



Lennon, Smith, Souleret  
Engineering, Inc.  
Civil Engineers and Surveyors

# LSSE News

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

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## Award-Winning Center Township Water Authority Interim Plant Complete, Permanent Facility Underway

Lennon, Smith, Souleret Engineering, Inc. (LSSE) completed design of Phase 1 for Center Township Water Authority's (CTWA) new \$65 million potable water source of supply and surface water treatment plant in Beaver Co., Pennsylvania. This complex public works project is being delivered in two phases on an accelerated schedule. The plant and intake were necessary to facilitate the construction of the adjacent Shell Chemical industrial redevelopment project in Potter Township.

Phase 1, with a final construction value of approximately \$28 million, included alternatives analysis, treatability studies, sampling, detailed design, permitting, bidding, construction, coordination with the developer, and start-up of an interim river intake and interim conventional surface water treatment plant in just 20 months. The project was delivered using fifteen separate concurrent material and construction contracts to meet schedule demands. Phase 1 was completed in September 2016. The capacity of the interim facility is 3 million gallons per day (MGD). *The clarity of the finished water was observed to be "more clear than bottled water"* when the ultraviolet (UV) disinfection system was tested by the manufacturer.

Prior to initiating Phase 2, CTWA decommissioned its wellfield and groundwater treatment plant. Construction of the permanent surface water intake is underway along with the preliminary design of the 5 MGD permanent water treatment plant.

The Project Team for the Phase 1 interim facility project was awarded two local engineering awards – the 2016 Project Award in the Industrial Category by the Engineers' Society of Western Pennsylvania (ESWP) and the 2016 Award of Merit by the American Society of Civil Engineers (ASCE) Pittsburgh Section. The Project Team included Center Township Water Authority as the Owner, LSSE as the Engineer/Project



Center Township Interim Water Treatment Plant, October 2016

## Larry Souleret Announces Retirement

After 49 years in the practice of engineering and surveying, Larry W. Souleret, P.E., P.L.S., M.ASCE retired from LSSE on January 1, 2017. Larry received his Associate degree in surveying in 1967 from The Pennsylvania State University and a Bachelor of Science in civil engineering in 1978 from Geneva College. He obtained his professional registration in both practices in 1977.



Larry Souleret accepting ASCE  
Pittsburgh Section's 2016  
Meritorious Service Award

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# LSSE Clients and Projects



From left to right: Brian Grayburn, P.E., DBIA (Trumbull Corporation), Gary Guy (Guy's Mechanical Systems Inc.), Ned Mitrovich, P.E. (LSSE Principal/Design Project Manager), and Bill DiCioccio, Jr. (CTWA).  
Photo credit: Larry Rippel.

## CTWA Plant Project (Continued)

Manager, and contractors Guy's Mechanical Systems Inc. and Trumbull Corporation, as well as a number of subconsultants. LSSE's design team was led by Ned Mitrovich, P.E., Principal and Project Manager with assistance by Larry Lennon Jr., P.E., and Ryan Contestabile, P.E.

The interim facility was designed to treat to a *Cryptosporidium* bin concentration of 3.0 oocysts/L or higher – this is known as bin classification 4 (or Bin 4). CTWA has been sampling raw water for nearly two years to have this requirement relaxed. Even if relaxed, the level of treatment and equipment will remain the same. However, the goal is to reduce the costly reporting requirements. Additionally, proposed amendments of the PA Code Chapter 109 (Safe Drinking Water) will also clarify the existing minimum residual disinfectant level in the distribution system. Currently, levels of 0.015 mg/L or higher round up to 0.02 mg/L and are considered in compliance. Under the proposed new minimum level, water suppliers will be required to maintain a residual that is equal to or greater than 0.20 mg/L. CTWA is already operating to meet this level.

One of the unique aspects of this project, and a benefit to the community, was the final water quality. The clarity of the water is measured as ultraviolet transmittance (UVT). This is the measurement of the ratio of light entering and exiting the water (particles in the water would decrease the transmittance). *With the treatment that was installed, the clarity of the treated water ranges between 96-99%.* This high level of clarity was attributed to several factors of the design which included a raw water tank with mixers for treatment chemical reaction time, multiple treatment chemical application points, followed by conventional filtration and activated carbon contactors.

## LSSE Works with North Fayette and Brighton Township Public Works Departments to Incorporate BMPs

Recently in North Fayette Township (Allegheny Co.), LSSE completed the design and the Township's Public Works Department completed the construction of a number of stormwater Best Management Practices (BMPs), including rain gardens, infiltration swales, and stormwater ponds. These facilities were completed at the existing municipal complex which was originally constructed decades ago without stormwater management for the facility. When the Township began plans to renovate the existing facility, BMPs and stormwater management were planned in the conceptual phase and included in the final land development. This included maximizing the use of existing pavement and decreasing the amount of impervious pavement needed for the same amount of parking, as well as adding a number of rain gardens throughout the facility. Grass lined swales were also incorporated to collect, convey, and treat the stormwater prior to discharge into Robinson Run and an unnamed tributary. LSSE worked together with the Public Works Department to provide surveys and the layout so the Department's staff could construct the stormwater facilities. The Township provided interpretive signage to explain the benefits of BMPs and green infrastructure. During the same time, the Township also constructed a new Community Center and installed forebays at each of the proposed stormwater ponds to meet the DEP permits for the water quality portion of the NPDES permit for the site.

LSSE completed the similar design of a rain garden/bio-retention area for construction by the Brighton Township (Beaver Co.) Road Department as part of improvements to the parking lot, access drives, and material storage and fueling areas at the existing Brighton Township Public Works building. Stormwater quality improvements consisted of a rip-rap lined channel to collect and convey runoff from the parking lot surface to the newly constructed rain garden/bio-retention area to provide pollutant reduction prior to ultimate discharge of the runoff to Two Mile Run. Prior to these improvements, all runoff from the parking area discharged unfiltered and untreated. LSSE also provided support to the Township's Road Department for BMP layout and survey stakeout.



Rain Garden / Stormwater Facility and Forebay,  
North Fayette Township



# LSSE Clients and Projects

## Civil-Site:

- **Ashley Capital**, Allegheny Co. – LSSE provided civil site surveying and engineering services for the recently completed 316,000 sq. ft. Ashley Capital industrial building complex at Findlay Industrial Park.
- **Chapman Westport**, Allegheny Co. – LSSE provided civil site design and permitting services for a 2,200 LF road extension, infrastructure and utilities for a 90-acre parcel, and full civil site engineering for the 74,000 sq. ft. building pad at Findlay Industrial Park.
- **Almono Hazelwood Redevelopment**, Allegheny Co. – LSSE provided civil site engineering and surveying services to RIDC and MSR Design including preparation of subdivision plans, storm sewer evaluation, ALTA/ACSM Land Title Survey, master grading plan, land development plans for a temporary parking lot, updates to the master plan, and revision of the master stormwater plan. LSSE is providing design development plans, construction documents, specifications, permitting, and construction administration for Phase 1 of the Mill 19 Re-use Development.



Ashley Capital, Findlay Township

## Civil-Municipal:

- Welcome to LSSE's New Municipal Clients – **Moon Township** (Allegheny Co.), and **White Township** (Beaver Co.). In addition, LSSE was recently authorized to provide MS4 Program assistance to **Findlay Township** (Allegheny Co.), **Hopewell Township** (Beaver Co.), **North Huntingdon Township**, and **Rostraver Township** (Westmoreland Co.).
- LSSE was recently contracted to provide GIS services to **Ohio Township**, **Richland Township**, **Scott Township**, and **Sewickley Borough** (Allegheny Co.) and **Center Township Sanitary Authority** (Beaver Co.). Services include implementation of the TRAISR™ asset and infrastructure management system to assist these clients in efficiently managing their municipal infrastructure/assets.



Milling on Broad Street, Sewickley Borough

## Night Paving in Sewickley Borough

For Sewickley Borough's 2016 Road Paving Program, LSSE recommended that the Borough consider both daytime and nighttime work on Broad Street, a busy business/residential street within Sewickley's Business District. The street serves as the main access for traffic coming from the often congested Route 65, as well as from other neighboring communities. Nighttime milling and paving helped reduce the impact to both local residents and businesses. As a result of choosing this method, the Borough saw a cost savings of approximately \$6,000 and the timeframe to complete the paving project was reduced by three weeks. Paving on the project included milling, base repair, binder installation, and wearing course.

## Happiness is a Day at the Pool....Scott Township Pool

Due to accelerated deterioration of Scott Township's former pool, the Township decided to replace the structure for the 2016 season. The Township contracted with a pool design consultant and worked to develop an accelerated replacement plan.

As Scott Township's Engineer, LSSE was retained to provide related engineering and surveying services. The pool replacement project included demolition of the existing pool structure; construction of a replacement pool with a new pump and filter building, storage and chlorination; and related site improvements. Scott Township's new pool opened on schedule in time for Memorial Day weekend in May 2016.



Photo Courtesy of Scott Township

# Client Notices / Tech Notes

## MS4 Update for LSSE Municipal Clients

Current LSSE clients are in year 2, 3, or 4 of the 5-year MS4 permit cycle, depending on when they received their last renewal. The 2016 Annual Outfall Screening is complete and the follow-up investigation findings should be starting to clear any positive hits for Fecal Coliform, detergents, or chlorine. After the screening, each client receives a memorandum describing any positive findings that need to be resolved and recommendations for pollutant mitigation. In addition to the year 3, 4, or 5 testing, a Notice of Intent (NOI) will be due for General Permits on September 16, 2017. Clients will receive notices from the Department of Environmental Protection (DEP) on when their NOI is due to the Department and what, if any, specific requirements exist. In addition to the NOI, clients will likely be required to develop a Pollutant Reduction

Plan (PRP). This plan must be displayed for public comment for 30 days, and be reviewed at a public meeting to address public comments. The plan will provide high level schematics for BMPs, which will be required to provide at least 10% reduction for sediment and 5% reduction for nutrients over the initial five year period. Based on initial discussions with the DEP, this amount of reduction will continue for the next thirty years.



## Tech Notes: What is TRAISR™?

LSSE has been very active in 2016/2017 rolling out TRAISR™ to our clients, under a collaborative business arrangement with McMahon Associates, Inc. A number of municipal clients have either purchased the program direct or signed up through LSSE's Software as a Service (SaaS) agreement. LSSE's clients of all sizes now enjoy the utility of this Geographic Information Systems (GIS) asset management software, as well as the software's permitting and work order modules.

The TRAISR™ software was developed by McMahon Associates, Inc. to provide clients, both large and small, with a scalable, customized program. Clients can track a huge volume of municipal data within one program, including all aspects of permit compliance, as well as

tracking the six minimum control measures (or MCMs) in the community's MS4 program.

LSSE has assisted McMahon in developing the proper forms and applications so all TRAISR™ modules can be customized to meet a multitude of diverse client needs. TRAISR™ is web-based and cross-platform compatible, so it can be accessed and updated remotely from laptops, tablets, and smart phones.

For more information on TRAISR™, please contact Jason E. Stanton, P.E., Principal, or Gwen Zarko, GISP, GIS Manager.

## Flushable Wipes—Not “Flushable” After All

LSSE's municipal client Public Works Departments are being made aware that flushable disposable wipes are, in fact, not “flushable” at all—they are trash. Sewer systems are experiencing “fatbergs”, which are wipes caked in grease that can form a fortified grease ball of enormous size and either clog sewers or pump stations.

The incidence of system clogs has multiplied with the prevalence of disposable wipe products in the past few years. Companies advertise their disposable wipes as “flushable” or “safe for sewer and septic systems,” but independent tests have found otherwise. Multiple articles have been published indicating that after 24 hours, the wipes remain intact. Since the wipes do not disintegrate easily or quickly, they may clog sewage treatment equipment.

While “flushable” wipes can technically be tossed into the toilet and flushed, the “flushable” label as it is currently used, fails to address the issues that arise when flushed.

Another problem with “flushable” wipes is that they are similar in appearance to wipe products that are specifically designed to be disposed of in the trash rather than the toilet. Baby wipes or facial wipes, for example, are typically not labeled as “flushable”, but residents may assume they can be. Both “flushable” and non-flushable wipes may contribute to fatberg clogs.

LSSE recommends that authorities and municipalities educate customers/residents regarding proper disposal methods.



# Employee News

## New Hires

Welcome to: Charles J. Dawson – Environmental Technician; Eric J. Fritz – Assistant Engineer; Donna R. Louis – Engineering Clerical; Joseph S. Shook, Jr. – Assistant Engineer; John W. Valinsky – Resident Project Representative

## LSSE Annual Company Picnic

LSSE's company picnic was held on August 5, 2016 at Moon Park. Awards were given to recognize and thank employees for their years' service as follows: Ned Mitrovich for 20 years; Ryan Gilligan and Emily Palmer for 15 years; Gary Baird, Daniel Biwer, Scott Grogan and Rick Laughlin for 10 years. The picnic included a barbecue, after dinner ice cream stand, and activities such as a softball game, closest-to-the pin golf contest, and cornhole.



*LSSE's 2016 Company Picnic*

## Larry Souleret Retires (Continued from Page 1)

Larry's career involved working for LeHigh Portland Cement Company, Baker Engineers (now Michael Baker International), and just before joining Lennon, Smith Engineering in 1987, he was with Moore, Souleret & Associates. Larry was a Managing Principal in charge of LSSE's Civil Site, Surveying, and Municipal engineering departments, and was directly engaged in project and client management throughout his career.

The activities performed by the engineers, designers, surveyors, and technicians under his direction included studies and detailed design projects for: municipal engineering; commercial, residential, industrial and recreational site evaluation and development; stormwater management; airfields; roads and streets; mine facilities; mine reclamation; water distribution and treatment; wetland delineation and reconstruction; and environmental permitting. Site design included work on brownfields, greenfields, and riverfront developments.

Larry represented LSSE under multiple municipal retainer service contracts including annual municipal roadway programs, stormwater facilities, sanitary sewers, municipal infrastructure upgrades, and parks

and recreational facilities. Under Larry's direction, LSSE provided site design services for over 30 large commercial, industrial, and residential sites comprising over 3,500 housing units.



Larry is a life-long member of the American Society of Civil Engineers (ASCE) and received the ASCE Pittsburgh Section's 2016 Michael A. Gross Meritorious Service Award (pictured on Page 1).

Larry will maintain a part-time working relationship with LSSE for special assignments, but will without a doubt take advantage of his retirement with family and his many hobbies and interests.

***On behalf of all of his partners and the entire LSSE family, we wish Larry the best of the best in retirement!***

# Employee News (Continued)



2016 LSSE Softball Champions



Relay for Life - Fear Fighters



LSSE Light the Night Walkers



LSSE Pirates Game at PNC Park

## LSSE Employee and Community Happenings

### LSSE Monthly Employee Social BREAKfests

In 2016, LSSE implemented informal monthly social breakfasts in our lunchroom to provide the opportunity for employees to interact, new employees to be welcomed, and LSSE's Managing Principals/Principals to give an update on current projects and news.

### 2016 LSSE Tournament

LSSE employees split into two teams to participate in the 2016 tournament which included bowling, beach volleyball, and ended with a softball game at the Annual Picnic. Congratulations to the winners on Team Wright!

### Relay for Life of Murrysville

To support LSSE Principal Kevin Brett's daughter, Jessica Brett, and to raise money for the American Cancer Society, LSSE sponsored the Franklin Regional Relay for Life Team, the Fear Fighters. Jessica's team raised \$1,817 at the relay in 2016.

### Erie Yacht Club/American Red Cross Charity Regatta

LSSE again sponsored Dan Gilligan's A'ile-Muir in the annual Charity Regatta race, held in August 2016, to benefit local disaster relief through the Greater Erie Chapter of the American Red Cross.

### 2016 Light the Night (LTN) Walk

LSSE again sponsored the Leukemia & Lymphoma Society's LTN Walk in Pittsburgh in October 2016. LSSE employees participated in the walk and together with LSSE raised \$4,496 to provide aid to those battling blood cancers.

### LSSE Bike Rides

LSSE's Larry Souleret hosted two bicycle rides on the Montour Trail (selected as the 2017 Trail of the Year by the Pennsylvania DCNR) to encourage employees to get out, exercise, and enjoy local trails.

### LSSE Night at PNC Park

LSSE employees, family, and friends enjoyed an evening at PNC Park in September 2016, which consisted of a tailgate party, Pirates vs. Reds game, followed by fireworks.



A'ile-Muir and crew sailing in Regatta Race



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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.

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