

Lennon, Smith, Souleret
Engineering, Inc.

Civil Engineers and Surveyors

LSSE News

*Lennon, Smith, Souleret
Engineering, Inc...
one of the region's largest
engineering units dedicated
solely to civil engineering.*

Fall/Winter 2012

LSSE Participates in the region's first of its kind Regional Wet-Weather Green Infrastructure Evaluation

At the national level, application of Green Infrastructure (GI) Technologies has recently been promoted as a potentially attractive alternative to conventional grey wet weather plan solutions. ALCOSAN's recent release of its regional Wet Weather Plan was met with immediate demands for use of GI as an alternative to grey technologies. Within Allegheny County the same reaction may be anticipated by municipal engineers who propose only grey technologies, without any consideration of GI, in their mandated Feasibility Studies, which must be submitted to the regulators by July 2013. While there is a groundswell of interest in application of GI, there is little hard data, and less in the way of engineering technical assessment tools, available to municipal engineers which is sufficient to undertake an areawide

evaluation of GI for comparison to conventional technologies. Absent the availability of objective design and performance data, a municipal engineer would be hard pressed to render such an opinion in routine practice, let alone in the current regulatory context, which requires compliance with enforceable Consent Orders. In keeping with its eight (8) successful years of assisting Allegheny County municipalities meet the requirements of municipal consent orders, 3RWW commissioned its Program Management Team to develop and implement an evaluation project that is intended to provide affected municipalities with practicable engineering protocols, performance assessment criteria, and cost estimating tools, sufficient for use in the DEP/ACHD – mandated Feasibility Studies.

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LSSE recently welcomed the following new employees:

- Patti Kilburn recently joined LSSE as an Administrative Assistant.
- Alissa Bickar has joined the GIS Unit as a Supervisor.

The following employee was recently promoted:

- Scott Grogan is supervising the Environmental Field Unit.

Congratulations!



LSSE is a Corporate Sponsor for the Leukemia and Lymphoma Society's Light the Night Walk on October 4, 2012. Team LSSE will walk in memory of our 15 year employee Don Hall who passed away earlier this year from Stage 4 Lymphoma. Through donations and in-house fundraisers the team is raising funds for the treatment and cure of these deadly diseases. Our team page is located at <http://pages.lightthenight.org/wpa/Pttsbrgh12/LennonSmithSouleretEngineeringInc>.

We would like to thank all those who helped through volunteering and donations to make this a success.



In memory of Don Hall

LSSE Participates in the first of its kind Green Infrastructure Evaluation

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The primary objective is to assess application of GI Technologies as a method to mitigate stormwater discharge, thereby reducing the size of downstream grey facilities.

Although LSSE has been designing Low Impact Development (LID) and stormwater Best Management Practices (BMP), into its private site design programs since the mid 1990s, this is a first of its kind project for consideration at the municipal areawide level.

Engineers from Lennon, Smith, Souleret Engineering, Inc. (Lawrence Lennon, P.E. D.WRE, Timothy Brett, P.E., Jake Bajek, E.I.T., and Josh Wilson, E.I.T.) are currently working as part of the 3 Rivers Wet Weather (3RWW) Program Management Team along with representatives from Baker Engineers and Wade Trim Engineering on developing a process for the purpose of determining the feasibility and cost associated with utilization of GI BMPs into the municipal Feasibility Studies.

Three test basins are being analyzed to develop the process of evaluating sites for potential GI projects. The Nine Mile Run Sewershed, Girty's Run Sewershed, and McNeilly Run Sewershed are the test areas 3RWW has identified as offering potential to be impacted by GI, due to their relative sizes, combined sewers, and number of overflow structures. The GI technologies or BMPs being considered for application in the municipal systems

include: bioretention basins, infiltration basins, grass swales, vegetated filter strips, constructed wetlands, and porous pavement.

The technical assessment process being developed by the PM Team starts with the EPA's SUSTAIN program Framework Manager which is an ArcGIS methodology utilized to identify potential sites for BMPs within a given sewershed based on design specific criteria such as slope, drainage area, and

soil conditions. This process yields mapping of potential GI features which must be screened through multiple engineering screening criteria to develop "sites" deemed conceptually appropriate for implementation of a Green Infrastructure solution. The resulting conceptual projects are then analyzed in 3RWW's web based "RainWays" application to evaluate their effectiveness in reducing runoff and developing cost estimates associated with specific BMPs. Using the process developed by LSSE and the

3RWW team, local municipalities will have a method to screen, cost, and evaluate GI projects on a large scale basis within their own sewer systems and, if appropriate and cost-effective, incorporate them into their Feasibility Studies. Project results will also be provided to the general public through the 3RWW web site in order for home and business owners to see where GI technologies could possibly be implemented.

"Being part of the team that is leading the way in evaluating Green Technologies in our region has been an exciting opportunity for all of us. In the future, these types of projects will only continue to grow in importance."

- Jake Bajek, E.I.T.



2012 LSSE COMPANY PICNIC

This year's picnic was held on August 17th. After the barbecue, Service Awards were presented to Larry Souleret for 25 years; John Heyl and Tim McClelland for 15 years; Matt Carroll and Veronica Ninness for 10 years; Brandon Hassinger, Dan Jageman, Beth Klacik, and Jeff Rininger for 5 years. Don Hall was posthumously awarded 15 years service. The award was given to his wife, Elissa.



Figure showing SUSTAIN output of "GIS Features" that identify possible locations for potential "BMP Feature" within a portion of the Nine Mile Run Sewershed

Green Infrastructure BMPs

Porous Pavement
Bioretention Basins
Infiltration Basins
Constructed Wetland
Grass Swales
Vegetated Filter Strips



Potential locations for permeable pavement "GI projects" shown in yellow.

The above tables list the Green Infrastructure (GI) BMPs being considered as part of the 3RWW project and typical Grey Infrastructure Alternatives. The GIS drawings help municipalities evaluate GI projects.

Small Projects, Big Impacts:

At the small community level, where elected or appointed officials live and engage their constituents and in some cases neighbors on a daily basis, small projects pay big dividends in sustaining positive community relations. On an annual basis, LSSE routinely prepares **over 150 bid packages** for street and infrastructure projects, many below \$100,000 in constructed value. For example, LSSE provided engineering services for the [City of Hermitage](#), designing a linear walk project along Buhl Farm Drive and pedestrian improvements at the intersection of Hazen Road and Buhl Farm Drive. Funding for the project was through the Pennsylvania Elm Street Program which was created to revitalize historical districts and surrounding neighborhoods. The pedestrian improvements included grading, concrete walk construction, curb and ADA ramps, driveway transitions for both commercial and residential, driveway adjustments, mailbox relocations, vinyl fence installation and a mid-block signalized cross walk warning sign.



Hermitage linear walk and pedestrian improvements

Volunteering to Support Great Causes

Western Pennsylvania Chapter of the National Multiple Sclerosis Society, Rockies Fundraiser

LSSE's Larry Souleret had a fantastic motorcycle trip to Colorado and back. Together with Rich Wilt and Mark Magalotti of Trans Associates the trio rode over 4,800 miles in 14 days, and raised over \$5,000 for the MS Society of Western PA. On their way to Pikes Peak, the three entertained each other through helmet headsets avoiding the western wildfires and had a great time. Thanks to everyone for the donations and helping the MS Society find a cure.



LSSE Employee Culinary and Fundraising Talents Tested for Light the Night

For soup day, Kimber Rugg made chili, Roni Ninness made broccoli cheese soup and beef vegetable soup. Sarah Boyce and Aubrey Betts provided homemade bread. Friday "Jersey Days" where employees paid \$2 to wear their favorite team jersey were popular. There was also a bake sale where employees filled a bag full of goodies for a small donation. Kimber Rugg, Sarah Boyce, Matt Carroll, Aubrey Betts, and Roni Ninness provided goodies from cupcakes to cookies to buckeyes to sweet breads. There was a 50/50 raffle and a raffle for one week parking in Larry Souleret's spot. Thanks to everyone!

Congratulations!



Greyson David James Carroll
was born on August 25, 2012 to [Matthew Carroll](#) and wife, Sarah.



Aidan Matthew Ruth
was born on August 25, 2012 to [Sheena Hoover](#) and Dave Ruth.



First-time grandfather, [Lawrence Lennon](#) with **Kaitlyn Lennon**, who was born on July 20, 2012 to son, Justin and his wife, Kelly.

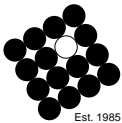
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LSSE News is published for the benefit of our clients, associates and friends. Further information can be obtained by contacting Daniel S. Gilligan, Managing Principal/Vice President at (412) 264-4400. www.lsse.com • info@lsse.com

Headquarters Office: 846 Fourth Avenue, Coraopolis, PA 15108 • (412) 264-4400 • (412) 264-1200 Fax
Branch Office: 4536 Route 136, Suite 1, Greensburg, PA 15601 • (724) 837-1057 • (724) 838-9811 Fax

Managing Principals: Lawrence J. Lennon, P.E., D.WRE; Larry W. Souleret, P.E., P.L.S.; and Daniel S. Gilligan
Principals: Ned Mitrovich, P.E.; Jason E. Stanton, P.E.; and Kevin A. Brett, P.E.

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846 Fourth Avenue
Coraopolis, PA 15108