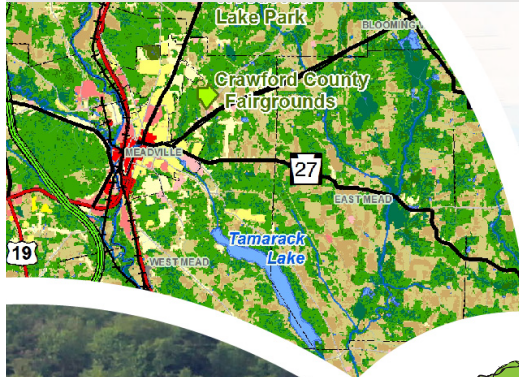


# 2014

## COMPREHENSIVE PLAN



Cultivating  
**CRAWFORD**  
Growing a Community



# ACKNOWLEDGEMENTS

The preparation of this plan would not have been possible without the guidance and contributions of the Crawford County Planning Commission and the Steering Committee, as well as the input given from local residents and officials. We would like to thank and recognize the following people for their efforts to make the plan possible:

## County Commissioners

The Crawford County Commissioners: Francis F. Weiderspahn, Jr.; Jack P. Lynch; and C. Sherman Allen

## Planning Commission

The Crawford County Planning Commission: Robert Moyers, Chair; Robert Klasen, Vice Chair; Scott Sjolander, Secretary; Mark Nickerson, Treasurer; Louis Gago, Roy Brant; Kate Preston; Dick Astor; Lynn Cressman.

Former commission members who assisted during development of the plan: James Becker, Chris Seeley, Kathy Comp; Dale Shreve; Jim Hubbard.

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## Stakeholders

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Gary Johnson, City of Meadville  
Mark Nickerson, CCPC  
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Visitors Bureau

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## Interviewees

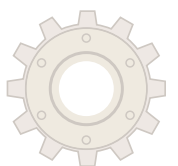
Michael Arthur, Professor of Geoscience, Penn State University; Maria Anderson Dreese, Erosion and Sedimentation Control Technician, Crawford County Conservation District; Kurt Hausammann, AICP, Director of Planning and Community Development, Lycoming County; Paul McCloskey, Vice President of Energy, Clearfield County Economic Development Corp.; Joy Ruff, Community Outreach Manager, Marcellus Shale Coalition; Jerry Walls, FAICP, Community Planning Consultant and former director of planning, Lycoming County; Erin Wells, Local Government Liaison, Northwest Region, Pa DEP .

## Professional Consultants

The plan was prepared in partnership with the county by Pashek Associates, Ltd.

**PASHEK ASSOCIATES**

LANDSCAPE ARCHITECTURE | DESIGN | PLANNING





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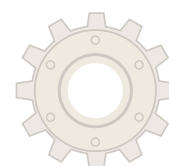
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*Appendix A: Survey Results*

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# INTRODUCTION

The Crawford County Comprehensive Plan is a document that, in a variety of topics, describes a series of goals and visions for the future of the county and its municipalities as well as the means to achieve them. A comprehensive plan is a policy document that sets priorities for protecting and enhancing quality of life throughout a county, community or group of communities. The plan's development is guided by the Pennsylvania Municipalities Planning Code (MPC). A comprehensive plan is shaped by thorough discussion and collaboration. Through these discussions the county developed a vision, goals, and strategies for implementation. County plans are unique because they set county-wide priorities that influence the municipalities within the county (per the MPC, local plans should be consistent with the county comprehensive plan). Because of this requirement, a county comprehensive plan must both be general enough to anticipate and plan for county-wide trends and specific enough to include recommendations that provide meaningful and beneficial outcomes.

An implementable comprehensive plan focuses on:

- a. A few key issues identified by leaders and residents;
- b. Specific strategies to guide implementation;
- c. Building capacity to ensure implementation occurs.

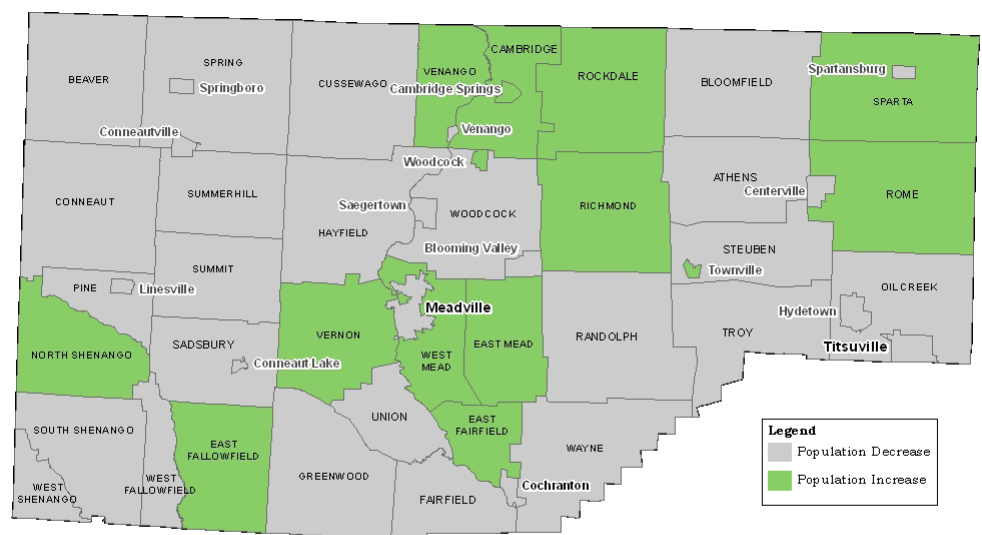
With thoughtful planning, public engagement and capacity building positive changes can take place in the County.

## County-wide trends

Before we begin to consider the future of Crawford County, it is important to take stock of the existing conditions and the trends of the recent past. The important figures and evidence that follows help to develop an informed picture of the county today.

***Crawford County's population declined almost 2% over the last decade.*** Population declined in the county. The population of Crawford County decreased from 90,366 people in 2000 to 88,765 in 2010 according to the US Census Bureau's Decennial Census.

### *Population Change by Municipality Census year 2000 to 2010*



SOURCE: US CENSUS DATA 2000 & 2010

Pashek Associates

***The most significant population gains are concentrated in 4 areas of the county.*** Cambridge Springs Borough, Cambridge Township, Rockdale Township, and Richmond Township together increased



in population by 568 people over the decade. Sparta and Rome Townships combined to increase the county's population by 187 people. The Townships surrounding Meadville (Vernon, West Mead, East Mead, and East Fairfield) added 235 people to the county's population. East Fallowfield increased by 186 people between 2000 and 2010.

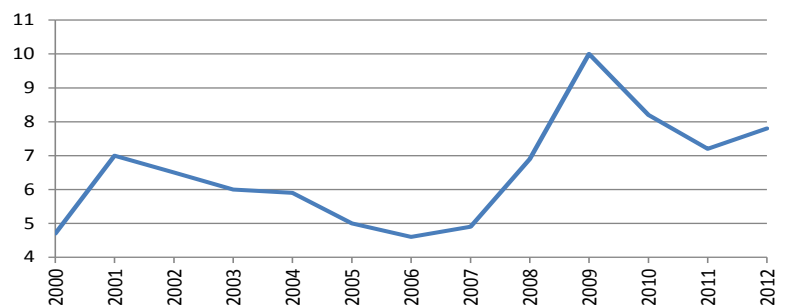
**The greatest population losses over the decade occurred in Meadville and Titusville.** While the county's two cities lost large populations, 7 rural townships also experienced population declines of greater than 100 residents including: Summerhill, Summit, Hayfield, Woodcock, Bloomfield, Steuben, and Troy.

**Housing condition and development has tracked population trends.** Older homes in cities and villages experience increasing maintenance needs. Many residents have vacated dilapidated homes in these more densely populated areas. Meanwhile, newly developed housing with modern amenities in suburban townships has attracted residents to the areas surrounding cities and villages.

**The economic downturn that hurt the nation beginning in 2007 did not spare Crawford County.**

Unemployment figures over the last 12 years highlight the effects of the economic downturn on the county. Unemployment has decreased slightly in recent years, but has not returned to the rates of 2000-2006. Like many other areas of the country, manufacturing and retail trade took a large hit during the economic downturn. Between 2000 and 2010 manufacturing employees in the county dropped from 8,994 to 6,604 per the U.S. Census Bureau's County Business Patterns. Retail employees decreased from 4,122 to 3,532.

**Crawford County Unemployment Rate (December)**



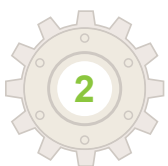
**The health care and education industries are on the rise in Crawford.** This trend is not unlike that of many other communities where the health care needs of aging residents are fueling this industry. The health care and social assistance industry gained more than 700 employees, jumping from 4,373 in 2000 to 5,098 in 2010. Educational services also increased from 1,922 to 2,190 over the decade; likely a feather in the cap of educational resources such as Allegheny College and the University of Pittsburgh - Titusville Campus.

**Development of recreational amenities has focused on trails and the county park.** Recent efforts to enhance recreational amenities in the county have focused on the development of trails such as the Ernst Trail, Queen City Trail and East Branch Trail. The County has also focused planning and development efforts on Woodcock Lake Park (formerly known as Colonel Crawford Park). Some communities in the county, such as Titusville, are undertaking individualized planning efforts to enhance recreational amenities.

**Agriculture is the largest sector of rural employment in Crawford County.** Data from the Center for Rural Pennsylvania states that 57% of the working population's primary occupation is farming. The 2007 Census of Agriculture found 1,468 farms in the county encompassing 232,093 acres, nearly 10,000 more acres and 50 more farms than was reported in 2002.

**Transportation planning in Crawford County has previously centered around the development and implementation of four studies.** These studies include: the 1995-1996 East / West Corridor Needs Study (Assessment); the 2001-2003 Meadville Bypass Study; the 2004 322/6/19 CCIP (Congested Corridor Improvement Program); and the 2005 Titusville CCIP (Congested Corridor Improvement Program).

**Crawford County is one of the few counties in Pennsylvania to not have a county-wide subdivision and land development ordinance (SALDO).** Many counties adopt these basic land development regulations to provide protection for municipalities that cannot administer these ordinances themselves.



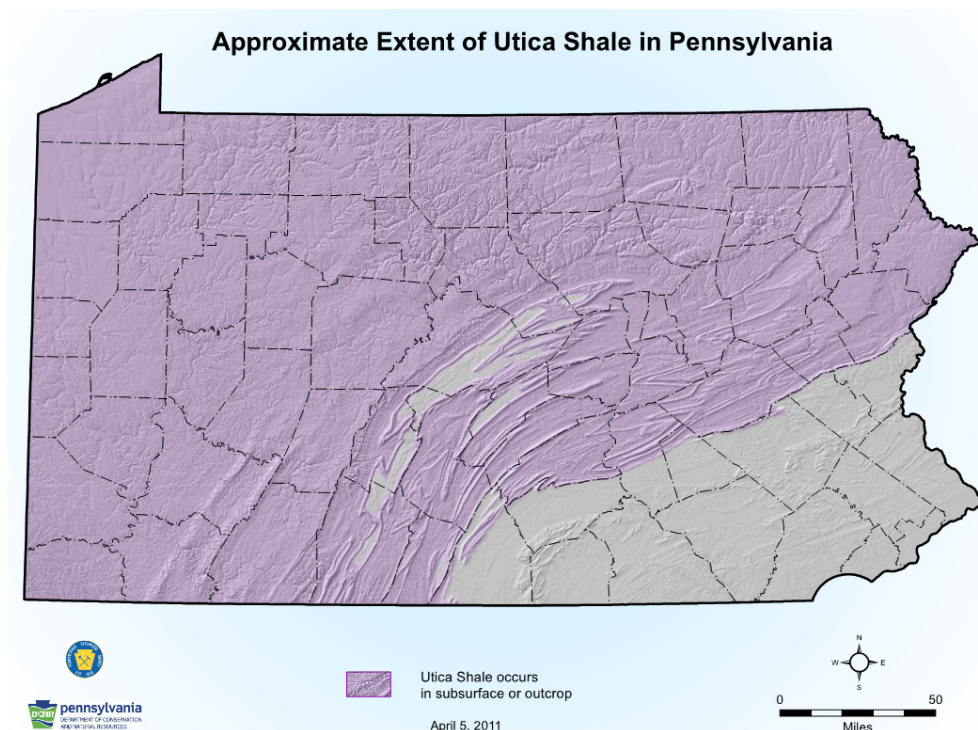
# The Oil and Gas Industry in Crawford County

Eight years ago, hardly anyone in Pennsylvania thought much about geology, and even fewer could have named the shale rock formation that underlies a large swath of the state. At the onset of this planning effort the consultant was told that natural gas extraction was not an issue and would not impact our planning. What a difference a few years make. The presence of natural gas deposits in the Marcellus Shale, made accessible by horizontal drilling, propelled exploration and production through western, central and northeastern Pennsylvania.

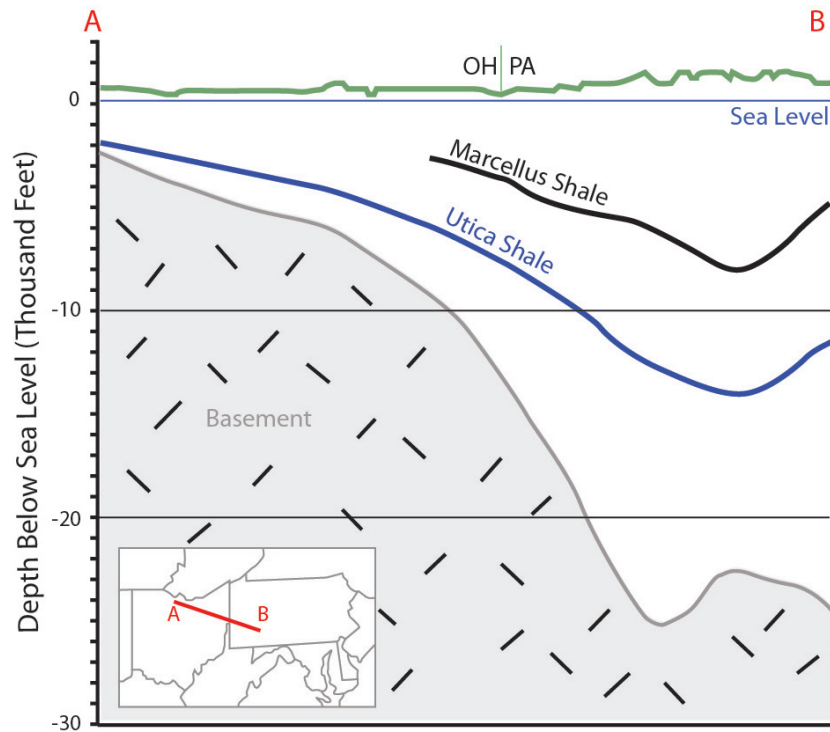
It turns out that Marcellus Shale could be just the first wave of natural gas extraction in Pennsylvania, as oil and gas companies now begin to consider the layers of shale and limestone that are below the Marcellus Shale. Under the Marcellus Shale is an older rock formation called Utica Shale. And under that is a shale-and-limestone layer called the Point Pleasant Formation. Geologists believe both of these rock formations contain extensive natural gas resources.

The Oil and Gas Industry is not new to Crawford County, Pennsylvania. In 1859, Edwin Drake started drilling on leased land south of Titusville, near what is now Oil Creek State Park. After many difficulties, he struck oil, launching the modern oil industry in the Oil Creek Valley, and changing the world forever. Although the “Oil Boom” in Titusville and the rest of the Oil Region has subsided somewhat, Titusville has launched a campaign to “Come Back To Where It All Started.” The Titusville Professionals Shale Gas Team has led the charge in an effort to return this region to prominence in the Oil and Gas Industry. In 2014, the Titusville Area Shale Strategic Plan was completed as a guide and a resource to accomplish this goal. For more information, please refer to the Titusville Area Shale Strategic Plan, which is available for review and download on the following websites: [www.tcda.org](http://www.tcda.org), [www.titusvilleshale.com](http://www.titusvilleshale.com), and [www.cityoftitusvillepa.gov](http://www.cityoftitusvillepa.gov).

Both the Utica Shale – an enormous formation that can be found under most of Pennsylvania (see map), parts of seven other states and into Canada – and the Point Pleasant Formation contain organic carbons.



## Generalized Cross Section Utica and Marcellus Shale Ohio to Pennsylvania



**The cross section shows the subsurface position of the Marcellus Shale, Utica Shale and the continental basement rock. The line of cross section is shown as line A-B on the inset map. Note that the Utica Shale is about 2000 feet below the Marcellus under eastern Ohio but about 6000 feet below the Marcellus in southcentral Pennsylvania.**

This cross-section was compiled by Geology.com using data provided by the Energy Information Administration [1], the United States Geological Survey [2], the Pennsylvania Geological Survey [3], and the U.S. Department of Energy [4]

Early indications are that the epicenter for natural gas exploration in the Utica-Point Pleasant play will be in eastern Ohio and Western Pennsylvania.

The pertinent questions for Crawford County are:

- How much gas will be found?
- What type of gas will be found?
- How easy/difficult would extraction be?
- What will be the impacts of extraction?

Oil and gas companies currently are securing leases, seeking permits and drilling test wells to begin the explorations that will answer these questions. Depending on what the companies find, the answers will have a major bearing on what life will be like for residents of Crawford County in the next 30 to 50 years.

## Extraction Timeline

*Lifespan totaling approximately 30-50 years*

		Pipeline Construction		Natural Gas Production	
		Permitting	Drilling		
		Up to 2 mos.	30-45 days	Wells can be productive over a 30-50 year period	
Pre-Drilling			Drilling & Completion	Production/Reclamation	
Geology Studies		Staking Well		Production Stimulation	Reclaiming
Up to six months		30-60 days		1-2 wks.	1 month +
Mineral Rights					

© 2011 Marcellus Shale Education & Training Center

Any extraction industry is – by its very nature – limited in duration, and all the clichés apply: What goes up must come down; bubbles pop; every boom has a bust. In this case, the drilling phase will begin and it will end. The flow of natural gas will eventually slow or stop. The industry cycle will run its course. And bearing this in mind as Crawford County finds out about the gas under its surface, it's wise to apply long-term thinking about not only what will happen soon, but also what is bound to come later. For example:

- Can local businesses plan not only for imminent growth but also for subsequent downsizing?
- If demand for housing spikes right away, can the additional units be planned so as to improve housing for years to come or so that the units have different uses later?
- If there is new county revenue, can it be invested in improvements that will out-last the boom phase?

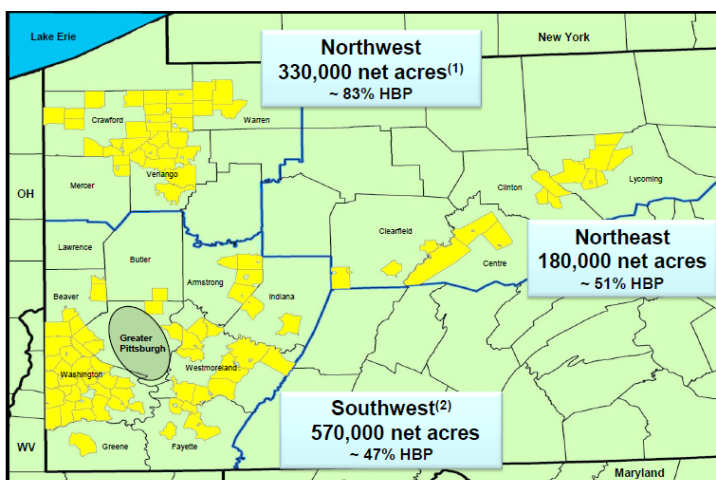
These are just a few examples of the kinds of long-term planning that Crawford County might want to consider, depending on what the natural gas industry finds under our feet during the exploration phase.

Though gas exploration is only just beginning, it is possible to make informed guesses about the future based on current understanding of the geology, of the Utica Shale results that are already known in Ohio, and of other Pennsylvania counties' experience with Marcellus exploration and production.

### How much gas will be found?

The oil and natural gas industry is demonstrating great initial interest in Crawford County. For example: The adjacent map shows Range Resources holdings as of the end of 2011. In addition, Halcon Resources holds 130,000 acres leased (as of October 2012) in five Ohio and Pennsylvania counties, including Crawford. Three horizontal wells were active as of fall, 2014.

Areas with both Utica and Point Pleasant are the most prospective. (The



Note: Townships where Range holds 3,000+ acres are shown in yellow (As of YE2011)  
(1) Approximately 150,000 acres prospective for Marcellus; 190,000 acres prospective for wet Utica (2) Extends partially into WV



Point Pleasant Formation does not extend into Erie County, but can be found increasingly to the south in Crawford County.)

The Utica Shale layer acts as a reservoir for natural gas; the Point Pleasant Formation has even higher levels of organic components because it both generates natural gas and acts as a reservoir.

The production horizon for Utica Shale is not yet known, but could be decades long. (Wells in the Marcellus Shale are expected to produce for 20-30 years, and possibly up to 50 years at a low level.)

### ***What types of gas will be found?***

Natural gas is a mixture of hydrocarbon gases. Though the primary component is methane, natural gas can also include ethane, propane, butane and pentane, along with smaller amounts of carbon dioxide, nitrogen, oxygen and hydrogen sulfide. When the natural gas is almost pure methane, it is called “dry” gas, and when other hydrocarbons are present, the natural gas is considered “wet.”

- The value of the hydrocarbons other than methane makes wet gas even more desirable – worth more money – than dry gas. Particularly valuable is ethane, a key component in the manufacture of plastics.
- Projecting trends from Ohio, it appears that Crawford County is at the transition between wet gas (to the west) and dry gas (to the east).

### ***How easy/difficult will the gas be to extract?***

Under Crawford County, the Utica Shale layer lies at 7000 to 7,500 feet depth – shallower and therefore more accessible than farther south in Western Pennsylvania. Areas that contain both Utica Shale and Point Pleasant Formation are considered more conducive to hydraulic fracturing because of the brittleness of the limestone-shale combination.

### ***The industry and its importance to this plan.***

In the absence of a crystal ball prediction, it is impossible to say with certainty what will be found under Crawford County or to forecast the price of natural gas on the commodities markets of the future. However, with an informed understanding of the state of gas exploration, it is possible to make conscientious decisions driven by likely scenarios. This comprehensive plan makes that its goal, contributing knowledge gained from:

- the experiences of counties that have seen an influx of Marcellus Shale drilling,
- independent scholars who have studied the many benefits, costs, opportunities and threats that accompany drilling,
- broad exploration of the likely impacts that natural gas exploration, production or related industry activities can have on the main topics of this report – housing, economic development, transportation, agriculture and conservation, recreation and land use.

Natural gas industry activity is not the only thing going on in Crawford County, and this comprehensive plan covers topics considered to be of significant importance quite outside the whole matter of drilling. However, gas drilling has proved to be a pivotal situation in Pennsylvania counties with Marcellus Shale and in Ohio counties with Utica Shale and Point Pleasant Formation. Therefore, facts, ideas and suggestions on reacting to new industry activity are threaded throughout this report.

Early in the planning process county leaders and stakeholders indicated that economic development should be a key component of the comprehensive plan. As the planning process evolved and a focus group was convened to discuss specific economic development strategies the conversation quickly pivoted to focus on gas extraction. It was clearly determined that the Crawford County Comprehensive Plan should strive to anticipate the impacts of the emerging natural gas extraction industry.



## Public Participation

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Public involvement is the heart of the comprehensive planning process. It fosters a sense of ownership of the plan in those who contributed to the process. A plan shaped through citizen input is more likely to address the key issues resonating with residents and is more likely to lead to effective implementation. A well-conceived public participation process engages citizens and strengthens communication and coordination between the county and its municipalities.

The Crawford County Comprehensive Plan was developed through a highly participatory planning approach, which is a cornerstone of an implementable plan. Citizens, business owners, and public officials were given multiple opportunities to voice their opinions and provide feedback throughout the process. They included:

### Stakeholder Meeting

The first public participation event was held at the William J. Douglas Jr. Conference Center in Meadville. This meeting was designed to involve key stakeholders throughout the county in the comprehensive planning process. The individuals were specifically invited to this meeting in order to gain their insight, knowledge, and expertise. The bulk of the meeting's discussions were centered on identifying the challenges and opportunities that the stakeholders see throughout the county. The feedback from this meeting began shaping the foci and central themes of the comprehensive plan.

### Public Meeting

Near the beginning of the planning process, the Crawford County Planning Commission hosted a public meeting to gather public opinion on important elements of the plan. The meeting was held in the Lew Davies Senior Center in Meadville. After an introductory presentation the participants joined small group discussions regarding a topic that interested them. The topics included: community facilities and recreation, transportation, land use, agriculture and conservation, and community/economic development and housing. The discussions at this meeting were intended to highlight the key issues facing County residents from the point of view of the general public.

### County Survey

To help gather additional information from the general public, an on-line survey was developed and posted on the Crawford County website from May through July 2011. The survey was publicized via the county's website. Additionally, a mailer advertising the survey was delivered to elected and appointed officials of municipalities throughout Crawford County. Also, the County Planning Commission sent email notifications to various groups. Nearly 300 residents responded to the survey.

The survey consisted of 25 questions. Fifteen substantive questions asked residents about the qualities they value, what needs to be improved, and what government actions and expenditures should be priorities. Some questions sought opinions about types and locations of new economic development. Questions 16 through 25 were designed to obtain information about the participants themselves, asking about age, household size, place of residence, length of residency, and place of work. The survey also inquired whether the respondent was either an elected official or a school district employee. There was also an open-ended question allowing participants to include additional information. The results of the survey can be found throughout the plan. The full results of the survey are provided in Appendix A.

### Focus Groups

Once the key topics of the comprehensive plan were determined a focus group was convened to further investigate the issues facing the county. Six focus groups were held and each explored one of the following topics: housing, economic development, agriculture and conservation,



transportation, recreation, and land use. Participants in the focus groups were strategically invited in order to aid the understanding of issues and leverage the participants' expertise in addressing the issues.

## Oil and Gas Task Force Meeting

Members of Crawford County's Oil and Gas Task Force who attended a February 2013 meeting heard a brief presentation about how gas development activities could impact the nature and contents of the comprehensive plan. Task force members were invited to ask questions and provide input.

## Comprehensive Plan Committee Meetings/Planning Commission Meetings

The consultant met with the Comprehensive Plan Committee, a subset of the Planning Commission, to review the key issues, discuss survey content, and present background information and responses to the public meeting and survey. As preliminary recommendations were formed, the consultant began meeting with the entire Planning Commission. The Planning Commission guided the plan by setting priorities and reviewing background information.

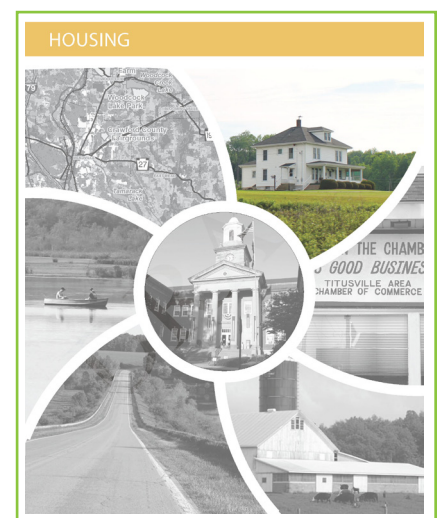
## The Plan's Organization

Following this introduction, the plan is organized into seven chapters. The first six chapters explore broad topics within the county that were identified by the Planning Commission at the start of the planning process. These six topics were validated as the most important through data analysis, interviews, input at public meetings, and work with the Steering Committee. Within each chapter the plan examines the key issues associated with that topic. To achieve an implementable comprehensive plan, the process must focus on what is important to maintain and enhance the quality of life most residents speak of when explaining why they chose to live here. Therefore, the main focus of the plan is on these key issues. Chapter seven analyzes the organizational structure necessary to implement the plan and delves into the new impacts on government services and how to best accommodate them. The seven main chapters are followed by a series of appendices that include additional data and analyses as well as other informational resources.

The seven chapters of the Crawford County Comprehensive Plan are:

- Chapter 1 – Housing
- Chapter 2 – Commerce and Economic Development
- Chapter 3 – Agriculture and Conservation
- Chapter 4 – Transportation
- Chapter 5 – Recreation
- Chapter 6 – Land Use
- Chapter 7 – Planning and Government Services

Each of these chapters is organized to highlight the crucial issue(s), justify the importance of the topic to the county, and outline a coordinated strategy for implementing the ideas presented. The chapters begin with an introduction of the issue and a section where the concern or condition is validated with statistical or field-collected data or information provided by experts in that particular field. The vision for the future, as determined by the county, regarding that issue is clearly communicated. The vision is followed by an implementation strategy that contains specific implementation steps as appropriate. The specific implementation steps are the emphasis of the plan. These steps, when implemented, will improve the quality of life in the communities. Throughout the planning process many ideas



for improving the communities were discussed. Each idea is important and like a puzzle piece, will contribute more when combined with other pieces. The project's Steering Committee was tasked to prioritize these projects in order to provide a logical and practical direction for the county's implementation of the Comprehensive Plan.

The results of this prioritization effort are reflected in the organization of each Chapter's implementation plan. One of three labels is applied to each recommendation:



- **Key Strategies.** The most important implementation projects that the county and planning team has identified are labeled “key strategy”. Many key strategies were labeled due to their importance to the county's quality of life. Others were categorized as key strategies due to their likeliness to be achievable in a short time period following adoption of the Comprehensive Plan. The county is committed to begin implementation of these projects as soon as possible. In fact, some of the strategies may be initiated and a few completed while the Comprehensive Plan is in the process of adoption. In order to assist in quick implementation, the Comprehensive Plan includes detail and guidance for the key strategies. Implementation of these projects will provide positive change and build momentum for realizing other improvements.



- **Important Recommendations.** The second tier includes a discussion of other important ideas that could be undertaken in the future to further improve the county and its communities. Important recommendations are not as ripe for implementation as key strategies but offer proven methods for addressing important issues facing the county.



- **Useful Ideas.** This third tier of recommendations includes a series of additional project ideas that would help enhance the county and its communities but are not currently priorities. These priorities might change if a project gains community support or if funding becomes available.

## The Role of the County's Comprehensive Plan

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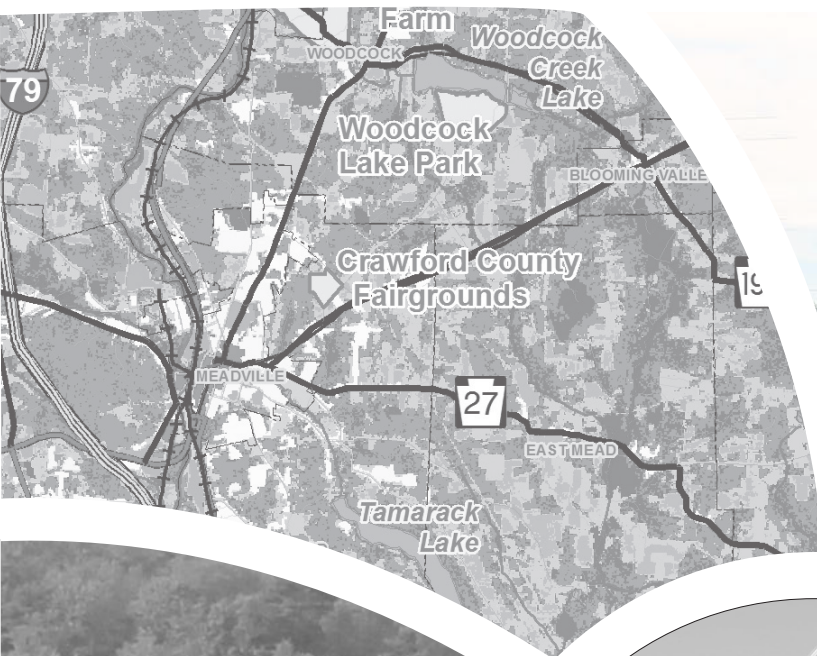
The Crawford County Comprehensive Plan established a vision and priorities for the county as a whole. The plan provides guidance to community leaders when they make decisions regarding a wide range of issues impacting the county's quality of life. The plan also plays an important role for the individual municipalities within the county. This advisory document can help Crawford County cities, borough, and townships to: make informed decisions regarding land use and planning in their municipality; establish sound policies and regulations to guide future development and conservation efforts; and help build consensus and cooperation between all levels of government in the county.



insert Base Map 11x17



# HOUSING



THE CHAMBER  
GOOD BUSINESS  
TITUSVILLE AREA  
CHAMBER OF COMMERCE





# HOUSING

At its basic level a home allows a person space to shelter them from the environment, to interact with family and friends, and to relax and rest. In order to meet the needs of a wide range of residents the county's housing stock needs to be varied in type, style, and price. Residents with large families likely need larger homes with extra space while older County residents might be looking to downsize their accommodations or to find a single-story home. Some are only seasonal residents who desire housing near the county's recreational assets. Others may only require small, group-oriented housing while they study at local institutions or navigate a transitional period in their lives. Maintaining this variety in housing stock is vital to the overall quality of life in Crawford County.



The County's housing stock can be complimented for its variety, historical character, and affordability. Respondents to the county's survey indicated that housing affordability is important. "Affordable Housing" ranked 9th among the 18 potential answers to the question: "What do you like most about Crawford County?"

Although extremely important to quality of life, when considered in the grand scheme of issues facing the county, housing-related challenges do not rank highly among the public's priorities. This is revealed by the survey conducted in conjunction with this Comprehensive Plan. The housing-related answers to the question "Which should be priorities for the county?" ranked 9th, 11th, and 12th out of 12 possible answers. Similarly, housing-related answers to the question "Given limited resources, where should the county invest public funds?" ranked 7th, 8th, 10th, and 11th out of 11 possible answers. However, this chapter explores a series of factors that could potentially exacerbate the housing issues facing the county. These factors could elevate the importance of addressing housing issues in the public's mind.

***The county's housing stock is aging and deteriorating.*** This issue is most apparent in older and more established centers of population like Titusville and Meadville. However, residences in more rural areas of the county are not immune to the impacts of age and neglect.

***The county is home to many vacant homes that are not on the market for sale or rent.*** These homes are more likely to remain vacant for extended periods of time and as a result are more likely to experience deterioration.

***Housing development in the recent past has been limited.*** In the past 10 years, there has been a small amount of new housing construction either in towns or out in the country; however, the new homes that are being built are mostly vacation places around Conneaut Lake, near Pymatuning State Park, or near other wild or vacation areas.

***Anywhere that gas drilling begins on a large scale, a kind of big bang occurs in the housing market.*** This causes ripples that affect all residents – from property owners to landlords to renters – in many different ways. The ripples create problems and opportunities.



## Vacancy and Deterioration: A Problem and an Opportunity

Some of the biggest problems our county has with housing center on vacancy and deterioration. The number of housing units in Crawford County increased from 42,416 in 2000 to 43,393 in 2005 to 44,686 in 2010 (a 5.4% increase over the most recent Census-decade). Over the same time period the non-seasonal vacancy rate in the county increased from 6.5% to 7.1%.

For a full picture of the housing situation in Crawford County, U.S. Census housing data for the county is compared with statewide numbers as well as data for Crawford's four neighboring counties and two counties that have experienced recent Marcellus shale gas drilling activity, as shown in this chart:



**Peeling paint, rotting siding and broken windows at a house in Meadville.**

% of total units that were vacant 2010 (non-seasonal vacancies only)							
State Overall	Crawford Overall	Neighboring Counties				Counties with recent Marcellus	
Pennsylvania	Crawford	Erie	Mercer	Venango	Warren	Greene	Lycoming
6.9%	7.1%	6.0%	8.2%	7.4%	6.1%	8.0%	5.3%

In 2010, 3.5% of housing units in the county were vacant and not available for sale or lease (1,548 units). Properties can be vacant and not available for sale or rental for many reasons, including:

- Foreclosures / walkaways – This is particularly true during economic downturns.
- Elderly or deceased owners – The death or long-term illness of a homeowner can result in home vacancy and sometimes in disputed ownership. There can be a lack of interest in claiming an old property, or lack of means to maintain an old house.
- Absenteeism – Homeowners might move from a property they no longer want, or may build a replacement home leaving the old place vacant, or just use it rarely.

The public survey confirmed that one of the elements “most in need of improvement in the county” was to “reduce/rehabilitate blighted or vacant properties”; this response was ranked 5<sup>th</sup> out of 23 potential answers. Although the question did not isolate housing from the more general category “properties”, further discussions with stakeholders and the public confirmed that the residents of the county consider housing deterioration an important issue that should be addressed. – Crawford County Community Survey

It is important to determine the makeup of these vacancies. In 2010, 2.1% of owned homes were vacant and available for sale; 8.3% of vacant rental housing units were available for rent. A homeowner vacancy rate of 2.1% in 2010 is tied for the highest among the benchmark counties and exceeds the state as a whole. Crawford's rental vacancy rate is second highest among the benchmark counties and the state in 2012. It is interesting to note the lower vacancy rates, both owned units and rented units, in Greene and Lycoming counties (the benchmark counties with significant oil and gas industry impacts in recent years).



Recent Vacancy Rate: % of all rental units that were vacant “for rent” in 2010							
State Overall	Crawford Overall	Neighboring Counties				Counties with recent Marcellus gas drilling	
Pennsylvania	Crawford	Erie	Mercer	Venango	Warren	Greene	Lycoming
8.1%	8.3%	7.0%	9.2%	6.8%	7.8%	6.5%	6.4%

Owned Home Vacancy Rate: % of all owned units that were vacant “for sale” in 2010							
State Overall	Crawford Overall	Neighboring Counties				Counties with recent Marcellus	
Pennsylvania	Crawford	Erie	Mercer	Venango	Warren	Greene	Lycoming
1.8%	2.1%	1.5%	2.1%	1.8%	1.6%	1.4%	1.2%

According to Investopedia, low vacancy rates point to strong rental sales. “Vacancy rates most often represent units that are vacant and ready to be rented, units that have been turned off upon the exit of a tenant, and units that are not currently rentable because they are in need of repairs or renovations,” the online investor reference site says.

As noted in the chart above, Crawford County has higher vacancy rates for rental units and homes for sale than those found in benchmark counties. In light of the fact that county residents emphasized their concern about vacant and dilapidated housing stock, it is possible that Crawford’s higher vacancy rates compared with benchmark counties reflects a need for repairs and renovations before units can be rented or sold.

It is unknown at this time whether the supply will be sufficient to meet demand if and when gas industry crews arrive in the county in droves. It is worth noting the comparatively low rental vacancy rates in Greene and Lycoming counties. An explanation of housing issues driven by the arrival of gas industry workers is provided in the section below titled “Housing an Industry, and its Effects on the Community.”

Besides vacancy rates, another issue to consider is the age of the housing stock in Crawford County. More than 93 percent of our total housing units were built before 2000, according to Census data for 2009-2011, and 82.3 percent were built before 1990. Nearly 29 percent – almost three of every 10 units – were built more than 74 years ago. Just because residences are old doesn’t mean that they are dilapidated; in fact, many people prefer the charm of older homes and maintain them carefully. But age does take a toll, and older homes certainly require more attention and upkeep. So even as Crawford County takes pride in its well preserved older homes, residents and officials alike describe dilapidated properties throughout the county as being a problem growing in extent and severity. As the chart below illustrates, the age of Crawford County’s housing stock isn’t too different from the age spread of housing units statewide. Because of the age similarities, any of us might be apt to say, “Then what’s the problem?” As with the matter of rental availability, the answer is: It could well be a problem when gas industry employees look for places to live, as will be explained in the section “Housing an Industry and its effects on the Community.”



A house in western Crawford County showing need for maintenance work.

Construction dates	Crawford County homes				Pennsylvania homes			
Year Structure Built	Estimate	Margin of error	Percent	Percent margin of error	Estimate	Margin of error	Percent	Percent margin of error
Total housing units	44,700	+/-233	100%	(X)	5,570,029	+/-664	100%	(X)
Built 2005 or later	901	+/-144	2.0%	+/-0.3	183,660	+/-3,620	3.3%	+/-0.1
Built 2000 to 2004	2,188	+/-301	4.9%	+/-0.7	274,397	+/-4,350	4.9%	+/-0.1
Built 1990 to 1999	4,833	+/-365	10.8%	+/-0.8	512,474	+/-5,137	9.2%	+/-0.1
Built 1980 to 1989	3,783	+/-342	8.5%	+/-0.8	548,639	+/-5,324	9.8%	+/-0.1
Built 1970 to 1979	7,378	+/-493	16.5%	+/-1.1	712,908	+/-5,860	12.8%	+/-0.1
Built 1960 to 1969	4,050	+/-365	9.1%	+/-0.8	557,528	+/-5,913	10.0%	+/-0.1
Built 1950 to 1959	5,031	+/-463	11.3%	+/-1.0	773,371	+/-6,155	13.9%	+/-0.1
Built 1940 to 1949	3,698	+/-467	8.3%	+/-1.0	466,630	+/-5,319	8.4%	+/-0.1
Built 1939 or earlier	12,838	+/-604	28.7%	+/-1.3	1,540,422	+/-9,131	27.7%	+/-0.2

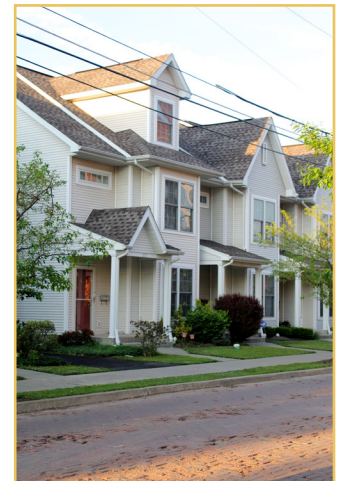
Source: U.S. Census Bureau, 2009-2011 American Community Survey

It is also important to consider the challenges of maintenance of an aging home because the costs to do so compound over time. Over time the costs of home improvement rise while the need for repairs also increase. This makes it increasingly difficult for low-income residents or residents on a fixed income to keep a house in working order. The result is that routine repairs such as a leaky roof go uncompleted and lead to additional water damage and ultimately higher repair bills.

There are some emerging national housing trends that indicate that older neighborhoods with commercial and cultural amenities within walking distance are increasingly attractive to people. Formerly hollowed out neighborhoods in many cities are beginning to fill back up. This trend is especially true for younger residents who have not yet reached their full earning potential and empty-nesters. These young residents are injecting energy and money into neighborhoods that once thrived. This trend could bode well for neighborhoods in Titusville and Meadville in the future if they can attract these citizens.

In summary, Census figures and public input highlight these facts about housing in our county:

- The housing stock is aging, and the rate of new home construction is slow.
- A significant percentage of housing units (rental and owned) are vacant.
- The vacancy rate for homes available for sale and apartments available for rent is relatively high.



**Attractive new housing dominates a block in Meadville.**

The county may feel inclined to address these housing issues as a part of the normal planning process. However, the anticipated arrival of natural gas development in Crawford County adds urgency due to potential problems and opportunities that could “move in” along with the industry.



## Housing an Industry and its Effect on the Community

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As described in the plan's introduction, it is becoming more apparent that natural gas development activities will start in the county in the near future. The industry brings with it a wide range of impacts that will be felt in the county's housing market. This section describes the biggest effects that drilling will have on housing in Crawford County, and poses questions the county should ask itself at this time so that it might be positioned to maximize benefits and minimize problems.

What follows here is a description of the housing needs that arise as different groups of workers move into an area at different times during gas development.

### *A wave of workers needing short-term housing*

As the natural gas extraction industry begins drilling wells, one of the first impacts the county will see is an influx of workers. Each well can require dozens if not hundreds of workers at a time. According to the Marcellus Shale Education and Training Center's 2011 report on workforce needs, "over 420 individuals working across nearly 150 different occupations are needed to perform all the operations required to complete and produce gas from a single Marcellus Shale well." Multiply this by one well or 10 wells or 100 wells to get an idea of how many people could be coming to Crawford to work, simultaneously and/or successively. These workers need places to live.

Gas industry workers are, for the most part, single men who already work in the industry, and move between places like Louisiana, Wyoming, North Dakota, Texas and/or Pennsylvania to follow the work. It is typical for most of the workers to be from elsewhere, although reliable local workers can also get hired. These men usually work 12-hour shifts for two weeks on/two weeks off (or longer), year round. On workdays, they are gone half the day, and then come home and sleep. They count on area stores and restaurants to be open at all hours. On days off, they look for entertainment, take care of chores like shopping and laundry, and sometimes go "home" if it's not too far away.

A report called "Marcellus Natural Gas Development's Effect on Housing in Pennsylvania," funded by the Pennsylvania Housing Finance Agency and prepared by Jonathan Williamson, Ph.D., and Bonita Kolb, Ph.D., at Lycoming College, provides extensive information about the drilling-industry workers, and their needs and expectations, based on the experiences of Pennsylvania counties that are now very familiar with the gas development industry. "The first wave of gas workers is transitory in nature. Their housing needs are being met with hotels, gas-company sponsored temporary residential facilities (so called "man camps"), campgrounds and a community's rental housing stock," the report states.

As Crawford County anticipates the influx of hundreds – possibly thousands – of workers who arrive in the area and stay only for the drilling phase, we should take stock of the availability and suitability of the types of housing typically desired by these workers:

- Rental units;
- Hotel rooms; and
- Other temporary housing such as RV parking areas, camping sites, etc.

### Rental Units.

Some workers who participate in the drilling phase are employed by major oil and gas companies, while others are sub- or sub-sub contractors. When these workers arrive in large numbers, they look for any kind of rentals they can find, be they apartment complexes, houses that have previously been divided into apartments, or just houses with a large number of rooms. Some people rent singly, and others group together with their colleagues who work opposite shifts. Typically, the workers prefer housing near their drilling sites, so they don't have to drive very far to get to work. They prefer accommodations that provide comfort and convenience, and they are willing to pay.



In other Pennsylvania counties, demand has quickly outstripped supply for apartments. Here is a typical progression, as seen in rural Marcellus Shale-drilling counties:

- Competition for the few available apartments causes rents to jump. It is not unheard of for rental rates to double, triple or even quadruple.
- The oil and gas workers expect to get what they pay for. In return for rents of \$800 or \$1,500 or \$2,000 or \$3,500 a month, workers expect to get a nice place with conveniences, where everything works.
- Some landlords, when presented with such an opportunity to profit, evict current residents. Those turned out are often elderly or disabled people on fixed incomes, or the working poor – people living on the margins who have no way to come up with so much money for rent.
- Homelessness spikes, putting pressure on any existing homeless shelters, or forcing renters to move into substandard/hazardous housing.



**Oil and gas workers who stay in an area temporarily can frequently pay more for housing than is paid by local people currently occupying a home or apartment.**

As Williamson and Kolb found in their research into housing issues in Marcellus gas drilling counties, “The increased demand for housing has created competition for even the least desirable housing, leaving increasing numbers of these individuals with few options beyond “couch surfing” and other forms of homelessness. In addition, housing providers are seeing new clients turning to them for help: the independent working poor, who traditionally made due financially on their own. Prior to Marcellus, these independent working poor had sufficient incomes to pay the low rents typical of these small town communities. With rents doubling and tripling, they have lost their economic self-sufficiency and been forced to look for assistance.”

In light of this clear understanding of some typical progression in the housing market it makes sense to evaluate again the statistics presented earlier and consider possible actions:

- 7.1 percent of all Crawford County’s housing units were vacant in 2010.
- The rental vacancy rate was 8.3% in 2010 (this is the percentage of vacant rental properties that are “for rent”).

**With a significantly high rate of housing units going unused in the county (vacant homes and units “for rent”) could these properties/units be adapted quickly as suitable housing for industry workers’ housing?**

### Hotel Rooms.

Some oil and gas companies house their employees in hotels and motels, and some companies have been known to reserve every available room in a 30- or 40- mile radius for months at a time. While such a bump in business might be welcome, the situation can create difficulties for residents inviting relatives to the area for a wedding, or vacationers hoping to find a base for some local activity like a boating, biking or hunting trip.

Other counties have sought to plan for long-term future uses for hotels that are/were initially built to accommodate gas industry workers. That said, the probable short-term need raises the questions of whether the county would have future use for additional hotel/motel rooms, or perhaps a new use for a structure initially built as a hotel/motel. **Could the current supply of accommodations in the county be determined and used to evaluate the potential need for additional rooms/structures?**



### Other Temporary Housing.

Some workers opt to stay in RVs or fifth wheels, parked at established or new RV parks. Other Pennsylvania counties have found that established commercial sites, when they exist at all, fill up. In other cases, landowners create small RV parks on their properties and lease the sites to workers. Utility connections can at times be makeshift. To prevent unsightly, unsafe and/or unsanitary conditions, some counties have created ordinances governing how many vehicles may be parked on private property, required conditions and appropriate land use.

Similarly to hotel rooms, the county should consider the long-term future of newly developed RV accommodations. **Can the development of these sites be conducted in a manner that provides benefit for the county's recreational amenities upon the completion of the drilling phase of oil and gas development?**

### *Second wave of workers seeking permanent housing*

No matter how many wells are developed in Crawford County, at some point the drilling phase will wind down and the production phase begin. The production phase could last 10, 20 or even 50 years, depending on the extent of Utica and Point Pleasant gas deposits.

The workforce in place during production is much smaller and more permanent than the workforce in place for drilling. The employees who work in production have a variety of responsibilities in the industry, and they expect to reside in an area for a long time. According to Williamson and Kolb, this group includes “a broad mix of blue and white collar, working to upper-middle class, straight-out-of-school to young families to empty nesters.” Because this smaller but more permanent workforce is diverse, the workers’ housing needs are also diverse and “will be met by rental and owner-occupied housing, both existing and to be developed. Included in this group are Pennsylvania natives with newly found financial stability that will increase demand for owner-occupied housing as they look to translate their new financial status from either higher wages or gas leases into more desirable living conditions.”

The researchers also learned that the more permanent workers associated with the production phase prefer and expect to purchase homes with modern floor plans, many conveniences and amenities. They are not interested, on the whole, in older homes or fixer-uppers. “As this second wave of gas employees settles into their new communities, a significant problem is the disconnect between their desired housing options and the existing housing available to them. While many moving into Pennsylvania are looking to buy newer homes in move-in condition with all the modern conveniences, they are finding and complaining about the aged housing stock, the amount of time and money required to make such housing livable and the lack of modern touches available to them.”

In light of this clear understanding of some typical progression in the housing market it makes sense to evaluate again the statistics presented earlier and consider possible actions:



**New construction is not often seen in Crawford County.**



Construction dates	Crawford County homes			
Year Structure Built	Estimate	Margin of error	Percent	Percent margin of error
Total housing units	44,700	+/-233	100%	(X)
Built 2005 or later	901	+/-144	2.0%	+/-0.3
Built 2000 to 2004	2,188	+/-301	4.9%	+/-0.7
Built 1990 to 1999	4,833	+/-365	10.8%	+/-0.8
Built 1980 to 1989	3,783	+/-342	8.5%	+/-0.8
Built 1970 to 1979	7,378	+/-493	16.5%	+/-1.1
Built 1960 to 1969	4,050	+/-365	9.1%	+/-0.8
Built 1950 to 1959	5,031	+/-463	11.3%	+/-1.0
Built 1940 to 1949	3,698	+/-467	8.3%	+/-1.0
Built 1939 or earlier	12,838	+/-604	28.7%	+/-1.3

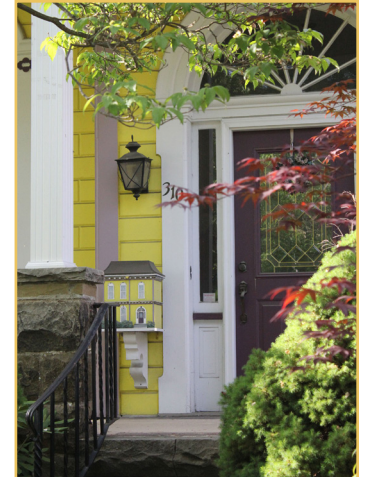
Source: U.S. Census Bureau, 2009-2011 American Community Survey

### Workers Seeking Fully Updated Permanent Housing.

As we have seen, the county can expect some gas industry workers to arrive – and stay – once the production phase begins. This group of workers is small compared with the high numbers who arrive on a more temporary basis for drilling. The workers tend to be people with families and good jobs who are looking for stability, schools, and a nice place to live. Williamson and Kolb found that this group has fixed work sites, and prefer housing that is:

- located within a 30-minute commute of their work site;
- in areas with the densest commercial and residential populations;
- less than 10 years old (in keeping with what the workers were used to in their former communities);
- in move-in condition and ready with no delay at all; and
- designed and built with open, airy floor plans, attached garages, fully modern kitchens and bathrooms, and other conveniences and amenities.

As we can see in the table above, about 7% or approximately 3,000 housing units in the county were built since 2000, which is roughly the time period desired by these second-wave industry workers. Because Crawford County's housing stock tends to be older, the expectations of these new workers for different kinds of housing may conflict with the supply, perhaps leading workers to settle elsewhere. The disconnect between supply and demand, even if it is not for a large number of families, could lead us to ask: **Are there things that the county can do to encourage new construction or renovation to attract permanent, fully employed oil and gas industry employees?**



Beautiful older homes have charm and appeal to many, but may not be what second-wave industry workers are looking for.

### Supporting the development of housing

Any approach to housing development should keep in mind that Crawford County – its lands, its people, its quality of life – will still be here long after the wave of intense activity that accompanies the drilling stage of natural gas development has come and gone. We cannot know at this time exactly how big the first wave of workers needing temporary housing will be. For that matter, we



also cannot know how many long-term workers could settle here for the production phase. But we can reasonably assume that some amount of housing rehabilitation, renovation or new construction will be needed in the short term. Based on the experiences of counties that have been the location of Marcellus drilling, it is possible to understand what roadblocks might hinder appropriate housing development in the short-run, and what steps can facilitate development that makes sense for our county's long-term well-being.

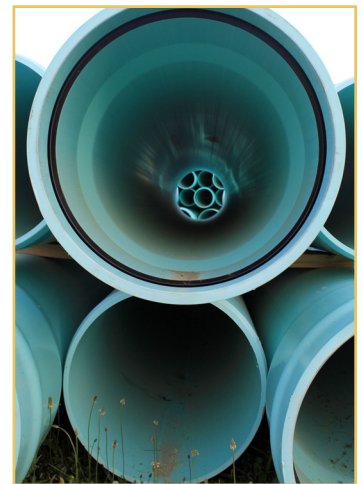
Some of the issues that we can expect based on the experiences of other counties are explained and addressed in this section. They are:

- Availability of infrastructure to support new development;
- Preparedness on the part of the county and municipalities to meet new demand, such as a common understanding about what type of housing development or redevelopment is desirable, where, and the implementation of policies that support our common goals; and
- Preparedness of housing developers or other contractors to meet new demand.

### Availability of Infrastructure.

The most significant barrier to new housing development in many of the communities where natural gas development is having a significant impact is a lack of infrastructure, according to Williamson and Kolb. Rural and small town counties have not seen much economic growth in decades, and as a result, "Their infrastructure, especially their water and sewer systems, has little capacity to absorb this new, unexpected growth."

For housing development to be feasible in communities that desire it, both water and sewers must be present if they currently are not. While developers typically lay down the infrastructure or help to do so, it is the counties and municipalities that must provide a water supply as well as sewage treatment. Some water supply systems and sewage treatment systems in towns and rural areas are old or small, and do not have capacity to support new housing development. Thus, it is timely for our county to consider these questions: **Do the county and/or municipalities offer sufficient water supply and sewage treatment capacity to sustain new housing development in the areas where it is desired and sought? What would it take to put them in place rapidly if appropriate? What would it take to develop capacity if needed?**



Stacks of pipe ready for use at a Meadville-area construction site.

**In areas concerned about sprawl, government bodies can limit or encourage development by regulating land uses and infrastructure requirements.**

### County and Local Preparedness.

A pro-active approach to housing development on the part of county and local officials can smooth the way for changes to unfold in the manner that residents, officials and planners choose, instead of in haphazard fashion. According to planners in other counties and researchers, this can be a change from the usual approach if a county does not have a history of long-range planning and land development regulation. For example, counties and localities might not be prepared to assist developers in finding suitable properties or adhering to codes or ordinances. Developers who worked in counties experiencing a need for rapid expansion of housing told Williamson and Kolb that a lack of preparedness on the part of county and local governments slowed projects or forced developers to change plans when new requirements were added rather late in the game. "To be able to adequately address planning for housing development, local officials need to add ... new areas of expertise," the researchers found. The need for county and local governments to have plans and regulations in place to encourage housing development that is of the type they want, that gets built in the places they want it, and that is completed at the time the housing is needed may lead Crawford County and its municipalities to reevaluate the current state of plans and land development regulations in place throughout the county.



## Seasonal Housing.

Housing Unit Characteristics, 2000-2010					
Total Housing Units, 2000	Total Housing Units, 2010	Change, 2000-2010	Seasonal Units, 2000	Seasonal Units, 2010	Change, 2000-2010
42,416	44,686	2,270 (5.4%)	4,964 (11.7%)	6,491 (14.5%)	1,527

In the years between 2000-2010, Crawford County added 2,270 houses. Of these, 1,527, or 67%, were seasonal homes. In other words, 152 of the 227 homes built each year (on average) were seasonal homes. This reinforces the previously mentioned points that

- the county is seeing little new housing development overall; and
- the development that is occurring could put pressure on natural resources.

Some of the townships with relatively high numbers of new seasonal units were Bloomfield, Conneaut, Fairfield, North Shenango, Sadsbury, South Shenango, Summit and West Shenango.

## Preparedness of Housing Developers.

The aging housing stock in Crawford County demonstrates that housing development has not occurred on a very significant scale here in recent years. As a result, some developers from the Western Pennsylvania region may be unfamiliar with Crawford County and unaccustomed to working here. The developers may not have networks of contractors and skilled labor in the area to support large housing development projects.

According to Williamson and Kolb, other counties saw time lags between the points when 1.) workers in the drilling phase arrived in town seeking housing and when 2.) local residents began to see effects on their communities, such as in housing, and when 3.) developers really saw specific business opportunities and began to gear up, and then again when 4.) work could actually begin due to delays assembling crews or delays caused by changing rules or expectations on the part of county and local governments.

The likely advent of shale gas development activities in Crawford County prompts a need for infrastructure to support new development; preparedness on the part of the county and municipalities to work with developers; and preparedness of housing developers or contractors to meet new demand.

These are only some of the needs, problems, issues, challenges and opportunities for housing development that the county is likely to face at the time that gas exploration, drilling and production occur, as we have seen. Even without the matter of gas drilling, our county has housing-related concerns that it should strive to address, such as an aging and deteriorating housing stock.

## Meeting the Short- and Long-Term Housing Needs of County Residents.

The overall goal of the housing plan is to ensure that all Crawford County residents have access to quality housing. During a series of meetings in preparation of this report, county residents and housing stakeholders asserted a common sentiment: The county needs to be proactive rather than reactive when tackling housing issues. Current housing challenges and the likely demands of the oil and gas industry seem to be complementary. The county needs to prepare for those short-term impacts as well as for the quality of life and wellbeing of residents over the long term. Planning new construction and adapting existing housing in order to accommodate and capitalize on the presence



of industry workers could also help address the long-term housing needs of the county.

One matter that arises is whether and how the county might plan for and encourage some level of new construction to attract families relocating to the region with permanent jobs in the gas extraction industry. It might make sense for the county, together with municipalities, to begin fostering working relationships with developers to plan some level of new construction. Moreover, opportunities may emerge to simultaneously add new residential construction while addressing the presence of derelict properties: Identify the blighted areas and replace unwanted or uninhabitable housing with new and desirable housing.

Another matter that arises is the degree to which governmental and planning functions are sufficiently empowered to develop well-thought-out strategies for managing housing issues. What follows is a list of typical government responsibilities:

- Land-use decision-making
- Communication between the county, local governments and both the gas development industry and the housing/construction industry
- Prioritization of infrastructure needs and projects to support housing development
- Prioritization of housing needs and any projects types considered (such as new construction or rehabilitation/renovation projects)
- Ability to conduct an inventory of existing housing resources, land resources and/or derelict properties
- Ability to work with for-profit and non-profit developers on an aggressive timetable
- Ability to anticipate and plan for long-term uses for projects undertaken initially to meet the housing needs that arise during the drilling phase of gas development.

The major role that the county will play in this process is to advocate for sound land use policy and support implementation of housing programs at the municipality level.



**Coordinate the housing plan with land use planning.** The best way to ensure that Crawford County meets its housing goals is to coordinate redevelopment and new development areas through land use planning. The Comprehensive Plan's Land Use Plan (see page L3) designates three land use patterns that are desired for the future: rural/natural; suburban low-density corridors; and urban/village areas. In rural/natural areas housing efforts are envisioned to be limited to agricultural and large lot or cluster housing developments that preserve natural and agricultural landscapes. Suburban areas offer the most room for completely new housing developments. Urban/village areas are intended to support a variety of housing rehabilitation and redevelopment at medium to higher densities and also provide for mixed residential and commercial/office uses.



**Designated residential growth areas.** Since little new residential development has occurred in the past 10 years, the county and local municipalities might not be fully prepared to encourage new construction. However, some prospective residents may not be

### Our vision for housing:

A wide variety of housing is provided throughout the county to meet the needs of all Crawford County residents. The variety of housing is established prior to increasing demand by individual industries. Displaced residents have additional housing options available to them during the short-term when the housing market is rapidly changing. As the housing market stabilizes over time all residents can find suitable and desirable housing.



**Property maintenance codes can help municipalities address problems.**



interested in rehabbing older homes, choosing instead to purchase homes with popular floor plans and a full range of amenities and conveniences, and that are in move-in condition. The county would be wise to identify sites that would be most likely to sustain future residential growth because of available infrastructure and proximity to existing development. Per the Land Use Plan these areas would ideally be found in the “suburban corridors” or where there is sufficient space within urban/village areas.



**Assist municipalities with code development and code enforcement.** As was discussed before, many communities in Crawford County are facing challenges with deteriorating housing due to age, abandonment or neglect. Many communities attempt to address severe deterioration issues with enforcement of municipal codes covering building standards, rental registration and property maintenance. However, code enforcement can bring challenges as well. Communities may not have adopted registration or property maintenance codes, or may not enforce them rigorously. The county can play several roles in assisting municipalities with creation, adoption, and enforcement of these regulations.

- **Code development.** The planning commission staff could help municipalities create local rental registration codes, which require housing unit rental properties to acquire a permit prior to renting the unit. This is typically done in conjunction with a safety inspection to ensure that the unit is in habitable condition. The staff could also assist with local property maintenance code development, although most communities that adopt these requirements simply choose the International Property Maintenance Code, which is readily available and can be adopted by local government action.
- **Code adoption.** Pennsylvania municipalities use the Uniform Construction Code, with or without amendment. Those seeking property maintenance regulation may adopt the International Property Maintenance Code. Overall, the planning commission staff should be a resource that the communities may look toward for answers and advice on amending the UCC or adopting a maintenance code.
- **Code enforcement.** The most challenging aspect of achieving results from implementing these codes is ensuring enforcement. If communities do not opt to provide their own “code official” to inspect properties and issue notices and permits, then adopting the regulations is ineffective. There are several ways that a community can ensure that its codes are being enforced:
  - **Hiring or appointing a code official.** A municipality can appoint an employee to be the government’s code official. Only those who hold Uniform Construction Code certification in specific areas (electrical, mechanical, building, etc.) may legally engage in any aspect of enforcement.
  - **Contracting code enforcement services.** Several companies provide professional code enforcement services for a fee. Typically, the municipality aligns the fees for certain permits and inspections to cover the cost of these services. These services ensure that the code official is experienced and knowledgeable. Another benefit is that these individuals likely do not have a local “stake” in the process and can therefore be seen as unbiased in their enforcement of the codes. This option is attractive for municipalities whose needs do not justify the expense of hiring a full time or part time



**An overgrown property in southwestern Crawford County.**

code official. A community also could contract with a nearby municipality for that town's code official to provide services.

- Band together to hire a "circuit rider." Several municipalities (or all municipalities) could coordinate to jointly hire a code official. Sometimes these individuals are referred to as "circuit riders." The advantage to this scenario is that communities can pool their monies in order to receive the professional services they desire, instead of one community providing the entire sum to employ the code official.
- A community may contract with the Pennsylvania Department of Labor and Industry for commercial construction inspections, and handle residential construction inspections in one of the ways previously mentioned.
- If a community opts not to provide its own inspectors, then the state Department of Labor and Industry will handle commercial construction inspections, while residential construction inspections are the responsibility of the property owner, and must be completed by a registered "third party" construction code official.

Although the county itself is typically one level of government removed from these property and building maintenance enforcement tasks, it can provide support to those municipalities. The planning commission staff should focus on providing the necessary information and advice to help local communities make informed and confident decisions.

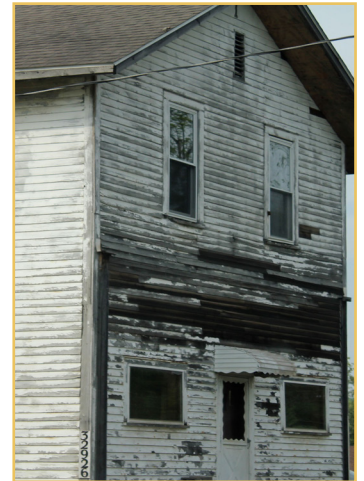


#### **Leverage Pennsylvania's Abandoned and Blighted Property**

**Conservatorship Act.** This law, commonly known as the Conservatorship Law, is another tool that has recently emerged for communities to use in their fight against abandonment and dilapidation. This law could allow communities and non-profits to address blighted and vacant property issues without condemnation. This is a promising tool that, due to its newness, is slowly being implemented across the state. There are many limitations to leveraging this law, however, and it is important to evaluate its appropriateness on a project-by-project basis. The County should be a resource for municipalities looking to learn more about how to use the conservatorship proceedings to address blight in their communities.



**Assist municipalities with home rehabilitation needs.** There are many ways that the County can involve itself with housing rehabilitation efforts. These vary from providing information and technical support to actually establishing funding streams to homeowners. One of the first tasks that will help inform the county's best strategy is to determine the extent of housing deterioration issues. Beyond this action, the county can decide if the need is great enough to warrant large-scale efforts such as establishing a housing authority/partnership or if smaller-scale efforts can effectively address the issues.



**An inventory could help Crawford County fully assess the extent of its derelict housing problem.**

- **Develop incentive programs for housing rehabilitation.** Many counties have established programs that provide assistance to residents in order to promote rehabilitation and correct code violations. Typically these programs are designed to specifically assist low-income or elderly households. Some programs designed to assist the elderly or disabled populations can be used for projects that provide accessibility modifications. These programs are commonly implemented as low- or no-interest loans.
- **Pursue funding through the Pennsylvania Housing Affordability and Rehabilitation Enhancement program.** This fund can help to provide affordable housing for low- and moderate-income families, the elderly and those with disabilities. Funds are allocated on a competitive basis specifically for: encouraging development and rehabilitation of distressed neighborhoods, providing counseling to those facing



foreclosure, and providing loans and grants for the construction or maintenance of housing. In addition, counties with unconventional gas wells that have adopted a local impact fee can pursue allocations from the PHARE Fund to address housing needs. An example of this from 2012 occurred in Westmoreland County: The Redevelopment Authority of Westmoreland County won \$125,000 for rehabilitating owner-occupied houses in areas most impacted by drilling activities. Eight to 12 owner-occupied homes will receive repairs such as to roofs, HVAC, electrical systems, plumbing and drainage, etc.



**Partner with real estate professionals and private property owners to help make housing information readily available to individuals relocating to the area on a temporary or permanent basis.** Many of the workers who would move to Crawford County to work in the gas exploration and extraction industry may be seeking housing from afar. Some may have their housing arranged by their employers, and others will conduct their own searches. The county could work with real estate agents to create a voluntary registry of housing units available to industry workers (as well as others). This could be accomplished largely through existing web sites and the Multiple Listing Service. The county could provide a checklist of tips for private property owners, to help them attract potential buyers or tenants.



**Evaluate the supply of and demand for hotel/motel accommodations.** Working with the Oil and Gas Task Force, the Convention and Visitor Bureau or other partners, the county could create an inventory of existing hotel accommodations, and then evaluate capacity and demand. Such a study would suggest whether additional hotel construction might be desirable in the short run, during a potential gas-drilling boom. This study also should plan for alternative uses for new hotel space in the long-term, after the drilling boom fades, such as housing for the elderly, to avert an over-supply.



**Support transitional housing and to help mitigate homelessness.** One typical ramification of a sudden influx of “first wave” workers in the gas development industry is pressure on the rental market. As increased demand drives up rental rates, low- or moderate-income tenants are sometimes forced out when they cannot keep up. Homelessness spikes. The county could directly support development of transitional housing and an increase in the number of housing counselors and caseworkers helping to prepare more families for public housing. The county also could support the work of allied groups. For example, it could help the Crawford County Coalition on Housing Needs to develop transitional housing, or the Crawford County Mental Health Awareness Program (CHAPS) to provide counseling to and advocacy for homeless residents.



**Explore unique instances of housing opportunity to serve short- and long- term needs.** Gas development industry workers who know they will be living in an area only temporarily sometimes choose to stay in RVs or fifth-wheels. They need a place to park. One result can be the creation of casual RV parks on private property that often are not improved to handle an increased pressure on water/sewer infrastructure or safe delivery of electrical power. The county can avert this undesirable situation and capitalize on an opportunity if it sees a future demand for camping facilities. The county could work with developers and landowners to plan regulated RV parks on county-owned or private property near recreational lands, so that when drilling eventually wanes, RV park facilities will have subsequent use by recreational campers.



**Crawford County could coordinate with local and regional developers to ensure the private sector is prepared to help meet housing goals.** Developers may not be familiar with or very active in Crawford County, since the area has not experienced much new construction in recent years. To help address this gap, Crawford County could seek to build ties to developers to determine their readiness to build aggressively if the demand arises. The county could work with business associations, trade unions and other groups

to establish a list of developers with a presence in the area, and determine how best to communicate with them. In a similar fashion, the county could assess whether contractors and builders are available in the area to work on housing, and if not, determine what could be done to attract or train workers. The county could review whether county-based businesses are sufficiently represented in groups such as the Northwest Pennsylvania Builders Association, and if not, to encourage membership. Finally, the county could assess its own ability to provide consistent, accurate and timely information to both for-profit and non-profit developers, and make any needed updates in its processes.

## Housing Goals

There are many aspirations that the county has for its housing stock. Up to this point the plan has focused on specific implementation strategies to address the key housing-related issues. However, there are many other housing issues that residents of Crawford County face on a daily basis. The comprehensive plan considers these important issues and, on the following pages, attempts to provide policy direction for future efforts aimed at solving these.

The Housing Goals Matrix, appearing below and on the following page, expands on the vision for housing that was expressed earlier in this chapter. The Housing Goals Matrix shows where certain policies are appropriate and desirable and where they are not.

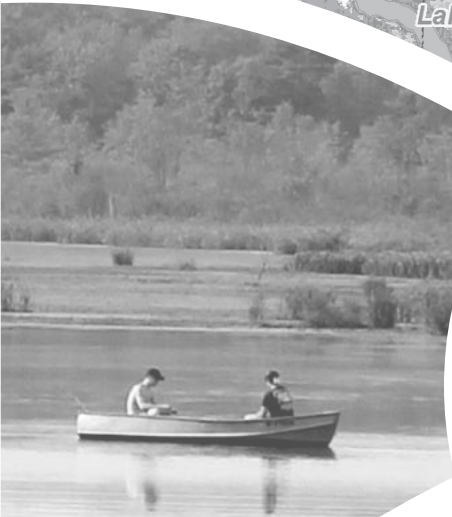
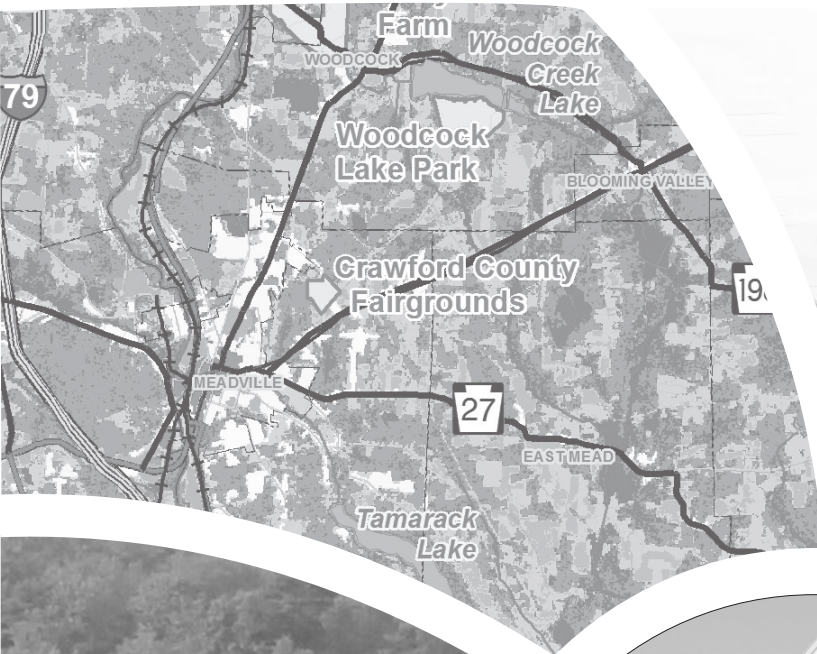
Housing Goals Matrix	Urban Centers/ Cities	Villages/ Boroughs	Suburban Townships	Rural Townships
Promote owner-occupied housing rehabilitation and home maintenance programs, including for elderly households.				
Encourage a mix of housing types and prices, to create diverse, inclusive communities for all needs and living styles.				
Minimize housing unit losses in Meadville, Titusville, and larger boroughs due to neglect, expansion of institutions and conversion to commercial uses.				
Minimize Meadville and Titusville’s population declines as families buy housing on the outskirts of those cities and into the hinterlands.				
Preserve and extend existing housing thru BOCA standards and implementation.				
Assist rural residents to maintain their houses.				
Minimize the dispersed manner in which much of the county’s new housing is developing in the townships surrounding Meadville and Titusville.				



Housing Goals Matrix	Urban Centers / Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Manage rural residential land use as utility service extensions and technologies solve rural development factors currently inhibiting growth.				
Assist the many families in Crawford County that are not eligible for public housing because of poor tenant records, credit history, or other life skills problems.				
Better utilize the public agency's housing resources' surplus of two and three bedroom public housing units, and support the development of one bedroom subsidized apartment units for single persons.				
Mitigate the problems associated with the County's many public housing units that are poorly situated for their residents to access public services and retail establishments.				
Ensure every senior citizen has access to adequate housing appropriate to his/her particular needs, including the development and maintenance of affordable and accessible rental units for low and moderate income elderly households.				
Encourage adaptive reuse of disused structures or infill construction of underused open space as high-density or multi-family housing.				
Support appropriate development of non-traditional forms of housing, including mobile or modular homes or recreational vehicle camps for transient workers.				
Support a countywide inventory of substandard housing.				
Integrate housing with retail, office or commercial uses to share infrastructure costs and populate municipal business districts.				
Provide physically-accessible housing options that are near supportive services, transportation, shopping, and jobs for people with disabilities.				
Maintain and support adequate emergency shelters for the homeless.				
Create opportunities for supportive housing for those who are chronically homeless.				
Support municipal comprehensive plans that encourage diverse housing options and a traditional approach to neighborhood design.				
Encourage the use of traditional neighborhood design concepts in new housing developments.				
Support smart site location and green development criteria for new developments.				
Ensure sufficient availability of appropriate housing for new industry workers.				
Foster new and existing relationships with developers and builders in the region in anticipation of housing development with arrival of new industry workers.				



# COMMERCE & ECONOMIC DEVELOPMENT





# COMMERCE & ECONOMIC DEVELOPMENT

**Overall, Bureau of Labor Statistics and US Census Bureau figures indicate a shift in the county's economy.** Where the county's employment was once dominated by agriculture and manufacturing, it is now more evenly spread over other sectors as well, including retail, education, and health services. This trend toward diversification is similar to that seen in many counties in western Pennsylvania. Residents' needs are changing and the influence of demographic shifts on the economy is clear. For example, as an increasing number of county residents grow older, their health care needs also increase, which ultimately necessitates more workers in the medical industry.



The county still has many workers in manufacturing positions and in the agricultural sectors. Over the last Census decade however, the number of people employed by the manufacturing industry has dropped by over 26% (8,994 employees in 2000 to 6,604 in 2010). Employment in the agriculture industry remained fairly constant over the same decade despite awareness in the county of dairy farms' being shuttered. The drop in manufacturing employment occurred at the same time that employment in education and health services rose. Educational services employment rose nearly 14% from 1,922 employees in 2000 to 2,190 in 2010. Health services employment rose more than 16% from 4,373 to 5,098 employees over the same time period. The retail trade industry suffered throughout the country during this decade, and Crawford County's retail employment statistics reflect this. Employment in retail dropped from 4,122 in 2000 to 3,532 in 2010 (a 14% decrease).

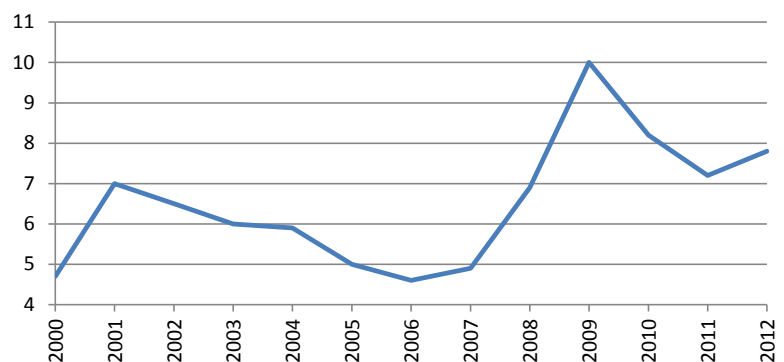
**Despite recent declines, the residents of the county still value manufacturing employment and view it as one of the most important sectors to the county's future.** The survey completed in conjunction with this comprehensive plan investigated the type of businesses that residents believed the county should attract to strengthen the economy. Of the nine potential responses to the question, the top four were: 1 – Light manufacturing; 2 – agriculture-based industry; 3 - heavy manufacturing; and 4 – retail.



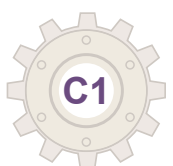
Channellock, one of the county's largest manufacturers, has been in business since 1886.

**The economic downturn of the past five years sent the nation reeling, and Crawford County was no exception.** One of the toughest problems was unemployment, which impacts the displaced workers and their families the most, but also sends ripples into the larger community as people with reduced incomes have less to spend on consumer products, food, and other needs. Local businesses that depend on these customers struggle more as a result, creating downward economic pressure on everyone. Despite the economic challenges facing the county, there are many positive factors that the county can build on.

**Crawford County Unemployment Rate (December)**



**The Marcellus, Utica and Point Pleasant formations offer an opportunity for economic development that the county should capitalize on.** The probable beginning of natural gas development in the county, and the many effects that this change will likely have on the county's economic development necessitate including the industry in economic development plans.



***The increase in education industry and excellence of local institutions position the county to capitalize on new economic opportunities.*** The presence of Allegheny College, Precision Manufacturing Institute, and the University of Pittsburgh - Titusville Campus (which also partners with the Pitt-Bradford campus), offer residents the training and education that could be used to capitalize on shifts in the manufacturing industry as well as the potential of the oil and gas exploration industry in the county.



The Precision Manufacturing Institute in Meadville.

***The County has a proven track record of willingness to invest time, expertise, and capital in economic development.*** Two players in economic development in Crawford County are the Economic Progress Alliance (EPA) and the Titusville Community Development Agencies. Both seek to improve the quality of life in Crawford County and are Pennsylvania State Certified Economic Development Agencies.

The EPA promotes, facilitates and supports viable economic development opportunities, working with these sites and facilities: Crawford Business Park, Keystone Regional Industrial Park, West Mead Industrial Park, Cambridge Business Center, Bessemer Commerce Park and Linesville Business Park. The Titusville Community Development Agencies and facilities are: Titusville Redevelopment Authority, Titusville Opportunity Park, Titusville Towne Square, Titusville Industrial Fund, Inc., J. Michael Allyn Industrial Complex, and Towne Square Conference Center.

***The County has also demonstrated a willingness to invest in economic development zones*** such as Keystone Opportunity Zones (KOZs) and Keystone Innovation Zones (KIZs). There are six KOZs in the county, in Greenwood, Cambridge and Vernon Townships. The County's KIZ, Allegheny College's Center for Economic and Environmental Development (CEED), is a unique method of engaging local industry, commerce, and education resources and leaders for mutual benefit.

## Challenges on Main Street

The economic hard times that began in 2007 exacerbated a persistent problem previously seen in our county: Main Streets in decline. The long-term nature of this problem – struggling traditional main street areas – makes it a matter that most Crawford County citizens already know about and want to see addressed. The fact that traditional Main Street areas are struggling comes as no shock to long-time residents who recall a more vibrant “small-town life” of the past. These residents have witnessed an increase in chain stores and franchises and a decrease in independent businesses; have seen businesses locate increasingly in strips along main roads on the perimeter of communities more so than in our downtown areas; and have watched as community and business leaders tried various creative strategies to invigorate our towns.

These sentiments from county residents are reinforced by the results of the survey conducted as a part of the Comprehensive Plan. The survey revealed that county residents strongly support assisting existing locally owned businesses as well as attracting new business. When asked what should be the priorities for the county, out of the 12 potential responses the No. 1 response was to “support existing locally owned businesses” while the No. 2 response was “attract new companies and industry to the area.” When asked which business development strategy the county should focus on, the responses were: Attracting new business 59%; Investing in existing businesses



Small businesses line the commercial district of Conneaut Lake.



40%; and Neither are important 1%. The public also supported government action to assist in job creation and economic opportunity. 88% of respondents agreed “somewhat” or “strongly” with the question, “In Crawford County, it is often perceived that there is a lack of jobs and economic opportunity. To encourage businesses to locate in Crawford County, should public agencies provide business incentives, including tax breaks, grants, and infrastructure improvements?” 9 percent disagreed with that question, and 3 percent were not sure.

The challenges facing our traditional main street areas can be dissected, and reveal specific issues that contribute to making areas on the perimeter of communities more attractive to businesses.

- Unattractive properties that are vacant or have not been updated;
- Insufficient availability of over-storefront apartments or other in-town housing;
- Lack of a “draw” – some identifying theme or location – that would encourage visitors to the area to stop their cars, get out and walk around, and stay for a meal or for a day;
- Not enough of the essential businesses and services that entice residents to choose the in-town area over other possible places to shop or conduct business or run their errands.

Crawford County is obviously concerned with the health and wellbeing of the Main Streets of its municipalities. The CCPC has worked in a variety of ways in the past to assist these communities. The nature of county government means that the county’s assistance is already one government level more distant than that of the local government, however. The result of this is that the county’s role has primarily been to provide professional assistance for local CDCs, grant writing, information and mapping, and office space for local government employees. The county recognizes the potential benefit of building a robust community revitalization program and its likely positive influence in Crawford County municipalities. However, as of now the county has been helping communities in the county to tackle these challenges by seeking grants or developing plans to help revitalize dilapidated/blighted areas.



The Cambridge Springs business district.

## A Potential “New” Player in the County Economy

Although conventional oil and gas drilling and production has been present in the county for many years, unconventional extraction of natural gas is a potentially significant new industry that is likely to impact the county in the future. Natural gas exploration, drilling and production can usher in to an area several different types of economic and business development. Here are the main forms:

- Business driven by personal spending by gas industry workers on items as diverse as restaurant meals, boots and shaving cream.
- Business driven by industry spending on a wide array of locally sourced supplies, from gravel to machine parts to diesel fuel.
- Employment growth driven by the two business areas listed above.
- Income or revenue driven by gas-related real estate sales or leases.
- Potential county revenue from royalties on any productive gas well drilled on county land.

### *First-Wave Workers and Their Spending.*

The people who work in the drilling phase of gas development arrive in large numbers and stay in an area only as long as new wells are being drilled and brought on-line. The number of people who come to an area depends on how many wells go in, and how fast that happens. Those who arrive are usually men from out of town, who quickly find a place to live and immediately start to work. They typically work grueling, 12-hour shifts, sometimes for two weeks on/two weeks off, and sometimes



for many weeks at a time before getting a leave of several weeks. Their demographics and their work schedules influence what they want to buy and when they want it.

Based on the experiences of other Pennsylvania counties where Marcellus Shale drilling has already occurred, here are some spending and consumer patterns typical of first-wave workers, which yield opportunities for local businesses.

### Anticipating new demand for specific types of goods and services.

Drilling workers, when they have time off, look for restaurants, grocery stores, hardware stores, pharmacy/drug stores, gas station/convenience stores, laundromats, bars and entertainment. It is predictable, for example, that gas-industry workers will walk into hardware stores expecting to find steel-toe boots, fire-resistant clothing and hard hats. Businesses that think ahead about future needs will hook more customers from the outset than businesses that fail to offer the necessities.

### Reacting quickly to preferences.

Not everything can be anticipated, and businesses that respond promptly to specific customer needs and preferences may benefit more than those that react slowly. For example, some transplanted workers might need new pull-on boots but see no stores that stock them, or want back-home meals, but see no restaurants with their favorites on the menu. Businesses that offer those choices the next time a patron arrives will get repeat business while other businesses will lose out.

### Hours of operation.

People working 12-hour shifts have unconventional hours for doing errands and relaxing. They may want to eat breakfast at 10 p.m. or throw dirty clothes into washers at 2 a.m. Businesses with extended hours capture the additional customers.

A website provided by the Marcellus Shale Coalition helps local businesses get on the radar of drilling-related companies and workers: [MarcellusOnMainStreet.org](http://MarcellusOnMainStreet.org). This site lists businesses and organizations in the categories of “Work, Live, Play.” This site helps industry workers find everything from security companies to pipe suppliers, laundry pick-up and delivery services to TV sales, and sports teams to day spas. In addition to this website, a vast word-of-mouth network among work crews passes along the names of local companies or organizations that prove responsive and reliable.



## **Supply Chain Needs of the Drilling Industry**

When natural gas development begins in an area, local workers and suppliers have opportunities to make the most of the moment, even as they recognize the drilling phase has a beginning and an end.

### Well-servicing companies.

The extraction and production companies (big names like Range Resources, Chesapeake Energy, etc.) sub-contract work to drilling companies. These sub-contractors in turn sub specific aspects of the job to companies that supply cement, sand, water, gravel, parts and other necessities. It is with the supply chain that local businesses have an opportunity, because suppliers and haulers must be located in the immediate area to ensure that no time is wasted in delivering a spare part or additional load of gravel. These local suppliers must have sufficient resources to scale up or down rapidly, depending on how much new drilling occurs, and how fast.



## Manufactured goods, available anytime.


A lot of money is at stake for drilling companies and the bigger corporations when work gets interrupted because something breaks down or isn't delivered on time. Since drilling is a 24-hour-a-day enterprise, companies that provide general construction supplies, common spare parts or typical services for drilling-related machinery, trucks and related equipment should plan to be open when they are needed. Crews share information by word of mouth about which businesses are open 24/7, which carry the necessary items and generally prove to be responsive to industry needs, and which businesses do not. For example, a local hardware store that has the right fitting at 1:30 a.m. on a Saturday is going to get repeat business not only from one satisfied customer but from other crews in the area as well, due to the workers' informal information pipeline. On the other hand, the store that was closed will find itself off the list of favorite places to do business.

## New Jobs

Jobs that become available during the drilling phase of natural gas development fall into these general categories:

- Locally based ancillary jobs, such as an overnight shift at a restaurant that formerly did not stay open.
- Locally based supply-chain jobs, such as working for a local hauler.
- Skilled-labor or drilling rig jobs. Many of these positions are filled by men who move around the country following the work, but some positions are available for local people with the right credentials. Those credentials begin with a willingness and ability to work outside in all seasons and at all hours; the ability to pass random drug and alcohol tests; the ability to prove a clean driving record.

A useful resource for people interested in working in the natural gas industry is the website ShaleNet.org, created through a U.S. Department of Labor grant. The website allows potential employees to create accounts and search for jobs, beginning with this questionnaire:



[About ShaleNET](#) [Contact Us](#) [Resources](#) [Training Providers](#) [WorkForce Forum](#) [My Account](#)

**Begin the Talent Match Process**  
Click here to start the job search process

**Shale Gas Basics**  
Click here to learn about the natural gas industry

**Learn the Ropes**  
Click here to learn about jobs in the natural gas industry

The following questions represent the basic requirements for most jobs in the gas industry. Safety and physical fitness are very important to success in this field.

Please answer all questions to your best ability, knowing that they will be reviewed by a career counselor and be subject to verification.

	Yes	No
1. Can you pass a drug test and stay off drugs as a condition of employment?	<input type="radio"/>	<input checked="" type="radio"/>
2. Are you willing to work outdoors continuously for up to 12 hours per day in all weather conditions?	<input type="radio"/>	<input checked="" type="radio"/>
3. Can you lift and carry 80 pounds several times per day?	<input type="radio"/>	<input checked="" type="radio"/>
4. Do you have a valid driver's license with a good driving record?	<input type="radio"/>	<input checked="" type="radio"/>
5. Can you demonstrate that you are dependable and reliable? Can you report to work on time every day and prove no unexcused absences on previous jobs?	<input type="radio"/>	<input checked="" type="radio"/>
6. Are you willing to submit to a criminal background check?	<input type="radio"/>	<input checked="" type="radio"/>
7. Do you have transportation to get to a work site?	<input type="radio"/>	<input checked="" type="radio"/>


Submit



ShaleNet.org, also provides what it describes as a [“realistic job preview” video](#) to help potential employees get a true sense of the demands of entry-level jobs.

**ShaleNET**Realistic Job PreviewClose

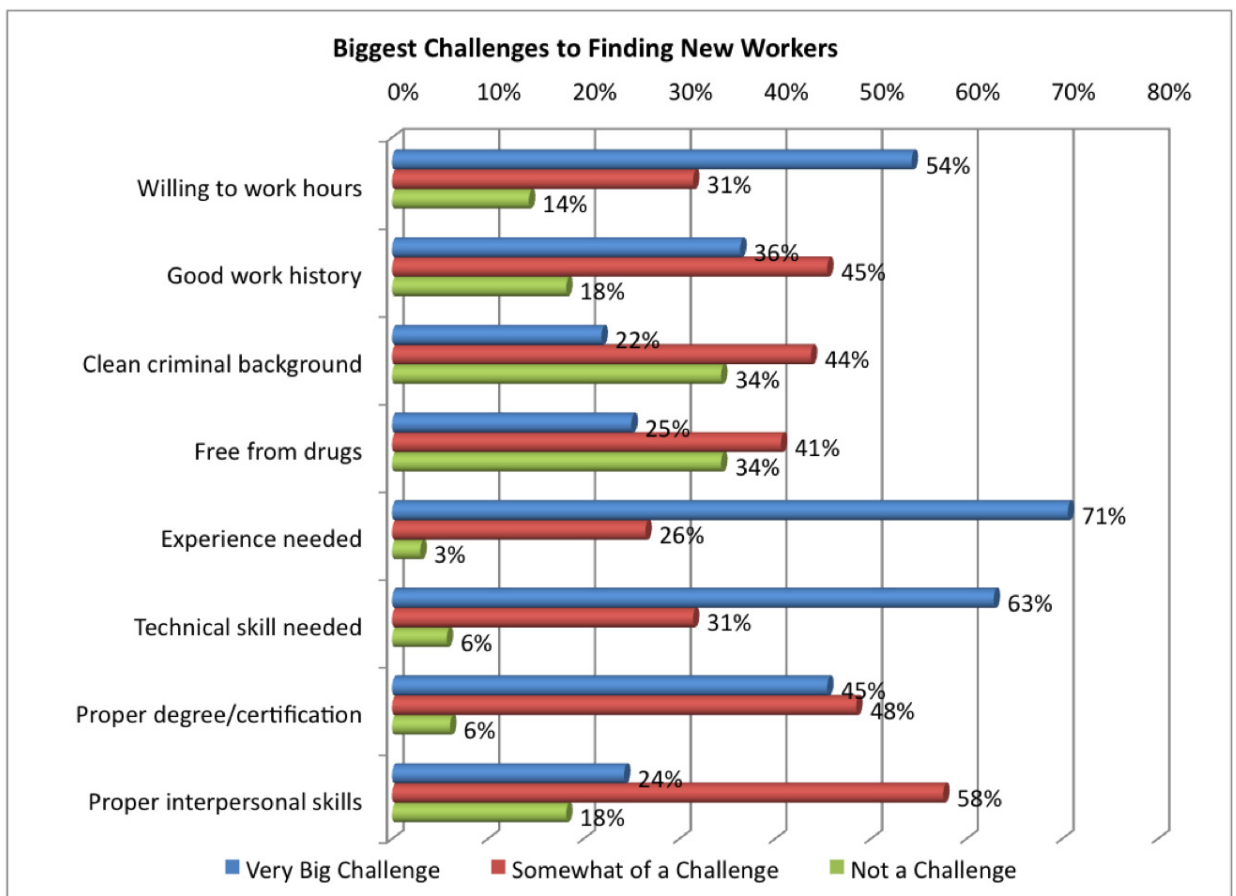
### Introduction



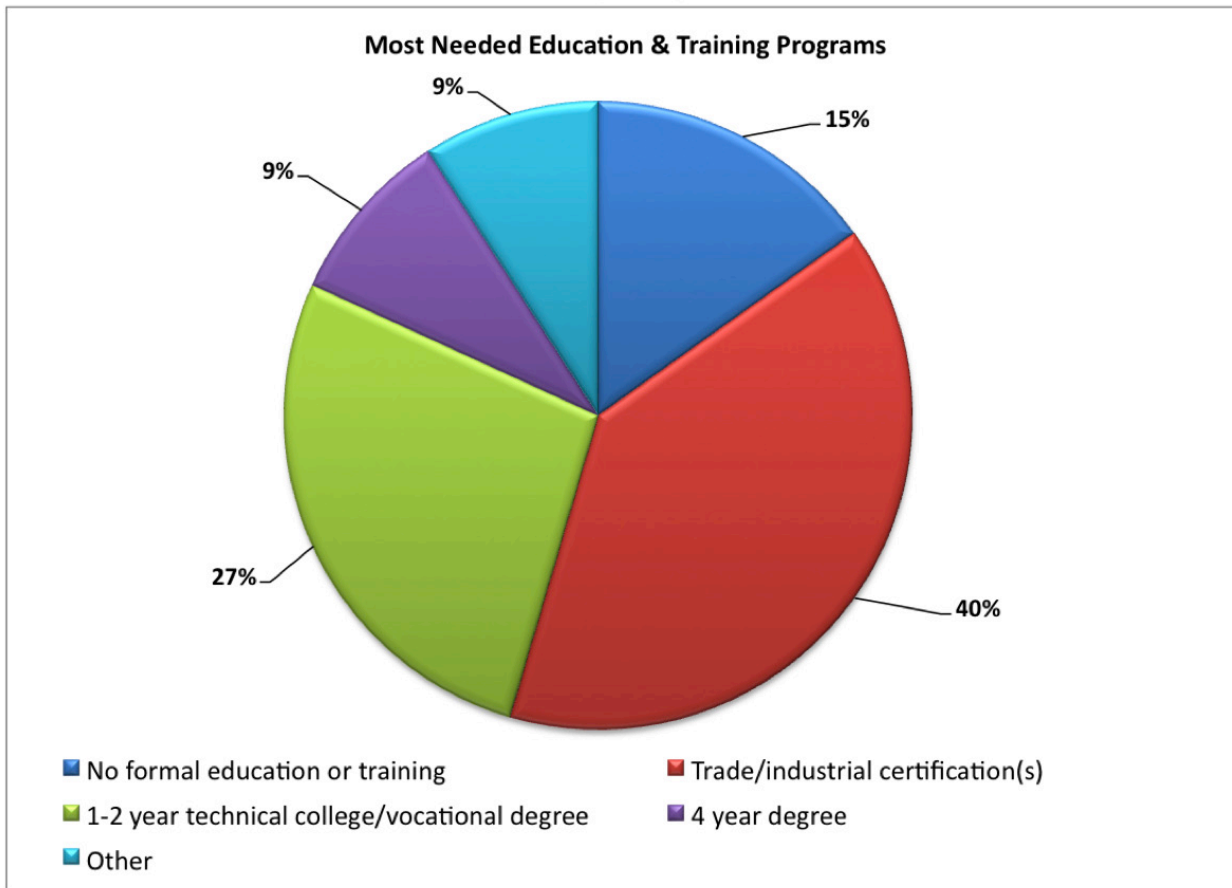
- What is it like to work in the Gas Industry
- Qualities for Success
- What's in it for you?
- Preview of a sampling of entry-level jobs and careers

Click Next to Continue

The availability of qualified workers is an issue for the gas industry. According to “Pennsylvania Marcellus Shale Workforce Needs Assessment,” a report developed by the Marcellus Shale Education and Training Center in 2011, the industry’s most challenging problems are finding people with appropriate experience and the necessary technical skills. The next biggest problem is finding workers willing to do the work or to work the necessary hours, as shown in this chart:



The same workforce needs assessment also found that the types of training and education the industry needs the most in its workforce are technical/vocational degrees or trade and industrial certifications:



ShaleNet.org provides links to training programs – from technical institutes to large universities – that emphasize workforce development in the shale gas industry.

The likely development of new jobs in the Utica / Point Pleasant shale drilling industry may lead our county to consider some questions about local workforce and labor market preparedness, and about workforce development and job growth: **Does the county (or the northwestern PA region) have a thorough understanding of the strengths and weaknesses of the local/regional workforce? Are correct training programs in place, or can they be developed?**

## Real Estate

Drilling can stimulate new real estate or property deals, taking these main forms:

- Gas development-related businesses often need to acquire or rent different types of property in the immediate area or at regional transportation hubs.
- A need for a pipeline network to gather and transmit natural gas creates an opportunity for property owners, including the county, to lease right-of-ways across their lands.

Real estate deals such as a pipeline easement or a lease on a warehouse and yard can drive economic development but can also have land-use implications for the county and municipalities.



## Properties for sale or lease.

When companies involved in gas development come to an area, they need to set up shop – and they need to do so quickly. Their real estate needs include:

- Commercial/office space for back-office work such as accounting, employment, payroll and logistics.
- Lay-down yards, which are flat paved or gravel areas suitable for storing materials, supplies and equipment before use or between uses.
- Industrial sites, such as warehouse, assembly or production facilities.



Sites are available at the Keystone Regional Industrial Park in the southwestern area of the county.

Gas industry companies – knowing they will be operating in a location for a limited period of time – prefer leases to purchases, although this depends many factors, including the type of business, the lending market, and long-term business prospects. Although the potential exists for real estate sector growth, some difficulties exist for businesses trying to relocate. For example, companies that are new to an area or businesses just starting up may not know the lay of the land or have an understanding of what is available.

Some Pennsylvania counties that have experience with Marcellus Shale development activity have sought ways to connect industry customers with available real estate. For example the Clearfield County Economic Development Commission created a mobile app and website called [rigmonkeyapp.com](http://rigmonkeyapp.com), which identifies properties that may be of interest to drilling-related companies. Owners can submit land or commercial or industrial properties for listing, and companies on the hunt for locations can conduct wide or narrow searches within the county.



Gas development companies' need for commercial/office space, industrial sites or laydown yards raises issues of land use priorities within the county. Because Crawford County has no zoning ordinance, the county currently provides limited guidelines on what types of land uses may occur in given locations. By contrast, most Pennsylvania counties that have experience with Marcellus Shale drilling have ordinances that work in the public interest to delineate the specific areas that both the county and its townships/municipalities agree are appropriate for specific uses or for protection zones. In Lycoming County, for example, a collaborative “zoning partnership” approach between the county and its townships and municipalities allows land uses to be shared and/or distributed in such a way that it benefits the partners.

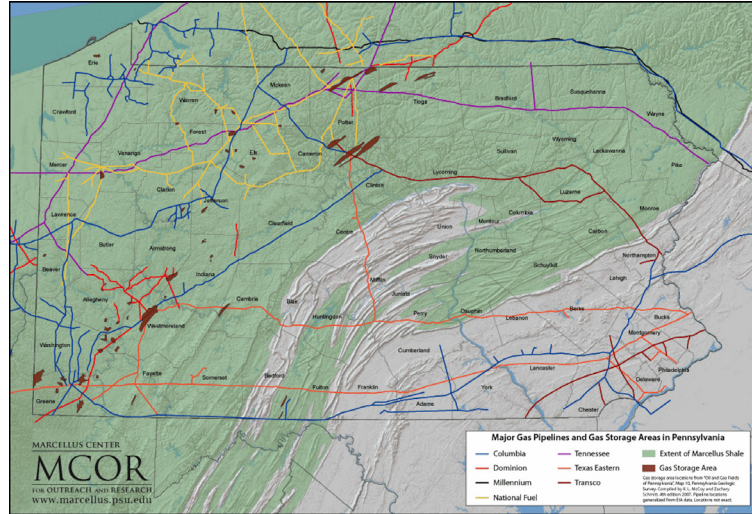
## Pipeline rights-of-way or easements.

After wells are drilled and found to be productive, the gas must be transmitted from wellhead to customers or processors. This “midstream” stage of gas development involves creating or expanding pipeline infrastructure. The infrastructure begins with gathering lines that collect gas at wellheads, and continues with transmission lines that have sufficient capacity to convey great quantities of natural gas over distances. Picture a creek that flows into a stream that flows into a river. And just as waterways cross properties, feeder systems of pipelines cross properties to get natural gas to its destinations.

Property owners – private or public – may lease strips of land to transmission companies for pipeline rights-of-way, which are also called easements. These leases grant transmission companies certain rights to the land around the pipes in exchange for agreed-upon terms with the property owner. Lease payments can provide income for landowners, be they private citizens or public entities.

([Useful information for landowners considering pipeline leases](#) is available from the Penn State Extension service.)

Crawford County could work with the transmission industry as well as local governments and private landowners to plan pipeline corridors that both minimize harm to fragile lands and also generate revenue. Depending on the location of wells and major transmission lines, it may be possible to plan and develop a multi-county corridor. The Penn State University Marcellus Center for Outreach and Research compiled the map below, which shows pipeline corridors in Pennsylvania. (In Crawford County, the blue lines signify Columbia Gas pipelines, and the purple lines signify Tennessee Gas Pipeline Company.)



Real estate deals – whether leases or property sales – can drive economic development in an area with shale gas activity.

## Well Leasing on County Land

In addition to leasing county land for pipeline easements, another potential source of revenue for Crawford County would be to lease county land for a gas well. Because 5 acres of land are typical for each well, the county could work with leasing agents and landowners to select a potential site. In addition, county officials could work with the tax office to determine if delinquent properties with mineral rights but no existing leases might be available for purchase.

## Capitalizing on New Economic Opportunities

The economic opportunities for Crawford County are becoming clearer. New industries such as non-conventional oil and gas extraction are emerging and need to be included in the County's strategy moving forward. This activity is most visible in the county courthouse and state and local permitting offices.

The strategies and recommendations that follow are intended to help the County and its municipalities prepare for and capitalize on this industry.

**Our vision for economic development:** Crawford County is a high-quality location in which people can live, work and play, and where businesses can prosper and gain a competitive edge based on quality, productivity and innovation in today's global economy.

**Position the County to capitalize on oil and gas development.** Economic activity that stems from natural gas exploration and extraction has the potential of benefitting the county, local municipalities, as well as individuals and businesses. The county can make plans and take steps now to be in position to reap benefits of any “boom.”



Preparing for gas development activity can take many forms, with steps that range from administrative to logistical, and from accommodating to activist. For example, tactics could include such possibilities as identifying properties within the county that could accommodate drilling or pipeline construction, and assisting local businesses in adapting to the demands of the oil and gas industry. Here is a closer look at viable ideas:



**The county will continue working with the Crawford County Redevelopment Authority.**

The CCRDA could manage some or all of the opportunities presented in this section, since these tasks could end up being too numerous to be handled effectively by existing county resources. The county would likely be a financial supporter as well.



**The county and/or its partners could appoint a specific liaison for gas development information, to serve as the “who you gonna call?” person for the industry as well as citizens.** This could include hiring, appointing, or adapting an employee’s responsibilities to work with the oil and gas industry and with the public. The responsibilities of the liaison would be to make connections between the industry’s needs and local businesses, to assist the industry with local or county permitting and approval processes. The liaison would also be the key point person for information, with broad and deep knowledge about both the industry and the county, and the ability to respond to questions on the part of county residents and industry representatives. The liaison would know whom to contact for all facets of oil and gas development, and would be a key county presence with the Oil and Gas Task Force. This position functions rather like a triage nurse in a hospital emergency department – prioritizing and responding to a variety of needs simultaneously, and arranging for appropriate levels of care for all.



**The county could identify county-owned properties that are suitable for drilling.** These could be large brownfields that are now vacant or that are home to vacant buildings with slim chance of redevelopment. More likely these are greenfield or rural sites in the county situated away from larger population centers. The county could identify properties of an appropriate size and nature (that is, outside of wetlands or other sensitive areas) that could accommodate a drilling pad and permanent production facilities. Pads are typically 4 to 9 acres in size. This pad area typically accommodates six wells/rigs, equipment storage, water storage, etc. Pads generally drain a square mile – 640 acres – of area. Coordination and cooperation with neighboring property owners sometimes can allow pads to be established in a geometric formation so that roads and collection pipes can be placed in the same corridor. Possible locations might include a large industrial park or other large county owned lands.



**The county and/or its partners could promote real estate sector economic development, both of county-owned and private lands.** One step could be to create an online list of real estate properties that are available for drilling-related commercial or industrial uses, such as Clearfield County’s [rigmonkeyapp.com](http://rigmonkeyapp.com). Another step could be for the county to inventory potential sites appropriate for infill development, such as brownfields or grey fields, or even developing such sites for use by the industry. The Economic Progress Alliance could be a key partner in developing and marketing the county’s existing industrial parks for use by the industry. A third step could be for Crawford County to work collaboratively with local governments, surrounding counties and the industry to define potential pipeline corridors, with the intention of generating revenue for the county when transmission lines are developed on county-owned land.



**The county and/or its partners could play a role in educating and assisting existing and prospective businesses in adapting to the needs and desires of the oil and gas industry.** This likely would take two forms: Goods and services that meet the needs of workers, and



those that serve the needs of the industry. As we have seen, “first wave” drilling workers have specific purchasing and consumer habits. The county could provide resources to help communities understand whether their “main streets” provide the types of businesses and sufficient numbers of them to serve first wave workers, and then help new and existing businesses to adapt to changing market conditions. In addition, the arrival of the extraction industry could mean new business-to-business opportunities. The county could develop tactics – such as workshops, a speaker series, and partnering with local organizations – that could help local businesses understand the typical consumer patterns of first wave workers and the business-to-business needs of the industry itself, and to create plans for gearing up, riding the wave, and then subsequently downsizing when the drilling phase eventually slows.



**The county and/or its partners could strive to increase business awareness and visibility, helping local businesses to market goods and services to the oil and gas industry, its employees, and other economic players.** The county planning staff could partner with other governments or organizations to help local businesses raise their profiles or increase their market shares. Some examples of this are: helping local businesses to participate in the MarcellusOnMainStreet.org website; developing a list of industry-related websites and publications where local businesses could advertise; helping existing organizations such as the Oil and Gas Task Force, local Chambers of Commerce, and others to be aware of each other’s initiatives to maximize productivity and minimize duplication of effort.



In other parts of Pennsylvania, businesses found they needed to adapt to the preferences of temporary workers. Some restaurants changed their menus.



**The county and/or its partners could strive to provide guidance and information to landowners regarding their rights and best practices for natural gas development.** Perhaps working with Penn State University’s Extension office, the county could provide local residents with resources that would help them become educated about their options regarding gas drilling leases or right-of-way easement leases.



**The county and/or its partners could support agencies that facilitate job training, job creation or enhanced employment opportunities in the oil and gas industry.** For example, the county could create an office of workforce development or fully develop a Workforce-Education Alliance for Economic Development (as suggested in the 2004 “Roadmap”) that would work closely with the oil and gas industry to emphasize job skills and job readiness on the part of Crawford County residents. The presence of the Precision Manufacturing Institute, a non-profit industrial training center in Meadville, might present the opportunity for a local organization to work closely with the oil and gas industry to create a center of excellence in related job training for Crawford and surrounding counties.



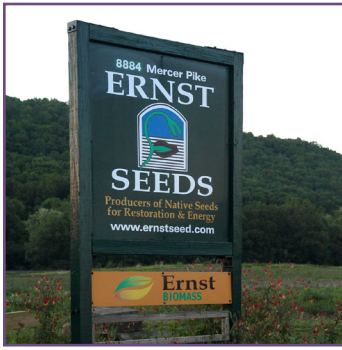
Local businesses could attract patronage by oil and gas industry workers.



**The county could increase the hours its property records office is open, to provide greater access for industry leasing agents (land men).**

## Adjusting our planning resources to meet the needs of municipalities.

The economic challenges facing Crawford County are clearly visible in many of the towns, villages,



Agriculture and timber production are important economic drivers in Crawford County.

and business districts in the county. The County Planning Commission has not focused on economic development efforts in the recent past. Instead, the approach has been to aid in local planning and land use policy formation to address these issues. Traditional economic development efforts have been left to groups with specific economic

development purposes such as the Economic Progress Alliance and Titusville Redevelopment Authority. The time is ripe for the professional staff of the County Planning Commission to assume a larger role in economic development in traditional main street areas and business districts in smaller communities.

***Enhance the Planning Commission's role in efforts to revitalize smaller rural communities in the county, focusing specifically on traditional main streets and business districts.*** There are several ways that the planning commission and staff can engage localities and aid in economic development initiatives. These can be generally placed into one of three categories:



**Providing planning assistance and education** – planning staff supports localities by providing expertise with creating local plans and educating local officials regarding programs and sound planning techniques that are available to them.

- An example: A locality is developing a new comprehensive plan. The County should review this plan per the requirements of the MPC. At this point the County could ensure that local economic development efforts include development and rehabilitation in the local business district/Main Street. An even better approach would be to set aside staff time commitments to attend meetings with the local comp plan committee while it is being drafted.
- An example: A municipality is revising its zoning ordinance. The planning staff should evaluate the zoning in the main street area in particular to ensure that a healthy mix of uses are permitted and that the zoning ordinance does not discourage uses that are important to the overall economic health of the community.
- Planning Commission staff could help a community start its own Main-Street type program. Although state funding for assisting the implementation of these programs has dried up, the technique is still proven to work well and can be implemented without outside capital assistance. The Planning Commission could train a staff member in the tenants and workings of the former program and task them with assisting local groups in establishing local programs. The staff member would advocate a four point action plan: Design, Promotion, Organization, & Economic Restructuring.



**Providing coordination assistance** – planning staff helps localities make connections with the necessary stakeholders/experts to achieve their project, or provides the necessary grantsmanship to achieve a result.



**Providing direct incentives** – county sets aside money, such as the county Community Development Block Grant program, to be used for initiatives in the municipalities.

- The county itself could set aside funds for the specific purpose of promoting economic development in municipalities. Funds could be set aside for a variety of purposes as the county deems appropriate. They could be used to fund:
  - o economic development studies;
  - o redevelopment feasibility studies;
  - o building rehabilitation;
  - o façade enhancements; or
  - o business district revitalization projects like street or sidewalk maintenance or providing street furniture (lights, benches, trash cans, banners, etc.).
- The county could set aside funding specifically intended to rehabilitate X buildings per year(s). A staff member or members could be tasked to foster the building's rejuvenation through to completion and occupancy. These funds could be grants, low interest loans (although right now most loans are low interest). The specific purpose of these funds might allow a building owner to renovate a building that they previously could not because they could not secure financing through traditional lenders.



The Pittsburgh Glass Works plant lies at one corner of the Keystone Regional Industrial Park.



**Conduct a county-wide branding campaign aimed at attracting visitors, enhancing tourism, and promoting investment.** Build on the “Cultivating Crawford” theme or another branding effort to market the county beyond its borders. Implement a County-wide branding campaign (covering businesses, industries, and tourism). This should be a partnership between the county and the Crawford County Convention and Visitors Bureau.



**Additional economic development ideas that came out of the planning process included:**

- Continue efforts to develop vacant portions of KOZs and industrial parks in the county.
- Continue traditional economic development efforts by supporting major players and stakeholders throughout the county.
- Enhance workforce development activities throughout the county.

## Commerce & Economic Development Goals

The county's goals for commerce and economic development are extensive. Many can be championed by implementing the strategies mentioned previously. However, the comprehensive plan considers the economic development aspirations beyond those strategies. On the following pages the plan provides policy direction for future efforts aimed at enhancing economic development throughout the county.

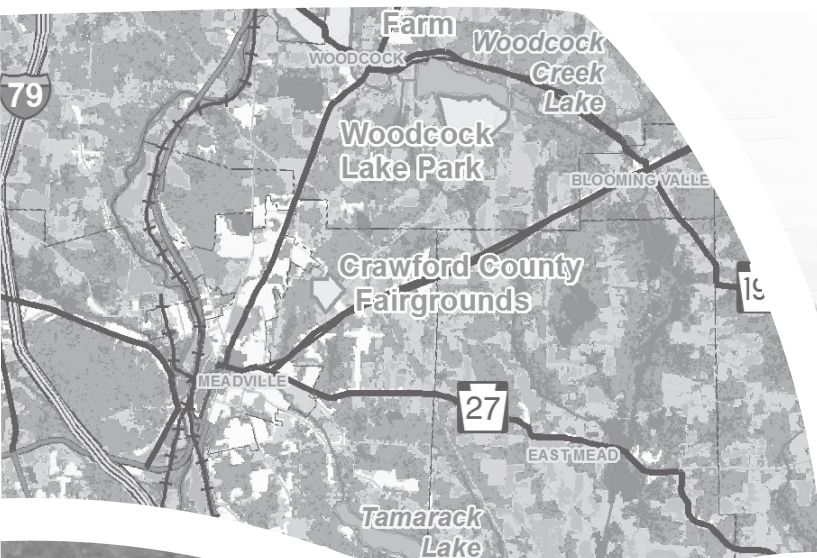
The Commerce and Economic Development Goals Matrix, appearing below and on the following page, expands on the vision for Commerce and Economic Development that was expressed earlier in this chapter. The goals matrix shows where certain policies are appropriate and desirable and where they are not.

Commerce & Economic Development Goals Matrix	Urban Centers / Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Foster a strong economic environment within the County to keep current and new residents working through the retention of current business, attracting new development, and supporting entrepreneurial efforts.				
Integrate economic development planning with land use planning, including developing infrastructure systems in designated growth areas.				
Target new businesses and industries to areas with existing infrastructure systems and/or to designated growth areas.				
Minimize the loss of raw materials and resources such as lumber, natural gas, farm products, and other agricultural products which are leaving the county and being processed or manufactured elsewhere to improve and diversify the local economy.				
Promote non-industrial forms of economic development outside of the cities of Meadville and Titusville.				
Nurture and support initiatives and policies that retain and enhance existing central business districts throughout the county.				
Facilitate communication between businesses, public agencies, economic development entities, and residents to foster retention and expansion of agriculture, business and industry.				
Promote the importance of agriculture to the local economy, and maintain farming as a viable industry through land use policies and regulations, technical assistance, community education, and funding through existing programs.				
Support local economic and workforce development entities to secure business start-up and development capital and technical assistance through state and federal programs.				
Promote the redevelopment of vacant or underutilized commercial and industrial facilities for use by new or expanding businesses, and support efforts to acquire funding for environmental remediation.				
Support municipal and county-wide infrastructure systems (such as transportation, utilities, stormwater management) as well as open space and recreation facilities that foster or enhance economic development opportunities and business growth.				
Ensure a diverse mix of housing options to accommodate the demand from existing businesses and new industry workers.				

Commerce & Economic Development Goals Matrix	Urban Centers / Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Preserve and promote the historic heritage and rural, woodland and agricultural character of the county to enhance its status as a destination for employers, residents and visitors.				
Support improvements to roadways and bridges, public transit, and nonmotorized forms of transportation to support economic growth and better connect workers and jobs.				
Encourage job creation through small business assistance and other entrepreneurial programs				
Further develop a connection between the K-12 education system, area colleges and training institutes with employers to provide employment opportunities for area residents and to meet the demand for a highly skilled workforce.				
Provide support and technical assistance to agricultural operations and farm-support businesses.				
Advocate and participate in the sharing of resources and cooperation between county departments and other entities related to economic improvement and workforce development initiatives.				
Coordinate or support economic development planning efforts that involve multiple municipalities or jurisdictions, and address regional issues and concerns.				
Encourage all businesses and industries in the county to retain a hazardous materials inventory and to file an emergency action plan with the county Emergency Management office in the event of a spill, chemical accident, etc.				
Promote a diverse range of rural and urban cultural opportunities to enhance the quality of life and encourage tourism.				
Promote the Oil Region National Heritage Area and the Pennsylvania Oil Heritage Region, which both include some locales within the county.				



# AGRICULTURE





# AGRICULTURE

Agriculture is an important component of the Crawford County economy. The 2007 Census of Agriculture found 1,468 farms in the county encompassing 232,093 acres, which is nearly 36% of the entire land area of the county. The products sold by these farms totaled \$101,036,000. There was a near split between the farmers whose full time primary occupation was operating the farm (754) and those that operate the farm as a secondary occupation (714 people).



## Soils and open land provide the basis for the county's farms

Class I, II, III, and IV soils are the most suitable for agricultural uses according to the USDA and the Crawford County Conservation District. These soils are ubiquitous, covering 89% (593,673 acres) of Crawford County and are present in every municipality in the county.

Prime agricultural soils cover 114,350 acres in Crawford County. This is 17.2% of the county's total area. Of the 51 municipalities within the county, 31 have more than 1,000 acres of these soils. Troy Township and Oil Creek Township each have more than 10,000 acres of prime agricultural soils (11,101 and 10,195 acres, respectively).

What do you like about Crawford County?

**"Agricultural Environment / Rural Landscape"**

(#2 answer 63.8% of respondents)

Out of all the items you checked above, which ONE do you feel is most important to your quality of life?

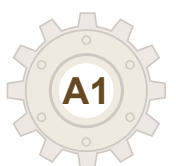
**"Agricultural Environment / Rural Landscape"**

(#3 answer)

-Crawford County Comprehensive Plan Public Survey

*Quality agricultural soils cover 89% of the Crawford County and are present in every municipality in the county.*

The table and map describe in more detail the presence of prime agricultural soils in the county and its municipalities. This chapter will frequently revisit the information included in this table and map, as they include important basic information regarding the agricultural potential of land in the county.





insert Agriculture Map 11x17

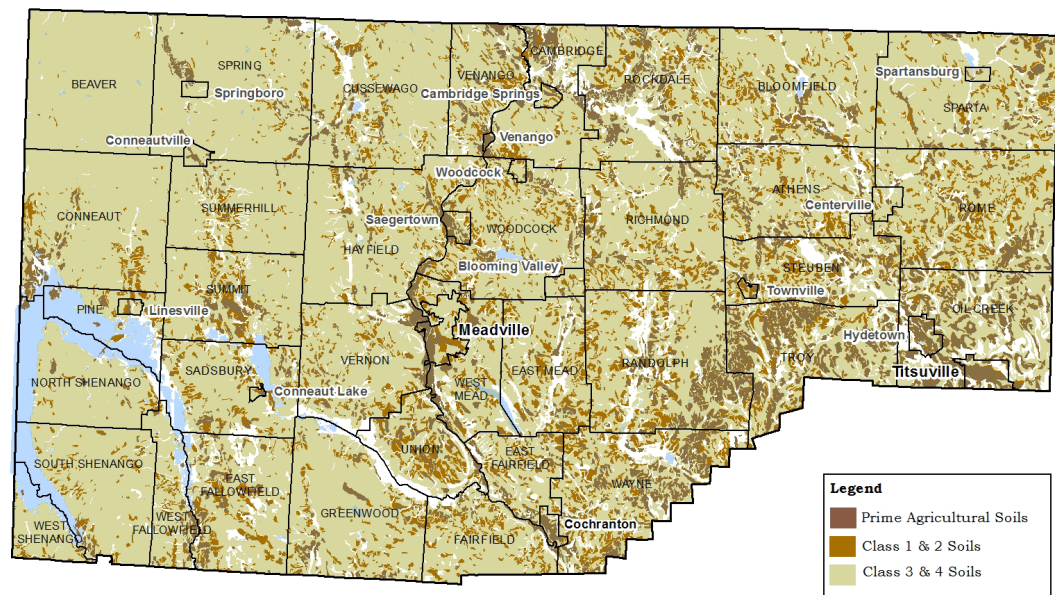


*The table below details the acreage of prime agricultural soils in each municipality in Crawford County and its rank by total number of acres of these soils. The ten municipalities with the highest number of acres of prime agricultural soils are highlighted in brown.*

Municipality	Prime Agricultural Soils Area (acres)	Prime Ag. Soil Rank (by # of acres)
Athens Township	2,947	12
Beaver Township	41	51
Bloomfield Township	2,744	14
<b>Cambridge Township</b>	<b>3,103</b>	<b>10</b>
Conneaut Township	2,151	23
Cussewago Township	2,318	20
East Fairfield Township	1,359	29
East Fallowfield Township	2,645	15
East Mead Township	1,677	26
Fairfield Township	1,017	31
Greenwood Township	2,184	22
Hayfield Township	2,048	24
North Shenango Township	723	34
<b>Oil Creek Township</b>	<b>10,195</b>	<b>2</b>
Pine Township	666	36
<b>Randolph Township</b>	<b>7,853</b>	<b>3</b>
<b>Richmond Township</b>	<b>3,135</b>	<b>9</b>
<b>Rockdale Township</b>	<b>6,688</b>	<b>5</b>
<b>Rome Township</b>	<b>4,651</b>	<b>6</b>
Sadsbury Township	1,607	27
South Shenango Township	629	37
<b>Sparta Township</b>	<b>3,534</b>	<b>8</b>
Spring Township	2,551	18
<b>Steuben Township</b>	<b>3,898</b>	<b>7</b>
Summerhill Township	521	38
Summit Township	2,493	19
<b>Troy Township</b>	<b>11,101</b>	<b>1</b>
Union Township	2,233	21
Venango Township	2,606	17
Vernon Township	2,631	16
<b>Wayne Township</b>	<b>7,738</b>	<b>4</b>
West Fallowfield Township	921	32
West Mead Township	2,830	13
West Shenango Township	262	40
Woodcock Township	3,035	11
Meadville	1,335	30
Titusville	1,889	25
Blooming Valley Borough	138	44
Cambridge Springs Borough	233	41
Centerville Borough	135	45
Cochranon Borough	707	35
Conneaut Lake Borough	62	50
Conneautville Borough	154	42
Hydetown Borough	1,460	28
Linesville Borough	88	47
Saegertown Borough	736	33
Spartansburg Borough	96	46
Springboro Borough	82	48
Townville Borough	144	43
Venango Borough	278	39
Woodcock Borough	77	49
Crawford County Total	114,350	



## Prime Agricultural Soils Map



SOURCE: Department of Conservation and Natural Resources  
Natural Resource Conservation Service

Pashek Associates

*The map above displays the amounts of prime agricultural soils present in each municipality in Crawford County. Prime agricultural soils and Class 1 & 2 soils are more prevalent in the eastern and southern municipalities in Crawford County. However, every municipality in the county contains land and soil suitable for agriculture.*

## Preserving agriculture in the face of land development pressure

One of the greatest threats to agriculture throughout the Commonwealth is pressure to develop land outside of urban centers. In many counties this pressure primarily takes the form of housing and other suburban development. The pressures on Crawford County farmland are slightly different, however. Population in Crawford County is shifting, increasing in certain municipalities and decreasing in others while the county overall experiences population decline. Specifically, the county lost approximately 1,200 residents from 2000 to 2010, during which time 23 municipalities gained population and 28 lost. Although these shifts are small, understanding where they occurred and how they correspond to agricultural uses and prime agricultural land in the county will help demonstrate their potential impacts in Crawford County.

Another type of land development – shale gas exploration and production – is likely to have a more significant impact on agricultural lands in the county. Farms are prime targets for oil and gas companies to lease for several reasons:

- The industry needs large portions of land in order to drill – and farmland often fits the bill.
- By focusing on farmland, the oil and gas companies can minimize the number of landowners that the companies need to negotiate with in order to accumulate sufficient acreage for a well site.
- Since oil and gas operations might be considered a nuisance to surrounding residents, companies can minimize complaints by situating a drilling rig on a less densely populated area, such as farmland.



A natural gas well site is found amidst farmland and woodland in western Crawford County.

Ultimately, the companies will go where the gas can be found, but if given the choice between needing to assemble many small tracts in a more densely populated area and assembling a few farms, the companies are likely to begin negotiating with the farmers. The oil and gas industry can also have significant impacts on the land itself and neighboring natural resources, including:

- Drilling operations need to set up holding ponds to store fracturing wastewater, which contains harsh chemicals and materials that can negatively impact the site and its surroundings if it leaks or spills.
- New access roads change the topography of the land, and can interrupt natural drainage patterns, affecting stream networks and wetlands.
- In addition, the drill site itself becomes a permanent production pad that must remain accessible, a condition that could break up previously farmable land.



There are definite positives to situating oil and gas operations on farms, however. Many farms have struggled to thrive during the recent economic downturn, and oil and gas leases could provide much-needed revenue for farmers. These revenues continue as long as the well is productive, which could be years or decades. Crawford County farmers need to consider these benefits and the costs when deciding whether or not to lease their land for oil and gas production.

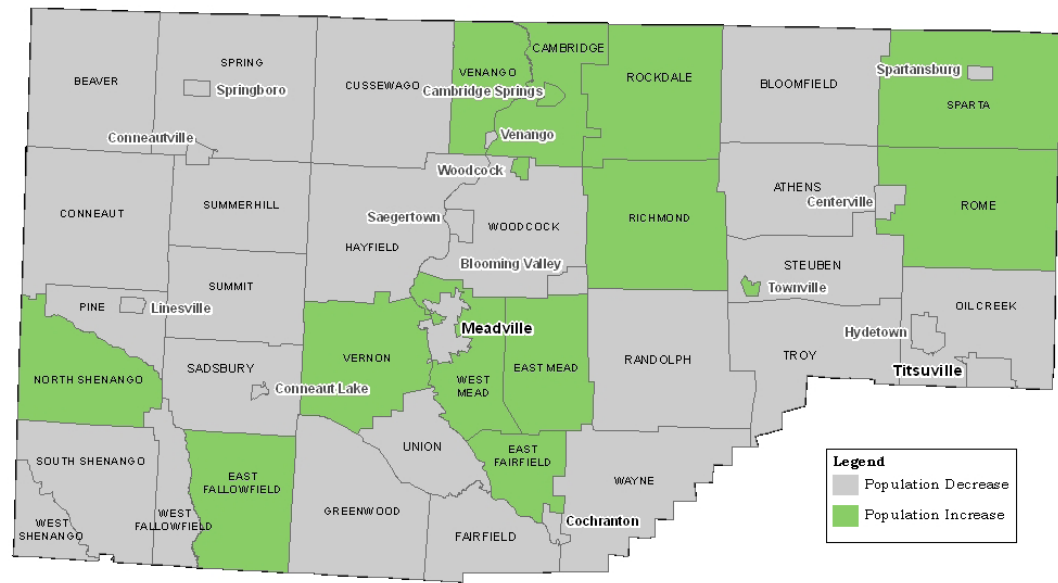
A productive gas well could be a financial boon to a farmer.

*The table below details the changes in population among Crawford County's 51 Municipalities. The 23 municipalities that gained population between 2000 and 2010 are highlighted in green.*

Municipality	Population Change 2000-2010
Athens Township	-5.3%
Beaver Township	-0.1%
Bloomfield Township	-6.4%
Blooming Valley Borough	-10.8%
<b>Cambridge Township</b>	<b>5.2%</b>
<b>Cambridge Springs Borough</b>	<b>9.8%</b>
Centerville Borough	-11.7%
Cochranon Borough	-1.0%
Conneaut Township	-4.8%
Conneaut Lake Borough	-7.8%
Conneautville Borough	-8.7%
Cussewago Township	-2.4%
<b>East Fairfield Township</b>	<b>8.7%</b>
<b>East Fallowfield Township</b>	<b>13.0%</b>
<b>East Mead Township</b>	<b>0.5%</b>
Fairfield Township	-7.3%
Greenwood Township	-2.2%
Hayfield Township	-4.9%
Hydetown Borough	-13.1%
Linesville Borough	-10.0%
Meadville City	-2.2%
<b>North Shenango Township</b>	<b>1.7%</b>
Oil Creek Township	-0.2%
Pine Township	-13.0%
Randolph Township	-3.0%
<b>Richmond Township</b>	<b>7.0%</b>

Municipality	Population Change 2000-2010
<b>Rockdale Township</b>	<b>12.1%</b>
<b>Rome Township</b>	<b>5.4%</b>
Sadsbury Township	-0.3%
Saegertown Borough	-7.5%
South Shenango Township	-0.5%
<b>Sparta Township</b>	<b>5.3%</b>
Spartansburg Borough	-8.4%
Spring Township	-1.5%
Springboro Borough	-2.9%
Steuben Township	-11.5%
Summerhill Township	-8.4%
Summit Township	-6.7%
Titusville City	-8.9%
<b>Townville Borough</b>	<b>5.6%</b>
Troy Township	-7.8%
Union Township	-3.7%
Venango Borough	-17.0%
<b>Venango Township</b>	<b>4.3%</b>
<b>Vernon Township</b>	<b>2.4%</b>
Wayne Township	-1.2%
West Fallowfield Township	-8.2%
<b>West Mead Township</b>	<b>0.4%</b>
West Shenango Township	-6.8%
<b>Woodcock Borough</b>	<b>7.5%</b>
Woodcock Township	-4.0%

## Population Change



SOURCE: US CENSUS DATA 2000 & 2010

Pashek Associates

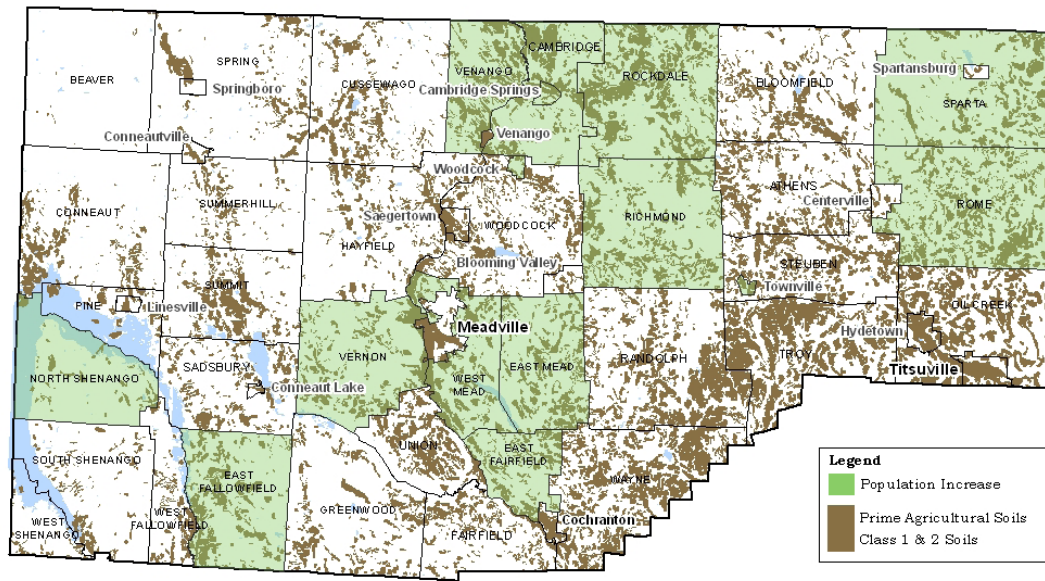
*The map shows geographically, the figures that are included in the previous table. Several patterns are apparent from this map:*

- *The townships surrounding Meadville grew while the city itself lost population.*
- *The townships north of Titusville also grew while the city lost population.*
- *Townships in northwestern Crawford County such as Spring, Cussewago, Venango, and Summerhill grew.*
- *In the north-central portions of the county the boroughs (Cambridge Springs, Woodcock, and Saegertown) grew in population while the surrounding townships lost population.*
- *Communities in western and southeastern Crawford County lost population.*

Population growth and residential development is the greatest threat to preserving agricultural land. Therefore, it is important to evaluate the population trends in terms of the county's existing and potential farmland. The map on the following page shows this analysis. To aid in narrowing the focus of this analysis class 3 and 4 soils were not included. Instead, the analysis focuses on "prime agricultural soils," "class 1 and 2 soils," and parcels in existing Agricultural Security Areas (ASAs).

*Most of the growing townships, with few exceptions, are also home to vast quantities of land that is prime for agriculture preservation.*

## Agricultural Areas & Population Increase



SOURCE: Department of Conservation and Natural Resources  
Natural Resource Conservation Service  
US Census Data 2000 & 2010

Pashek Associates

*Each of the communities that experienced population growth also includes large areas of exceptional farmland and agricultural soils. However, townships like Bloomfield, Sparta, Athens, Rome, and Oil Creek have extensive tracts of prime agricultural land that far exceed the coverage of townships like Spring and Summerhill. The growing townships surrounding Meadville also have large percentages of their land covered by prime soils and agricultural lands.*

## Effective Existing Preservation Tools in the County

Now that we understand where population shifts are occurring in the county and its individual municipalities, we need to better understand the state of agricultural preservation tools in the county. There are several major techniques in place.

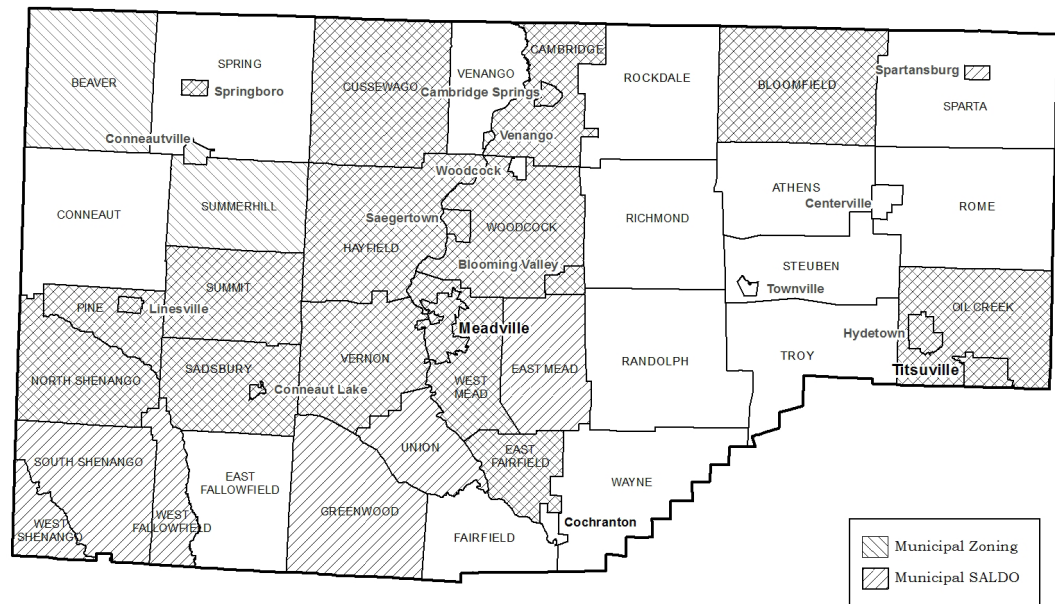
### Land Development Regulations (Zoning Ordinances and Subdivision & Land Development Ordinances)

The most basic and common tools to control land use in Pennsylvania are the Subdivision and Land Development Ordinance and Zoning Ordinance. These two ordinances can achieve many community- or county-level land use goals. This is true of farmland preservation as well. Zoning can prescribe areas that should accommodate agriculture and SALDO can control how land is divided. When operating together, these ordinances can ensure that an area retains large tracts of farmland, where it is appropriate. Because of the ordinance's importance and effectiveness, we have included an evaluation of the current state of these land development regulations in each municipality in the county.

Of Crawford County Municipalities:

- 26 have a Zoning Ordinance
- 29 have a SALDO
- 22 have both

## Municipal Ordinance Inventory



SOURCE: Crawford County Planning Commission

Pashek Associates

*The map above depicts the presence of a local zoning ordinance or SALDO in Crawford County Municipalities. Many of the communities along the I-79 corridor have one or both ordinances. It also appears that land development regulations are more prevalent in communities in the western portion of the county.*

Earlier it was discussed that many of the townships in the eastern, southeastern, and south-central portions of the county had extensive amounts of prime agricultural soils and lands. Few of these townships currently exercise control or influence over land development through zoning or SALDO. Many of the prime agricultural areas in the central and western portions of the county, however, are utilizing zoning and SALDO. A more detailed analysis of the content of these specific municipal ordinances would aid in determining how effective these ordinances are at preserving agriculture. However, this plan does not evaluate the ordinances individually.



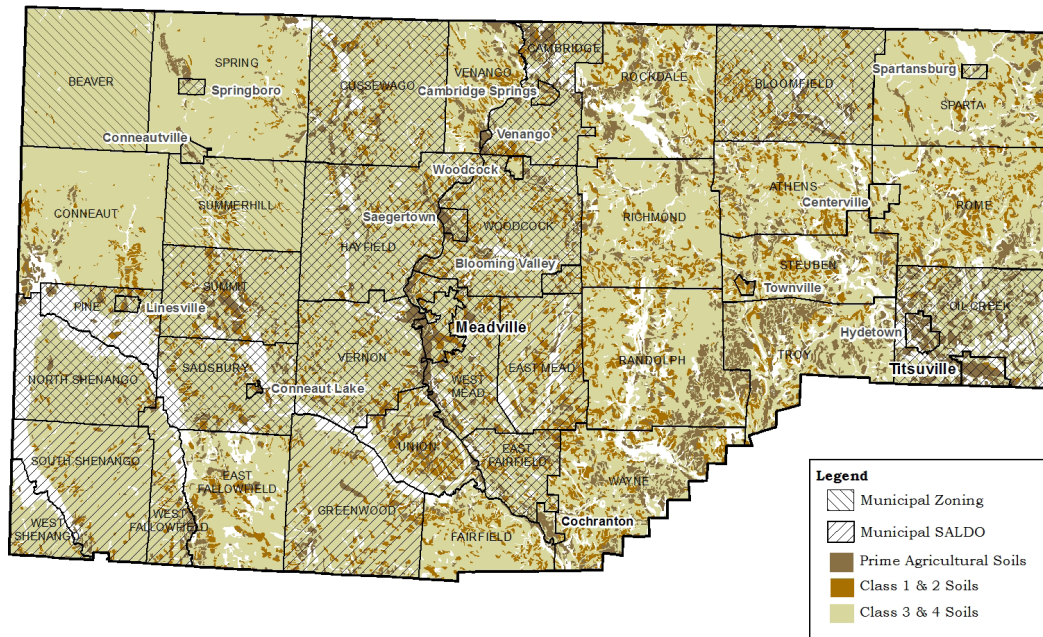
Ordinances can protect valuable farmland.

The survey that was conducted as part of the County Comprehensive Plan asked a question regarding land development regulation. The question was “Which of the following steps do you believe should be used to preserve agricultural land and natural resources?” The answers and the percentages of respondents that selected them are listed in order from highest ranking to lowest.

1. Protect streams by limiting development within a buffer area (77.1%)
2. Preserve farms through conservation easements (73.1%)
3. Protect sensitive wildlife habitats by creating conservation greenways (69.4%)
4. Encourage ordinances for new housing developments that preserve open space (60.4%)
5. Limit development of steep slopes (45.3%)

Answers 1, 4, and 5 are regulations that are commonly associated with a land development ordinance such as zoning or SALDO.

## Municipal Ordinance Inventory & Agricultural Areas



SOURCE: Crawford County Planning Commission

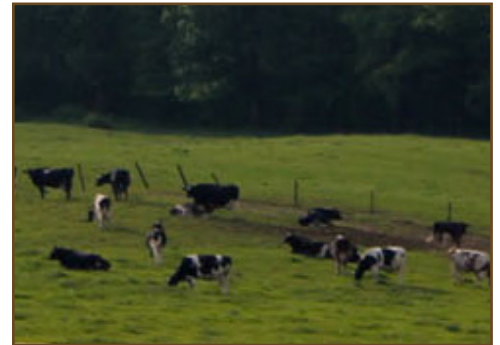
Pashek Associates

The map above compares the extent of quality agricultural soils and farmlands in the county's municipalities with the land development regulations that are currently in place. The communities in the southeastern portion of the county stand out as those with the least influence over new development as well as the most farmland to preserve.

### Agriculture Security Areas and Agriculture Conservation Easements

An Agriculture Security Area (ASA) is an area of land that has been officially designated as an agricultural district. The Agriculture Area Security Law, which enabled ASAs, requires that a district be 250 acres or more. The district may be owned by more than one person, and may comprise agricultural tracts that are noncontiguous. Agriculture Security Areas may also cross municipal and county boundaries.

The county plays an important role in the creation of an ASA. However, because localities are the primary implementers of local land use control and regulation, an ASA is typically a collaborative effort between the landowner and the township in which the proposed ASA is located. Because local and county government and the landowner(s) are in agreement, an ASA is both an individual decision to continue farming and a public expression of support for the land to remain in agricultural use. Participation in an ASA is voluntary and landowners incur no fees.



Several farms can be grouped together in an agriculture district of 250 acres or more, and gain the designation of an Agricultural Security Area.

Currently, 24 municipalities in the county take part in the Agriculture Security Area Program. ASAs cover over 71,000 acres in the county (just over 10% of the entire county's 664,563 acres).

While ASAs are a private and public policy commitment to preserving and encouraging agriculture, the Agricultural Conservation Easements Purchase Program is an excellent (and legally binding) way to ensure that land will remain in productive farming and not be developed for other purposes.

The Agriculture Area Security Law describes an agriculture conservation easement as, “interest in land... which... represents the right to prevent the development or improvement of the land for any purpose other than agricultural production.”

These easements are purchased from the landowner by the county or local government or preservation agency. This sale of certain development rights generates money for the landowner. The conservation easement also ensures that additional regulations or restrictions will not be placed on the landowner as long as he continues to operate the land as a farm.

As of June 2013, the county had successfully purchased agriculture conservation easements on four farms. Two of these farms are in East Fallowfield Township, one is in Fairfield Township, and one is in Wayne Township. These farms were purchased in stages between 2006 and 2009 and leveraged state funds to aid in the preservation. Combined, these three farms comprise nearly 760 acres. The Crawford County Farmland Preservation Board maintains a list of farms that they wish to preserve. Currently, there are eight farms on the list. The preservation of these farms is largely dependent upon funding assistance from the state.

Preserving farms through conservation easements was the #2 answer (73.1% of respondents) to the survey question that asked “Which of the following steps do you believe should be used to preserve agricultural land and natural resources?”



Equipment ready for use in southwestern Crawford County.

## Preserving agriculture’s prominence in Crawford County

The county has successfully purchased agriculture conservation easements on three farms. Two of these farms are in East Fallowfield Township and the third is in Fairfield Township. These farms were purchased in stages between 2006 and 2009 and leveraged state funds to aid in the preservation. Combined, these three farms comprise nearly 760 acres. The Crawford County Farmland Preservation Board maintains a list of farms that they wish to preserve. Currently, there are eight farms on the list. The preservation of these farms is largely dependent upon funding assistance from the state.

### Our vision for agriculture and conservation:

“To enhance lasting and profitable agriculture by coordinating wise land utilization, marketing, and preserving farmland and natural resources.”

“... leading farmland preservation counties employ at least six techniques: a comprehensive plan, transfer or purchase of development rights, differential assessment, right-to-farm laws, agricultural zoning, and urban growth boundaries.” – APA (American Planning Association)

The county’s strategy for preserving farmland and supporting the agriculture industry is intertwined with many of the other chapters of this comprehensive plan. Effective land use planning and implementing local land development regulation can be a significant boon for farmland preservation. Transportation and infrastructure planning can also support these valuable industries. The public has clearly declared its preference to preserve the large swaths of prime agricultural land that are present in Crawford County municipalities.



Spartansburg’s Platt’s Mill, as seen from across the Clear Lake weir.

The American Planning Association (APA) recommends many techniques for preserving farmland. Not all of these are suited for Crawford County. However, some are quite appropriate and several are already being implemented.

Crawford County already uses a system of differential assessment by placing much of the value of property on its improvements instead of the land itself. Pennsylvania's right-to-farm laws already provide an initial level of protection for farmers. The implementation plan for preserving agricultural lands and the agriculture industry is a three-part strategy: incentivizing farmland preservation, employing land use planning and regulation, and increasing visibility of the industry.

Rank the types of new businesses that you believe Crawford County should attract to strengthen its economy (Question 7). Agriculture-based industry ranked #2.

## Linking Farmland Preservation and Land Use Planning

Planning for agriculture began with identifying those areas that currently are prime for agricultural use. One of the initial recommendations, therefore, was to inventory prime agricultural soils in the county.



**Inventory prime-agricultural lands using soil types** – This recommended action was actually completed as part of the comprehensive plan using available GIS information and the Crawford County Soil Survey. The map on page A2-3 shows all these areas and includes all Class I - IV soils. Because this task is currently completed, the recommendation of this plan is to update this map whenever new soils geo-data or a new county soil survey becomes available. Additional mapping analyses examined the presence of agricultural security areas and agricultural easements in the county (see the Agricultural Areas Map on pages A2-A3). While the presence of these conditions is important in planning for the future of agriculture they do not ensure that the land is actively being used for agricultural purposes. Consequently, creating an inventory of active agricultural lands throughout the county was deemed to be one of the most important recommendations that emerged from the planning process.



An active farm in Eastern Crawford County.



**Create and maintain an inventory of active agricultural lands in the County.** These should include all lands that have been improved for agricultural use and determine a way to actively update and refresh this information. One of the largest hindrances to achieving this objective is the lack of land use and development regulations in many Crawford County municipalities. Communities that require land development approvals and other permits have a greater opportunity to keep track of how land is being used in their community.

Zoning Ordinances and Subdivision and Land Development Ordinances allow tracking of land uses and provide an opportunity to utilize additional farmland preservation tools within the context of the larger land regulations. There are several agriculture-specific land regulation tools that were recommended due to their potential effectiveness, although it is possible some may not be feasible in Crawford County.

**Develop a model agricultural zoning district for municipalities or the county to adopt.** This was not determined to be a priority as part of this planning process, but it could be an effective strategy for preserving farmland in Crawford County. The municipalities shown as "rural/agricultural" on the Land Use Plan (page L3) likely have the highest need for this type of zoning. Those communities that already have an ordinance could modify it to include agricultural zoning components. Agricultural zoning can include:



- “Large-lot zoning,” which requires large tracts for developing non-farm dwellings or uses;
- “Area-based allocation,” which limits the number of non-farm dwellings permitted based on the original size of the agricultural tract. It then requires smaller lots for those additional non-farm units in order to preserve large portions of the original tract; and
- “Agriculture-exclusive zoning,” which limits the uses permitted on the land to agricultural use.



**Develop a “conservation by design” ordinance.** Another regulatory technique is commonly called conservation by design, which leverages both the zoning and the subdivision and land development ordinances in a community to cluster developed areas of a tract in order to preserve large contiguous areas of the site. Often these preserved areas have an environmentally sensitive feature or prime agricultural land that should be preserved. These ordinances are effective in areas that experience significant development pressure (especially for residential development) and large undeveloped or farmed areas.



**Determine the appropriateness and ripeness of implementing a Transferrable Development Rights program.** Transferrable development rights schemes allow certain areas to be preserved, such as prime farmland areas or environmentally sensitive areas, while other designated areas are permitted to increase in density. The ability or “rights” to develop are essentially transferred from one location to the other. This strategy may not be viable county-wide at this point in time due to the lack of land development controls in many communities.



Farm products for sale in southwestern Crawford County.

## Reinvigorating Farmland Preservation Incentive Programs

Instead of taking the regulatory approach to farmland preservation, the County and other groups within have effectively incentivized agricultural preservation. Programs such as Agricultural Security Areas and agricultural conservation easements have been used throughout the county. Those currently enrolled in either of these programs were mapped as part of the comprehensive plan and are shown on the Agriculture Map found on page A3.

During discussions throughout the planning process it was revealed that the most effective action the planning commission could take would be for staff to focus on promoting the programs that are currently available and their benefits to farmers. It was recommended that these planning commission-sponsored activities should promote agriculture in the county in general and specifically promote the potential benefits and availability of programs such as Clean and Green, Agricultural Security Areas (ASAs), Agriculture Conservation Easements, etc. The County Conservation District and Agriculture Preservation Board should also be involved.



**Expand ASAs into the townships that currently do not have them but have quality agriculture soils and large farms.** ASA is a voluntary enrollment program that allows an extra level of protection for a farmer from nuisance complaints. Enrollment also moves a farmer a step closer to applying for farmland preservation programs. ASAs must meet a minimum size threshold. Current agricultural conditions mapping provides a clear view of where prime agriculture lands are found and where lands already enrolled in ASAs are situated. The county could use this information to target areas to recruit farmers to enroll in the ASA program.



**Reprioritize the purchase of agriculture conservation easements** (supported by survey results Question 12's #2 answer). The Crawford County Agricultural Lands Preservation Board determines criteria and priorities regarding where and when to acquire farmland conservation easements. A county can purchase easements with state funds or their own funds. The Preservation Board's Agriculture Conservation Purchase Program establishes the criteria that must be met in order to be considered for the program. Among other requirements there is a minimum size threshold that must be met, the property must be in an ASA, and the landowner must volunteer to participate in the program.

## ***Supporting visibility and access to locally produced agricultural goods***

A common refrain heard throughout the planning process was that so many quality agricultural products were being produced locally, but residents were unaware that they were available. In order to promote the visibility and awareness of these products the county should consider the following:



**Encourage non-farm residents to support farm stands, farm markets, community supported agriculture (CSAs), farm stores and agricultural retail outlets so they will benefit from local food.** Build on the successes of the existing farmers markets such as the: Meadville Market House, Titusville Farmers Market, Cochranon Farmers Market.



Finney's Pumpkinville was a popular site in Cambridge Springs.

### **Survey results:**

- Which of the following needs to be improved? (Question 3): "Enhance farming in the region." Ranked near the middle, which makes me think that people do not perceive agriculture needing to be "improved" because it is not a problem, but they want to preserve and protect it.
- Rank the types of new businesses that you believe Crawford County should attract to strengthen its economy (Question 7). Agriculture-based industry ranked #2.

Zoning cannot restrict a farmer from directly selling goods on their farm (due to the Right to Farm Law) as long as the farmer owns the farm and 50% of the goods sold were produced on the farm.

## **Agriculture and Conservation Goals**

The county's goals for agriculture and conservation are included below. The strategies asserted previously focus primarily on preserving farmland. This was due to the prominence and importance of the agriculture industry to the county. However, the comprehensive plan considers the county's natural resources to be extremely important. While preserving agriculture has indirect environmental benefits, this portion of the comprehensive plan also expresses the county's policy guidance for future efforts aimed at preserving sensitive natural resources throughout the county.

The Agriculture and Conservation Goals Matrix, appearing below and on the following page, expands on the vision for agriculture and conservation that was expressed earlier in this chapter. The Goals Matrix shows where certain policies are appropriate and desirable and where they are not.



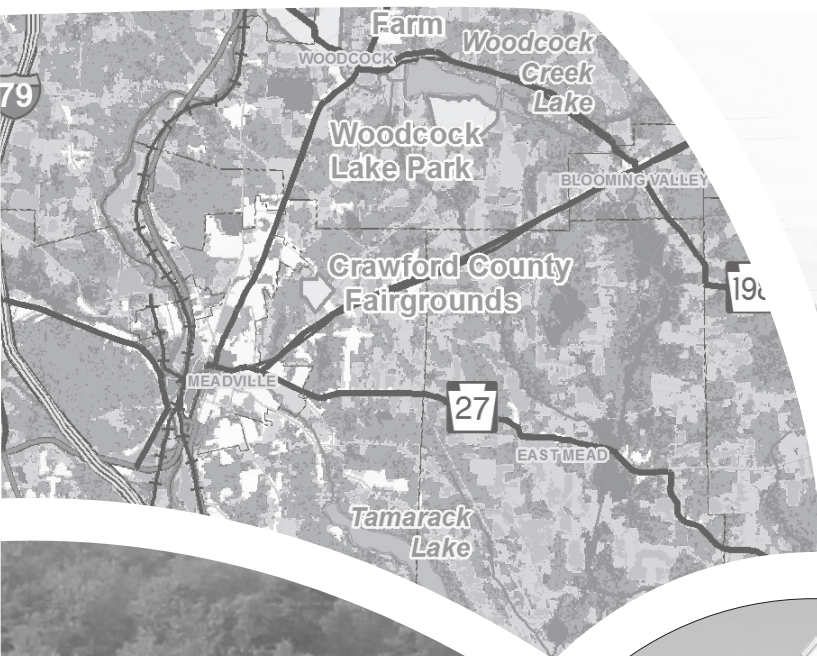
A farmer hits the road in southwestern Crawford County.

Agriculture & Conservation	Urban Centers / Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Promote policies and practices that protect active farmland with productive soil.				
Support the inventory and identification of all Class I through IV lands that have been improved (i.e. drained or tiled) for agricultural use.				
Partner with non-profits and municipal governments to protect and preserve agricultural lands.				
Target farmland preservation easement purchases in rural and agricultural landscapes.				
Foster appreciation for rural agricultural areas by encouraging appropriate public access via designated trails or portions of tracts that are encumbered with public easements.				
Discourage the conversion of agricultural lands to other uses unless such lands are part of designated growth areas established by a comprehensive or land-use plan.				
Encourage development within designated growth areas and to allow appropriate-scale agricultural uses in all districts, to deflect encroachment into prime agricultural lands.				
Encourage, through education and technical support, participation in the Agricultural Security Areas program, the Clean and Green program, and others.				
Limit sprawl and encourage cluster developments through the encouragement of mixed-use planned development uses (PUDs).				
Encourage county residents to support farm stands and markets, and other farm-to-table outlets so the residents may benefit from local food while also supporting producers.				
Assist farmers in gaining information about leasing land for gas line transmission easements and/or oil and gas drilling rights, and to explore or develop alternative energy sources, all of which may sustain or supplement energy needs or provide additional sources of income.				
Foster connections between K-12 and post-secondary educational facilities in the county and agricultural organizations to encourage appropriate skill and knowledge acquisition for new or next-generation farm ownership.				

Agriculture & Conservation	Urban Centers/ Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Encourage local marketplaces for processing or selling local/regional agricultural products to benefit the economy and minimize farmers' transportation costs.				
Support and/or enact, as appropriate, adequate weight limits on county-owned bridges to enable agricultural-related truck traffic, with this transportation network linked to heavy-haul corridors.				
Encourage acquisition and use of new technology in all sectors of agriculture to improve agricultural activities and to mitigate noise, dust and odor, while also educating the non-farming population about the practical and realistic side of agricultural production.				
Strive to integrate local planning and environmental mitigation efforts to ensure a designated level of treatment for wastewater, and reduce stream discharge for treated sludge in order to reduce environmental impacts and preserve agricultural lands.				
Support use of alternative / integrated pest management techniques on agricultural lands and by home gardeners instead of pesticides.				
Encourage efforts by forestry/timber management organizations and their educational programs to preserve and protect our existing forests while allowing for ecologically balanced amount of forestry.				
Encourage coordination between the county, municipalities and conservation and preservation groups to link historic resource and natural resource protection and to protect the natural resource network.				
Protect and enhance ground water recharge, in-stream resources, first order perennial streams, sensitive resources (including high quality and exceptional value watersheds), and riparian buffers to preserve water quality and quantity.				



# TRANSPORTATION





# TRANSPORTATION

The transportation network in Crawford County comprises a variety of important components that connect within and outside of the county. Railroads, Port Meadville and Titusville airports, and State and Federal highways primarily link the county to areas outside the region, while trails and other roadways are integral to citizens' movement within the county. Most importantly, residents of Crawford County, whether they live in the country, a town or a city, depend on roads – roads that link people with their churches and grocery stores, employees with their jobs, children with their schools, emergency vehicles with residents in distress, products to stores, and productive farmland, timber lots and other industries with their markets.



Because of the importance of personal vehicular travel to the county, issues centered on the road network are integral to the Comprehensive Plan. However, within individual Crawford County communities and to a lesser extent between these communities, an important issue that has arisen is enhancing walkability. Providing programs and capital projects to promote walkability can have a positive impact on public health and provide additional transportation options to some residents. Although walkability is obviously linked to transportation, the County's role in promoting walkability is more focused on county-wide facilities and programs. These include trails that typically serve more than one community in the county. Consequently, more detailed discussions of trails and walkability programs can be found in the "Recreation" chapter of this comprehensive plan.

Further, it should be noted that new industries are anticipated to exacerbate the county's already challenging roadway maintenance needs. The heavy truck traffic that arrives with the oil and gas industry will take a toll on roads that were built primarily for passenger vehicles. This will be especially noticeable on dirt and gravel roadways, which are the most vulnerable of the county's roadways.

With money tight and with a good number of roads, bridges and other elements of transportation infrastructure in need of improvements or repairs, people might wonder: What is Crawford County doing – or what could it do – to move projects along? The answer is a slightly different for roads vs. bridges because the county owns many bridges but doesn't own roads, which generally are the responsibility of the municipalities or the state. However, in both cases, the county can play an important and influential role, including via this comprehensive plan.

In Crawford County, a transportation planning project's first step toward implementation is at the County Planning Commission. Every two years the Planning Commission solicits proposals from all of the municipalities in the county for transportation projects. These can include projects for a variety of transportation modes: pedestrian, personal automobile, air travel, and public transportation. The Planning Commission reviews the proposed projects and forwards its list of recommended projects to the Northwest Rural Planning Organization (NWRPO).

## Improving Roads and Bridges

All of the municipalities in Crawford, Clarion, Forest, Venango and Warren counties cooperate on transportation matters through the NWRPO and the Northwest Regional Planning Commission (Northwest Commission). The NWRPO creates a list of the transportation projects in the area that local stakeholders – members of a Transportation Advisory Committee – feel are the highest priority. The Transportation Advisory Committee of the Northwest Commission is made up of representatives



from government agencies, the private sector, elected officials, and the Pennsylvania Department of Transportation. All five counties are represented, and Crawford County's voting members on the committee currently are a county commissioner, the county planning officer and a planning commission member, with another county commissioner as alternate.

The advisory committee prioritizes projects in the five-county NWRPO through a blind voting process. Once the top transportation projects are chosen, they get listed on the state's multimodal transportation planning system lists.

PennDOT's multimodal transportation planning system lists include a long-range plan that looks out 25 years, as well as a Twelve Year Program, which is also called TYP. Projects in the most immediate four years of the TYP are on a list called the Transportation Improvement Plan or TIP.



Good roads knit communities together.

PROJECT NAME	PROJECT TYPE	TIME FRAME
Meadville ADA	Highway Reconstruction	2013-14
Hatchtown Rd. Bridge T-922	Bridge	2014-16
6/322 Conneaut Lake Outlet	Bridge	2013-15
SR6 Smock Bridge	Bridge	2014-16
SR6 Bridge over French Creek	Bridge	2014-16
PA27 North Street Connector	Safety and Mobility Improvements	2013
PA173 Cochranon Tr. Bridge	Bridge	2015-16
PA 198 Realignments	Highway Reconstruction	2014-16
PA 198 / Conneaut Crk Trib	Bridge	2013-15
PA 285 Bridge over Adsit Run	Bridge	2013
Price Road Bridge SR 1043	Bridge	2013
Deckards Run Bridge No. 1	Bridge	2013
SR 2028 Bridge over Pine Creek	Bridge	2013
Eddies Road Bridge / T-776	Bridge	2013-14
Wightman Rd Bridge / T-620	Bridge	2013-15
Peters Rd Brdg Removal / T-703	Bridge	2013
Mead Ave. Bridge	Bridge	2013-14
So. Perry St. Bridge	Bridge	2013-15

Crawford County has a somewhat more direct role regarding bridges that it owns directly, and also has influence on which municipally owned bridges in the county get on a list for repairs or improvements. Which county-owned and municipal bridges become top priorities for funded improvements or repairs comes down to these main factors: which do the County Planning Commission recommend for improvement; which are most urgently in need of repairs, based on inspections; and which projects are most essential, based on community context.

Taking these factors one at a time:

1. Top priorities chosen by the County Planning Commission. The planning commission selects the top bridge projects from proposals submitted by the municipalities, and also assesses what county-owned bridges need work most urgently.



Traffic backs up on the bridge that carries Rt. 198 over French Creek at Saegertown.

2. Which bridges need repairs most urgently, as determined through inspections. The Federal Highway Administration's National Bridge Inspection Program deems that all bridges over 20 feet long must be inspected at a minimum of every two years, or more frequently if their condition dictates that. PennDOT administers the mandatory inspection process for the Federal Highway Administration, and in turn, The EADS Group, based in Altoona, inspects all municipal- and county-owned bridges in Crawford County, under contract, and reports results to PennDOT. Bridges may be found to be structurally deficient or functionally obsolete.
3. Which bridge projects are most important within a community's context. This is an assessment of how essential the bridge is for public use.

The state calculates a score for each bridge via the Bridge Management System risk assessment process. The score indicates the bridge's ability to meet the traffic demands and safety needs for the route it carries. The rating system in place in 2013 factors in:

- the structure's adequacy and safety
- the structure's serviceability and functionality, and
- how essential the bridge is for public use.

Sufficiency ratings range from 100 (entirely sufficient) to 0 (entirely insufficient or deficient). These ratings dictate whether a project qualifies for federal funding.

Local communities consider federal funding desirable because it can cover a large chunk of a project's cost. The breakdown is 80% federal funding; 15% state funding; 5% local funding.

Federal funding is not available for work on locally owned bridges with spans of less than 20 feet; however, those between 8 and 20 feet can qualify for state funding. With state funding, the cost-sharing breakdown is 80% from the state and 20% from the local owner.

The following pages provide charts listing bridges in Crawford County owned by the county itself or by municipalities, along with data that shows whether the bridges are structurally deficient and/or functionally obsolete, the year of construction and their sufficiency rating. Maps accompany each set of charts.



## 2013 CONDITIONS OF CRAWFORD COUNTY-OWNED BRIDGES.

MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
0	Mead Avenue Bridge over French Creek	Meadville	SD	FO	0	1871	CLOSED
1	T-743 Hamilton Rd over Muddy Creek	Athens Township	SD	FO	26.2	1920	POSTED 5 Tons
2	T-776 Eddie Rd over Muddy Creek	Athens Township	SD	FO	14.6	1895	CLOSED
3	T-885 Jerusalem Rd over Stone Run	Beaver Township	SD	FO	24.2	1884	POSTED 9 Tons
4	T-899 Kreitz Rd/ Little Conneauttee Creek	Cambridge Township			87.9	2011	OPEN
5	T-721 Lester Rd over Paden Creek	Conneaut Township			73.1	1940	OPEN
6	Center Street over Conneaut Creek	Conneautville	SD	FO	14.4	1896	POSTED 6 Tons
7	Jefferson Street over Conneaut Creek	Conneautville			89	1998	OPEN
8	T-751 Creek Rd over Cussewago Creek	Cussewago Township	SD	FO	24.8	1910	POSTED 3 Tons
9	T-841 Center Rd over Cussewago Creek	Cussewago Township		FO	88.5	2011	OPEN
10	T-399 Griffen Rd over Little Sugar Creek	East Fairfield Twp		FO	48.6	1910	POSTED 32 Tons
11	T-517 Plank Rd over Little Sugar Creek	East Mead Township	SD	FO	30.8	1905	POSTED 25 Tons
13	T-574 Marsh Rd over Conneaut Outlet	Fairfield Township	SD	FO	22.2	1890	POSTED 3 Tons
14	T-620 Wightman Rd over Conneaut Outlet	Fairfield Township	SD	FO	13.8	1897	POSTED 3 Tons
16	Mercer Street over French Creek	Meadville		FO	61.9	1936	OPEN
19	T-599 Finney Rd over Thompson Creek	Oil Creek Township	SD	FO	38.6	1930	POSTED 27 Tons
20	T-993 Messerall Rd over Pine Creek	Oil Creek Township	SD	FO	19.9	1875	CLOSED
21	T-926 Dotyville Rd over Pine Creek	Oil Creek Township	SD	FO	27.8	1900	POSTED 30 Tons
22	T-928 Duncan Rd over Pine Creek	Oil Creek Township			77.4	1910	POSTED 2 5 Tons



Insert County-Owned Bridges Map 11x17

Insert County-Owned Bridges Map 11x17

MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
23	T-928 Duncan Rd over Caldwell Creek	Oil Creek Township			99.9	2000	OPEN
25	T-962 Jordan Drive over French Creek	Saegertown	SD	FO	22.9	1900	POSTED 6 Tons
26	T-793 Glynden Rd over Oil Creek East Br	Sparta Township		FO	68.8	1896	OPEN
27	T-869 Blakelee Rd over Oil Creek East Br	Sparta Township			97.9	2005	OPEN
28	T-896 Sportsman Rd over Oil Creek East Br	Sparta Township	SD	FO	15.9	1901	POSTED 3 Tons
29	T-384 Depot Rd over Conneaut Creek	Conneautville		FO	49.8	1889	POSTED 4 Tons
30	T-803 Tower Rd over Conneaut Creek	Spring Township			100	2008	OPEN
31	T-885 Jerusalem Rd over Conneaut Creek	Spring Township			100	1998	OPEN
32	T-406 Smith Rd over Conneaut Creek Trib	Summerhill Township			99	2012	OPEN
33	T-693 Fish Rd over Conneaut Creek	Summerhill Township			87.9	2003	OPEN
34	Brown Street over Oil Creek	Titusville			98	1991	OPEN
35	T-2024 South Perry Street over Oil Creek	Titusville	SD	FO	15.7	1900	POSTED 3 Tons
36	T-847 Tobin Rd over Bole's Run	Venango Township	SD	FO	40.8	1972	POSTED 15 Tons
37	T-488 Hollis Rd over Watson Run	Vernon Township	SD		44.5	1960	POSTED 30 Tons
40	T-768/T-421 Sugar Lake Rd over Lake Creek	Wayne Township			84.4	1976	POSTED 37 Tons
41	T-600 Craig Rd over Woodcock Creek	Woodcock Township	SD	FO	22.3	1896	POSTED 4 Tons
42	T-602 Bockman Hill Rd over Gravel Run	Woodcock Township			99.9	1996	OPEN
43	T-650 Huson Rd over Gravel Run	Woodcock Township		FO	81.4	1935	OPEN
44	T-658 Leimbach Rd over Gravel Run	Woodcock Township			97.9	2004	OPEN
45	T-735 Amy Rd over Gravel Run	Woodcock Township			99	2006	OPEN



## 2013 CONDITIONS OF MUNICIPAL-OWNED BRIDGES.

MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
1	T-301 Drake Hill Rd over Muddy Creek E Br	Athens Township	SD		67.9	1957	OPEN
2	T-709 Three Bridge Rd / Muddy Creek E Br	Athens Township		FO	44	1960	POSTED 19 Tons
3	T-765 Dobbs Rd over Federal Run	Athens Township			81.7	1983	POSTED 29 Tons
4	T-765 Dobbs Rd over Federal Run	Athens Township			98	2011	OPEN
5	T-789 Athens Rd over Federal Run	Athens Township		FO	62	1920	POSTED 25 Tons
6	T-794 Dewey Road over Muddy Creek E Br	Athens Township	SD	FO	61.5	1960	OPEN
7	T-828 Old Grade Rd over Muddy Creek E Br	Athens Township	SD		49.1	1960	POSTED 29 Tons
8	T-300 Palmer Rd over Stone Run	Beaver Township	SD		72	1965	OPEN
9	T-348 Cole Rd over Conneaut Creek Trib	Beaver Township		FO	80	2000	OPEN
10	T-368 Spring Rd over Stone Run	Beaver Township		FO	68.9	1940	OPEN
11	T-835 Parker Rd/ Conneaut Creek Mid Br	Beaver Township	SD		61.1	1975	POSTED 40 Tons
12	T-867 Philadelphia Rd/ Conneaut CR Mid Br	Beaver Township		FO	66.9	1920	POSTED 40 Tons
13	T-867 Philadelphia Rd over Stone Run	Beaver Township		FO	78.9	1991	OPEN
14	T-867 Philadelphia Rd over Mud RUN	Beaver Township		FO	74	1965	POSTED 40 Tons
15	T-867 Philadelphia Rd/ Conneaut Cr E BR	Beaver Township	SD	FO	51.9	1986	OPEN
16	T-883 Joiner Rd over Conneaut Cr W Br	Beaver Township	SD	FO	16.6	1935	POSTED 20 Tons
17	T-883 Joiner Rd over Conneaut Creek M Br	Beaver Township		FO	75.8	1983	OPEN
18	T-883 Joiner Rd over Conneaut Creek E Br	Beaver Township			88.5	2008	OPEN
19	Nelson Driveway over Conneaut Creek E Br	Beaver Township	SD	FO	2	1935	POSTED 17 Tons
20	T-791 Mickle Hollow Rd over Federal Run	Bloomfield Township			99.9	1983	OPEN
21	T-990 Lakeview Dr over East Shreve Run	Bloomfield Township			85.3	1999	OPEN
22	Island Ave Bridge over West Shreve Run	Bloomfield Township	SD	FO	46.1	1964	POSTED 40 Tons



Insert Municipal-Owned Bridges Map 11x17

Insert Municipal-Owned Bridges Map 11x17

MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
23	SR7203 Maple Dr over West Shreve Run	Bloomfield Township		FO	76	1964	OPEN
24	T-346 Wallace Ave over Linesville Creek	Conneaut Township	SD	FO	20.8	1911	POSTED 3 Tons
25	T-605 West Road over Linesville Creek	Conneaut Township	SD	FO	19	1934	CLOSED
26	T-609 Wheeler Rd over Linesville Creek	Conneaut Township			93.9	2006	OPEN
27	T-496 Lake Rd over Cussewago Creek	Cussewago Township			28.3	1984	POSTED 6 Tons
28	T-540 Fry Rd Over Wolf Run	Cussewago Township	SD	FO	35.5	1920	POSTED 16 Tons
29	T-841 Center Rd over Cussewago Creek	Cussewago Township		FO	48.6	1925	POSTED 14 Tons
30	T-841 Center Rd/Cussewago Creek Trib	Cussewago Township			88.9	1960	OPEN
31	T-642 Smith Rd over Little Sugar Branch	East Mead Township			80.2	1955	OPEN
32	T-670 Hinkson Rd over Little Sugar Branch	East Mead Township	SD		70	1900	OPEN
33	T-387 Brown Hill Rd over Conneaut Outlet	Greenwood Twp			99.9	1988	OPEN
34	T-479 Fries Rd over Bennett Run	North Shenango Twp			83.9	2011	OPEN
35	T-639 Bog Hollow Rd / McLaughlin Creek	Oil Creek Township	SD	FO	48.7	1947	OPEN
36	T-926 Dotyville Rd over Henderson Run	Oil Creek Township		FO	64.9	1945	OPEN
37	T-724 Castile Rd over Woodcock Creek	Richmond Township		FO	73.7	1930	OPEN
38	T-840 Hogback West Rd over Kelly Run	Rockdale Township	SD		82	1976	OPEN
39	T-878 Swamp Rd over Muddy Creeek	Rockdale Township	SD	FO	63.2	1980	OPEN
40	T-401 Hurlbert Rd over Pymatuning Trib	South Senango			67.3	1978	OPEN
41	T-795 Fish Flats Rd over Oil Creek East Br	South Senango			43.8	1950	POSTED 23 Tons
42	T-878 Britton Run Rd over Britton Run	Sparta Township			85.4	1965	OPEN
43	T-880 Firth Rd over Britton Run	Sparta Township	SD	FO	22.3	1920	POSTED 5 Tons
44	T-922 Hatchtown Rd over Five Mile Creek	Sparta Township	SD	FO	16.6	1950	POSTED 15 Tons
45	T-924 Welsh Hill Rd over Patrick Run	Sparta Township			99	2002	OPEN



MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
46	T-366 Greene Rd over Crazy Run	Spring Township			91.9	1960	OPEN
47	T-466 East Spring Rd over Carr Run	Spring Township	SD	FO	17.4	1940	POSTED 5 Tons
48	T-747 Blue Falls Rd/Conneaut Creek Trib	Spring Township		FO	75.5	1996	OPEN
49	T-749 King Rd over Carr Run Tributary	Spring Township	SD	FO	25.1	1910	POSTED 24 Tons
50	T-360 Townline Rd over Fish Creek	Summerhill Township		FO	53.6	1990	POSTED 17 Tons
51	T-689 Wing Rd over Conneaut Creek	Summerhill Township	SD	FO	33.7	1933	POSTED 17 Tons
52	SR 618 over Inlet Run Tributary	Summit Township			96.1	1927	OPEN
53	T-402 Porter Rd over Conneaut Creek	Summit Township			74.2	1995	OPEN
54	T-452 Gibson Rd over Pine Run	Summit Township			87	1995	OPEN
55	T-609 Agnew Rd over Conneaut Creek	Summit Township		FO	65.7	1920	OPEN
56	T-609 Agnew Rd over Inlet Run	Summit Township			99	1992	OPEN
57	T-425 Deeter Hill Rd over Little Sugar Creek	Troy Township	SD	FO	59.5	1950	OPEN
58	T-477 Jay Rd over Sugar Creek East Branch	Troy Township		FO	62.7	1935	POSTED 15 Tons
59	T-477 Jay Rd over Sugar Creek	Troy Township		FO	65.7	1950	POSTED 40 Tons
60	T-413 Hamill Rd over Norfolk Southern RR	Union Township		FO	45.1	1925	POSTED 19 Tons
61	T-704 Kennedy Hill Rd over Unnamed Run	Union Township			89.4	1969	OPEN
62	T-568 Capp Rd over Coulter Run	Venango Township		FO	59.4	1905	POSTED 31 Tons
63	T-616 Sherred Rd over Coulter Run	Venango Township			75.7	1930	OPEN
64	T-634 Drakes Mills Rd over Torry Run	Venango Township			99	2011	OPEN
65	T-807 Kightlinger over Coulter Run	Venango Township	SD	FO	18.6	1930	POSTED 3 Tons
66	T-873 Racop Rd over Torry Run	Venango Township			73.9	1915	OPEN
67	T-487 Middle Rd over Watson Run	Vernon Township			81.4	2002	OPEN
68	T-421 Sugar Lake Rd over Sugar Lake Trib	Wayne Township	SD		45.8	1920	POSTED 30 Tons



MAP NO.	BRIDGE LOCATION	MUNICIPALITY	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	SUFFICIENCY RATING, 0-100	YEAR BUILT	POSTING STATUS
69	T-653 Morris Rd over W NY&PA RR	Woodcock Township	SD	FO	19.6	1935	CLOSED
70	T-657 German Rd over Woodcock Cr Trib	Woodcock Township			85.9	1989	OPEN
71	West Center Street over Mill Run	Meadville			82.9	1906	OPEN
72	Cherry Street over Mill Run	Meadville		FO	84.6	1906	OPEN
73	Clinton Court over Mill Run	Meadville	SD	FO	28.8	1902	POSTED 5 Tons
74	Chestnut Street over Mill Run	Meadville			97.8	1906	POSTED 40 Tons
75	Garden Street over Mill Run	Meadville	SD	FO	22.9	1913	OPEN
76	Grove Street over Mill Run	Meadville	SD	FO	45.8	1912	OPEN
77	Liberty Street over Mill Run	Meadville	SD	FO	31.5	1910	OPEN
78	N Main & W Steers over Mill Run	Meadville			97.8	1916	OPEN
79	Arch Street over Mill Run	Meadville			99.7	1970	OPEN
80	Market Street over Mill Run	Meadville			86.8	1910	OPEN
81	Mulberry Street over Mill Run	Meadville		FO	61.9	1970	OPEN
82	Poplar Street over Mill Run	Meadville	SD		36.6	1910	TEMP
83	Walnut & Cottage Streets over Mill Run	Meadville	SD	FO	34.3	1916	POSTED 26 Tons
84	Water Street over Mill Run	Meadville			66.7	1906	OPEN
85	Barber Street over Hammond Run	Titusville		FO	93	1965	OPEN
86	Breed Street over Trout Run	Titusville	SD	FO	24.2	1920	Under Cons
87	Brown Street over Church Run	Titusville			95	1995	OPEN
88	T-576 Dutch Hill Rd over Hammond Run	Titusville			100	1992	OPEN
89	Linden Place over Church Run	Titusville	SD	FO	19.4	1910	POSTED 19 Tons
90	West Mt Vernon Street over Church Run	Titusville	SD	FO	25	1910	POSTED 5 Tons
91	T-870 Patterson Rd over Oil Creek Tributary	Hydetown		FO	83.2	2005	OPEN



## Maintaining Dirt and Gravel Roads

Dirt and gravel roads are a major part of Pennsylvania's road infrastructure, with 16,300 miles lacing the state, and 1,017 miles in Crawford County alone. One in four Pennsylvania residents uses dirt or gravel roads every day, either as residents, travelers or workers. In fact, the largest industries in Pennsylvania – forestry, agriculture, mining and tourism – all depend on rural, relatively undeveloped roads, according to the Penn State Center for Dirt and Gravel Road Studies. These roads literally keep the wheels of our economy turning, so good maintenance is of tremendous importance not only for residents' safety and community life, but also for the county's economic health.

When we picture a gravel road in Crawford County, we might think of a well-maintained road that gets us where we need to go. However, Crawford County residents and officials find that poorly maintained gravel and dirt roads are a problem. Results of a survey conducted in conjunction with this comprehensive plan listed "Fixing roads and bridges" as the second highest priority (behind attracting new businesses) for Crawford County to address. In the same survey, respondents listed "maintenance of existing roads and sidewalks (where sidewalks exist)" as the No. 1 priority for investing public money, given limited resources. The problem of bad roads and bridges will become more complex as shale gas development begins in earnest, as can be seen in this photo from Bradford County.



"Spring Thaw, 2010" SR 3020 Bradford County, PA, from 6/18/10 presentation by PennDot Engineering District 4 "Marcellus Shale Coordination Meeting." (Used with permission.)

By and large, local governments are responsible for maintaining their own roads, whether they are dirt, gravel or asphalt. However, as budgets are stretched by tough times, a local government may find that it just cannot budget for all the maintenance or road repairs it would like to complete. (Adequate maintenance of dirt and gravel roads help keep them as dirt and gravel, which not only preserves the county's character, but also is more economical in the long run for townships and taxpayers than paving would be.) Some help for work on non-paved roads comes annually from the state in the form of grants to municipalities through county conservation districts. The Dirt and Gravel Road Program – the only one of its kind in the nation – is part of the PA Vehicles Code, and it is designed to help municipalities improve sections of road where the risk of dust and sediment pollution would harm streams. Crawford County Conservation District administers the local townships' allocation, which is about \$150,000 in grant money per year.

The 1997 law creating the Dirt and Gravel Road Program has the primary goal of preventing road runoff that results in sediment pollution in streams (Pennsylvania has the second largest network of streams and rivers in the nation, behind Alaska, according to the road program). But roadwork is roadwork, and repairs/maintenance that reduce runoff also improve the safety of roads, enhance the comfort of drivers, and reduce wear and tear on vehicles. Best practices for building, repairing and

insert Unpaved Roads Map 11x17



insert Unpaved Roads Map 11x17

maintaining the roads in environmentally sensitive ways also help townships hold down their costs because the same erosion or washouts that damage streams also damage a town's road budget due to the expense, particularly of replacing gravel. The Crawford County Conservation District, working closely with the Penn State Center for Dirt and Gravel Road Studies, provides technical assistance and best practices to municipalities even if grant funding isn't involved.

Some of the worst dirt and gravel road problems occur at the locations of large culvert structures where streams or drainage pass under the road, and these have been the locations of some project grant-funded repairs. An example of repair work is the replacement of old railroad tanker cars that were buried long ago as culverts, with the tanker ends cut off to create 8-foot diameter "pipes." The tankers may remain intact after many years but joints between tankers or headwalls at the ends of the culvert may be failing, causing the roads to be undercut by subsidence, freeze-thaw weaknesses or erosion.

Although the Dirt and Gravel Road Program sites are established far in advance, documentation by the county of needed repairs can identify roads to be improved in long-term plans or can raise awareness about other problem areas found around the county. These include trouble spots such as damage from drainage across the road or in ditches along the road; frost heaves that damage the sub-base and undermine the road surface, and improper road elevations that result in erosion around culverts or along ditches. These and other potential repair sites may affect drivers of both commercial and private vehicles, but may not be on the radar of the county or municipalities outside the immediate area. The county could play a coordinating role with the Conservation District and local governments to identify the most urgent road repair sites throughout Crawford County. Could the county work with municipal governments and the conservation district to create a documented list of high-priority projects that might encourage municipalities to coordinate repairs on important stretches of road that cross town lines; to enhance funding applications (such as from the federal Public Works and Economic Development program), or to speak with a collective voice at the time that drilling-industry haulers post road bonds?



A newly graded and raked road in Venango Township.

## The Gas Industry Will Introduce Additional Road Maintenance Challenges

Just as residents of Crawford County depend on roads for community and economic connections, shale gas development industry will depend on local roads to get materials and workers to and from well sites. Many of these will be located in places that currently are not heavily traveled and perhaps are near environmentally sensitive areas such as woods, prime farmland, wetlands or important streams.

The heavy truck traffic – both in terms of weight and the frequency of trips – takes a toll on roads that were built primarily for passenger vehicles.

Tim Ziegler, field operations specialist with the Penn State Center for Dirt and Gravel Road Studies, said in a recorded training session that his organization uses these estimates:

### HEAVY LOADS

"A lot of the problems that we're seeing in relation to Marcellus Shale [are caused by] the fact that our roads here in Pennsylvania never were designed to handle the amount and especially the weight of the traffic that we are seeing to support this industry. ... They are designed to typically handle small passenger cars, F250 pickup trucks, that kind of thing, fairly well, but the whole thing changes when you get 80,000-pound water trucks on there."

– **Tim Ziegler**, field operations specialist,  
Penn State Center for Dirt and Gravel Road Studies  
Recorded brown-bag training session, July 19, 2010



Development of an initial well pad involves 1,000 water trucks weighing 80,000 pounds, plus 500 other heavy-haul trucks carrying stone, sand or equipment. This is a total of 1,500 heavy truck trips for each initial well pad, a total that would be reduced to about 1,100 heavy haul trips for subsequent well bores at the same pad.

Another set of estimates for truck generation comes from The Marcellus Shale Freight Transportation Study commissioned by the Northern Tier Regional Planning and Development Commission in November 2011:

“Roadway volumes in the Northern Tier have increased dramatically since 2007. Overall average annual daily traffic (AADT) in the 5-county region rose 12 percent and average daily truck traffic (ADTT) rose 22 percent from 2007 to 2010. The largest traffic growth is in Bradford and Susquehanna Counties while the largest percentage growth was in Tioga and Susquehanna Counties. Compared to a traffic growth rate of approximately one percent annually between 1996 and 2006, this four percent annual increase in average daily traffic and over seven percent in average daily truck traffic can be directly attributed to Marcellus Shale activity. “

#### Change in AADT and ADTT in the Northern Tier (2007 to 2010)

County	County-wide % Change in AADT	County-wide % Change ADTT
Bradford	1%	3%
Sullivan	4%	6%
Susquehanna	10%	12%
Tioga	38%	58%
Wyoming	4%	12%
<b>Overall average</b>	<b>12%</b>	<b>22%</b>

Source: PennDOT RMS

How does heavy haul traffic compare with single-axle loads, such as with passenger vehicles? The Denton County (Texas) Oil and Gas Task Force Summary Report from 2005 estimated it this way: “One truck, at the legal weight limit, weighs 80,000 lbs. Each drilling site requires approximately 364 trips to haul water to the site. This would be the equivalent of 3,494,400 car trips.” Using the same math, 1,500 heavy-haul truck trips would be the equivalent of 14,400,000 car trips.

With careful planning, local governments can protect themselves against some of the costs of maintaining roads that are subject to such intense use. Municipalities and the county can require companies to post a bond (after the local governments lay a lot of groundwork for that), and then work to recover costs if a company causes damage. Here is a brief summary of the steps involved, according to the Penn State Extension’s booklet “Marcellus Shale: What Local Government Officials Need To Know”:

**Posting:** A road must be posted with a weight limit before a bond can be required of a hauler. The steps taken to establish a weight limit include:

1. Completing an engineering and traffic study that supports the need for a weight restriction;
2. Passing an ordinance identifying the road segment and setting the weight restriction;
3. Advertising the posting two times in a general circulation newspaper at least five days prior to actual posting;
4. Contacting known heavy haulers who are using the road about executing a maintenance agreement; and
5. Erecting standard signs showing the weight limit.



**Excess maintenance agreement:** After posting a road, the local government enters into an excess maintenance agreement with each hauler that will be operating overweight vehicles on that road. This agreement allows the local government to shift responsibility for repairing road damages on a pro rata basis to the haulers who damage the road. Note that haulers are only responsible for damage they cause in excess of normal wear and tear on the road.

**Permits:** Driving an overweight vehicle on posted roads generally requires a permit. The type of permit depends on the number of vehicles, the number of posted roads used, and the amount of use. Permits are issued only after an excess maintenance agreement has been signed.

**Inspections and monitoring:** Before overweight hauling begins, the local government inspects the road to determine its condition. The hauler who pays for this service has the right to be present. After hauling begins, the local government is responsible for monitoring the condition of the road and notifying the hauler of any necessary repairs. If the local government is responsible for making the repairs under the excess maintenance agreement, the local government bills the hauler for the costs.

**Security (bonding):** Haulers generally must provide security to ensure payment for any road repairs for which they are responsible under the agreement. This security is usually a performance bond, a standby letter of credit, or a certified bank check. The regulations specify the amount of security that may be required for unpaved roads (\$6,000 per linear mile) and paved roads (\$12,500 per linear mile) in cases wherein the hauler agrees not to downgrade the road. When the local government and the hauler agree that the road type can be downgraded during hauling and restored after hauling ceases, the amount of security required is \$50,000 per linear mile. If the hauler uses several roads for only a short time or makes relatively few trips, the rates per mile may be replaced with a flat rate of \$10,000. By following these rules, local officials can assure taxpayers that they will not have to pay for road repairs caused by overweight vehicles.

There are additional special issues to keep in mind, based on the experiences of locales where drilling has occurred:

**Damage might occur on roads that are not bonded.** One study found that “operators are inclined to post bonds only in municipalities or counties where they have well sites, while the trucks travel much longer routes through other towns and counties. Their roads are left vulnerable.” (Christopherson and Rightor, How shale gas extraction affects drilling localities: Lessons for regional and city policy makers 2012)

**Planning for posting limits takes a lot of time and work, and may overwhelm small governments.** The planning, posting, and enforcement of truck routes “need to be supported by comprehensive traffic impact studies, well-documented baseline data backed by video and photographs of pre-development road conditions, and specialized legal advice — processes that require additional staff and, for most communities, funds for consulting engineers and lawyers as well.” (Christopherson and Rightor, How shale gas extraction affects drilling localities: Lessons for regional and city policy makers 2012)

**Safety issues can crop up.** If rural roads are upgraded to accommodate big trucks, a few new public safety issues can emerge, such as higher drop-offs at the road edges due to changes in



A gravel road that has been improved to handle heavy haul truck traffic.



The weight limited is posted on Adamsville Road / SR3004 in southwestern Crawford County.

grade, and faster-moving traffic due to better surfaces, wider lanes and better sightlines. (Penn State Center for Dirt and Gravel Road Studies 2010)

**Alternate routes are important.** Existing economic sectors – agriculture, timber, retail, etc. – and the new gas development industry all are harmed by delays that occur when roads are closed due to maintenance/repair problems. Also, many people can be affected when the need to move large machinery, parts or equipment to a well site closes roads. School buses, emergency vehicles, mail delivery vehicles, residents, visitors and commercial vehicles all need to understand alternate routes when temporary detours are necessary. Posted alternate truck routes are an effective way of protecting fragile roads or ecosystems.



Roads leading to a new natural gas well in southwestern Crawford County are clearly labeled for industry truck traffic.

**Future maintenance costs for local governments may be higher on improved roads.** No matter whether a gas-industry company or a local government improves a road today, the local government will be responsible for it in the future. This can mean more expense to maintain gravel on or remove snow from a road that used to be 18 feet wide and now is 30 feet. (Penn State Center for Dirt and Gravel Road Studies 2010)

**There may be more dust.** Improved roads may attract more traffic and also traffic that moves faster. More flow and speed means more dust. (Penn State Center for Dirt and Gravel Road Studies 2010)

**There may be new environmental impacts from road building.** Roads create unnatural forms on the land, and interrupt or change the way water flows. As gas development brings additional public or private roads to rural areas the roads can interrupt normal drainage patterns, possibly increasing runoff or affecting wetlands. (Penn State Center for Dirt and Gravel Road Studies 2010) In addition, roads and heavy truck traffic can disturb wildlife habitat.

**Bridges may be of concern.** According to PennDOT's 2011-2012 bridge program statistics, Crawford County has 129 local bridges over 20 feet in length. Of those, 53 (41 percent) are structurally deficient, which means that the bridge has deterioration to one or more of its major components. Of the 129 bridges, 72 (55.8%) are functionally obsolete (which means they were built to standards that were appropriate for their era but not necessarily for today's demands). Heavy-haul truck traffic may pose an additional challenge. The state inspections do not include bridges of less than 20 feet, which are most likely to be found on local roads.

**Public vehicles and emergency response.** Degraded roads can create higher emergency vehicle response times, and add wear and tear to public and private vehicles such as police cars, mail delivery vehicles, and school buses. (J. A. Walls 2012)

**Demand for gravel affects prices, availability.** The need for stone aggregate for natural gas development access roads has escalated prices to municipalities, and trucks are less available or not available for other projects. (J. A. Walls 2012)

**Shortage of road crews.** Demand by gas development has tied up contractors who are no longer available to municipalities, counties, and County Conservation Districts for normal road and construction projects or who will bid higher prices due to gas work pricing. (J. A. Walls 2012)

Since the presence of heavy haul trucks will likely compound existing maintenance problems, the county may want to ask:

**-Are there ways the county would want to work with partners to identify roads and bridges that are of concern?**

**-Is the county able to play some coordinating or supporting role in facilitating the road posting and bonding process?**



## Industry Impact on Local Airports

Port Meadville, Crawford County's public airport, owned by the Crawford County Regional Aviation Authority, is base for 22 aircraft (16 single-engine airplanes, one multi-engine airplane, four jets and 1 helicopter), as of Sept. 2014, according to operational statistics from [airnav.com](http://airnav.com). Its runway, at 5001 x 75 feet is suitable for small jets and is slightly on the small side for operations by larger craft. The airport averaged 37 flights a day from June 21, 2013 to June 20, 2014. This included 67% local general aviation; 30% transient general aviation; 2% air taxi and <1% military. Twenty new hangars were finished three years ago, and five were still vacant in early 2012. However, as of 2013 all 20 hangars were filled. The airport expects a small uptick in daily flight operations due to an anticipated increase in shale gas development, including business flights from Texas, etc. for meetings with local companies such as Universal Well Services, which has its Pennsylvania main office in Meadville, or with industries currently hosting operations in Crawford County. However, no major airport improvements are expected at this time.



The slightly smaller Titusville Airport is publicly owned by the city of Titusville, and lies in Venango County. It is base for 17 aircraft (12 single-engine airplanes, one multi-engine airplane, and four ultralights), as of November 2013, according to [airnav.com](http://airnav.com). Its runway is 4902 x 75 ft. The airport averaged 26 flights per day from Dec. 1, 2011, to Nov. 30, 2012. This included 74% local general aviation, 26% transient general aviation and <1% military.

## Moving people and driving the economy in Crawford County

The main goal of the County's transportation plan is to foster an effective transportation network. In order to accomplish this Crawford County needs to develop a clear short- and long-term vision for the transportation network. The county's strategy needs to be system-wide and communicated clearly with plans and maps. A transportation plan is intended to be coordinated with the land use plan in order to allow the county to grow strategically, enhance the economy, and minimize environmental impacts.

### Our vision for transportation:

"The County's transportation system allows for efficient and effective movement of people, resources, and products. The entire county benefits from quality transportation infrastructure and willingly supports its maintenance and development. Transportation investments are made strategically given limited resources and varying needs and desires. All transportation modes are considered important to the transportation network."

## Establishing a transportation planning framework.

Most significant transportation projects undertaken in the County require assistance from many levels of government. Some projects are the result of local and state cooperation. Others are completed with local, state and federal funding. As was mentioned previously in this chapter, seeing a transportation project from inception to construction involves a grand dance between a large cross-section of players. The players are various levels of government (local, county, regional, state, and federal). It is the intent of this portion of the Crawford County Comprehensive Plan to look far ahead and establish as much influence over this process as possible.

The Transportation chapter of this comprehensive plan serves several important purposes for ultimately aiding in project funding. First, the plan documents the transportation needs of the county. Second, it prioritizes the most critical transportation projects in the face of diminishing financial resources to implement them. This prioritization is based on a variety of information and attempts to outline an overarching vision for the transportation network in the county. The Planning Commission and County Commissioners will continue to advocate for the implementation of the



priority projects at the regional and state levels of the funding hierarchy. They will have the Transportation Plan to point to as evidence that the Crawford County public supports the implementation of these projects. Every transportation enhancement project must move through a long government prioritization process. This begins at the county level. The County Planning Commission solicits desired projects from its municipalities every two years. The county determines the priority projects that will be sent on to the next level of intercession, the Rural Planning Organization, which is where decisions involving five counties – including Crawford – are made. The Crawford Comprehensive Plan focuses on the county level. The County Comprehensive Plan should ideally list the high-priority transportation enhancements, whether entire corridors or specific targeted projects, or feasibility studies to determine the best next steps toward realizing the plan. Consequently, the Crawford County Transportation Plan was developed to embody these priority ideas and projects for the county.



Roads are a primary element of an effective transportation system.

The Transportation Plan includes a range of projects covering several different travel modes (roads, bridges, public transit, pedestrian amenities such as trails, air, and rail). Specific projects are identified and prioritized as part of the transportation planning process. Specific projects are intended to advance general goals for each mode of transportation; their purpose is to communicate the long-term vision of the county.

## The Transportation Plan

Counties and municipalities want to get their most important projects onto the regional transportation planning project lists so that the projects have the best chance of winning funding. One way to demonstrate a county's vehemence about its top priorities – roads, bridges, streetscapes, trails, mobility, etc. – is to emphasize their importance in the comprehensive plan. The map that follows reflects the overall vision for the County's transportation network. The specific projects listed in the four tables that follow, some of which are mentioned elsewhere in this comprehensive plan, reflect the priorities of the Crawford County Planning Commission, the County Planning Staff and County Commissioners, because the projects reflect important economic development initiatives, quality of life issues, or other priorities.



**Proposed Priorities.** The projects in the tables and text below have been selected by Crawford County municipalities and officials as the highest priority for the next Twelve-Year Plan (TYP). In several cases, the projects are continuations or offshoots of current or scheduled projects.

PROPOSED PROJECT	MUNICIPALITY	COST EST.
SR 77 and 198 Intersection Improvements	Blooming Valley Borough	unknown
SR 86 and 198 Intersection Improvements	Woodcock Township	unknown
SR 198 Bridge over French Creek and Roundabout	Saegertown Borough	\$5,350,000
US 322 Corridor/Airport Service Road	Vernon Township	\$4,500,000
Joiner Rd Bridge over Conneaut Creek West Branch	Beaver Twonship	\$751,000
Wallace Avenue Bridge over Linesville Creek	Conneaut Township	\$700,000
West Road Bridge over Linesville Creek	Conneaut Township	\$760,000
Hamilton Road Bridge over Muddy Creek	Athens Township	\$725,000
SR 408 Bridge over Thompson Run	Hydetown Borough	unknown
Dotyville Road Bridge over Pine Creek	Oil Creek Township	\$1,100,000

<<insert Transportation Plan map 11x17>>

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PROPOSED PROJECT	MUNICIPALITY	COST EST.
East Spring Road Bridge over Carr Run	Spring Township	\$128,000
Russell Road Bridge over Linesville Creek	Conneaut Township	unknown
Deeter Hill Road Bridge over Little Sugar Creek	Troy Township	\$600,000
Jay Road Bridge over Sugar Creek	Troy Township	unknown
Craig Road Bridge over Woodcock Creek	Woodcock Township	\$1,100,000
Racop Road Bridge over Torry Run	Venango Township	\$400,000

## Highways

1. *State Routes 77 and 198 Intersection Turning Radius Improvements, Blooming Valley Borough.* This project consists of making intersection improvements on State Routes 77 and 198 in Blooming Valley Borough. The project was identified as one of the high priority improvements in the Meadville Bypass Study. It is the easternmost point in the proposed truck bypass. It is currently being designed by the Pennsylvania Department of Transportation, along with the proposed intersection improvements at State Routes 86 and 198 in Woodcock Township. The total estimated cost of both intersection projects is approximately \$4,000,000.

2. *State Routes 86 and 198 Intersection Improvements, Realignment, Woodcock Township.* This project involves the realignment of the intersection of State Routes 86 and 198 in Woodcock Township. This project was identified as a high priority improvement in the Meadville Bypass Study. Currently, State Route 198 to the west and east of State Route 86 do not line, requiring a right and left turn if crossing the intersection on SR 198, instead of driving straight ahead. The project will line up the intersection, so that these turn movements are no longer required. This will facilitate the movement of trucks through the intersection as part of the bypass plan.

3. *State Route 198 Bridge and US Routes 19/6 Roundabout, Saegertown Borough.* This project involves the repair of the bridge on State Route 198 over French Creek and a new roundabout to replace the existing intersection of State Route 198 with US Routes 6 and 19 in Saegertown Borough. This project was also a high priority recommendation of the Meadville Bypass Study. The deck and upper portion of the bridge will be replaced, and the eastern side will be lined up with a roundabout to improve traffic flow through the intersection. The estimated cost of this project is approximately \$5,350,000.

4. *US Route 322 Corridor Improvements/Port Meadville Airport Service Road.* This project involves improvements along US Route 322 in Vernon Township between the Interstate 79 Interchange and Watson Run Road. Due to intensified development pressures along this already high traffic corridor, including the proposed Meadville Medical Center facility at the former site of the Meadville Mall, the project may add parallel “service roads”, construct new roundabouts at busy and/or unsafe intersections, and install traffic signals to improve traffic flow and safety. Port Meadville Airport officials are also proposing a service road to be constructed just south of the airport to improve access and serve non-aviation uses near the airport. The estimated cost of these improvements is approximately \$4,500,000.



Congestion can tie up traffic entering and exiting Route 322 between Meadville and Conneaut Lake Borough.

5. *Titusville Truck Route Projects.* This project will make intersection improvements, including truck turning radius and truck route signage for truck routes in Titusville. This includes sight line and turning radius at McDonalds on St. Johns Street and improved truck route signage for Routes 8 and 27, turning radius for Union Street at Franklin and Brook Streets, and Union Street at Route 89, the Diamond/Central/Martin Street Intersection, and turning radius for Route 8 at Water Street. These



improvements were recommended in the Titusville Area Shale Strategic Plan.

6. *Route 27 Titusville to Meadville Projects.* These projects involve making improvements to Route 27 between Titusville and Meadville. This would include straightening curves, identifying target areas in need of improvement and connecting areas already improved to those in need of improvement. Projects would need to be reviewed for consistency with East-West Corridor Study.

### **Bridges**

1. *South Perry Street Bridge, City of Titusville.* This county owned bridge is currently on the Transportation Improvement Program, but the City of Titusville has rated this to be their highest priority for bridge projects. The bridge, over Oil Creek, is structurally deficient, functionally obsolete, and has a sufficiency rating of 15.7. The estimated cost of replacing the bridge is \$3,000,000. The Pennsylvania Department of Transportation has asked the county to execute an agreement to relinquish control of the bridge for this project. PennDOT wants to complete a Feasibility Study to determine if the bridge should be replaced or removed.

2. *Joiner Road Bridge over West Branch of Conneaut Creek, Beaver Township.* This is Beaver Township's No. 2 priority for 2013. It is a structurally deficient bridge with a sufficiency rating of 16.6. Township proposes replacing signs, guide rail and railing, patching damaged areas, repointing joints, grading, painting, repaving and related activities. Estimated Cost: \$758,000.

3. *Wallace Avenue Bridge over Linesville Creek, Conneaut Township.* This is Conneaut Township's No. 1 priority for 2013. It is structurally deficient, functionally obsolete, and has a sufficiency rating of 20.8. The bridge is the only access point for residents and emergency vehicles north of the West Road Bridge, which is currently closed. Estimated Cost: \$700,000.

4. *West Road Bridge over Linesville Creek, Conneaut Township.* This is Conneaut Township's No. 2 priority for 2013. It is structurally deficient, functionally obsolete and has a sufficiency rating of 19. It has been closed to traffic for several years. Replacement will allow area residents and emergency vehicles to have quicker access. Estimated Cost: \$760,000.

5. *Hamilton Road Bridge over Muddy Creek, Athens Township.* This Crawford County owned bridge was on the county's 2011 Priority List, but has not been scheduled for implementation. The bridge is structurally deficient, functionally obsolete, and has a sufficiency rating of 26.2. Estimated cost for bridge replacement is \$725,000.

6. *State Route 408 Bridge over Thompson Run, Hydetown Borough.* This is Hydetown Borough's No. 1 priority for 2013. The borough indicated that this is the main bridge through their municipality, and if they lose the bridge, it would close down traffic flow on State Route 408, a major east/west route between Meadville and Titusville. The bridge is structurally deficient and has a sufficiency rating of 43.3. A cost estimate was not provided by the borough.

7. *Dotyville Bridge over Pine Creek, Oil Creek Township.* This Crawford County owned bridge was on the county's 2011 Priority List, but has not been scheduled for implementation. The bridge is structurally deficient, functionally obsolete, and has a sufficiency rating of 27.8. Estimated cost of bridge replacement is \$1,100,000.

8. *East Spring Road Bridge over Carr Run, Spring Township.* This is Spring Township's No. 1 priority for 2013. The bridge is structurally deficient, functionally obsolete, and has a sufficiency rating of 17.4. The township indicates this is a highly travelled route between Springboro and Rundell Roads. An inspection revealed that a failing wingwall needs to be repaired, and the township would like to replace the bridge. Estimated Cost: \$128,000.

9. *Russell Road Bridge over Linesville Creek, Conneaut Township.* This bridge project was



recommended as a priority by the Crawford County Engineer. The bridge has been closed since 2004. The engineer did not provide a cost estimate for this project

10. *Deeter Hill Road Bridge over Little Sugar Creek, Troy Township.* This bridge project was recommended by the Crawford County Engineer. The bridge is structurally deficient and functionally obsolete, and has a sufficiency rating of 59.5. This bridge replacement project was on the county's 2011 Priority List, but has not been scheduled for implementation. Estimated Cost: \$600,000

11. *Jay Road Bridge over Sugar Creek, Troy Township.* This bridge project was recommended by the Crawford County Engineer. The bridge is functionally obsolete and has a sufficiency rating of 65.7. The engineer indicated that the bridge is in bad shape and needs to be replaced. The engineer did not provide a cost estimate for this project.

12. *Craig Road Bridge over Woodcock Creek, Woodcock Township.* This Crawford County owned bridge was on the county's 2011 Priority List, but has not been scheduled for implementation. The bridge is structurally deficient, functionally obsolete, and has a sufficiency rating of 22.3. The estimated cost of replacing this bridge is \$1,100,000.

13. *Racop Road Bridge over Torry Run, Venango Township.* This township bridge was on the county's 2011 Priority List, but has not been scheduled for implementation. The township reports that, although some repairs have been made, the bridge needs to be replaced according to recent bridge condition reports. Estimated Cost: \$400,000.

## Other Projects

1. *Titusville Traffic Signal Project.* This project will implement the recommendations of the Traffic Signal Inventory and Improvement Program prepared for the City of Titusville by WRA Associates in August, 2014. Complete signal replacement to bring signals into compliance is estimated to cost \$585,000. The Street Lighting Project in the City's Central Business District is already included in the region's Transportation Improvement Program.

2. *Titusville Sidewalks and Crosswalks Projects.* These projects are eligible for Transportation Alternatives funding. The City proposes a sidewalk and a crosswalk on Route 8 at the Walmart, a Black Bridge pedestrian walkway or bikeway, a sidewalk on South Perry St., and crosswalks at Monroe and Central and at Monroe and Spring (for the Sheetz).

3. *Titusville Trail Town Master Plan Improvements.* The City is proposing to construct additional bike trails in Titusville to connect gaps in the trail and to implement the Trail Town Master Plan.

4. *Ernst Trail Extensions to Conneaut Lake and Meadville.* The Ernst Trail is a paved bike trail in Vernon and Union Townships, south of the City of Meadville. There are proposed future extensions of the trail westward to Conneaut Lake and northward into the City of Meadville. These extensions will help to implement the 2009 Crawford County Greenways Plan.

5. *East Branch Trail Extensions to Corry and Titusville.* The East Branch Trail in eastern Crawford County is part of the proposed Erie to Pittsburgh to Trail. The trail currently runs through Sparta Township and Spartansburg Borough. Future extensions are proposed northward to Corry and southward to Titusville. These extensions will help to implement the 2009 Crawford County Greenways Plan.



In some cases, the priority transportation project is to study the potential for changes in the future. Crawford County's most important study area currently is the US Route 6/322 Corridor in Vernon Township. This area is delineated on the Transportation Plan. This includes both sides of Route 6/322 from Interstate 79 to Watson Run Road and includes a



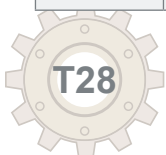
short distance of US Route 19 north and south of the intersection with Route 6/322. The corridor study will identify potential problem areas and recommend transportation projects that should be implemented to improve access and safety. The study will examine possible service roads north and south of US 6/322 to accommodate new traffic from large existing and new developments such as the Meadville Medical Center and former Meadville Mall.



“12 Year Program BID OUT” – All of the Crawford County Highway and Bridge Projects listed on the 2011-2022 Twelve Year Program that have already been advertised for bids and/or constructed.

**BID OUT AND/OR CONSTRUCTED CRAWFORD COUNTY HIGHWAY/BRIDGE PROJECTS LISTED ON TWELVE YEAR PROGRAM (2011-2022)**

MPMS #	PROJECT NAME	MUNICIPALITY	ESTIMATED COST	BID DATE	LOW BID
59029	Meadville Greenway (TE)	Meadville	\$334,500	2011	\$459,624.38
71025	Ernst Bike Trail - Phase II (TE)	Conneaut Lake	\$602,000	2012	\$601,783.61
57941	US 6 Bridge over Padan Creek - Bridge Replacement	Conneaut Township	\$1,934,400	2012	\$1,129,110.55
83005	US 6 & PA 408 Restoration	Woodcock Township	\$2,045,000	2011	\$1,777,000
82964	PA 8 - Franklin Street Bridge Rehabilitation	Titusville	\$50,000	2010	\$1,237,008
92829	PA 8 - County Line to Titusville Restoration	Titusville	\$835,000	2012	\$678,913.16
93083	SR 8 - Lake Road to Countyline Restoration	Bloomfield Township	\$1,300,000	2012	\$1,181,071.25
83007	PA 18 Harmonsburg to Conneaut/Summit Restoration	Summit Township	\$1,850,000	2011	\$1,930,642.81
373	SR 27/Little Sugar Creek Tributary Bridge Replacement	East Mead Township	\$350,955	2011	\$89,000
75045	PA 27 North Street Improvements	Meadville	\$8,568,000	2012	\$6,781,141.72
88451	Crawford ADA Group Pedestrian Facilities	Meadville	\$250,000	2011	\$173,949.25
57964	PA 198/ Wolf Run Bridge Deck Replacement	Hayfield Township	\$1,093,300	2012	\$681,429.60
484	PA 285 Smock Run Bridge Replacement	Greenwood Twp	\$728,000	2012	\$482,600.97
500	PA 285 Over Wymans Run Bridge Replacement	Fairfield Township	\$886,180	2012	\$529,407.41
82916	PA 285 Over Adsit Run Bridge Rehabilitation	East Fallowfield Twp	\$662,106	2012	\$326,007.05
68674	PA 699 Over Tory Run Bridge Replacement	Venango Township	\$720,800	2011	\$568,853
416	SR 866 Over Ashery Run Bridge Replacement	Woodcock Borough	\$598,000	2010	\$347,190
82917	1001-Park Ave. Ext/Woodcock Creek Rehabilitation	Saegertown	\$774,800	2012	561,436.43
94892	1001-Meadville ADA Group 2012 Pedestrian Facilities	Meadville	\$1,150,000	2012	\$725,900



275	1002-Gravel Run Road/French Creek Bridge Removal	Cambridge Township	\$90,000	2010	\$466,887.49
78760	SR 1002/Pinney Run Tributary Bridge Replacement	Richmond Township	\$492,812	2011	\$422,702.50
154	1013 Thompson Creek Road Bridge Replacement	Oil Creek Township	\$408,000	2011	\$344,577
376	1013 Shirley Run Bridge Replacement	Oil Creek Township	\$892,000	2011	\$708,049
345	1016 Millers Station/French Creek Bridge Replacement	Rockdale Township	\$3,406,000	2010	\$2,383,102
74678	SR 1019 Over Coulter Run Bridge Replacement	Venango Township	\$10,000	2010	\$830,190
508	1033 Mackay Run Bridge Replacement	Richmond Township	\$725,000	2011	\$613,606.05
422	SR 1043 Price Road Bridge Replacement	Woodcock Township	\$1,297,920	2012	\$765,254.80
354	SR 2003 Mercer Pike Bridge Replacement	Union Township	\$1,694,000	2011	\$1,111,000
57982	3005 Bennett Run Bridge Replacement	North Shenango Twp	\$850,000	2011	\$699,685.80
57986	4003 Conneaut Creek Tributary Bridge Replacement	Conneautville	\$984,256	2012	\$694,580.31
74558	4010 Cussewago Street Bridge Replacement	Spring Township	\$718,480	2010	\$441,027
57992	SR 4016 Bill Mack Run Bridge Deck Replacement	Summerhill Township	\$668,000	2011	\$491,313.50
317	7213 Fries Road Bridge Replacement	North Shenango Twp	\$639,000	2011	\$451,002.89
311	7225 Smith Road T-406 Bridge Replacement	Summerhill Township	\$925,000	2011	\$606,546.45
535	7225 Wing Road Bridge Replacement	Summerhill Township	\$665,000	2012	\$515,006.43
538	7229 Drake Mill Road Bridge	Venango Township	\$405,000	2010	\$347,501.60



“Current Transportation Projects” – All of the Crawford County Highway and Bridge Projects listed on the 2011-2022 Twelve Year Program that are scheduled to be advertised for bids within the next three years.

SCHEDULED CRAWFORD COUNTY HIGHWAY/BRIDGE PROJECTS LISTED ON TWELVE YEAR PROGRAM (2011-2022)				
MPMS #	PROJECT NAME	MUNICIPALITY	ESTIMATED COST	PROJECT SCHEDULE
57942	SR 6 Smock Bridge Rehabilitation	West Mead Township	\$3,500,000	2014-2016
82915	6/322/Conneaut Lake Outlet Bridge Replacement	Sadsbury Township	\$837,159	2017-2019



579	PA 173 Cochranon Truss Bridge Replacement	Fairfield Township	\$5,257,800	2015-2016
483	SR 198/ French Creek Bridge Rehabilitation	Saegertown	\$6,074,200	2013-2016
57967	SR 285 Over I-79 Bridge Preservation	Greenwood Township	\$850,000	2013
57977	2018 Deckards Run Bridge Replacement	Wayne Township	\$1,150,000	2013
494	SR 2028 Over Pine Creek Bridge Replacement	Oil Creek Township	\$700,000	2013-2014
306	7201 Eddies Road Bridge Removal	Athens Township	\$1,335,000	2014
323	7210 Wightman Road Bridge Replacement	Fairfield Township	\$950,000	2015
261	7235 Peters Road Bridge Removal	Woodcock Borough	\$192,000	2013
170	7301 Mead Avenue Bridge Replacement	Meadville	\$9,229,606	2014
75050	PA 198 Intersection Improvements	Blooming Valley/Woodcock Twp	\$2,912,000	2014-2016
404	SR 198/ Conneaut Creek Tributary Bridge	Beaver Township	\$700,000	2015
281	South Perry Street Bridge	Titusville	\$2,750,000	2015
70790	Hamill Road Bridge	Union Township	\$600,000	2014
96113	SR 6 French Creek Parkway - Main Street	Saegertown	\$1,170,000	2013
72370	Hatchtown Road Bridge T-922	Sparta Township	\$300,000	2014-2016
57940	SR 6 Bridge Over French Creek	Hayfield/Woodcock Townships	\$1,100,000	2014-2016
96708	SR 19 Meadville Medical Center	Vernon Township	\$250,000	2013



“Aviation and Transit Projects” – All of the Port Meadville Airport and CATA Transit projects from the 2011-2022 Twelve Year Program from Crawford County.

#### CRAWFORD COUNTY AVIATION AND TRANSIT PROJECTS ON TWELVE YEAR PROGRAM (2011-2022)

MPMS #	PROJECT NAME	PROJECT LOCATION	ESTIMATED COST	SCHEDULE
76754	CON SRE Building - Phase II	Port Meadville Airport	\$3,912	
80421	Rehabilitate Apron	Port Meadville Airport	\$200,000	
80422	Replace MIRL	Port Meadville Airport	\$397,499	
84165	Acquire Land ROW - Runway 25 Approaches	Port Meadville Airport	\$242,778	2013
86568	Acquire Land BRL 65-69 D	Port Meadville Airport	\$158,334	2014-2015
89879	Rehabilitate (overlay) Runway - Phase I	Port Meadville Airport	\$166,666	2013-2014
77442	Computer System	CATA	\$25,000	
84350	CATA Storage Facility	CATA	\$3,259,950	
89622	Shared Ride Fit Expansion	CATA	\$350,000	
89720	Meadville Fixed Route Expansion	Meadville	\$373,372	
89721	Titusville Fixed Route Expansion	Titusville	\$150,000	
89724	Purchase Fleet Vehicles	CATA	\$55,000	



89726	Shared Ride Bus Replacement	CATA	\$350,000	
92638	Fleet Support Vehicles	CATA	\$34,677	
93127	Shared Ride Fleet Purchase	CATA	\$266,000	
93513	CATA Storage Facility - ntermodal Services	CATA	\$60,000	



“Projects not scheduled” - Those projects submitted to PennDOT on the 2011 Priority List that have not been advertised for bids or constructed, are NOT scheduled to be advertised for bids, and don’t have an MPMS number.

#### PROJECTS ON CRAWFORD COUNTY 2011 PRIORITY LIST NOT SCHEDULED FOR CONSTRUCTION/ NO MPMS #

PROJECT NAME	MUNICIPALITY	ESTIMATED COST
Oil Creek Township Line to Hydetown Borough	Oil Creek Township	\$1,600,000
Morris Road Bridge Replacement	Woodcock Township	\$1,350,000
Jay Road Bridge No. 2 Bridge Removal	Troy Township	\$600,000
Crowther Road Bridge Replacement	Troy Township	600,000
Deeter Hill Road Bridge Replacement	Wayne Township	\$600,000
Main Street Bridge Replacement	Spartansburg Borough	\$800,000
Joiner Road Bridge Replacement	Beaver Township	\$860,000
West Road Bridge Replacement	Conneaut Township	\$760,000
Racop Road Bridge Replacement	Venango Township	\$760,000
Agnew Road Bridge Replacement	Summit Township	\$700,000
Russell Road Bridge Replacement	Conneaut Township	\$860,000
Dotyville Road Bridge Replacement	Oil Creek Township	\$1,100,000
Craig Road Bridge Replacement	Woodcock Township	\$1,100,000
Hamilton Road Bridge Replacement	Athens Township	\$725,000

## Roads

Crawford County is home to a variety of land uses that have been developed at varying densities. Overall, the County desires a roadway network that is well-maintained. Roadway expansion projects are part of the county’s overall transportation planning process. Their necessity or appropriateness is evaluated based on adjacent land uses and development as well as traffic volumes.

More substantial transportation infrastructure development typically goes hand-in-hand with denser land development or with uses with larger vehicular demand. The large portions of rural Crawford County are crossed with unpaved (dirt or gravel) roadways. More heavily developed areas are typically served by paved roadways. The county’s vision for these areas differs greatly.

Crawford County wishes to maintain its dirt and gravel road network in order to preserve the county’s rural and agricultural character. The county envisions the more heavily populated Crawford County wishes to maintain its dirt and gravel road network in order to preserve the county’s rural and agricultural character. The county envisions the more heavily populated and developed areas to be crossed by key corridors that serve as the spine of the vehicular transportation network. There are two key corridors that connect the major population centers of the county. I-79 continues to traverse the county and provides the north/south spine. An east/west spine is created that connects Linesville, Conneaut Lake, Meadville, and Titusville.



Priority roadway projects that have been identified during this planning process are:



Road work near Blooming Valley.

- Update the feasibility study completed for the east/west corridor to reflect current conditions (e.g. previously completed segments, land uses, average daily traffic, latent demand, etc.).
- Re-evaluate the Meadville bypass study to determine which, if any, projects should be added to the transportation priority list.
- Construct a service road adjacent to highway 322 between Meadville and Conneaut Lake Borough that provides access to the uses along the heavily travelled roadway.

Dirt and gravel roadways are upgraded to a more durable surface only when a coordinated land use policy and plan deems such improvements appropriate. Otherwise, the focus of these areas is proper maintenance of the roadways. However, because these roadways are most likely to be profoundly affected by an expansion of shale gas extraction, it is important to ensure that local communities understand and exercise the tools and techniques that are available to them. These include road posting and bonding, and were discussed in greater detail previously.

### Bridges

The increasing need for maintenance or enhancement of local- or county-owned bridges is met with a coordinated and well-thought-out prioritization process. The priorities are determined based on the bridges' importance to the county's transportation network, condition, and community benefit. When bridge projects are being planned, they incorporate the possibility of non-motorized use. The county transportation plan focuses on county and locally owned bridges, but could also include priorities for state-owned bridges if appropriate. Priority bridge projects that have been identified as part of this comprehensive planning process are depicted on the Transportation Plan on page T13.

### Public Transit

The public transit system in Crawford County connects residents of urban and rural areas to urban centers and villages in the county.

### Pedestrian amenities (trails)

A safe network of non-motorized trails is established that reaches all corners of the county. The Crawford County trail network connects residents to employment and recreation amenities. It also serves as a key piece of the larger regional trail network connecting Pittsburgh and Erie. This network accommodates walkers/joggers, bicyclists, and equestrian activities where appropriate.

The trail network is delineated on the Recreation Plan (page R7). It is mentioned here because a survey conducted in conjunction with this comprehensive plan found that "Create places where people can walk and bike safely" was priority No. 9 for respondents (out of 23 choices). Specific implementation of these trails is discussed in greater detail in the recreation chapter of this comprehensive plan.

### Air

The county's air travel facilities are accessible and effectively connect Crawford County to the regional aviation network, thereby supporting economic development in Crawford County.

### Railroads

Railroads throughout Crawford County link industries to the region. Active railways are well-maintained, crossings are safe and overall the system is efficient. Inactive railways are adapted for



other transportation modes such as pedestrian/trail use.

### Alternative Fuels

With the further emergence of alternative fuel production in the County, Crawford fosters the use of natural gas or other alternative fuel powered vehicles. Alternative fuel stations are also encouraged throughout the county. The County is undertaking a study to determine the feasibility and costs of implementing alternative fuel vehicles for the vehicle fleet. The Pennsylvania Department of Environmental Protection also recently announced a large sum of funds that is available for counties to convert vehicles to natural gas as their fuel source (DEP Alternative Fuel Incentive Grant (AFIG) Natural Gas Vehicle Program).



A rail line at the Keystone Regional Industrial Park.

### Maintaining quality unpaved roads.

Dirt and gravel roads in Crawford County are locally owned by townships or boroughs. Thus, the county has little say in whether or not unpaved roads get improved in conjunction with land development. The county should, however, use the location of these roads to inform an overall land use plan that distinguishes “rural” areas to be preserved. Townships in the county then would need to be generally consistent with this overall land use policy when drafting and adopting local plans and regulations (zoning and SALDO).

In addition, the county could potentially influence the effectiveness of the dirt and gravel road network within its borders by working with local governments and the county conservation district to maintain a list of dirt and gravel roads where improvements would benefit the most users, particularly if projects would be of mutual benefit to multiple townships or boroughs.

### Anticipating new issues from natural gas industry expansion.

The maintenance of paved and unpaved roads will become more complex with the anticipated arrival of heavy truck traffic associated with gas development. In light of this approaching issue, here are recommended actions:

- Road bonding is a costly undertaking in terms of time, money and expertise, and local governments are most likely unprepared to absorb this enormous workload. The county should be a conduit for training and capacity building for municipalities within its borders on the topics of posting and bonding, perhaps working with the Penn State Center for Dirt and Gravel Road Road Studies, PennDOT and the county Conservation District.
- The county should identify a go-to person to serve as a primary contact for the gas-extraction industry and for residents on road issues, even if that person’s main role is to refer callers to the proper local authorities.
- The county should document the status of its county-owned bridges, including those that are less than 8 feet, and initiate the posting process.

## Transportation Goals

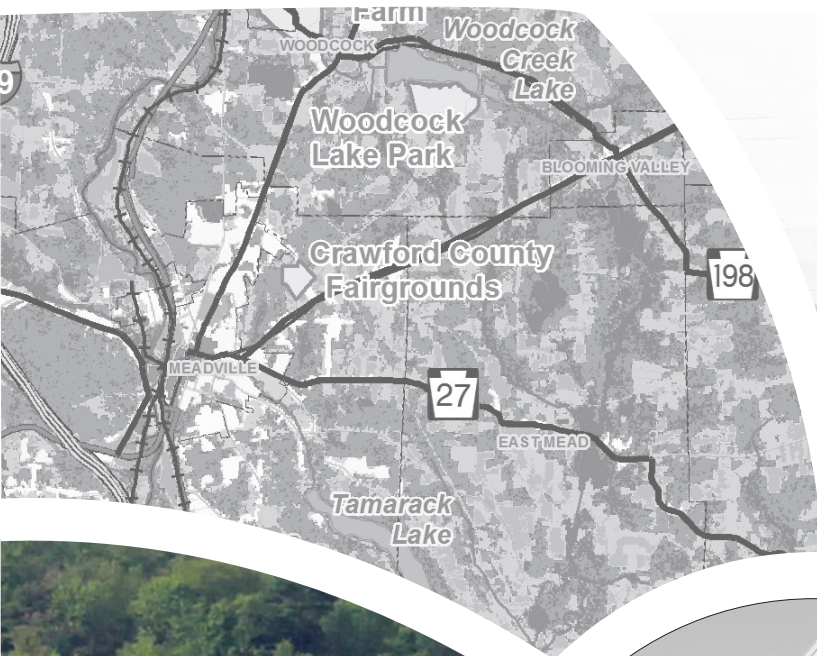
The county’s goals for transportation are included below. The strategies asserted previously focus primarily on optimizing the regional transportation planning process. This was due to the scope and variety of transportation project needs within the county. Beyond those projects, there are many transportation components that the comprehensive plan considers to be important to the overall transportation network. These are reflected and asserted in the Transportation Goals Matrix on the next page.



The Transportation Goals Matrix expands on the vision for transportation that was expressed earlier in this chapter. The Transportation Goals Matrix shows where certain policies are appropriate and desirable and where they are not.

Transportation	Urban Centers / Cities	Villages / Boroughs	Suburban Townships	Rural Townships
Provide an efficient, safe and economical transportation system to move people and goods.				
Employ the transportation network to promote better communications, make better use of neighboring resources, and create a greater choice of living-working relationships for the citizenry.				
Preserve and improve rail freight service and enhance intermodal connections for the movement of goods.				
Preserve and improve air services of the Meadville and Titusville airports, and promote intermodal connections and appropriate surrounding land-uses.				
Promote the maintenance and improvement of dirt and gravel roads throughout the county to support the safe and efficient movement of people and goods.				
Promote and encourage the cooperation of local municipalities in the Dirt and Gravel Roads Program introduced by the County Soil and Water Conservation District, with the aim of improving water quality for streams by reducing the run-off from gravel roads.				
Promote preservation of the existing dirt and gravel road network as a key element of the county's rural character, and discourage expansion of a paved road network in rural, agricultural or natural areas.				
Encourage the expansion of public transportation options in terms of geography, accessibility, frequency and amenities.				
Enhance the safety of the existing roadway network for all users, motorized and non-motorized.				
Develop a transportation network with sufficient capacity to support growth in designated areas.				
Create, enhance and protect the aesthetic and scenic qualities of the roadway network.				
Adopt or support policies that reduce dependence on motorized vehicles and associated environmental impacts, and instead support alternative transportation means.				
Develop major freight / heavy-haul corridors to support economic activity while protecting land-use priorities.				
Encourage public transportation services to convert to natural gas fueling, minimize idling and adopt other environmentally sound practices to improve air quality.				

# RECREATION





# RECREATION

Crawford County has a wealth of recreational opportunities, ranging from large open spaces to indoor recreation facilities. Crawford County residents pride themselves in the fact that their county is rural in nature and has an abundance of natural features. Many residents take full advantage of the county's parks, lakes, streams, forests, trails and community recreation facilities. However, some programs and facilities are lesser known among county residents and potential visitors.

***Coordinating programming across county recreational facilities and programs could enhance visitors' experience when recreating in Crawford County.*** A common assertion at public meetings during the planning process was that the county had so many facilities and programs that they often overlapped or were not effectively promoted/advertised. Some residents were not aware of all the recreational facilities that are available to them in the county.



## Crawford County's Recreational Amenities

***The eastern portion of Crawford County features one of the county's major community recreation resources, the Titusville Area Leisure Services Commission.*** Faced with declining population, a lower tax base and lower average income levels, and an aging population, the city has undertaken a Comprehensive Recreation, Park and Open Spaces Plan intended to restructure how it provides parks and recreation services.

Titusville serves as a hub of recreational opportunity, with more activity likely in the future as a Trail Town along the proposed Erie to Pittsburgh Trail (ETP). To the south, the Queen City Trail already connects to the Oil Creek Trail and other segments of the ETP Trail that works its way to Pittsburgh with only a few sections still incomplete. Titusville's "Trail Town Master Plan" may be viewed at [www.cityoftitusvillepa.gov](http://www.cityoftitusvillepa.gov).

The region also includes significant recreational water features at Clear Lake, Canadohta Lake and Oil Creek. The county-owned Crawford County Forest is also located in this region, along with six areas of state game lands.

***The central region of Crawford County has numerous recreational highlights of county-wide significance.*** These include Woodcock Lake Park, the Erie National Wildlife Refuge, the Meadville Area Recreation Complex, French Creek, Tamarack Lake, Spring Lake, Sugar Lake, and Woodcock Creek Lake.

Woodcock Lake Park, formerly known as Colonel Crawford County Park, the sole county-run park, is located on the south shore of the Army Corps of Engineers flood-control lake. It is part of a partnership with Crawford County, the U.S. Army Corps of Engineers, Crawford County Conservation District, the state Fish and Boat Commission, and state Game Commission that emphasizes recreation, conservation, and flood control. It features a boat launch, lake and shoreline fishing, a campground, beach, picnic shelters, sport courts, playgrounds, and trails. The county recently completed an operational study of the park in an effort to increase usage and revenues, improve facilities, enhance marketing, extend the useful season of the park, and strengthen cooperation among the partners. The recommendations of that study are discussed later in this chapter.



A family camping at Woodcock Lake Park.



The Meadville Area Recreation Complex is a Joint Recreation Authority that owns and manages an indoor ice rink, indoor/outdoor swimming pools, and a full recreational park.

Erie National Wildlife Refuge and numerous state game lands provide many opportunities for outdoor recreation and conservation. The previously identified lakes, French Creek, and other smaller bodies of water provide opportunities for water-based recreation including canoeing, kayaking, boating, fishing, hunting, bird and wildlife watching, and more. These are significant county-wide recreational attractions. French Creek is a designated water trail for its entire length through the county.

The Ernst Trail is the only completed section of trail in the central region of the county, yet it serves as a starting point for continuation to Conneaut Lake and to extend southward as the French Creek Trail.

***The water resources of western Crawford County establish a recreation-rich Lakeland region.*** Western Crawford County is blessed with the largest natural lake in Pennsylvania, Conneaut Lake, and the largest lake overall, the 17,088-acre Pymatuning Reservoir, which lies in Pymatuning State Park, one of Pennsylvania's largest.

Conneaut Lake, which imposes no horsepower limits on boats, attracts people with speedboats, water skis and personal watercraft. However, these do not preclude other lake-based activities, such as pontoon boating and fishing. Surrounded almost completely by privately owned land, the lake boasts many private and commercial recreational opportunities. Plans are underway to connect the Ernst Trail to Conneaut Lake.



Visitors look toward Ice House Park from the docks at Conneaut Lake Borough.

Pymatuning Reservoir, on the other hand, has a 9.9 horsepower limit on all boat motors. This lake, therefore, attracts more sailboats, pontoons and smaller watercraft, presenting a different recreational focus. The state owns a significant portion of land around the lake, which creates an emphasis on both recreation and conservation. Pymatuning State Park offers camping, swimming, picnicking, hunting, and shoreline fishing, and provides rental cabins, sport courts, trails, picnic shelters, handicapped fishing, observation areas and more. There are plans on or near the lake for major recreational trails, including the Spillway Trail, Pymatuning Valley Greenway, End of the Road Trail, and the Conneaut Lake Trail.

The region also has several state game lands, and the Conneaut Outlet waterway.

## Review of recommendations from Previously Completed Recreation Plans

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Crawford County has recently completed two recreation plans that address two of the most significant recreation issues in the County. The first is the County Greenway Plan that was finalized in 2009 as part of the Northwest Regional Greenways Plan. The second is the Colonel Crawford Park operational analysis that was completed in 2012.

While the County has not developed a separate county-wide comprehensive recreation, parks, and open space plan, both the Greenway Plan and the Park Study address the major recreational issues within the County. Each Plan sets forth significant recommendations for the future of recreation, parks, and open space. These become critical components of the County Comprehensive Plan.



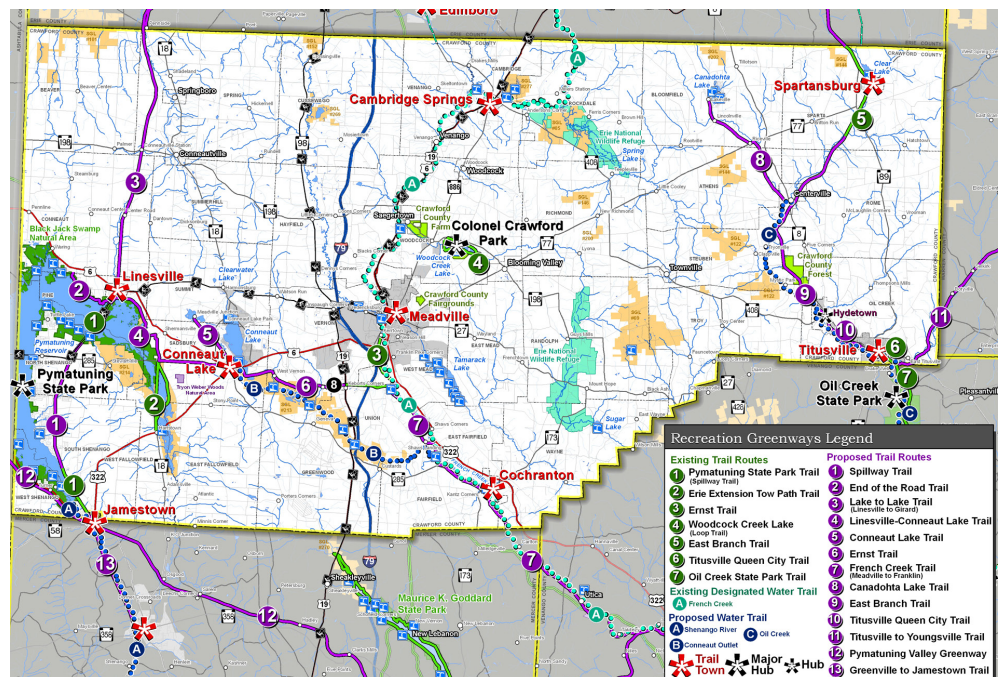
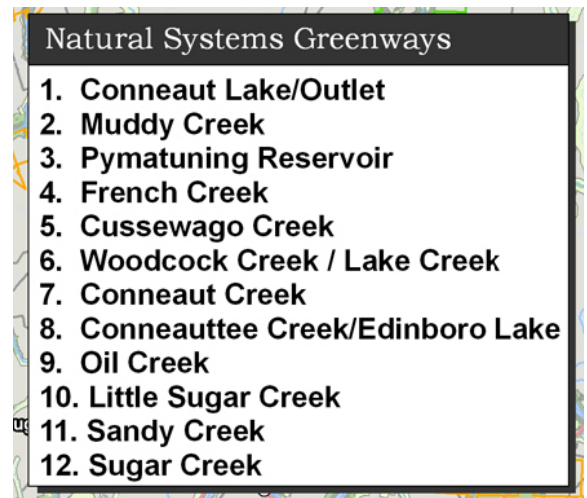
## County Greenway Plan

The development of the Greenway Plan included a thorough inventory and analysis process and a comprehensive public input component. The result is a Plan that casts a vision for the future of greenways in the county and prescribes standards, criteria, and recommendations for both Natural Systems Greenways and Recreation/Transportation Greenways. The Visions for each are depicted in a graphic format via mapping that portrays a long-range visualization of how they will look in the future. The Plan was met with strong support from County residents, elected officials, and stakeholder organizations.

The Natural Systems Greenway Vision establishes twelve proposed greenways identified in the accompanying box to the right. Each is described in great detail in the Plan. The primary purpose of this type of greenway is to offer long-term preservation of environmental and ecological features within the County. In many cases, the greenway corridors extend into surrounding counties where the regional greenways plan proposes similar preservation measures.

The graphic vision for Recreation and Transportation Greenways depicts twenty-four existing or proposed trails spread across all sections of the County. These include both water and land-based trails. Most trails connect in some ways to a series of trail towns, recreational hubs, and other trails. Each provides both recreational and transportation opportunities.

The recreation and transportation greenways are corridors in which trail development is recommended or trails already exist. These greenways connect population centers and points of interest. They bring people in contact with the outdoors and engender an appreciation of the natural world. These trails also provide alternative, environmentally-friendly transportation opportunity for commuters and visitors. In some cases, recreational trails overlay areas where conservation of natural assets is also an objective.



Implementation of the recommendations of the County Greenways Plan is critical to meeting the on-going recreational needs of County residents.

## Colonel Crawford County Park Study

This study identified Colonel Crawford County Park (now called Woodcock Creek Park) as one of the most significant recreational opportunities in the County. Woodcock Creek Lake was created by the US Army Corps of Engineers (USACE) in 1973 upon the completion of a flood control dam on Woodcock Creek. Soon after its completion, the USACE entered into a lease agreement with Crawford County for the management and operation of 311 acres that was developed as public park



and recreation land. Included in the original lease were a number of recreational facilities built as part of the original dam construction project. They include a concrete boat launch with parking facilities, picnic shelters, a swim beach, a campground, and infrastructure to support these facilities. In 1999, the USACE and Crawford County Commissioners renewed their lease for an additional 25 years through 2024.

In addition to the USACE areas and the County-leased property, the PA Game Commission, PA Fish and Boat Commission, and the Crawford County Conservation District serve as stakeholders in the management, operations or programming of lake and surrounding properties.

The study analyzed management and operations as well as the facilities, programs, and recreational opportunities on and around the lake identifying the following key issues.

1. The park and lake offer tremendous recreational opportunities for residents of Crawford County. These include a swim beach with concession stand, 111 campsites, four picnic shelters, boat launch ramp, hiking trails, sand volleyball courts, basketball court, trails, fishing, boating, hiking biking, environmental centers, programming, and much more.
2. There is an apparent disconnect among the individual stakeholders when it comes to knowing and understanding what the others are doing. This disconnect makes it difficult for the visitor to get the full impact of the facilities associated with the lake as the lack of cooperation promotes confusion about opportunities at the lake.
3. Despite the beauty of exceptional recreational opportunities, many people do not know much about the lake and its facilities. Publicity and public relations have not adequately promoted the park.
4. Most of the facilities in Colonel Crawford County Park were part of the original construction of the park in the early 1970's. As federally designed and built projects, they were well constructed and have provided many years of excellent service. However, after more than forty years of use, most of the facilities are in need of improvements and upgrades.



Fishing at Pymatuning Reservoir.

The Study puts forth a series of recommendations intended to:

- Increase revenues and decrease expenses
- Enhance visitation in both quantity and quality
- Extend the season by attracting visitors in the early spring, late fall, and during the winter
- Improve marketing of the park

Implementation of the recommendations of this plan is vital to enhancing the long-term recreational opportunities of County residents.

## Comparison to other Counties

When compared to other counties of similar size, Crawford County matches up well in most categories. Pennsylvania counties with populations between 60,000 and 90,000 residents include Bradford, Carbon, Columbia, Armstrong,

County	Number of Parks	Total Park Acreage
Bradford	3	660
Carbon	1	Unknown
Columbia	1	173
Armstrong	1	10
Somerset	0	0
Clearfield	1	362
Crawford	1	333
Indiana	14	2,175



Somerset, Clearfield, Crawford, and Indiana. Of these eight counties, seven have at least one county park or recreation facility. Somerset County is the only exception. Carbon, Columbia, Clearfield, and Crawford each have one county park. Bradford County has three parks and Indiana County has four parks that include two major trail systems; and Armstrong County owns and operates an indoor recreation facility with an ice rink, swimming pool, and community room. The chart to the right displays a comparison of parks and their related acreage.

While each of the parks focuses on providing and preserving natural features, many have a number of supporting recreational facilities. These include campgrounds, boat launches, picnic shelters, beaches, trails, sport courts, and playgrounds. Indiana County parks feature a number of additional recreational facilities, and the Armstrong park focuses on active community-style recreation.

Bradford, Carbon, Armstrong, Clearfield, and Indiana have full-time park or recreation facility managers. Columbia County uses its public works department to care for the county park and has no dedicated staff. Crawford County also utilizes the county public works department for maintenance and general management of its park. Previously, a county commissioner served as the park's de facto director.

The following chart depicts further detail of the comparison.

Comparison of County Parks Systems in Pennsylvania - All Counties with Populations between 60,000 and 90,000						
County	Population	# of Parks	Park Names	Park Acreage	Facilities	Staff
Bradford County	62,622	3	Sunfish Pond	30	Pond; picnic shelter; campground; restrooms; camp store; boat launch;	Maintenance director
			Mt Pisgah	600	Two picnic shelters; otherwise undeveloped	
			Larnard-Hornbrook	30	Three picnic shelters; restrooms; campground; lake; boat launch	
Carbon County	65,249	1	Mauch Chunk Lake Park	Unknown	Campground; swim beach; lake; picnic area; trails; Environmental Center	Park Director
Columbia County	67,295	1	Briar Creek Lake	173	Lake; picnic areas; covered bridge	County maintenance, no FT dedicated staff
Armstrong County	68,941	1	Belmont Center	10	Indoor ice ring; community rooms; outdoor swimming pool	Director; 3 fulltime staff and multiple part-timers
Somerset County	77,742	None				No park
Clearfield County	81,642	1	Curwensville Lake	362	Lake; boat moorings; boat launch; swim beach; ballfields; picnic shelters; campground; sport courts; hiking trails; playgrounds	Park Manager, Asst. Park Manager; up to 20 seasonal and part-time staff
Crawford County	88,765	1	Woodcock Lake Park (formerly Colonel Crawford County Park)	333	Lake; boat launch; campground; picnic shelters; trails; volleyball and basketball court; playgrounds; swim beach	Managed through the County Public Works Department. Seasonal Park Maintenance Manager; public works staff as needed; seasonal, part-time help
Indiana County	88,880	14	Blue Spruce	650	Trails; pavilions; lodge; lake; playground	Parks and Recreation Director; full-time maintenance staff; multiple seasonal and part-time staff
			Pine Ridge	635	Hiking trails; picnic shelters; playgrounds; lodge	



			Memorial	1	Bandstand	
			Old Smicksburg	33	Trails	
			Hemlock Lake	62	Lake; boat launch; picnic areas; trails	
			Blacklick Valley Natural Area	713	Trails	
			Buttermilk Falls	48	Waterfall	
			Waterworks Conservation Area	10	Undeveloped	
			Buena Vista Furnace	5	Historic site	
			Eliza Furnace	2	Historic site	
			Tunnelview Historic Site	16	Interpretive exhibits; canoe/kayak launch; picnic shelters; playground	
			Ghost Town Trail	36 miles		
			Hoodlebug Trail	10 Miles		

Crawford is in a relatively good position among its peer counties. Therefore, some questions that may be helpful to ask include:

- **How should the county prioritize projects or programs to enhance its recreational offerings?**
- **Should the County focus on overall coordination and supporting local programming?**



insert Recreation Resources Map 11x17



# Recreation with a County-wide Impact

In today's society, residents place many demands on municipalities, counties, and organizations for the provision of publicly available recreational opportunities. Counties throughout Pennsylvania often complete a Comprehensive Recreation, Parks and Open Space Plan (CRPOP) to develop a systematic strategy to address the recreational needs of County residents.

In Crawford County, Commissioners previously completed the County Greenways Plan and a study of Colonel Crawford County Park. These two plans already address many of the needs and implementation strategies that can effectively meet the recreational expectations of County residents. The County has also chosen to address parks and recreation in the County Comprehensive Plan. This allows officials to bring together implementation strategies from previous plans while also considering supplementary strategies that will address other county-wide recreational needs.

**The primary implementation strategies of this Plan focus on accomplishing the recommendations of the County Greenway Plan and the Colonel Crawford County Park (now known as Woodcock Creek Park) Plan.** Each of them provides significant detail in its respective implementation strategies. This Comprehensive Plan takes the implementation strategies from each of those and fine tunes them into a more succinct action plan, prioritizing projects that can be achieved more readily and clearly defining actions that will lead to their completion.

## Fulfilling the County's Vision for Trails

In 2009, Crawford County espoused a Vision for Recreational Trails within the County as they adopted the County Greenways Plan. The Vision is depicted in graphic format through the Recreation and Transportation Greenways Map in the Greenways Plan, a copy of which can be found in the appendices of this document.

## Crawford County's Proposed Role in Trail Planning and Development

This Plan proposes that the role of the County should be to:

- Serve as a champion of trail planning and development throughout the County and identify and support other champions throughout the county.
- Promote the potential economic impact of trails.
- Provide technical assistance to municipalities for grant writing and administration, and trail engineering services.
- Promote the Erie to Pittsburgh Trail, which travels through the eastern section of the County including the Queen City Trail and the East Branch Trail, as a recreational amenity and economic tool within the County.
- Appoint a single planning commissioner and staff position to focus on trail planning.
- Help to address land ownership issues along trail segments.
- Consider ownership of trail segments where other owners are not available or willing.
- Participate in efforts to prioritize, plan, design, develop and maintain greenways and trails.
- Support and enhance trail, greenway and open space plans of municipal and organizational stakeholders.

### The County's vision for recreation:

The County's amenities are promoted and well known. Its attractions are multi-faceted. There are three "backbone" trails in the county's trail network. There are organized activities and programs that are coordinated regionally. Regional partnerships are formed and organizations build on each other's efforts.

## Summary of Implementation Strategies

1. Establish the County's role in trail planning and development and focus on completion of three priority trail segments identified in the Crawford County Greenway Plan.
2. Implement the recommendations of the Woodcock Creek Park (Colonel Crawford County Park) Peer Study.
3. Increase awareness of county-wide recreational assets and events.
4. Hire or assign the appropriate staff to accomplish these strategies.



- Assist with project management and/or grant writing.
- Support “branding,” marketing and signage of regional green ways and trails.

## Planning and Development of Three Priority Trails

This Plan uses the Crawford County Greenways Plan as the basis for identifying priority trails for development. Using an evaluation system that ranks eight criteria for development, the Greenways Plan identifies eight trail corridors as exceptional or significant priorities. After additional evaluation and analysis of current conditions, this Plan recommends that the County adopt three trail segments for the first phase of implementation. They are:

1. **East Branch Trail** that traverses southward from the Crawford-Erie County border through Sparta Township, Spartansburg, Rome Township, Centerville, Steuben Township, Oil Creek Township, and Hydetown.
2. **Queen City Trail** that travels southwards from the East Branch Trail through Hydetown, Oil Creek Township, and the City of Titusville, connecting with the Oil Creek State Park Trail.
3. **Ernst Trail** from the southwest terminus of the existing portion of the Ernst Trail westward through Vernon and Sadsbury Townships into the Borough of Conneaut Lake



Trailhead for the Ernst Trail

The following chart depicts the top eleven priority trails as identified in the Greenways Plan. Updated trail descriptions and cost estimates are included in the chart and the following narrative.

Trail	Unbuild Mileage	Projected Construction Cost using \$65/LF	Projected Construction Cost using \$125/ LF
East Branch Trail	14.64	\$5,024,448	\$9,662,400
Titusville Queen City Trail	4	\$1,372,800	\$2,640,000
Lake to Lake (Linesville to Girard) Trail	13.7	\$4,701,840	\$9,042,000
Spillway Trail	6	\$2,059,200	\$3,960,000
Linesville to Conneaut Lake trail	9.4	\$3,226,080	\$6,204,000
Ernst Trail (Conneaut Lake to Route 19)	6.3	\$2,162,160	\$4,158,000
Titusville to Youngsville	3.6	\$1,235,520	\$2,376,000
FrenchCreek Trail	10.1	\$3,466,320	\$6,666,000
Conneaut Lake Trail	3.5	\$1,201,200	\$2,310,000
Pymatuning Valley Trail	4.4	\$1,510,080	\$2,904,000
End of the Road Trail	3.3	\$1,132,560	\$2,178,000



### East Branch Trail

The East Branch Trail, which is part of the Erie-to-Pittsburgh trail corridor, is owned and managed by the Clear Lake Authority in Spartansburg. Just one section from Route 89 north of Spartansburg to its intersection with the same route south of Spartansburg is complete. The remainder of the trail is passable but not yet developed.

Impediments to completion of the trail:

#### Proposed County role with the East Branch and Queen City Trails:

1. Coordinate with partners on overall plan for trails throughout Crawford County.
2. Assign a planning staff member to serve on each of the trail leadership teams, which should consist of representatives of each municipality through which the trail passes, the County, and the Clear Lake Authority for the East Branch Trail. The trail leadership team should work together to determine appropriate roles for each of the participants.
3. Promote the trail planning efforts with each of the individual municipalities, the Commonwealth of PA, and potential funding sources.
4. Participate in resolution of property ownership, management, and maintenance issues along the trail.



The East Branch Trail in Spartansburg.

1. Engineering services are needed to provide for analysis, design, and preparation for construction of the remaining sections of the trail.
2. The Authority does not own or control two significant pieces of property through which the trail needs to travel.
3. At this point in time, the Authority may not have the capacity to complete development, manage, and maintain the completed trail.

The approximate length of the entire trail is 16.5 miles with about 14.6 miles that is not yet built. The estimated cost to complete the trail is between \$5.0 and \$9.6 million.



### Queen City Trail

The existing portion of the Queen City Trail travels from Titusville to Oil Creek State Park. Titusville and the county are committed to extending the trail in the future to the East Branch Trail and the Erie-to-Pittsburgh Trail.

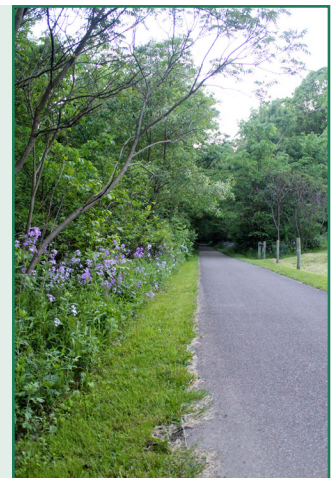


### Ernst Trail

The existing section of the Ernst Trail is paved and runs approximately 5 miles from the Park Avenue Plaza in Meadville to Route 19 southeast of the city. The proposed section runs from Route 19 another 6 miles to Conneaut Lake. It is currently undeveloped but is passable by hikers and mountain bikers. The trail route follows the former Meadville to Linesville Railroad corridor.

#### Proposed County Role with the Ernst Trail

French Creek Recreational Trails, Inc. is the managing organization for the Ernst Trail. It is currently making good headway in extending the Ernst Trail to both the east and the west. The County's role should be to meet with the Council on Greenways and Trails and the French Creek Recreational Trails to better understand the impediments to completion of this trail.



The approximate length of the anticipated trail from Meadville to Conneaut Lake is 11 miles

with about six that is not built yet. The French Creek Trails Association is also working to connect the trail eastward through the City of Meadville and the Meadville Area Recreation Complex to Tamarac Lake. The anticipated cost for the six mile to Conneaut Lake is \$2.2 to \$4.2 million. Additional work should extend the trail into Meadville at Bicentennial Park, then on to the Meadville Area Recreation Complex and Tamarack Lake, as well as north along French Creek and to the Conservancy's lands into the city's Fifth Ward.

## Increasing awareness and visibility of recreational assets and events

It is extremely important that residents and visitors alike are aware of the recreational facilities and events that are available in the County. It was a top priority in the public input component of this Plan that the County do a better job of informing residents of these. Specifically, residents asked for a master calendar to be available that would allow event planners to identify potential conflicts as they schedule various activities. The thought was that a comprehensive master calendar that is available to all residents, event planners, and visitors would reduce the number of conflicting events in the County while serving as a central location to promote these events.

At the same time, residents felt they do not know enough about available recreation facilities across the County. This includes trails, lakes, parks, athletic facilities, indoor recreation opportunities, dog parks, school recreation facilities, boating access points, game lands, and other recreational amenities.



### Master Events Calendar

A review of the Crawford County Convention and Visitors Bureau website, [www.visitcrawford.org](http://www.visitcrawford.org), reveals that the Bureau already maintains a comprehensive events calendar for the County. It's as easy as clicking on any given month of the calendar to see all events scheduled for that time. The calendar displays dates, locations, contact information, and a description for each event. Most of the event listings include a web link that will take the viewer to their site for additional information. Event information can be posted by contacting the Convention and Visitor Bureau.



### Parks and Recreation Facility Listing

Many Counties compile a comprehensive listing of park and recreation facilities of their County webpage. Once again, the Crawford County Convention and Visitor Bureau already has a "Parks" tab on their website. However, the information is limited to parks that are regional in nature such as state, county, and private parks and recreation opportunities. Another section of the Bureau's website lists opportunities for hunting and fishing opportunities. It is understand able that the Bureau would limit its site to facilities that promote tourism. If the Bureau is willing to include a listing of other facilities such as local parks and facilities, it may simply be a matter of collecting the appropriate data and providing it to them. Otherwise, the County could compile and display the information on its own website.

There are three basic types of web-based listings for parks. One is a matrix of facilities describing parks by location and listing the types and numbers of facilities at each park. A second method is to create an interactive County map that displays the locations of each park or trail. Additional information is given on the screen by rolling the curser over the park location or clicking the park name on the map. Finally, many Counties simply provide a listing of parks that include location, types of amenities, contact information, and more.



Dauphin County, Pennsylvania has a website that includes a listing of County parks, local parks, and regional parks and trails. It can be viewed at <http://www.dauphincounty.org/government/Parks-and-Recreation/Dauphin-County-Parks/Pages/default.aspx>. And Maui County, Hawaii offers a more in-depth look at their County parks by region at <http://www.co.maui.hi.us/index.aspx?NID=287>. A sample of the Butler County, PA park matrix is located in the appendices.



# DAUPHIN COUNTY

## PENNSYLVANIA

[Citizen](#) | [Business](#) | [Government Services](#)

Dauphin County > [Government Services](#) > [Parks & Recreation](#) > [Dauphin County Parks](#)

## Dauphin County Parks

**Click to visit one of our many County Parks and Sites**

- Wildwood Park
- Fort Hunter Park
- Wiconisco Creek Park
- Lykens Glen Park
- Community Gardens
- Henninger Farm Covered Bridge
- Fort Hunter Conservancy
- Other Local Parks in the County

### Affiliates

- Capital Area Greenbelt
- Lykens Valley Rail Trail
- Millersburg Riverfront Park
- Fort Halifax Park
- Highspire Reservoir Park
- Harrisburg Hershey Regional Visitors Bureau
- Schedule of Hikes & Activities



### County News

06/06/2013 - DAUPHIN COUNTY FITNESS FESTIVAL POSTPONED DUE TO WEATHER FORECAST

06/05/2013 - Dauphin County's Juvenile Probation Director Retires after 40 Years of Service

05/23/2013 - A Warning to Veterans: Don't Fall for "Pension Poachers" and Other Scams

### County Events

06/09/2013 - Flower Walk: Peak of Blooming

06/09/2013 - Classics at the Mansion

Chapter two of the Crawford County Greenways Plan already includes a listing of many of the parks and recreation facilities throughout the county including:

- Public Recreation Facilities
- Private Recreation Facilities
- Trails and Bikeways
- Water Trails and Waterfront Access Areas
- Fishing Opportunities

This information provides a good start for the data collection phase of this recommendation.



## Improving Woodcock Lake Park

Woodcock Lake Park is the only Crawford County-owned park. Constructed in 1973, the Park is now forty years old and many of its facilities are beginning to show signs of age. It is remarkable to think that these facilities have been maintained in a good useable condition for so many years. The time has come to address the issues of deteriorating infrastructure and outdated facilities by improving the park to meet current building codes and safety standards and to provide more modern facilities that better meet the recreational needs of Crawford County residents and visitors. In 2012, the County completed a park study that included an analysis of park facilities, operations, management, publicity, and usage.

In an effort to protect facilities against further deterioration, to expand usage of the park, improve publicity, and strengthen its management structure, the study made a series of recommendations that will ensure the long-term sustainability. Detailed recommendations in the study provide opportunity for the County to:

- Enrich the user experience.
- Develop the swimming area as the recreational hub of the park.



- Improve the camping area.
- Create a seasonal campground.
- Construct various types of rental cabins.
- Enhance the park's trail system.
- Strengthen partnerships with USACE, Crawford County Conservation District, PA Fish and Boat Commission, and the PA Game Commission.
- Improve publicity.

**The County should develop a focused action plan for the implementation of the Woodcock Lake Peer Study Recommendations. While everything does not have to be completed immediately, a plan should be in place that keeps the county resolute in making annual improvements that will fulfill the long-term vision for the Park.**



The Woodcock Lake campground was not busy on this early summer day.



## **Staffing for Recreation Planning**

As in many Counties across the Commonwealth, Crawford County is faced with tremendous new needs in community planning. Recreation, parks, and trail planning is one of those. Just like other more traditional planning functions, parks and recreation is a basic component of meeting the residents' needs. As the County's Greenway Plan and Woodcock Creek Park Plan have been completed, there needs to be staff in place to move these projects ahead.

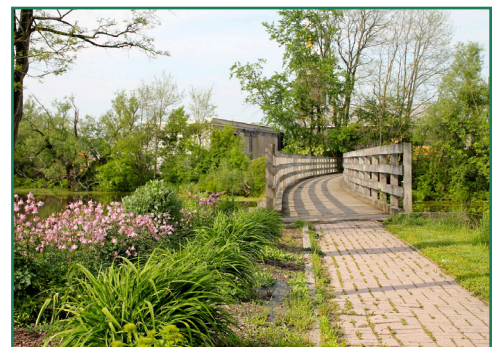
**It is the recommendation of this Plan that the County hire a Park and Trail Manager** whose primary responsibilities would be to:

- Oversee implementation of the recommendations at Woodcock Lake Park.
- Oversee program development at Woodcock Lake Park according to the recommendations of the Peer Study.
- Assist with local implementation issues of trail planning and development as previously described in this Plan.
- Coordinate dissemination of information concerning major recreation opportunities in the county.

## **Promoting walkability will enhance quality of life in Crawford County.**

**Public desire for promoting health and quality of life through "walkability" is increasing.** The increasing importance of walkability can be seen clearly through the public's satisfaction with projects such as the Ernst Trail. The challenge facing the county is how to maintain and expand pedestrian amenities such as sidewalks in established towns while also extending walkability options into more rural areas of the county.

**Walkable communities and amenities such as trails positively affect the desirableness of housing and property values.** As trails gain in popularity, communities are attempting to incorporate them into new development or establish them in previously developed areas. Trails are regarded by real estate



A bridge over the weir at Clear Lake in Spartansburg is accessible from the East Branch Trail.

agents as an amenity that helps to attract buyers and to sell property. These projects are often promoted with figures touting their positive impacts on property values and the marketability of properties near the trail.

*In a survey of metro-Denver real estate agents, 73 percent of the agents believed a home near a trail would be easier to sell. A survey of homeowners living adjacent to a trail showed that 29 percent were influenced by the proximity of a trail in buying their home, and 17 percent of renters were influenced by the presence of a trail.<sup>1</sup>*

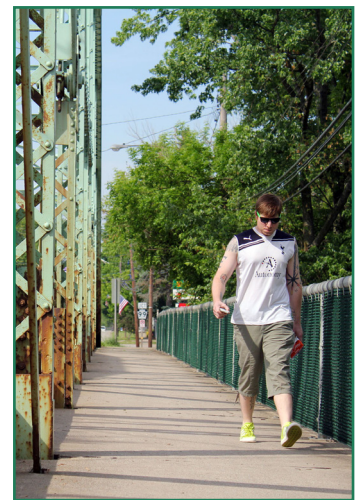
Other studies have quantified the attractiveness of homes near trails by examining their impact on property values. For example, Seattle's Burke-Gilman Trail has increased the value of homes near the trail by 6.5 percent<sup>2</sup>. A survey of property values near greenbelts in Boulder, Colorado, noted that housing prices declined an average of \$4.20 for each foot of distance away from a greenbelt for up to two-thirds of a mile. In one neighborhood, this figure was \$10.20 per foot. The same study concluded that the average value of a home adjacent to the greenbelt would be 32 percent higher than the same property 3,200 feet from the greenbelt.<sup>3</sup>

The website [www.walkscore.com](http://www.walkscore.com), which ranks a location based on its proximity and access to various amenities such as businesses, parks, and transit, boasts that one point of walkscore is worth up to \$3,000 of value for a property.

**Walkable communities promote the health and activeness of citizens.** It is no surprise that increasing residents' ability to walk for daily chores or to exercise close to home has a positive impact on their health. However, several studies have quantified how increasing these abilities results in increased health and lower health care costs.

*A National Park Service study compared people who lead sedentary lifestyles to those who exercise regularly. The exercisers filed 14 percent fewer healthcare claims, spent 30 percent fewer days in the hospital, and had 41 percent fewer claims greater than \$5,000.<sup>4</sup>*

The Walkscore website cites a study, published in the Journal of the American Planning Association, that claims, "the average resident of a walkable neighborhood weighs 7 pounds less than someone who lives in a sprawling neighborhood." Each additional mile walked or run by a sedentary person would give them an extra 21 minutes of life and save the US society an average of 34 cents in medical and other costs. (Rand Corporation, 1993).

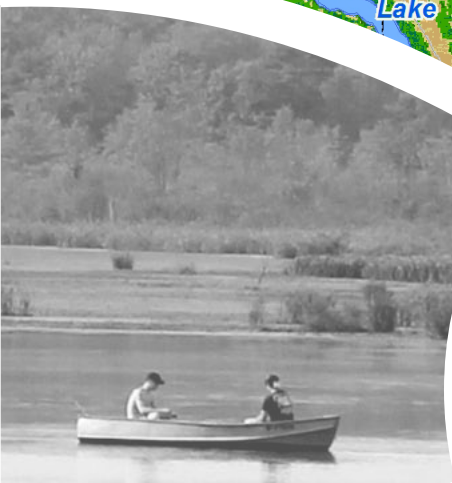
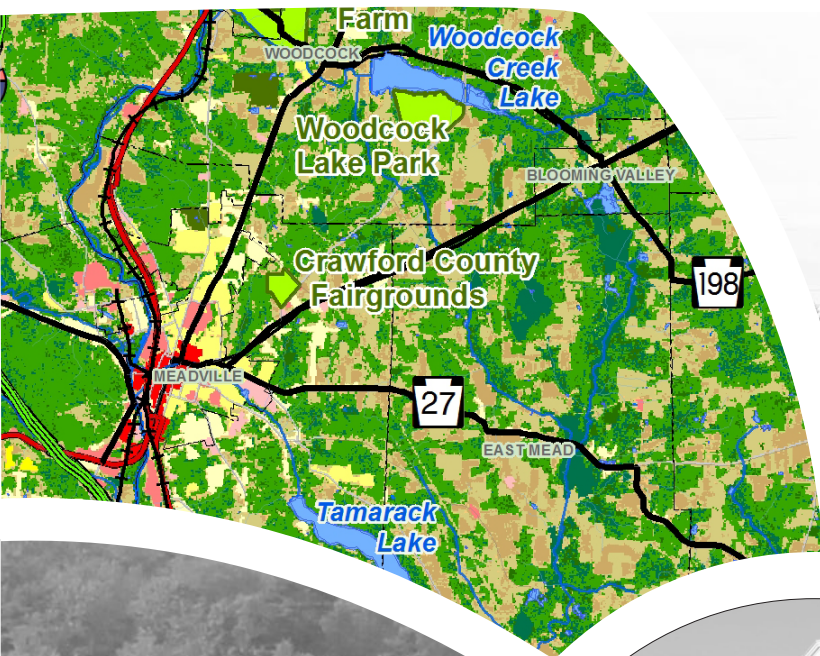


Walking in Cambridge Springs.

**Walkability can be promoted effectively through programming as well as capital projects.** WalkWorks, a partnership between the University of Pittsburgh Graduate School of Public Health and the state Department of Health, has been operating in Crawford County to promote physical activity and walking. In Crawford County the WalkWorks program also partnered with the Crawford County Health Improvement Coalition (CHIC) and the YWCA in Titusville. These groups have established walking routes in Conneautville, Meadville, Spartansburg, and Titusville. Many residents and groups such as local boy scout troops use these routes.



# LAND USE



THE CHAMBER  
GOOD BUSINESS  
TITUSVILLE AREA  
CHAMBER OF COMMERCE





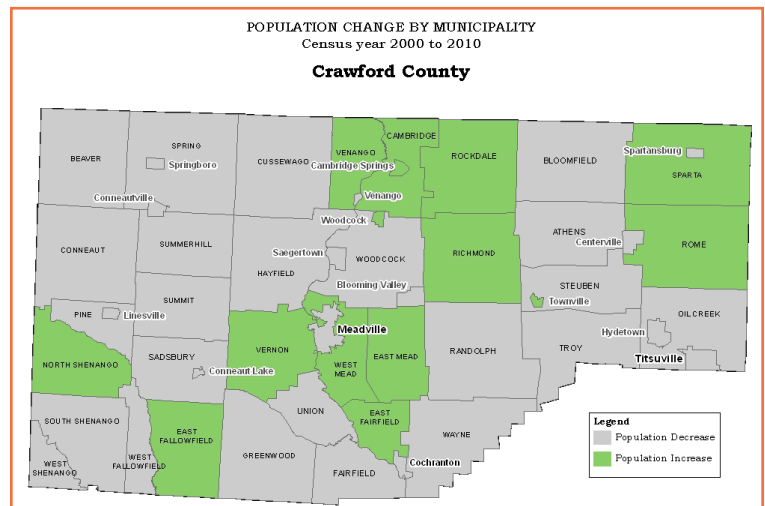
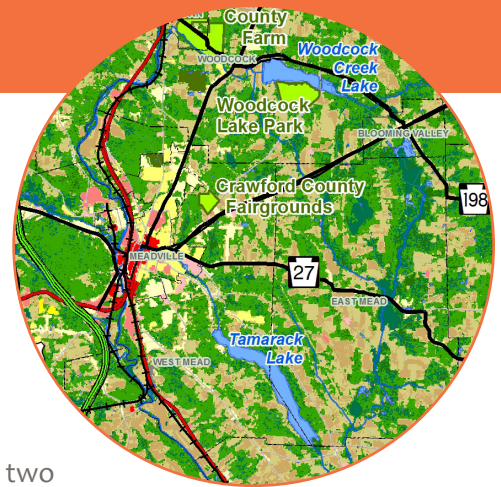
# LAND USE

**Crawford County's landscape is dominated by natural and agricultural areas and residents value these land uses.** Cropland, grassland, and forests blanket the county. This is clear from the abundance of green and tan shades (the colors that correspond to these land uses) on the Land Use Map of the county. Agricultural areas cover approximately 60% of the county's total area while forests occupy another 25%. Survey results show that the public values these resources and supports their preservation.

**Population is shifting from larger population centers to the townships surrounding them.** This is a generalization of population trends between the two most recent Decennial Censuses per the U.S. Census Bureau. This trend is somewhat contrary to national trends, which are showing that population of established cities and towns stabilize or slightly increase as more people desire to be closer to the amenities offered by these towns.

**It is an important function of a county comprehensive plan to establish the future land use vision for the county.** One of the fundamental roles of a county comprehensive plan in the Commonwealth of Pennsylvania is to include a general land use plan for the county. The comprehensive plans of individual or groups of municipalities in the county then are required to be "generally consistent" with this land use plan. According to a public opinion survey conducted in conjunction with this comprehensive plan, residents are clearly calling for a broad land use policy for the county that identifies areas where growth and development should occur as well as areas where the existing rural/natural landscapes should remain undeveloped.

**Three documents are integral to effective implementation of a county or community's land use vision: the comprehensive plan; the subdivision and land development ordinance (SALDO); and the zoning ordinance.** The three documents play different roles, and when well coordinated, they operate in the public interest to provide for optimal implementation of a community's land use goals. The comprehensive plan establishes the overall land use vision for the county or community. When a development is proposed it should be checked for consistency with the comprehensive plan of the community and county. The SALDO provides basic and essential standards for ensuring quality development. These standards vary, but should describe the approval processes for subdivisions and land developments as well as the components of a plan that are required to be submitted as part of the approval process. The SALDO includes minimum standards for many elements of land development such as roadways,



What do you like about Crawford County?

**"Natural Places (rivers, streams, forests)"**

(#1 answer 88.8% of respondents)

**"Agricultural Environment / Rural Landscape"**

(#2 answer 63.8% of respondents)

Out of all the items you checked above, which ONE do you feel is most important to your quality of life?

**"Natural Places (rivers, streams, forests)"**

(#1 answer)

-Crawford County Comprehensive Plan Public Survey



utilities, sidewalks, etc. The SALDO typically does not regulate where various land uses may be situated. This is the primary role of the zoning ordinance. SALDOs are often confused with zoning ordinances, but each serves different and important purposes. It is common to describe the roles of the zoning ordinance as regulating “where” land can be developed and the SALDO as regulating “how” it can be developed. Comprehensive plans, SALDOs and zoning ordinances can be adopted at the municipal level, county level or both.

It is common for a county to have a comprehensive plan and a SALDO, but not as common to have their own zoning ordinance. Zoning is typically left to localities to adopt and administer. Along with their zoning ordinance, municipalities typically maintain a comprehensive plan and a SALDO. The hierarchy of these documents works like an umbrella. The county’s policies and ordinances provide coverage for its localities. The county comprehensive plan should inform and influence the comprehensive plans of individual municipalities. If the county has its own SALDO, it provides basic standards for development for the individual municipalities within the county that do not have their own SALDOs. However, if a locality has its own SALDO, then the county’s SALDO does not apply.



Meadville (its central business district shown here) has a zoning ordinance and a SALDO, and participates in the Central Crawford Region Multi-Municipal Comprehensive Plan.

***Crawford County is one of only two counties in Pennsylvania that does not currently have a county-wide subdivision and land development ordinance.*** Only 29 of the 51 municipalities in the county have their own SALDO. Consequently, the essential standards provided by a SALDO are not present in 22 municipalities in Crawford County.

***Despite public opposition to the buzzwords “zoning” and “SALDO” there is extensive public support in Crawford County for the essential roles behind these ordinances.*** The public opinion survey completed as part of this planning project revealed that residents prefer controlling land development in order to achieve a goal of preserving land (73% of respondents). When asked where and how new housing should be developed, respondents favored land preservation and control over the development.

When asked if they would like to see more development (residential, commercial, etc.) in their municipality, 49% of respondents indicated that they would only like development in certain areas – a desire that can only be ensured by adopting land use regulation.

***Despite the clear public desire (as seen in the public input and survey) to preserve the county’s rural setting, many Crawford County communities do not have basic land development standards and controls.*** Ideally, each community in the county would set its land use policy through a local or multi-municipal comprehensive plan. The municipality would ensure that land was developed in accordance with the plan by adopting a local SALDO. It would then implement the plan’s land use vision by adopting

#### Question:

Some see new housing developments as positive and should be encouraged without restrictions. Others are concerned with conserving open space, agricultural areas, forested areas, and steep slopes, and would prefer controlling where housing is developed. What is your preference?

- o New housing should be controlled to preserve land - 73%
- o New housing should be encouraged with little or no restrictions - 17.5%
- o No opinion - 9.5%



A zoning ordinance and a SALDO protect land uses in Conneaut Lake Borough, in Sadsbury Township.

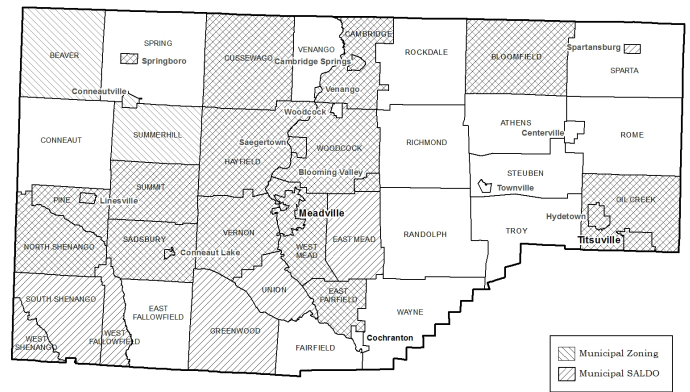


insert Land Use Map 11x17



a zoning ordinance that reflected the future land use plan. However, it is more likely than not that the localities in Crawford County do not have one or more of these essential documents. Of the 51 municipalities in Crawford County:

- 37 have a Comprehensive Plan;
- 28 have a SALDO;
- 26 have a Zoning Ordinance; and
- 21 have adopted all three documents (comprehensive plan, SALDO, and zoning ordinance).



### ***The County Planning Commission and staff assist localities with creating and editing local regulations.***

The county planning staff has been advocating for sound, public-interest planning and land use regulation throughout the county. The staff directly assists localities in drafting and implementing local ordinances. The staff also provides support for municipalities that wish to modify existing codes to remove barriers to development and set minimum standards to ensure quality. The CCPC also reviews development plans for conformance with local ordinances, where they exist.

The CCPC's cooperative Zoning and SALDO projects have taken place throughout the county and have yielded successful partnerships with several townships. Bloomfield, Woodcock, and Cussewago townships all drafted and adopted zoning ordinances with assistance from the CCPC. The SALDOs of Bloomfield and Summit Townships are also products of cooperative efforts between the county Planning Commission and the local governments. CCPC staff is currently partnering with West Mead to update the township's zoning regulations and with Woodcock Township to update the township's SALDO.

The Planning Commission can be a valuable resource for local governments within the county. The CCPC is a central hub of knowledge and expertise that local governments can look to for guidance and direction. CCPC can help localities avoid common hurdles and relate the challenges faced in this or that community to others throughout Crawford County.

## **Encouraging proactive land use planning in Crawford County**

Land use planning is directly related to all other areas of planning within this comprehensive plan. Land use planning helps determine the desired location for housing. The most appropriate areas for industries that provide jobs can be determined through land use planning. The provision of transportation and other infrastructure is commonly tied to plans for future land use and development. Future recreational assets can be planned using knowledge of the existing population. Land that is prime for agriculture or ideal for conservation can also be identified through land use planning. Land use plans are the policies that tie these kinds of choices all together. In addition, county and local land development and land use regulations are the primary tools for implementing those land use plans and policies. This chapter focuses on both the policies and regulatory tools available to the county and its municipalities to realize the future that is envisioned by Crawford County residents through comprehensive plans.

### **Our vision for land use:**

“Crawford County provides consistent county-wide land use regulations and helps inform and educate municipalities regarding sound land use practices. County and local land use policies strive to accommodate new development while preserving the valuable natural and cultural resources that residents value.”



## Informing land use policy-making

The Future Land Use Plan for the 2014 Crawford County Comprehensive Plan was developed collaboratively by the Planning Consultant and the Planning Commission staff and Comprehensive Planning Committee.

A Future Land Use Map was prepared to identify areas of the county where new development may occur, and areas of the county to be preserved from development. The most prevalent land use projected for the planning period is Agricultural/Rural, which covers most of the county outside of the cities, boroughs and identified Village Residential areas. Agriculture is projected to remain the most important economic sector for the county in the near future, and that is reflected in the amount of acreage shown as a future land use.

Also shown on the Future Land Use Map are areas of the county to be preserved from new development through public ownership or conservation easements. This includes the Agricultural Security Area (ASA) parcels located in 23 of the county's 35 townships, encompassing more than 71,000 acres. The participating land owners in these townships have indicated that they want to preserve these properties as agricultural lands and will not develop other uses there. Other large land areas are owned by public entities such as Pennsylvania's Department of Conservation and Natural Resources (DCNR) and Fish and Boat Commission or the U.S. Army Corps of Engineers. These include Pymatuning State Park, Tamarack Lake and Woodcock Creek Lake, which are available for public recreation activities and preserved as open space areas. Additional public open space preserved from developed land uses include the Erie National Wildlife Area and State Game Lands in the county.

The Future Land Use Map identifies urban areas, such as the cities of Meadville and Titusville, which are already developed, and Village Residential Areas, which encompass the boroughs in the county as well as areas of townships near the urban areas that have a denser development pattern than the more rural areas. Also included in the Village Residential land use category are areas surrounding the lakes in the county (Pymatuning Reservoir, Conneaut Lake and Canadohta Lake), where the water recreation facilities have attracted (and will continue to attract) seasonal housing for visitors from other areas. New residential development is expected to occur elsewhere in the county during the planning period, but not in high densities, due to the lack of public water and sewer facilities outside of urban areas.

The Future Land Use Map also shows three areas of the county where new commercial and industrial development is expected to occur during the planning period. More commercial development is likely along the US 322 corridor in Vernon Township, just west of the City of Meadville. This is the largest concentration of commercial establishments in the county, with the highest traffic volumes, and proximity to the Interstate 79 interchange. The Meadville Medical Center has proposed



The center square in Titusville.



A town green in Cambridge Springs.



The busy Route 322 thoroughfare in suburban Vernon Township.

a \$30,000,000 medical/office/retail complex at the site of the former Meadville Mall, and the Pennsylvania Department of Transportation is completing a transportation study that will propose new service roads, roundabouts and other improvements in this area. Elsewhere in the county new development is proposed for the Keystone Opportunity Zone in Greenwood Township. This is expected to include rail improvements, the Deerfield Farms project and the proposed Tires to Energy Facility. The Future Land Use Map also highlights the area between Titusville and Hydetown in the eastern part of the county, where new commercial development is likely to occur.

The Future Land Use Plan serves as the overall vision for future development and land conservation in Crawford County.

Another important function of the Future Land Use Plan is its interfacing with local and regional comprehensive plans and land use policies. As this plan mentioned previously, a county's comprehensive plan sets the broad land use policy for the cities, boroughs, and townships within. The Pennsylvania Municipalities Planning Code requires local plans to be "generally consistent" with the county's plan. While other parts of the Crawford County Comprehensive Plan provide guidance regarding future policy-making, the Future Land Use Plan is the component that links this information to a map. Crawford County Planning Commission staff has been a strong advocate for local and multi-municipal planning efforts in the past.

### ***Enabling best practices for land development and land use regulation***

The Crawford County Planning Commission has had success fostering municipalities through plan and ordinance development in the past. However, some recent efforts have stalled and some communities remain unconvinced by the positive influences that basic land development and land use ordinances can provide. Yet, two factors suggest a clear need for codified local land-development and land-use strategies: First, residents overwhelmingly value the county's existing rural and natural character; second, many





insert Future Land Use Map 11x17



communities have not responded to that public wish by employing the basic tools at their disposal for preserving the desired rural and natural character.

### Crawford County should adopt a subdivision and land development ordinance (commonly known as SALDO).

County officials should act on the clearly stated will of a wide majority of citizens to protect the county's rural and agricultural character, its natural places, and its small towns and "main streets" through land-development regulation. The most direct way to approach the matter is for the county to adopt a SALDO. As stated previously, nearly all Pennsylvania counties have a SALDO; thus it is possible for Crawford County to readily find examples to examine. A well-crafted SALDO for Mercer County, which shares Crawford's rural, natural and agricultural character, is provided via URL in Appendix D of this Comprehensive Plan.



Crawford County Fairgrounds is the site of many activities that have roots in agriculture or rural life.

### The county could alternatively pursue a county-wide partnership for SALDO and land use regulation (commonly known as zoning).

Any local opposition and unwillingness to implement land use controls needs to be addressed directly through communication that explains exactly what land development and land-use ordinances can and cannot do. Still, if the adoption of a countywide SALDO is not feasible at this time, county officials need not feel their hands are tied. Crawford County should still make progress toward the goal in a more gradual manner. Changing the mindset and culture toward planning might be slower than desired, but beneficial and rewarding in the long-run. The process for shaping public opinion to support planning needs to be handled purposefully. In order to be successful the staff charged with this task must be persistent, and must fully understand and support the principles behind what they are advocating. The Planning Commission needs to recognize that it could take a few years to realize the initial victories, and that the ordinances and the public benefits will continue over time.

This approach is still being successfully implemented in Lycoming County and has evolved since their effort began in 1989.

**What is a land development and land use "partnership?"** Implementing a land development and land use partnership is setting up a mechanism by which municipalities in the county can opt-in or opt-out of multi-municipal (county administered) ordinances. These can be subdivision and land development or zoning ordinances, or both. Municipalities work with county planning staff to determine the details for the SALDO or zoning and ensure that it is fully in the public interest and developed in a clear and open process. Member municipalities would be those that opted-in to one or more of the ordinances. County staff would provide affordable, unbiased and professional enforcement and administration of the regulations in opt-in communities only.

**Participation should be completely voluntary.** Labeling the initiative a "partnership" is deliberate. It is clear at this point in time that not all Crawford County municipalities are supportive of these types of regulations. All communities eventually determine when the time is ripe and these ordinances are a necessity. However, it is not the intent of the partnership to force any community to participate against their will or interest. The word partnership implies that participation is determined by the individual communities' willingness. Participation should remain completely voluntary. The Planning Commission should assert the benefits and advantages of participation, and work with municipalities to ensure that the partnership caters to their needs.



Partnerships can allow small communities to protect the character of the land uses that currently exist – or define exactly how the land uses should change. This scene is in Guys Mills.

**The partnership allows member municipalities to shape the future they desire.** Throughout the process of working with municipalities a constant refrain should be heard: "The partnership enables your community to decide what it looks like and how it develops in the future. SALDO and zoning



are the most essential tools to keep it the way it is now or help it become what you want it to be.”

**Creating the partnership requires a sustained long-term effort but is ultimately worth the investment.** The process should begin by building support for the initiative at the county level (County Commissioners and Planning Commission). Planning staff should work with the County Commissioners to agree in concept to a plan that would help towns and municipalities join with the county to create a common land-use zoning plan. This could be a continuation of the land use planning efforts initiated during development of this Comprehensive Plan. Planning staff should familiarize themselves with the key components of the “partnership” initiative and brief the County Commissioners on the costs and benefits. After building county-level support, the focus should shift to communication with boroughs and townships in the county.

**County planning staff should conduct a series of discussions with elected officials and planners.** These discussions should focus on determining the community’s vision for future land development. Planning staff should conduct visual preference surveys to determine the desires of the community. These should involve photographs of development alternatives and questions such as “Do you prefer this or that?” and “Would you like to see your town developed this way or preserved that way?” Where possible, these visual preference questions should be paired with relevant local development issues. In Crawford these might be development of prime farmland for housing or non-conventional oil and gas extraction. Once the community builds consensus around a desired future, the planning effort can shift to determining how to implement the community’s vision.

The planning staff should then work with the community to determine the answers to the questions: “What would it take to make sure your preferences are protected and enacted?” “What will happen if you do nothing?” This is the best opportunity to highlight the benefits of land development and land use ordinances with the communities. The overall tone should emphasize all the positive potential, while not shying away from explaining what can go wrong without a land-use plan and basic ordinances. The discussions at this phase should also stress the particular advantages of a multi-municipal ordinance(s), which are described in more detail below. Public input on the idea should also be considered in the process, with county planning staff and officials from interested communities presenting an outline of the partnership idea at public meetings, and collecting reaction and ideas in return. At all phases the staff should emphasize that the work is being done in the public interest and that the effort is a voluntary one and a partnership.



A farm in north-central Crawford County.

**The County should facilitate multi-municipal cooperation.** The next phase of the process should be to facilitate discussions between several neighboring communities. Issues should be discussed openly and honestly in order to determine the best course of action. While each municipality has the option of deciding what they want in their town, the county should negotiate multi-municipal issues along common borders. For example, the county could work with three to four towns at a time, facilitating discussions about land uses at abutting municipal boundaries, and managing the desires and expectations of each community. This process should also foster feelings of common interest and good will between partner municipalities.

**Proposed changes to the map or ordinances should be reviewed with partner municipalities.** Ultimately, the county should develop the ordinance and map (if applicable) for the partnership communities. The ordinance and map should be amended as more communities decide to participate in the partnership. County planning staff should commit to reviewing the proposed map with the communities before any one of them votes to adopt it. Staff should also commit to not make changes to the map or ordinance without first checking with the partner municipalities. These

<<insert Multi Municipality Partnership Timeline 11x17 here>>



assurances are especially important in later phases as additional communities join the partnership.

**Continually stress the basic benefits of land development and use regulations.** Zoning is the most useful and practical tool communities have at their disposal to protect individual property owners' investments. Individual property owners' rights are strengthened by zoning strategies that authorize compatible land uses in any given district. Minimizing conflicting land uses reduces the number of complaints and protects the owner's rights to use their property as they intended. For example, if there's an existing industry, and housing grows up around it, then the industry may find it difficult to expand when many residential neighbors oppose their plans. Conversely, zoning can protect a residential neighborhood from encroachment by commercial or industrial interests. Regardless of the land use in question, minimizing potential conflicts makes for a more predictable future for a property and strengthens its potential as an investment.

**The partnership can provide efficiency, affordability, and professionalism to implement your community's vision.** The partnership method can utilize a centralized enforcement and administrative staff and a single zoning hearing board. This is more efficient than each community needing to hire or contract out these enforcement and administration tasks. Several communities pooling their resources in partnership with the county can increase the level of professional knowledge that their dollars leverage.

The partnership can shoulder many of the costs and risks more easily than can small communities individually. The County can absorb the legal risk instead of burdening small communities. Overall the costs of the partnership are subsidized by the county (65%, for example) while the partner municipalities pay the remainder (35%). The participating municipalities would pay the county on a per-capita rate to provide staff support for the initiative, professional and legal advice, and assumption of risk. The costs are based on the population of the municipality (in Lycoming County in 2013, the cost of participation in the partnership is \$2.25 per capita). For this relatively small fee the small communities receive full-service, professional zoning and SALDO enforcement and administration. The community also no longer needs to maintain a zoning hearing board (although it would have a representative – and thus a voice – on a multi-municipal board). The process is professional, streamlined and affordable.

A multi-municipal, regional, or county-wide zoning hearing board can also be beneficial because it can be slightly removed from local politics and can more easily make determinations and decisions without bias or conflict of interest, or the appearance of favoritism.

Multi-municipal zoning in particular authorizes member municipalities to plan and situate zones and uses in the most suitable areas, as agreed upon, regardless of municipal boundaries. This is advantageous given that under individual community zoning schemes each municipality is required to authorize the full range of potential land uses. In multi-municipal zoning the full-range of uses can spread across municipal boundaries. This can be especially advantageous when siting noxious land uses. These uses can be placed in the most appropriate locations rather than allowing something deleterious to simply emerge where it is not wanted or where it mars the rural and natural character that residents have clearly stated they wish to preserve.

**Existing plans and ordinances can hint at municipalities' likelihood to embrace additional ordinances.** Developing the SALDO partnership should begin in those communities that have a comprehensive plan but do not have SALDO or zoning. The zoning partnership should begin in those communities with existing SALDOs and comprehensive plans.

**The drawbacks to member municipalities are minimal.** The majority of the risks are borne by the



Lumber for sale at a small mill in northeastern Crawford County.

county itself. The county must initially commit and sustain an investment of staff time to the partnership. County staff may be able to assume the responsibilities of implementing the partnership or new staff or new expertise may be necessary. The County faces a drawback due to the fact that it will be assuming the legal responsibility for administering and enforcing the ordinance(s). The County might also need to hire a professional consultant to draft the ordinance(s) and map(s). The benefits to member municipalities and therefore the county as a whole should offset these burdens on the county.



Buggies share the road in northeastern Crawford County, contributing to a particular rural character residents may wish to preserve.

**A multi-municipal partnership could lay a foundation for future collaborative work.** As a multi-municipal partnership gains members who “speak with one voice,” it will be increasingly possible to align the intentions of county planning action with the preferences of the partnership, and vice versa. For example, the county and the partnership could work together to add infrastructure – such as water and sewer – to areas specified as growth areas in the zoning partnership so that growth is most likely to occur where it’s wanted, which also takes pressure off areas where growth is not desirable. In addition, it would be possible to link partnership initiatives to the county Comprehensive Plan. The plan would include a list of special places and qualities to be protected, or a list of priorities as determined by the partnership. Such lists would become a point of guidance during future meetings and discussions.

**Success of the partnership should be measured over the long-term.** This partnership will take shape and evolve over a number of years. The first few years may be spent simply meeting with potential partner communities and forming their desired vision for development in their communities. Formation of the initial partnership and adoption of the ordinances may not be completed for three to five years.

**The County should learn more about the Lycoming County partnership by visiting, if possible.** Much credit for this idea is given to the former and current planning directors of Lycoming County, Jerry Walls and Kurt Hausamann, respectively. Their experience and willingness to share information greatly aided in forming this recommendation of the comprehensive plan. These planners even volunteered to host Crawford County representatives who are willing to visit Lycoming County to learn more about their successful multi-municipal partnership. The County should gather a group of county officials and staff as well as local officials to visit Lycoming County and see the benefits first-hand.

## Land Use Goals

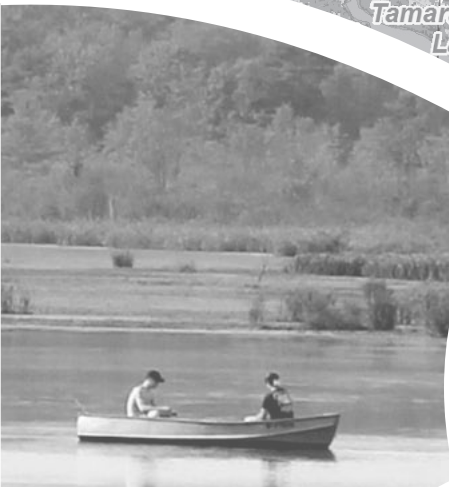
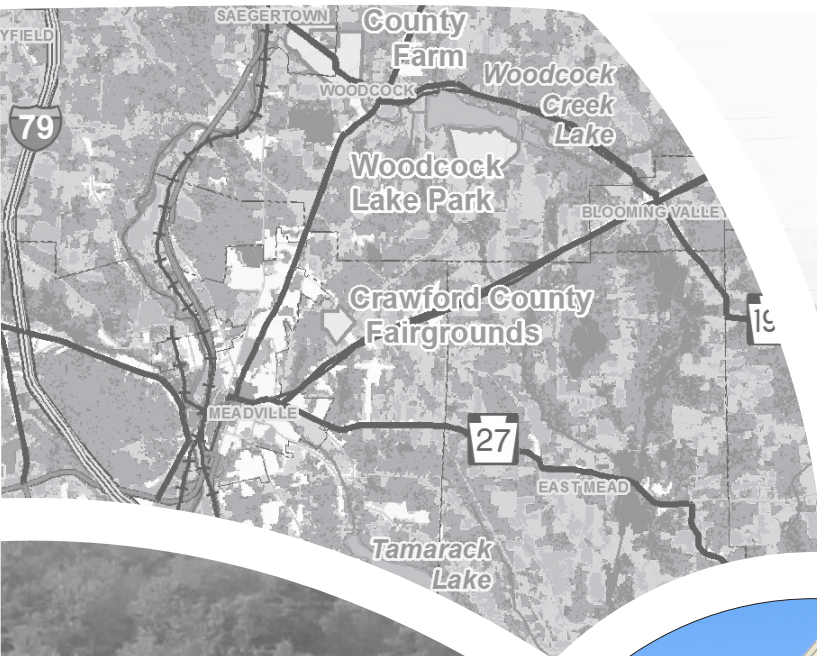
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The strategies described previously focus primarily on facilitating best practices for planning throughout the county. There are several other policies that could also facilitate sound land planning practices in Crawford. These are reflected in the Land Use Goals Matrix on the following page. The Land Use Goals Matrix expands on the vision that was expressed earlier in this chapter. The Land Use Goals Matrix shows where certain policies are appropriate and desirable and where they are not.

Land Use	Urban Centers/ Cities	Villages/ Boroughs	Suburban Townships	Rural Townships
Promote best practices for land use planning and regulation (comprehensive planning, land development regulation, and land use regulation).				
Promote strategic multi-municipal land use planning to direct growth, protect sensitive resources and enhance quality of life.				
Coordinate the expansion of infrastructure (water, sewer, transportation) with land use planning.				
Integrate natural resource conservation and land use planning.				
Encourage the location and expansion of a diverse range of businesses, institutions and community services in the “main street” areas of cities, towns and villages.				
Encourage residency in downtowns and “main street” areas.				
Support infill development and redevelopment efforts and promote consistency with the character of existing land uses and development.				
Limit infrastructure improvements in rural areas to those supporting the agricultural industry and use context sensitive design to maintain community character.				
Promote acquisition, development and maintenance of community and neighborhood parks, trails, and recreation facilities to protect resources, provide connections, and to promote healthy lifestyles.				
Encourage the identification and protection of historic and cultural resources to enhance revitalization efforts and maintain the character of the landscape.				
Promote a diverse range of rural and urban cultural opportunities to enhance the quality of life and encourage tourism.				



# PLANNING & GOVERNMENT SERVICES



THE CHAMBER  
GOOD BUSINESS  
TITUSVILLE AREA  
CHAMBER OF COMMERCE





# PLANNING & GOVERNMENT SERVICES

## Managing Demand for Government Services

As this plan has made a strong case that substantial changes are likely coming to Crawford County in the form of new industries and residents, it is prudent to examine the potential impacts that these changes might have on local governments and how we can best prepare for these impacts.

***Decisive leadership will help the county prepare for change.*** At times of change – in any industry or organization – when people are jumpy and concerned, leaders are most effective when they:

- Operate transparently,
- Involve stakeholders in decision-making, and
- Share information more often and in more depth than ever, according to prominent thinkers on the topic, such as Stephen Covey, John Kotter and Malcolm Gladwell. In addition, leaders who work smoothly as a team inspire confidence that they are pursuing the path that is most likely to improve conditions for everyone, from top to bottom. These points, at their most basic, are a set of ideas for how to consistently act in the public interest – and to be perceived by the public as acting in their interest – during a time of intense and rapid change, such as at the beginning of gas development in Crawford County.

General confidence that the county is operating entirely in the public interest is especially important during fast-paced activity of gas development because of the wide range of opinions and extreme views on all sides of the “drilling issue.”

And even as expectations for public openness and accountability are at their highest, the workloads for county and local governments also rise to new heights because of the many challenges and opportunities that come with gas development. There will be new demands on budgets and staff time, new issues for everyone in county government to learn about, new areas of decision-making, new expectations from the public and the media regarding information and services.

This section of the Comprehensive Plan explores some of the public-policy issues and decision-making or governing practices that have been identified as important by scholars, experts and officials in counties where gas development has occurred.

## Critical Public-policy Issues

As gas development activities begin, elected and appointed officials as well as county employees will need to know a great deal about the gas industry and its impacts on county life, and need to know it sooner than the general public so that county officials and staff members can be both proactive and responsive.

The county is already pursuing a proactive stance toward the industry through the formation of the Oil and Gas Task Force, which is positioned to:

- Provide grassroots input on county future policy decisions through study and analysis.
- Serve as a conduit for citizen concerns and ideas.
- Learn and share best management practices from counties where gas drilling has occurred.
- Help identify challenges facing the county before any minor problem becomes a crisis.
- Act as a neutral party or intermediary in the midst of an issue that carries strong opinions on all sides.



Knowledge and awareness about issues related to gas development will need to extend beyond the task force and permeate all facets of county government. **What follows is a list of some of the most important issues about which county officials and staff members need to have factual, authoritative knowledge:**

### Taxation and finance

The county must have or develop an ability to examine revenues and expenditures related to gas exploration and to project future financial resources needed for county operations. (Penn State Natural Gas Marcellus Education Team 2009)

### Drilling activity

The county must be able to act as one primary resource for the industry while also helping to protect individual rights, enforce laws and monitor compliance. Activities could include things like:

- Hosting a township supervisor convention(s) twice a year that drillers and gas companies also attend, to facilitate communication and problem solving.
- Establishing points of contact at the county for various gas-drilling related issues, such as road maintenance or housing matters – both for the industry and for the public.
- Operating a Gas Drilling Review Committee to mediate disputes over wells, pipelines, and truck traffic.
- Establishing consistent standards for drill site and infrastructure facility setbacks, the use of fracture ponds, and deadlines for re-landscaping drill sites.
- Working actively to mitigate noise, dust, and mud on county roads.

#### **GAS EXPLORATION:**

##### **A WHOLE LOT MORE WORK**

“Counties are feeling tasked with responsibilities for which they don’t have complete knowledge. For example, they are not attuned to the overall scope of the gas industry. Understanding how long major operations will last, housing impacts, employment increases, demographic changes, traffic impacts, water usage, and the processes related to drilling, fracturing technology, production and the long-term impacts of gathering pipeline development is critical information for county-wide planning. Keeping up with duties has been more difficult since no additional revenue has been directed to county planning offices to take on the additional responsibilities.”

– **Marcellus Shale Freight Transportation Study**  
*Northern Tier Regional Planning and Development Commission*

### Public investment

While much of this portion of the plan focuses on adapting county and local government in order to address additional demand and impacts, the arrival of the industry also presents new direct economic opportunity for the government. The county should acquire or develop expertise to examine opportunities and create plans across governments on possible ways to:

- Use assets and facilities to generate revenues from drilling, transmission, water, and wastewater activities related to gas exploration.
- Be proactively involved in regional economic development and long-term community benefit. (Penn State Natural Gas Marcellus Education Team 2009) (Christopherson, Marcellus Shale Gas Drilling: What Should We Plan For? 2011)

### Land use planning

Local governments should incorporate natural gas development as a new and distinctive land use, and provide for economic development, new commercial and residential activity, and improvements to the local transportation system. (Penn State Natural Gas Marcellus Education Team 2009)

The complex and wide-ranging effects of shale gas development may prompt a decision by Crawford County to consider crafting a zoning ordinance as a framework for managing so much change. A



successful example of this can be found in Lycoming County, where a strong cooperative arrangement evolved among the county and local governments over the creation of a zoning ordinance. The county planning officers held public meetings with planners and citizens in every township to discuss “What do you want the community to be.” The discussions, which honestly conveyed what zoning can do or cannot do, resulted in a zoning ordinance that supported the desires of the county and municipalities as a whole. During the process, the planners and the county promised local governments that there would be no changes in zoning without the opportunity for the public to review the changes in draft form. As well, the process gave townships the opportunity to opt out of the county zoning ordinance. The countywide ordinance now applies in all townships that do not have their own ordinances.

#### IT’S ALL NEW

*“Gas drilling brings many new factors to communities that have not been experienced previously in many areas of Pennsylvania.”*

#### – What Local Officials Need to Know

Penn State Natural Gas  
Marcellus Education Team  
PSU Cooperative Extension Office

Despite historical opposition in many Crawford municipalities to zoning and subdivision regulations, the potential impacts of this new industry may bring about a change in local opinion. A coordinated effort at sound land use planning and regulation that clearly addresses the need to protect localities from potential impacts could finally raise the importance of land use regulation in Crawford County.

### County management

**An active industry will increase demand on local and county government offices and services.** The increased demand for information and services from county and local government offices cannot be ignored. An active oil and gas industry will generate a steady stream of requests for public information such as maps, ordinances, regulations, fee schedules, development applications, Freedom of Information Act/right-to-know requests, etc. County staff needs to be prepared in order to quickly and efficiently address these requests.

Crawford County will need sufficient personnel to keep track of mining activities, manage initiatives, carry out inspections, anticipate production or market changes, and encourage workforce development to supply skilled workers. Since gas exploration is regional in scope, the management process needs to be carried out jointly by affected municipalities, counties, and school districts, as well as the private sector. (Penn State Natural Gas Marcellus Education Team 2009)

**To cover some new costs, Sullivan County began collecting fees for data and maps requested by gas companies and related parties (see image to the right).**

The impacts of the industry will undoubtedly expand the roles played by county employees and officials. The following is a sample of tasks or responsibilities that might be new to Crawford County as its relationship with the oil and gas industry evolves.

### **Public Decision-making and Governance Issues**

The report “Marcellus Shale: What local officials need to know” from Penn State’s Cooperative Extension office suggests adopting a new view of planning when gas drilling activity comes to the area. With the very fast pace of change that occurs, planning cannot only be something that takes place at monthly meetings of the Planning Commission or that is demonstrated by a commitment to this comprehensive plan. Though both of those planning activities are vital for the county, the arrival of gas development also demands a very fast-paced, open and collaborative decision-making ability. Because gas development is a regional activity, this includes working cooperatively with other over-stressed local governments, and operating with full transparency to the public.



One of the first unconventional natural gas wells in Crawford County.

*Here are some ideas from elsewhere that might help Crawford County:*

### Citizen information and involvement initiatives

Activities or programs the county sponsors to enhance public involvement in and education about issues related to gas development. These could include things like:

- Tapping the expertise of committees from the Oil and Gas Task force to create recommendations for county ordinances, resources or policies related to gas-development activities or their effects.
- Easy-to-find contact information for county and local government point people for various drilling-related issues, such as housing, roads, land records, etc.
- Enlisting the local bar association to help landowners understand lease agreements.
- Awareness of state resources online that help citizens monitor and stay abreast of drilling applications and permits.
- Transparency regarding county activities related to gas drilling, such as incidents and infrastructure.
- Energetic efforts to include public input into and publicity about matters related to gas industry activities, such as impact studies or proposed ordinances.



Some tools of the trade for planners.

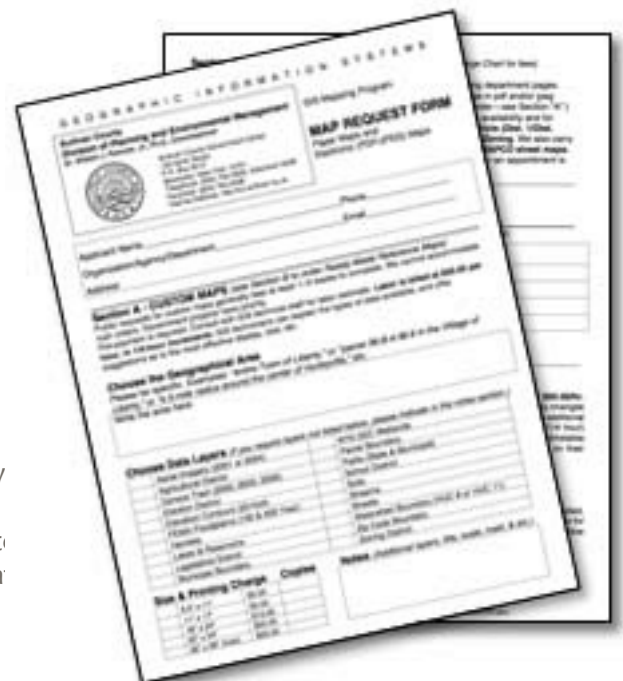
### Enacting a zoning partnership

In Lycoming County, as noted previously, the county and local governments worked together to create a mutually satisfactory zoning ordinance. One aspect of the partnership allows land uses to be shared across municipalities, so that each locality does not have to provide for all uses. This enabled the county and local governments, for example, to create industrial zones where it made sense for them to be, to plan pipeline right-of-ways, to maximize the potential of transportation corridors, and to protect farmland and other important natural resources.

### No need to go it alone

Some counties created or relied in new ways upon private commissions or quasi-governmental bodies to help manage the work and the address new needs that arise due to gas development. Examples:

- Clearfield County: The Clearfield County Economic Development Corp., a private non-profit, became the go-to organization in the county for gas industry-related economic development. Clearfield County is not the location of as much drilling as its neighbors, and so the role of the CCEDC has been to find ways besides drilling to develop economic opportunity related to the industry. This has included maximizing its location along I-80 as a prime location for gas-related businesses to rent or purchase real estate for staging their operations. Examples of work by the CCEDC include organizing a semi-annual meeting of township supervisors and industry representatives to enhance communication and problem solving, and creation of a website and mobile app called [rigmonkeyapp.com](http://rigmonkeyapp.com) that identifies land and industrial and commercial properties available for rent or sale.



- Lycoming County: The county and its municipalities relied increasingly on the expertise of the Lycoming County Water and Sewer Authority, which was created in 1989 to “undertake projects that are normal and incidental to the planning, creation, operation, maintenance or financing including but not limited to water has been able to take a big-picture approach to utility expansion, water supply and water treatment when gas development started.
- Westmoreland County: The Redevelopment Authority of Westmoreland County, created to work on revitalization efforts, is responsible for two programs that are particularly pertinent when gas drilling activity begins: 1.) A county demolition program, which provides funding to municipalities to remove vacant, hazardous and dilapidated structures. 2.) Administering a \$125,000 Pennsylvania Housing Affordability and Rehabilitation Act (PHARE) grant for rehabilitating owner-occupied houses in areas most impacted by drilling activities.
- Susquehanna River Basin Commission: Created through an act of Congress as well as approval by three states, the commission’ mission is to “enhance public welfare through comprehensive planning, water supply allocation, and management of the water resources of the Susquehanna River Basin.” Pennsylvania counties in the Susquehanna River Basin have relied upon the requirements of the River Basin Compact to ensure that the watershed is protected from the withdrawal of too much water and from other drilling-related matters.
- A dozen Pennsylvania counties banded together as the Pennsylvania Wilds, which is a strategic effort to grow the nature- and heritage-tourism industry in the north-central part of the state. It aims to create jobs, diversify local economies, and improve quality of life while inspiring a stewardship ethic in residents and visitors. The group created design guidelines that help preserve the character of local communities.
- Five Pennsylvania counties created a regional planning and development commission “To help businesses expand their markets, generate employment, improve the local economy, and plan for the future development of the Northern Tier Region.”

Crawford County may find that there is strength in numbers, or that sharing resources, ideas and costs can produce results the county desires. It could consider any of the above-listed forms of local and regional private or quasi-governmental agencies to maximize opportunity and minimize challenges of gas development activities, or create new types of agencies, corporations or agreements as it sees the need.





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# APPENDICES

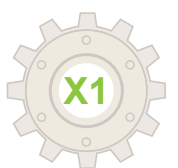
Appendix A: Survey Results

Appendix B: Greenway Map

Appendix C: Butler County, PA Park Matrix

Appendix D: Mercer County, PA

Subdivision and Land Development  
Ordinance





# Appendix A: Survey Results



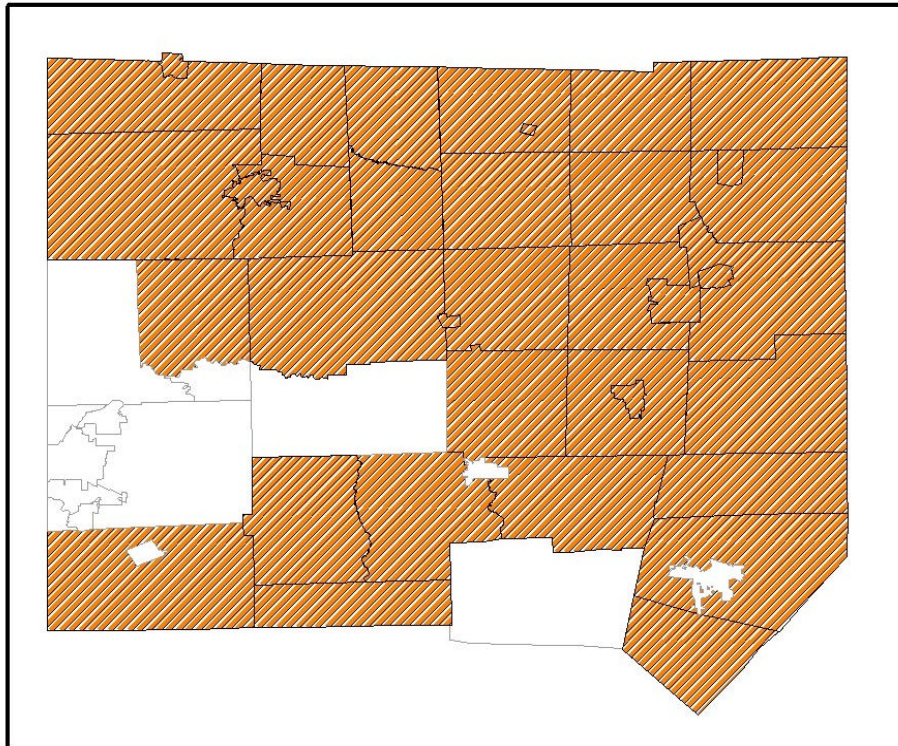
# Appendix B: Greenway Map



# Appendix C: Butler County, PA Park Matrix



## MERCER COUNTY Subdivision & Land Development Ordinance



Ordinance # 1-2006  
Effective Date - April 1, 2006  
Prepared by: Mercer County Regional Planning Commission  
(MCRPC)

Mercer County's ordinance may be found at:

<http://www.mcrpc.com/subordinance.htm>

Prepared by Crawford County Planning Commission  
in collaboration with Pashek Associates, Ltd.  
October 2014