Tazewell County, VA

Growth Readiness Report

January 2007

Project Sponsors

Report Design: Kristen Deitrick, Southeast Watershed Forum

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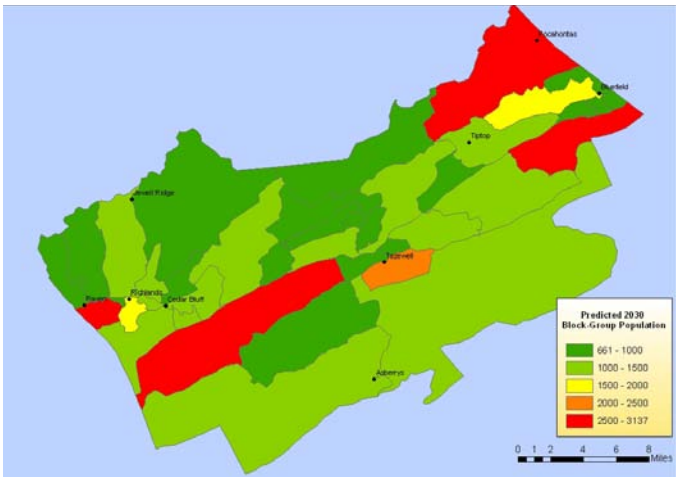
INTRODUCTION

Many communities in Southwest Virginia are experiencing changes due to urbanization, as residents move from more rural, outlying areas into larger communities. This population shift causes changes in land usage and in the character of those communities. This can have many positive effects for the communities in question, but it also creates a need to address the issues of urbanization including stormwater runoff, flooding, increased costs for water supply treatment, and impacts on tourism and recreation related to water quality.



Population Projection 2030

To help community leaders address these issues, the Town of Tazewell hosted five Growth Readiness Workshops in 2005. Participants from a broad base of decision-makers and citizens learned about best practices for land use and development, and evaluated their capacity to successfully manage growth, provide flood control, and preserve water quality.

About thirty community leaders participated, representing the jurisdictions of Cedar Bluff, Pocohontas, Richlands, Tazewell, and Tazewell County. They compared existing codes and ordinances to Growth Readiness Model Principles, focusing on three designated areas: streets and parking, lot design, and open space. Over several months, work groups prepared recommendations for reducing the negative impact of development on water quality and quantity.

There were several positive outcomes to this process. First, the entire group reached consensus on the steps needed for implementing workgroup recommendations. One such step was to present these results to officials within their jurisdictions for further action. Another outcome was an information and outreach committee that provided educational materials and helped the Tazewell County communities with implementation and which continues to support local officials and other stakeholders today. Finally, the workshops helped local communities apply for grants through Virginia's Water Quality Improvement Act (WQIA). As a result, Tazewell and Cedar Bluff were both awarded sizeable grants to implement storm water control projects. Key to these successes was the collaboration of a diverse selection of community leaders who were able to achieve a common purpose.

The workshops were conducted by the Tennessee Valley Authority, the U.S. Fish and Wildlife Service, the Southeast Watershed Forum, and the Virginia Department of Conservation and Recreation.

They were based on the NEMO (Non-point Source Education for Municipal Officials) program of the University of Connecticut and the *Better Site Design Handbook* of the Center for Watershed Protection. The Southeast Watershed Forum and Tennessee Valley Authority sponsored and facilitated the Tazewell County Growth Readiness workshops and fostered the process of consensus-building.

Workshop I
Understanding the Impact of Growth on Water Resources

April 28, 2005

Participants learned how urbanization affects water quality, and how water quality affects the economic, legal, and quality-of-life aspects of a community. They identified local water issues, and used maps and population data to make growth projections. They also discussed the impact of timbering and impervious surfaces on water quality.

Jane Fowler, Jerry Wood, Joel Haden and Neil Kilgore viewing population maps

Workshop II
Having Growth and Water Quality Too

June 9, 2005

Participants compared existing population and impervious maps to the projected population and impervious maps from the first workshop. They learned about: the 22 Model Principles for Better Site Design developed by the Center for Watershed Protection; the Codes and Ordinances Worksheet (COW), a tool to help communities evaluate their existing ordinances against the model principles; and forestry best practices. They determined which principles might work in their communities and how to promote best practices. A representative from each jurisdiction agreed to complete the COW prior to the next workshop.

Workshop III
Deciding What's Right For Our Community

Aug. 11, 2005

Community representatives discussed the COW results. Participants divided into three work groups to recommend changes to streets and parking, lot design, and natural areas. They reviewed an example of low-impact development, the Village at Tom's Creek in Blacksburg, Virginia. Discussion focused on obtaining waivers to state road requirements, choosing a type of development, and using supporting ordinances to make the development process more efficient. They learned about opportunities for funding through The Virginia Water Quality Improvement Funds, and that applicants get extra points for participating in the growth readiness workshops.

Presentation of Cedar Bluff growth projection

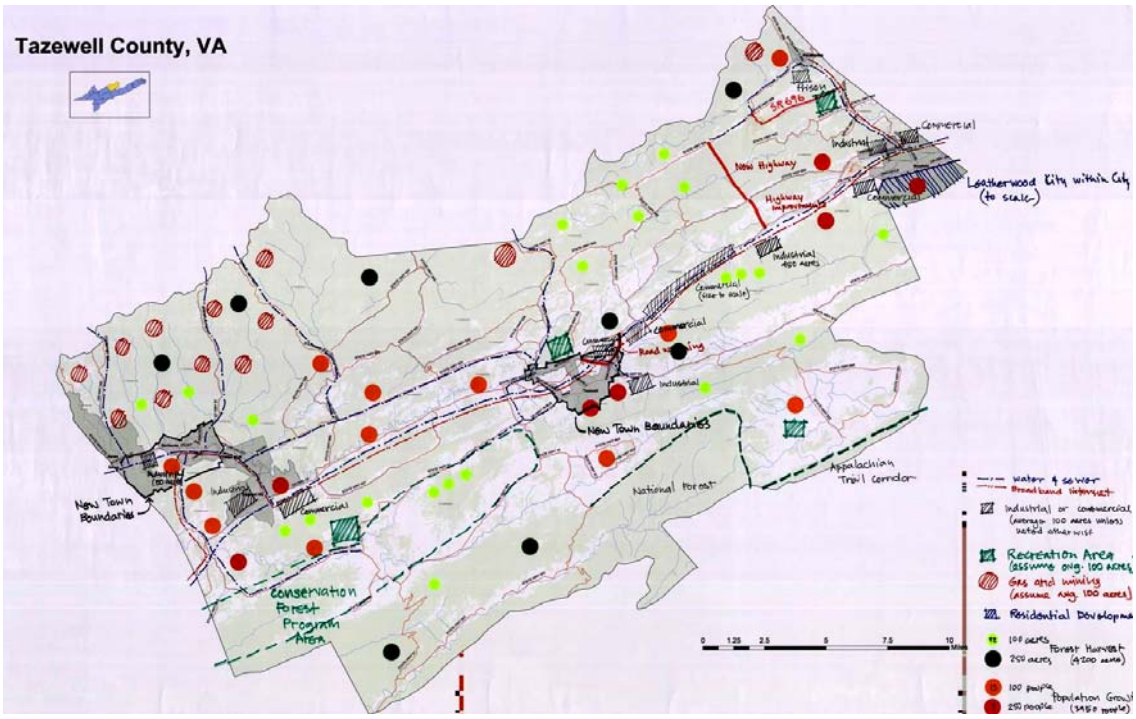
Workshop IV
Work Group Meetings
Oct. 27, 2005

The three work groups assessed their progress. They also discussed their proposals for funding through the Virginia Water Quality Improvement Fund, and considered submitting a regional proposal with local projects.

Tazewell officials projecting growth

Workshop V
Building Consensus For Change
Dec. 9, 2005

Work groups presented their recommendations for change. The entire group reviewed the recommendations and made revisions. The work groups then reconvened to determine an approach for finalizing the recommendations in Tazewell County. Participants also determined the steps needed to involve other stakeholders and implement the recommendations in their respective jurisdictions.



Growth projection map

After reaching consensus, the group prepared the following recommendations for 19 of the 22 Model Principles for Better Site Design. These recommendations are provided for the County and Towns to use as they update comprehensive plans, review existing ordinances, design new ordinances, and encourage new businesses to locate in their communities.

Growth Readiness Workshop

Residential Streets and Parking Lots

Principle 1. Street Width

Design residential streets for minimum required pavement width needed to support travel lanes, on-street parking, and emergency and service vehicle access.

Recommendations:

- In low-density developments allow minimum pavement widths of 18 to 22 feet (low- density development = less than 500 daily trips).
- In high-density developments allow parking lanes to serve as traffic lanes.

Principle 4. Cul-de-sacs

Minimize the number of street cul-de-sacs and incorporate landscaped areas to reduce impervious cover. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles. Consider alternative turnarounds.

Recommendations:

- Use a minimum cul-de-sac radius of 45 feet.
- Allow landscaped islands in cul-de-sacs only if the homeowners association agrees to maintain them.
- Allow alternative turnarounds in low-density developments.

Principle 5. Vegetated Open Channels

Where density, topography, soils, and slope permit, use vegetated open channels in the street right-of-way to convey and treat storm water runoff.

Recommendations:

- Use the Virginia Erosion and Sediment Control Handbook and the Virginia Storm Water Management Handbook for designing swales, biofilters, grass swales, etc.

Residential Streets and Parking Lots (Habitat for Cars) *Continued*

Principle 6. Parking Ratios

To curb excess parking space construction, enforce the required parking ratio as both a maximum and a minimum. Review existing parking ratios for conformance, taking into account local and national experience to see if lower ratios are warranted and feasible.

Recommendations:

- Retail stores – 1 parking space for every 200 square feet.
- Commercial building (office buildings) – 1 parking space for every 400 square feet.
- If established minimum parking lot requirements are exceeded, ask applicant to provide additional information to justify exceeding the minimum requirements for intended site use.
- In cases where there is a need for additional parking beyond the minimum requirements, encourage the use pervious surfaces.

Principle 7. Parking Codes

Parking codes should encourage shared parking where feasible.

Recommendations:

- Promote shared parking agreements and provide model agreements.
- Reduce parking agreements and provide model agreements.

Principle 8. Parking Lot Design

Reduce impervious parking lots by increasing efficient parking lanes and using pervious materials in spillover parking areas.

Recommendations:

- Use minimum stall width of 9 feet for standard parking spaces.
- Use minimum stall length of 18 feet for standard parking spaces.
- Allow pervious paving materials in spillover parking areas.

Principle 10. Parking Lot Runoff

Where possible, provide storm water treatment for parking lot runoff using bio-retention areas, filter strips, and/or practices that can be integrated into landscaped areas and traffic islands.

Recommendations:

- Allow bio-retention islands and other storm water practices within landscaped areas or setbacks.
- Landscaped areas must account for at least 10% of parking lot surface area.

Lot Development (Habitat for People)

General Recommendations:

Tazewell rain garden educational sign

Planting of Tazewell rain garden

- Promote discussion between the county and townships about making their subdivision ordinances consistent. Differences encourage development in areas where regulation is minimal.
- Hold workshops on low-impact development for contractors and developers involved in subdivision construction.
- Develop an information packet about low-impact development for distribution with permit applications.
- Establish a process for demonstrating that low-impact development principles have been considered in new residential development; e.g., developers must submit written justification for not using low-impact development.
- In ordinances, require a general statement of support for low-impact development.
- Educate owner/developers, planners, and government.

Lot Development (Habitat for People) *Continued*

Principle 11. Open Space Developments

Advocate open-space development that incorporates smaller lot sizes to minimize total impervious area, reduce total construction costs, conserve natural areas, provide community recreational space, and promote watershed protection.

Recommendations:

- Address open-space and cluster development in current subdivision ordinances.
- Incorporate tree conservation in subdivision ordinances.
- Promote protection of sensitive areas such as stream buffers, karst, source water, etc., within residential developments.
- Create incentives for preservation of open space in developments.
- Establish pervious surface requirements for open spaces within residential developments.
- Encourage developer buy-in through education and workshops.
- Discourage new development in hollows upslope of existing developments.

Principle 12. Setback s and Frontages

Relax side yard setbacks and allow narrower frontages to reduce total road length in the community and overall site imperviousness. Relax front setback requirements to minimize driveway lengths and reduce overall lot imperviousness.

Recommendations:

- Reduce setback and frontage requirements for smaller lot sizes in subdivision ordinances. It is recognized that topography may provide a limit in setbacks and frontages in this mountainous region. Most residential development in the county is on larger lots, and high density development is not seen at this time.

Principle 13. Sidewalks

Promote more flexible design standards for residential sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways.

Recommendations:

- Encourage low-impact development practices in building and maintaining sidewalks – use of pervious materials, sloping away from streets where feasible, and alternate pedestrian networks. Few, if any, subdivisions now have sidewalks in Tazewell County.

Lot Development (Habitat for People) *Continued*

Principle 14. Driveways:

Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes.

Recommendations:

- Allow pervious materials for driveways. Add empowering language to subdivision ordinances.

Principle 15. Open-Space Management

Clearly specify how community open space will be managed. Designate a legal entity responsible for managing both natural and recreational open space.

Recommendations:

- Local work groups need to address this principle.
- Establish a mechanism to manage open spaces within developments. Most subdivisions within the county do not have homeowners' associations – alternate forms of management for these areas still need to be developed.
- Encourage more effective homeowner associations.
- Educate in counties and townships.

Principle 16. Roof Top Run-off

Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas. Avoid routing rooftop runoff to the roadway and the storm water conveyance system.

Recommendations:

- Establish demos of alternative methods of dealing with rooftop run-off, e.g., green roofs, rain barrels.
- Require alternative methods for handling rooftop run-off in city and county ordinances. In some cases, discharge into a storm sewer may currently be required.
- Offer incentives to use alternative methods of handling rooftop run-off in subdivision development.
- Address/limit direct discharge to streams.

Natural Areas (Habitat for Nature)

Principle 17. Aquatic Buffers

Create a variable width, naturally vegetated buffer system along all perennial streams that have critical environmental features such as the 100-year floodplain, steep slopes, and freshwater wetlands.

Recommendations:

Ridge and Valley Region

- Maintain a 25-foot buffer with 1 foot for every percent slope.
- In areas where topography allows, a 3-zone buffer system is recommended by CWP.

Cumberland Plateau

- Encourage buffers on streams for all new development.
- Offer incentives, such as buffer averaging, to place buffers on streams in the Cumberland Plateau.

Principle 18. Buffer Maintenance

Preserve or restore the riparian stream buffer with native vegetation that can be maintained throughout the review, delineation, construction, and occupancy stages of development.

Recommendations:

- Delineate buffer on all clearing, grading, and site plans.
- Prohibit construction within 25 feet of the stream.
- Preserve or restore buffer with native vegetation and non-native vegetation that is non-invasive. Develop an approved vegetation list.

Principle 19. Clearing and Grading

Limit clearing and grading of forests and native vegetation to the minimum amount needed to build lots, allow access, and provide fire protection. A fixed portion of any community open space should be managed as a protected green space.

Natural Areas (Habitat for Nature) *Continued*

Principle 20. Tree Conservation

Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Wherever practical, manage community open space, street rights-of-way, parking lot islands, and other landscaped areas to promote natural vegetation.

Recommendations:

- Create an ordinance to guide tree conservation on development sites.
- Delineate tree conservation areas on all clearing, grading, and site plans.
- Manage community open space to remove "nuisance" trees.
- Plant vegetated parking lot islands with native trees.
- Plant native trees in street right of ways.

Principle 21. Conservation Incentives

Encourage incentives and flexibility in the form of density compensation, buffer averaging, property tax reduction, storm water credits, and by-right open space development to promote conservation of stream buffers, forests, meadows, and other areas of environmental value. In addition, encourage off-site mitigation consistent with locally adopted watershed plans.

Recommendations:

- Allow stream buffer averaging.
- Encourage environmentally sensitive variances. Use language in ordinances that makes it easier to receive variances.
- Research and develop conservation incentives.

Principle 22. Stormwater Outfalls

Do not allow new storm water outfalls to discharge unmanaged storm water into wetlands, sole-source aquifers, or other water bodies.

Recommendations:

- Do not discharge storm water directly to streams, rivers, wetlands, sole-source aquifers, or other sensitive areas. Treat storm water before it is discharged into streams, wetlands, sole-source aquifers or other sensitive areas.

Implementation Report from Cedar Bluff

Throughout the workshop series the Town of Cedar Bluff had representation at each session. Currently, the town is addressing ordinances and planning aimed at directing future growth based on output from the workshops.

Additionally, The Town of Cedar Bluff applied for and received a Water Quality Improvement Act (WQIA) grant for $52,000. This grant will support the Cedar Bluff Stormwater Assessment and Bio-Retention Retrofit Project (SABR).

SABR will involve conducting an urban hotspot survey of the town to identify sites for six bio-retention retrofits using Low Impact Development (LID) principles. Projects will be implemented at these sites including an educational plan consisting of signage and a walking tour. The education plan will include an interpretive walking tour developed by an OSM / VISTA volunteer and supported by signage at each retrofit site. The trail and tour will showcase the bio-retention retrofits, local biodiversity, water quality, and low impact development principles. The trail will be used by the Clinch River Headwater's Association and the Town to promote smarter growth in the future.

The sites will be used as regional demonstration sites to showcase LID principles and expose the need for further discussion regarding smarter growth. Monitoring will be an integral part of measuring the success of SABR, but also of importance will be the number of people from the community who are involved and become educated about water quality issues.

Implementation Report from Tazewell

The Town of Tazewell applied for and won a $200,000 WQIA grant. The grant will fund installation of six rain gardens and a series of 40 gabion structures to control the quantity and quality of storm water runoff along the Clinch River and its tributaries. The grant will also fund an outreach and education campaign to promote efforts to improve water quality and protect the community's natural resources.

Components of the education program include partnering with area schools to involve students in the design, maintenance, and monitoring of the rain gardens; designing and posting educational signage at rain garden sites; and developing informational presentations, posters, and brochures about the rain gardens.

This project will encourage the town and surrounding localities to develop best practices and ordinances to protect the Clinch River watershed. TVA is conducting preliminary engineering studies, and the town manager is preparing a request for proposals to obtain engineering assistance. The engineering phase will conclude in February 2007. Construction of the rain gardens will begin in Spring 2007. Implementation of the education program will occur in Spring 2007. Educational signage will be designed, constructed, and installed by June 30, 2008.

In addition to receiving the WQIA grant, the town made several changes to its Zoning Ordinance, such as reducing the number of parking spaces that directly impact storm water management. The town plans to develop a storm water management ordinance, and in preparation, the town manager is reviewing other ordinances. In the future, the town will work with the Virginia Department of Conservation regional office to develop an Erosion and Sediment Control Ordinance.

Core Team

David Richert, Virginia Department of Forestry

Jane Fowler, Southeast Watershed Forum

Jerry Wood, Manager, Town of Tazewell

Joel Haden, Tennessee Valley Authority

Kerry Linehan, Virginia Tech

Mark Odom, Tennessee Valley Authority

Neil Kilgore, Virginia Department of Conservation and Recreation

Shannon O'Quinn, Tennessee Valley Authority

Participants

Benny Moore, Town of Tazewell

Bill Allison

Bill Miller, Virginia Division of Forestry

Charles Green, Mayor, Town of Tazewell

Charles McReynolds, Virginia Department of Transportation

Charles Rest, Virginia Department of Health

Charles Wearmouth , Tazewell Community Hospital

Dan Bowling, Tazewell County Board of Supervisors

Dave Kinder, Tazewell County DOE

Dean Johnson, Building Official, Tazewell County

Dean Johnson, developer

Derrick Ruble, developer, The Leatherwood Company

Elizabeth Abe, Virginia Department of Conservation and Recreation

Gary Erp, Virginia Department of Transportation

Heather Hamilton, Tennessee Valley Authority

Henry Murray, Engineer/Planner/Zoning, Tazewell County

Jack Steele, Tazewell County

James Baker, Thompson & Litton

Jason Airtrip, Town of Bluefield

Jim McGlothlin, Manager, Town of Cedar Bluff

Jim Talbert, newspaper

Jim Taylor, Public Works Director, Town of Richlands

John Neel, Gay and Neal, Inc.

Joyce Buchanan, Tazewell Soil and Water Conservation District

Keith Campbell, Council Member, Town of Pocahontas

Lawrence Sheppard, Town of Tazewell

Linda Griffith, Clerk-Treasurer, Town of Tazewell

Martha Podren, Coal Country Watershed Coalition

Robert Shamblin , Public Works Director, Town of Cedar Bluff

Robin Brewster , Administrative Assistant, Town of Tazewell

Sam Wolford , Tazewell County

Shane Barton , VISTA volunteer, Town of Cedar Bluff

Steve Frederick , Public Works Director, Town of Tazewell

Stevie Steele, Anderson & Associates

Sue Wade, Town of Richlands

William B. Payne, Engineer, Town of Richlands