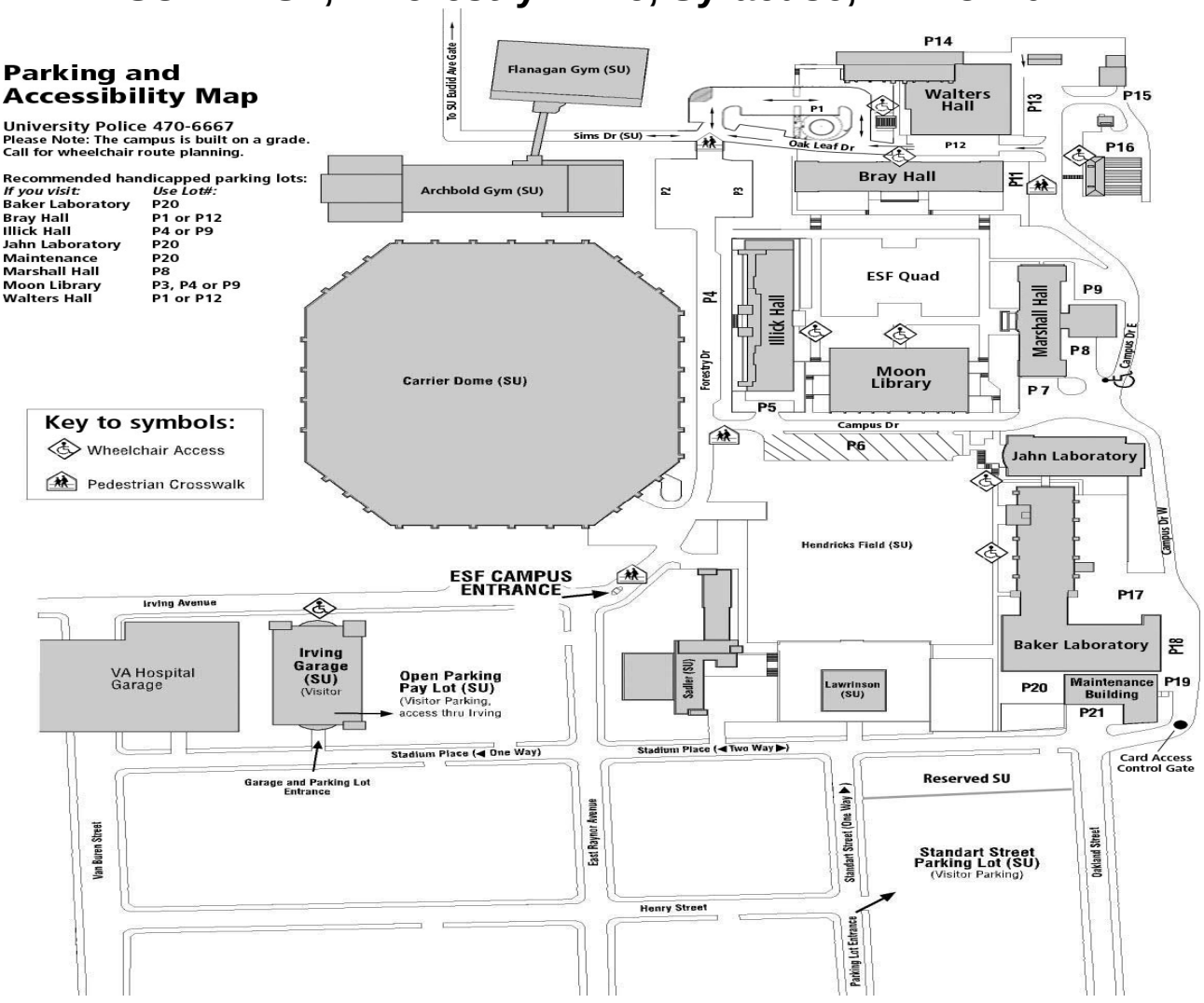
Stream Investigation, Stabilization & Design Workshop

With an emphasis on Innovative Approaches to Stream Stabilization and Restoration

May 17-19, 2011 Syracuse, NY.

Classroom Location: Baker Laboratory, Room 146
SUNY ESF, 1 Forestry Drive, Syracuse, NY 13210



Stream Investigation, Stabilization & Design Workshop

This workshop will introduce the methodologies and procedures for initiating, planning, analyzing, and ultimately designing long-term sustainable river and stream stabilization or restoration projects. Innovative, environmentally sensitive, and cost-effective approaches to restoration will be discussed. Comprehensive case studies will be presented. Rain gear, boots, and field clothes are recommended for the field trips. After May 1st, lectures will be posted on the FTP site: ftp://chlguest:3bit5map@134.164.34.99:21/DERRICK-LECTURES

Workshop Sponsors: U.S. Army Corps of Engineers Buffalo District, State University of New York College of Environmental Science and Forestry (SUNY ESF), and Onondaga County Soil & Water Conservation District.

Instructors: Dave Derrick, Research Hydraulic Engineer with the Corps of Engineer's Engineering Research and Development Center's Coastal & Hydraulics Laboratory (ERDC-CHL)

Mark Schaub, Resource Conservation Specialist with Onondaga County Soil & Water Conservation District.

Dr. Ted Endreny, Ph.D., P.H., P.E.
Professor and Graduate Coordinator
Department of Environmental Resources Engineering State University of New York, College of Environmental Science & Forestry

WORKSHOP OVERVIEW AND GOALS

Apply concepts of grade control & the Channel Evolution Model (CEM).

Get tips on how to develop appropriate project goals.

Learn about innovative bank protection methods and how to choose the appropriate method or combination of techniques.

Discuss the importance of constructability, monitoring, & maintenance

Learn how to read a stream and analyze a streambank erosion problem with an experienced practitioner.

Perform a series of in-the-field site analyses, understanding the role of project goals in the development of conceptual flow analyses, and designing stabilization plans that relate to the project performance goals.

Register Early! Space is limited to the first 110 folks!!

STREAM INVESTIGATION, STABILIZATION & DESIGN WORKSHOP

Registration Form

Name:_____

E-Mail_____

Agency/Affiliation_____

Address:_____

Phone:_____

Fax:_____

Submit Registration via e-mail to
David.L.Derrick@usace.army.mil
Questions? Please call Dave Derrick @ 601-218-7717

Some hotels close to the ESF classroom

1) SHERATON SYRACUSE UNIVERSITY HOTEL, 801 UNIVERSITY AVE., SYRACUSE, NY 13210 - (315) 475-3000 (0.6 mile from the classroom)
2) GENESEE GRANDE HOTEL, 1060 E. GENESEE ST., SYRACUSE, NY 13210 - (315) 476-4212 (0.9 mile from the classroom)
3) PARKVIEW HOTEL, 713 E. GENESEE ST., SYRACUSE, NY 13210 - (315) 701-2600 (0.9 mile from the classroom)
4) CROWN PLAZA SYRACUSE, 701 E. GENESEE ST., SYRACUSE, NY 13210 - (315) 479-7000 (0.9 mile from the classroom)
5) HAMPTON INN & SUITES SYRACUSE ERIE BLVD, 13017 ERIE BLVD EAST, SYRACUSE, NY 13224 - (315) 373-0333 (3.1 miles from the classroom)
6) HOLIDAY INN EXPRESS HOTEL & SUITES, 5908 WIDEWATERS PARKWAY, EAST SYRACUSE, NY 13057 - (315) 546-1000 (4.1 miles from the classroom)
7) HAMPTON INN SYRACUSE NORTH, 417 7TH NORTH ST., LIVERPOOL, NY 13088 - (315) 457-9900 (4.3 miles from the classroom)
8) HOMEWOOD SUITES BY HILTON, 275 ELWOOD DAVIS ROAD., LIVERPOOL, NY 13088 - (315) 451-3800 (4.8 miles from the classroom)

THERE ARE MANY MANY MOTELS/HOTELS IN THE AREA!!!! GO TO WWW.KAYAK.COM , TYPE IN THE CLASSROOM ADDRESS

IMPORTANT: All lunches will be on your own.

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SUNY ESF - DAY 1 - TUESDAY - MAY 17, 2011	
7:45 – 8:15	**Sign-in**
8:15 – 8:30	**Welcome – Introductions / Workshop Overview**
8:30 – 9:40	**Philosophy of Restoration** • **Goal and Function Based Design** • **Project Planning** • **Monitoring** • **How Streams Dissipate Energy** • **Self-Adjusting Bank & Grade Control**
9:40 – 9:55	**BREAK**
9:55 – 12:00	**Channel Evolution Model (CEM) & Environmentally Compatible Grade Control – Includes Vegetation & Fish Passage**
12:00 – 1:00	**LUNCH**
1:00 – 3:00	**Resistive & Continuous Bank Stabilization Methods** • **Show the Duck Creek Construction Video** • **Longitudinal Peaked Stone Toe Protection (LPSTP)** • **Longitudinal Fill Stone Toe Protection (LFSTP)** • **Keys, Filters, Stone,** • **Case Studies – Red Banks; Grand River @ Rt. A; Duck Creek; Elton Cr.; Missouri River @ Vermillion, SD.**
3:00 – 3:15	**BREAK**
3:15 – 4:30	**Bioengineering Philosophy & Planting Veg with Large Yellow Machines** • **Harvesting Adventitious Poles** • **Slit Trench Plantings** • **Slit Brush Layering** • **Willow Poles & Willow Curtains** • **Transplants** • **Half Drowned Bushes** • **Traffic Control Stones**
4:30 – 4:40	**Wrap-up / Field Information for Wednesday**
4:40 – 5:20	**A New Restoration Design Goal - Enhancing Riverbed Flow and Hyporheic Exchange.** **By Dr. Ted Endreny, Ph.D., P.H., P.E.** **Professor and Graduate Coordinator @ State University of New York, College of Environmental Science & Forestry**
5:30 – 8:30	**Optional Dinner / Ice-breaker (Location TBD)**

SUNY ESF - DAY 2 - WEDNESDAY - MAY 18, 2011	
8:30	Meet in parking lot of Onondaga County Soil & Water Conservation District office, 2571 Route 11, Lafayette, NY 13084
8:30 – 12:00	Field Trip – Onondaga Creek several restoration sites in Tully Valley-TOUR GUIDE-MARK SCHAUB, Onondaga County Soil & Water –directions and maps at the end of this agenda!!!!
12:00 – 1:00	LUNCH – In Lafayette,NY
1:00 – 4:30	Field Trip continued – Onondaga Creek urban sites & other cool sites- TOUR GUIDE-DR. TED ENDRENY, ESF Professor–directions and maps at the end of this agenda!!!!
SUNY ESF – DAY 3 – THURSDAY - MAY 19, 2011	
8:30 – 10:00	Redirective Methods • Rock Vanes • J-Hooks • Bendway Weirs • Case Studies – Little Blue River; Chautauqua Cr.: Neosho River; Catt Cr; Sulphur Cr.;
10:00 – 10:15	BREAK
10:15 – 12:00	How to Conduct a Field Investigation • Fundamentals of Fluvial Geomorphology How to Read a Stream
12:00 – 1:00	LUNCH
1:00 – 1:45	Innovative Techniques • Show the 18-Mile Creek Restoration Video • Locked Logs • Living Dikes • Planting on a Grid • Hydraulic Cover Stones • Building Pools
1:45 – 2:00	BREAK
2:00-3:00	CASE STUDIES • Goodwin Creek - Jungle Growth • Haw Creek - Engineered Floodplain Bench • Caz Creek – Bioengineering for a Concrete Lined Channel • Bushkill Cr - Soil-Choked Riprap in a high-energy stream • Guadalupe River - Willows Planted when it was 103 degrees
3:00 – 3:45	Abrupt Planform Modifiers – 5 methods to replicate small radius 90-degree bends, impinging flow situations, and bends that exit into the middle of the next bend (no crossing in between):

	• **Boil-Up Pools** • **Wrong-Way Boil-Up Pools** • **Twin Spin Boil-Up Pools** • **Angle Slams & "T" Angle Slams** • **Grand Slams**
3:45 – 4:15	**Dave's Top 10, 46 Ways to Stay Out of Trouble!**
4:15 – 4:30	**Project Construction**
4:30 – 4:40	**Course Wrap-Up**