

# BAILIWICK NEWS

Reporting and critical analysis of State College public affairs

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## **Regional planning and municipal zoning as they relate to water, sewer, land use, housing development and population growth.**

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This is the first installment of an intermittent series on regional planning and municipal zoning as they relate to water, sewer, land use, housing development and Penn State enrollment-driven population growth. The series is currently organized into seven proposed sections.

**Section 1: Ecological Frameworks.** This section will give an overview of how water flows into, under, through and out of the Nittany Valley watershed, feeding the main waterway: Spring Creek. It will look at the non-human infrastructure that surrounds us: the unique surface and underground karst limestone geology that make safe land and water use planning so crucial to our region, and to downstream communities from Bellefonte and Milesburg to the Chesapeake Bay.

**Section 2: Technical Frameworks – Water.** This section will give an overview of the technical systems that collect groundwater through wells, pumps, pipes, treatment plants, and tank storage, and deliver it to homes, schools, hospitals, churches and businesses.

**Section 3: Technical Frameworks – Sewage.** This section will give an overview of the technical systems that collect water and sewage through sinks, toilets, bathtubs and other drains, and convey the flow to sewage treatment plants. It will cover hydraulic flow, nutrient loads, temperature differentials; how the discharge infrastructure releases treated water into Spring Creek and the University Area Joint Authority beneficial reuse system, and into state gamelands through Penn State's spray irrigation system; and how sewage processing facilities convert treated sludge into finished compost.

**Section 4: Political Frameworks.** This section will give an overview of the governing documents that address regional planning. There are two main ones. The Centre Region Comprehensive Plan was most recently updated in 2013, and includes the "Regional Growth Boundary" line, intended to steer development to existing public infrastructure at existing densities. The Centre Region Act 537 Plan – required by state law under the Pennsylvania Sewage Facilities Act of 1966 and enforced by the state Department of Environmental Protection (DEP) – was most recently updated in 2006 and includes the "Sewer Service Area" line, also intended to steer development to existing public infrastructure.

This section will unpack the enforcement mechanisms for each planning document, the category of "Developments of Regional Impact" and the political procedures used to review and approve such developments, along with the governing structures of the State College Borough Water

Authority, the University Area Joint Authority (UAJA), municipal zoning frameworks, COG planning frameworks, and Penn State Office of Finance and Business, and how those political entities interact with each other.

**Section 5: History of Centre Region Comprehensive Plans.** This section will drill down into the interplay of the main regional planning document and municipal zoning decisions that have either upheld or undermined it, as evidenced in actual housing growth in recent decades. It will look at the 2000 Centre Region Comprehensive Plan, then at two municipal zoning decisions in 2004 – in Patton and Ferguson townships – that violated the regional planning protocols over the objections of regional planners and concerned citizens. This section will conclude with an overview of the 2013 Centre Region Comprehensive Plan that's currently in effect, and how it relates to the 2015 "collegiate overlay" zoning decision in State College.

**Section 6: History of Centre Region Act 537 Plans.** This section will examine how the PA-DEP sets and enforces public water quality standards. It will look at how Centre Region sewage management systems fit with other Centre County systems. It will look at the history of mergers and overlapping service areas, especially between the UAJA and Penn State systems with respect to sewage flow produced within the Borough of State College. It will look at changing discharge limitations as they've evolved from 1969, when the UAJA treatment plant was put into service, to the present, with respect to both water discharge and sludge treatment and disposal. It will conclude with an overview of the wastewater treatment alternatives examined in the mid-1990s, which led to the selection of the beneficial reuse program, and how Centre Region Council of Governments (COG) and UAJA are now looking at expanding the beneficial reuse system.

**Section 7: Financial Frameworks.** This section will look at who pays for public water and sewer infrastructure, and how, including costs for ongoing maintenance of existing systems, and costs for expanding and upgrading systems. Financing mechanisms include rates paid by users – both volumetric or commodity-based billing, and capacity-based billing structures. Public authorities also pay for infrastructure through borrowing, with municipal guarantees that the loans will be paid back by taxpayers. Developers pay tapping fees, which may or may not be passed on to end-users of new housing through higher rents and higher purchase costs, pushing working class families out of the housing market. This section will also explore how upzoning and housing growth pressure drives up land prices, pushing young farmers out of the market for arable land.

This section will conclude with a look at burden shifting in at least two ways: the shifting of costs from private developers to public taxpayers, and the generational shifting of costs from older residents to

younger residents, when upgrades and expansions are funded by long-term public debt.

## PRELIMINARY CRITICAL ANALYSIS

The Centre Region Comprehensive Plan is updated by the Centre Region Planning Agency and endorsed by the COG roughly every 10 years. Alone, it's not strong enough to protect the watershed and the taxpayers from overdevelopment, because regional planning frameworks are voluntary. To work, they must be implemented with strong, enforceable and *enforced* municipal zoning laws.

Similarly, the municipalities can't feasibly get ahead of Penn State enrollment to the point where new housing exceeds demand and drives down rents to improve affordability for working class (non-student) renters. Penn State's leadership can and historically does increase enrollment to keep it above the local housing supply, because those leaders collude with developers to flip land, pressure municipalities for zoning changes that increase allowable density, and then split the profits from high rents paid by students using student loan financing. Penn State and housing developers have many incentives to keep pushing enrollment above a growing housing supply.

The direct result of Penn State enrollment growth and weak municipal zoning ordinances and enforcement is the last decade's wave of sprawl in the surrounding townships and now high-rises in State College Borough.

Within this context, regional elected officials – who are none-other than municipal elected officials working together through the mechanism of the COG General Forum – are grappling with rising cost pressures for water and sewage system management for which the constituent municipal boards themselves are primarily responsible.

Two traditionally-unquestioned key assumptions are 1) that developers of private land are entitled not only to build and inhabit the structures they wish to build, but are also entitled to public resources, primarily water and the local ecosystem's waste absorption capacity, and 2) that current elders are entitled to obligate younger residents to long-term debt.

Regional elected officials can begin to challenge these assumptions by adding downzoning (from higher density to lower density) plus projected legal fees to craft and defend those downzoning decisions – to the matrices through which they evaluate costs and benefits of proposed strategies to steward regional water supplies and waste absorption capacity.

## SECTION 1 – ECOLOGICAL FRAMEWORKS

Looking at a 2009 Spring Creek Watershed map published by the Spring Creek Watershed Commission, the Spring Creek Watershed Association, and ClearWater Conservancy, Spring Creek starts east of Boalsburg, picking up water from Blue Spring on the way to Oak Hall, where it joins Cedar Run, which is fed by Linden Hall Spring. Spring Creek then winds through Lemont.

Slab Cabin Run starts near Pine Grove Mills and winds along Route 45, picking up water from Windy Hill Farms Spring, Musser Gap Run, and Roaring Run from

the Shingletown area. Contributing water to the SCBWA Harter and Thomas wells as it passes, Slab Cabin Run flows on to Millbrook Marsh, picking up more water from Thompson Spring and Bathgate Springs and joining Spring Creek at Spring Creek Park.

Spring Creek then runs north picking up flow from UAJA discharges, Benner Spring and Paradise Spring (at Fisherman's Paradise) into downtown Bellefonte at Talleyrand Park. At that point, it takes up the flow from Logan Branch, which is coming in by way of Pleasant Gap, picking up flow from Axemann Spring, Cerro Spring and Big Spring on the way.

Now with flows from Slab Cabin Run, Roaring Run, Cedar Run and Logan Branch, Spring Creek heads further north, picking up flow from Buffalo Run which winds along Route 550, to Milesburg. There, Spring Creek joins Bald Eagle Creek. Bald Eagle Creek flows northeast into the West Branch of the Susquehanna River at Lock Haven. The Susquehanna River then flows south through Harrisburg to the Chesapeake Bay at Havre de Grace.

The 1996 Centre Region Planning Agency Wastewater Treatment and Disposal Alternatives Study noted: "Unlike other major population centers in Pennsylvania, the Centre Region is located in the headwaters of two watersheds which both contain high quality cold water streams that make significant contributions to the community's quality of life. The Region does not have the advantage of being near a large body of water which can receive the Region's treated wastewater," unlike other population centers such as Pittsburgh, Philadelphia and Harrisburg.

The key dilemma was summarized in an Oct. 1997 CRPA supplement study focused on beneficial reuse of treated water. "Approximately 100 MGD [million gallons per day] of groundwater passes through the Spring Creek Watershed, exiting the watershed at Milesburg... However, with an average flow of approximately 45 MGD, Spring Creek can be significantly affected by the [treatment plant] discharge." The CRPA summarized the dilemma:

- As the area grows, groundwater withdrawal will increase, reducing baseflow.
- Increased groundwater withdrawal results in more wastewater to treat and discharge.
- Since baseflow is dropping, the wastewater discharge becomes an increasingly larger portion of Spring Creek's total flow.

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