



Agenda
Jefferson County Planning Commission
Special Meeting/Work Session
Tuesday, October 5, 2021 at 7:00 PM

This meeting will NOT be a live broadcast on our website. Instead, it will be accessible through a live ZOOM Meeting only. No public input will be received at this meeting.

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There is no public comment for the following items.

1. **Review and Discuss** the County Commission's request regarding an amendment to the Jefferson County *Envision Jefferson 2035 Comprehensive Plan* (approved 1/14/15) to clarify and/or state that solar facilities are principal permitted uses in the rural and residential zoning districts, in accordance with WV Code 8A-3-11, 8A-3-6, and related statutes.
 - a. Planning Commission review and discussion of draft *Comprehensive Plan Text Amendment* prepared by staff per direction received from the Planning Commission at their 9/28/21 Workshop (Attachment A).
 - b. Planning Commission discussion of the public input received during and after 9/28/21 Workshop regarding the proposed text amendment to the *Envision Jefferson 2035 Comprehensive Plan* pursuant to a directive by the County Commission (9/2/21) (Attachment B "Summary Memo" and Attachment C from the Houghs).
2. **Direction and Action:**
 - a. Planning Commission input and comments to modify the proposed draft *Comprehensive Plan Text Amendment* to incorporate changes based on research and public input received. Finalize draft amendment language and direct staff regarding the final draft.
 - b. Finalize the Planning Commission Public Hearing meeting date (tentatively 11/16/21) and provide a date that the draft will be available to the public for review.



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Attachment A

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MEMO

TO: Planning Commission
FROM: Jennifer Brockman, County Planner
DATE: October 5, 2021
RE: Cover Memo for Draft *Envision Jefferson 2035 Comprehensive Plan* Amendment prepared by staff

At the conclusion of the September 28, 2021 Planning Commission (PC) roundtable/workshop, the PC made a motion to instruct staff to prepare a draft revision to the *Envision Jefferson 2035 Comprehensive Plan (2035 Plan)* to permit large scale solar facilities in the rural and residential growth districts, which carried unanimously.

Attached is this draft amendment, with the relevant sections of the *2035 Plan* excerpted for context. The proposed revisions are those areas that are highlighted in yellow with red text. Some yellow highlights may include existing text for ease in locating; however all new text is in red.

The purpose of the October 5, 2021 meeting is for the Planning Commission to review this draft and recommend modifications as necessary to incorporate changes based on research and public input received. The goal is to finalize the draft amendment language in preparation for the required Public Hearing.

The Planning Commission has tentatively called a Public Hearing for November 16, 2021, which needs to be advertised on October 13, 2021. This meeting date will also need to be confirmed or changed at the October 5, 2021 meeting.

2. Economic Development, Employment, and Infrastructure Element

Economic growth and development is closely tied to the availability of natural resources, technological innovation, and human capital as well as its geographic proximity to major population centers, adequate roads, and infrastructure. Jefferson County is ideally situated to have a vital economy. The general health of an economy can be determined by examining two components: stability and balance. Stability is an indication of the ability of a local economy to withstand the fluctuations in the regional and national economy. Balance refers to the level of diversification of a local economy. The more diversified the local economic and employment base, the more difficult it is to disrupt the local economy. Any economy that is overly reliant on a single employer or employment sector is more highly impacted by economic shifts.

The major sectors of Jefferson County's economy include traditional economic development activity, including education and high tech training; agriculture and the rural economy; and recreational, historic and heritage tourism. This section of the Plan discusses each of these sectors in detail and provides recommendations for them. Additionally, because of the critical nexus of economic development with the adequacy and extent of the infrastructure and transportation system networks, these components are included in this element as well.

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2.A. Economic Development and Employment

According to the Jefferson County Development Authority, Jefferson County's strategic Mid-Atlantic location close to Washington, D.C. and Baltimore, MD Metropolitan Areas coupled with ready access to major transportation routes makes the County ideally situated for business, manufacturing, and industry. Jefferson County is located in one of the fastest growing areas in the United States. The County is a major economic driver in a state that boasts the nation's fourth lowest cost of doing business, low utility rates, and a highly skilled and hard-working workforce. While facilitating relocations and start-up businesses, the Jefferson County Development Authority supports and promotes existing businesses.

While there has been a significant amount of commercial development in Jefferson County since the 2004 Comprehensive Plan, it has slowed considerably in recent years. During this same time period, residential growth occurred at a more rapid rate, particularly in the early 2000's. Additionally, Jefferson County's economic

development efforts have benefited from a number of public and quasi-public projects and efforts, including, but not limited to:

- Infrastructure improvements that have taken place in recent years (particularly the construction of WV 9 as a four-lane roadway through Jefferson County);
- An increased federal presence within Jefferson County;
- The continued expansion of Shepherd University in Shepherdstown and the relocation of the American Public University System's headquarters in the Charles Town/Ranson area;
- The increased utilization of telecommuting as a viable employee option by national and regional businesses and federal government offices; and
- The expansion of a business park that has the necessary infrastructure in place for each lot which results in ready-to-build parcels.

Despite those gains, the lack of high paying jobs for Jefferson County's skilled workforce requires approximately 36% of all employed individuals to commute to employment centers with higher wages located closer to Washington, D.C. or Baltimore, MD.

At the same time and paralleling a national trend, Jefferson County has lost some manufacturing and warehousing facilities. The loss of these employers has resulted in several vacant or underutilized structures, as well as unemployed workers. A number of these vacant facilities are within the Charles Town/Ranson urbanized area, and provide opportunities for redevelopment. Some of these facilities have been reused for other purposes, particularly by American Public University System (APUS) and the City of Ranson. APUS's efforts have enhanced the economic revitalization process by purchasing and renovating 12 structures in Charles Town and Ranson as well as constructing a multi-story administrative building and related parking with a large array of solar panels. As part of this renovation and redevelopment activity, APUS has utilized several brownfield sites on the Charles Town/Ranson border.

With Jefferson County's proximity to Washington, D.C. and Baltimore, MD and with the existing economic cluster of federal agencies, the County has the opportunity to attract additional federal facilities.

To support the success of future economic growth, there are a number of proposed improvements to the County's public infrastructure that are expected to take place in the coming years. These include:

Major Public Infrastructure Projects that are Proposed

The widening and realignment of US 340 from Charles Town to the Virginia line near Berryville

The potential for improving natural gas and alternative energy facilities in the Eastern Panhandle and extending natural gas services into Jefferson County

Improvements to the County's telecommunications network, particularly wireless technology and any advanced technologies

These improvements will enhance the ability of Jefferson County to compete on an economic development basis with other communities in the region.

Target Industries

Jefferson County will encourage a diversity of business types to locate within its borders. As part of these efforts, the Jefferson County Development Authority (JCDA) has identified several industries and other sectors of employment towards which incentives and programming should be targeted (in no particular order):

Jefferson County Development Authority Identified Industry Sectors	
Agriculture Development	Manufacturing
Government	Small Business
Information Technology	Tourism

Each of these target industries are currently located in Jefferson County and will benefit from retention, expansion, and attraction to strengthen each cluster. Building on these assets will give the County a strong identification of its core business strengths. While not identified by the JCDA, there are several large non-profit organizations which are a significant part of Jefferson County’s economy. This provides additional economic and employment opportunities.

Additionally, small businesses, which can range from restaurants and artisan cottage industries to small technology and service firms, are an integral part of the local economy and have opportunities to grow stronger.

Federal Government

One of Jefferson County’s target industries is correlated with the presence of state and federal government facilities. Since the federal government has found success with their existing local facilities, the potential for additional federal employment opportunities to locate here is greatly enhanced. The following Table lists federal facilities, many of which have had a long term presence in the County.

Federal Facilities in Jefferson County
U.S. Coast Guard Administrative Support Facility
U.S. Customs and Border Protection Advanced Training Facility
Department of State Diplomatic Security Training Center
U.S. Fish and Wildlife, National Conservation Training Center
Harpers Ferry National Historical Park
National Park Service Design Center
U.S. Department of Agriculture Cool and Coldwater Aquaculture Facility
U.S. Department of Agriculture Fruit Research Center
U.S. Geological Services’ National Biological Aquaculture Laboratory

The County has been fortunate in that the federal government has invested substantial resources into Jefferson County over the years. Since most government entities do not have to follow Jefferson County land use standards, there are few mechanisms to address any on site activities once the site is in use. In designing some government owned sites, there may be situations where buffers or areas may be needed to insulate the use from the surrounding area. This is for both the facilities' needs and residents surrounding the facility.

In a period of tightening government budgets, it is important that Jefferson County and federal, state, and local elected officials work together to maintain the federal and state facilities that are located here and to explore additional facilities that could benefit from Jefferson County's workforce and location.

Growing the Economy

One of the strengths of Jefferson County is that the residents have a strong entrepreneurial spirit. There is a need for local and regional technical and financial resources to be made available to these entrepreneurs and to publicize these resources. There are existing programs in Jefferson County which currently work to support smaller companies and start-ups. The Eastern Panhandle Entrepreneur Forum and the JCDA's agricultural development program and small business coaching efforts focus on cultivating the talent that resides in Jefferson County and are examples to be followed.

While the potential success of numerous small businesses will have a positive effect on the County as a whole, the attraction of larger employers often results in much greater attention to the economic development efforts of a community. It is important to continue to look at approaches that aid all types of companies and to provide awareness of these efforts to both existing businesses and to potential businesses looking to locate in Jefferson County.

In the coming decades, creating opportunities that would allow residents with a variety of skills and talents to be employed at jobs located in Jefferson County will continue to be of importance. With the increasing number of high skill workers that have relocated into the community and the presence of Shepherd University, American Public University System (APUS), and other educational facilities, a workforce that is attractive to a wide variety of employers is already present in Jefferson County.

Training and Education

In order to attract and maintain employers, it is imperative that opportunities exist for residents of all ages to obtain the skills that would attract employers and for employers to find and retain a highly skilled, local workforce available to meet their needs. Along with training to meet the skillsets desired by Jefferson County's employers, it is important to improve and expand connections such as school to work, co-op, and mentoring programs between educational institutions, residents and employers. Such programs provide a chance for employers to work closely with both educational institutions and potential workers. Co-op or mentorship programs can be an important

factor in improving both the quality of Jefferson County's workforce and encouraging residents to stay in the County, working for employers that are a part of this program.

Jefferson County has a high educational attainment rate in relation to West Virginia. There are a variety of opportunities for higher education in the Eastern Panhandle as well as access to the universities in the Washington, D.C. and Baltimore, MD regions. The role of education in Jefferson County is discussed in more detail in the Education Element.

Transportation and Economic Development

A robust transportation network is important to the economic vitality of a community. With the continued growth of the Washington, D.C. and Baltimore, MD Metropolitan Areas and the improvements to the local and regional transportation and infrastructure networks that have or are expected to take place in the coming years, the atmosphere for attracting a diversity of businesses to the County is constantly improving. With the rail lines in the County, there is an opportunity for freight rail, with contiguous industrial zoning, that has not yet been fully realized. As transportation access to and through Jefferson County has improved in recent years, it has become increasingly easier to get goods and people to and from the County. Additional improvements are proposed that would further enhance the attractiveness of the County to potential employers. Recommendations related to transportation are discussed in more detail in the Transportation section of this element, page 95.

Regulatory Environment and Site Suitability

In the past several years, Jefferson County has worked to reduce unnecessary regulatory barriers which were impacting the viability of economic development in the County. Compared to other communities with land use and development regulations, Jefferson County has local planning and zoning requirements that are less stringent than surrounding states. It has been noted that the State centralized regulatory control for licensing of various business enterprises has a negative impact on economic growth in Jefferson County. Currently, nearly all State business licensing and similar business requirements are granted only out of offices located in the Charleston area. This Plan recommends that the State permit a more regional approach to such licensing for the benefit of the areas throughout the State that are remote from Charleston.

Within the County there are business/industrial parks that have site-ready lots for sale. In addition, there are existing properties zoned for office/industrial uses that could support new businesses. It is a priority of this Plan to ensure that sufficient area exists for commercial, office, and/or industrial uses that may serve to bolster Jefferson County's employment base while balancing the environmental and quality of life concerns that may arise from larger scale businesses.

Focusing Economic Development in Municipalities, Urban Growth Boundaries, and Preferred Growth Areas

Envision Jefferson 2035 expects urban level commercial, office, and industrial activity to be located in the municipalities, within the Urban Growth Boundary and Preferred Growth Areas, where the infrastructure is expected to be available to support these uses. Within the unincorporated area, the County's industrial park and properties zoned industrial are also important to the economic growth and vitality of the County.

In recent years, public, and private reinvestment in the urban core of the five municipalities has occurred and is continuing to grow, as the following examples illustrate:

- The Town of Ranson received numerous grants that focus on the Brownfield Commerce Corridor that is shared with Charles Town, and includes the redevelopment of vacant industrial buildings, street and streetscape improvements, and the expansion of a key transportation corridor through Ranson.
- Shepherdstown and Bolivar/Harpers Ferry have vital core commercial areas that support the local and tourist population in the County and serve as gateways into the County from neighboring states.
- Shepherdstown and Bolivar/Harpers Ferry are a part of the Canal Towns Partnership, comprised of several communities along the C&O Canal, which is an economic development initiative with the goal of cooperatively marketing and making improvements to attract visitors to the canal's gateway communities.
- The American Public University System made substantial investment in Charles Town and Ranson, including the redevelopment of existing structures and construction of administrative buildings and parking facilities.
- Hollywood Casino at Charles Town Races has been a strong component of economic activity in the County and continues to respond to a changing market by advancing alternative entertainment and horse racing options.

These examples of collaboration between local government entities and private entities bolster local economic development opportunities and this collaboration should continue.

The County's downtown areas are concentrations of local and regional government agencies, small offices, and a limited number of small shops, restaurants, and services which serve to attract visitors and residents to the downtown areas. The downtown areas of Jefferson County are viewed as a place to gather or meet, where unique shopping options, good food, a nice walk, and small entertainment venues are available.

The following recommendations are related to the enhancement of economic development activities in Jefferson County.

Economic Development and Employment Recommendations (Goals 6 & 7)	
1.	Expand and strengthen the existing marketing and branding of Jefferson County’s qualities, facilities, and resources to potential businesses, residents, and visitors.
2.	Collaborate with HEPMPO and other transportation agencies to identify ways to improve transportation (commuter, air, rail, and bus services) connectivity and roadways between Jefferson County and nearby states.
	a. Establish a working relationship with Washington Metropolitan Council of Governments and Loudoun County’s Transportation and Safety Commission to address highway transportation problem areas identified in both counties.
3.	Work with key stakeholders to effectively streamline Jefferson County’s permitting and development review processes in a manner that balances the protection of the public health, safety, and welfare of the community with economic development priorities.
4.	Encourage the Jefferson County Development Authority (JCDA) to identify incentives for the specified target industries on an annual or semi-annual basis.
5.	Create a business friendly environment in Jefferson County.
	a. Streamline the State licensing of various business enterprises by providing regional or satellite offices in Jefferson County.
	b. Coordinate with local and state economic development agencies to identify potential funding sources for economic development efforts.
	c. Identify opportunities for public/private partnerships (or other creative forms of collaboration) between local and state government entities and private sector investment that would result in the creation or expansion of employment opportunities and infrastructure in Jefferson County.
	d. Develop a land bank program that would enable potential economic development projects such as a large federal facility or other regionally significant employment facility.
6.	Develop methods to promote local business growth which include providing research, support, and marketing resources that would assist business start-ups in Jefferson County.
	a. Plan with stakeholders’ co-work facilities or business incubators that provide space for start-up companies along with a small network of entrepreneurs to collaborate.
	b. Expand awareness of entrepreneurs’ forums, employer open houses, and job fairs taking place in Jefferson County and the Eastern Panhandle.
	c. Encourage local municipalities and residents of the County’s villages to research and create Business Improvement Districts (BID) to implement improvements and provide services to businesses located in the district.
7.	Encourage local employers and the JCDA to improve online and offline outreach to potential employees, including County residents and individuals outside the region.

8.	Coordinate with local businesses and the JCDA to identify and utilize methods to market Jefferson County's products within the Mid-Atlantic region, the nation, and the world.
9.	Collaborate with various state and federal agencies to attract departments or agencies that would benefit from Jefferson County's workforce and location.
	<ul style="list-style-type: none"> a. Encourage state and federal agencies to consider the location of new facilities in Jefferson County within the growth areas identified in this Plan.
	<ul style="list-style-type: none"> b. Encourage state and federal agencies planning to build new facilities in Jefferson County to adhere to local land use regulations as part of the site design process.
	<ul style="list-style-type: none"> c. Encourage the utilization of existing structures or the utilization of greyfield or brownfield sites for the development of new state and federal facilities.
	<ul style="list-style-type: none"> d. Coordinate with state and federal facilities locating in Jefferson County so that the following land use considerations are addressed and mitigated:
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> i. Existing and potential impacts caused by land uses adjacent to proposed state and federal facilities are known in advance of first construction.
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ii. Existing and potential impacts of new or repurposed facility use on adjacent lands provide adequate buffers and setbacks to surrounding uses.
10.	Implement strong and vibrant relationships between Jefferson County businesses and business related organizations and all educational resources in the County, Eastern Panhandle, West Virginia, and the Mid-Atlantic region that will promote graduating students with job opportunities in Jefferson County.
	<ul style="list-style-type: none"> a. Expand partnerships with all local and regional institutes of higher education that focus on programs which would further educational opportunities in the core economic sectors identified by the JCDA.
	<ul style="list-style-type: none"> b. Maintain and expand relationships with local businesses and local/regional education institutions to increase availability of co-op and mentoring programs between students and businesses in Jefferson County and the Eastern Panhandle.
	<ul style="list-style-type: none"> c. Collaborate with key business and economic stakeholders to identify and create programs that would encourage the retention of highly skilled young graduates from the County's institutions of higher learning.
	<ul style="list-style-type: none"> d. Coordinate with key business stakeholders to improve employer outreach and collaboration with regional and state university/college career centers to promote Jefferson County employment and internship opportunities to students on all academic levels.
	<ul style="list-style-type: none"> e. Coordinate with appropriate agencies to publicize available scholarship programs for students interested in the target industries to strengthen workforce development in Jefferson County.
11	Collaborate with Shepherd University, American Public University System (APUS), and other higher education entities to identify opportunities for Jefferson County based research programs that would combine classroom learning with virtual resources.

2.B. Agricultural and Rural Economy

One of the more significant issues expressed by County residents involved in the Envision Jefferson 2035 process was maintaining the rural economy and small town lifestyle of Jefferson County. It is important that this discussion not be framed by the concept of preservation but of creating opportunities for farms to be economically viable. This would include identifying ways to protect and enhance the farms and open spaces that provide the rural character along with the agribusinesses that have been the historical heart of the Jefferson County economy. One goal of this Plan is to maintain productive farmland soils and the rural character and economy of the County by reducing the conversion of farmland to non-agricultural based uses.

There must be a viable rural economy to maintain the rural landscape. The rural economy is much more than traditional farming. It includes innovative agriculture, horticulture, forestry, commercial and non-commercial equine industry, other forms of animal husbandry, tourism, rural based public and commercial recreation, ancillary rural business, and compatible rural institutional uses. Many of these sectors are growing and collectively contribute significantly to Jefferson County's economy and provide several thousand jobs. The County's citizens benefit from the proximity of rural based activities and services and the rural enterprises benefit from nearby markets for goods and services. With this potential, the rural areas of Jefferson County should be seen as ripe for investment and reinvestment.

A key aspect of the County's rural economy is recognizing the changes in the regional and national marketplace that might affect agricultural activities at the local level. In some instances, farm operators have adapted to these changes by diversifying into additional farm based activities, changing the types of farming activities taking place on a site, or seeking to include direct sales and on-site marketing, and value added processing of crops or products. The ability of a farm operator to diversify or change their operations to meet the needs of the marketplace is an important consideration in providing a framework for the continuation and enhancement of farm and agricultural activities in Jefferson County.

The enhancement of the rural economy is a central focus of the rural strategy of this Plan and requires the support of the Jefferson County Development Authority and other organizations which support the agricultural economy. A broad-based rural economy can be a net-revenue generator for the County because tax revenues generally exceed expenditures for rural properties. The County recognizes its fiscal responsibility to protect the land resource for the rural economy, to provide fundamental protection for rural businesses, to ensure prudent fiscal management of limited public resources, and to provide needed protection of the public health and safety.

Rural Economic Activities

The agricultural community in Jefferson County recommended the following priorities to strengthen the rural economy:

Agricultural Community Priorities
Diversify farm operations through the sale and marketing of value added products (such as the processing and marketing of products on-site);
Allow farm operators to work with nearby farm operators to market and sell each other's goods on each individual farm;
Allow a wider range of service activities to take place on agricultural properties.

The rural areas of Jefferson County include not only farms and residences, but also a variety of small artisan studios and other cottage industries. While the preservation of agriculture is essential to the protection of rural areas, it is also important to provide for the ability of appropriately scaled businesses to succeed. When permitting additional uses in the rural area, it is important that the size and scale of both the property and the business be correlated. The intensity of the activity permitted should directly relate to the size of the rural property which would enable larger rural properties to undertake more activities. By correlating scale and intensity of uses to the rural property size, it is anticipated that off-site impacts would be mitigated for the surrounding landowners. Some uses may require performance standards which should be incorporated into the local land use regulations.

By enabling farm operators to have more options and encouraging the creation of cottage industries that reflect the rural aesthetic, the viability of operating rural based businesses in the County's rural areas will be enhanced in the coming decades. While Jefferson County has modified its Zoning and Land Development Ordinance to allow for a greater variety of uses, additional steps might be needed to improve opportunities for farm operators to continue or expand their businesses, and for artisans and other individuals to operate small businesses that complement these activities. A streamlined process for uses with minimal impacts to surrounding neighbors should be developed.

The land use component of this Plan recognizes an example of a non-residential Conditional Use Permit (CUP) in the Rural area referred to as an Agricultural Based Economic Empowerment Area, defined as a commercial agricultural hub that is not located on a farm, but is located in a rural area and focuses on intensively supporting agricultural activity through the value added processing, holistic health and marketing of local goods. Other appropriate uses in the Rural district (some of which may require a CUP) include, but are not limited to, artisan activities; home based businesses; agricultural equipment sales, rental, and repair services; veterinary services; farm co-ops; product storage and seed supply; agri-tourism, bed-and-breakfast enterprises; farm markets, wayside stands, and similar types of uses, provided that these uses are designed in a manner compatible with the rural character of the area.

There are many creative people that live and work in Jefferson County, using their talents to create poetry, pottery, paintings, plays, performances, photographs, novels, fabric art, sculpture, carvings, installations, music and dance, and the fine art and culture of all forms. The County is home to numerous cultural and historical organizations as well as artist studios, galleries, museums, and theaters which host a number of activities and events throughout the year. These activities and organizations add to the cultural value in the County and provide economic resources for the artisan. This Plan supports the artisan community and its needs for developing a robust economic and cultural community.

While most of these types of Cottage Industries and Home Occupations are permitted by right in the Rural District, some more intense uses may require a CUP. This Plan recommends that the use of the CUP in the Rural District be limited to non-residential uses not permitted in the Rural District which are compatible in scale and intensity with the rural environment and that pose no threat to public health, safety, and welfare. Some non-agricultural/non-residential related rural CUPs should only be proposed on a small portion of a rural property to help preserve farmland and open space, and continue agricultural operations. This requires eliminating the Land Evaluation Site Assessment (LESA) system and modifying the CUP process. For additional discussion, see Rural Land Use Planning Section (page 34).

Agricultural Service Facilities

An issue expressed by members of Jefferson County's agricultural community during the planning of this document was the lack of agricultural service facilities located in Jefferson County. Farm operators currently travel to Winchester, Hagerstown, or Frederick to purchase farm machinery or to get their machinery repaired. Farmers raising livestock also need to travel out of state to sell or purchase animals at auctions. There are few large animal veterinarians in Jefferson County that can assist with maintaining the health of animals or be available in case of emergency. There are no meat processing facilities in the County and nearby out of state facilities are limited to mass production which excludes small farmers from receiving this service. The lack of service facilities could have a negative impact on the maintenance or expansion of agricultural activities in Jefferson County in the coming years.

Distribution and Marketing of the County's Agricultural Products

In recent years, there has been a change in the way farm products are marketed and sold in Jefferson County. In the past, a large number of farm products cultivated on Jefferson County farms were commodities, with little differentiation between the products of individual farm operators. Currently this is changing due to the increasing reliance of the local farm community on farmers' markets and direct sales to local and regional restaurants. There are several farmers' markets operating in Jefferson County on a weekly basis, during the growing season, at temporary sites. A permanent year-round farmers' market could provide opportunities for a winter market in a place that could also be used for the sales of arts and crafts, root crops, or value added products. Incorporating a farmers' market into a regional agricultural center

complex could serve as another means of selling the County's farm products and could include dining and/or commercial kitchen facilities.

While the farmers' markets have helped individual farm operators differentiate between their products, there is still a limited local or regional identity when it comes to agriculture in the Eastern Panhandle. In some cases, individual farms have addressed this concern through the creation of an identity for the farm and/or for the product being produced. It would be beneficial to the Jefferson County rural economy if a more unified effort occurred through a shared marketing mechanism, regional branding, or the creation of common distribution and marketing facilities.

An increasing movement toward smaller farming operations of less than 40 acres in size in the County should not be discounted, even though a number of farms in Jefferson County are located on large tracts of land. According to the 2012 U.S. Agricultural Census, over half of all farms in Jefferson County provide a limited income to farm operators; however, there are opportunities for expansion of smaller farming operations. The majority of the farms in Jefferson County have the opportunity to provide a viable range of income generating agricultural activities to an individual farm operator.

Enhance Farmland Protection Activities

In 2000, Jefferson County formed a Farmland Preservation Program that is funded by a portion of the transfer tax collected when a house or land is sold. To date, this program has purchased the development rights of 3,900 acres. As mentioned in the Land Use element, the funding that is available to support the County's farmland protection program is much less than the demand from farm operators to participate in it. Since the County's farmland protection program is funded by a portion of the transfer tax, the viability of the program is subject to a widely fluctuating real estate marketplace. In times when there is a great deal of real estate activity, revenue generated for the program is strong, enhancing the ability to purchase development rights and protect farmlands. Conversely, in times when the real estate market is slow, the amount of money available for protection efforts is limited. Therefore, it is important to establish reliable funding sources to support farmland protection activities. One option to protect farmland is to coordinate with the American Battlefield Protection program to make the most efficient use of funding resources.

To reduce the conversion of farmland, the Plan recommends that clustering should be the preferred method of any rural residential development. This would allow land owners to group lots in a traditional rural community pattern, while retaining a majority of the land for agricultural and rural economic uses. Even when the development of a residential cluster results in the loss of some farm land, the goal of the regulations related to cluster developments is to retain as much farmland as possible by adjusting the number and size of the lots in the cluster and requiring the balance of the farm (the residue) to be retained as a permanent agricultural use. Cluster developments on a property should minimize the use of high quality soils and maximize the use of less

productive agricultural land. In order to retain the maximum amount of land in farm use and rural economic activity, the open space requirement for residential cluster development shall be met by the residue which will retain no development rights.

Transportation in the Rural Environment

The County's rural road network originally evolved serving the needs of the farming community and is not intended to serve the needs associated with the higher traffic volumes and speeds required for large residential subdivisions. At certain seasons of the year conflict can be created between residential traffic and large pieces of slow moving farm equipment. The LESA/CUP system has not effectively protected the rural road network from this type of development pressure. As such, this Plan recommends utilizing cluster developments as the preferred form of residential development within the rural areas. Limiting suburban development in the rural area helps protect agricultural land use activities.

Most of the roads in the County's rural area are paved, but tend to have narrow widths, excessive horizontal and vertical curvatures, bridge and drainage problems, and poor intersection alignments. These conditions contribute to the safety concerns associated with increasing motor vehicle traffic on the rural roads. The increased residential densities that have occurred in the rural area in the past are producing additional traffic volume and requiring more maintenance of the rural road network of predominantly narrow, two-lane paved roads with existing design issues.

Utilities in the Rural Environment

The availability of electricity is an important resource to support all residential, commercial and agricultural operations in Jefferson County. The federal government is working to encourage states to develop policies that encourage an increase in the amount of power generated by alternative renewable energy sources such as solar, wind and hydropower. The location of transmission lines and substations in Jefferson County are a local resource which could provide opportunities for future renewable energy resources to connect to the power grid in an efficient manner.

Utility scale solar facilities and/or community solar power systems are large-scale installations that provide clean energy to a regional energy provider or directly to a local community. The utility scale systems are commonly mounted on the ground and span across fields of land to generate electricity to assist in meeting renewable energy and sustainable energy production goals. Proximity to transmission lines and substations, elevation/slope, flood zones, wetlands, and soils all affect a site's buildability for large scale solar facilities.

Generally, solar facilities are compatible with rural lands and agricultural uses as they have minimal negative off-site impacts. A primary impact of utility-scale solar facilities is the removal of rural and agricultural land from active use; however, this use can preserve the land for future agricultural use, and applicants typically state that the land will be restored to its previous condition. Generally, large scale solar facility system owners choose to lease instead of purchasing property, allowing local farmers to retain ownership of the land. Some farmers also retain portions of their land for on-

going agricultural uses compatible with the solar facilities. Solar energy systems have a typical lifespan of 25-30 years; so the system owner would be paying the lease for decades, ensuring an economic contribution to the property owner for the duration of the system's life and allowing to property to revert to agricultural uses in the future if the landowner desires.

Agriculture Tourism

The rural areas of the County contribute to the local tourism economy in a variety of ways. Not least of these is the maintenance of attractive viewsheds to enhance the experience of visitors to battlefields, historic sites and villages. Tourism is addressed later in this Element on page 81.

The following recommendations provide action steps to foster and expand the diverse rural economy through a variety of policy, regulatory, incentive-based, and programmatic approaches that will protect the rural land, structures, and character necessary to advance the rural economy.

Agricultural and Rural Economy Recommendations (Goal 8)	
1.	Support West Virginia’s and Jefferson County’s “Right to Farm” policies which protect the rights of existing and future farms and farmers by developing zoning standards, other legislation, and educational programs designed to reduce potential conflicts arising from the proximity of agriculture to residential development (State Code § 19-19; Section 4.5 of the County’s Zoning Ordinance).
	a. Identify and utilize a wider variety of funding sources that could serve to expand the County’s farmland protection program.
	b. Create an educational pamphlet informing developers, realtors, and potential homeowners of the offsite impacts of living adjacent to farming activities.
2.	Enact Zoning Ordinance provisions to reduce the intensity of residential development in the Rural zone, other than by clustering, thereby protecting and increasing the investment potential and attractiveness of the agricultural lands for families, entrepreneurs, and businesses.
	a. Decrease the problems of rural traffic volume and the need for additional costly public infrastructure services in rural areas while conserving areas of the Rural zone for agricultural uses and the rural economy through support for rural cluster development vs large subdivisions of new home growth.
3.	Support the rural economy by amending the Subdivision Regulations to establish rural business site plan standards to include:
	a. performance criteria, including compatible size, scale, use, intensity, traffic capacity limits, employee limits, site design standards (i.e. buffering, siting), and standards that protect public health, safety, and welfare; and
	b. the adaptive reuse of existing historic and agricultural structures.
4.	Collaborate with the County’s agricultural community to assess the current land use regulations and determine what opportunities for agriculture might currently exist and what additional opportunities might be able to succeed in Jefferson County.
5.	Amend the Zoning and Land Development Ordinance to permit additional non-residential rurally compatible uses.
	a. Incorporate into the zoning provisions innovative agricultural uses including the creation of standards which permit flexibility in the sale of farm products and related auxiliary products.
	b. Amend local land use regulations to permit non-agriculturally related commercial uses by the Conditional Use Permit (CUP) process in the Rural zone if the use is agriculturally and rurally compatible in scale and intensity, poses no threat to public health, safety, and welfare, and if the use helps to preserve farmland and open space and continue agricultural operations.
	c. Amend the local land use regulations to permit utilities which generate electricity by alternative renewable energy sources (such as solar, wind and hydropower) to be permitted as a principal permitted use throughout the County.

	<p>d. Require that new non-rural commercial uses that are not compatible with the dominant agricultural land use pattern locate only in the Urban Growth Boundaries (UGBs) and Preferred Growth Areas (PGAs) as identified by the future land use recommendations of this Plan.</p>
6.	<p>Coordinate with local businesses and the Jefferson County Development Authority (JCDA) to brand and market Jefferson County farms and products by identifying and linking potential partnerships and matching suppliers with potential local and regional markets.</p>
	<p>a. Conduct market research on high-value agricultural products, ancillary farm businesses, and other rural economic uses such as farm agri-tourism, retreats, and country inns;</p>
	<p>b. Develop and expand, in conjunction with the Jefferson County Convention and Visitors Bureau, brand identification of Jefferson County farm products;</p>
	<p>c. Provide more alternatives to promote rural tourism and rural land uses.</p>
7.	<p>Work with Jefferson County’s agricultural community to effectively distribute local agricultural products and encourage the growth of the market for local products.</p>
	<p>a. Facilitate the establishment of year round marketing outlets to support the farm community, such as farmers’ markets or a product distribution center;</p>
	<p>b. Encourage the expansion of off-site farmers’ markets to provide marketplaces for farmers and artisans to sell their goods within a variety of Jefferson County commercial venues;</p>
	<p>c. Promote products to Jefferson County based businesses.</p>
8.	<p>Coordinate with key agricultural and rural stakeholders to identify ways to expand marketing and value added production activities for farmers and artisans on their properties in rural areas of Jefferson County.</p>
	<p>a. Amend existing regulations in order to identify and facilitate ways to allow the sale of items grown, processed, crafted, or manufactured in Jefferson County on farms other than the farm where the product originated.</p>
	<p>b. Develop a streamlined process for such uses when there are minimal impacts to surrounding neighbors.</p>
	<p>c. Expand and improve high speed Information Technology (IT) connections in rural areas of Jefferson County with local internet or advanced technologies providers to enable residents to run businesses from home or to telecommute.</p>
9.	<p>Collaborate with the local artisan community and Jefferson Arts Council to review and amend the local land use regulations to promote and enhance the viability and livelihood of artisans in the rural areas of Jefferson County.</p>
	<p>a. Encourage local non-profit organizations and local and regional economic development agencies to create a regular forum where all County artisans, businesses, and members of the non-profit and arts communities can meet to network and collaborate.</p>

	<p>b. Work to improve connections between County businesses and artisans that may have products and services that can be sold in local stores or other businesses.</p>
	<p>c. Ensure that training and educational opportunities are available that would enable the success of such businesses.</p>
	<p>d. Establish and support an endowment for arts funding for rural crafted arts.</p>
10.	<p>Strengthen the Agricultural Committee of the JCDA by creating a public/private Rural Economic Development Council comprised of rural industry sector leaders. This organization will:</p>
	<p>a. link governmental, non-governmental, and regional organizations;</p>
	<p>b. link state and federal farm assistance programs to local farmers;</p>
	<p>c. receive and make grants;</p>
	<p>d. act as an advocacy group for rural issues; and</p>
	<p>e. promote activities that nurture the rural economy.</p>
11.	<p>Create a county or regional agricultural industrial park that could include sites for service providers such as farm equipment repair facilities, tractor and implement sales, meat processing facilities, and veterinarian services; as well as:</p>
	<p>a. A local or regional food hub that could be tied into Community Supported Agriculture (CSA) packaging and distribution, a regional food bank, and to serve as a marketing site for farms and farmers;</p>
	<p>b. A neighborhood based CSA or Development Supported Agriculture;</p>
	<p>c. A permanent, year-round farmers' market site;</p>
	<p>d. Sites for Industrial Agriculture such as Vertical Farming, Hydroponic Greenhouses, and Aquaponic Farming;</p>
	<p>e. Agriculture based training, research, and continuing education facilities created in conjunction with institutes of higher learning and research;</p>
	<p>f. Commercial aquaculture activities;</p>
	<p>g. A livestock auction facility;</p>
	<p>h. A Community Cold Storage/Meat Locker Facility that would allow county residents to rent space to purchase and store sides of meat; and/or</p>
	<p>i. Alternative Energy Production facilities, ranging from ethanol refining to algae production for biofuels.</p>
12.	<p>Promote and expand the commercial and recreational equine industry as a fundamental component of the rural economy by amending County ordinances to reflect the current practices and needs of the industry.</p>
13	<p>Collaborate with the County's culinary, artisan, and farm communities and JCDA to study the feasibility of establishing a Culinary Center that would provide exposure to and for marketing the goods that are produced in Jefferson County and the Eastern Panhandle.</p>

	<p>a. Collaborate with the West Virginia Extension Service, West Virginia Department of Agriculture, and local stakeholders to establish a regional commercial kitchen and packing facility in the Eastern Panhandle that could be used by farm operators in the manufacture of value added products.</p>
14.	<p>Expand vocational programs, either through the existing Future Farmers of America program in the County's high schools or through programs that combine classroom exercise with a co-op program exposing students to a variety of agricultural formats and opportunities.</p>
	<p>a. Advocate for Jefferson County Schools to partner with Berkeley and Morgan County schools to create a regional Agriculture Magnet School whose curriculum would be focused on agriculture and agribusiness fields.</p>
	<p>b. Encourage the Board of Education to provide equal vocational education programs in all middle schools and high schools throughout the County.</p>
15.	<p>Coordinate with Jefferson County Schools to encourage the following agricultural activities:</p>
	<p>a. Preserve and expand the Future Farmers of America programs that are in place at the County's middle and high schools.</p>
	<p>b. Coordinate with local artisans to improve accessibility and awareness of arts education and programming.</p>
	<p>c. In conjunction with local gardening organizations and Jefferson County Agricultural Development Office, expand school garden programs that could serve as a source of fresh foods for cafeterias.</p>
	<p>d. Encourage schools to use local agricultural products in cafeterias through partnerships with local farmers and CSA programs.</p>
16.	<p>Encourage the West Virginia University Extension Office to consider the creation of Mentoring/Training Programs similar to FarmLink programs that are in place in other states such as Maryland and Virginia.</p>
17.	<p>Support the County's rural economic strategy by working with the State Legislature to review the State Code and consider the following amendments:</p>
	<p>a. Tax credits on farm-related capital improvements;</p>
	<p>b. Tax abatement or deferral when a farmer makes an investment in high-value crops that do not turn a profit for several years (orchards, Christmas trees, vineyards, etc.);</p>
	<p>c. Assessment of farm worker housing on farms below residential market value;</p>
	<p>d. Additional reduction in the real estate tax rate on rurally zoned property that is under permanent conservation easement.</p>

2.D. Infrastructure

Having adequate and quality infrastructure in Jefferson County is beneficial to residents, businesses, and the County’s economy. Planning for the types of infrastructure needed and its location requires coordination with different entities that provide these services. The planning and coordination of where services are to be located maximizes efficiencies of these systems.

This Plan encourages infrastructure to be located in municipalities, Urban Growth Boundaries, Preferred Growth Areas, and Villages in a cost effective manner. In many places in rural areas, on-site private well and septic systems will be used.

Major Elements within Section 2.D. Infrastructure
Water and sewer
Stormwater
Alternative energy
Natural gas services
High-speed internet and advanced technology communications services

Water and Sewer Systems

Urban level development, which requires the provision of water and sewer systems, is defined as where more intense levels of residential, commercial, and industrial development activity occur. In West Virginia, by law, water and sewer providers are required to provide water and/or sewer service anywhere in a community so long as a developer pays to provide the initial infrastructure that would support the service(s). As a result, land use planning in West Virginia has to take a pro-active role in defining where urban level amenities and development will occur.

In order to take a pro-active role, it is the recommendation of this Plan to encourage the provision of infrastructure that allows for a higher level of development inside of the following areas: municipalities, Urban Growth Boundaries, Preferred Growth Areas, and Villages. In the rural area, it is anticipated that on-site private well and septic systems are to be utilized. In order for Jefferson County to retain its rural character and agricultural base, the expansion of water and sewer service into rural areas not designated as growth areas should not occur.

In the County’s village areas, development and revitalization is limited by a lack of existing water and sewer infrastructure that would support village-level development. In these areas, minimum lot size requirements tied to well and septic spacing have played a factor in limiting redevelopment or reuse of existing buildings within village centers. If Jefferson County is to reinvigorate its villages, infrastructure improvements would need to be in place to serve the village areas. A specific component of this would be the provision of village scaled water and sewer facilities that would alleviate the need for individual property owners to locate a well and septic tank on small village

parcels. These improvements could be accomplished in a cost-effective manner that limits the fiscal impacts to residents and businesses of the newly served areas.

An issue expressed by the County's utility providers as part of the planning process for Envision Jefferson 2035 relates to the construction of sewer pump stations as part of new development. Typically, in other areas of the United States, sanitary sewer utility providers master plan the location of pump stations based on topography and watersheds. The utilization of these pumping stations that serve multiple subdivisions or areas is the most cost effective and efficient means for providing service. In West Virginia, state laws limit the ability of local utility providers to construct oversized infrastructure to serve future development because of the uncertainty of future development and cost to existing rate payers. Therefore, there is often one or more individual pump stations included as part of most new developments. The result of this has been higher rates for customers, due to the number of pump stations that must be maintained by the service providers.

Cost of Water and Sewer Service Extension

As new developments have occurred in the County, there have been concerns that the costs of water and sewer service extensions to the outlying areas are borne by both newly served homes and by existing customers of service agencies. While developers are required to extend the new services and each home is assessed a Capital Improvement Fee (CIF), the cost of additional maintenance, upkeep, and upgrades of the facilities are incurred by the existing customer base along with the new customers serviced by the new infrastructure. In areas served by the Charles Town sewage treatment plant, CIFs are being utilized to upgrade the treatment facilities.

For existing developments on well and septic systems that are failing or substandard, public water and sewer may need to be extended to these developments. In 2010, the Jefferson County Board of Health, together with the Jefferson County Water Advisory Committee, recommended to the County Commission that the County should begin to implement a program that requires owners of an on-site sewage treatment system to have the septic tank pumped out or inspected at least once every five years starting in July 2015. This program would reduce the number of failing septic systems in the County and protect the quality of groundwater resources for drinking water purposes. When septic systems fail to the extent that public systems need to be extended to these developments, it is anticipated that the capital cost associated with the new or extended services should be paid by the residents who will use these utilities. However, in many cases the upfront capital costs serve as a deterrent to a neighborhood or community that may require water or sewer services, even if warranted by existing environmental or public health conditions. Unfortunately, the ability for Jefferson County to obtain grant funding that would mitigate the costs of extending water and/or sewer service is limited due to Jefferson County income levels in relation to other areas of West Virginia.

Quality Standards for Package Plants and Small-Scale Infrastructure

As Jefferson County has grown in population over the last several decades, newer subdivisions and commercial developments are increasingly built to a level of density that requires water and sewer services. In some areas of the County the extension of water and sewer systems is not the best option as existing services are too far away, already near capacity, and/or their extension would be cost prohibitive. In these instances, developers have relied on small-scale private water and sewer systems.

There are two key concerns related to the use of privately built water or sewer facilities. In older neighborhoods, private water or sewer facilities were built to less than current industry-accepted standards and/or are unable to meet the demands of the existing neighborhood. In some communities, the substandard design of these systems has resulted in a variety of environmental issues, as well as liability issues for the developer and/or HOA. Second, once the development is complete and the HOA takes ownership, the HOA and its members may not have the expertise and funding needed for the maintenance of the water and/or sewer systems.

In some instances, the Jefferson County Public Service District (PSD) has assumed maintenance and ownership of private facilities which may require substantial upgrades. While the West Virginia Department of Environmental Protection (WVDEP) does review and approve small water and sewer facilities, the local PSD may have higher design and material standards. A requirement that small water and sewer facilities meet the local PSD standards could allow a local PSD to assume maintenance and possible ownership of these services in the future, with fewer upgrades and expenses. This policy could minimize potential issues related to neighborhood based water and/or sewage facilities.

Public Service Plan

There is a direct relationship between land use activity and the need for water and sewer infrastructure. Decisions made in land use plans and in water and sewer plans have a direct effect on the rate and location of development activity. For this reason, this Plan recommends that over the next 20 years urban level growth occur in the municipalities, Urban Growth Boundaries (UGB), Preferred Growth Areas (PGAs), and Villages. This will also enable utility providers to more effectively plan for the future growth of the utility systems in the above defined areas. The Shepherdstown Growth Management Boundary (GMB), as discussed in the Shepherdstown 2014 Comprehensive Plan, directly reflects their proposed expansion of the City water and sewer systems into annexed areas.

Jefferson County's residents and businesses expect infrastructure capacity, facilities, and services to be available to meet current needs while ensuring the ability to accommodate future expansion of the services. Businesses considering relocation or expansion to Jefferson County are able to better plan for their needs knowing that infrastructure and services are in place, or that documentation for plans to expand services exist. Coordination of future land use plans with water and sewer plans allows local residential and business development to be targeted to areas where water

and sewer services and other infrastructure and services are readily available. Local utility and service providers will have a reasonable expectation of where growth will occur and what the potential maintenance and operating costs of expanding services would be. Encouraging the utility and service providers to coordinate the creation of their service plans for infrastructure and service improvements with the growth areas identified in the Future Land Use Element would enhance the providers planning efforts and local land use planning efforts. For additional information about the Growth Areas, see the Land Use and Growth Management Element (page 16).

Maintenance and Upgrade of Existing Capital Facilities

The population growth of Jefferson County and the development pattern that has occurred has resulted in additional demands placed on the County's water resources and wastewater facilities. At the same time, federal and state regulations limit discharges into and from Jefferson County's water bodies, which eventually flow into the Chesapeake Bay. These guidelines and regulations have created additional demands for water and sewer suppliers to upgrade their facilities to meet the higher emission limits.

While many of the County's utilities have upgraded their facilities to meet Chesapeake Bay Watershed Protection program requirements, the financing of future upgrades to the County's water and sewer infrastructure may be difficult, particularly for the smaller scale utility providers that are present. This is because the federal funding sources that aid smaller and mid-sized communities in constructing or upgrading water and/or sewer facilities to meet newer requirements have been reduced in recent years, with further funding cuts foreseen.

Consolidation of Water and Sewer Providers

Over the years, there have been numerous efforts to consolidate the various public water and sewer providers to provide an economy of scale and efficiency to better serve the customer base. Efforts toward this end are multi-faceted and require a significant public policy based decision making process. Good land use planning is closely tied to the provision of public water and sewer services within defined service areas. The complexity of a variety of private and public providers throughout Jefferson County makes this difficult but the consolidation of water and sewer providers should continue to be pursued.

Stormwater Management

As land development occurs, the effect is an increase in impervious surfaces, which affects the ability of the land to absorb rainwater or snowmelt. This results in run-off on adjacent properties, into waterways, and/or directly into the groundwater through the karst topography. In order to mitigate this, Jefferson County adopted stormwater management standards in the Jefferson County Subdivision and Land Development Regulations that have effectively regulated the quantity of stormwater generated by local development. These regulations do not compel older stormwater systems, which may not meet current standards, to be upgraded or maintained. Recently, the County adopted a new stand-alone Stormwater Management Ordinance that includes

additional standards related to water quality and includes provisions for low impact design stormwater provisions such as rain gardens, bio-swales, permeable pavers, and permeable asphalt. These new standards help to minimize the impact of sediment and certain identified nutrients as required by the Chesapeake Bay Program.

In addition to land development activities, the following point and non-point source activities impact the water quality in waterways due to stormwater run-off:

Point and non-point source pollution
Over-fertilization and the use of chemicals to maintain lawns by homeowners
Use of salt and chemicals on roads in winter weather by the State Division of Highways
The fertilizers used to grow crops
Industrial emissions
Waste products (rubber, gasoline, and various other fluids) associated with auto use
Animal husbandry activities

The effect of stormwater run-off on the local waterways, particularly the Shenandoah and Potomac Rivers, has a significant impact on our local and regional recreational and heritage tourism, as well as drinking water quality. There are a number of watershed protection groups in the County that are actively seeking to improve the quality of the surface and groundwater within particular watersheds. These groups have made efforts to clean-up the waters and restore aquatic life to Jefferson County waterways. Such efforts have included, river clean ups, water monitoring, septic tank pumping and repair reimbursement programs, fencing of livestock to keep them out of streams, tree plantings, and outreach to residents and businesses to educate them about how to combat pollution. These efforts will ensure that high quality of water in Jefferson County continues.

Alternative Energy

It is widely recognized that many of the resources that we rely on to heat, cool, and light homes, power electronics, provide transportation fuel, and other daily needs are finite. Consequently, there has been an increasing need to assess the viability of alternative and renewable energy sources that may assist in maintaining the quality of life of Jefferson County's residents and businesses. In 2009, West Virginia adopted an Alternative and Renewable Energy Portfolio Standard that requires investor-owned electric utilities (such as Potomac Edison) with more than 30,000 residential customers to supply 25% of retail sales from eligible alternative and renewable energy resources by 2025. This standard was subsequently repealed by the state legislature in 2015; however many private utility providers and other large companies have set their own renewable energy or clean energy goals and are pursuing these alternatives without state or federal mandates.

Alternative and renewable energy sources are available, ranging from hydro (water), solar, and wind power to the use of various biofuels (algae, biomass, wood pulp, and other waste products), and plant crops (corn and switchgrass) that might be used to

complement or replace existing power sources. Another alternative energy source that may be applicable for the heating and cooling of buildings is the use of geothermal systems (drawing up groundwater and circulating it through pipes embedded in a building's walls).

There are efforts underway at the local and state level to encourage the conservation of energy and the utilization of alternative energy sources. The most notable of these are the projects that have been incorporated into the expansion of the American Public University System (APUS) in Charles Town and Ranson. These projects include the use of solar collectors that also serve as cover for parked cars, the installation of several electric car charging stations, and the utilization of building improvements and materials that limit the use of energy needed for heating, cooling, and lighting. The improvements undertaken by APUS can serve as a role model to new development in Jefferson County and to the redevelopment of existing structures and sites.

Several large-scale alternative and renewable energy projects have taken place in the County. Concern has been expressed that legislation prohibiting Cooperatives or Communities to create a solar panel system that would feed multiple houses is impacting the expansion and viability of implementing other solar projects in the County. As the cost of improvements decreases and the efficiency of various renewable energy materials improves, the reliance on current energy sources will be reduced as more families and businesses adopt these improvements.

In recent years, Jefferson County has been identified as an area that could accommodate utility scale solar energy facilities due to its proximity to the grid network, the gentler topography than many areas of West Virginia, and large open areas throughout the County. Opportunities to develop these alternative energy resources should be pursued in the County.

Natural Gas Services

Jefferson County regional economic development officials and businesses identified the need for natural gas services to homes and businesses. At present the only area of the County served by natural gas lines is the former Kodak/3M plant in Middleway; however, the potential exists for the expansion of service capacity in the Eastern Panhandle and the extension of natural gas lines from the Berkeley/Jefferson County line along WV Route 9 to various parts of the County. The extension of natural gas into Jefferson County would aid County economic development efforts while providing an alternative to electricity for residential and commercial purposes.

One of the reasons this improvement is needed is because an increasing number of businesses are using natural gas in their manufacturing process, due to the lower costs and the cleaner emissions that result from its use. Natural gas, in a compressed or liquefied form, can also be used to fuel cars and buses. While natural gas has been primarily used as a fuel source for local and regional bus services in the US, it can also serve as a fuel source for both privately owned and County owned vehicles.

High-Speed Internet and Advanced Technology Communication Services

Over the last two decades, people have increasingly taken for granted the ability to be connected to the world via the internet. Internet uses include a variety of communication and media modes, conducting business, shopping for goods, staying abreast of local, national and world events, and have a plethora of entertainment options. For a business, the ability to connect to customers and suppliers, and execute financial transactions in a timely manner is imperative to the success of their enterprises. Advanced and evolving technologies that are not yet broadly used or even invented, will be important to the competitive economic environment of Jefferson County.

In rural Jefferson County, households and small businesses are impacted by the quality of telecommunications options that are available to them. Due to the low residential densities of rural areas, it is not cost effective for telecommunications providers to provide service at an affordable rate. Therefore, areas of the County are not currently served or underserved by wireless services. These factors impact the ability of employees to work efficiently from home and home based commerce from thriving.

The Eastern Panhandle has seen a great deal of private investment in its technology infrastructure; however, there are some gaps in the overall system. In order to maintain a competitive edge, internet connectivity will need to be improved to support a variety of technology enabled services and businesses. As broadband and landline technology and connectivity has improved, Jefferson County's internet providers have steadily increased the maximum possible broadband speed available to their customers. As higher speed internet services or alternate advanced technologies develop and become more commonly used, the County can continue to attract new employers and entrepreneurs who rely on the creation and utilization of this advanced technology.

The following recommendations are related to the provision of public infrastructure in Jefferson County.

Infrastructure and Technology Recommendations (Goals 10 & 11)

1.	Require key stakeholders to coordinate planning and investment for both local and countywide infrastructure improvements.
	a. Require members of the development community and utility and service providers to collaborate regularly to plan for future infrastructure needs, while considering the impact on the individual consumer rates.
	b. Provide and encourage mechanisms to have consolidated water and sewer providers in the County.
2.	Bring natural gas into Jefferson County to grow the economy and increase the quality of life for the residents.
	a. Identify partners and funding sources for the expansion of natural gas services.
	b. Ensure that one or more compressed or liquid natural gas fueling stations is built to serve Jefferson County residents, businesses, and visitors.
	c. In coordination with Hagerstown Eastern Panhandle Metropolitan Planning Organization (HEPMPO), Jefferson County Schools, and Eastern Panhandle Transit Authority (EPTA), advocate for the wider utilization of natural gas as a fuel source for school buses and for EPTA.
3.	Create opportunities for the County's water and sewer providers to share resources and better coordinate their systems and administration.
	a. Amend Subdivision and Land Development Regulations to require privately owned public water and sewer utilities to meet the local PSD standards, which would allow a local PSD to assume maintenance, and possible ownership in the future, with fewer upgrades and expenses.
	b. Provide opportunities for applicable homeowners associations and/or developers to enter into maintenance agreements for privately owned public water and/or sewer utilities with the applicable public utility providers in which the public utility providers will maintain new facilities.
	c. Coordinate with the County's utility providers to identify methods that would limit the expansion of water and sewer trunk lines to areas within the Urban Growth Boundary and/or Preferred Growth Areas.
	d. Encourage the PSDs to promote cooperation with the local development community to work toward cost sharing on infrastructure projects.
4.	Collaborate with Village residents, businesses and utility providers to identify ways to provide water and sewer utilities within Village and village expansion areas.
5.	Enact and enforce requirements for maintenance and inspection of individual, on-site septic systems on a regular basis.
	a. Initiate a dynamic education and informational program for County residents concerning well and septic maintenance and use practices.
	b. Pursue an amendment to the state code to allow residents who are required to connect to an extended water or sewer network to continue to utilize existing individual well and septic systems for the lifetime of the home system if there are no public health issues.

	<p>c. Collaborate with local public utility providers to identify and provide incentives that would encourage property owners to transition from well and septic to a centralized system where and when needed to address public health issues.</p>
	<p>d. Find funding mechanisms to defray the costs of providing public utilities in areas where the provision of these utilities is necessary based on declining public health or environmental concerns.</p>
6.	<p>Coordinate with Region 9 and the County's public service providers to identify and seek additional funding sources that would aid in the construction of needed capital facilities and for the upgrading of existing facilities to meet newer federal standards.</p>
	<p>a. Continue to monitor and participate in planning efforts related to the implementation of the Chesapeake Bay Watershed Improvement Plan.</p>
	<p>b. Assess and evaluate the County's stormwater planning documents as best management practices in the field evolve.</p>
7.	<p>Identify ways that utility services can be regularly upgraded to meet the highest level of service and technology through coordination with local water, sewer, electric, gas, and telecommunications utility and service providers.</p>
	<p>a. Require all local electric, cable, and other utility providers to bury existing and new lines (serving new development) as a part of the regular maintenance and upgrading of their facilities.</p>
8.	<p>Encourage public and private entities to utilize alternative and renewable energy sources.</p>
	<p>a. Enable the construction of renewable energy generation facilities.</p>
	<p>b. Encourage County businesses and service stations to provide electric vehicle recharging stations within Jefferson County as soon as possible and use distinctive signage to guide residents and visitors to the charging stations.</p>
	<p>c. Develop regulations to enable cooperatives or communities to create a solar panel system that would feed multiple houses in the County.</p>
9.	<p>Collaborate with local economic development agencies and Information Technology (IT) providers to ensure that the current and future needs of small businesses within Jefferson County are met.</p>
	<p>a. Ensure that all areas of Jefferson County are served by high speed wireline and/or wireless services and other advanced technologies.</p>
	<p>b. Encourage private sector investment to improve wireless internet service availability in Jefferson County and the Eastern Panhandle.</p>
	<p>c. Ensure that, as next-generation wireless and cellular services are implemented, Jefferson County collaborates with providers, including any necessary regulatory changes, to ensure that providers are able to provide these services at the same time as other communities in the Washington, D.C. and Baltimore, MD Metropolitan Areas.</p>

10.	Partner with IT providers, the Shepherd University Research Corporation (SURC), and the existing federal and state agencies located in Jefferson County to establish the feasibility and creation of an open access telecommunications network that could serve as a trunk line for regional services across the Eastern Panhandle.
	a. Market the availability of the established trunk line services across the Eastern Panhandle to potential businesses and organizations that are heavily reliant on a bandwidth intensive service and researching Jefferson County as a possible relocation site.
11.	Explore the creation of a reimbursement funding mechanism that would allow for pump stations and water mains that serve one subdivision to be oversized or expanded upon to serve nearby future development within the designated growth areas, not solely dependent on revenue from rate payers but also the development community.
12.	Explore policies in concert with the State legislature, Public Service District (PSD), and the municipalities to study and amend regulations related to water and sewer infrastructure development, including legislative options that would allow equitable distribution of cost sharing with entire development community along with rate paying base (i.e. Capital Improvement Fees).

Appendix D – Goals and Objectives

Land Use and Growth Management Element (includes Housing and Intergovernmental Coordination)

Goal #1: Require Urban Intensity Residential and Non-Residential Development to Occur within Existing Urbanized Areas, Approved Urban Growth Boundaries, Villages, and/or the County's Identified Preferred Growth Areas.

- Objective #1:** Recognize the existing vested rights, development entitlements, and permitted density levels on properties in Jefferson County.
- Objective #2:** Require that any rezoning of properties adhere to all of the recommendations created as part of the Comprehensive Plan.
- Objective #3:** Establish a broader variety of commercial, residential, and mixed-use zoning categories appropriate to the County's needs.
- Objective #4:** Permit the creation of urban level uses (particularly residential development) within approved Urban Growth Boundaries (UGBs), Villages, or in the Preferred Growth Areas (PGAs) through rezoning that is consistent with the recommendations of this Plan.
- Objective #5:** Allow areas outside of the UGBs or PGAs to develop as rural cluster subdivisions; in accordance with existing land use rights; and/or as compatible non-residential development utilizing the Conditional Use Permit (CUP) process.
- Objective #6:** Encourage the location of new community facilities (such as schools, libraries, parks and other county facilities) and infrastructure within municipalities, UGBs, PGAs, and Villages.
- Objective #7:** Establish that new development adjacent to municipal boundaries, Villages, or within UGBs is designed and built in a way that enables connectivity to the existing street and infrastructure network or for future connectivity as development is extended to these areas.
- Objective #8:** Encourage the adaptive reuse of existing buildings and previously used sites within Jefferson County, paying particular attention to brownfield and greyfield sites.
- Objective #9:** Establish a plan to provide incentives to encourage residential developments to locate in designated growth areas (within the municipalities, UGBs, PGAs, and Villages where water and sewer services are available).

Goal #2: Maintain and Enhance the Agricultural and Artisan Economy, Rural Land Uses, Rural Neighborhoods, and Rural Character of the Areas of the County Outside the Preferred Growth Areas.

- Objective #1:** Review and revise the existing Jefferson County Subdivision and Land Use Regulations and site plan standards to reduce regulatory barriers to agricultural and/or artisan operations.
- Objective #2:** Review and revise local regulations to ensure that production and marketing of artisan or agricultural products can occur on-site in the Rural district; based on the size and scale of the operation and the property.
- Objective #3:** Enhance the viability of existing farmlands within Jefferson County by allowing a greater range of agricultural and/or artisan uses within existing rural areas.
- Objective #4:** Provide a variety of mechanisms to protect existing farmlands, key farm buildings, and scenic corridors within Jefferson County.
- Objective #5:** Identify methods to involve members of the agricultural community in planning and land use decisions related to rural lands within Jefferson County.
- Objective #6:** Recognize the vested rights that are present on existing properties in Jefferson County.
- Objective #7:** Protect the viability of agricultural lands and wildlife corridors by encouraging the utilization of cluster subdivisions as the preferred form of residential development within rural areas
- Objective #8:** Recognize the rights and viability of existing rural residential neighborhoods.

Goal #3: Encourage Renewal, Redevelopment, and Limited Expansion of Villages to Allow Village-Scale Residential Development and Compatible Neighborhood Commercial Activities.

- Objective #1:** Identify resources to enable the rehabilitation of key structures within the village areas.
- Objective #2:** Provide land use tools to encourage expansions to the village areas and to provide a continuation of village scale and design into these areas.
- Objective #3:** Utilize shared public infrastructure to allow the construction of village-scaled businesses, residential uses (including small-scale multi-family housing) and applicable community facilities within designated village areas and in potential village expansion areas.
- Objective #4:** Where appropriate, allow small-scale commercial and multi-family uses in existing areas that have the potential to be designated as a village at a future date.

Goal #4: Preserve, Protect and Enhance the Character of the County by Implementing Community Design Standards which Promote High Quality Development in Appropriate Areas.

- Objective #1:** Ensure that development within approved Urban Growth Boundaries (UGBs) is designed to a similar standard as development in the adjacent municipality.
- Objective #2:** Encourage developers to develop new neighborhoods in ways that meet standards set by regional or national sustainable building organizations.
- Objective #3:** Create and implement corridor management requirements and design guidelines to protect accessibility and viewsheds along designated Primary and Secondary roadways located within Jefferson County.
- Objective #4:** Create and enforce design guidelines for new commercial development and the redevelopment and revitalization of non-residential properties throughout the County.

Goal #5: Encourage the Development of a Comprehensive Range of Housing Options for Residents of all Incomes and at all Lifecycle Stages within Jefferson County.

- Objective #1:** Work with county residents, members of the development community, and local and regional non-profit organizations to identify ways to integrate workforce and affordable housing within existing and new communities in Jefferson County.
- Objective #2:** Amend regulations to provide property owners with a streamlined process to enable the construction of accessory dwelling units or energy efficient home improvements on their properties.
- Objective #3:** Continue to regularly evaluate fees and taxes related to residential uses in Jefferson County.
- Objective #4:** Work with local and regional financial institutions and state and federal agencies to identify a variety of financing mechanisms to encourage the construction of affordable and workforce housing in Jefferson County and to encourage homeownership within Jefferson County by workers employed in the County.

- Objective #5:** Encourage the construction of a mix of housing options, including single family homes, townhomes, and apartments (including

detached accessory units or similar housing) within Jefferson County at a variety of price points for both the owner-occupied and rental markets.

- Objective #6:** Encourage developers, contractors, and homeowners to build new homes and to renovate homes to accommodate residents across the entire lifecycle.
- Objective #7:** Identify ways to encourage residents to maintain and upgrade their homes.
- Objective #8:** Encourage the adaptive reuse (renovation and utilization) of existing non-residential structures for housing.
- Objective #9:** Encourage the construction or renovation of homes that are energy, resource, and location efficient and that provide long-term cost savings for Jefferson County residents by meeting national “green housing” certification standards while being respectful of the natural and built environment.
- Objective #10:** Identify methods to lower the cost of constructing low-income and affordable housing within Jefferson County while ensuring a high quality of housing in conjunction with local non-profits and housing providers.
- Objective #11:** Encourage the development of communities that provide a variety of care for elderly and/or disabled residents within Jefferson County in close proximity to transportation corridors, medical facilities, and everyday needs.

Economic Development, Employment and Infrastructure Element (includes Transportation)

Goal #6: Encourage the Growth of Jefferson County's Economy and Enable the Creation of High Quality Jobs within the County.

- Objective #1:** In coordination with the Jefferson County Development Authority (JCDA) and other agencies, work to build and expand existing local businesses and to enable the start-up of new businesses within Jefferson County.
- Objective #2:** Collaborate with local higher education institutions, non-profit organizations, and existing federal facilities to provide training that supports and enhances local economic development efforts.
- Objective #3:** Sponsor, support, and establish school to work programs to meet current and future workforce needs.
- Objective #4:** Work with the JCDA, other local economic development agencies, and local employers to identify opportunities and programs that would aid in retaining young residents within Jefferson County.
- Objective #5:** Provide opportunities to engage local employers with the existing local workforce to enable county residents to work locally.
- Objective #6:** In conjunction with the JCDA and other local economic development agencies and local businesses, identify ways to better market local facilities and products within the region and nationally.
- Objective #7:** Provide incentives and opportunities for businesses in target industries identified by the JCDA and other local economic development agencies to relocate or to expand their operations within the County.
- Objective #8:** Work with the state's congressional delegation, federal agencies, and state elected officials to identify opportunities for relocation or expansion of federal or state facilities within Jefferson County.

Goal #7: Encourage and Promote Diverse Business and Employment Creation and Retention within the Approved Urban Growth Boundaries, Villages, and/or Preferred Growth Areas within Jefferson County.

- Objective #1:** Provide a variety of incentives to guide economic development toward existing municipalities or within the approved Urban Growth Boundaries (UGB), Preferred Growth Areas (PGA), and/or Villages.
- Objective #2:** Ensure that sufficient public and private infrastructure is in place within UGBs, PGAs, and/or Villages to enable economic development to occur.

Objective #3: Amend development requirements and reduce regulatory barriers to encourage economic development within the UGBs, PGAs, or Villages.

Objective #4: Ensure that sufficient land area is available within the UGBs, PGAs, or Villages to accommodate a variety of economic development opportunities.

Goal #8: Retain, Strengthen, and Enable the Growth of Jefferson County's Rural, Cultural and Artisan Economies.

Objective #1: Encourage diverse economic activity and agricultural production in the County's rural areas.

Objective #2: Update existing land use regulations to allow for diverse compatible and complementary uses on agricultural properties and within rural areas of Jefferson County.

Objective #3: Enhance farmland protection activities within Jefferson County.

Objective #4: Encourage the creation of agricultural service facilities within Jefferson County, preferably within areas in close proximity to agricultural activities.

Objective #5: Enhance local and regional distribution and marketing of the County's agricultural products.

Objective #6: Provide tools for the education of and resources for the creation and viability of new generations of farmers.

Objective #7: Encourage farm operators to collaborate with county officials in identifying potential economic development opportunities related to agriculture in Jefferson County.

Goal #9: Preserve, Promote and Enhance Components of Jefferson County's Natural, Cultural, Built, Historic, Recreational, and Rural Environments which Encourage Tourism.

Objective #1: Collaborate with the Jefferson Arts Council (JAC), Historic Landmarks Commission (HLC), Jefferson County Convention and Visitors Bureau (JCCVB), and other organizations in the creation of a long-range cultural tourism and management plan.

Objective #2: Encourage the utilization of existing historic and agricultural areas for a variety of uses in ways that respect their historical function or setting.

Objective #3: Protect and enhance the viability of natural, cultural, and built environments within Jefferson County while allowing recreational and tourism opportunities.

Goal #10: Maintain and Enhance Community Services and Infrastructure Capacity for Water, Sanitary Sewer, Storm Sewer, and Other Utilities; and Enable the Provision of Orderly and Efficient Services and Advanced Technologies.

- Objective #1:** In coordination with public and private service providers serving Jefferson County, create a public service plan for the County that identifies specific standards (based on state and nationally accepted standards for communities), the applicability of enhancements to existing facilities, and potential locations of future infrastructure improvements.
- Objective #2:** Continue to coordinate between county and regional/state agencies in relation to information and activities related to meeting Chesapeake Bay Watershed Implementation Plan (WIP) goals.
- Objective #3:** Create and implement a means to require shared infrastructure between existing and proposed development.
- Objective #4:** Require that new utility facilities and/or extensions are located within Urban Growth Boundaries (UGBs), Preferred Growth Areas (PGAs), or Villages.
- Objective #5:** Identify and implement ways to provide utility services within and immediately adjoining Village areas.
- Objective #6:** Provide mechanisms to ensure that existing utility systems are upgraded to meet the needs of the residents and businesses throughout the County.
- Objective #7:** Private water and wastewater plants shall meet material and design standards set by local publicly owned service providers.
- Objective #8:** Work with appropriate local agencies and regional providers to extend natural gas services into Jefferson County.
- Objective #9:** Encourage the creation of and use of a variety of energy sources (including renewable energy) within Jefferson County in ways that respect the character of the County.
- Objective #10:** Adhere to the regulations included as part of the Jefferson County Stormwater Ordinance.
- Objective #11:** For water and sewer utilities to serve new developments and in areas currently not served by water and sewer where services have been deemed necessary by local or state health officials, allocate costs equitably so that new development or the development being served is responsible for the infrastructure cost, rather than existing ratepayers.

Goal #11: Ensure the Provision of High-Speed Broadband Internet or Advanced Technology Communication Services throughout Jefferson County.

- Objective #1:** Work with local internet service providers to identify ways to enable the provision of more reliable high speed internet connections.
- Objective #2:** In coordination with other communities and in partnership with the various federal agencies, healthcare facilities, and institutes of higher education located in the Eastern Panhandle, consider the creation of a region-wide open source advanced technology network.
- Objective #3:** Encourage area communications providers to provide the highest speed or connections that are possible under current technology to reach all areas in the County, while being designed in a way that respects the historic and natural features of Jefferson County.

Goal # 12: Improve Roadway Capacity and Safety and Decrease Travel Time and Congestion.

- Objective #1:** Identify an attainable level of service for roadways located in Jefferson County and work with appropriate agencies to identify means to achieve this level of service.
- Objective #2:** Coordinate land use access and transportation improvement decisions to enhance the countywide transportation network through the development review process.
- Objective #3:** Coordinate with HEPMPO and WVDOH District 5 (and other appropriate agencies) to identify areas of potential highway safety or capacity concerns within Jefferson County and ways to address these concerns.
- Objective #4:** Work with HEPMPO and WVDOH to create a series of corridor management plans for arterial roadways within Jefferson County that take into account the natural beauty and historic character of the County.
- Objective #5:** In coordination with HEPMPO, WVDOH, and applicable state agencies in Virginia and Maryland, identify ways to improve highway connectivity into adjoining states.
- Objective #6:** Continue to take an active role in the preparation of the HEPMPO Transportation Improvement Plan (TIP) and the HEPMPO Long Range Transportation Plan.
- Objective #7:** Encourage development patterns in the County that would minimize the average household vehicle miles traveled (VMT).

- Objective #8:** Develop and adopt an access management planning tool for application in appropriate areas of Jefferson County.
- Objective #9:** To enhance the existing or future transportation network, ensure that neighborhood/commercial development within the UGBs, PGAs, or Villages is designed in such a way that interconnections to existing (if possible) and future development are included.
- Objective #10:** Work with WVDOH to develop a roadside beautification program for identified corridors within Jefferson County.
- Objective #11:** Continue to coordinate with WVDOH regarding the locations of existing and potential development activities so the State and County can be informed of each other's potential activities.
- Objective #12:** Ensure that streets through new developments are designed in a way that enables traffic calming and work with HOA's, WVDOH, and other agencies to identify ways that streets through existing neighborhoods and Villages can be retrofitted to enable traffic calming as needed.
- Objective #13:** Implement a policy to allow for a right of way preservation and/or dedication when a preferred road alignment has been identified.
- Goal #13: Provide a Variety of Options for Mobility and Accessibility for Jefferson County Residents and Visitors, including Public Transportation and Pedestrian/non-motorized Opportunities within the County and Between Neighboring Counties and States.**
- Objective #1:** In coordination with EPTA, improve transit service both within Jefferson County and to other areas of the Eastern Panhandle.
- Objective #2:** Coordinate with MARC and other applicable local government agencies to continue and improve commuter rail options from Jefferson County into Maryland and to Washington, D.C., including the relocation of the Duffields MARC station.
- Objective #3:** Identify opportunities to provide commuter transit service into Northern Virginia for County residents and visitors.
- Objective #4:** Implement a network of sidewalks, shared roadways, and trails are available to residents of Jefferson County and that connections along the trails/pathway are extended into adjoining neighborhoods, communities, and counties.
- Objective #5:** Require that sidewalks are constructed (or that at a minimum, easements are provided) within and connecting to existing and new development within the UGBs, PGAs, or Villages.

Objective #6: Encourage the expansion of existing taxicab services and carpool/vanpool programs in Jefferson County (including both traditional and peer to peer models).

Cultural, Historic and Natural Resources, and Recreation Element

Goal #14: Preserve and Protect Significant Cultural Landscapes that encompass Historic Properties, Buildings, Battlefields and Sites from the Impacts of Incompatible Development.

Objective #1: In conjunction with efforts from the Jefferson County Historic Landmarks Commission (JCHLC) and other applicable agencies, continue to identify key sites and structures built more than 50 years ago that should be prioritized for protection.

Objective #2: Create and implement a series of preservation standards to help protect the integrity of historic structures, properties, and districts within Jefferson County.

Objective #3: Work with local, state, and federal elected officials and agencies to identify additional tools and incentives to aid in the preservation of historic structures, properties, and districts in Jefferson County.

Objective #4: Work with property owners and applicable agencies to balance private property rights with the need to protect historically significant properties, structures, sites, or archeological resources.

Objective #5: With assistance from applicable agencies, provide technical resources for property owners and local businesses on the protection of historic resources within Jefferson County.

Objective #6: Encourage the adaptive reuse of existing historic buildings within Jefferson County for a variety of purposes.

Objective #7: Identify areas or corridors for consideration for inclusion in a historic, cultural, or heritage area of local, regional, or national significance.

Goal #15: Protect the Rural and Historic Viewsheds and Landscapes in Jefferson County.

Objective #1: Develop and implement Community Design Standards as recommended in the 2004 Comprehensive Plan to enable high quality, compatible development.

Objective #2: Identify, prioritize, and conduct analysis of key viewsheds and landscapes within Jefferson County in cooperation with other agencies using the viewshed analysis undertaken by the JCHLC and Scenic America along the US 340 corridor as a model.

- Objective #3:** Develop methods to balance the interests of property owners and local government agencies in the protection of identified priority viewshed/landscape areas.
- Objective #4:** Identify and pursue a variety of funding mechanisms to enable the protection of identified priority viewshed/landscape areas.
- Objective #5:** Coordinate with the JCHLC, the Jefferson County Farmland Protection Board, and other applicable agencies to provide technical resources to assist property owners in the protection of their lands.
- Objective #6:** Continue to work with municipalities, Villages, and the JCHLC to identify and establish additional historic districts where applicable.

Goal #16: Encourage and Promote the Protection of Jefferson County's Unique Natural Features Including, but not limited to: Sensitive Karst Features, Rivers and Streams, Steep Slopes, and Tree Canopy.

- Objective #1:** Coordinate with property owners and applicable agencies to identify ways to balance the protection of unique natural features with the rights of property owners.
- Objective #2:** Identify and provide technical resources to property owners or their agents and the community to assist in the protection of the County's natural resources.
- Objective #3:** Identify financial resources that may be used to help fund activities that would lead to the protection of Jefferson County's unique natural features.
- Objective #4:** Continue to actively implement the recommendations of the County's Urban Tree Canopy Plan.
- Objective #5:** Identify and utilize best management practices in relation to the protection of the County's natural resources.

Goal #17: Conserve and Protect Significant, Sensitive and Unique Natural Features from Incompatible Development through Local Land Use Regulations.

- Objective #1:** Based on the recommendations of the Jefferson County Green Infrastructure Assessment, designate priority natural resource protection areas within Jefferson County.
- Objective #2:** Work with applicable agencies to help fund conservation and protection efforts of priority protection areas within Jefferson County.

- Objective #3:** Strengthen applicable County regulations and standards related to site development and design to effectively protect key natural resources within proposed developments where appropriate.
- Objective #4:** Work with property owners and the public to identify appropriate standards for the preservation of the existing tree canopy and significant individual trees and stands of trees where reasonable.
- Objective #5:** Ensure that the natural beauty of the gateway areas to Jefferson County are improved to take advantage of the natural beauty of their surroundings.

Goal #18: Conserve and Protect the Watersheds and Aquifers that are Located Within or Connect to Lands in Jefferson County.

- Objective #1:** Continue to work with private property owners and watershed groups to act upon the recommendations included in the Chesapeake Bay Watershed Improvement Plan.
- Objective #2:** Work with property owners on the Blue Ridge Mountain and the Blue Ridge Watershed Coalition to implement the recommendations of the Blue Ridge Mountain Communities Watershed Plan.
- Objective #3:** Collaborate with the Board of Health, local watershed groups, other agencies, and private property owners to identify funding mechanisms for the maintenance and upgrade of current septic systems.
- Objective #4:** Identify and promote best practices regarding septic system design, installation, siting, and maintenance to ensure that there is a minimal effect on downstream waters.
- Objective #5:** Coordinate with WVDOH and private developers to ensure that streets, roadways, parking areas, and other impervious areas within the County are designed in a way that would mitigate stormwater impacts to the greatest possible extent.
- Objective #6:** Encourage the formation of new watershed groups and organizations in applicable areas of Jefferson County where groups do not currently exist.

Goal # 19 Develop and Expand Well-Programmed Publicly and Privately Owned Local, Regional and Federal Recreation, Park, and Trail Facilities and Opportunities Distributed throughout the County.

- Objective #1:** Coordinate with the National Park Service, public agencies, and private providers to minimize the duplication of facilities and programming within the County.

- Objective #2:** Based on the recommendations included in the Jefferson County Parks and Recreation Master Plan, work with area municipalities to identify and collaboratively manage future sites for parks and recreation facilities.
- Objective #3:** Work with local community groups, property owners, and agencies to identify ways to co-locate parks, trails, and recreation facilities with facilities owned and/or operated by other agencies.
- Objective #4:** Identify locations and key properties that would allow for the creation of a countywide trail network that would connect communities, parks, schools, and other key civic facilities within Jefferson County.
- Objective #5:** Coordinate with volunteer groups and other organizations to provide for the development, improvement, and maintenance of trail facilities located within Jefferson County.
- Objective # 6:** Coordinate with public and private sector recreation providers located within Jefferson County to ensure that their facilities reflect the character of the communities or areas where they are located.

Goal #20: Provide for a Variety of Recreational Opportunities that Meet the Needs of Residents of all Ages and Abilities within Jefferson County.

- Objective #1:** Utilizing on the recommendations of the Jefferson County Parks and Recreation Master Plan, identify and implement specific programs and opportunities that are desired by the County's residents.
- Objective #2:** Coordinate with state and local governments, non-profits, and other community groups to identify funding sources for the construction and operation of publicly owned recreational facilities that may be needed within Jefferson County.
- Objective #3:** Create a range of parks and recreational facilities within Jefferson County for both active and passive forms of recreation.
- Objective #4:** Work with Shepherd University's Public Recreation and Parks Administration program and with other local schools to provide technical assistance and training for parks and recreation staff and volunteers.
- Objective #5:** Identify ways for County, private recreation providers, the National Park Service, schools, municipalities, and Shepherd University to collaborate on programming or special events.

Goal #21: Balance the Use of Jefferson County's Natural Resources for Recreational and Tourism Purposes with Conservation Practices that Ensure the Resources will be Available for Future Generations.

- Objective #1:** Ensure that public and privately owned parks and recreation facilities within Jefferson County are designed in a way that respects the natural features of the properties where the facilities are located.
- Objective #2:** Develop methods to integrate community gardens and related facilities with parks and recreational activities.
- Objective #3:** Encourage the provision of a variety of public and private camping facilities located in appropriate areas of Jefferson County.
- Objective #4:** Provide improved public access to the Potomac and Shenandoah Rivers for residents and tourists in a manner that is compatible with existing neighborhoods and rural areas, for all water sports and related activities.

Education Element

Goal #22: Collaborate with the Jefferson County School Board to Assess Locations for new School Facilities and/or Potential Enhancement of Existing School Sites Based on the Rate and Location of New Development within Jefferson County.

- Objective #1:** Work with the Jefferson County School Board to identify areas of existing and future facility needs related to the student population in Jefferson County.
- Objective #2:** Encourage the construction of new school facilities inside of the UGBs, PGAs, or Villages whenever possible.
- Objective #3:** Identify ways to protect and enhance the viability of existing school facilities within Jefferson County, particularly those located within UGBs, PGAs, or Villages.
- Objective #4:** Identify opportunities for the shared use of school facilities with other area agencies.
- Objective #5:** Review the School Impact Fee to determine if the existing fees are appropriate or need to be adjusted
- Objective #6:** Jefferson County, in combination with its representation at the state level, should work with state agencies to identify a more equitable funding method for financing operating costs for schools within West Virginia.
- Objective #7:** Continue to encourage the adaptive reuse of school buildings for community and non-profit uses.

Goal #23: Ensure that a High Quality Library and Information Technology Service is Available to Residents of Jefferson County.

- Objective #1:** Working with the existing library agencies and based on accepted standards of the field, identify the existing facility needs of the County's public libraries, community libraries and reading rooms, as well as identifying areas where gaps in service may exist.
- Objective #2:** In conjunction with the various library agencies operating within Jefferson County, identify a desired level of service for library facilities and associated emerging information technologies within the County and help to find appropriate funding sources to reach the desired level of service.
- Objective #3:** Encourage the construction of new library facilities in areas within municipalities, UGBs, PGAs, or Villages, preferably in walkable proximity to residential neighborhoods, retail areas, services, and recreational areas.
- Objective #4:** Identify ways to co-locate library facilities within other public and/or non-profit agencies located in Jefferson County.

Finance and Public Safety Element

Goal # 24: Ensure that Adequate Short and Long Term Financing is Available to Support the Current Capital and Operating Needs of the County and its Residents as well as the Requirements of Future Growth in Jefferson County.

- Objective #1:** Establish the position of Chief Financial Officer for the County.
- Objective #2:** Identify external funding sources to assist in the implementation of county activities or the construction of capital projects.
- Objective #3:** Create a robust capital projects funding source in the annual budget that is adopted each year by the Jefferson County Commission
- Objective #4:** Create a robust capital management plan for all buildings and facilities operated by Jefferson County.
- Objective #5:** Ensure that if capital projects are constructed or if additional services are created, adequate funding is available to enable the continued operation and maintenance of the facility or agency.
- Objective #6:** Continue to regularly evaluate County impact fees to ensure that they are able to support existing levels of services (based on population growth) for relevant agencies.

Objective #7: Continue to regularly assess property values and to evaluate local taxation rates and fees to ensure that there is funding available to meet local needs.

Objective #8: Identify ways to consolidate purchasing by County agencies, municipalities, and governments in the Eastern Panhandle.

Goal #25: Ensure that Appropriate Levels of Fire, Police, Ambulance and other Emergency Services can be provided to Existing and New Development in an Orderly and Efficient Manner.

Objective #1: In conjunction with Jefferson County's public safety agencies, identify the desired level of services within the County, based on accepted national standards.

Objective #2: In coordination with local, state, and federal public safety agencies, identify where service gaps may exist and based on this information, where new public safety facilities should be constructed.

Objective #3: Identify methods and funding sources to ensure that sufficient staffing, equipment, and personnel training are available to meet the existing and future needs of Jefferson County's public safety agencies.

Objective #4: To adequately serve the recommended urban density within the UGBs, PGAs, or Villages, identify ways to improve the quality of public safety services to those areas.

Objective #5: Review impact fees based on the existing level of services to determine if the existing fees are appropriate or should be adjusted.

Objective #6: Identify locations for dry hydrants where there is not a water utility or low water pressure that cannot support a traditional hydrant system.

Goal #26: Coordinate with Local Municipalities, Adjoining Counties and States, and Federal Entities to Ensure Consistency of Goals and Outcomes across Multiple Jurisdictions.

Objective #1: Require staff members of local and regional agencies to meet on a regular basis.

Objective #2: Identify ways that state, municipal, and county governments in the Eastern Panhandle can create opportunities to share services, facilities, and capital projects on a micro regional basis.

Objective #3: When possible, identify ways to provide for compatible land use regulations to be in place along municipal, county, or state borders.

Objective #4: Continue to encourage the collaboration between County elected officials and elected officials at the municipal, regional, and state levels in matters of importance to Jefferson County and its residents.

Goal # 27: Provide a High-Quality Experience for Individuals Utilizing County Services and Facilities.

Objective #1: Ensure that providers of County services act in a transparent and accountable manner.

Objective #2: Work to ensure that staff of County services and agencies continues to provide excellent customer service.

Objective #3: Provide opportunities for County staff to improve their skills and knowledge to better serve the public.

Objective #4: Continue to identify and implement best management practices from a variety of sources that would be applicable to the needs of Jefferson County and its residents.

Objective #5: Establish a Human Resources department within Jefferson County government.

Objective #6: Continue to provide opportunities for the public to provide feedback regarding County services.

Objective #7: The County should provide residents with continuing educational opportunities regarding county and state regulations affecting county services.



Jefferson County, West Virginia
Department of Engineering, Planning and Zoning
Office of Planning and Zoning
116 E. Washington Street, 2nd Floor
P.O. Box 716
Charles Town, West Virginia 25414

Attachment B

Email: planningdepartment@jeffersoncountywv.org
zoning@jeffersoncountywv.org

Phone: 304-728-3228
Fax: 304-728-8126

MEMO

TO: Planning Commission
FROM: Jennifer Brockman, County Planner
DATE: October 5, 2021
RE: *Envision Jefferson 2035 Comprehensive Plan Amendment 9/28/21 Workshop Input Summary*

On September 28, 2021, the Jefferson County Planning Commission (PC) held a roundtable/workshop to receive input from interested parties and the public regarding the County Commission (CC) request that the PC consider amending the *Envision Jefferson 2035 Comprehensive Plan* (the *2035 Plan*) to clarify or state that solar facilities are Principal Permitted Uses in the rural and residential zoning districts.

At that roundtable/workshop, staff provided an overview of the *2035 Plan* and noted relevant sections that may need to be amended. The PC President stated that the purpose of the meeting was to receive public input about the requested amendment to the *2035 Plan*. Each interested person was permitted to speak for 3 minutes. The following summarizes the input received:

1. Mr. Doug Rockwell, Charles Town, WV. Mr. Rockwell referred to WV Code 8A-3-1 and 8A-3-2 regarding the Comprehensive Plan amendment process. Mr. Rockwell stated he objected to the format of the meeting notice and the limitation to three minutes for public comment. Mr. Rockwell provided an overview of various sections of the Comprehensive Plan, emphasizing the Plan's various goals and objectives regarding protection of the County's rural character and viewsheds. Mr. Rockwell suggested a combination of processes to include permitted uses and conditional use permits, similar to special event facilities. [Mr. Rockwell had also submitted a copy of the PAS Memo-2019-09-10 "Planning for Utility Scale Solar Energy Facilities" which was included in the 9/28/21 PC packet.]
2. Chris Sternhagen, Minneapolis, Minnesota, Director for Development with EDF Renewables and acting as the Principal Developer for the proposed Wild Hill Solar Facility sited in Jefferson County. Mr. Sternhagen offered various points to consider solar energy facilities as compatible with agricultural uses and also to be considered a variant of traditional agricultural land uses. Mr. Sternhagen stated that solar facilities help preserve productive soil for future agricultural use. He also noted that solar farms do not require the installation of new utility infrastructure or roads typical to traditional commercial development. Mr. Sternhagen provided an overview of the siting process for solar facilities and noted two limiting factors: 1) Access to available transmission capacity; and 2) Topology and access to land suitable for installation and operation of a solar farm. Mr. Sternhagen concluded with a request to the Planning Commission to consider an amendment that would allow solar facilities as a principal permitted use.
3. Julie Philabaum, Charles Town, WV. Ms. Philabaum stated that she was speaking as a concerned citizen and not as a representative of any group or organization she had been appointed or elected to. Ms. Philabaum stated that the proposal to allow solar as a permitted use was not consistent with the Comprehensive Plan. She stated that the text amendment as drafted would allow more than 80% of the County to be used for solar facilities without significant safeguards. Ms. Philabaum referred to various goals in the Plan which include protecting the rural character of the County and implementation of the urban tree canopy plan. Ms. Philabaum concluded by recommending that solar facilities require a Conditional Use Permit and that there be a limitation to the percentage of land that could be used for solar in the County.
4. Anastasya Tabb, Shepherdstown, WV. Ms. Tabb stated that the agenda description was not as direct as it could have been. She stated that she was not opposed to renewable energy but argued that the amendment should be drafted in a way that is compatible with the community.

5. Christine Marshall, Shepherdstown, WV. Ms. Marshall urged the Planning Commission to conduct a study of the impact of utility scale solar on the county, including environmental and economic impact. She stated that following a thorough study, then the County could propose changes to the concept [sic] plan. Ms. Marshall stated that the County should also study the best siting locations for utility scale solar and consider financial incentive for siting on brownfields and landfills. [Ms. Marshall also submitted an e-mail and copy of the PAS Memo-2019-09-10 "Planning for Utility Scale Solar Energy Facilities" which was included in the 9/28/21 PC packet.]

From: Susan Hough <farmwife90@aol.com>
Sent: Friday, October 1, 2021 8:58 AM
To: Planning Department
Subject: Comprehensive Plan revisions
Attachments: Jefferson Countys Comprehensive Plan Edit 9-24-2021 A.docx

Planning Commission,

Thank you for reaching out to us for our participation on the Comprehensive Plan amendments regarding solar facilities. We have discussed these amendments with others and are submitting the attached proposed changes to the Comprehensive Plan for your inclusion in the Public Comment and Testimony. We believe that these changes conform with the direction of the County Commission for the Comprehensive Plan amendments. We may also forward to others that may be interested.

Thanks again,

Todd and Susan Hough
Kabletown District
Jefferson County

Jefferson County's percentage of arable agricultural land is 54.7%, more than any other county in West Virginia. That affords the County a rich mix of urban, suburban, and agricultural environments. With that consideration in mind, the Plan strengthens proposals related to its historic farming community's economic growth. It recommends potential amendments to the Zoning Ordinance and Subdivision Regulations, which will support a more robust, profitable agricultural and artisan economy through a diversity of uses. This Plan proposes a higher density cluster provision rather than allowing rural residential developments via the Land Evaluation Site Assessment (LESA) system / Conditional Use Permit (CUP) process; to authorize the development of solar energy production facilities including commercial and wholesale facilities as a Principal Permitted Use in the Rural and Residential Districts, provided that there is a State or County system for solar panels to be removed at the end of their useful life; and ~~to consider~~allow the use of ~~the~~ a more traditional CUP process in the Rural District for other non-residential uses which are compatible in scale and intensity with the rural environment and that pose no threat to public health, safety, and welfare; and to allow much more flexibility in multiple uses on agricultural properties to allow diversification of their businesses.

What are Goals, Objectives, and Recommendations?

Goals are general guidelines that broadly describe what the community wishes to achieve over the period of the Comprehensive Plan. Goals are generally bigger in scope than objectives.

Objectives are the types of actions or activities that are recommended in order to attain the goals.

Recommendations are implementation strategies that are specific steps that would be undertaken to achieve the goals and objectives. They can involve regulatory processes or actions that provide a means for the goals and objectives to be achieved.

Goals and Objectives are what a community wishes to achieve. Recommendations are implementation strategies of how a community looks to achieve them.

Rural/Agricultural Areas

Rural/Agricultural properties outside the UGBs and PGAs are allowed to develop using the “by right” standard of one lot per 15 acres and a cluster development of one lot per ten acres. Over the past number of years, the Zoning Ordinance has been amended to allow many additional uses in the Rural District to promote more rural agricultural uses and value added operations. The 2008 Subdivision and Land Development Regulations have been amended to reduce the site improvement standards for rural business. This Plan proposes that a holistic review of Rural zoned properties should occur that would allow for greater scope and variety of agriculture related activities and rural recreation. It should be noted that regardless of location, whether in an UGB, GMB, or PGA, all Rural zoned properties shall be permitted to undertake the activities noted above. Additionally, this Plan proposes that the Zoning Ordinance be reviewed and amended to consider a higher density for rural/agricultural lots utilizing the cluster provision instead of allowing rural residential developments via the Condition Use Permit process. This Plan also proposes to authorize small or large scale solar energy development including wholesale and commercial facilities as a Principal Permitted Use in the Rural and Residential Districts with land restoration and panel removal requirements with the State or County. Existing farmers who want to stay on their farms but who cannot rely on traditional farming activities to do so have expressed an interest in leasing portions of their land for solar energy facilities rather than selling the land for permanent conversion from agriculture. While commercial scale facilities can be hundreds of acres, most will likely be constructed near the existing electrical transmission infrastructure (which is already exempted from zoning). In addition, there are capacity constraints on the existing transmission system which limit the ability of the transmission system to carry unlimited new generation unless the transmission system is expanded.

***Land Evaluation Site Assessment (LESA)
also known as the
Conditional Use Permit (CUP) process
outside the UBG or PGA***

Currently, any land use not listed as a Principal Permitted Use in the Zoning Ordinance may be proposed on any property utilizing the LESA/CUP process. This Plan recommends eliminating the LESA system and modifying the CUP process for use exclusively for non-residential development projects in the Rural Zoning District.

It is expected that urban level residential and non-residential development (and redevelopment efforts) will focus in the UGBs and identified PGAs in the next two decades. In addition, it is anticipated that the bulk of new investment by public entities will take place in these areas over the 20-year timeframe of this Plan.

Retention of Existing Zoning Map Classifications

As part of the Envision Jefferson 2035 process, there are no zoning map amendments (rezoning requests) or reductions in existing zoning rights proposed by the County.

	f. Streamline development review and permitting policies by establishing a two tiered system that would allow greater power for staff review for projects of a certain size or smaller scale, etc.
6.	Require new urban level development to provide opportunities for multi-modal accessibility and to occur in a manner that enables connectivity to existing street and infrastructure networks or for future connectivity as development is extended to municipalities, UGBs, PGAs, or Villages.
	a. Create and implement the results of small area studies that would address the potential provision of infrastructure, accessibility, place making, and community facilities.
	b. Require viable integration of multi-modal accessibility to facilities as part of new development plans.
	c. In coordination with the West Virginia Division of Highways, identify key corridors where publicly owned roadways might be beneficial to the overall development of the County.
	d. Coordinate with existing property owners/HOA's to extend existing roadway corridors when possible to connect into adjoining neighborhoods or new development. At a minimum, this may include pedestrian, non-motorized vehicle, and/or emergency access ways.
7.	Encourage the location of new infrastructure (water, sewer, utilities) within municipalities, UGBs, PGAs, or Villages.
	a. Direct new development to be contained in municipalities, UGBs, PGAs, Villages, and areas zoned for Residential Growth (RG), where public water and sewer will be available; <u>provided however that solar energy production can be located in all Rural and Residential Districts.</u>
	b. In designating where public utilities are to be delivered, enable public utility providers the ability to right size the infrastructure needed as development occurs, while considering the ability of current and future customer base to assume the debt for the infrastructure.
	c. Encourage that new investment by public entities be focused toward the municipal areas, including the UGBs and the PGAs.
8.	Encourage the location of new community public facilities (such as schools, libraries, parks) within Municipalities, UGBs, PGAs, or Villages.
	a. Encourage the clustering of development so that the developer retains their density while dedicating community facilities.
	b. Locate and integrate new neighborhoods so that existing community centers, schools, parks, or libraries serve the needs of the new development.
	c. Whenever possible, construct community facilities in areas served by public water and/or sewer.

1.B. Rural Land Use Planning

Between 1974 and 2007, nearly 14,000 acres of land were removed from agricultural production in the County. Approximately 78% of these acres were lands with prime soils or soils of statewide importance. It is important that viable existing farmlands are protected. By encouraging cluster residential development, a large portion of the property will be maintained for farming activities, which would allow Jefferson County's agricultural and rural character to be maintained. Likewise, by requiring that solar energy production facilities be removed after their productive lives, the land is preserved for future agricultural uses. Below is a soils map of Jefferson County and a larger version can be found in Appendix F – Maps.

With Jefferson County's close proximity to the Washington, D.C. and Baltimore, MD Metropolitan Areas, the possibility of rejuvenated local agricultural activity exists. Niche farming has expanded for both foods and materials used in the creation of goods. As value added agricultural and rural land use activities increase, they enable the retention of the agricultural and rural environment. These value added activities assist in providing farmers with additional revenue sources to maintain the farms. The growing movement toward more localized food sources has resulted in the creation of community farmers' markets, the revitalization of local farm markets, and the expansion and awareness of community supported agriculture (CSA) programs. Similarly local restaurants and schools are increasingly utilizing local grown food in their facilities.

Rural Land Use

One of the highest priorities of the Envision Jefferson 2035 Steering Committee and the public was the desire to preserve the rural landscapes, heritage, and lifestyle that attracted many residents to Jefferson County. Comments were received that indicated Jefferson County needs to balance the demands of growth with the protection of agricultural lands. Efforts of the agricultural and artisan communities can create desirable places for tourism to thrive. In these communities, visitors can visit working farms, shop at an artisan studio, and eat at restaurants that are either located on farms or that serve food derived from local enterprises.

The form and types of development that takes place in the rural environment should be respectful of the rural culture and historic nature of the community. Many of the residential and commercial structures built in Jefferson County are similar in design and scale to types of buildings constructed in other areas of the U.S. without consideration of local architectural style.

A variety of tools and means exist to assist in the protection of lands with prime or statewide importance, soils and active farm sites. These tools range from policy, such as purchase of development rights, to land development standards that allow for flexibility of agriculture based uses and activities on the farm.

Since zoning was adopted in Jefferson County, large residential developments and non-agricultural commercial developments were permitted in the Rural District through the Land Evaluation Site Assessment (LESA) system/Conditional Use Permit (CUP) process. As a result, rural land has been converted to non-agricultural uses. For this reason, this Plan recommends that the cluster provision of the Zoning Ordinance be the preferred method of residential development in the rural zoning district. The cluster provisions should be reviewed and amended to consider a higher density for rural/agricultural lots utilizing the cluster provision. This Plan further recommends amending the Zoning Ordinance to eliminate the LESA point system and to develop procedures that would allow the use of a more traditional CUP process in the Rural District for non-residential uses, except that this Plan recommends that solar energy production be authorized as a Principal Permitted Use in the Rural and Residential

Districts and they be required by the State or County to return the land to a condition capable of being used for agriculture after the solar panels are removed. This CUP process should require a public hearing before the Board of Zoning Appeals to determine if the use is compatible in scale and

and septic systems, with a limited probability that public services will be extended to these properties in the future. The preservation of the quality of life and rural lifestyle for existing and future residents is of great importance for property owners in these communities.

The following recommendations address the needs of the agricultural community, artisan community and the rural environment.

Rural Land Use Planning Recommendations (Goal 2)	
1.	Recognize the rights and viability of existing rural residential neighborhoods.
	a. Balance artisan, home occupation, and cottage industry rights with the maintenance of the character of rural neighborhoods by considering the size and scope of all activities within designated rural neighborhoods.
2.	Allow and promote a greater range of agricultural and/or artisan uses within the rural areas on existing farmlands to incentivize the expansion of the rural economy within Jefferson County.
	a. Collaborate with key stakeholders in the agricultural community to update the County’s zoning and land use recommendations to broaden the range of permitted complementary and accessory on-farm uses.
	b. Identify types of farm activities that may be successful based on the soils on individual properties and the proximity of Jefferson County to relevant markets.
3.	Revise existing Jefferson County land use requirements and site plan standards to reduce regulatory barriers related to agricultural and/or artisan operations.
	a. Revise local regulations to balance production and marketing of artisan or agricultural products on-site, considering the individual use, size, and scale of the operation as appropriate to the property site.
	b. Waive or modify the roads, parking, and stormwater regulations on farms for on-site production and marketing enterprises, to the extent possible.
4.	Protect the viability of agricultural lands and wildlife corridors by encouraging the utilization of cluster subdivisions as the preferred form of residential development within rural areas.
	a. Allow residential development outside of the Urban Growth Boundaries or Preferred Growth Areas to develop only as rural cluster subdivisions, in accordance with existing land use rights.
	b. Amend the Zoning Ordinance to eliminate the Land Evaluation Site Assessment (LESA) system and to modify the Conditional Use Permit (CUP) process in the Rural Zoning District, which would be used for compatible non-residential development only <u>and without restriction to solar production facilities</u> .

	c. Amend the Zoning Ordinance density provisions related to Cluster Developments to utilize a higher density such as one unit per five acres, with provisions for a maximum lot size and a mandatory retention of a set percentage of the original tract in agricultural uses, open space, and/or forest/woods, instead of allowing for rural residential development to occur using the LESA/CUP system.
	d. Amend the Subdivision Regulations to permit a Cluster Development of any size to process as a minor subdivision, provided that the subdivision standards shall apply.
	e. Encourage the creation of subdivisions that incorporate working farmland or community gardens in Development Supported Agriculture programs.
	f. Consider amending the provision in the Jefferson County Zoning and Land Development Ordinance related to the transfer of land between parent and child to include other family members, such as sibling to sibling.
	<u>g. Amend the Zoning and Land Development Ordinances to allow small and large scale wholesale or commercial solar energy development as a Principal Permitted Use in the Rural and Residential Districts and provide for the removal of facilities by the State or County after they have exhausted their useful lives, so that the land may be returned to agricultural use.</u>
5.	Encourage a variety of mechanisms to protect existing farmlands, key farm buildings, and scenic corridors within Jefferson County.
	a. Identify funding sources for farmland protection which could come from local, state and federal sources in addition to fundraising opportunities.
6.	Involve members of the agricultural community in planning and land use decisions related to rural lands within Jefferson County.
	a. Establish collaborative and interactive mechanisms for the Planning and Zoning staff and economic development officials to coordinate with the agriculture community that will enable the farming community's input in the planning and zoning process.
7.	Explore policies in concert with the Public Service District (PSD) and municipalities regarding rural water and sewer infrastructure.
	a. Explore legislative options that would allow equitable distribution of cost sharing with entire development community along with rate paying base (i.e. Capital Improvement Fees).

2. Economic Development, Employment, and Infrastructure Element

Economic growth and development is closely tied to the availability of natural resources, technological innovation, infrastructure, utilities, energy production and human capital as well as its geographic proximity to major population centers, adequate roads, and infrastructure. Jefferson County is ideally situated to have a vital economy. The general health of an economy can be determined by examining two components: stability and balance. Stability is an indication of the ability of a local economy to withstand the fluctuations in the regional and national economy. Balance refers to the level of diversification of a local economy. The more diversified the local economic and employment base, the more difficult it is to disrupt the local economy. Any economy that is overly reliant on a single employer or employment sector is more highly impacted by economic shifts.

The major sectors of Jefferson County's economy include traditional economic development activity, including education and high tech training; agriculture and the rural economy; and recreational, historic and heritage tourism. This section of the Plan discusses each of these sectors in detail and provides recommendations for them. Additionally, because of the critical nexus of economic development with the adequacy and extent of the infrastructure and transportation system networks, these components are included in this element as well.

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2.A. Economic Development and Employment

According to the Jefferson County Development Authority, Jefferson County's strategic Mid-Atlantic location close to Washington, D.C. and Baltimore, MD Metropolitan Areas coupled with ready access to major transportation routes makes the County ideally situated for business, manufacturing, and industry. Jefferson County is located in one of the fastest growing areas in the United States. The County is a major economic driver in a state that boasts the nation's fourth lowest cost of doing business, low utility rates, and a highly skilled and hard-working workforce. While facilitating relocations and start-up businesses, the Jefferson County Development Authority supports and promotes existing businesses.

While there has been a significant amount of commercial development in Jefferson County since the 2004 Comprehensive Plan, it has slowed considerably in recent years. During this same time period, residential growth occurred at a more rapid rate, particularly in the early 2000's. Additionally, Jefferson County's economic

development efforts have benefited from a number of public and quasi-public projects and efforts, including, but not limited to:

- Infrastructure improvements that have taken place in recent years (particularly the construction of WV 9 as a four-lane roadway through Jefferson County);
- An increased federal presence within Jefferson County;
- The continued expansion of Shepherd University in Shepherdstown and the relocation of the American Public University System's headquarters in the Charles Town/Ranson area;
- The increased utilization of telecommuting as a viable employee option by national and regional businesses and federal government offices; and
- The expansion of a business park that has the necessary infrastructure in place for each lot which results in ready-to-build parcels.

Despite those gains, the lack of high paying jobs for Jefferson County's skilled workforce requires approximately 36% of all employed individuals to commute to employment centers with higher wages located closer to Washington, D.C. or Baltimore, MD.

At the same time and paralleling a national trend, Jefferson County has lost some manufacturing and warehousing facilities. The loss of these employers has resulted in several vacant or underutilized structures, as well as unemployed workers. A number of these vacant facilities are within the Charles Town/Ranson urbanized area, and provide opportunities for redevelopment. Some of these facilities have been reused for other purposes, particularly by American Public University System (APUS) and the City of Ranson. APUS's efforts have enhanced the economic revitalization process by purchasing and renovating 12 structures in Charles Town and Ranson as well as constructing a multi-story administrative building and related parking with a large array of solar panels. As part of this renovation and redevelopment activity, APUS has utilized several brownfield sites on the Charles Town/Ranson border.

With Jefferson County's proximity to Washington, D.C. and Baltimore, MD and with the existing economic cluster of federal agencies, the County has the opportunity to attract additional federal facilities.

To support the success of future economic growth, there are a number of proposed improvements to the County's public infrastructure that are expected to take place in the coming years. These include:

Major Public Infrastructure Projects that are Proposed
The widening and realignment of US 340 from Charles Town to the Virginia line near Berryville
The potential for improving natural gas and alternative energy facilities in the Eastern Panhandle and extending natural gas services into Jefferson County
Improvements to the County's telecommunications network, particularly wireless technology and any advanced technologies

These improvements will enhance the ability of Jefferson County to compete on an economic development basis with other communities in the region.

Target Industries

Jefferson County will encourage a diversity of business types to locate within its borders. As part of these efforts, the Jefferson County Development Authority (JCDA) has identified several industries and other sectors of employment towards which incentives and programming should be targeted (in no particular order):

Jefferson County Development Authority Identified Industry Sectors	
Agriculture Development	Manufacturing
Government	Small Business
Information Technology	Tourism

Each of these target industries are currently located in Jefferson County and will benefit from retention, expansion, and attraction to strengthen each cluster. Building on these assets will give the County a strong identification of its core business strengths. While not identified by the JCDA, there are several large non-profit organizations which are a significant part of Jefferson County’s economy. This provides additional economic and employment opportunities. In addition, more regional employers are looking to acquire renewably generated electricity to meet the demands of shareholders and expected future regulatory requirements. Starting around 2020, this demand has created interest in sourcing solar energy production facilities in Jefferson and surrounding counties. These facilities will place little stress on existing infrastructure and will add substantially to the tax base.

Additionally, small businesses, which can range from restaurants and artisan cottage industries to small technology and service firms, are an integral part of the local economy and have opportunities to grow stronger.

Federal Government

One of Jefferson County’s target industries is correlated with the presence of state and federal government facilities. Since the federal government has found success with their existing local facilities, the potential for additional federal employment opportunities to locate here is greatly enhanced. The following Table lists federal facilities, many of which have had a long term presence in the County.

Federal Facilities in Jefferson County
U.S. Coast Guard Administrative Support Facility
U.S. Customs and Border Protection Advanced Training Facility
Department of State Diplomatic Security Training Center
U.S. Fish and Wildlife, National Conservation Training Center
Harpers Ferry National Historical Park

Focusing Economic Development in Municipalities, Urban Growth Boundaries, and Preferred Growth Areas

Envision Jefferson 2035 expects urban level commercial, office, and industrial activity to be located in the municipalities, within the Urban Growth Boundary and Preferred Growth Areas, where the infrastructure is expected to be available to support these uses. Within the unincorporated area, the County's industrial park and properties zoned industrial are also important to the economic growth and vitality of the County.

The exception to this general philosophy is to also allow solar energy development as a Principal Permitted Use in all of the Rural and Residential Districts as well.

In recent years, public, and private reinvestment in the urban core of the five municipalities has occurred and is continuing to grow, as the following examples illustrate:

- The Town of Ranson received numerous grants that focus on the Brownfield Commerce Corridor that is shared with Charles Town, and includes the redevelopment of vacant industrial buildings, street and streetscape improvements, and the expansion of a key transportation corridor through Ranson.
- Shepherdstown and Bolivar/Harpers Ferry have vital core commercial areas that support the local and tourist population in the County and serve as gateways into the County from neighboring states.
- Shepherdstown and Bolivar/Harpers Ferry are a part of the Canal Towns Partnership, comprised of several communities along the C&O Canal, which is an economic development initiative with the goal of cooperatively marketing and making improvements to attract visitors to the canal's gateway communities.
- The American Public University System made substantial investment in Charles Town and Ranson, including the redevelopment of existing structures and construction of administrative buildings and parking facilities.
- Hollywood Casino at Charles Town Races has been a strong component of economic activity in the County and continues to respond to a changing market by advancing alternative entertainment and horse racing options.

These examples of collaboration between local government entities and private entities bolster local economic development opportunities and this collaboration should continue.

The County's downtown areas are concentrations of local and regional government agencies, small offices, and a limited number of small shops, restaurants, and services which serve to attract visitors and residents to the downtown areas. The downtown areas of Jefferson County are viewed as a place to gather or meet, where unique shopping options, good food, a nice walk, and small entertainment venues are available.

The following recommendations are related to the enhancement of economic development activities in Jefferson County.

11	Collaborate with Shepherd University, American Public University System (APUS), and other higher education entities to identify opportunities for Jefferson County based research programs that would combine classroom learning with virtual resources.
12	<u>Recognize that modern and innovative energy sources such as solar energy facilities provide for clean economic development in the County and are vital to the emerging local, State and National trend/need for clean electrical energy.</u>

2.B. Agricultural and Rural Economy

One of the more significant issues expressed by County residents involved in the Envision Jefferson 2035 process was maintaining the rural economy and small town lifestyle of Jefferson County. It is important that this discussion not be framed by the concept of preservation but of creating opportunities for farms to be economically viable. This would include identifying ways to protect and enhance the farms and open spaces that provide the rural character along with the agribusinesses that have been the historical heart of the Jefferson County economy. One goal of this Plan is to maintain productive farmland soils and the rural character and economy of the County by reducing the conversion of farmland to non-agricultural based uses. Or, by providing other opportunities for farmers to use their land and then return to farming in the future when other possibilities may emerge. Throughout this Plan, solar facilities are presented as a way to preserve farms for a generation and then return the land to agricultural uses. This protects large acreage from permanent residential development, while allowing other portions of the properties to continue to farm.

There must be a viable rural economy to maintain the rural landscape. The rural economy is much more than traditional farming. It includes innovative agriculture, horticulture, forestry, commercial and non-commercial equine industry, other forms of animal husbandry, tourism, rural based public and commercial recreation, ancillary rural business, ~~and~~ compatible rural institutional uses and other profitable uses such as solar energy production. Many of these sectors are growing and collectively contribute significantly to Jefferson County's economy and provide several thousand jobs. The County's citizens benefit from the proximity of rural based activities and services and the rural enterprises benefit from nearby markets for goods and services. With this potential, the rural areas of Jefferson County should be seen as ripe for investment and reinvestment.

A key aspect of the County's rural economy is recognizing the changes in the regional and national marketplace that might affect agricultural activities at the local level. In some instances, farm operators have adapted to these changes by diversifying into additional farm based activities, changing the types of farming activities taking place on a site, or seeking to include direct sales and on-site marketing, and value added processing of crops or products. The ability of a farm operator to diversify or change their operations to meet the needs of the marketplace is an important consideration in providing a framework for the continuation and enhancement of farm and agricultural activities in Jefferson County. The County Commission and Planning Commission need to authorize other uses, such as solar development, that have emerged on farms and in the rural areas that may in the long run protect farms from other development.

The enhancement of the rural economy is a central focus of the rural strategy of this Plan and requires the support of the County Commission, Jefferson County Development Authority and other organizations which support the agricultural

economy. A broad-based rural economy can be a net-revenue generator for the County because tax revenues generally exceed expenditures for rural properties. The County recognizes its fiscal responsibility to protect the land resource for the rural economy, to provide fundamental protection for rural businesses, to ensure prudent fiscal management of limited public resources, and to provide needed protection of the public health and safety.

Rural Economic Activities

The agricultural community in Jefferson County recommended the following priorities to strengthen the rural economy:

Agricultural Community Priorities
Diversify farm operations through the sale and marketing of value added products (such as the processing and marketing of products on-site);
Allow farm operators to work with nearby farm operators to market and sell each other's goods on each individual farm;
Allow a wider range of service activities to take place on agricultural properties.

The rural areas of Jefferson County include not only farms and residences, but also a variety of small artisan studios and other cottage industries. While the preservation of agriculture is essential to the protection of rural areas, it is also important to provide for the ability of appropriately scaled businesses to succeed. When permitting additional uses in the rural area, it is important that the size and scale of both the property and the business be correlated. The intensity of the activity permitted should directly relate to the size of the rural property which would enable larger rural properties to undertake more activities. By correlating scale and intensity of uses to the rural property size, it is anticipated that off-site impacts would be mitigated for the surrounding landowners. Some uses may require performance standards which should be incorporated into the local land use regulations.

By enabling farm operators to have more options and encouraging the creation of cottage industries that reflect the rural aesthetic, the viability of operating rural based businesses in the County's rural areas will be enhanced in the coming decades. While Jefferson County has modified its Zoning and Land Development Ordinance to allow for a greater variety of uses, additional steps might be needed to improve opportunities for farm operators to continue or expand their businesses, and for artisans and other individuals to operate small businesses that complement these activities. A streamlined process for uses with minimal impacts to surrounding neighbors should be developed.

As discussed above (see Land Use and Growth Management: Rural/Agricultural Components), significant new opportunities exist for farms located near existing electrical infrastructure to lease their land for the production of solar power. These opportunities will provide those farmers, some of whom have indicated they cannot maintain their farms without additional sources of revenue, to access new income sources and to maintain the rest of their farms in agricultural uses. By further restricting the solar facilities with reclamation and panel removal standards, the impacts to the rural landscape will be minimized, while allowing farming and other agricultural uses to return once the land is reclaimed.

The land use component of this Plan recognizes an example of a non-residential Conditional Use Permit (CUP) in the Rural area referred to as an Agricultural Based

Economic Empowerment Area, defined as a commercial agricultural hub that is not located on a farm, but is located in a rural area and focuses on intensively supporting agricultural activity through the value added processing, holistic health and marketing of local goods. Other appropriate uses in the Rural district (some of which may require a CUP) include, but are not limited to, artisan activities; home based businesses; agricultural equipment sales, rental, and repair services; veterinary services; farm co-ops; product storage and seed supply; agri-tourism, bed-and-breakfast enterprises; farm markets, wayside stands, and similar types of uses, provided that these uses are designed in a manner compatible with the rural character of the area. As noted throughout the Plan, solar energy production facilities shall be a Principal Permitted Use in these areas, as well.

productive agricultural land. In order to retain the maximum amount of land in farm use and rural economic activity, the open space requirement for residential cluster development shall be met by the residue which will retain no development rights.

Transportation in the Rural Environment

The County's rural road network originally evolved serving the needs of the farming community and is not intended to serve the needs associated with the higher traffic volumes and speeds required for large residential subdivisions. At certain seasons of the year conflict can be created between residential traffic and large pieces of slow moving farm equipment. The LESA/CUP system has not effectively protected the rural road network from this type of development pressure. As such, this Plan recommends utilizing cluster developments as the preferred form of residential development within the rural areas. Limiting suburban development in the rural area helps protect agricultural land use activities.

Most of the roads in the County's rural area are paved, but tend to have narrow widths, excessive horizontal and vertical curvatures, bridge and drainage problems, and poor intersection alignments. These conditions contribute to the safety concerns associated with increasing motor vehicle traffic on the rural roads. The increased residential densities that have occurred in the rural area in the past are producing additional traffic volume and requiring more maintenance of the rural road network of predominantly narrow, two-lane paved roads with existing design issues.

Agriculture Tourism

The rural areas of the County contribute to the local tourism economy in a variety of ways. Not least of these is the maintenance of attractive viewsheds to enhance the experience of visitors to battlefields, historic sites and villages. Tourism is addressed later in this Element on page 81.

The following recommendations provide action steps to foster and expand the diverse rural economy through a variety of policy, regulatory, incentive-based, and programmatic approaches that will protect the rural land, structures, and character necessary to advance the rural economy.

Solar Energy Facilities

Solar energy facilities which are required to be removed upon expiration of their usable lives can provide farmers with the income necessary to retain their farms while having minimal impact on the rural esthetic or the permanent conversion of land to non-agricultural use. Permitting these facilities as Principal Permitted Uses will also generate construction jobs and tax revenues while placing almost no strain on existing infrastructure and will thereby promote the economic well-being of the County and the Rural and Residential Districts. Additionally, the land will be reclaimed for the ability to farm the land or provide for other permitted agricultural uses.

Agricultural and Rural Economy Recommendations (Goal 8)	
1.	Support West Virginia’s and Jefferson County’s “Right to Farm” policies which protect the rights of existing and future farms and farmers by developing zoning standards, other legislation, and educational programs designed to reduce potential conflicts arising from the proximity of agriculture to residential development (State Code § 19-19; Section 4.5 of the County’s Zoning Ordinance).
	a. Identify and utilize a wider variety of funding sources that could serve to expand the County’s farmland protection program.
	b. Create an educational pamphlet informing developers, realtors, and potential homeowners of the offsite impacts of living adjacent to farming activities.
2.	Enact Zoning Ordinance provisions to reduce the intensity of residential development in the Rural zone, other than by clustering, thereby protecting and increasing the investment potential and attractiveness of the agricultural lands for families, entrepreneurs, and businesses.
	a. Decrease the problems of rural traffic volume and the need for additional costly public infrastructure services in rural areas while conserving areas of the Rural zone for agricultural uses and the rural economy through support for rural cluster development vs large subdivisions of new home growth.
3.	Support the rural economy by amending the Subdivision Regulations to establish rural business site plan standards to include:
	a. performance criteria, including compatible size, scale, use, intensity, traffic capacity limits, employee limits, site design standards (i.e. buffering, siting), and standards that protect public health, safety, and welfare; and
	b. the adaptive reuse of existing historic and agricultural structures.
4.	Collaborate with the County’s agricultural community to assess the current land use regulations and determine what opportunities for agriculture might currently exist and what additional opportunities might be able to succeed in Jefferson County.
5.	Amend the Zoning and Land Development Ordinance to permit additional non-residential rurally compatible uses.
	a. Incorporate into the zoning provisions innovative agricultural uses including the creation of standards which permit flexibility in the sale of farm products and related auxiliary products.

b. Amend local land use regulations to: i) permit solar energy production in the Rural and Residential Districts as a Principal Permitted Use (PPU) provided also that developers or owners provide security to State or County to remove solar facilities at the expiration of their usable life so that land may be returned to farming or other agricultural uses; and ii) permit other non-agriculturally related commercial uses by the Conditional Use Permit (CUP) process in the Rural zone if the use is agriculturally and rurally compatible in scale and intensity, poses no threat to public health, safety, and welfare, and if the use helps to preserve farmland and open space and continue agricultural operations.

	<p>c. Require that new non-rural <u>and non-solar</u> commercial uses that are not compatible with the dominant agricultural land use pattern locate only in the Urban Growth Boundaries (UGBs) and Preferred Growth Areas (PGAs) as identified by the future land use recommendations of this Plan.</p>
6.	<p>Coordinate with local businesses and the Jefferson County Development Authority (JCDA) to brand and market Jefferson County farms and products by identifying and linking potential partnerships and matching suppliers with potential local and regional markets.</p>
	<p>a. Conduct market research on high-value agricultural products, ancillary farm businesses, and other rural economic uses such as farm agri-tourism, retreats, and country inns;</p>
	<p>b. Develop and expand, in conjunction with the Jefferson County Convention and Visitors Bureau, brand identification of Jefferson County farm products;</p>
	<p>b. Provide more alternatives to promote rural tourism and rural land uses.</p>
7.	<p>Work with Jefferson County’s agricultural community to effectively distribute local agricultural products and encourage the growth of the market for local products.</p>
	<p>a. Facilitate the establishment of year round marketing outlets to support the farm community, such as farmers’ markets or a product distribution center;</p>
	<p>b. Encourage the expansion of off-site farmers’ markets to provide marketplaces for farmers and artisans to sell their goods within a variety of Jefferson County commercial venues;</p>
	<p>c. Promote products to Jefferson County based businesses.</p>
8.	<p>Coordinate with key agricultural and rural stakeholders to identify ways to expand marketing and value added production activities for farmers and artisans on their properties in rural areas of Jefferson County.</p>
	<p>a. Amend existing regulations in order to identify and facilitate ways to allow the sale of items grown, processed, crafted, or manufactured in Jefferson County on farms other than the farm where the product originated.</p>
	<p>b. Develop a streamlined process for such uses when there are minimal impacts to surrounding neighbors.</p>
	<p>c. Expand and improve high speed Information Technology (IT) connections in rural areas of Jefferson County with local internet or advanced technologies providers to enable residents to run businesses from home or to telecommute.</p>
9.	<p>Collaborate with the local artisan community and Jefferson Arts Council to review and amend the local land use regulations to promote and enhance the viability and livelihood of artisans in the rural areas of Jefferson County.</p>
	<p>a. Encourage local non-profit organizations and local and regional economic development agencies to create a regular forum where all County artisans, businesses, and members of the non-profit and arts communities can meet to network and collaborate.</p>

	b. Work to improve connections between County businesses and artisans that may have products and services that can be sold in local stores or other businesses.
	c. Ensure that training and educational opportunities are available that would enable the success of such businesses.
	d. Establish and support an endowment for arts funding for rural crafted arts.
10.	Strengthen the Agricultural Committee of the JCDA by creating a public/private Rural Economic Development Council comprised of rural industry sector leaders. This organization will:
	a. link governmental, non-governmental, and regional organizations;
	b. link state and federal farm assistance programs to local farmers;
	c. receive and make grants;
	d. act as an advocacy group for rural issues; and
	e. promote activities that nurture the rural economy.
11.	Create a county or regional agricultural industrial park that could include sites for service providers such as farm equipment repair facilities, tractor and implement sales, meat processing facilities, and veterinarian services; as well as:
	a. A local or regional food hub that could be tied into Community Supported Agriculture (CSA) packaging and distribution, a regional food bank, and to serve as a marketing site for farms and farmers;
	b. A neighborhood based CSA or Development Supported Agriculture;
	c. A permanent, year-round farmers' market site;
	d. Sites for Industrial Agriculture such as Vertical Farming, Hydroponic Greenhouses, and Aquaponic Farming;
	e. Agriculture based training, research, and continuing education facilities created in conjunction with institutes of higher learning and research;
	f. Commercial aquaculture activities;
	g. A livestock auction facility;
	h. A Community Cold Storage/Meat Locker Facility that would allow county residents to rent space to purchase and store sides of meat; and/or
	i. Alternative Energy Production facilities, ranging from ethanol refining to algae production for biofuels.
12.	Promote and expand the commercial and recreational equine industry as a fundamental component of the rural economy by amending County ordinances to reflect the current practices and needs of the industry.
13	Collaborate with the County's culinary, artisan, and farm communities and JCDA to study the feasibility of establishing a Culinary Center that would provide exposure to and for marketing the goods that are produced in Jefferson County and the Eastern Panhandle.

may not meet current standards, to be upgraded or maintained. Recently, the County adopted a new stand-alone Stormwater Management Ordinance that includes additional standards related to water quality and includes provisions for low impact design stormwater provisions such as rain gardens, bio-swales, permeable pavers, and permeable asphalt. These new standards help to minimize the impact of sediment and certain identified nutrients as required by the Chesapeake Bay Program.

In addition to land development activities, the following point and non-point source activities impact the water quality in waterways due to stormwater run-off:

Point and non-point source pollution
Over-fertilization and the use of chemicals to maintain lawns by homeowners
Use of salt and chemicals on roads in winter weather by the State Division of Highways
The fertilizers used to grow crops
Industrial emissions
Waste products (rubber, gasoline, and various other fluids) associated with auto use
Animal husbandry activities

The effect of stormwater run-off on the local waterways, particularly the Shenandoah and Potomac Rivers, has a significant impact on our local and regional recreational and heritage tourism, as well as drinking water quality. There are a number of watershed protection groups in the County that are actively seeking to improve the quality of the surface and groundwater within particular watersheds. These groups have made efforts to clean-up the waters and restore aquatic life to Jefferson County waterways. Such efforts have included, river clean ups, water monitoring, septic tank pumping and repair reimbursement programs, fencing of livestock to keep them out of streams, tree plantings, and outreach to residents and businesses to educate them about how to combat pollution. These efforts will ensure that high quality of water in Jefferson County continues.

Alternative Energy

It is widely recognized that many of the resources that we rely on to heat, cool, and light homes, power electronics, provide transportation fuel, and other daily needs are finite. Consequently, there has been an increasing need to assess the viability of alternative and renewable energy sources that may assist in maintaining the quality of life of Jefferson County’s residents and businesses. In 2009, West Virginia adopted an Alternative and Renewable Energy Portfolio Standard that requires investor-owned electric utilities (such as Potomac Edison) with more than 30,000 residential customers to supply 25% of retail sales from eligible alternative and renewable energy resources by 2025.

Alternative and renewable energy sources are available, ranging from hydro (water), solar, and wind power to the use of various biofuels (algae, biomass, wood pulp, and other waste products), and plant crops (corn and switchgrass) that might be used to

complement or replace existing power sources. Another alternative energy source that may be applicable for the heating and cooling of buildings is the use of geothermal systems (drawing up groundwater and circulating it through pipes embedded in a building's walls).

There are efforts underway at the local and state level to encourage the conservation of energy and the utilization of alternative energy sources. The most notable of these are the projects that have been incorporated into the expansion of the American Public University System (APUS) in Charles Town and Ranson. These projects include the use of solar collectors that also serve as cover for parked cars, the installation of several electric car charging stations, and the utilization of building improvements and materials that limit the use of energy needed for heating, cooling, and lighting. The improvements undertaken by APUS can serve as a role model to new development in Jefferson County and to the redevelopment of existing structures and sites.

Several large-scale alternative and renewable energy projects have taken place in the County. Concern has been expressed that legislation prohibiting Cooperatives or Communities to create a solar panel system that would feed multiple houses is impacting the expansion and viability of implementing other solar projects in the County. As the cost of improvements decreases and the efficiency of various renewable energy materials improves, the reliance on current energy sources will be reduced as more families and businesses adopt these improvements. Emergent local, regional and National trends indicate that large scale alternative and renewable energy projects, such as solar energy facilities, have become essential and will continue to be needed to provide clean energy throughout the region and into the power grid.

Natural Gas Services

Jefferson County regional economic development officials and businesses identified the need for natural gas services to homes and businesses. At present the only area of the County served by natural gas lines is the former Kodak/3M plant in Middleway; however, the potential exists for the expansion of service capacity in the Eastern Panhandle and the extension of natural gas lines from the Berkeley/Jefferson County line along WV Route 9 to various parts of the County. The extension of natural gas into Jefferson County would aid County economic development efforts while providing an alternative to electricity for residential and commercial purposes.

One of the reasons this improvement is needed is because an increasing number of businesses are using natural gas in their manufacturing process, due to the lower costs and the cleaner emissions that result from its use. Natural gas, in a compressed or liquefied form, can also be used to fuel cars and buses. While natural gas has been primarily used as a fuel source for local and regional bus services in the US, it can also serve as a fuel source for both privately owned and County owned vehicles.

High-Speed Internet and Advanced Technology Communication Services

	c. Collaborate with local public utility providers to identify and provide incentives that would encourage property owners to transition from well and septic to a centralized system where and when needed to address public health issues.
	d. Find funding mechanisms to defray the costs of providing public utilities in areas where the provision of these utilities is necessary based on declining public health or environmental concerns.
6.	Coordinate with Region 9 and the County's public service providers to identify and seek additional funding sources that would aid in the construction of needed capital facilities and for the upgrading of existing facilities to meet newer federal standards.
	a. Continue to monitor and participate in planning efforts related to the implementation of the Chesapeake Bay Watershed Improvement Plan.
	b. Assess and evaluate the County's stormwater planning documents as best management practices in the field evolve.
7.	Identify ways that utility services can be regularly upgraded to meet the highest level of service and technology through coordination with local water, sewer, electric, gas, and telecommunications utility and service providers.
	a. Require all local electric, cable, and other utility providers to bury existing and new lines (serving new development) as a part of the regular maintenance and upgrading of their facilities.
8.	Encourage public entities to utilize alternative and renewable energy sources for a variety of energy needs.
	a. Enable the construction of renewable energy generation <u>and production</u> facilities by residents, and businesses, <u>and commercial solar energy providers</u> .
	b. Encourage County businesses and service stations to provide electric vehicle recharging stations within Jefferson County as soon as possible and use distinctive signage to guide residents and visitors to the charging stations.
	c. Develop regulations to enable cooperatives or communities to create a solar panel system that would feed multiple houses in the County.
9.	Collaborate with local economic development agencies and Information Technology (IT) providers to ensure that the current and future needs of small businesses within Jefferson County are met.
	a. Ensure that all areas of Jefferson County are served by high speed wireline and/or wireless services and other advanced technologies.
	b. Encourage private sector investment to improve wireless internet service availability in Jefferson County and the Eastern Panhandle.
	c. Ensure that, as next-generation wireless and cellular services are implemented, Jefferson County collaborates with providers, including any necessary regulatory changes, to ensure that providers are able to provide these services at the same time as other communities in the Washington, D.C. and Baltimore, MD Metropolitan Areas.