

Spotlight

A publication of Spotts, Stevens and McCoy



AUGUST 2020

SPOTTS | STEVENS | MCCOY

Our work touches everyday life.

From the water you drink to the air you breathe to the buildings and communities where you live, work and play.

Spotts, Stevens and McCoy is a family-owned regional engineering, environmental, and surveying firm serving local and global clients. We engineer solutions for a better world. Our work touches everyday life; from the water you drink, to the air you breathe, to the buildings and communities where you live, work and play.

EXPERTISE

- Building Engineering
- Site and Civil Engineering
- Survey, Data Capture and Modeling
- Water and Wastewater Engineering
- Construction Phase Services

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From the water you drink to the air you breathe to the buildings and communities where you live, work, and play.



A refreshing glass of water.

On the surface, it's filled with nothing but H₂O. Thinking deeper, you'll see that a lot more has gone into it. Such as protecting the purity of reservoirs, aquifers, wellheads, and springs. Rehabilitating abandoned wells. Using hydrogeologic modeling to calculate the impact of proposed development on source water and surrounding terrain. Using GIS to manage complex and voluminous environmental databases. Tailoring solutions for municipalities and water suppliers, and getting clean water to communities, buildings and faucets. Into every refreshing glass of water goes a lot of deep thinking.

At SSM, we believe in protecting, developing, and managing water resources for future generations. Our Water Resources team takes great pride in making water happen, protecting water resources, and providing the greatest care to our supply sources every single day.

August is Water Quality Month. And so this month we challenge you to take a little bit of extra time to think about that refreshing glass of water. Or, that clean shower stream. Or, the water bodies you might enjoy for recreation.

Enjoy your water this month! It's been sourced with you in mind.

Our Favorite Movies About Water: Finding Nemo | Jaws | Titanic | The Perfect Storm | Erin Brockovich | On Golden Pond | A River Runs Through It



Meet a Team Member

Ashton Prifer is a Water Resource Specialist in our Water Resources department.

Describe what you do:

We figure out how water flows on and through the earth, and use that information to help our clients manage, use, and protect their water.

What's the neatest part of your job?

The work that we do touches every person in a community, whether or not they know the work is being done. Everyone relies on and is affected by how their community manages water.

And for a more nerdy take- It's fun to figure out how we can represent and recreate the complexities and fluidity of water in the rigid equations, models, and geospatial software that we use in our work.

What's something you wish people know about water resources?

In reality, water isn't divided into neat categories like "storm water", "drinking water", "wastewater", etc. It is one cycle, continuously flowing, and we simply encounter and use it at different stages in its cycle. What we do with our storm or wastewater directly impacts our downstream neighbors' recreational and drinking water.



Got Water?

A case for making water supply a before thought, not an afterthought.

Water supply can derail a project. That's the blunt point we're here to make. At SSM, we've seen development plans be entirely transformed, due solely to the lack of pre-planning water supply needs.

It's not uncommon to think of water supply like one would think of electricity or other utilities. Build the building, design the space, and connect the water- right? Wrong. Not thinking of your water supply first or in the earliest stages can threaten the entire project.

Your number one question in your earliest stages of development should be: "Where is the water coming from?"

Here are a few priorities that outline why consideration of your water supply from the very beginning is absolutely essential. You'll see that the process of making water happen in your space can not only be a very long one, but could be very impactful to your initial project goals. If we, your water resources team, come in late our options become limited and our hands are increasingly tied. Getting a hydrogeologist in early, before breaking ground even happens, means that your project results in the way you envision it, on a timeline that works for you, and with your end goals at the forefront.

Source of Supply

The first key to identify is whether your operations will utilize public water supply or your own self-supply. While a public supply might be the easiest to access and the timeliest option, it often comes with many other considerations. For example, depending on your intended usage you might be facing high tapping fees. This comes in when your usage capacity requires the public supply system to charge you for over and above the cost of just the water. For example, if your capacity requires the system to get a more robust infrastructure set up- you will pay for that improvement. We have seen organizations ill-prepared for this cost of implementation and wishing they had considered a self-supply instead. While a public system might be the fastest way- just setting up a tap- it might not be the most effective or best option for you.

A self-supply, on the other hand, may be a better option as it eliminates these tapping fees. However, establishing a self-supply is a project in and of itself that extends over a long period of time. So, identifying your plan before even breaking ground on your project is essential.



Got Water? *Continued*

Your Needs

An initial consideration in finding a water source is establishing and articulating what your specific needs are. Not only will this be key to identifying a public- or self- source, but it will also be a critical first step in the development of your self-supply.

Identifying your needs provides a baseline, answering questions such as “How many aquifers will you need? Is one suffice or will several be necessary?” Questions such as these ensure development happens correctly and you’re not left to deal with expensive problems down the line.

Siting & Feasibility

The next goal of establishing a self-supply is finding the optimal location. Our experts will help with this- don’t worry. Site exploration and feasibility studies ensure that sites are prime, optimal, and can produce what you need to produce.

This process will require some exploratory drilling. Here is where the water supply begins to unfold. This is considered exploratory because while we’re confident in our experts’ skills and capacity to identify a prime location- no expert completely knows until we see exactly what’s going on underground. So, we use all of the data, the science, and the technical expertise we have to identify our most confident and precise location. Then, exploratory drilling will confirm or identify a better location for your supply to exist.

Testing and Regulations

For a self-supply to be legitimately utilized, it must then go through an extensive route of testing and permitting to comply with regulations.

Water from the source must be tested multiple times over an extended period of time to ensure adequate water quality. Completion of this is required before you may begin to use this water supply for your operations. While the identification of the supply location may be over, this is the period where timelines can extend as very specific intervals between testing is required.

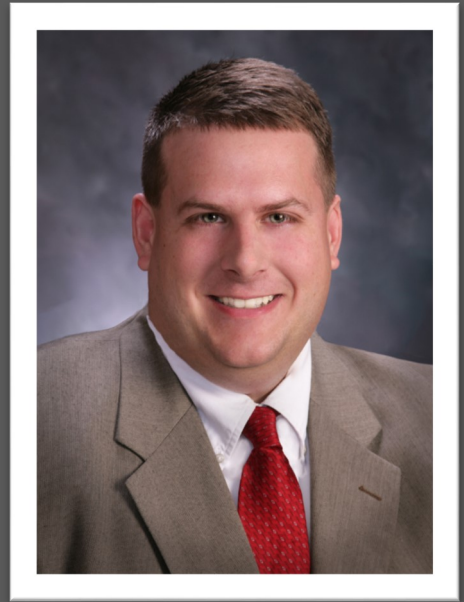
Ownership of a self-supply also comes with other specific regulations that must be considered. Here’s an example: if your water supply is used strictly for industrial processes, versus consumed by people (break rooms, bathrooms, etc.), your permits and who and what you need to operate will differ. The same is true for whether or not the people using your water are considered transient or non-transient meaning they will be in contact continuously or not. Depending on the size of your system you might also be required to have a licensed operator on your site to run and manage your water system.

Thinking Ahead

Having your own water supply can prove to be a great asset to your operations. Often times we think of water as just something that’s always there. And if it’s not right there, that’s okay we’ll just dig and get it. But, it just isn’t that simple. Always make sure to think of this from the very beginning of your planning stages. This way, you are able to have the most effective system in place when you need it.

It’s the best decision to bring in your water resources team from the very beginning of your development process, so that you can get everything you need and in the fashion you need it.

We love water, and we love making water happen. But, we hate seeing organizations or projects disrupted because water supply wasn’t a before thought, but an afterthought.



Meet a Team Member

Jason Newhard, CMIT is a Construction Services Administrator in our Water and Wastewater Services department.

Describe what you do:

We help supply the water you drink, use for baths and give to your pets. Without us, the world would be a dirtier place to live.

What brought you to this line of work?

Water is in my blood- literally and figuratively. My father was a small town Municipal Authority Manager and used to take me out on after hours calls with him when my mother worked night shift at the hospital. The water business stuck with me.

What’s the neatest part of your job?

Consulting and working on the same water system I grew up drinking and my family still consumes.

What’s something you wish people know about water resources?

Water is the cheapest utility we have, but the most vulnerable to pollution and environmental influences. Another thing to know is that “spring water” you buy at the grocery store is almost always municipal water!

Commonwealth Financing Authority Announces Grant Awards

The Pennsylvania Department of Community and Economic Development announced this month the approval of grant funding for both water and sewer projects as well as new water infrastructure improvement projects through the Commonwealth Financing Authority.

SSM assisted several municipal and municipal authority clients in completing grant submission requirements and obtaining grant funding through both the **PA Small Water and Sewer Program** as well as the **H2O PA Program**.

We helped our clients acquire \$1,708,865 in project funding!

[Muhlenberg Township Authority - Interceptor Replacement](#)

SSM helped secure a \$100,000 H2O Grant for replacement of a gravity sewer interceptor. Replacement of the interceptor will reduce levels of inflow and infiltration and will allow the authority to maintain the capacity of sewage conveyance.

[Manheim Area Water and Sewer Authority - Sanitary Sewer Rehabilitation Project](#)

SSM assisted with grant preparations and submission, securing \$422,865 in Small Water and Sewer grant funds. For this project, the authority will continue rehabilitating a 30" diameter interceptor pipe.

[North Coventry Municipal Authority - Sewer Replacement and Sewer Repairs Project](#)

The Authority secured a Small Water and Sewer grant for \$325,000 with the assistance of SSM in grant submission. This funding will be utilized to support replacement of a deteriorating sewer pipeline as well as repairs to a sewer pumping station.

[North Coventry Water Authority – Water Main Replacement](#)

SSM helped obtain \$175,000 in funds for improvements to its water system. Among these improvements include continuation of efforts to reduce leakage from its water distribution system; elimination of lead pipe, joints and services in the system; and enhancement of the reliability of service to customers.

[Oley Township Municipal Authority - Wastewater Treatment Plant Headworks Upgrade Project](#)

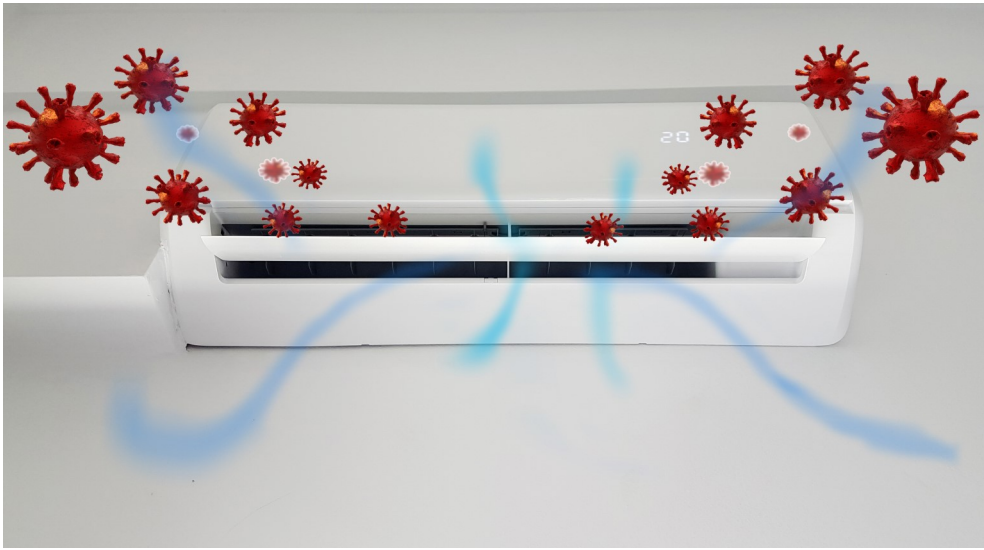
SSM aided the Authority in securing \$250,000 in H2O Grant funding for a WWTP Headworks Upgrade Project. The modifications and upgrades to the wastewater treatment plant will improve the treatment process.

[Oley Township Municipal Authority - Sewer Collection System Televising and Manhole Rehabilitation Project](#)

The Authority also secured \$100,000 in Small Water and Sewer Grant funding with the assistance of SSM for ongoing inflow and infiltration work to reduce flows and hydraulic constraints within the sewer collection system. This project will include televising the sewer system to determine areas of the collection system that need rehabilitation.

[Perkiomen Township Municipal Authority - Sanitary Sewer Rehabilitation and Replacement Project](#)

The Authority was granted \$236,000 for assistance in funding the proposed sanitary sewer rehabilitation and replacement project. SSM assisted in preparation and submission of the PA Small Water and Sewer Grant application materials. The project is expected to include over 4,000 linear feet of sanitary sewer cured-in-place pipe lining as well as the replacement of two manholes and one sanitary sewer line. All of this is expected to save the authority considerably in terms of transportation and treatment costs, allowing customers to avoid an increase in sanitary sewer rates. This project is also expected to create a long-term solution to existing systems nearing the end of their useful life.



A Note About COVID-Proofing Your Air

Call it “Murphy’s law”, “sod’s law” or just an unintended consequence, but making seemingly appropriate adjustments to building operations in the time of COVID-19 should be taken with caution and advice from technical experts.

We are hearing from so many people that they are seeking basic tips and guidance on making their buildings safer/healthier in light of COVID-19.

But it just isn’t that simple. Unfortunately, over-simplification of the measures to be taken can give building owners and occupants a false sense of security.

For example, a broad directive to increase outdoor air as a means of increasing air flow can lead to mold growth in your facility. The hope is it would be in a place that you can recognize it. The reality is it very well won’t be.

As we see a focus on mitigating the airborne spread of COVID-19, we also see an increase in over-generalized guidance that neglects the details that accompany these recommendations.

For example, implementation of HEPA filtration could reduce airflow or require costly system modifications. Or, increasing outdoor air could mean increasing cooling and heating capability. On the other hand, “local” attempts with supplemental equipment may prove challenging or ineffective depending on the structure and organization of your space. (Think about all of the obstructions in your space to fully circulating your air.)

Amid all of the recommendations currently circulating, the best and foremost recommendation we can provide is to seek advice from technical experts in the decision making process of your building’s modifications.

Remember that guidance is only intended to *guide* discussion as it relates to your unique facility. We say unique because there is no specific solution that meets the need of every building. Instead, modification and operations should be specifically tailored to the demands of your facility, the capacity of your system, and the health and wellbeing of your people and operations.

Neglecting to consult a technical expert can lead to many unintended consequences, the likes of which negate your intentions to keep your people, your building, and your operations safe and well. We are thrilled to see operations and facility managers taking an invested interest in the air quality of their spaces. But, modification should not be made without expert knowledge.



Give us a call.

If you need a team, our mechanical engineers are here, ready to help, utilizing guidelines distributed by the Centers for Disease Control (CDC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

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Director, Mechanical Engineering

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WIFTA PENNVEST Lead Line Replacement Initiative

The Water Infrastructure Funding Transfer Act (WIFTA) was signed into law on October 4, 2019, temporarily expanding the Clean Water to Drinking Water State Revolving Fund (SRF) transfer authority specifically to address lead-related threats to public health in drinking water. PENNVEST anticipates approximately \$93 million may be subject to the SRF transfer and available in the form of principal forgiveness loans to address remediation of lead in drinking water in the Commonwealth.

Eligibility

- Drinking water system or facility owners or operators are eligible to apply, provided they are otherwise authorized to make application under the PENNVEST Act. The system or facility may be privately or publically owned or operated.
- Drinking water projects otherwise eligible under the PENNVEST Act with adequately mapped and designated lead line replacement areas are eligible. The replacement must be a full line replacement for both the public and private sides of laterals ending at the homeowner's foundation to be eligible.

The deadline for this initiative will be February 3, 2021.

For more information about the program: <https://www.pennvest.pa.gov/Information/Funding-Programs/Pages/Lead-Line-Replacement.aspx>

PENNVEST Announces Small Project Initiative (SPI) Funding Program

The Pennsylvania Infrastructure Investment Authority (PENNVEST) board of directors recently approved a new funding opportunity for lower-cost water quality projects, allowing for accelerated funding approval. The Small Project Initiative (SPI) is available statewide and is designed to efficiently support repairs, short-term construction for water, wastewater, non-point source and stormwater improvements.

SPI funding is available for public or private entities with a maximum award amount of \$500,000 in low-interest loan funding. Projects must address a service area of less than 12,000 people or incorporate less than 1,000 system hook-ups. The program allows PENNVEST staff to perform appropriate reviews and render a decision targeted at two weeks, rather than requiring approval at a quarterly board of directors meeting.

A more detailed explanation of the Small Project Initiative can be found at <https://www.pennvest.pa.gov/Information/Funding-Programs/Pages/Small-Projects.aspx>.



Give us a call.
We are ready to help.

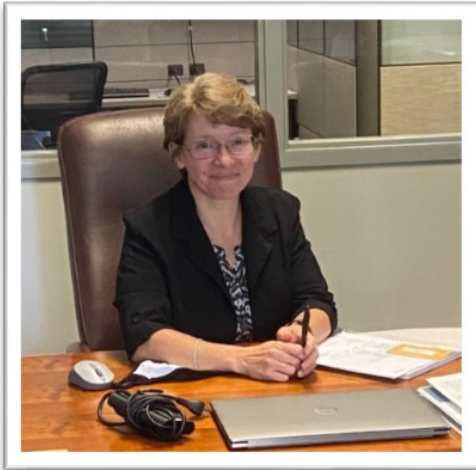
Ralph E. Johnson, PE
Vice President, Environmental
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Welcome to the Team!

This month we welcomed several new team members to SSM.



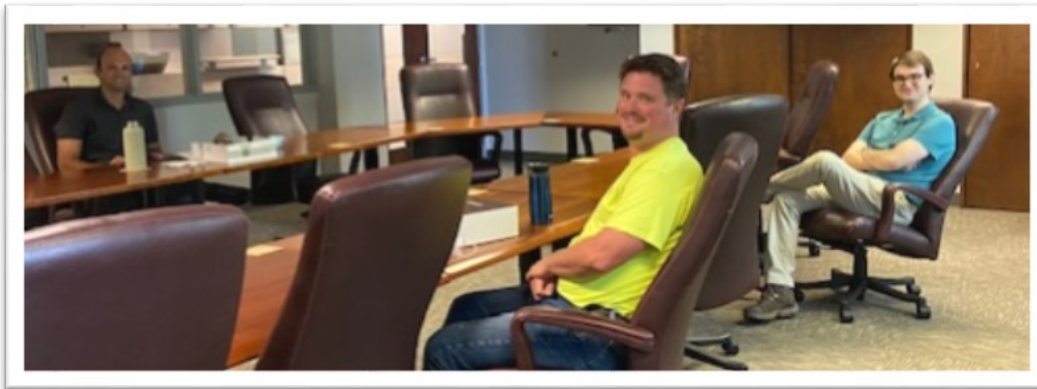
Molly Dixon
Project Coordinator
Environmental Division



Jackie Johnson
Proposal Coordinator
Marketing Department



Seth Nace, PE, LC, LEED AP
Senior Engineer
Electrical Engineering



Cameron Knight
Survey Technician
Surveying and Data Capture



Kate Lyons
Transitioned from intern to Graduate Geologist
Energy Services

Opportunities at SSM - join the team!

Visit ssmgroup.com for more information about these opportunities:

- Land Development Engineer
- Project Representative/Construction Observer
- AutoCAD/REVIT Drafter
- Survey Crew Chief
- Structural Engineer
- Director, Water and Wastewater Engineering
- Senior Water Engineer
- Project Manager