

Bio: David Del Porto

Since 1972, David Del Porto has been a practitioner and advocate of building-integrated water efficiency and pollution prevention using the ecological paradigm as a template.

His solar-heated home in Newton, Massachusetts incorporates these principles as it provides space heat, food production, air purification and wastewater treatment all within an attached two-story greenhouse of his design.

Del Porto is a guest lecturer at the Harvard University Graduate School of Design and the School of Engineering and Applied Science, the University of Minnesota, Milwaukee School of Engineering and other institutions of higher learning. He was recently the keynote speaker at the Massachusetts Riverways “Beyond Sewering” conference.

His slide presentation can be watched on the following web site:

http://www.mass.gov/dfwele/river/pdf/beyond_sewering_delporto.pdf

Del Porto has advised on projects for Ford Motor Company, Greenpeace International, the National Science Foundation, the U.S. Environmental Protection Agency, and the Department of the Interior, the Republics of Fiji and Palau, the Federated States of Micronesia, public agencies, institutions, municipalities, private companies and individual property owners.

In 2002, Del Porto founded the Ecological Engineering Group (EEG) which incorporates planning, engineering, architecture, construction management and operation services under one corporate roof. EEG has completed the construction of, and now operates a 27,500-gallon-per-day Solar Aquatic greenhouse-based advanced tertiary wastewater treatment for ground water discharge system. The client is New England Biolabs of Ipswich, Massachusetts.

Examples of current EEG projects:

The Phase 2 Expansion of the Massachusetts State Firefighting Academy (MFA).

Stow, Massachusetts. This will be a LEED Gold project. EEG is tasked with developing a sustainable and integrated water and wastewater system for MFA. This includes:

- Evaluating a nearby pond as a drinking water supply as opposed to bringing a water line from a neighboring town at great expense.
- Designing an advanced ecological wastewater system that will be used for groundwater recharge and reuse for flushing toilets.
- General consulting on high-performance green building using the site and buildings as a unique watershed with adequate water supplies from storm water to meet all the non-potable needs of the facility

Furman University’s expansion of the Plylor Hall Science Center.

Greenville, South Carolina. This will be a LEED Gold facility. EEG is tasked with designing a Solar Aquatic System™ for the new science center. This includes:

- Designing an advanced ecological wastewater system that will be used for reuse for flushing toilets, makeup water for evaporative air conditioning and educating students on the principals of ecological design.
- Evaluating a biogas reactor to use the organic carbon in wastewater and food waste to produce combined heat and electrical power

New Southern branch of the Taiwan National Palace Museum (NPM)

Taipao, Taiwan. Following an international competition for the design of the NPM Southern Branch that drew entries from 40 architects from 14 countries, the design team was selected that would produce a modern museum on the site of an old sugar cane plantation. The site and building would convey the image of a mountain peak surrounded by gardens and artificial lakes. Viewed from a distance, the building is likely to resemble a Chinese landscape painting. EEG was tasked with

- Developing a conceptual plan for maximum aesthetic and economic benefits. Designing an integrated stormwater collection to make up lake water levels during the annual droughts, store water during annual monsoons and treat wastewater to remove pollutants to keep the lakes from eutrophication.
- Integrating these elements into a sustainable Urban Watershed to use and reuse the stormwater and wastewater within the limnological challenges facing the project with shallow artificial tropical lakes.

Del Porto serves on the Joint Committee on Wastewater Technology of NSF International, with which he co-authored performance standards for wastewater treatment technologies. He also serves on the Massachusetts Water Resource Authority's Citizen Advisory Committee.

He has been published in numerous conferences and hearing proceedings, books, professional journals, environmental encyclopedias and government publications, and has written a definitive reference book on ecological sanitation and gray water use. His latest published work is the chapter "Urban and Industrial Watersheds and Ecological Sanitation- Two sustainable strategies for on-site urban water management," *Rogers, P., Llamas, R., Martinez-Cortina, L., Ed., Water Crisis – Myth or Reality*, Taylor & Francis/Balkema plc., London, UK 2006 ISBN 10: 0-415-36438-8

Del Porto is presently a member of the International Ecological Engineering Society, the International Society for Industrial Ecology, the Water Reuse Association, US Green Building Council and the Massachusetts Water Supply Advisory Committee, and he serves as Chair of the Sustainable Newton Committee and co-chair of the Newton Renewable Resources Committee and a member of the High Performance Building Coalition. He has served on many commissions and committees in the city of Newton and is a founding director of the Green Decade Coalition. He received a BA from Boston University and resides in Newton, Massachusetts