



Lycoming County Comprehensive Plan Update 2018

Land Use and Resource Management

AT A GLANCE

The Land Use and Resource Management chapter of the 2006 Lycoming County Comprehensive Plan drew upon twelve categorical topics related to Lycoming County's existing land use patterns, development trends, and resource (both natural & cultural) management. These topics were identified in relation to the County as a whole or at a broader – regional level. All of the topics that were profiled in 2006 are still relevant and have the potential to greatly impact the County in terms of land use policy and community character. The following topics were noted by the Planning Advisory Team as being of particular importance because of significant changes in legislation, progress in project implementation, or because the issue is integral to defining the character of our communities:

- Major Transportation Initiatives
- Open Space Preservation
- Ag Preservation
- Concentrated Animal Feeding Operations
- Floodplain Management
- Oil & Gas (New Topic)
- Telecommunication

Since adoption of the 2006 plan, new regulations (Oil & Gas, Stormwater Management, and Wind Energy) have been implemented or impacted by new legislation, a renewed focus of state agencies enforcing existing legislation, and innovation which has created or expanded use types. Land use regulations must continuously be reviewed and updated in order to permit/regulate these activities to minimize negative impacts on neighboring property owners, steer development towards areas with available or planned infrastructure, and implement the community's ever evolving vision of what it would like to become.

The two newest legislatively driven uses that all jurisdictions should consider for potential additions to their ordinances include the 2016 legalization of medical marijuana (Medical Marijuana Act - SB 3) and the 2017 expansion of Commonwealth's casino gambling law (HB 271) which will now allow for satellite casinos and permit gambling in certain airports and truck stops.

The County/Municipal Land Use Jurisdiction and Administration Tables in Appendix C illustrate

the County's 52 municipalities which have been grouped into the three rural planning areas of the County, as well as the six multi-municipal PAT planning areas. The tables show those which administer their own respective land use ordinances (SLDO, zoning, stormwater management, development in the floodplain, oil & gas uses, and medical marijuana), and those which are administered by the County staff.

2006 Comprehensive Plan

Categorical Topics in Land Use and Resource Management:

- *Ridgetop Development*
- *Steep Slope Development*
- *Land Use/Interchange Impacts from Interstate 99*
- *Agricultural Preservation*
- *Open Space Preservation*
- *Concentrated Animal Feeding Operations*
- *Junk/Salvage Yards*
- *Floodplain Management*
- *Groundwater Quality*
- *Susquehanna River Opportunities*
- *Scenic Resources*
- *Cultural Resources*

MAJOR TRANSPORTATION INITIATIVES

I-99 Update: The 2006 Comprehensive Plan described the future development of Interstate 99 as a project that may provide local municipalities with additional land development opportunities, particularly around both existing and new interchanges. However, such opportunities also pose challenges in terms of mitigating the potential negative impacts on community character and coordinating growth with existing and proposed infrastructure. Current land use regulations will need to be reviewed and updated to specifically deal with the highway interchange development once funding has been secured and design has started for the upgrade on US 220 between Jersey Shore and Williamsport.

The 2013 Long Range Transportation Plan explains that portions of I-99 have already been officially designated along US 220 between I-76 PA Turnpike at Bedford and I-80 in Centre County, however several major corridor improvements and design exceptions still need to be addressed to further extend the route designation.

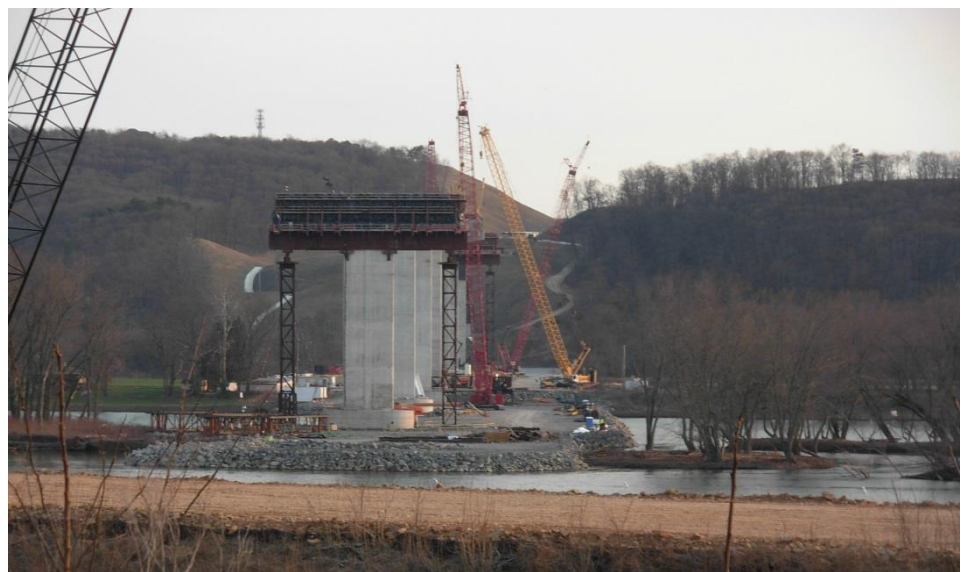
With Congress abolishing the Appalachian Development Highway Program in the MAP-21 legislation removing a vital federal funding source to complete these Appalachian corridor segments P and U (See Appalachian Development Highway System map for more detail)— it appears unlikely that the I-99 project will see completion in the near term. Nevertheless, the Williamsport Metropolitan Planning Organization (MPO) continues to support completion of I-99 within Pennsylvania.

While waiting for additional funding to continue this multi-phased project and seeking guidance on design criteria for portions of the project, Lycoming County and its municipal partners should still perform the following proactive measures:

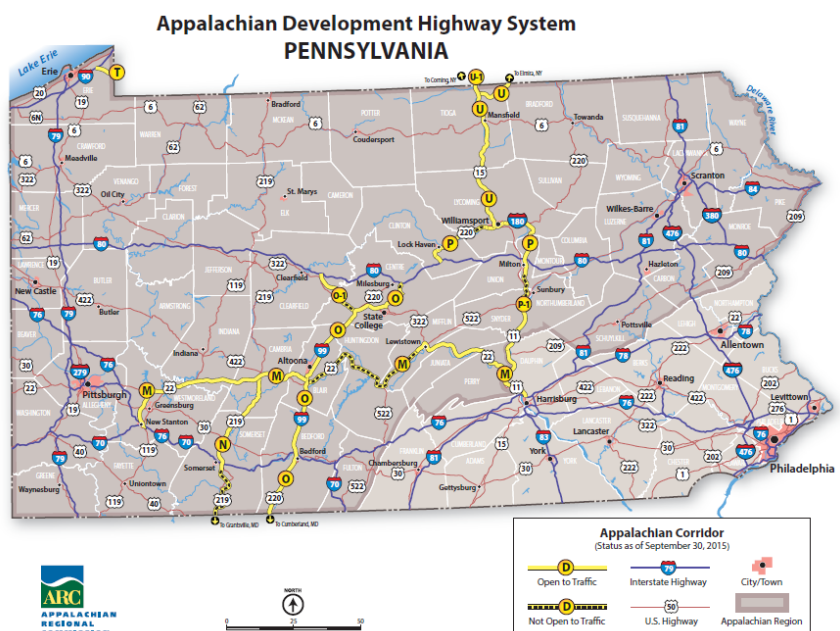
- Guide development to areas of existing or proposed infrastructure
- Encourage new development that would enhance local communities
- Minimize/mitigate environmental impacts from new highway development

Central Susquehanna Valley Thruway: The CSVT project entails phased construction of a new 12 mile long modern four lane limited access highway system. It will connect I-80 near Milton with US 11/15 just south of Selinsgrove with a bypass around congested Northumberland Borough and a major bridge crossing over the Susquehanna River near Winfield. The completion of CSVT has the potential to impact Lycoming County in multiple ways.

While the extent and nature of the impact from this project is hard to accurately define, the potential shift of traffic volumes (and the attendant possibility for commerce) from the US-15 South planning area to those communities located in the Montoursville–Muncy & Muncy Creek Planning Areas could provide additional economic development opportunities in one corridor while reducing those opportunities in others. To better understand the land use impacts of the CSVT project and the actions that should be taken, please refer to Issue #5 in Chapter 3 of this plan and in the following Multi-Municipal Comprehensive Plans: Montoursville – Muncy (Issue #3), Muncy Creek (Issue #6), and US-15 South (Issue #6).



The bridge portion of CSVT near Winfield from as viewed from Route 147
Source: PCD

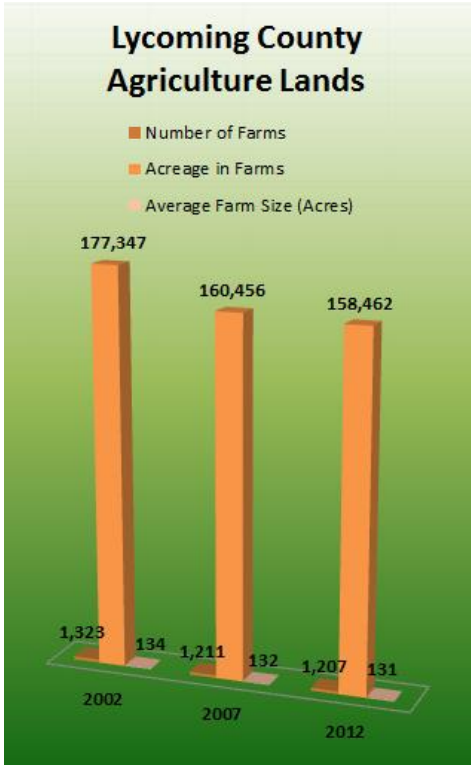
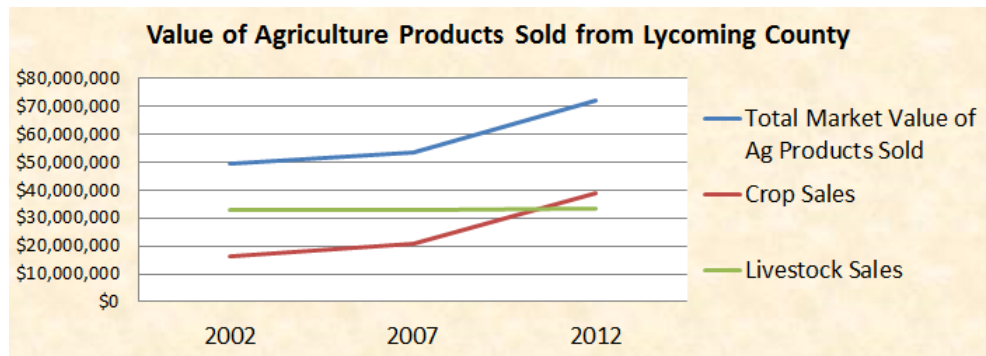


Pennsylvania Portion of the Appalachian Development Highway System
Source: Status of the Appalachian Development Highway System

OPEN SPACE PRESERVATION

Agriculture Profile: The USDA provides updated agricultural related statistics every five years with the most recent being the 2012 Census of Agriculture reference document.

Although the number of farms and the total amount of farm acres has decreased over time, the total value of agriculture products sold from Lycoming County producers has increased 32% over a ten year period. Some speculate that the Marcellus natural gas boom in the County contributed to a loss of farmed acreage through gas development occupying farmland or longtime farmers selling off lots for purposes other than farming as a source of income. Conversely, the additional income generated through gas well leasing may have enabled some farmers to invest in equipment upgrades and undertake needed capital improvements to modernize their operations. According to the 2016 PA Comprehensive Freight Movement Plan a steadily growing international demand for U.S. food products offers another explanation for the increased product pricing and sales.



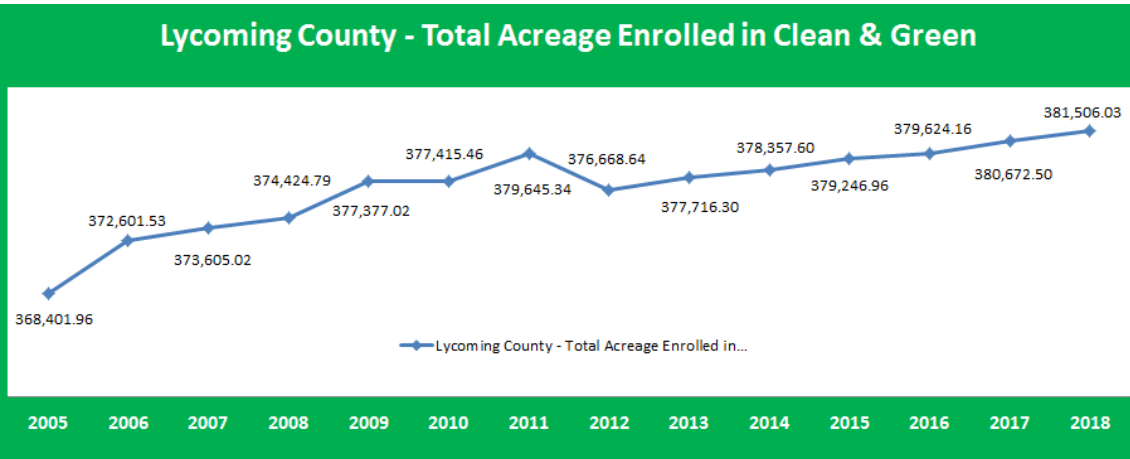
Open Space Conservation: The conservation of forested and agricultural land within Lycoming County is critical to preserve the quality of existing habitats and ecosystems, recreational assets, and our agricultural heritage.

The North Central Pennsylvania Conservancy (NCPC) plays a large role in Lycoming County by preserving lands for conservation purposes. The NCPC encourages open space preservation in two ways. First, by being a pass-through entity for landowners to donate or sell their lands to land holding organizations like the Commonwealth of PA or municipalities. Second, by being an entity that acquires and manages conservation easements through their Conservation Easement Stewardship Program. Throughout Lycoming County, the NCPC holds approximately 1,535 acres (an increase of 382 acres since 2006) in conservation easements which have been acquired through its stewardship program.

Agricultural land preservation is seen as an important facet of Lycoming County’s overall conservation efforts. County landowners continue to show interest in taking advantage of programs such as agricultural conservation easements, Clean and Green enrollment, and by grouping lands together to form Agricultural Security Areas. The Lycoming County Conservation District reports that nearly 10,000 acres have been permanently preserved through 79 agricultural easements.

The Clean and Green program benefits landowners with properties containing 10 acres or more by utilizing a “preferential” or “use value” assessment of the property’s value rather than the typical “fair market value,” resulting in a reduction of tax liability for the land owner. This preferential land valuation

is utilized as an incentive to keep agricultural and forested land contiguous and limits development to those uses which are consistent with characteristics of open space and agricultural operations. Although Clean and Green acres enrolled in the County had seen a slight drop between 2011 and 2012, there has been a steady increase with landowners still taking advantage of the program, with about 381,500 acres protected in 2018.



OPEN SPACE PRESERVATION (CONT'D)

Open Space Conservation (cont'd):

A landowner(s) may also voluntarily propose to designate an Agricultural Security Area (ASA) which defines an area of 250 acres or more of agricultural land. The proposed area can be made up of any number of noncontiguous parcels, as long as each contains at least ten acres and has an anticipated yearly gross income of \$2,000 or more from agricultural production. Enrollment in this program affords farmers a higher level of legal protection against nuisance complaints and enforcements brought by nearby land owners and local laws/ordinances (unless they bear a direct relationship to public health or safety).

Agricultural preservation is not just about preserving farmland and open space; it is also about preserving a way of life and a major component of our community character. In addition, the Commonwealth has also enacted several pieces of legislation to help protect farmers from nuisance suits and overly restrictive local regulations. The PA 1982 Right to Farm Law protects agricultural activities which are considered “normal agricultural operations” from nuisance suits and local ordinances which may impede the typical farming practices. Further protections were afforded with the passage of The Agriculture, Communities, and Rural Environment (ACRE) Act of 2005 which provides a legal tool to help farmers challenge local ordinances that interfere with normal agricultural operations as defined by state law. These laws contribute towards a sense of stability in the farming community, but can also be viewed as preemptive to communities that have very little recourse when they are faced with agriculture related problems and nuisances that may be considered outside the normal agricultural occurrences, such as insect infestations and pervasive environmental complaints.

A Trend in Agriculture:

Sustainable agriculture continues to be an emerging concept that brings together science, technology, and environmental stewardship to ensure that the agriculture community has profitable businesses contributing towards a robust economy. Many Lycoming County farms have started down the sustainability road by implementing agricultural best management practices (BMP) with the help from the Lycoming County Conservation District, USDA-NRCS, and the Farm Service Agency – such as Hilltop Farm in Loyalsock Township which is owned by Harold and Joan London. Implementing agricultural BMPs will aide in:

- Building and maintaining healthy soil
- Managing water wisely
- Minimizing air, water, and land pollution
- Promoting biodiversity

Other keys to sustainable agriculture include diversification in more than one of the agriculture sectors or having non-agricultural supplemental income.

There are also technologies being used by the agricultural community to maximize both the use of land and production that help towards sustainability, such as renewable resource energy production, concentrated animal feeding operations (CAFOs), agroforestry, and agroecology.

Agriculture Sectors

- Crop Production
- Animal Production
- Food & Beverage Processing and Manufacturing
- Forestry Production
- Forestry Processing
- Landscaping



*Drone Photo of the Hilltop Farm in Loyalsock Township
Source: Lycoming County Conservation District*

Case Study: Hilltop Farm

Hilltop Farm, with its 50-head beef cattle operation, was recently honored as the 2017 Cooperator of the Year by the Lycoming County Conservation District for using many agriculture BMPs to improve water quality leaving their property and for being an agriculture advocate. Some of the BMPs used are:

- Comprehensive Nutrient Management Plan
- No-till Planting
- Cover Crops
- Access Road & Animal Trails and Walkways Stabilization and Erosion Control
- CREP Forested Riparian Buffer
- Manure Stacking Facility
- Heavy Use Area Protection
- Spring Development
- Conveyor Belt Diversions
- Rock-lined Waterway

OPEN SPACE PRESERVATION (CONT'D)

Each farm has unique physical characteristics that could be used to its advantage for renewable energy production and reducing operating costs over time. A livestock producer may choose to use a manure digester for heat. A hill top farm could use windmills or solar panels to lessen electric bills or for running pumps to irrigate crops and aerate ponds. Farms that feature streams can use mini-hydroelectric systems. On a varied scale, these technologies can be used in Lycoming County to power individual agriculture related systems or an entire farm operation.

Municipalities should review their land use controls to allow farmers flexibility to have multiple types of uses on their property and to promote the use of sustainable agriculture practices.

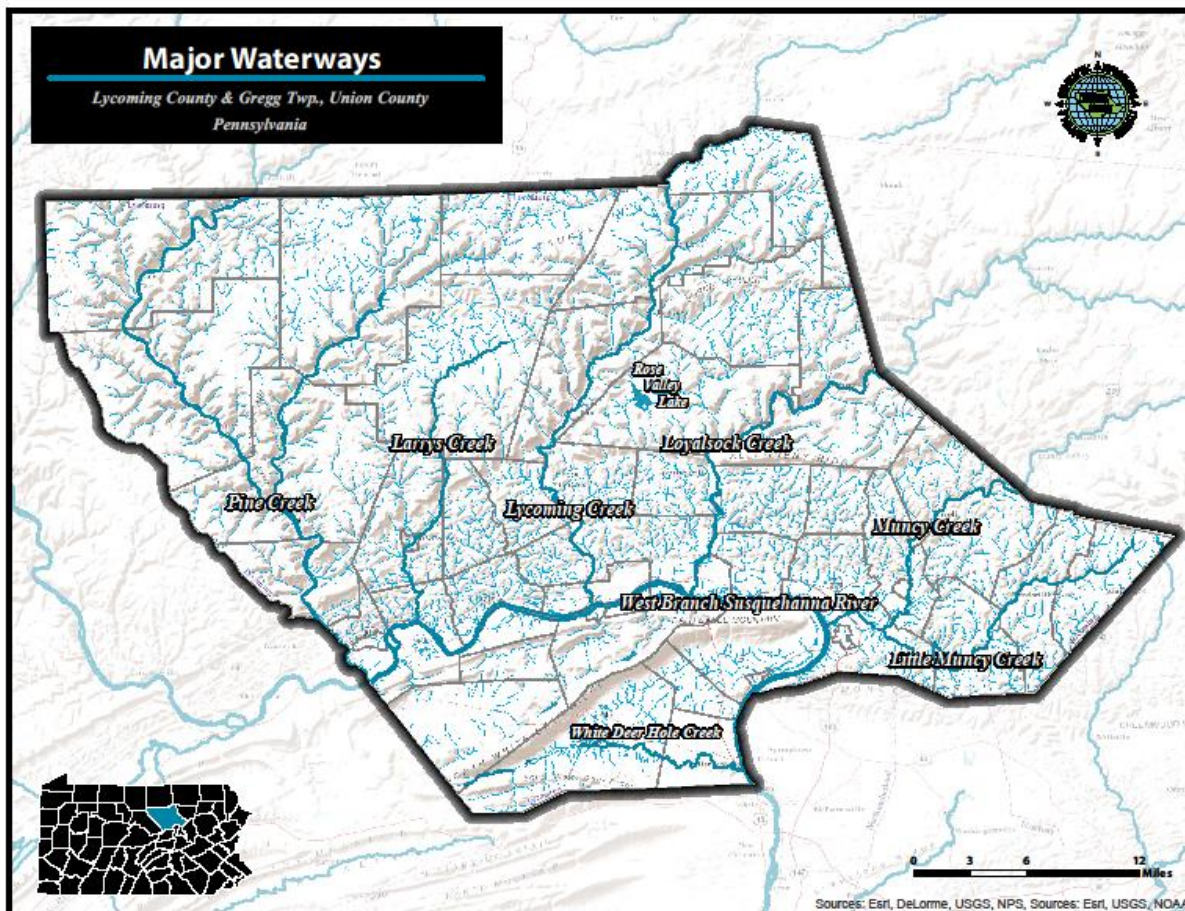


14.4 kW Agricultural Roof Mount, Kintnersville, PA
Source: Paradise Energy Solutions, LLC

FLOODPLAIN DEVELOPMENT AND REGULATIONS

Introduction: The County of Lycoming lies entirely within the Susquehanna River Basin, one of four major drainage basins in Pennsylvania. Over 2,200 miles of streams traverse the County, which was settled long before land use controls and floodplain regulations were in place. The County’s most populated watershed is the West Branch of the Susquehanna River, which flows throughout the County for a distance of 38 miles. The West Branch and its seven major tributaries within Lycoming County can be seen on Major Waterways map below.

Lycoming County Floodplain Regulation Current Status: Floodplain management regulations and zoning ordinances have a profound impact on shaping future development within flood prone areas. Through the administration of these ordinances, municipalities can ensure that all new



construction (or substantial improvements to existing structures) in the regulatory floodplain are designed to minimize the impact of flooding, thereby increasing the resiliency of the entire community. Most of our oldest and densest population centers are located along the West Branch Susquehanna River. Given their locations, these communities have a high vulnerability to the impact of flooding. By following floodplain regulations, citizens and business owners within the floodplain are constructing safer buildings that will also have lower flood insurance premiums due to NFIP-compliant construction practices.

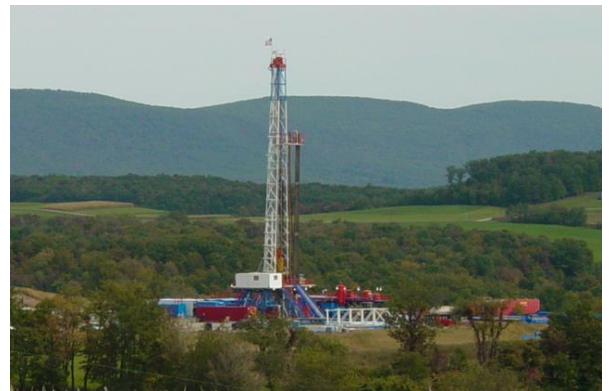
FLOOD DEVELOPMENT AND REGULATIONS (CONT'D)

The National Flood Insurance Program (NFIP) and the Pennsylvania Floodplain Management Act (Act 166 of 1978) established minimum floodplain management criteria. A municipality must adopt and enforce these minimum criteria to be eligible for participation in the NFIP. All 52 municipalities in Lycoming County have enacted floodplain ordinances and have updated their floodplain management ordinances as part of the recent 2016 FEMA RiskMAP project. Communities must, at a minimum, meet the NFIP requirements – but are encouraged to implement higher regulatory standards. When effectively prepared and administered on a consistent basis, the implementation of these regulations will result in the decrease in flood related damages reported after a significant storm event.

The County has made it a priority to steer future development away from the Special Flood Hazard Area (SFHA). The County, through collaboration with municipal officials, will use zoning to concentrate and guide development within the identified growth areas; restore natural floodplains through acquisition and demolition; preserve open space, natural resources, and farmland; and coordinate land use development to provide for mixed use development and brownfields redevelopment.

OIL AND GAS

Overview: Due to technological limitations and market forces, the subject of oil and gas development was not an issue that was profiled in the 2006 Countywide Comprehensive Plan. However, with the innovation of extraction techniques, the relatively accessible Marcellus Shale Formation, oil and gas exploration and extraction activities have since increased exponentially. It should be noted that industry presence within a community can fluctuate significantly in short periods of time. Being that the industry is driven by market forces, the resultant development activities have been quite volatile. Recently the pace of development has slowed as profitability decreased and demand was limited by the lack of existing supply infrastructure and end users. Current trends indicate that companies are presently focused on drilling additional wells on previously established well pads. These trends may change dramatically as companies are able to capitalize on the expanded pipeline distribution network which will dramatically broaden the market of potential customers.



*Natural gas well pad during the drilling stage
Source: PCD*

Going forward, while contemplating this industry's impact on Lycoming County, emphasis should be put on ensuring that appropriate zoning jurisdictions provide for the use, identify ways of protecting open space and community character, and encourage pipeline collocation where possible. For more information pertaining to which jurisdictions have an oil & gas ordinance, refer to the County/Municipal Land Use Jurisdiction and Administration Tables in Appendix C.

Protection of Open Space: Despite the passage of legislation known as PA Act 13 in 2012 (which preempts many facets of local land use control), Lycoming County has been able to create a legally compliant zoning ordinance amendment that balances the need to protect the health, safety, and



*Natural gas pipeline under construction with a natural gas well pad
Source: PCD*

welfare of its constituents – while not being overly prohibitive to development. To understand the impact that this industry can have on our County, consider the following statistics provided through research conducted by the Penn State Extension:

- On average, a standard oil and gas well pad will have an impact of roughly five and a half acres.
- As of 2016, Lycoming County had 865 wells on an estimated 230 well pads and associated water retention ponds for a disturbed area more than 1,100 acres.
- This does not account for the area disturbed by the pipeline infrastructure associated with the well pads.

By encouraging practices such as pipeline collocation, employing steep slope protection standards, and requiring that developments meet certain performance standards – communities have taken steps to preserve community character and lessen the impacts of this new industry within Lycoming County.

TELECOMMUNICATIONS

Legislation Impacting Land Use: There are several major pieces of legislation and rulings at the state and federal levels which mandate restrictions on how local government reviews wireless siting applications. The first of these is the Federal Telecommunication Act of 1996. However, parts of this regulation were unclear which prompted the Federal Communications Commission (FCC) to publish two pieces of guidance: the 2009 FCC Wireless Shot Clock Order and the FCC Report and Order of October 21, 2014. The Federal Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act) provided further clarification and regulation in regards to local reviews of wireless siting applications.

While these pieces of legislation hold several provisions which are important to local land use reviews, the most important aspect is the mandated shot clock for application review timeframes. The Commonwealth of Pennsylvania also passed the Pennsylvania Wireless Broadband Collocation Act (Act 191 of 2012) which also mandated a shot clock for application review (which includes a “deemed approval” provision if the application is not acted on within 90 days) as well as broadening the definition of “Wireless Support Structure” to include a myriad of vertical structures.

Changes Since 2006: 4G wireless service was introduced in 2011 and deployed across the Nation and Lycoming County in subsequent years. This technology was developed to accommodate the exponentially growing demand for wireless data. Deploying this technology required the industry to add new antennas to a variety of infrastructure including existing cell towers, tall buildings, water towers, and a variety of other vertical structures. Wireless providers also erected new towers in some areas where vertical infrastructure did not exist or could not support wireless antennas.

Relevant Trends Going Forward: The next trend on the horizon for telecommunications land use is the upcoming deployment of 5G technology and the need to fill existing coverage gaps. 5G communications technology is being developed to answer the need for more data. As our technology improves the amount of data we use increases exponentially. It’s estimated that by 2020 there could be more than 24 billion smart devices on the planet or 4 to every person. These will vary from smart phones and laptops to automated vehicles, sensors fulfilling a variety of functions, and unmanned aerial vehicles.

Worldwide data traffic is projected to increase sevenfold between 2016 and 2021 at a compound annual growth rate of 47%. 5G technology is still in development, but industry projections target 2021 as being the likely start date for deployment, with large cities being the first to receive the technology. Small Cells, cellular transmitters with a smaller range and capacity, will be a critical piece of infrastructure for this technology in order to take the load off of the existing wireless network. As legislation continues to be put forth concerning how this industry can be regulated, local land use officials will need to consider how to lawfully review these development proposals in their respective jurisdictions.



*Cellular antennae collocation utilizing existing vertical infrastructure has allowed cellular providers to provide coverage without building new towers in urban environments.
Source: PCD*

*Increased network efficiency is needed to accommodate the next generation of mobile devices. The term Hetnets refers to Heterogeneous Networks or the ability for networks to accommodate a variety of devices utilizing different operating systems.
Source: www.Strategyr.com*