

- Incorporating results from the RUSLE model
- Limitations

Designing Effective S&EC plans

- Assessing existing and future runoff conditions
- Calculating performance goals to contributing watersheds
- Designing on a macro scale using the effectiveness equation
- Developing plans for the contractor to implement
- Compiling notes for the contractor

MODULE 4

Erosion Control Practices

- Developing seed mixtures
- Fertilizer calculations

Assessing “Soft Armoring” Techniques for Channel Protection

Instructor

Dr. Jerald Fifield, president, HydroDynamics Inc.

Since 1982 when Dr. Jerald Fifield started HydroDynamics Inc., he has been actively involved with drainage, sediment and erosion control, water rights, and nonpoint pollution control. Through his company, he develops sediment and erosion control plans, completes drainage analysis, provides inspection services, and teaches about controlling sediment and erosion on construction sites. Mr. Fifield has authored numerous professional papers, researched sediment and erosion control products, has written a sediment and erosion control manual for designers, and wrote a field manual for contractors and inspectors.

NEW

Light Imprint: Integrating Sustainable Green Infrastructure and Community Design

Monday, August 22 • 8:00 a.m. – 4:00 p.m.

0.5 Continuing Education Unit

PLATINUM BALLROOM 4

Why Attend This Course?

The Light Imprint tool set addresses stormwater runoff through natural drainage, conventional engineering infrastructure, and innovative infiltration practices. These tools are used at the regional, neighborhood, and block scale.

Light Imprint green infrastructure is compatible with urban design that emphasizes compact, mixed-use, pedestrian-oriented design, and environmental efficiency. It is designed to reduce community infrastructure costs. It allows municipal staff, land planners, architects, property owners, environmentalists, development teams, engineers, and land conservationists to select site-specific Light Imprint tools. Light Imprint can be adjusted based on the site location (climate), the soil character (soil type), the intensity of development (transect), the topographical conditions (slope), the initial project budget (cost), and the plan for upkeep (maintenance cost). Light Imprint emphasizes design of public civic spaces and connectivity.

What You Will Learn

Participants will understand the organization of the *Light Imprint Handbook* and interactive database on the Light Imprint website. They will see unique Light Imprint characteristics of historic and new communities using case studies that focus on sustainable design and good urban planning techniques. They can specify and use the 64 tools that make up the Light Imprint matrix for projects ranging in size from the lot to the block, to the neighborhood to the region. In design sessions, participants create site design overlays for projects including brownfield infill development, greyfield redevelopment, historic district improvements, suburban retrofit, and new greenfield village development.

About Light Imprint

Light Imprint developed from a need to coordinate engineering concerns with Smart Growth planning and design principles. The techniques have been compiled and assembled into a practical matrix in the *Light Imprint Handbook: Integrating Sustainability and Community Design* and on the interactive website, www.lightimprint.org.

Light Imprint enables designers to give more consideration to environmental factors without compromising performance; its techniques respect terrain. Additionally, Light Imprint offers a range of environmental strategies, from time-tested to cutting-edge, for differing landscapes and urban conditions.

This information is organized in the Light Imprint matrix, which divides the landscape into sections representing urban to rural conditions called the transect. More than 60 Light Imprint tools and resources are clearly organized in the matrix according to appropriateness of use in each zone. The matrix includes the urban-to-rural (transect) conditions, initial costs, long-term maintenance factors, soil hydrology, slope conditions, and climate.

The Light Imprint toolset can also significantly lower construction and engineering costs. When used in conjunction with traditional engineering methods, the tools reduce the need for the typical solution of inlet, pipe, and pit infrastructure. With Light Imprint, stormwater be returned to the ground without channeling it far from its original location. This contrasts with conventional engineering that directs water to an inlet, where it flows through a pipe, and is released into a pit.

Course Outline

Part I – Introduction to Sustainability and Urbanism

- Principles
- Community form
- The region

Part II – Case Studies

Historic and new communities

- Site overview
- Review of unique characteristics
- Sustainability and urbanism techniques

Part III – Introduction to the Matrix and Toolbox

- Paving
- Channeling
- Storage
- Filtration

Part IV – Lunch and Walking Tour of Sustainable Urban Neighborhoods

Part V – Hands-On Design Workshop

Attendees break into groups at roundtables. Using the Matrix and the Tool Box, they create a site design overlay for a specific range of projects including:

- Brownfield infill
- Greyfield redevelopment
- Historic district improvements
- Suburban retrofit
- Greenfield – new village
- Transit-oriented development

Part VI – Roundtable Discussion With Leaders in the field of Sustainability and Urban Design Along With Local Leaders

Instructors

Thomas Low, director of DPZ Charlotte and a partner in the firm of Miami-based Duany Plater-Zyberk & Company, Architects and Town Planners

Thomas Low is a registered architect and certified planner and has directed numerous award-winning projects from organizations including the American Institute of Architects, the Sierra Club, the National Association of Homebuilders, and the Environmental Protection Agency for Smart Growth Achievement. He leads the research initiative on Light Imprint, combining environmentally sensitive stormwater management techniques with New Urban community design principles. It includes the *Light Imprint Handbook*, and website, www.lightimprint.org.

Paul Crabtree, PE, president, Crabtree Group Inc.

Paul is a new urbanist professional civil engineer with extensive experience in total project management, town planning, form-based codes, watershed management, water and wastewater treatment plants, and construction management. His firm, the Crabtree Group Inc., a civil engineering and town-planning firm, is dedicated to smart growth and new urbanism with offices in Colorado and California. Among his many accomplishments and affiliations, he is a founding member of the Transect Codes Council, leader of the CNU Rainwater Initiative, and author of the SmartCode “Regional Watersheds” Module, author of “Rainwater Do’s and Don’ts” for *Stormwater* magazine, a coauthor of the soon-to-be-published *Sustainable Communities Guidebook*, and a 2010 CNU Charter Award Winner for “Salon des Refuse”—a counter-proposal for an LID design competition.



Donald Cecil

The stormwater profession, by definition, is a silo; but only one of dozens. StormCon helps us expand our horizons, change our paradigms, and make important connections.