

PER-AND POLY-FLUOROALKYL SUBSTANCES (PFAS)

Background:

Harmful PFAS are a public health and environmental issue facing communities across the United States. PFAS have been manufactured and used in a variety of industries since the 1940s and is/was used in a wide range of products ranging from foam used for firefighting, cleaning products, personal care products and even food packaging. These chemicals were widely used and the components do not readily break down naturally very slowly over time and there is suggestive evidence of carcinogenic potential in humans (US EPA June 2022). Even with a significant reduction in industrial uses of these chemicals in the past 20 years, these chemicals persist in the environment from previous uses and with the resistance to naturally biodegrade these chemicals are being referred to as "forever" chemicals. Because of the duration and historic widespread use, PFAS can be found in surface water, groundwater, soil, and air.

Drinking Water Source of Supply:

Many communities and ecosystems are continuously exposed to PFAS in soil, surface water, groundwater and air. Areas can be exposed due to their proximity to industrial sites, airports, military bases, land where biosolids containing PFAS have been applied, and other sites where PFAS have been produced, used and disposed of.

As historically sampling for these parameters has not been a requirement for community water systems, the amount of PFAS in community water systems is largely unknown as there is a lack of data (US GAO).

There are thousands of PFAS chemicals, current drinking water regulations focus on PFOAS and PFOS with anticipation that this will expand in the future dependent on ongoing federal actions/research on PFAS compounds.

State and Federal Actions for Drinking Water:

In May 2016, US EPA reduced the combined Health Advisory Level (HAL) to 70 ppt (Parts Per Trillion) for PFOA and PFOS. In 2022 US EPA issued interim updated HALs for PFOA and PFOS that are "near zero" (0.004 and 0.02 ppt) and are below current level of detection of current laboratory procedures reporting levels and minimum detection levels. HALs differ from maximum contaminant levels (MCLs) in drinking water regulatory compliance as HALs are not enforceable limits.

In Pennsylvania, a statewide sampling plan was initiated in June 2019 under executive order from the Governor. In June 2021 a press release concluded that the "results do not indicate widespread PFAS Contamination." Nearly 500 water authorities were sampled, results show an average concentration of PFOS and PFOA of 9.9 and 7.5 ppt, respectively. In 2021 DEP issued a proposal to set an MCL for PFOS and PFOA of 18 and 14 ppt.

US EPA as part of UCMR 5 (unregulated contaminant monitoring rule) requires that authorities greater than 3,300 (population served) and some selected fewer than this service population conduct sampling to assist US EPA in providing data that is needed to improve EPA's understanding of

the frequency of these contaminants in public water systems. US EPA has indicated that systems with service populations less than 10,000 people, laboratory analytical costs will be covered by US EPA.

US EPA integrated approach to PFAS is focused on three central directives:

- **Research-** Invest in research, development and innovation to increase understanding of PFAS exposures and toxicities. Human health and ecological effects and effective interventions that incorporate the best available science.
- **Restrict-** Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.
- **Remediate-** Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems. As part of the remediation, the EPA is supporting the federal government to fund remediation projects to areas with PFAS concerns including municipal water treatment systems.

Water Treatment Technologies:

Currently the EPA recognizes three known treatment processes that can be effective for PFAS removal: granular activated carbon, ion exchange resins, and high-pressure membrane systems. The optimal choice between these technologies is a balance between many factors.

Other emerging technologies are being vetted for feasibility for use in PFAS treatment (chemical addition, oxidation, etc.).

The recent federal infrastructure act included \$1 billion in grant funding for use in PFOS/PFOA related drinking water projects. In Pennsylvania this funding is primarily being administered by PENNVEST.

Future Wastewater Treatment Regulations for PFAS Discharges:

Effluent Limitation Guidelines (ELGs) are a powerful tool to limit pollutants from entering the nations waters ELGs establish national technology-based regulatory limits on the level of specified pollutants in wastewater discharged into surface waters and into municipal sewage treatment facilities. EPA plans to make significant progress in ELG regulatory work by the end of 2024 that future NPDES permit regulations may be impacted.

Conclusion:

To break the cycle of contamination and exposure from PFAS, additional research is being conducted nationwide to identify and/or develop techniques to permanently dispose of or destroy these durable compounds. Government agencies, industry, and private laboratories need tools and validated methods to measure PFAS in air, land and water to identify pollution sources, demonstrate facility compliance, hold polluters accountable, and support communities during and after cleanups.



STANTON INDUCTED INTO OLD-TIMERS' 2022 HALL OF FAME CLASS

On August 13, 2022, the Somerset County Baseball Old-Timers hosted their 25th Annual Hall of Fame induction picnic and ceremony at the Stoystown American Legion Post 257 to honor its 2022 Hall of Fame class. Among the nine inductees was LSSE's very own Jason E. Stanton, P.E., a former Meyersdale, Pennsylvania resident and Red Raider.

Jason was one of the first members of the 2022 Hall of Fame class to be recognized in a three-part segment published by Daily American starting on August 9, 2022, highlighting his impressive and awe-inspiring baseball career. Some of these highlights include the successful and "magical" season Jason experienced his senior year of high school in 1990; his monumental career as part of the University of Pittsburgh at Johnstown baseball team from 1991-1995; playing for the Cologne Dodgers in Germany during the summers of 1994 and 1995; and being offered an invitation to the Atlantic Braves West Palm Beach spring training camp in February 1995.



LSSE would like to congratulate Jason on this great achievement. We are honored, and lucky, to have him as part of the LSSE family.

LSSE NOW OFFERING DRONE SERVICES

LSSE is pleased to provide Drone surveying and photography solutions to our clients. This advanced surveying technology provides more surface data in less field time than conventional survey techniques. Use of the drone for existing conditions surveys provides several data points per square foot, creating a "point cloud" of millions of points per survey, from which a 3-D model of the site is rendered. This model allows us to provide clients with precise data not possible with conventional GPS or optical surveying. It also allows us to cover much greater areas in less time, with a typical 40-acre site survey taking hours instead of days in the field. Combining ground control targets with aerial surveys, we maintain high quality surveys of existing ground conditions.

Drone surveying also creates a real-time image of the site as seen from above. Similar to a satellite image, but current to the day of the survey and in higher quality. This orthoimage is useful as a background to design drawings, and as site progress record. It can be produced quickly, on a schedule with development, to provide stakeholders with near real-time visuals of development progress.

Talk to your project manager about how this technology can benefit your existing and proposed land development project.



DJI Phantom 4 Pro Drone

Chapman Lot 300 Point Cloud
41 acres



BALDWIN LIBRARY OPENS IN REPURPOSED/ MULTI PURPOSED LELAND CENTER

On April 1, 2019, Baldwin Borough residents and patrons of the Baldwin Borough Public Library (BBPL) celebrated the library's grand re-opening with a ribbon-cutting ceremony. This event culminated the long-planned process of giving BBPL a permanent home at the Leland Center located in South Baldwin off of Wolfe Drive. In a unique partnership, the Borough provided under-utilized space at the Leland Center to the Library Board to repurpose into an innovative and versatile home while maintaining resources and space for the Borough's Department of Public Works (DPW) snow removal teams. The Borough and the library also shared resources including grant funding support as well strategic construction tasks from the Borough's DPW staff. The library also implemented an aggressive fundraising campaign that include engraved brick paver donations. LSSE provided surveying and grant funding support to the Borough for this effort and wish the Baldwin Borough Public Library Board, the residents and patrons best wishes on fulfilling this long-planned dream.



LSSE SPOTTED ON GOOGLE EARTH

LSSE has been spotted on Google Earth Street View on 661 New Castle Road in Butler County.



LSSE News is published for the benefit of our clients, associates and friends.

www.lsse.com | info@lsse.com

Headquarters Office:

846 Fourth Avenue
Coraopolis, PA 15108

P: (412) 264-4400
F: (412) 264-1200

Westmoreland County Branch Office:

4534 Route 136, Suite 9
Greensburg, PA 15601

P: (724) 837-1057
F: (412) 264-1200

Erie County Branch Office:

10560 Walnut Street
Albion, PA 16401

P: (814) 756-4384
F: (814) 756-5638

Franklin County Branch Office:

5980 Wilcox Place, Suite 1
Dublin, OH 43016

P: (614) 395-1661
F: (412) 264-1200

Managing Principals:

Kevin A. Brett, P.E.

Ned Mitrovich, P.E.

Jason E. Stanton, P.E.

Beaver County Branch Office:

150 Pleasant Drive, Suite 204
Aliquippa, PA 15001

P: (412) 264-4400
F: (412) 264-1200



Visit www.lsse.com

Markets Served:

Municipal
Commercial
Institutional
Industrial
Residential
Utilities and Energy Services

Services Provided:

Civil - Site
Water and Wastewater Facilities
Stormwater Management and Facilities
Geographic Information Services (GIS)
Surveying

GRANTS AND FUNDING UPDATE

We are pleased to announce recent funding awards totaling **\$1,957,102** to our clients:



Active Allegheny Grant Program (AAGP) - Neville Township \$30,000 - Active Transportation Master Plan.

Allegheny County Economic Development (ACED) - Baldwin Borough \$30,770 - North End Demolitions CD Year 48; Pleasant Hills Borough \$71,115 - Municipal Building ADA Sidewalk CD Year 48; Scott Township \$20,000 - Pool Building Chair Lift CD 48 7.5.



Community Development Block Grant (CDBG) - Bridgeville Borough \$20,013 - Triangle Park ADA Walkways; Crescent Township \$20,014 - Shouse Park ADA Improvements; Neville Township \$110,000 - Utah Street Waterline Replacement; North Fayette Township \$20,013 - Point West ADA Ramps.

PA Department of Conservation and Natural Resources (DCNR) - Bridgeville Borough \$272,000 - Cook School Park & McLaughlin Run Park Playgrounds.



PennDOT's Green Light-Go - Moon Township \$156,469 - Traffic Signal Upgrades at Beaver Grade Road and Coraopolis Heights Road; Neville Township \$278,058 - Traffic Signal Upgrade at Grand Avenue and Gibson Lane; North Fayette Township \$133,403 - Signal Upgrade at McKee Road and PTC Road; Scott Township \$295,247 - Traffic Signal Upgrade at Cochran Road and Robinwood Drive.

Redevelopment Assistance Capital Program (RACP) - Moon Township \$500,000 - VFC and Community Center Improvements.



Please feel free to contact Emily A. Palmer, P.E. (epalmer@lsse.com) or Joshua R. Callender, E.I.T. (jcallender@lsse.com) with any questions or for additional information.

FEMA BENEFIT COST ANALYSIS COURSE

On August 24 and 25, LSSE attended a FEMA Benefit Cost Analysis Course hosted by the Pennsylvania Emergency Management Agency (PEMA). The course was designed to instruct grant application writers on how to draft competitive FEMA grant applications and specifically focused on the Benefit Cost Analysis (BCA) section of the application. A BCA is intended to model the cost effectiveness of a project over the life of the final product from construction to replacement. LSSE attended this course as part of the process of improving FEMA grant application skills to compete for additional grant funding through FEMA. FEMA has opened the 2022 Flood Mitigation Assistance (FMA) and Building Resilient Infrastructure and Communities (BRIC) Grant Programs.



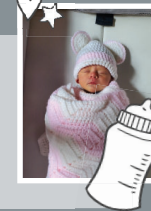
FORT CHERRY DEVELOPMENT DISTRICT IMPERIAL LAND

Beginning in 2017, on behalf of Imperial Land Corporation (ILC), LSSE began due diligence and conceptual master planning on ILC property located in Robinson Township, Washington County. This included surveying services for the approximately 1,000 acres and obtaining the NPDES permit for the entire project area; located along the Southern Beltway (I-576), less than 15 miles southeast of the Pittsburgh International Airport. LSSE worked over the next 4 years with ILC to create an Overall Master Plan consisting of an estimated 6 million square feet of industrial, flex, office and ancillary commercial (e.g. neighborhood retail, lodging, restaurants). The Fort Cherry Development District is projected to generate nearly \$550,000,000 in private investment. In the fall of 2021, LSSE worked with ILC and Robinson Township to obtain Land Development and Subdivision approval for Phase 1 of the overall Campus Boulevard Development. Construction of the roadway and infrastructure started in the second quarter of 2022. LSSE is privileged to continue their 20-year partnership with Imperial Land Corporation and look forward to continuing to contribute to the Fort Cherry Development District.

LSSE's NEWBORNS

LSSE would like to congratulate...

Matthew T. Sopher and his wife welcomed their daughter April Elaine Sopher on May 24, 2022 at 8:36 p.m., weighing 6 lbs. 1 oz.



Carter J. Johnson, E.I.T. and his wife welcomed their daughter Amelia Day Johnson on July 10, 2022 at 6:06 p.m., weighing 6 lbs. 9 oz. and 20.5 inches.

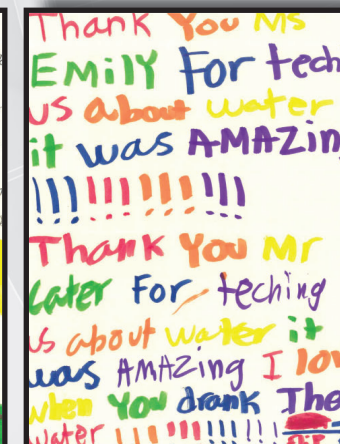
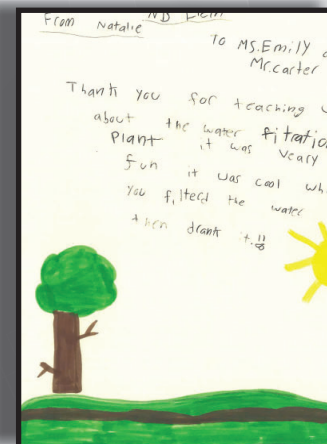


Brian Dalton and his wife welcomed their daughter Brianna Ashley Dalton on July 23, 2022 at 3:04 p.m., weighing 7 lbs. 8 oz. and 20.4 inches.



NEW BRIGHTON ELEMENTARY STEAM DAY

On March 17th, LSSE was proud to participate in New Brighton Elementary School's annual Science, Technology, Engineering, Arts, and Mathematics (STEAM) Day. LSSE's Emily Palmer and Carter Johnson, presented to fourth grade students about "Where Does Our Water Come From?". The students helped set-up and run a water filtration model science kit while LSSE explained the processes. Pictures of real life examples (of which LSSE has many!) of river intakes, water treatment plants, storage tanks, and distribution system models were displayed for the children. The best part for Emily and Carter was the Thank You cards sent from each of the kids. LSSE had a fantastic time preparing and delivering the presentation, and looks forward to their next opportunity to meet with the students and staff of New Brighton Elementary School.



WELCOME NEW CLIENTS!

Municipal Water Authority of the Township of Jenner
Hopewell Township, Washington County

EMPLOYEE SPOTLIGHT

NEW HIRES:

Allegheny County Office (Headquarters):

Brian A. Dalton; Luis Diaz de la Cruz; Raeanne O. Heuler; Peter J. Johnson, P.E.; Richard A. Kauffman, P.E.; Robert Kohnfelder; James K. Minahan; Timothy A. Pedersen; Michael Schafer

Erie County Office (Branch):

Sean H. Dougherty

Westmoreland County Office (Branch):

Daniel P. Moyer

Beaver County Office (Branch):

Benjamin Dumm; Adam J. Hixson

Franklin County Office (Branch):

Robert Gilpin

Welcome
TO THE
TEAM



LSSE's Newly Weds



CONGRATULATIONS TO THE NEWLYWEDS...

Mike Vadas got married on May 28, 2022

Dan Moyer got married on September 24, 2022

We wish you all the best!

LSSE SOCIAL COMMITTEE

On April 28, 2022, the LSSE Social Committee hosted Trivia Night at the Ohio Township Recreation Complex. It was a night full of laughs, comradery and intense competition. Attendees formed four teams: RAMROD, CHIPS, NO LAWS WHEN YOU'RE DRINKIN' CLAWS and SIT ON MY MUNICIPALITY. After five grueling rounds of questioning, team RAMROD came out on top with 121 points.



Looks like Markey and Regan were having a fun time at Trivia Night!

