

**PLANNING IS A
CONTINUOUS
PROCESS.**



Implementation

Warren County

Planning is a continuous process. The Comprehensive Plan is intended to provide a vision of the future for Warren County. The Plan is not a static document because communities are always changing. The Comprehensive Plan provides general guidelines and recommendations to the County for proper evaluation of piecemeal improvements and day to day development decisions against their long-range impact upon the County. The Plan is not a document which encourages regimentation. It is, however, a guide which encourages development patterns that permit orderly and efficient community growth within the context of a rural setting.

Each chapter in this Plan contains specific implementation recommendations. Recognizing that this plan is intended to be a 15-year document, these recommendations have been organized by chapter, by suggested time frames for implementation. The time frames are: 1-3 years, 3-5 years, 5-10 years, and 10-15 years, as well as an annual/continuous basis. Placing these activities within time frames, allows the County to develop more specific plans and generate the needed resources to implement these activities. Finally, the time frames are not set in stone. Since the County is continually changing, any specific activity may be implemented as the County deems necessary, regardless of the specific time frame indicated. This allows the County flexibility shifting its resource use to the most important needs at any particular phase of the planning period.



Chapter 8 - Implementation

The following recommendations should be undertaken on an annual or continuous basis to implement the Plan's policies.

Chapter 3 - Natural Resources and Environment

Adequate Public Facilities Standards - Maintain a LOS policy in conjunction with the County's Fiscal Impact Model. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. LOS policies make a clear statement to developers and help reflect the public's expectations for County services. Maintaining LOS policies and standards for public services, would ensure that sufficient services were in place or would be provided as development occurs. LOS standards can ensure that service expansion coincides with new development.

Agriculture - Protect and enhance prime agricultural soils from development and encourage marketing of local produce.

Best Management Practices - Encourage the best recognized soil and water conservation management practices. This would include pollution control, with particular attention to groundwater contamination for all agricultural, forestry, and development areas, including parking lot runoff. Individual development sites and projects should be evaluated in accordance with the County Comprehensive Plan, Performance Standards, and Zoning Overlay Districts.

Capital Improvements Program (CIP) - Maintaining a CIP is important in meeting future needs.

Citizen Participation - Include County residents on committees and advisory Boards that provide additional input and comment to the Planning Commission and/or Board of Supervisors.

Coordination With Other Agencies - The increased pressure on animal habitats in the National Park and in the County makes it essential that greenways and travel corridors, in cooperation with the National Park and the National Forest, be established in appropriate areas. This would help increase the area's animal carrying capacity which is so important to tourists, conservationists, and hunters.

Directed Development - Direct future County development to designated districts where public sewer services are in place or are planned. Limit the future use of on-site sewage treatment systems to those areas where public sewage systems are unavailable. Discourage large concentrations of individual on-site sewage treatment facilities in rural and environmentally sensitive areas.

Encourage Adopt-A-River, Adopt-A-Road and Adopt-A-Spot - Encourage beautification programs which would involve and encourage local citizens to respect and preserve the environment.

Encourage Open Space - Encourage local citizens to preserve open space by placing their property in scenic easements with VOF, VCC, or the County. Encourage programs that foster preservation and assist farmers, such as agricultural/forestral districts.

Environmental Impact Statement - Enforce the County Zoning Ordinance (Section 180-64 A [1]), provision that requires the preparation and presentation of an Environmental Impact Statement by all

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proposed developers which identifies potential environmental problems and suggests appropriate mitigation strategies.

Extend bike and hiking paths - Cooperate with the Town of Front Royal to extend Front Royal's biking and hiking paths into the County, along the south fork of the Shenandoah River and along Routes 55 E., 340 S. and 522 S. Such paths and greenways should lead visitors into areas which would expose them to the year round beauty of our mountains, the bursting forth of life in the spring, and the riot of fall color.

Floodway Development Prohibition - Prohibit development within river and stream floodways. Encourage the use of floodway areas for recreational uses, agriculture, non-structural uses, and natural space. Adopt appropriate measures to protect floodway water resources from agricultural contamination. Also, prohibit the building of storage sheds, pit privies, or septic systems, in the flood zone.

Limit Future Development - Enact zoning provisions which would limit the types and intensities of development permitted in designated conservation and development districts and such environmentally fragile areas such as karst terrain, steep slopes, and floodplains. Particularly sensitive areas should be limited to low density residential uses, and park and recreation uses.

Natural Space Requirements - Establish natural space requirements and limit the extent to which a site can be covered by impervious surfaces. Requirements should specify minimum areas that must remain undisturbed and available for storm water infiltration and site vegetation. There should be maximum retention of natural vegetation and trees related to open spaces, with site clear-cutting expressly prohibited. A minimum resource protection buffer of 50 feet must be required along areas of karst terrain, wetlands, perennial rivers, and streams.

No-Net-Change - Continue to prevent no-net-change in runoff at development sites. Drainage techniques normally channel storm water runoff away from the structure and off of the site. The volume, velocity, and sediment content of storm water runoff leaving a developed site should be no greater than pre-development levels. Use Best Management Practices to limit discharge of oil, gas, etc. from parking lots and garages. Special requirements are needed when development occurs in areas such as karst terrain, where storm water directly enters the groundwater through depressions, sinkholes, and fractures.

Performance Standards - Incorporate into zoning and subdivision ordinances new performance standards for environmental protection within sensitive areas which would protect natural features and identify potential hazards such as wetlands, critical plant and wildlife habitat, karst terrain, floodplains, and slopes subject to erosion. Such standards would allow quantification of existing and potential problems and would define performance criteria in excess of minimum property standards applicable to less sensitive areas.

Note: When standards for new work, or an existing problem has been identified, a performance standard is chosen or developed that will assure the desired result. A desirable rather than a minimal standard is applied. In some cases the two can be the same.

Permit Evidence - Require evidence of all federal, state, and local environmental and health permits as a condition for development approval, thereby assuring that potential air, water, and soil contamination is addressed.

Preserve Natural Vegetation - Expressly prohibit site clear-cutting, thereby preserving natural vegetation and trees during development. Require the protection of mature trees and vegetation preservation during development. If tree removal is unavoidable, require replacement plantings. Encourage generally-accepted good forest management practices when private logging operations are anticipated. Where vegetation is removed, require grass seeding for erosion control.

Public Education and Participation - Encourage the incorporation of environmental concept curriculum in Warren County Schools and in civic associations.

Recreation - Provide varied access to natural features through means such as biking and hiking paths and public access to the Shenandoah River and tying into existing bike paths. This will allow residents and visitors to enjoy the County's recreational opportunities.

Recycling and Education - Maintain the recycling program and continue the County's twice a year cleanup days. Promote recycling through educational programs in local schools and civic associations.

Slope Density Regulation - Investigate controlling development, including building permits, in areas where the site slope could pose an environmental danger. Enact slope density regulations.

Views/Vistas, Tourism, and Rural Character - To preserve views from the Skyline Drive and vistas along County roads, both vital to tourism and rural character, discourage clear cutting and unnecessary tree cover and other natural vegetation reduction by application of best management practices. Encourage cluster development and discourage strip development.

Voluntary Proffers - Maintain a proffer system associated with the Capital Improvements Plan.

Zoning Related Incentives - Develop zoning criteria that will encourage cluster development while discouraging both residential and commercial strip development. Priority consideration should be given to cluster housing development with the minimum number of outlets to state and County roads, with broad tree and greenway buffers between the structures and public roads.

Chapter 4 - Land Use and Growth Management

Section 1

Adequate Public Facilities Standards - A Level of Service Policies (LOS) should be maintained. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. LOS policies, make a clear statement to developers and reflect the public's expectations for County services. Establishing LOS policies and standards for public services ensures that sufficient services are in place or would be provided as development occurs. LOS standards can ensure that service expansion coincides with new development.

Agricultural and Forestal District Expansion - Encourage expansion and addition of voluntary Agricultural and Forestal Districts throughout rural areas.

Capital Improvements Program (CIP) - Maintaining a CIP is important in meeting future needs. The Capital Improvements Plan is intended as a guide to assist the Board of Supervisors in the development of the County's budget. Warren County's Capital Improvements Plan includes major

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capital projects that are: non-recurring, should have a “useful life” of five years or more; and the estimated cost of the expenditure must exceed \$50,000 for a general government project and \$100,000 for a school project. Projects included in the document address facilities development and/or improvement, infrastructure and large equipment needs.

Citizen Participation - Include County residents on committees and advisory boards that provide additional input and comment to the Planning Commission and or Board of Supervisors.

Fiscal Impact Analysis - The development of a residential per-unit fiscal impact model has been completed. The model provides a rational basis on which to accept developers’ proffers. Fiscal impacts are calculated for schools, law enforcement, fire and rescue, waste collection and disposal, as well as for other community facility needs. The model has also been updated to include industrial/commercial development.

Public Service Limitation - Limit the extension of water and sewer services to outlying rural areas, thereby preventing sprawling development patterns.

Research and Technology Zones—Encourage the establishment of one or more research and technology zones in the County to encourage growth in these targeted industries.

State/Federal Program Participation - Encourage rural property owners and farmers to participate in local, State and Federal Programs designed to foster resource conservation. Such programs could include: Agricultural Cost-Share and Conservation Easements.

Voluntary Proffers - Maintain a proffer system associated with the County’s Capital Improvement Plan (CIP).

Zoning Ordinance Revision - Revise the Zoning Ordinance to create a second commercial district. Permitted uses should include hotels, motels, sit-down restaurants, banks and other high-end uses. The district should not allow truck stops or other such uses.

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth and development of Rural Villages. These areas should retain their traditional character as they develop into service centers for the surrounding rural areas.

Section 2

Drainage Preservation Easements - The preservation of natural drainage shall be incorporated into development plans for the proposed land area.

Environmental Hazards - Determine the nature and magnitude of environmental hazards. Explore, adopt, and implement means of reducing these hazards.

Geographic Information System - Update and maintain a County geographic information system. The system would serve as a centralized location for the storage of and management of all County data.

Greenways & Landscaping - Revise development regulations that encourage and provide incentives for the preservation of greenways in development projects. Additionally, continue to provide high landscaping standards associated with development projects.

Land Use & Development Performance Criteria - Follow State standards to minimize the effects of erosion and sedimentation potential, maximize rainwater infiltration, and establish vegetative buffers along perennial streams to protect water quality.

Preservation Performance Criteria - Developers must demonstrate to the County that the use and development of land meets the following aspects:

- Only that land which shall be disturbed is necessary to provide for the desired use.
- Native vegetation shall be preserved to the maximum extent possible consistent with the use and development allowed.
- The establishment of a vegetative buffer around significant sinkholes and karst areas to enhance and protect water quality.
- All State and Federal regulations have been followed for land disturbance and storm water related issues.
- All permanent features/structures have properly been documented as to how any maintenance will be permanently addressed.

Section 3

Accessory Apartment Units - Permit Accessory Apartment units to be utilized with adequate safeguards to protect the character of existing neighborhoods. This strategy will stimulate new, moderate cost rental housing for both young and elderly households while preserving larger, older homes and allowing elderly homeowners to stay in their residence. The original home should have an owner occupied resident and should appear from the outside as a single family dwelling.

Bonus Densities for Affordable Housing - Grant bonus densities to planned development projects thereby encouraging the provision of more affordable housing as authorized by the 1994 General Assembly. An ordinance provision should be written to allow bonus densities in support of more affordable housing.

Building Codes - Adopt and enforce federal and state building codes to remove substandard rental housing conditions.

Commercial Apartments - Permit apartments in conjunction with commercial establishments in village zones.

Flexibility in housing types - Foster land use patterns and provide builder incentives to encourage flexibility in housing types by reducing land costs. This type of program can be achieved by planned residential development and cluster development provisions within the County's zoning ordinances. This strategy can also be implemented by allowing maximum flexibility in configuring lots into clusters rather than relying on minimum size lots to determine the desired density in a neighborhood. The increased flexibility will allow for maximum efficiency in providing infrastructure (water & sewer) to homes. Multi-family housing should be encouraged in areas close to activity and employment centers.

Housing Trust Fund - Consider setting up a local Housing Trust Fund. The Virginia Housing Development Authority (VHDA) and the Virginia Department of Housing and Community Development (VDHCD) administer a State fund to be used as a revolving loan fund to induce the development of low and moderate income housing.

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Indoor Plumbing/Adequate Sanitation - Provide technical assistance and create partnerships with non-profit and with for-profit organizations to provide indoor plumbing and to upgrade substandard conditions for all existing low and moderate income residents.

Manufactured Housing - Continue to allow manufactured houses that are constructed off site, transported in one or more sections and placed on a permanent foundation, to be used as dwellings, subject to all federal regulations.

Mobile Homes - Continue to permit mobile homes in designated areas as a means of providing affordable housing. Establish performance standards to ensure their use creates a safe, sanitary living environment. The current zoning regulations regarding mobile homes should be reviewed to determine if ordinances are in place and to ensure that they make a positive contribution to the housing stock and to the community.

Utilize local, state, and federal funds for housing programs - There should be a concerted effort to review the County's history of housing funding source use. In addition, other funding sources should be identified and utilized. A funding development plan should be developed and timetables established for the application for available funds. Encourage partnerships with County government agencies and non-profits to secure and apply for these funds.

Some of the sources to be explored:

- Virginia Housing Partnership Program
- Virginia Housing Production Program
- Community Development Block Grants
- HUD Section 236 Program
- HUD Section 202 Housing for Elderly and Handicapped
- HUD Section 8 Housing Vouchers

Volunteerism - Coordinate local resources, non-profits, local agencies, church groups, and for profit organizations, to rehabilitate, build, and upgrade housing stock within the County.

Section 4

Agricultural & Forestal District Expansion - Encourage expansion and addition of voluntary Agricultural and Forestal Districts throughout rural areas.

Public Service Limitation - Limit the extension of water and sewer services into outlying areas to prevent sprawling development patterns.

State/Federal Program Participation - Encourage rural property owners, including farmers, to participate in State/Federal Programs designed to foster conservation of resources. Such programs might include: Agricultural Cost-Share, and Conservation Easements.

Zoning Ordinance Revision - Maintain a Rural Residential (RR) zoning district which corresponds with the future Land Use Map's designated area in the zoning ordinance for parcels of land larger than two acres, but smaller than six acres. This District would provide a transition zone between the traditional residential districts and truly agricultural districts. Residential development in this area shall be of low density, not exceeding one net unit per five acres.

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth, expansion, and development of Rural Villages. Additionally, allowances must to be made for possible new Villages in the County. These areas should retain their traditional character as they develop into service centers for the surrounding agricultural and rural regions.

Section 5

Public Service Limitation - As the County develops water and sewer service for the Rural Villages, limits on the expansion of these services into outlying rural areas must be developed. Without such limits sprawling development patterns will result.

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth and development of Rural Villages. These areas should retain their traditional character as they develop into service centers for the surrounding agricultural and rural areas. Additionally, the provision of dual uses on single parcels of land or within an existing building must be included in the ordinance revision.

Section 6

Ordinance Revision - Continue to require as part of the County's Zoning Ordinance that commercial forest activities, including sale of trees, in residential areas be conducted in accordance with the guidelines established in the Virginia Department of Forestry's latest edition of *Logger's Guide*. To prevent clear-cutting, there shall be no cutting of trees with a diameter of eight inches or less (25-inch circumference). No commercial forest cutting in residential areas should occur without County review. A pre-harvest plan and map with the following guidelines should be required:

1. Property boundaries
2. Streams and drainage
3. Critical areas
4. Road and trail locations
5. Stream and drainage crossings
6. Log landings and mill seats
7. Stream-side management zones (SMZ's)
8. Other environmental concerns

The following should also be included:

1. Road and trail specifications
2. Harvesting equipment to be used
3. Timing of the harvest
4. Logging contract specifications
5. Special planning for wet areas
6. Obstructions, such as rock outcroppings
7. When and where best management practices will be used

Stream Buffer Zones - Designate stream buffer zones to protect water quality. Establish buffer zones along streams where commercial logging operations and other development activities are occurring.

Timber Resources - Commercial and non-commercial forest cutting should be conducted to ensure long term forest viability and to minimize negative environmental impacts, particularly along streams,

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rivers, and wetlands. Water resources can be protected by providing buffer zones along these environmental features.

Section 7

Increased Agency and Locality Cooperation—Work with the Shenandoah National Park and other jurisdictions surrounding the park to promote the presence of the Park in our jurisdictions. This could include the establishment of an overlay district that would help enhance the gateway to the Skyline Drive and the Shenandoah National Park.

Section 8

Economic Development - Continue providing ample sites with adequate infrastructure, thereby developing a diverse economic base for the County.

Performance Standards - The creation of performance standards relating to site design, infrastructure, and environmental issues must be incorporated in the County's development regulations.

Section 9

Focused Development - Traditionally, villages like Bentonville, Browntown, Limeton, Reliance, Rivermont, Rockland, and Waterlick were focused around elementary schools, churches, convenience stores, and the fire hall. With school consolidation, the local village schools are gone and a more mobile population has decreased the importance and viability of village stores. Stricter health regulations and potential pollution problems make additional development difficult in some of the traditional centers. As a way to refocus rural residential growth at these existing centers, the County should consider small scale sewage treatment plants and water systems to serve these villages. Much of Warren County is divided by hilly terrain, rivers, parks, and the National Forest. These conditions make future centralized sewage treatment and water systems prohibitively expensive. Additionally the spokes from a central system promote linear, strip development which would destroy our rural character.

Cluster Development - This type of development aids in preserving open space and in reducing contractor development costs. This type of development can provide a wide variety of housing types and creative site design.

Rural Character - Allow the construction of small sewage treatment facilities in rural villages such as, Browntown, Bentonville, and /or Limeton which could combine services with the Raymond R. "Andy" Guest, Jr., Shenandoah River State Park.

Section 10

Agency Participation - Work with the Virginia Department of Transportation and transportation consultants on corridor plans to develop the overall framework.

Chapter 5 - Community Facilities

Section 1

Awareness of Existing Tools - Support educational efforts by promoting awareness of existing tools as is done in *A Property Owner's Guide to Resource Protection*, the Virginia Department of Conservation and Historic Resources publication.

Citizen Participation - Include County residents on committees and advisory boards that provide additional input and comment to the Planning Commission and/or Board of Supervisors.

Civil War Battlefields—Preserve Civil War battlefields through existing County land use protection tools for open space preservation and agricultural support such as the purchase or donation of development rights, conservation or scenic easements, and expansion or creation of Agricultural and Forestal Districts in battlefield areas where productive farms are located. Consider potential impacts, including viewsheds, with proposed future development, land use and/or zoning change on or within close proximity to the battlefield sites.

Education - Encourage school system and community wide participation in a historical resources management program through education and public awareness.

Ensure Compatibility - Provide architectural guidelines for new development, thereby ensuring compatibility with existing historic structures.

GIS Layer - Develop a GIS layer for historical sites identified in the 1991 Rural Historic Resources Survey.

Historically Significant Open Spaces - Encourage and assist property owners to voluntarily place scenic easements on lands associated with historic buildings, sites, and archaeological resources representing all of the County's historical time periods and cultures.

Local Historic Districts - Establish historic overlay districts, located throughout the County, as part of the County's zoning ordinance. These districts would provide protection over and above the regular zoning regulations for such areas. Local historic overlay districts are established by the Board of Supervisors after required public hearings and may be proposed by any property owner, neighborhood organization, or by any County Board or Commission.

Review Development Proposals - Review development proposals which might adversely affect historic resources when granting permits for development or other forms of land alteration, such as grading and mining. Negotiate mitigation measures where possible.

Rural Historic Resources Survey - Continue to follow the policies and recommendations set forth by the 1991 Rural Historic Resources Survey Report of Warren County. Regulate and control development activities to prevent impairment to historical sites.

State and Federal Programs - Support state and federal programs, such as the National Register of Historic Places, which fosters incentives for structures' protection or restoration.

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Support Archaeological Research - Support archaeological research through preservation and through encouraging developers to allow archaeologists a limited time to excavate the proposed site before development begins.

Support Organizations - Support the efforts of the County's preservation and cultural organizations and encourage open communications between these organizations.

Support Owners - Encourage and assist property owners to pursue state and national register designation. Consider including tax incentives for major structural or exterior renovation, or for the donation of protective historic easements.

Tourism - Promote the County's historic sites through cooperation with the Town's tourism department, via such items as pamphlets distributed by the Chamber of Commerce and by other organizations.

Section 2

Beautification Committee - Utilize the local beautification committee to assist the Planning Commission with landscaping and corridor standards for new development proposals.

Capital Improvements Program - Maintaining a CIP is important to identify future needs.

Cluster Development - Encourage developers to utilize cluster development by reducing lot size and/or consolidating lot layout in order to provide compensating amounts of open space within the subdivision. Although no increase in the number of lots is allowed, consolidation of layout would save the developer infrastructure costs and the County would acquire significant cost-free open space.

Consulting the Virginia Department of Conservation and Recreation - Take advantage of the Department of Conservation and Recreation's recreational consultation and workshops to become better informed about streamlining local departmental operations and developing, operating, and maintaining park and recreation programs.

Evaluation - Periodically evaluate recreational facilities and programs to determine if the community's needs are being met. This can be accomplished through surveys of residents and facilities' users.

Inventory - Maintain an inventory of all parks and recreation facilities, private and public, throughout the Town and the County. By maintaining an overview of all the facilities, the County and Town can ensure that recreational needs are met in a timely and cost effective manner.

ISTEA - Apply for enhancement grants for the acquisition and development of trails and greenways.

Nature Trails (hiking and biking) - These needs can be met through Warren County and Front Royal joining adjacent counties to connect their Greenways and Trails. These trails would link park lands, conservation areas, scenic landscapes, and historic/cultural sites. Initial projects would extend the Town's proposed trails' plan into the County to link State and Federal Parks with the Town's existing facilities. Such a project could use existing rights-of-way (i.e. road shoulders).

Neighborhood Parks - Encourage developers to design subdivisions with a central theme of a neighborhood park that would include playground apparatus, open space, and a hard-surfaced

activity area. In addition to providing recreational areas in the County, residents would have the enjoyment of having a park within walking distance of their home which could provide recreation for the entire family.

Ordinance Revision - Provide open space and recreational facilities requirements in the County's zoning and subdivision ordinance.

Parks and Facilities Distribution - Parks and similar facilities must be located in the County where users live. Explore using school sites for additional facilities.

Residential Institutions - Require that nursing homes and similar institutions provide passive open space and on-site outdoor activity facilities.

Scenic Byways - Support the Virginia Scenic Byways and Scenic Rivers programs.

Special User Groups and Facility Accessibility - Ensure the availability of a variety of programs for people of all ages and for special user groups, such as the physically disabled. Also, when planning new facilities or upgrading existing ones, design the facility to be completely accessible to the physically disabled.

Traditional Parks (ball parks and playground facilities) - Facilities should be established near population centers at each side of the County (north, south, east and west). Acquire tracts of land in each County area to provide fully developed park sites and to allow for future expansion.

Tourism - Capitalize on the area's tourism through publication of recreational site locations and activities, public waterfront access locations, and Community programs and events.

User Fees - Develop and expand a user fees system which would generate revenues for park maintenance, operational costs, and facility improvements.

Virginia Outdoors Fund - Apply for Virginia Outdoors Fund money to assist in acquiring and developing recreational lands.

Voluntary Proffers - Maintain a proffer system associated with the Capital Improvement Plan.

Volunteer Programs - Establish a Park and Recreational Department volunteer program, thereby increasing manpower at a minimum cost.

Waterfront Access - Acquire land along both forks and the main stem of the Shenandoah River to ensure public access to the river.

Section 3

Alternative Funding - Support development of the Warren County School private endowment fund.

Capital Improvement Planning - Maintain a capital improvements plan that meets the County Comprehensive Plan's criteria and goals. This program would assist the County in setting priorities and in efficiently using available funds.

Maintain a School Plan - This plan would identify the school division's educational instruction and physical facilities needs.

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Educational Opportunities - Periodically review and evaluate current programs and ensure that expanded educational programs are provided in a cost efficient manner. Additionally, ensure that the programs use a child/student centered approach.

New Facilities - When new facilities are constructed, plan and provide for instruction materials, transportation needs, and renovations to existing school buildings and administrative offices, as well as for the building of a new school(s).

Voluntary Proffers - Voluntary proffers provide a direct means of obtaining the needed capital improvements to service new developments. Continue using proffers to help defray expanding school facilities' costs.

Section 4

Communication Center - While the current communications center is operating under the management of law enforcement, a joint operated communications center should be established and maintained with the appropriate policies and procedures in place, as well as appropriate fire and rescue training for the communications officers.

Implementation of Springsted Study - Continue implementation of the EMS, Fire Services and Emergency Communications Study adopted by the Board of Supervisors on June 16, 2009.

E-911 Management - The County should fund a person to supervise the E-911 System, maps, road names, house numbering, and equipment list. Additionally, this person would provide other logistical and management support to the Joint Communications Center necessary to provide the highest quality of service to County citizens.

Equipment & Training - Continue to support the funding of special equipment as well as regular and specialized training to ensure quality service to Warren County citizens. Maintain a training committee to identify future needs of the fire and rescue department in the area of training. The committee should look at service delivery needs and address mandatory training standards as needed or required.

Fire Chief's Advisory Committee - Continue to utilize the Fire Chief's Advisory Committee to set into motion the County's goals and objectives for fire and rescue protection utilizing a participatory management system so that all of the members have a voice in the direction and future of the County's emergency response system.

Insurance - Warren County should develop and fund a comprehensive County-wide insurance plan for volunteer fire and rescue companies.

Recruitment and Retention Committee - Maintain a recruitment and retention committee to examine volunteer response needs and address with methods to encourage volunteerism through such methods as incentives and other ideas used by other agencies to attract volunteers.

Section 5

Adequate Public Service Standards - Establish adequate public service standards which would help to control the development process by showing that sufficient services are in place or will be provided as development occurs. This standard can ensure that service expansion coincides with new development

Capital Programming - Develop a capital improvements program.

E-911 - Continue implementing the E-911 system, with a dispatch and communications center for joint use of fire, rescue, and law enforcement protection.

Review and Evaluation - Conduct yearly reviews and evaluations of the Sheriff's Department services to ensure that resources are effectively used before proceeding with service expansion.

Voluntary Proffers - Maintain a proffer system that provides a direct means of obtaining needed capital improvements funds.

Section 6

Capital Programming - Maintain a capital improvements program to fund expansion of library resources and facilities. Such resources would include additional books, seating facilities, E-books, and word processors, or computers for patrons' use. Additionally, develop branch libraries in County locations where population concentrations are sufficient to support such facilities.

Endowment Fund - Support and encourage the creation of an endowment fund to provide additional library services that meet the priorities of the Library.

Public Facility Standards - Develop a system of standards that would ensure that sufficient infrastructure and services are present or would be provided in conjunction with development proposals.

Voluntary Proffers - Maintain a voluntary proffer system in association with existing development which would ensure that additional services would be funded equitably by those benefiting from such expanded services.

Section 7

Capital Programming - Maintain a Capital Improvements Program to assist in the costs associated with the maintenance of and the additional public facilities and programs.

Meet Existing Needs First - Continue to maintain and evaluate replacement sites for the all of the existing compactor sites prior to looking at additional sites.

Voluntary Proffers - Maintain a proffer program as a direct means of obtaining the needed capital improvements to service new developments.

Section 8

Adequate Public Facilities Standards - From the County's Comprehensive Plan a Level of Service policies (LOS) should be maintained through the County's fiscal impact model. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. With the establishment of LOS policies, the County makes a clear statement to developers which would reflect the public's expectations for County services. Establishing LOS policies and standards for public services, ensures that sufficient services are in place or will be provided as development occurs. LOS standards ensure that service expansion coincides with new development. This implementation strategy applies to all types of County facilities and services.

Chapter 8

Government Center Future Expansion - Purchase additional buildings/land next to the Government Center to allow for expansion in the future.

Parking Facilities - Provide adequate parking for citizens as well as for employees at all County facilities.

Chapter 6 - Economic Development

Business Attraction - Aggressively market Warren County to industrial and commercial prospects. Emphasize the attraction and growth of businesses that maintain and enhance the County's quality of life.

Capital Improvements Program - Maintenance of a CIP is important to meet future needs.

Citizen Participation - Include County residents on committees and advisory boards that provide additional input and comment to the Planning Commission and/or Board of Supervisors.

Education - Provide students with basic skills to be able to compete for jobs within the local economy and work with Lord Fairfax Community College on providing students with post-graduate opportunities.

Enterprise Zone - Expand and extend the County's enterprise zones to permit state and local tax incentives to new businesses.

Fiscal Impact Analysis - Maintain a per-unit fiscal impact of residential and commercial development would provide a rational basis on which to accept developer's proffers. Such fiscal impacts must be calculated for schools as well as for other community facility needs.

Free Trade Zone - Maintain designation as a free trade zone, especially for areas in and around the Inland Port facility.

Increase Capital - Work with the local finance and banking community to increase the availability of seed and start-up capital for new and small businesses.

Job Opportunities - Provide job opportunities that pay a living wage, provide health and retirement benefits and demonstrate a positive interest in existing and new industries. Increase variety of job opportunities for unemployed and underemployed citizens.

Management Guidance - Work through the Economic Development Authority to provide small and new businesses with the necessary management and marketing skills to facilitate success.

Public/Private Partnerships - Encourage public/private partnerships that will provide well serviced and properly located industrial sites which can be developed quickly.

Shell Building Program - Invest in a shell building program that will provide available space as well as incubator facilities for new and small businesses.

Site Identification - Identify potential sites compatible with the Future Land Use map for industrial, commercial, and office development, based on the following locational and market criteria:

- Availability of infrastructure.
- Commercial/Community Center location.
- Access to major transportation routes.
- Compatibility with surrounding development

Small Business Assistance - Develop programs which would assist small business with marketing of products and services. Assist local entrepreneurs to locate and acquire new business financing.

Tourism - Continue to emphasize and promote tourism as an industry. This should be accomplished through coordination with local, regional, and State tourism development Boards and agencies.

Water/Sewer Service - Examine alternative means of providing solutions for servicing the County's water and sewer needs, including State and Federal agency grant funds. Ultimately, a regional water/sewer authority should be developed. Currently, the County does not have a water or a sewer system.

Voluntary Proffers - Maintain a proffer system associated with the CIP.

Chapter 7 - Infrastructure

Section 1

Adequate Public Facilities Standards - Establish public facility and design standards for new development proposals within service districts.

Cooperation - Investigate and cooperate with the Town of Front Royal or other entities.

Citizen Participation - Include County residents on committees and advisory boards that provide additional input and comment to the Planning Commission and/or the Board of Supervisors.

Development Service Districts - Establish Development Service Districts based on the premise that new development can be serviced most efficiently if it is limited to certain County areas. A Development Service District's key to success is the availability of services and capital improvements.

Establish A Water Authority - Develop the County Water Authority to provide service extensions where appropriate into the County, or develop County owned facilities. (The County currently has a Water Authority, with includes the members of the County Board of Supervisors.)

Special Taxing Districts - Consider using special taxing districts to aid in financing public facilities.

Voluntary Proffers - Maintain a proffer system for capital improvements associated with development proposals and service expansion.

Section 2

Adequate Public Facilities Standards - Establish public facility and design standards for new development proposals.

Consultant - Consider using a private consultant or providing additional staff to the County Health Department to conduct a County testing program that would gather evidence for State and Federal funds' application for a sewer service system and organization within the County.

Development Service Districts - Establish Development Service Districts based on the premise that new development can be serviced most efficiently if it is limited to certain County areas. A

Chapter 8

Development Service District's key to success is the availability of services and capital improvements: therefore, provide water and other types of infrastructure to accommodate anticipated growth.

Establish A Sewer Authority - Develop a Sewer Authority to provide service extensions where appropriate into the County, or develop County owned facilities.

Revise Ordinance - Revise the existing ordinances pertaining to County septic systems. Increase the development and/or design standards for County septic systems. Establish a buffer between septic systems and perennial streams and the Shenandoah River.

Special Taxing Districts - Consider using special taxing districts to aid in public facilities financing.

Voluntary Proffers - Maintain a proffer system for capital improvements associated with development proposals and service expansion.

Section 3

Capital Improvements Plan - Maintain a Capital Improvements Plan to identify and fund needed improvements in existing County developments.

Inspection & Maintenance - Conduct annual inspections of any stormwater control devices by County inspectors to ensure proper maintenance. Maintenance can be by a property owner's association or by the County through a special taxing district.

Special Districts - Explore the use of service and taxing districts to address the existing problems associated with stormwater management.

Stormwater Management Plan/Ordinance - Evaluate developing and implementing a stormwater management plan and ordinances associated with the plan, to address stormwater management issues.

Section 4

Access Management - Create, initiate, and support an access management program. Ordinances would ensure that access opportunity is not unnecessarily pre-empted along key road links, or near major intersections, particularly those along the designated Highway Corridor Districts. Consider the following techniques in managing access to principal corridor roadways.

- Limit the number of conflict points by installing physical barriers, modifying driveways, and installing signals at entrances.
- Separate basic conflict areas by regulating the minimum spacing of driveways, spacing driveways optimally in the permit authorization stage, consolidating access for adjacent properties, buying abutting properties, denying access to small frontage parcels, and requiring access via collector streets, i.e. service roads, etc.
- Minimize the need for deceleration in traffic by geometrically designing access points.
- Remove turning volumes or queues from through lanes sections by pavement marking alterations, geometric design modifications, right-of-way acquisition, or by requiring adequate internal site circulation.

- Adopt guidelines for access type and minimum spacing of intersections.
- Revise zoning and subdivision provisions to require reverse frontage lots on all County roads and to minimize left turn movements or conflicts, both on the site and in the street.
- Design driveways in order to achieve clear sight lines based on design speeds as adopted by VDOT. Require that site access and circulation conform to the following standards:
 - Arrange vehicular site access to avoid traffic use of local residential streets.
 - Require that site access roads have sufficient traffic carrying capacity to accommodate the amount and type of traffic generated by proposed development.
 - Require that provisions are made for turning lanes, directional islands, frontage/service roads, driveways, and traffic controls within the road.

Capital Programming - Capital programming has been recognized as a pro-active way of avoiding some of the past transportation capacity problems. To assure that opportunities for pre-planned expansion are not missed, implement and require an annual review of the County Capital Improvements Program (CIP). Coordinate the CIP with the County's Comprehensive Plan. Annually evaluate the relationship between the State's available resources and the demands upon the County's road systems created by the proposed land uses and by land use trends. The County should perform preliminary studies in conjunction with VDOT to ensure that adequate rights-of-way for proposed improvements and future roads can be preserved.

Commercial and Industrial Parks - Discourage linear development and encourage interior uses in planned parks where access control is efficient and where interior roads, rather than arterial or collector roads, provide access. This land use technique will discourage shallow strip development. This technique also provides deeper commercial and industrial zoning and permits effective site design to maximize access point usage. When between two and five commercial establishments can use a single access point, substantial traffic flow improvement results.

Coordination of Land Use/Transportation Planning Process - Emphasize coordination between the County, Town, and VDOT, on matters related to planning and programming, improvements, and transportation systems' management. Several steps can be taken to improve the current transportation planning process. The County and State should work together to evaluate the County Comprehensive Plan's transportation system implications and a coordinated State and County transportation management policy should address expansion of car-pooling. This is particularly important at the major collector highway intersections serving commuters.

Development of Local Circulation Plans - Develop traffic circulation plans for each community center and/or village center to provide adequate traffic facilities and to access control on a smaller scale.

Highway Corridor Overlay Zoning - Overlay zoning should include access controls, transportation impact analysis for high volume-uses, as well as design and landscaping requirements. Overlay zoning brings additional design requirements and standards beyond those required by underlying zoning.

Chapter 8

Intermodal Surface Transportation Efficiency Act (ISTEA) & Other Transportation Grants - Explore and apply for transportation grants for funding of major infrastructure projects.

Proffers - Utilize the Comprehensive Plan and the CIP to encourage dedication to new road rights-of-way, for road extensions, and widening existing highways.

Rights-of-Way Reservation and New Road Construction - Preserve rights-of-way for road improvements consistent with the Comprehensive Plan, the State Transportation Plan, and the CIP.

Special Service Districts - Use special service districts as a financing mechanism for service roads needed to control access along highway corridors.

Traffic Impact Analysis - Require a traffic impact analysis of all major new projects as part of the zoning process. This analysis would be used to determine post development traffic levels. At a minimum, the traffic analysis should include a description of past and present roadway conditions, existing roadway capacity, traffic accident data, existing and projected traffic volumes (ADT and peak traffic), existing and projected levels of service, and existing and proposed sight lines. Where the County has short-term improvements scheduled, the development could include such improvements in the traffic impact analysis. Precise standards for the preparation of these analyses should be adopted.

The following recommendations should be implemented within 1 to 3 years after the Plan's adoption.

Adequate Public Facilities Standards - From the County's Comprehensive Plan a Level of Service Policies (LOS) must be developed. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. With the establishment of LOS policies, the County would make a clear statement to developers which would reflect the public's expectations for County services. Establishing LOS policies and public services' standards, this would ensure that sufficient services are in place or would be provided as development occurs. LOS standards could ensure that service expansion coincide with new development.

Capital Programming - Capital programming has been recognized as a pro-active way of avoiding some of the problems associated with the providing of public facilities. To assure that opportunities for pre-planned expansion are not missed, continued implementation of the County Capital Improvements Program (CIP) is important in meeting future needs. Coordinate the CIP with the County's Comprehensive Plan. Annually evaluate the relationship between the County's available resources and the demands upon the County's public facilities created by the proposed developments.

Citizen Participation - Include County residents on committees to develop the overall framework on landscaping/beautification, corridor standards, and other relevant topics. The committees would serve as advisors to the Planning Commission and the Board of Supervisors.

Voluntary Proffers - Voluntary proffers provide a direct means of obtaining the needed capital improvements to service new developments. Proffers are developed from a capital program detailing the costs associated with providing additional services. Maintain a proffer system associated with the County's Capital Improvements Plan (CIP).

Chapter 3 - Natural Resources and Environment

Directed Development - Direct the majority of future County development to designated districts where public sewer services are in place or are planned. Limit the future use of on-site sewage treatment systems to those areas where public sewage systems are unavailable. Discourage large concentrations of individual on-site sewage treatment facilities in rural and environmentally sensitive areas.

Limit Future Development - Enact zoning provisions which would limit the types and intensities of development permitted in designated conservation and development districts and in such environmentally fragile areas as karst terrain, steep slopes, and flood plains. Particularly sensitive areas should be limited to low density residential uses and park and recreation uses.

Performance Standards - Incorporate into zoning and subdivision ordinances new performance standards for environmental protection within sensitive areas which would protect natural features and identify potential hazards such as wetlands, critical plant and wildlife habitat, karst terrain, floodplains, and slopes subject to erosion. Such standards will allow quantification of existing and potential problems and would define performance criteria in excess of minimum property standards applicable to less sensitive areas. Additionally, these standards would address site design and infrastructure.

Zoning Related Incentives - Develop zoning criteria that will encourage cluster development while discouraging both residential and commercial strip development. Cluster housing development with the minimum number of outlets to state and County roads, with broad tree and greenway buffers between the structures and public roads, should be given priority consideration and should be rewarded by reduced taxes on land that is left in a natural state or that is dedicated to parks or preserves. Another incentive for such development could be the allowance of additional units clustered within the original site acreage.

Chapter 4 - Land Use and Growth Management

Accessory Apartment Units - Permit Accessory Apartment units to be utilized with adequate safeguards to protect the character of existing neighborhoods. This strategy will stimulate new, moderate cost rental housing for both young and elderly households while preserving larger, older homes and allowing elderly homeowners to stay in their residence. The original home should be an owner occupied and should appear from the outside as a single family dwelling.

Bonus Densities for Affordable Housing - Grant bonus densities to planned development projects to encourage the provision of more affordable housing as authorized by the 1994 General Assembly. An ordinance provision should be written, allowing bonus densities to support more affordable housing.

Commercial Apartments - Permit apartments in conjunction with commercial establishments in village zones.

Greenways and Landscaping - Revise development regulations that encourage and provide incentives for the preservation of greenways in development projects. Additionally, continue to provide high landscaping standards associated with development projects.

Flexibility in housing types - Foster land use patterns and provide builder incentives to encourage flexibility in housing types by reducing land costs. This type of program can be achieved by planned residential development and cluster development provisions within the County's zoning ordinances. This strategy can also be implemented by allowing maximum flexibility in configuring lots into clusters rather than relying on minimum size lots to determine the desired density in that neighborhood. The increased flexibility will allow for maximum efficiency in providing infrastructure (water and sewer) to homes. Multiple-family housing should be encouraged in areas close to activity and employment centers.

Cluster Development - This type of development would aid in preserving open space and in reducing contractor's development costs. This type of development can provide a wide variety of housing types and creative site design.

Preservation Performance Criteria - Developments must demonstrate to the County that land use and development meets the following aspects:

- No more land shall be disturbed than is necessary to provide for the desired use or development.

- Preservation to the maximum extent possible, native vegetation consistent with the use and development allowed.
- Any land disturbing activity that exceeds an area of 2,500 square feet (including construction of all single-family houses, septic tanks, and drain fields, but otherwise defined in Section 10.1560 of the Code of Virginia) shall comply with the requirements of the local sediment and erosion control ordinance.
- The establishment of a vegetative buffer around significant sinkholes and karst areas to enhance and protect water quality.

Public Service Limitation - As the County develops water and sewer service for the Rural Villages, limits on the expansion of these services into outlying rural areas must be developed. Without such limits sprawling development patterns will result.

Stream Buffer Zones - Designate stream buffer zones to protect water quality, establishing buffer zones along streams where commercial logging operations and other development activities are occurring.

Zoning Provisions - Adopt zoning provisions for the orderly growth and development of Rural villages. These villages should retain their traditional character as they develop into service centers for the surrounding agricultural and rural areas. Additionally, the provision of dual uses on single parcels of land or within an existing building, must be included in the ordinance revision. Finally, allowances must to be made for possible new Villages in the County.

Chapter 5 - Community Facilities

Cluster Development - Encourage developers to utilize cluster development by reducing lot size and/or consolidating lot layout in order to provide compensating amounts of open space within the subdivision. Although no increase in the number of lots is allowed, consolidation of layout would save the developer infrastructure costs and the County would acquire significant open space at no cost.

Education - Encourage school system and community wide participation in an historical resources management program through education and public awareness.

Inventory - Establish an inventory of all parks and recreation facilities, private and public, throughout the Town and County. By keeping an overall view of the all facilities, the County and Town can ensure that needs are met in a timely and cost effective manner.

Ordinance Revision - Provide requirements for open space and recreational facilities in the County's zoning and subdivision ordinance.

Chapter 6 - Economic Development

Adequate Public Facilities Standards - From the County's Comprehensive Plan a Level of Service Policies (LOS) must be developed. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. With the establishment of LOS policies, the County would make a clear statement to developers which would reflect the public's expectations for County services. By establishing LOS policies and standards for public services, this would ensure that sufficient services are in place or will be provided as development occurs. LOS standards can ensure that service expansion coincides with new development.

Management Guidance - Work through the Economic Development Authority to provide small and new businesses with the necessary management and marketing skills to facilitate success.

Small Business Assistance - Develop programs which would assist small business with marketing of products and services. Assist local entrepreneurs to locate and acquire new business financing.

Training Programs - As identified in the Warren County Strategic Plan, implement an ambassador training program. Approximately 17% of the community's jobs are in service related positions. These are the people that tourists most often meet; therefore, it is these individuals who often will have the greatest impact on a visitor's impression of our community. It is imperative that service personnel be trained as community representatives.

Chapter 7 - Infrastructure

Adequate Public Facilities Standards - Establish public facility and design standards for new development proposals.

Development of Local and Circulation Plans - Developing traffic circulation plans for each community center and/or village center to provide adequate traffic facilities and access control on a smaller scale.

Highway Corridor Overlay Zoning - Overlay zoning should include access controls, transportation impact analysis for high volume-uses, as well as design and landscaping requirements. Overlay zoning brings additional design requirements and standards above those of the underlying zone

Revise Ordinance - Revise the existing ordinances pertaining to septic systems in the County. Increase the development and/or design standards for County septic systems. Establish a buffer between septic systems and perennial streams and the Shenandoah River.

The following recommendations should be implemented within 3 to 5 years after the Plan's adoption.

Chapter 3 - Natural Resources and Environment

Natural Space Requirements - Establish natural space requirements and limit the extent to which a site can be covered by impervious surfaces. Requirements should specify minimum areas that must remain undisturbed and available for stormwater infiltration and site vegetation. There should be a maximum retention of natural vegetation and trees related to open spaces, with site clear-cutting expressly prohibited. A minimum resource protection buffer of 50 feet must be required along areas of karst terrain, wetlands, perennial rivers, and streams.

Permit Evidence - Require evidence of all federal, state, and local environmental and health permits as a condition of development approval, thereby assuring that potential air, water, and soil contamination is addressed. Local standards will have to be written.

Slope Density Regulation - Investigate controlling development, including building permits, in areas where the site slope could pose an environmental danger. Enact slope density regulations.

Views, Vistas, Tourism, and Rural Character - To preserve views from the Skyline drive and vistas along County roads, both vital to tourism and rural character, discourage clear cutting and unnecessary reduction of tree cover and other natural vegetation by application of best management practices. Encourage cluster development and discourage strip development.

Chapter 4 - Land Use and Growth Management

Indoor Plumbing and Adequate Sanitation - Provide technical assistance and create partnerships with non-profits and for profit organizations, to provide indoor plumbing and to upgrade substandard conditions for all existing low and moderate income residents.

Ordinance Revision - Continue to require as part of the County's Zoning Ordinance, that commercial forest activities, including the sale of trees, in residential areas be conducted in accordance with the guidelines established in the *Logger's Guide*, Virginia Department of Forestry, latest edition. The Ordinance should require that property owners submitted a pre-harvest plan prior to conducting logging activity. The pre-harvest plan should include a map identifying the following:

1. Property boundaries
2. Streams and drainage
3. Critical areas
4. Road and trail locations
5. Stream and drainage crossings
6. Log landings and mill seats
7. Stream-side management zones (SMZ's)
8. Other environmental concerns

Chapter 8

Other items that should also be considered include:

1. Road and trail specifications
2. Harvesting equipment to be used
3. Timing of the harvest
4. Logging contract specifications
5. Special planning for wet areas
6. Obstructions such as rock outcroppings
7. When and where best management practices will be used

Timber Resources - Commercial and non-commercial forest cutting should be conducted to ensure long term forest viability and to minimize negative environmental impacts, particularly along streams, rivers, and wetlands. Water resources can be protected by providing buffer zones along these environmental features.

Chapter 5 - Community Facilities

Alternative School Funding - Explore alternative funding sources for the school system, such as private sector grants and partnerships. Support the development of the Warren County School private endowment fund.

Government Center Future Expansion - Purchase additional building next to the Government Center to allow for expansion in the future.

Meet Existing Needs First - Evaluate replacement sites for all of the existing compactor sites prior to looking at additional sites.

Parking Facilities - Provide adequate parking for citizens as well as for employees.

Chapter 6 - Economic Development

Increase Capital - Work with the local finance and banking community to increase the availability of seed and start-up capital for new and small businesses.

Public/Private Partnerships - Encourage public/private partnerships that will provide well serviced and properly located industrial sites which can be developed quickly.

Shell Building Program - Invest in a shell building program that will provide available space as well as incubator facilities for new and small businesses.

Tourism - Continue to emphasize and promote tourism as an industry. This should be accomplished through coordination with local, regional, and State Tourism Development Boards and agencies.

Chapter 7 - Infrastructure

Commercial and Industrial Parks - Discourage linear development and encourage interior uses in planned parks where access control is efficient and where interior roads, rather than arterial or collector roads, provide access to each use. This land use technique will discourage shallow strip development. This technique provides deeper commercial and industrial zoning and permits effective site design to maximize access point usage. When between two and five commercial uses can use a

single access point, substantial traffic flow improvement can result.

Stormwater Management Plan and Ordinances - For all new developments, develop and implement a stormwater management plan and ordinances associated with the plan, to address stormwater management issues.

Traffic Impact Analysis - Require a traffic impact analysis of all major new projects, as part of the zoning process and implementation of the LOS Policy. This analysis would be used to determine if post development traffic levels and patterns will be consistent with the LOS policy. At a minimum, the traffic analysis should include a description of past and present roadway conditions, existing roadway capacity, traffic accident data, existing and projected traffic volumes (ADT and peak traffic), existing and projected service levels, and existing and proposed sight lines. Where the County has short-term improvements scheduled, the development could include such improvements in the traffic impact analysis. Precise standards for the preparation of these analyses should be adopted.

Traffic Access Management - Create, initiate, and support an access management program. Ordinances would ensure that access opportunity is not unnecessarily pre-empted along key road links, or near major intersections, particularly those along the designated Highway Corridor Districts. Consider the following techniques in managing access to principal corridor roadways.

- Limit the number of conflict points by installing physical barriers, modifying driveways, and installing signals at entrances.
- Separate basic conflict areas by regulating the minimum spacing of driveways, spacing driveways optimally in the permit authorization stage, consolidating access for adjacent properties, buying abutting properties, denying access to small frontage parcels, and requiring access via collector streets, such as service roads.
- Minimize the need for traffic deceleration by geometrically designing access points.
- Remove turning volumes or queues from through lanes sections by pavement marking alterations, geometric design modifications, right-of-way acquisition, or by requiring adequate internal site circulation.
- Adopt guidelines for access type and minimum spacing of intersections.
- Revise zoning and subdivision provisions to require reverse frontage lots on all County roads and to minimize left turn movements or conflicts, both on the site and in the street.

Design driveways in order to achieve clear sight lines based on design speeds as adopted by VDOT. Require that site access and circulation conform to the following standards:

- Arrange vehicular site access to avoid traffic use of local residential streets.
- Require that site access roads have sufficient traffic carrying capacity to accommodate the amount and type of traffic generated by proposed development.
- Require that provisions are made within the road for turning lanes, directional islands, frontage/service roads, driveways, and traffic controls.

**The following recommendations should be implemented
within 5 to 10 years after the Plan's adoption**

Chapter 3 - Natural Resources and Environment

Coordination With Other Agencies - In light of the increased pressure on the animal habitats in the National Park and in the County, it is essential that greenways and travel corridors, in cooperation with the National Park and the National Forest, be established in appropriate areas. This would help increase carrying capacity for animals that are so important to tourists, conservationists, and hunters.

Extend bike and hiking paths - Cooperate with the Town of Front Royal to extend Front Royal's biking and hiking paths into the County, along the south fork of the Shenandoah River and along routes 55 E., 340 S, and 522 S. Greenways should be established in sufficient width to assure preservation of natural tree growth and seasonal beauty such as trillium, dogwood, and redbud, with which the County is blessed. Such paths and greenways should lead visitors into areas which would help them experience the great year round beauty of our mountains, the bursting forth of life in the spring, and the riot of fall color.

Recreation - Provide access to the County's natural features through a variety of means such as biking/hiking paths and public access to the Shenandoah River and tying into existing bike paths. This will allow residents to experience the enjoyment of the County's recreational opportunities.

Chapter 4 - Land Use and Growth Management

Related Lands Study - The Shenandoah National Park is in the process of developing a related lands study in conjunction with counties bordering the Park. Warren County should actively work with the Park Service on the development of a local study for the County's use in planning and development regulations. Additionally, much of the information gathered should be available in a digital format and should to be incorporated into the County Environmental Data Base.

Focused Development - Traditionally, villages like Bentonville, Browntown, Limeton, Reliance, and Rivermont, were focused around elementary schools, churches, convenience stores, and the fire hall. With school consolidation, the local village schools are gone and a more mobile population has decreased the importance and viability of village stores. Stricter health regulations and potential pollution problems make additional development difficult in some of the traditional centers. As a way to refocus rural residential growth at these existing centers, the County should consider small scale sewage treatment plants and water systems to serve these villages. Much of Warren County is divided by hilly terrain, rivers, parks, and the National Forest. These conditions make future centralized sewage treatment and water systems prohibitively expensive. Additionally, a central system's spokes promote linear strip development which would destroy our rural character.

Rural Character - Construct small sewage treatment facilities in rural villages such as, Browntown, Bentonville, and/or Limeton which could combine services with the Raymond R. "Andy" Guest, Jr., Shenandoah River State Park. Locate future elementary schools in some of the villages, after sewage systems are in place, as a way of giving them a focus and decreasing the busing of younger students.

Utilize local, state, and federal funds for housing programs - There should be a concerted effort to review the County's history of housing funding source use. In addition, other funding sources should be identified and utilized. A funding development plan should be developed and timetables established for the application of available funds. Encourage partnerships with County government agencies and non-profits to secure and apply for these funds.

Some of the sources to be explored are:

- Virginia Housing Partnership Program
- Virginia Housing Production Program
- Community Development Block Grants
- HUD Section 236 Program
- HUD Section 202 Housing for Elderly and Handicapped
- HUD Section 8 Housing Vouchers

Chapter 5 - Community Facilities

Chase Vehicles - There should be three chase vehicles strategically placed in Warren County, with three full-time paid paramedics staffing these units during the day and staffed by volunteers at night. This concept would give County citizens the best medical coverage possible with limited funds. This type of program is working well in neighboring counties.

Consulting the Virginia Department of Conservation and Recreation - Take advantage of recreational consultation and workshops offered by the Department of Conservation and Recreation. These services will provide information about streamlining local departmental operations and the best methods of developing, operating, and maintaining, park and recreation programs.

Educational Opportunities - Periodically review and evaluate the current programs and ensure that expanded educational programs are provided in a cost efficient manner. Additionally, ensure that the programs use a child/student centered approach.

Intermodal Surface Transportation Efficiency Act (ISTEA) & Other Transportation Grants - Explore and apply for transportation grants for funding of major infrastructure projects.

Nature trails for hiking, cross country skiing, and biking - These needs can be met by Warren County and the Town of Front Royal joining with adjacent counties to produce Greenways and Trails. These trails would link park lands, conservation areas, scenic landscapes, and historic/cultural sites. Initial projects would extend the Town's proposed trails' plan into the County to link State and Federal Parks with the Town's existing facilities. Such a project could use existing rights-of-way (i.e. road shoulders).

Facilities - Plan and provide for instruction materials, transportation needs, and renovations to existing school buildings and administrative offices, as well as for the building of a new school(s).

Special User Groups and Facility Accessibility - Ensure the availability of a variety of programs for people of all ages and for special user groups, such as the physically disabled. Also, when planning new facilities or upgrading existing ones, design the facility to be completely accessible to the physically disabled.

Chapter 8

Traditional Parks consisting of ball parks and playground facilities - Facilities should be established near population centers at each side of the County (north, south, east, and west). Acquire tracts of land in each of the County areas to provide fully developed park sites and to allow for future expansion. Future parks and similar facilities must be distributed in County locations where users live. Explore using school sites for additional facilities.

User Fees - Develop and expand a system of user fees which would generate revenues for supporting park maintenance, operational costs, and facility improvements.

Virginia Outdoors Fund - Apply for Virginia Outdoors Fund money to assist in acquiring and developing recreational lands.

Chapter 6 - Economic Development

Training Programs - As identified in the Warren County Strategic Plan, implement an ambassador training program. Approximately 17% of all jobs in the community are in service related positions. These are the people that tourists most often meet, therefore, it is these individuals who often will have the greatest impact on a visitor's impression of our community. It is imperative that service personnel be trained community representatives.

Water and Sewer Service - Examine alternative means of providing solutions for servicing the County's water and sewer needs, including State and Federal Agency grant funds. Ultimately, a regional water and sewer authority should be developed. Currently the County does not have a water or a sewer system.

Chapter 7 - Infrastructure

Development Service Districts - Development Service Districts are based on the premise that new development can be serviced most efficiently if it is limited to certain County areas. A Development Service District's key to success is the availability of services and capital improvements; therefore, provision of water and other types of infrastructure is mandatory to accommodate anticipated growth.

Inspection & Maintenance of Stormwater Management Facilities - Conduct annual inspections of any stormwater control devices by County inspectors to ensure proper facility maintenance. Maintenance can be undertaken by a property owner's association, or by the County through a special taxing district.

Special Taxing Districts - Consider using special taxing districts to aid in financing public facilities.

The following recommendations should be implemented within 10 to 15 years after the Plan's adoption.

Chapter 3 - Natural Resources and Environment

Alternative Drinking Water Supplies - Enhance conservation and appropriate use of ground water. Measure ground water quality and levels. Explore the development of alternative drinking water supplies in areas where groundwater quality or levels are decreasing.

Chapter 4 - Land Use and Growth Management

Environmental Hazards - Determine the nature and magnitude of environmental hazards. Explore, adopt, and implement, means of reducing these hazards.

Housing Trust Fund - Consider setting up a local Housing Trust Fund. The Virginia Housing Development Authority (VHDA) and the Virginia Department of Housing and Community Development (VDHCD) administer a State fund to be used as a revolving loan fund to induce the development of low and moderate income housing.

Public Service Limitation - As the County develops water and sewer services, limit the extension of such services into outlying rural areas to prevent sprawling development patterns. Additionally, as such services become available for Rural Villages, limits on the expansion of these facilities, outside of the village, must be developed.

Chapter 5 - Community Facilities

Ensure Compatibility - Provide architectural guidelines for new development in historic zones, thereby ensuring compatibility with existing historic structures.

Local Historic Districts - Establish historic overlay districts, located throughout the County, as part of the County's zoning ordinance. These districts provide protection over and above the regular zoning regulations for such areas. Local historic overlay districts are established by the Board of Supervisors after required public hearings and may be proposed by any property owner, neighborhood organization, or by any County Board or Commission.

Neighborhood Parks - Encourage developers to design subdivisions with a central theme of a neighborhood park that would include playground apparatus, open space, and a hard-surfaced activity area. In addition to providing recreational areas in the County, residents would have the enjoyment of having a park within easy walking distance of their home which would provide limited types of recreation for the entire family.

Parks and Facilities Distribution - Available parks and similar facilities must be distributed in the County in locations where users live. Explore using school sites for additional facilities.

Chapter 6 - Economic Development

Free Trade Zone - Maintain designation as a free trade zone especially for areas in and around the Inland Port facility.

