

The background features the Bowles Rice logo, which consists of a stylized map of the United States. The map is composed of several overlapping shapes in shades of blue and yellow. The top right portion of the map is yellow, while the rest is in various shades of blue. The text 'Bowles Rice' is positioned in the upper right area of the map.

Bowles Rice

VIEWS & VISIONS

BOWLESRICE.COM

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Mark Wolinsky serves as Manager of the North Strabane Township Authority. He is a certified wastewater treatment plant operator, a member of the Western Westmoreland Municipal Authority Board of Directors, and a long-time member of the Water Environment Federation and Pennsylvania Water Environment Association. Over the last 35 years, Wolinsky has worked in various capacities in the municipal wastewater industry, including the Hempfield Township Municipal Authority, Cranberry Township, and as Executive Director of 3 Rivers Wet Weather, a nonprofit environmental organization created to address the region's wet weather overflow problems.

Water, Water Everywhere

Unlike our cousins out west who are watching Lakes Mead and Powell evaporate before their very eyes, and who are on the verge of impending civil water wars, we here in Southwestern Pennsylvania generally experience rich water resources – occasionally a bit too much, mind you, causing localized flooding, and occasionally a bit too little, giving the farmers a headache. But, by and large, we should not complain too much on the water front. That's a good thing.

Yet, management of the various forms of water still presents a day-to-day challenge to those tasked with providing clean drinking water to residents, or reclaiming wastewater from homes and businesses for safe discharge to waterways, or dealing with stormwater issues and MS4 regulations. And with more and more development in the region, combined with more and more regulations imposed by the regulatory folks (PFAS anyone?), the challenges become even more onerous and expensive.

In Southwestern Pennsylvania, municipal and private entities deal with these various forms of water in various ways. Often, we have water providers that treat and distribute potable water; sanitary authorities that collect, convey, and treat wastewater; and municipal governments that are tasked with stormwater management. Sometimes these responsibilities are consolidated under one roof, but often times separate entities, with somewhat conflicting goals, are performing these important functions. The workers at these separate entities are way too busy dealing with their own issues to worry about what the other folks are doing. *Is this the best way to do it?*

One problem wastewater system operators constantly battle is what is known as I&I

(Infiltration and Inflow). Infiltration is groundwater that seeps into the sanitary sewer system through holes, cracks, and faulty joints or connections in the underground pipes. Inflow is stormwater that rapidly flows into sewers from directly connected sources such as downspouts and foundation/driveway/yard drains from private residences and businesses, as well as storm drain cross-connections and holes in manhole lids.

Combined, I&I can account for almost half of the annual flow to a wastewater treatment facility. This can lead to problems in treating the wastewater and/or cause sanitary sewer overflows. Inadequately treated wastewater or sewage discharging from a manhole may then flow into a river, where downstream is





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the intake of a potable water system. And though drinking water treatment plants are very capable of making the water safe, they may have to work a little harder to do so. This cascading effect – excuse the pun – is an example of the interactive nature of those tasked with the different aspects of water management.

Further, while the wastewater folks try their best to rid their systems of excessive I&I, the following example illustrates how solving one problem may lead to other issues. Most local

sanitary authorities work hard to eliminate I&I from their wastewater systems. As noted above, a great deal of I&I comes from private homes and businesses. In order to determine if there are illegal sources of surface or stormwater entering their sanitary sewers, dye tests are performed on homes and businesses at the time of sale. Let’s say a dye test identifies a sump pump or driveway drain illegally discharging to the sewer line. The authority, therefore, sends the homeowners a nice letter that says they must disconnect that source of

I&I before they can sell the house. The homeowner, not being a professional in the field, says, “Ok, but where shall I then direct that water?” The authority says, “We don’t care how you do it, just get it out of our sanitary sewer line.” The homeowner then redirects the sump pump discharge into their side yard, and during the next hard rain the water erodes away the neighbor’s hillside or ends up in the neighbor’s basement. Of course, the neighbor then calls the local municipality to complain about their poor stormwater management. Ugh – our own little civil water war.

To avoid such incidents, it is becoming more and more crucial that these separate entities charged with water/wastewater/stormwater management reach out to each other and work together for the common good, with an earnest eye toward the future to provide sensible, efficient, cost-effective solutions to the myriad challenges of water, water everywhere. **▼**