

Ed Dunne

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Phone: 352-672-1202; Email: ejsdunne@gmail.com

OBJECTIVE

I am an applied watershed ecologist, who focuses on collaborative and science-based decision making to protect and improve water resources.

CURRENT POSITION

Branch Chief

June 2017 – Present

Water Quality Standards and TMDLs, Water Quality Division, Department of Energy and Environment, DC Government, Washington, D.C.

- Regulate the Clean Water Act at local government scale. Manage the District's water quality standards, total maximum daily loads, and water quality certification programs. Lead a team of eight technical staff who are environmental engineers, environmental specialists, and program analysts.

PAST POSITIONS

Program Officer

September 2014 – June 2017

Water Science and Technology Board, Division on Earth and Life Studies, National Academies, Washington, D.C.

- Facilitated consensus studies on national important issues like the affordability of flood insurance.

Environmental Scientist V

October 2012 - August 2014

Wetland and Watershed Section, Bureau of Environmental Sciences, St. Johns River Water Management District, Florida

- Managed a large-scale constructed wetland to remove nutrients from Lake Apopka.

Supervising Environmental Scientist

November 2007 - October 2012

Lake Apopka Basin Program, Division of Environmental Sciences, St. Johns River Water Management District, Florida

- Undertook science-based restoration of natural wetlands and lakes.

Assistant Research Scientist

December 2006 – November 2007

Soil and Water Science Department, University of Florida

- Managed wetland restoration projects to increase water and nutrient storage in the Lake Okeechobee watershed.

Postdoctoral Research Associate

January 2005 – November 2006

Soil and Water Science Department, University of Florida

- Conducted biogeochemistry (e.g., nitrogen, phosphorus, and carbon cycling) research on wetlands, rivers, streams, and ditches.

EDUCATION

PhD *Environmental Resource Management. University College Dublin, Ireland* 2004

Dissertation—Use of wetland systems to mitigate sediment and nutrient loss from agriculture.

MSc *Environmental Resource Management. University College Dublin, Ireland* 2001

Thesis—International approaches to environmental impact assessment.

BSc *Biology. University of Wales, Bangor, U.K*

1999

PERTINENT SKILLS AND EXPERTISE

Supervising. Supervise a small team of scientists and engineers that undertake technical work in support of local and federal water regulations. Supervised environmental scientists, who developed and managed work plans, analyzed and reported data, managed databases and contracts. As a supervisor, I assign and review work, rate employee performance, help with professional development and training, and ensure

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employees are empowered.

Leadership: Lead volunteer committees to produce consensus reports on complex natural resource and policy issues (e.g., panel on hydrological cycles and water resources within the National Academies consensus report “A Decadal Strategy for Earth Observation from Space”). Graduated from the Florida Natural Resources Leadership Institute (FNRLI), which equipped me with skills to collaborate with stakeholders on complex natural resource issues. Currently attending a certified public manager and strategic project management course with District of Columbia Government and George Washington University.

Planning and designing projects. Planned and designed projects that received seed, local, state, and federal grant funding. For example, planned, designed, and ultimately received 319 Nonpoint Source Management Program funding for a stormwater retention practice.

Contract management: Oversaw the procurement and management of contracts for several projects. Example projects include lake dredging and management practices to protect groundwater.

Providing technical support and coordination. Provided technical support and coordination for a range of activities (e.g., preparing consensus reports, and reports to state and federal funding entities). Coordinated and successfully held an international symposium on using green infrastructure practices to improve water quality.

Written communication. Published several peer-reviewed manuscripts, which were for a technical audience. I also published technical and non-technical information in trade journals, fact sheets, newspapers, symposium proceedings, and institutional publications.

Oral communication. Presented scientific information at international and national conferences, workshops, seminars, Hill briefings, and webinars. Presented technical and non-technical information on management practices to improve water quality to a reduce nonpoint source pollution to various audiences (e.g., stakeholder groups, landowners, counties, cities, and public citizens).

PUBLICATIONS

Peer-reviewed manuscripts

Dunne, E.J., M. F. Coveney, V. R. Hoge, R. Conrow, R. Naleway, E. F. Lowe, L. E. Battoe, and Y. Wang. 2015. Phosphorus removal performance of a large-scale constructed treatment wetland receiving eutrophic lake water. *Ecological Engineering*. 79:132-142.

Kröger, R., E.J. Dunne, J. Novak, K.W. King, E. McLellan, D.R. Smith, J. Strock, K. Boomer, M. Tomer, and G.B. Noe. 2013. Downstream approaches to phosphorus management in agricultural landscapes: regional applicability and use. *Science of the Total Environment*. 442:263-274.

Dunne, E.J., M. F. Coveney, E. R. Marzolf, V. R. Hoge, R. Conrow, R. Naleway, E. F. Lowe and L. E. Battoe. 2012. Efficacy of a large-scale constructed wetland to remove phosphorus and suspended solids from Lake Apopka, Florida. *Ecological Engineering*. 42:90-100.

Dunne, Ed J., Mark W. Clark, Ronald Corstanje, and K.R. Reddy. 2011. Legacy phosphorus in subtropical wetland soils: influence of dairy, improved and unimproved pasture land use. *Ecological Engineering*. 37:1481-1491.

Dunne, E.J., M.W. Clark, J. Mitchell, J.W. Jawitz, and K.R. Reddy. 2010. Soil phosphorus flux from emergent marsh wetlands and surrounding grazed pasture uplands. *Ecological Engineering*. 36:1392-1400.

Cheesman, A.W., E. J. Dunne, B. L. Turner, and K.R. Reddy. 2010. Soil phosphorus forms in hydrologically isolated wetlands and surrounding pasture. *Journal of Environmental Quality*. 39:1-9.

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- Cohen, M.J., E. J. **Dunne**, and G.L. Bruland. 2008. Spatial variability of soil properties in cypress domes surrounded by different land uses. *Wetlands*. 28:411-422.
- Leader, J.W., E.J. **Dunne**, and K.R. Reddy. 2008. Phosphorus sorbing materials: sorption dynamics and physicochemical characteristics. *Journal of Environmental Quality*. 37:174-181.
- Dunne**, E.J., Clark, M.W., K.R. Reddy, J. Smith, D. Perkins, and J. Jawitz. 2007. Phosphorus storages in ecosystem compartments of emergent marsh wetlands and their surrounding uplands. *Ecological Engineering*. 31:16-28.
- Dunne**, E.J., K.A. McKee, M.W. Clark, S. Grunwald and K.R. Reddy. 2007. Phosphorus in agricultural ditch soil and potential implications for water quality. *Journal of Soil and Water Conservation*. 62:244-252.
- Dunne**, E.J., K.R. Reddy, and M.W. Clark. 2006. Phosphorus release and retention by isolated wetland soils. *International Journal of Environmental Pollution*. 28:496-516.
- Dunne**, E. J., K.R. Reddy, and M.W. Clark. 2006. Biogeochemical indices of phosphorus retention and release by wetland soils and adjacent stream sediments. *Wetlands* 26: 1026-1041.
- Dunne**, E.J., N. Culleton, G. O'Donovan, R. Harrington, and K. Daly. 2005. Phosphorus retention and sorption by constructed wetland soils in the Southeast of Ireland. *Water Research*. 39:4355-4362.
- Dunne**, E.J., N. Culleton, G. O'Donovan, and R. Harrington. 2005. A farm-scale integrated constructed wetland to treat farmyard dirty water. *Ecological Engineering*. 24: 221-234.

Technical and non-technical publications

- Dunne**, E.J., M. F. Coveney, E. R. Marzolf, V. R. Hoge, R. Conrow, R. Naleway, E. F. Lowe and L. E. Battoe. 2011. Lake Apopka: Reducing Excess Nutrients. *Lakeline Magazine*. North American Lake Management Society. p. 14-19.
- Dunne**, E.J., Coveney, M.F. R. Conrow, E. Daneman, R.J. Naleway, J.H. Shields. 2009. Biological Assessment: Depositing Lake Beauclair Dredge into West Marsh. St. Johns River Water Management District, Palatka, FL. Submitted to Lake County Water Authority.
- Dunne**, E.J., M. Coveney, E. Marzolf, V. Hoge, R. Conrow. 2008. Final monitoring report pertaining to the biological assessment of the Lake Apopka Marsh Flow-Way. St. Johns River Water Management District, Palatka, FL. Submitted to United States Fish and Wildlife Service.
- Dunne**, E.J., M. Coveney, E. Marzolf, V. Hoge, R. Conrow. 2008. Lake Apopka Marsh Flow Way. Technical factsheet. Available at: <http://sjr.state.fl.us/publications/factsheets.html>
- Dunne**, E., N. Culleton, G. O'Donovan and R. Harrington. 2005. A farm scale integrated constructed wetland to treat farmyard dirty water. End of project report 4649. Teagasc. Dublin. Available at: <http://www.teagasc.ie/research/reports/environment/4649/eopr4649.htm>
- Dunne**, E., N. Culleton, G. O'Donovan and R. Harrington. 2005. Phosphorus retention and sorption by constructed wetland soils. End of project report 4649A. Teagasc. Dublin. Available at: <http://www.teagasc.ie/research/reports/environment/4649/eopr4649a.htm>
- Dunne**, E. 2002. Farm level constructed wetlands. *Today's Farm*. 13: 37. Teagasc. Dublin.
- Dunne**, E. 2002. The wetland approach! *Irish Scientist*. Samton Limited. Dublin.
- Dunne**, E., N. Culleton and R. Harrington. 2002. Farm level integrated constructed wetlands. Teagasc
- Culleton, N., R. Harrington, and E. **Dunne**. 2001. Constructed wetlands to treat farmyard dirty water. *Irish Farmers Journal* 53: 46. p. 6.
- Dunne**, E., and N. Culleton. 2001. Adapting biogeochemical processes for the amelioration of soiled waters from farmyards. *Farm and Food: Research and Development*. Spring. Teagasc. Dublin. p. 10-11.
- Harrington, R., N. Culleton, R. Schulte, A. Harrington, and E. **Dunne**. 2001. Facing the challenges of Irish agriculture. *Farm and Food: Research and Development*. Autumn. Teagasc. Dublin. p. 11-16. Today. 15, April.

Other publications

- National Academies of Sciences, Engineering, and Medicine. 2017. Proceedings of a Workshop. Flowback and Produced Waters: Opportunities and Challenges for Innovation. Washington, DC: The National Academies Press. (Workshop Rapporteur).

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National Academies of Sciences, Engineering, and Medicine. 2015. Affordability of National Flood Insurance Program Premiums – Report 2. Washington, DC: The National Academies Press.

National Academies of Sciences, Engineering, and Medicine. 2015. A Community-Based Flood Insurance Option. Washington, DC: The National Academies Press.

Book chapters

- Culleton, N., E. J. **Dunne**, S. Regan, T. Ryan, R. Harrington and C. Ryder. 2005. Cost effective management of soiled water from agricultural systems in Ireland. Chapter in **Dunne**, E.J., K.R. Reddy and O.T. Carton. (eds.). 2005. Nutrient management in agricultural watersheds: A wetlands solution. Wageningen Academic Publishers. pp. 260-269.
- Dunne**, E.J., and K.R. Reddy. 2005. Phosphorus biogeochemistry of wetlands in agricultural watersheds. Chapter in **Dunne**, E.J., K.R. Reddy and O.T. Carton. (eds.). 2005. Nutrient management in agricultural watersheds: A wetlands solution. Wageningen Academic Publishers. pp. 105-119.
- Dunne**, E.J., N. Culleton, G. O'Donovan. 2005. Constructed wetlands to retain contaminants and nutrients, specifically phosphorus from farmyard dirty water in Southeast Ireland. Chapter in **Dunne**, E.J., K.R. Reddy and O.T. Carton. (eds.). 2005. Nutrient management in agricultural watersheds: A wetlands solution. Wageningen Academic Publishers. pp. 144-156.
- McHugh, S., K. Richards, E.J. **Dunne**, R. Harrington and V. O'Flaherty. 2005. Microbiological studies on an integrated constructed wetland used for treatment of agricultural wastewaters. Chapter in **Dunne**, E.J., K.R. Reddy and O.T. Carton. (eds.). 2005. Nutrient management in agricultural watersheds: A wetlands solution. Wageningen Academic Publishers. pp. 245-249.
- Dunne**, E., N. Culleton, R. Harrington, and G. O'Donovan. 2002. Integrated constructed wetlands. Chapter in Culleton, N., P. Barry, R. Schulte, and J. Finn. (eds.). Principles of organic farming. Teagasc. Dublin.