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## **Application of Progressive Gateway Community Strategies in Townsend and Tuckaleechee Cove**

Leon Christion Jr.

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To the Graduate Council:

I am submitting herewith a thesis written by Leon Christion Jr. entitled "Application of Progressive Gateway Community Strategies in Townsend and Tuckaleechee Cove." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Public Administration.

John D. Peine, Major Professor

We have read this thesis and recommend its acceptance:

Cecilia Zanetta, Bruce Tonn

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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John D. Peine, Ph.D.  
Major Professor

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recommend its acceptance:

Cecilia Zanetta, Ph.D.

Bruce Tonn, Ph.D.

Accepted for the Council:

Anne Mayhew  
Vice Chancellor and Dean of  
Graduate Studies

(Original signatures are on file with official student records.)

**APPLICATION OF PROGRESSIVE GATEWAY COMMUNITY  
STRATEGIES IN TOWNSEND AND TUCKALEECHEE COVE**

A Thesis Presented  
for the Master of Science in Planning  
Degree  
The University of Tennessee, Knoxville

Leon Christian, Jr.  
August 2004

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## **ABSTRACT**

Gateway community and rural planning literature was examined to determine the essential elements of successful Gateway Communities and was combined with interviews with citizens, consultants and government agents to ascertain present conditions. Analysis of these elements was applied toward a case study of the Tuckaleechee Cove planning process.

Common problems experienced in rapidly developing gateway communities are environmental degradation, visual blight, low wages, seasonal unemployment, and loss of residential base.

Tuckaleechee Cove lacks sufficient landowner support to address issues on a Cove-wide basis. National Parks, local communities, county government, state agencies, federal agencies, citizens, landowners, and the business community must be involved, if the planning effort is to be successful.

Communication among Blount County, TCAB, GSMNP, and the City of Townsend seems to be regular, amicable and well-established. Communication among landowners and other entities could be improved.

There are three potential paths to move the planning process forward. These are identified by three approaches: Planning District Approaches, Incorporation Based Approaches, and Sewer Line Catalyst Approaches. The Sewer Line Catalyst Approach is a novel means, with potential to bring resistant parties to the negotiating table.

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## **CHAPTER ONE INTRODUCTION AND PROBLEM STATEMENT**

The National Park System of the United States is one of the most admired and respected in the world. Yellowstone, Everglades, Grand Canyon, Hawaii Volcanoes, Mammoth Cave, Olympic, Redwood, Wrangell-St Elias, Yosemite, and Great Smoky Mountains are World Heritage Sites. World Heritage Sites are areas or objects of extraordinary cultural, historical, aesthetic, or natural significance. Preservation of these treasures is in the interests of every American citizen. It is a proud heritage, but one increasingly in peril.

Today we find many of our treasured parks in peril due to development associated with tourism. Most national parks, monuments, and natural areas were established in remote locations, with low population densities. Typically, this meant low- intensity development and few human induced disturbances (other than Park Service projects). The post- World War II economic boom and suburbanization allowed more Americans to purchase automobiles and to gain access to remote areas. As visitation to protected areas increased, so did associated problems. Communities near protected areas rapidly developed in order to capitalize on the tourist trade. These communities near protected areas are known as Gateway Communities.

Gateway Communities are towns, hamlets, and cities bordering national parks, state parks, wildlife refuges, forests, historic sites, wilderness areas, or other public lands, typically on main routes of entry (Howe, McMahon, and

Propst, 1997). Gateway communities often supply the support facilities and services for visitors, such as hotels, restaurants, grocery supplies, laundry facilities, and fuel. Additionally, they supply living quarters, schools, and other services for park staff and their families. This can be a mutually beneficial arrangement. Gateway communities supply the goods and services visitors need, offering economic opportunities for local residents, while reducing conversion of park land to visitor support services. However, problems can arise when gateway communities undergo rapid and uncontrolled growth. Uncontrolled growth can have grave social and environmental consequences for both gateway communities and neighboring protected areas.

Growth in Gateway communities has become a nationwide issue of concern to managers of protected areas. A 1994 survey of National Park Superintendents revealed that 85% were experiencing problems with rapid growth in adjacent gateway communities. Concerns expressed by managers included:

- Rapid conversion of open space to commercial uses
- Pollution of air and water
- Traffic, noise, and congestion
- Visual blight from signage, and poor and out of scale architecture
- Human-animal contact and ecosystem degradation (O'Brien, 1999).

## Statement of the Problem

The Great Smoky Mountains National Park (GSMNP) lies on the border between Tennessee and North Carolina, and is one of the most visited parks in the National Park System. Gateway communities of the GSMNP have experienced rapid population growth and development. This is especially true of the Tennessee side of the GSMNP, primarily due to the greater extent of private ownership of adjacent lands and ease of access from interstates I-40 and I-75. In contrast, a large portion of adjacent lands on the North Carolina side is National Forest, a limiting factor in development (Fig. 1).



**Figure 1. Great Smoky Mountains Region**

Dark Green: GSMNP    Light Green: National Forests.  
White: Private Land or Municipalities.  
Illustrates larger developable area on Tennessee side of GSMNP.

Growth on the North Carolina side of the GSMNP is concentrated primarily in the vicinity of Cherokee, NC (Harrah's Casino and associated development by the Cherokee Tribe). Development on the North Carolina side is also cause for concern. Some development decisions in Cherokee, NC seem insensitive to the needs of GSMNP.

In general, development intensity and geographic extent are greater on the Tennessee side of GSMNP; environmental impacts are also more noticeable, especially on water quality (Christion, 2000). This thesis is focused on conditions on the Tennessee side of the GSMNP.

The Tennessee communities of Sevierville, Pigeon Forge, and Gatlinburg are located along State Highway 441, along the highest traffic volume entrance into GSMNP. They are often cited as negative examples of gateway community development. Both cities are in Sevier County, which has no county-wide zoning, or other effective growth management tools (the county does have subdivision regulations). Rapid and unplanned development in these and other GSMNP gateway communities has had detrimental impacts on air quality, water quality, aesthetics, wildlife, and the social fabric of the gateway communities themselves:

- Although not exclusively the fault of these communities, air quality in the Smokies has gotten progressively worse. It is not uncommon to have several ozone alert days in the months of July and August. East TN is the 12th worst ozone region in the United States (Sonoran, 1998).

- Almost all the large rivers and streams in East Tennessee, with headwaters in the GSMNP, are on the Federal List of Degraded Waters (303(d) list). The Little Pigeon River, which flows through Gatlinburg, Pigeon Forge, and Sevierville, is unfit for body contact due to high fecal coliform concentrations (Ibid).
- Visual blight due to an over-abundance of signage and out-of-scale and out-of-character development has reduced the appeal of entering the GSMNP through the Sevierville to Pigeon Forge corridor, according to some visitors (Ibid).
- GSMNP animals are increasingly attracted to human occupied areas. Gatlinburg has experienced incidents with bears from the park foraging in dumpsters (Ibid).
- Land values in the area have skyrocketed, making it difficult for some lower income residents to afford housing. This is common in many rapidly developing gateway communities (Howe, McMahon, and Propst, 1997).

### **The Choice of Tuckaleechee Cove**

Gateway community development literature often cites the Tennessee Communities of Sevierville, Pigeon Forge, and Gatlinburg as examples of negative development practices. One sees pictures of cluttered strip development with colorful plastic dinosaurs and monstrous billboards labeled “Highway 441, Pigeon Forge, TN.” Positive examples of good practice exist in

East Tennessee as well. Pittman Center is a small community near Gatlinburg that has managed to develop in a planned and sustainable manner. Additional positive examples are needed to demonstrate that Tennesseans are capable and responsible neighbors of the GSMNP.

Unlike Sevierville and Pigeon Forge, Tuckaleechee Cove is still relatively undeveloped. In Tuckaleechee Cove, there exist an opportunity to demonstrate that Tennessee recognizes past mistakes and desires positive change in stewardship practices in relation to natural areas. The Tuckaleechee Cove experience can act as a model for the State of Tennessee and other Appalachian communities in the Southeastern United States.

There appears to be general consensus on the vision for Tuckaleechee Cove. The Tuckaleechee Cove community wants to prosper, yet maintain a clean, quiet and aesthetically pleasing environment. Much of the preliminary work has been done.

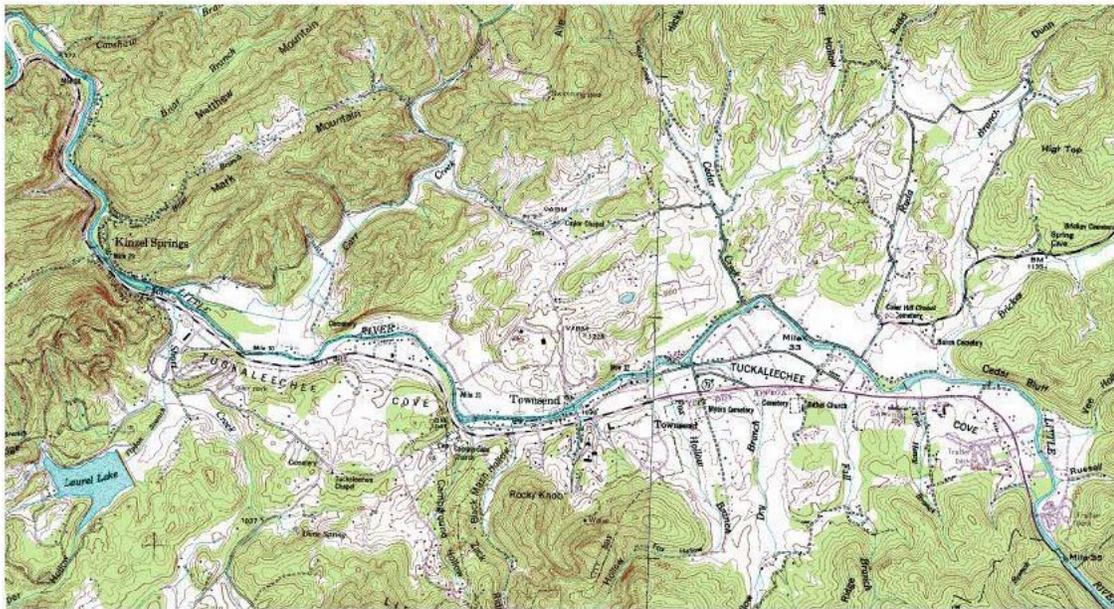
Lastly, there is strong local, county, state and national interests in preserving the character of the Cove, and keeping at least one major entrance of the GSMNP free of the unappealing strip development cited in Pigeon Forge, TN.

## **Case Study**

Tuckaleechee Cove is a narrow valley ringed by 3000 ft ridges located in Blount County, Tennessee. It is thirty-two square miles of plains and rolling hills, and contains the small City of Townsend (the only incorporated part of the Cove).

For the purposes of this thesis, Tuckaleechee Cove refers to the entire thirty-two square mile valley (including the City of Townsend) unless otherwise distinguished (Fig. 2).

Tuckaleechee Cove has a population of 3,000 residents (including approximately 250 residents of Townsend) and is a major gateway of the Great Smoky Mountains National Park (GSMNP). It receives 1.5 million visitors per year (Barge, Waggoner, 1997). Through the center of the cove runs the Little River, and parallel to it, State Highway 321 (a two-lane highway recently expanded to four lanes through most of Tuckaleechee Cove).



**Figure 2. Topographic Map of Tuckaleechee Cove and Vicinity**

The Little River has headwaters in the GSMNP, and is one of the few major streams on the Tennessee side that meets water quality standards. The Little River also provides three-fourths of Blount County's drinking water supply (Blount County Planning Commission, 1990).

The Highway 321 corridor through Tuckaleechee Cove is one of the least developed of the major entrances into the Great Smoky Mountains National Park. Tuckaleechee Cove is comprised of open fields, and grass covered rolling hills, except for small, clustered pockets of development along Highway 321. Despite the low concentration of development, the Walland –Tuckaleechee Cove area contributes 49% of gross sales tax receipts for Blount County, primarily through hotel receipts and cabin rentals (Ibid). Lack of sewage lines has been the principle factor inhibiting growth.

The route through Tuckaleechee Cove contrast greatly with the six-lane, heavily developed GSMNP entrance through Sevierville-Pigeon Forge, Tennessee. Tuckaleechee, Cove residents stated in visioning exercises that they did not want to become another Pigeon Forge. Townsend's slogan is "The Peaceful Side of the Smokies" (Ibid).

However, recent expansion of State Highway 321 to four lanes and increased development activity has raised concerns over the fate of the last relatively un-commercialized major entrance into the GSMNP. To date there has been an extensive and well-documented visioning process, Preliminary Development Plan by consultants Barge-Waggoner (BG), a Highway 321 Design

Plan (which influenced the Tennessee Department of Transportation's (TDOT) redesign of Hwy 321, a Tennessee Valley Authority assessment of point and non-point water pollution sources (unpublished pilot study) and a National Park Service Study of Transportation Alternatives to alleviate peak season traffic congestion in nearby Cades Cove, the most popular single attraction in the GSMNP (NPCA, 2001).

The Tuckaleechee Cove planning process stalled for a time after the drafting of the Preliminary Development Plan, but has since been revived. Points of conflict included: differing views between City of Townsend residents versus those of unincorporated areas of Tuckaleechee Cove, differing views amongst property owners as to the type and intensity of future development. Another point of contention was some existing owners fear competition from new businesses. There also exists a segment of the population that does not want any major new development in Tuckaleechee Cove. Additionally, there were issues of false and misleading information being perpetuated by individuals intent on sabotaging the process. Despite disagreements and complicating factors, the community has moved forward and is addressing issues outlined in visioning exercises. The City of Townsend is now addressing the question of what suite of standards, ordinances and incentives will move them toward their community vision.

There is a history of successful collaboration from the visioning process and the Highway 321 Design Plan, and Blount County recently passed a referendum for county-wide zoning (Lamb, 2001). There is also renewed interest

in addressing the needs of Tuckaleechee Cove. The ongoing GSMNP Cades Cove Peak Season Traffic Management Plan will most likely impact or directly involve Tuckaleechee Cove. A well organized and energized Tuckaleechee Cove can achieve its vision while assisting the park in addressing snarled peak season traffic in Cades Cove. This is a significant opportunity.

### **Purpose of the Study**

This thesis, examines Gateway Community Planning literature for a national and regional context and studies the challenges and opportunities of Tuckaleechee Cove to provide a Case Study for the East Tennessee and Southern Appalachian Region. It is the author's hope that this Thesis will help Tuckaleechee Cove fulfill the vision expressed by its residents.

Gateway community and rural planning literature was examined to determine the essential elements of successful Gateway Communities and was combined with interviews with citizens, consultants and government agents to ascertain present conditions. Analysis of these elements was applied toward a case study of the Tuckaleechee Cove planning process.

## **Research Questions**

This study addresses the following questions:

- What are the common challenges faced by gateway communities? What strategies were employed to address challenges? How are these strategies best adapted to the situation in Tuckaleechee Cove?
- What are the roles of key participant groups in the process? What are their goals and objectives?
- What is the nature of communication among entities, and how can it be improved?
- What is the current structure and status of the process?
- What is needed to move the process forward?

## **Rationale**

- National Park Service officials cite uncontrolled development in Gateway communities as one of their top issues of concern (Peine, 2000). Case studies for communities in Appalachia are relatively few in number.
- A Cove wide process is necessary to help the Tuckaleechee Cove community achieve visioning goals. The community has expressed protecting the Little River and the scenic beauty of the cove as top priorities (Barge, Waggoner, 1997). Environmental degradation of the

Little River would hurt tourism (fishing, tubing, and canoeing) and threaten Blount County's water supply.

- Tuckaleechee Cove will need to work with GSMNP officials to remedy traffic problems in Cades Cove (the most visited single attraction in the GSMNP). Townsend-Tuckaleechee Cove is the most logical staging area for a public transportation system (Handly, 2001).
- Townsend has made great strides between 2002 and 2003. The process has gotten re-energized since the expansion completion of Highway 321. The time is now ripe to address Cove wide planning issues.

### **Assumptions of the Study**

- All individuals who participated in the study gave honest and accurate information to the best of their knowledge.
- Available environmental data accurately reflects the conditions in the study area.
- Strategies utilized in other gateway communities are applicable to Tuckaleechee Cove (with necessary modifications).

### **Limitations of the Study**

The study is limited by the willingness of participants to be interviewed and truthful disclosure by participants.

This thesis is limited to the errors and assumptions of the authors of previously published surveys and documents (primarily consultants Barge-Waggoner and TVA).

Further, circumstances in each community are unique, and therefore ideas must be tailored to the conditions of the community in which they are applied.

## **Definition of Terms**

### **Fecal Coliform**

A bacterium used as a water quality marker. It indicates pollution from sewage and animal waste.

### **Gateway Communities**

Towns, hamlets, and cities bordering national parks, state parks, wildlife refuges, forests, historic sites, wilderness areas or other public lands (Howe, McMahon, and Propst (1997)). They are usually on main routes and/ or near entry points into public lands.

### **Great Smoky Mountains National Park (GSMNP)**

Located on the border of Tennessee and North Carolina, it has roughly equal area in both states. It is the most visited parks in United States and is an International Biosphere Reserve.

### **Point and Non-Point Source Pollution**

Point source pollution is produced or emitted from a spatially small and discernable source such as a factory or sewage treatment plant. Non-point sources are geographically spread out and may be small sources of pollutants

individually, but cumulatively can be large. Examples include residences, golf courses, and farms. Non-point source pollution can be sediments, micro-organisms, and chemical constituents.

### **Watershed**

A hydrologic unit whereby runoff from the land surface flows into the same watercourse. The main watercourse in this study is the Little River within Tuckaleechee Cove and adjacent smaller coves.

## **Overview and Organization of the Study**

To date there has been an extensive and well-documented visioning process, a Highway 321 Design Plan, a Point and Non-point Pollution Assessment, a Preliminary Development Plan, and an ongoing attempt to achieve a “Special Entity Status” for Tuckaleechee Cove—an administrative and planning unit status beyond traditional City and County frameworks. Until recently, little has been accomplished toward the next phase, the drafting, approval and implementation of a working plan for Tuckaleechee Cove (Lamb, 2001). This thesis utilizes the available planning documentation, and interviews with participants in the Tuckaleechee Cove visioning and planning process, to ascertain present conditions and where the process lies on the Five Step Planning Framework. The framework allows one to evaluate where the process stands in relation to an idealized reference (The common stages exhibited in most planning initiatives). Best practices from the literature were utilized to draft a

general strategy and suggestions for moving the planning process forward on a Cove-wide basis.

## **Methodology and Procedures**

This thesis examines many planning frameworks, including the Twelve Step Visioning and Planning Sequence of the Smart Growth Guide for Tennessee Towns and Counties, and discovered that most planning frameworks have common essential elements. Typically, community desires for the future are sought (Visioning), information regarding conditions is obtained (Data Acquisition), planning alternatives are created (Formulation of Alternatives), preferred alternatives are approved and implemented, and mechanisms are created to evaluate and revisit the process. These five steps are incorporated into what the writer terms as the Essential Five-Step Model.

The Essential Elements Five-Step Model is as follows:

- Recognition and Visioning
- Data Acquisition
- Formulation of Planning Alternatives
- Approval and Implementation of Preferred Alternatives
- Monitoring—and Re-evaluation

This Five-Step Model is the basic evaluative framework. The Review of the Literature yielded aspects of best practices and made recommendations regarding approaches. These were applied toward recommendations to guide

the process in the case study community of Tuckaleechee Cove. The primary methodological sources for the Five-Step Model were English, Peretz, and Manderschied (1999) Smart Growth Guide for Tennessee Towns and Counties: A Process Guide; Howe, McMahon, and Propst's (1997) Characteristics Displayed by Successful Gateway Communities, and Miller (1990) Evaluative Research in Rural Development . The Review of the Literature addressed aspects of successful gateway community planning process, leadership roles, common issues of concern in gateway communities, and issues specific to Tuckaleechee Cove and the Great Smoky Mountains National Park region.

The primary information sources for the Tuckaleechee Cove case study were documents by the consulting firm of Barge-Waggoner and TVA's unpublished Point and Non-point Water Pollution study, supplemented by interviews with participants in the Tuckaleechee Cove planning process.

## **CHAPTER TWO: REVIEW OF THE LITERATURE**

### **Rural America and Tourism**

Most gateway communities are located in areas that are predominantly rural or unincorporated. Thus, adjacent lands' conflict with gateway communities can be viewed within the context of "rural development". There are many definitions of "rural." The US Census Bureau defines rural as those areas outside places with populations of 2,500 or more (Radin et al., 1996). Other agencies consider rural areas as those county areas outside the borders of Metropolitan Statistical Areas. Regardless of the definition used, rural areas tend to be characterized by small-scale, low-density development, distance from metropolitan areas, a varying degree of cultural and social isolation, and specialization of their economies (Ibid). The 1990 Census reported that ninety-seven percent of the land area of the lower forty-eight states was rural and eighty percent was non-metropolitan. Nearly one-fourth of the US population lives in non-metropolitan areas. Castle (1998) determined that 22.5 percent Americans lives in "rural" areas and 24.8 percent lived in non-metropolitan areas.

The term "development" also has many meanings and definitions. Development was once synonymous with progress and modernization, and was associated with infrastructure such as water and sewage, roads, electricity, and communications. It has evolved to include such elements as social and intellectual capital, resource management, and natural capital. The recognition

of negative social and environmental impacts has changed the perception of the term “development.” Infrastructure improvements can radically alter the character of rural and undeveloped areas. The lack of infrastructure and isolation are factors contributing to the unique aesthetic and social dynamic of rural areas.

### **Economic Fabric of Rural America**

The economic fabric of rural America has changed dramatically in the last fifty years. Since World War II, the farm population has dropped from 24.3 million people to below five million. At the same time, the number of people living in non-metropolitan areas has increased dramatically. Rural areas are less farm-based and more complex and diverse than in the past (Lapping, 1989). Agriculture and mining have dropped as a portion of the US Gross Domestic Product, from a peak of about eight percent in 1980 to less than four percent by 1990. Only two percent of US workers made their primary income from farming in 1990 (Radin et al., 1996). Although fifty percent of rural land is devoted to agricultural pursuits, only ten percent of rural people make their primary living from agriculture and farming related services. Primary incomes now come predominantly from non-agricultural segments of the economy. Thus, there is little basis to equate rural people with farming (Castle, 1998).

Structural changes in the US economy have greatly impacted rural areas. Decentralization of manufacturing benefited rural areas (especially in the South). However, this trend has slowed and is expected to decline as more

manufacturing shifts to developing nations. Increased non-farm employment has heightened incomes in many rural areas, but poverty rates still remain high.

Rural America continues to lag behind urban areas in household income, level of educational attainment, rate of poverty, and access to health and social services (Machlis and Field, 2000).

Rural communities typically suffer from a lack of diversity in their economic structure, making them vulnerable to changes in commodity prices, global market changes, or business decisions of base firms. Smaller enterprises in rural communities tend to be heavily dependent on the few large local employers in the area (in their capacity as suppliers or service providers). Thus, rural communities are more vulnerable to structural changes in the economy than more economically diverse urban areas (Ibid). Even in the best of times, most jobs provided by resource extraction and manufacturing in rural areas tend to be low-skill, low-wage jobs providing little potential to raise a family out of poverty (Ibid).

Rural communities frequently must rely upon external sources of financial capital. Increased absentee ownership has removed decision-making power from local entities, putting rural communities in a weak negotiating position. Often communities lack the ability to have input into strategic decisions of base employers. The relationship usually consists of communities giving tax incentives or other concessions to keep the facility in the area (Ibid). There is much debate over the merit of promoting small businesses versus recruitment

and retention of large firms (which tend to have better wages and benefits). Small firms in small communities may not be able to provide the quality of jobs needed to raise incomes. Low population densities of rural communities make it more expensive to provide education, healthcare, transportation, water, sewage, and other services. Rural areas are placed at a great disadvantage as a result. They must raise taxes to provide the services, or exist without them. The lack of quality services and lack of scale inhibit the types of small businesses that can exist and thrive in a community. Small businesses need supporting services like accountants, technical experts, insurance, and other support aspects often not available in many rural communities (Ibid). Rural communities have many strikes against them in their quest to diversify their economic base.

### **The Appeal of Tourism**

The geographic isolation and lack of economies of scale limit the economic development options for rural communities. For gateway communities, however, there is a readily available economic development alternative-- tourism. Successful economic development derives from a strategy which exploits an economic niche in which the community has a comparative advantage (Ibid). For gateway communities, the comparative advantage is location near a desired natural or cultural attraction. The large volumes of tourists demand services such as accommodations, restaurants, outfitters, retail stores, and other services and amenities.

Public tourism policies usually involve government promotion and marketing to increase opportunities for tourism sector businesses, and thus, increase sales tax receipts (Ibid). Tourism is promoted because it generates jobs and income. Some writers have raised concerns over income distributional aspects and infrastructure costs of a tourism-dominated economy. Marcouiller (1997) claimed that there is a need for a more holistic tourism perspective if environmental, social, and economic sustainability are to be realized. He argued that awareness of the impacts of tourism can help a community better manage and reduce negative outcomes.

Tourism as an economic sector is vaguely defined. It is generally measured indirectly by compiling data on lodging, restaurants, gas stations, retail and other service sectors above the calculated base required to serve local needs. Some researchers also include construction, real estate and certain aspects of transportation under tourism-related businesses. Regardless of what specific sectors one includes under tourism-related businesses, they tend to be highly labor intensive. During peak seasons in resort communities, there is great demand for workers. Often, employers encounter difficulties filling all available positions (Machlis and Field, 2000).

Two aspects of tourism stand out: the seasonality of labor use and the wage rate structure of tourism jobs (Ibid). These factors have tremendous implications for rural income distribution, transfer of income among regions, availability and affordability of housing, and general rural migratory patterns

(Ibid). Machlis and Field (2000) stated that little effort has been made to assess the types of jobs created by tourism, their match with local and regional employment goals, and the integration of tourism with larger development goals of the region. Critics of tourism have pointed out that tourism creates a situation whereby local residents are placed in a subservient role, catering to wealthy tourists (Ashworth, 1992). Others have suggested that lower income residents, disproportionately represented by female-headed households, are subjected to persistent poverty due to the low wages and seasonality of work in tourist areas (Smith, 1989). Tourism businesses are owned by wealthy entrepreneurs, while the people employed by these enterprises are paid predominantly low wages (Leatherman and Marcouiller, 1996).

An examination of different development options for a rural area of Southwestern Wisconsin indicated that of the five development options, tourism produced the largest degree of income inequality of the five development options.

Tax revenue earned from tourism is usually from sales taxes. High sales taxes can add additional burdens on low-income workers living in the community. This regressive tax structure is an issue of major concern. Some areas reduce the burden by incorporating ad valorem taxes (such as hotel or room taxes). This shifts more of the tax burden to visiting tourists (Machlis and Field, 2000). Tourism also places burdens on local infrastructure. Heavy seasonal tourism places demands on roads, water and sewage, police and fire protection. These

add real costs to the community and should be incorporated into an economic analysis. The costs are proportional to the intensity level of visitation (Ibid).

## **Tourism in the Great Smoky Mountains Region**

Tourism generates over 8 billion dollars per year for the state of Tennessee. It continues to grow as a business sector and is actively promoted by the state (Barge Waggoner, Sumner and Canon, 1997). Tourism is the dominant employment sector for counties surrounding the GSMNP (on both the Tennessee and North Carolina sides of the park). Tooman (1997) examined the economic impact of tourism in the Great Smoky Mountains region. He used Cherokee, North Carolina (Swain County) and Pigeon Forge/Gatlinburg (Sevier County) as units of analysis. According to Tooman, most economic impact analyses take the form of multiplier effects of aggregate income and employment. Aggregate analysis techniques do not give insight into the well-being of the community as a whole, especially income distribution and social well-being aspects. Labor force participation rates, proprietary income, unemployment rates (including seasonal), levels of poverty, participation in welfare programs, educational attainment, wages by industry, and public finance were all examined and compared to neighboring counties.

Growth of tourism has been rapid and conspicuous in both counties since 1970, and will continue to be a major sector for both counties. Aggregate analysis indicated tourism to be a success in both counties. Production of goods

and services has increased, as have profits, savings, investment; additionally, Gross Domestic Product (GDP) has been boosted. Second order and third order effects, though, have often been ignored in many analyses because the dominant goal of economic development has been achieved. Tourism is often viewed as requiring minimal public investment, usually only minor improvements in roads, downtown cleanup, and marketing. The private sector provides hotels, restaurants, retail, and other services. Tourism is an easy sell and is often viewed as being a “free” means of development (Ibid).

Tourism in Sevier County is the number one business sector. From 1966 to 1993, Sevier County increased from 3,762 accommodation units to 13,971. Since the 1980’s Sevier County added Dollywood theme park, four factory outlet malls, and a Super Wal-Mart, in addition to several country music theaters. Growth in Swain County, North Carolina has not been as dramatic, but is significant in its own right. Most tourism-related development in Swain County is centered around the town of Cherokee on the Cherokee Reservation. The number of lodging establishments increased from fifteen in 1966 to sixty-five in 1994. Development has accelerated since the opening of Harrah’s Casino on the reservation. The number of restaurants, specialty shops, and other attractions has since increased (Ibid).

Tooman (1997) indicated the following findings about second and third order effects of tourism for the case study counties of Sevier and Swain:

- Proprietary income and labor force participation were higher than state averages in both counties. Much entrepreneurial activity was generated due to the small-scale nature of most operations and relatively low cost of start-up.
- Most jobs created were low-skill and low wage positions. The jobs were also seasonal and/or part-time so that annual earnings were quite low. These jobs provide little hope of advancement and tended to be filled by married mothers, students, retired people, or unemployed people from outside the area. Further, women outnumbered men three to one.
- Seasonal unemployment was high in both counties. January marks the high point in seasonal unemployment.
- Per capita income in both counties (from 1970-1990) was well below respective state averages.
- From 1970-1990, Absolute levels of poverty increased by 3.3 percent in Sevier County, while the Tennessee state average poverty rate declined by 10.9 percent. Poverty increased by 29.1 percent in Swain County, while the North Carolina state average declined by 16.7 percent.
- Upward mobility of the next generation was limited. Dropout rates were high. Some young people dropped out of school and worked in the tourist industry where a degree is often not required.
- Land use became more restricted to tourist activities: hotels, restaurants, seasonal housing, outlet malls, and amusements. Low-income housing

was scarce, and economic diversity diminished. Real estate selling for \$1,000 acre in 1964 sold for \$4,000 a square foot in the mid 1980s; in Pigeon Forge, twenty eight acres that sold for \$8,000 in 1970 sold for \$6,000,000 in 1990.

- Weekly wages in Sevier County were below the East Tennessee average in all major industry categories, and the rate of wage increase was also less than the East Tennessee average.
- Compared to neighboring relatively undeveloped rural counties, Swain and Sevier have higher per capita incomes and lower poverty rates, but they were well behind counties with more diverse economies.

Tourism produces positive first-order effects. However, the benefits are not equitably distributed. Most of the jobs created are suitable for supplemental income and do not pay a living wage. When tourism becomes the dominant economic sector, it tends to lower economic diversity. In both Swain and Sevier counties, a few entrepreneurs and large land owners benefited, while the majority of the population received low-paying seasonal jobs. Tooman (1997) suggested that policies should be implemented to enhance benefits and reduce costs, such as taxes on each unit of tourist construction such as hotels and restaurants. Funds could be used to help provide affordable housing and training to help local people form business cooperatives or other poverty-reducing policies and programs.

Rural gateway communities must be cautious of how they utilize tourism. Careful planning of the type and intensity level of tourism can help produce higher paying jobs and less socially disruptive tourism. In response to news of a new golf course and housing development planned nearby, a resident of the community of Sheridan, Wyoming (gateway to the Bighorn Mountains) commented that not many people in Sheridan want their children to eke out a living “making beds for some Californian.” Finding the right mix of “sustainable” good paying jobs is a difficult challenge for rural communities (The Economist, 1995).

Most contemporary tourism public policies focus on supporting tourism sector interests without considering the broader community (Machlis and Field, 2000). This narrow focus ignores detrimental effects such as increased infrastructure costs, lack of affordable housing, environmental degradation, and increased income inequality. Most economic analyses do not address these concerns. If a community wishes to achieve economic development, yet preserve its character, it must use caution in pursuing tourism as a development strategy.

## **Purpose and Function of the National Park System**

Protected areas are a relatively recent occurrence in the world. Most of the world’s protected areas were established in the last twenty-five years, with a five-year period starting in 1970 being the most productive (O’Brien, 1999). The

International Union of Conservation of Nature (IUCN) counts 9,832 areas as having some kind of protection. Several U.S national parks are also World Heritage Sites (WHS): Yellowstone, Everglades, Grand Canyon, Great Smoky Mountains, Hawaii Volcanoes, Mammoth Cave, Olympic, Redwood, Wrangell-St Elias, and Yosemite. World Heritage Sites are areas or objects of extraordinary cultural, historical, aesthetic, or natural significance.

The national park system of the United States is one of the most admired and well-known natural resource protection systems in the world and a source of recreation and pride for the nation. National parks also function as natural laboratories and biosphere reserves. Of the 376 units in the national park system, only fifty-four are actual parks. Most are historical and cultural units. The fifty-four parks are not representative of all the major ecosystems of the nation. The National Parks Conservation Association (NPCA) stated in their 1990 report that forty-two percent of remaining ecosystems are not represented in national parks, making existing national parks even more important as natural area sanctuaries (Ibid). Many of the excluded ecosystems are under Forest Service or Bureau of Land Management control. These areas can be subject to mineral extraction and timber harvesting, and other uses that may be in conflict with protecting ecosystems for wildlife (Ibid).

The Park Service Organic Act of 1916 was drafted to provide general guidance and described the intended purpose of the United States National Park System:

...the service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments and reservations...by such means and measures as conform to the fundamental purpose of the said parks, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as to leave them unimpaired for the enjoyment of future generations (Freemuth, 1991).

The Park Service Organic Act's wording suggests use patterns should be sustainable within the "fundamental purpose" of individual park units. The Act did not envision threats from adjacent lands use patterns.

Our national parks are an asset we inherit and must pass on to future generations. The responsibility for stewardship is a national and trans-generational equity issue. Naturally, there are value conflicts. Freemuth (1991) terms it the "use versus preservation" debate. Parks must simultaneously protect natural and scenic beauty while providing for the "enjoyment" of human visitors. There are also billions of dollars in revenue generated by communities supplying goods and services to park visitors and staff. Finding the balance between these competing goals and interests is the heart of the adjacent lands debate.

National Parks fulfill several roles. Dearden (1995) divided national parks into two major role categories, designated as social and ecological roles:

#### Social Roles of National Parks:

- Museum role: Parks are to preserve natural monuments and cultural monuments for public viewing and future generations.
- Art galleries: Parks should preserve the most scenic examples of natural landscapes.
- Recreational centers: National Parks are playgrounds and places of relaxation from the stresses of urban life.
- Spiritual centers: Parks offer close contact with nature, which enriches the spirit.
- Economic role: National parks offer opportunities for some people to make a living selling services to visitors.

#### Ecological Roles of national Parks

- Nature bank: National parks serve as banks for genetic capital, which preserve genetic diversity by providing the right habitat for their propagation.
- Natural laboratories for research: Protection of biodiversity in national parks makes it possible to perform scientific research in natural conditions.
- Open-air classrooms: National parks provide opportunities for educational hands-on immersion in the natural world by all sorts of people (Ibid).

## **Vulnerability of Mountainous Areas**

Especially vulnerable are mountainous areas, due to their isolation and sensitivity to change. Mountainous protected areas are extremely important as social, spiritual, and ecological reserves. Reasons for protected area status for mountain regions as determined by the World Conservation Union are:

- Mountains are often associated with sacred places, especially for indigenous peoples.
- Mountains have mystique for scholars, visitors, and the general public.
- They are the headwaters of valuable surface waters.
- Mountain biota are under climate stress even under the best of times.
- Mountain areas need protection from exogenous air pollution.
- Mountain areas are refuges for rare animal and plant species.
- Mountain areas are subject to rapid change and tend to be fragile.
- There is a concentration of high scenic value attractive to tourist and visitors.
- Tourism in confined areas requires proactive management strategies to minimize degradation (IUCN, 1992)

## **Park Service Authority Over Adjacent Lands**

The Park Service has no jurisdiction over lands outside of park boundaries. Attempts by park service officials to address adjacent lands issues are often met with resistance. Thus, it is incumbent among local citizens, park service officials, local environmental groups, local officials, local land owners, and businesses to work together in order to formulate solutions to local problems that involve national parks.

A 1985 Conservation Foundation study of the Park Service indicated:

At the heart of opposition to park service power over nonfederal lands are respect for private property rights and resistance to federal intrusion into what are generally perceived to be purely local affairs.

To address these concerns as well as park needs, protective measures need to be tailor-made, accommodating the diversity of parks and their local jurisdictions (Conservation Foundation, 1985).

### **Attributes and Methodologies of a Proactive Official**

Freemuth (1991) stated that for park managers who were successful in resolving external threats, twelve factors were helpful to them:

- Get involved early.
- Coordinate with other federal agencies.

- Find support from local groups or agencies.
- Inform people about the local benefits of the park.
- Share information freely.
- Have facts to support your position.
- Suggest alternatives and be positive rather than negative.
- Ask for what you believe is necessary.
- Be prepared to negotiate.
- Try to understand the interests of others.
- Keep in touch with the players.
- Be persistent and patient (Ibid).

Positive social interactions and coalition building are often the only means available to park managers to address external threats. Thus, the most successful at addressing adjacent land conflicts are those that invest in gaining support in the adjacent gateway communities.

### **External Threats to National Parks**

As early as the 1930's, the Park Service began to recognize management problems concerning wildlife stress. In 1933, the Park Service issued a series of reports on wildlife issues. A report by George Wright, Joseph Dixon, and Ben Thompson listed geographical shortcomings as a major cause of wildlife stress. They stated that unfavorable conditions for wildlife stemmed from "insufficiency

of park areas as self-contained biological units.” They further stressed that biological integrity should be a criteria for establishing park boundaries. They recommended natural faunal boundaries, protection of minimal habitat to sustain populations, protection of year round habitat, and complete faunal surveys of parks. This report was the first to recognize that park boundaries were permeable and might not be capable of keeping out external threats (NPS, 1932).

The 1960’s marked the next phase of recognition of external threats. A panel report in 1963 recognized additional wildlife management problems. The panel chaired by A. Starker Leopold, reaffirmed that most parks were not big enough to be considered biological units, and thus were vulnerable to external threats. The report called for more studies and cooperation with other management agencies to address the issue (Wildlife Institute, 1969). A report by the National Academy of Sciences (NAS) recommended a well-defined research program to address issues such as changes in land use, other natural resource use, and economic activities on areas adjacent to national parks likely to affect the parks (NAS, 1963).

Increased awareness of environmental issues in the 1960’s, helped place external threats on the political agenda. By the late 1970’s, major concerns had arisen concerning external threats. In 1979, the National Parks and Conservation Association (NPCA) published its adjacent lands survey. It asked a large number of park officials about problems their units faced. Park officials listed residential development, energy extraction, and industrial and commercial development as

major concerns. Half the respondents stated they felt they did not have the authority to address concerns, and that informal means were the primary methods for addressing problems (NPCA, 1979).

During the 1980's, the Reagan administration favored a policy of coordination among federal agencies to address adjacent lands' threats to park units. In 1984, the Department of the Interior convened a task force to work on issues of park protection. The task force relied heavily on internal agency procedures to "improve the anticipation, avoidance, and resolution of resource conflicts". A 1987 GAO report concluded that no agency had instituted such procedures as of the report date (Freemuth, 1991). The park service wanted to begin documenting harmful external actions, but this measure was stopped by then assistant secretary William Horn (Ibid).

Approaches in the 1990's moved toward community-based strategies to address external threats. There was also a trend toward viewing parks as part of greater ecosystems, as advocated by past writers. A classic example is the Greater Yellowstone Ecosystem project, which is focused on protecting areas that support the declining grizzly bear population of the park (Freemuth, 1991). A movement toward regional planning incorporating environmental concerns took root as well. Schafer (1994) stated that the landscape setting is an equally important part of the park ecosystem. He emphasized large-scale, regional planning in protecting and maintaining ecosystem quality of park units.

Growth in gateway communities and the demand for energy and natural resources has adversely affected many national parks and wildlife preserves. Freemuth (1991) identified three principle categories of threat: mineral extraction, air pollution, and development issues on lands adjacent to parks. Mineral extraction can scar the landscape and pollute ground and surface waters. Air pollution constituents that cause acid rain, ozone, or particulate deposition can travel hundreds and even thousands of miles. Development at the borders of natural areas shrinks the range of park animals, increases human/animal interactions, and can introduce noise, light, air, and water pollution, which stress animal populations. Development also provides a conduit for the introduction of invasive species and causes visual blight of the landscape (Ibid).

### **Adjacent Land Development Threats to National Parks**

Visitation to national parks has increased by 4.5 percent per year from 1992-1997, increasing to 280 million visitors in 1997. Popular park units like Great Smoky Mountains, Acadia, and Grand Canyon are overwhelmed each summer by throngs of visitors (McGivney, 1998).

National forests have also seen increased visitation (from 598 million in 1991 to 835 million in 1994). Visitation to wildlife refuges has averaged around 25-30 million visitors per year (Howe, J., E. McMahon and L. Propst, 1997). The upward trend in visitation is expected to continue for the foreseeable future. In the 1990's, two million more Americans moved to rural areas than the reverse.

In the 1980's, counties with federally designated wilderness areas grew six times faster than those without designated wilderness areas (McMahon and Propst, 1998).

Gateway communities have become destinations of choice for those seeking a higher quality of life and recreational opportunities. Retirees seeking picturesque places and outdoor recreation opportunities, often choose gateway communities. Estes Park, Colorado (gateway to Rocky Mountain NP); Moab, Utah; and Maryville, TN, have experienced significant population growth. Cities like Traverse City, Michigan; Flagstaff, Arizona; Durango, Colorado; Talkeetna, Alaska; and Fredericksburg, Virginia are other examples of gateway communities coping with rapid growth (Ibid).

Howe, McMahon, and Propst (1997) addressed common problems and pitfalls of rapidly growing gateway communities. Some of the common problems experienced in rapidly growing gateway communities were:

- Lack of affordable housing as land values rise
- Loss of community character
- Loss of crucial adjacent lands habitat
- Sensitive environmental areas tend to be the most desirable building sites
- Seasonal nature of tourist-based economies
- Quality of built environment
- Transportation issues

Gateway communities have experienced explosive growth over the last 20 years, primarily due to Baby Boomers and more affluent Americans seeking vacation and retirement homes away from the cities and suburbs. Lower cost of living, recreational opportunities and a slower pace of life have drawn people to areas adjacent to national parks. The new arrivals are often educated persons with high incomes. They bring their economic clout and cultural expectations with them. Their influx can quickly transform a rural town into an economically exclusive community. Land values escalate along with property taxes, forcing local land owners to subdivide and sell their land to developers. In Bozeman, Montana, land that sold for \$600 an acre in 1981 sold for as much as \$10,000 an acre in 1994. "There is no way young people can stay in town," said a Bozeman resident, highlighting one of the common problems experienced in gateway communities: the inevitable rise in land values that drive the conversion of open land to commercial uses. For example, Gatlinburg, Tennessee no longer has any residential neighborhoods. Most housing has been converted to rental properties or second homes (Howe, J., E. McMahon and L. Propst, 1997). Some newcomers to gateway communities build large "trophy homes" on land that was once forest or pasture. Trophy homes are large and expensive houses that can be two to five times the square footage of the average home. Such houses have a large footprint, and blight the landscape. Communities like Jackson Hole, Wyoming have passed ordinances to prevent construction of such houses. The

ordinance limits the maximum square footage of homes within the jurisdiction (Ibid).

Large mammal species have ranges that often include adjacent private lands. Important mating, grazing, and wintering areas in bottom-lands and along rivers, are the sites often chosen for “trophy home” and rental property construction. This causes human-animal conflicts and stresses animal populations. Gatlinburg, Tennessee has problems with bears from the GSMNP eating out of dumpsters and garbage cans. The city lies in a valley that also supplies the acorns the bears rely upon to build winter fat reserves. Identifying critical adjacent lands habitats is an important step in finding a balance between development and wildlife protection (Ibid).

Peine et al. (2000) discussed potential problems associated with adjacent land use in the vicinity of the Great Smoky Mountains National Park. Some of the categories of recognized threats were:

- Habitat fragmentation and degradation
- Barriers to natural movement patterns
- Isolation from other protected areas and bioregions
- Point and non-point sources of pollution
- Solid Waste disposal
- Pathways for the introduction of exotic pest, plants, and pathogens
- Human-wildlife interactions
- Domestic animals preying on native species

- Utilization of renewable and non-renewable natural resources
- Noise intrusion
- Light intrusion
- Visual intrusion
- Traffic increases

Traditional development increases the percentage of impermeable land cover such as roads, buildings, and parking lots. Impermeable surfaces increase run-off. This run-off contains oil, pathogens, grit and dirt, chemicals, and nutrients that reach streams, lowering water quality. Increased run-off raises water temperatures, which is detrimental to species such as trout. Construction along rivers can destroy vegetative cover, causing stream banks to erode. Vegetative cover also helps keep streams cool from the summer sun, and provide shelter and habitat for land and aquatic animals (Howe, J., E. McMahon and L. Propst, 1997).

Leaking sewer lines and septic tanks can pollute ground and surface waters, making them unfit for aquatic life and bodily contact. This is a major problem in both cities and rural areas (Ibid).

Road construction divides habitats and increases deaths of wild animals (road kill). Increased vehicular traffic also heightens noise and air pollution. Increased traffic lowers the quality of life for local people and diminishes visitor experiences as well. Traffic in and around national parks is a major concern of

the Park Service. Grand Canyon, Great Smoky Mountain Nation Park, and other parks are examining public transportation alternatives to relieve congestion (Ibid).

Environmental problems arise at the intersection of ecosystems and human social systems (Machlis and Field, 2000). Finding a sustainable balance requires an approach that recognizes the importance of integrating human social and economic needs with that of the natural world. Development in rural areas should be viewed within a more holistic framework, one that includes protection of cultural and natural resources, which preserve the sense of place of rural communities.

### **Strategies of Progressive Communities**

Propst et al. (1997) listed nine characteristics displayed by successful gateway communities. Not all communities utilized all of the following attributes:

- Develop a widely shared vision
- Create an inventory of local resources
- Build on local assets
- Minimize the need for regulations
- Meet the needs of both landowner and the community
- Team up with public land managers
- Recognize the role of nongovernmental organizations
- Provide opportunities for leaders to step forward
- Pay attention to aesthetics

The following is a list of crucial areas of concern a protection strategy should address according to Howe, J., E. McMahon and L. Propst, (1997):

### **Public Participation**

A promising effort is most often not derailed by disagreement over goals or strategies but resistance that comes from people who feel left out of a process or who believe--fairly or unfairly--that an effort was "planned on" them rather than with them.

### **Partnerships**

Partnerships are crucial. Citizens groups, local regional and federal agencies, non-profit organizations, business organizations, neighboring towns, and philanthropic organizations can be helpful in implementing a successful community plan.

### **Rhetoric**

Public officials and park managers should focus on finding common ground on issues rather than casting blame or vilifying those with differing points of view.

## **Regulation**

Regulation prevents the worst of development but does not promote the best of development. Regulation is necessary but should not be overemphasized. A mixture of regulation, market incentives, and conservation easements can protect community treasures and promote quality development while respecting property rights.

## **Development**

Development should be fiscally sound, environmentally responsible, and aesthetically pleasing. Development should complement community vision and meet certain performance criteria. A diverse local economy with a mixture of land uses is best. Indigenous businesses are preferred because more money stays in the local economy rather than flowing to national corporations.

## **Housing**

Gateway communities should supply a mix of housing, not just housing for wealthy retirees. The community should be able to provide housing for those on a median income. This is important in maintaining community character. For instance, in Vail Colorado, only nine of forty-eight police and firefighters can afford to live in the city. If average citizens cannot afford to live in the town in which they work, community cohesion is lost (Propst, 1997).

It is crucial to cultivate a stronger protection ethic, in order to preserve the health of ecosystems of protected areas and to maintain a high quality natural experience for the park visitor. Additionally, the long-term sustainability of a tourism-based economy is enhanced by incorporating sustainability principles. Tourist traps are easy to construct and go through life cycles. Communities that incorporate protection strategies, and maintain their charm and character do not have to constantly reinvent themselves in order to maintain their share of the tourist market. Communities such as Sanibel Island, Florida and Dewees Island, South Carolina are successful not because of amusements and neon, but because they provide a natural and restful experience which promotes return visits and word of mouth recommendations.

## **Rural Planning**

Planning for rural areas is different than for urbanized areas. Traditional urban planning assumes that growth is inevitable and desirable and that increasing the tax base is the prime concern. It also places authority to make planning decisions in legislative bodies and administrators. An open and more democratic process is needed in unincorporated rural areas, as rural people tend to want more involvement in the decision making process. Sargent et al. (1991) stated that “rural people place a high value on self-reliance and self-determination...and they have experience with techniques for cultural and economic survival.” Rural people value cooperation and collective action to solve

community problems. This comes from generations of experience in rural living and the long tradition of cooperation being a survival tool for rural people (Ibid). Land is more than just a commodity for rural people. It is also symbolic of a way of life. Maintaining the land is an important part of protecting the character of rural communities (Ibid).

Planning for increased self-reliance must consider human, animal, and plant ecologies. Rural planning should utilize the conservation ethic and self-reliance of rural people as assets in the planning process. The planning process should seek to increase the capacity of the community to steward its cultural and habitat resources (Ibid). The following summarizes sustainable rural development practices:

Sustainable development is positive socioeconomic change that does not undermine the ecological and social systems upon which community and society are dependent. Its successful implementation requires integrated planning, and social learning processes; its political viability depends on the full support of the people it affects through their governments, their social institutions, and their private activities (Rees, 1989).

### **Community Development and Good Gateway Community Practice**

Development decisions are also community development issues.

“Community development is a process through which a community attempts to

improve the social, economic, and cultural situation“ according to Christenson (1982). Community development is the quality and quantity of public services, community demographics, and the alleviation of poverty. The community must first decide on a vision and then choose a path that fulfills the desired outcome. Christenson wrote, ”Economic development without community development can increase the gap between social classes... .Community development is needed to realize the potential social well-being benefits of economic development” (ibid).

A citizen-based process is the key to successful community development in rural areas. The concept of community development encompasses economic development, but views it as part of a larger process, a process which features citizen involvement in determining the quality of the social, physical and economic environment of the community. It is inherent in the idea that the market place, along with community desires, should determine the community’s future (Ibid).

Galston and Baehler (1995) established criteria for a community development plan. Any plan should incorporate the following attributes: relieving poverty, creating opportunity for young workers, preserving social continuity, promoting self sufficiency, and treating people with respect.

### **Negotiation and Community Process**

Tropman (1997), in his book *Successful Community Leadership*, outlined common obstacles to effective decision making. “There are three types of problems: problems of procedure, problems of process, and problems of people.”

Procedural problems are caused mainly by poor organization and not establishing parliamentary rules. Power conflicts and single issue individualism can also cause procedural problems. Problems of process can involve:

- Folly, which is implementing a poor decision;
- Group think, which is policy derived from excessive group cohesion; and other breakdowns in a rational group process;
- Problems of people are usually personality conflicts and control issues associated with individuals, groups, and factions in a community (Ibid).

Tropman (1997) outlined the elements of good community process:

Inclusiveness means that a wide range of people are involved in the process.

- **Trustworthiness** means that the meetings one attends are the real ones; no backroom decisions have overtaken the public process.
- **Viability** means that decisions made in such forums stand up and do not erode over time, suggesting that the decisions are legitimate.
- **Validity** means that the right issues--not "fake" ones-- are on the table.
- **Reliability** means that information on which decisions are based is accurate (Ibid).

## **Planning Frameworks**

In Rural Environmental Planning (REP), Sargent et al. (1991) stated that the planning process should be open and involve as many people as possible.

Citizens define the goals and make choices, take field trips to study existing land uses and conditions, and hold public meetings to determine preferences and priorities for resource access, development, and protection. The open citizen-lead process, enhances democracy and increases the likelihood that a plan will be adopted and successfully implemented. REP also stressed economic development using local resources as the foundation for guiding growth. Additionally, protection of natural assets such as wetlands, natural areas, water courses, and scenic areas was emphasized. Howe, McMahon and Propst (1997) also stressed the importance of citizen lead actions in successful gateway community planning.

Miller (1990) provided a general rural plan development model framework. It is typical of general planning models in that it begins with a perceived need (impetus for starting a planning process), and proceeds through to implementation of programs and policies. The steps of the Miller framework are:

- Organization and citizen participation
- Definition of community problems
- Assignment of priorities and specification of objectives
- Development of action plans
- Implementation of plans
- Establishment of new facilities, programs, and institutions
- Delivery of new services and programs

- Improvement of well being of rural citizen (goal achievement)

Leeuwis' (1998) "Tasks in integrative negotiation processes" Is a community based planning process framework. It is designed for use in a citizen lead planning process. It provides additional guidance for integrating citizens into the planning process, lacking in Miller (1990). The Leeuwis framework is as follows :

**Task 1: Preparation**

- Exploratory analysis of conflicts, problems, relations, practices, etc.
- in a historical perspective
- Selecting participants who feel interdependent
- Securing participation by stakeholders
- Establishing relations with the wider policy environment

**Task 2: Preliminary Proposal**

- Creating a code of conduct and a provisional agenda

**Task 3: Joint Exploration and Situation Analysis**

- Group formation
- Exchanging perspectives, interests, goals
- Analyzing problems and interrelations
- Integration of visions into new problem definition
- Preliminary identification of gaps in knowledge and insight

**Task 4: Joint Fact Finding**

- Developing and implementing an action plan to fill knowledge gaps

**Task 5: Forging Agreement**

- Spelling: clarifying positions, making claims, use of pressure to secure concessions, create and resolve impasses
- Securing and agreement on a coherent package of measures and action plans

**Task 6: Communication of Representatives with Constituencies**

- Transferring the learning process
- 'Ratification' of agreement by constituencies

**Task 7: Implementation**

- Implementing the agreement made
- Monitoring implementation
- Creating contexts of re-negotiation
- 

English, Peretz, and Manderschied (1999) examined aspects of successful smart growth practice and provided information on techniques and resources for visioning, community based planning process guidelines, evaluation, and monitoring. They also listed resources and provided case studies in support of the process. The Twelve Step Sequence Model is a citizen-based planning model for rural counties and communities in Tennessee. The English, Peretz, and Manderschied (1999) framework is as follows:

- Form a core group
- Distill basic information
- Consult with community members on their visions of the community.
- Hold Visioning Retreat.
- Gather further information; lay plans for later monitoring.
- Do forecasting.
- Boil down information.
- Develop options.
- Assess and refine options.
- Consult with community members on the options.
- Finalize the options and monitoring plan.
- Officially approve the plan.

### **Section Summary: Gateway Community Plan Development**

There are many planning framework models and guides to effective plan development and implementation. Common elements in rural and gateway community planning process models and guidelines :

- Most models emphasized establishing a citizen derived list of goals (through some form of visioning process), followed by information gathering and forecasting.

- From the visioning data and research, objectives and more specific targets were defined. Citizens then examined and debated the merits of proposed general options.
- A plan or series of plans was developed encompassing the preferred options or scenarios. Citizens debated the pros and cons of alternative plans and selected the best fit alternative. Implementation guidelines and associated policies were developed.
- Many writers also recommended some form of evaluation mechanism be established to determine if the programs and policies were indeed meeting stated goals.
- Others also stressed the need for establishing mechanism for revisiting the process, in order to accommodate changes in community needs and to further the evaluation process.

Details for planning models may vary, but most stress a citizen-centered process lead by trusted and respected members of the community as providing the greatest probability of success.

Communities have many genuine conflicts of values and interests. Therefore, there is a constant need to provide a forum for airing these differences. Such forums open public debate and stimulate further citizen involvement. This should be an ongoing process (Wahab and Pigram , 1997).

Sargent et al. (1991) concluded that sustainable economic development entailed enhancing the environment, developing human and cultural resources,

and nurturing self-reliant economic activity. Four elements were selected as guiding principles:

- Emphasizing human development
- Expanding local control of the use resources
- Increasing internal investment
- Changing economic activity and social structures to increase opportunity and decrease dependency

These four elements might be used as guidelines to measure the degree of “sustainability” of proposed actions.

Sargent et al. (1991) stated that economic development and natural and cultural resource protection were mutually supportive public goals. Rural people usually care deeply about jobs, protection of natural resources, and community well being.

Economic development planning should be conducted on a regional basis, considering competitive advantage and accounting for unique attributes of communities in the region.

Sustainable tourism will grow in importance as the pressures of tourism invade communities worldwide. The need to support sustainable tourism will increasingly involve citizen participation in the tourism development process (Wahab and Pigram, 1997).

## **CHAPTER THREE REGIONAL CONTEXT AND MODEL APPROACHES**

### **Land Use and Air Quality**

#### **Forest and Farmland**

The amount of forested land in Tennessee has increased dramatically since the 1920s. The percentage of forested land is fifty-one percent greater than in the 1920's and nine percent greater than in 1989. However, the diversity and quality of the forest has declined. Tennessee has an area of 26.4 million acres, of which 14.2 million acres is forested (TN Dept. of Agriculture and Forestry, 1999).

In contrast, farmed area in Tennessee has declined. Farmed acreage decreased by 10 percent from 1982 to 1997, while the number of individual farms decreased by 15 percent. Tennessee ranked eighth in prime and unique farmland converted into urban uses from 1982 till 1992 (Ibid).

#### **Air Quality**

According to the National Parks and Conservation Association, "Chronic air pollution continues to plague Great Smoky Mountains National Park, placing it on the Ten Most Endangered Parks list for the second consecutive year" (NPCA, 2001). GSMNP remained on the NPCA's Top Ten Most Endangered Parks list through 2004. Air pollution, invasive species, lack of comprehensive planning, and under-funding were major issues of concern cited by NPCA. (NPCA, 2004).

Average visibility in GSMNP is now 25 miles (down from 113 miles under pre-industrial conditions) due to airborne pollutants. Smog concentrations increased at seventeen of twenty-four National Park Service Monitoring sites from 1992-1998, and Great Smoky Mountains National Park violated national air quality standards one out of every three summer days in 1999 (Sierra Club, 2001).

Ozone levels in the GSMNP are of great concern and might cause EPA action if the trend continues. Knoxville and the East Tennessee region have the 12th worst ozone problem in the nation. The Asheville, North Carolina region and higher elevation areas around Asheville and GSMNP have also experienced a decline in air quality due to ozone. Ozone is a colorless gas created when nitrogen oxides emitted by power plants, automobiles and factories mix with hydrocarbons in the presence of sunlight (Ibid).

**Top Ten Smoggy Parks:**

1. Joshua Tree National Monument, CA
2. Great Smoky Mountains National Park, TN
3. Sequoia National Park, CA
4. Shenandoah National Park, VA
5. Cape Cod National Seashore, MA
6. Cowpens National Battlefield, SC
7. Great Smoky Mountains National Park, NC

8. Acadia National Park, ME
9. Yosemite National Park, CA
10. Indiana Dunes National Lakeshore, IN\*

\*based on two years of data (Sierra Club, 2001).

**Results of poor air quality:**

- Poor air quality leads to reduced growth and survival of tree seedlings, and increased plant susceptibility to disease, pests, and other environmental stresses.
- Campers and hikers who escape to our parks are often greeted by dim, hazy vistas and unhealthy air.
- Haze shortens lives (“what you see, you breathe”); thousands die prematurely each year from the same pollutants that cause haze.

Regarding human health, The American Lung Association reported that during the summer of 1997, air pollution in Tennessee resulted in 4,500 visits to emergency rooms and 1,500 admissions to hospitals from respiratory distress (NPCA, 2001).

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Visibility in GSMNP has declined noticeably over the years and appears to be worsening. Distant mountains and hills, once visible, are now obscured by haze from pollutants. Trees in the higher elevations are stressed, making them more susceptible to infestation. Susceptible species are dying off at a rapid rate.

This phenomenon is quite apparent at Clingman's Dome, a popular observation spot in the higher elevations.

GSMNP air-quality specialist Jim Renfro pointed out that air masses were already poor by the time they reached Tennessee. Ozone levels grew significantly worse as the air crossed the Tennessee Valley -- rising from 85 to 105 parts per billion along the eastern edge of the Cumberland Plateau and to 105 to 125 parts per billion by the time they reached GSMNP. Dr. Wayne Davis of the University of Tennessee stated that the state's vehicle-miles traveled is growing faster than improvements brought about by stricter federal emission standards and that cars contribute thirty-five to forty percent of the nitrogen oxides in the state's air. Most of the rest comes from coal-burning power plants and industrial facilities (Sierra Club, 2001).

On June 1, 2001, the governors of Tennessee, North Carolina, and Georgia signed the Southern Air Principles document to address air quality issues in the region. The document recognized declining air quality as a problem and pinpointed automobile emissions and emissions from power plants and industry as the main sources of manageable pollutants. The document stated that the environmental officers of all three states would meet and offer recommendations to the governors on December 31, 2001. Final recommendations were due March 15, 2001. The draft recommended a reduction of Tennessee Valley Authority (TVA) emissions but did not mention specifics about vehicle miles and other transportation issues. There appeared to

be no binding obligation to follow recommendations of the Tri-State Environmental Officers (Tennessee Governor's Office, 2001).

Knox, Blount, Sevier, and other counties in the GSMNP region have entered into a compact to address high summer ozone levels in the region. They must generate a series of options and propose a plan that allows the area to reach attainment status based on a schedule. An examination of alternatives was ongoing.

### **Road Expansion and Construction**

Tennessee Department of Transportation (TDOT) road expansion projects in the vicinity of the GSMNP have increasingly experienced resistance from local environmental groups, particularly the expansion of Highway 321. In March of 2001, the first phase of the project began. It is an expansion beginning in Gatlinburg and extending northeast for 2.6 miles to Buckhorn Road. The current two-lane highway will be expanded to five lanes, with a continuous turning strip down the center (Metropulse, 2001). TDOT and City of Gatlinburg claim the expansion is necessary to relieve congestion. The second phase is 1.2 miles long, and runs parallel to the Little Pigeon River. The ultimate goal of the project is to link up with Interstate 40 (Ibid).

Some claim this expansion is an attempt to promote Pigeon Forge-like development, and that it will have adverse affects on water quality as well as disturbing wildlife. Additionally, the corridor is rich in Native American Artifacts, and these might be disturbed as well. The road will impact several streams in

the area and sections of it run parallel to the GSMNP boundary. The stream alterations require permits from TVA and the Army Corp of Engineers (Ibid). The first phase has already been granted approval by TDEC. Groups hope they might be able to influence the permitting process of the two federal agencies (TVA and the Army Corp of Engineers) and prevent construction. However, this does not seem likely according to Vesna Plakanis, who runs a hiking guide business in the area. It seems phase one has a high probability of approval by the permitting agencies (Metropulse, 2001).

Expansion of Highway 321 through Tuckaleechee Cove is complete. Residents of the Cove were successful in having the design changed to one that is more suitable to a gateway community and the desires of residents. Bike-lanes and pedestrian paths were added, in addition to trees and shrubs to beautify the highway. Redesign of Highway 321 was a significant improvement over the standard five-lane design originally proposed by TDOT. This is an example of how an active community can influence large bureaucracies.

Peak season traffic jams in Cades Cove (the most visited single attraction in the GSMNP) will most likely involve some form of public transportation option to reduce traffic along the loop road. Tuckaleechee Cove is the most likely place to locate an intermodal system (Barge, Waggoner, Sumner, and Cannon, 1997). It has large tracts of open land and has a recently expanded road that can accommodate high traffic flow. The Park Service, Blount County, and

Tuckaleechee Cove residents will have to work together in order to maximize the potential for success.

### **Observable Impacts on GSMNP**

Of the many external threats to Great Smoky Mountains National Park (GSMNP), two are most obvious to casual observers: the accelerating pace of land development (with associated traffic congestion) and the declining air quality of the Great Smoky Mountains Region. Longtime visitors often cite these two occurrences as the most obvious signs of impact on the GSMNP. Anecdotal evidence often includes comments about the rapidity of construction in the area and the increased “haziness” that obscures once-visible peaks. This is true of both the Tennessee and North Carolina sides of the park.

Development adjacent to the park has increased rapidly over the last 20 years, especially along the Highway 441 corridor through Pigeon Forge, Tennessee and along the Highway 441 entrance through Cherokee, North Carolina. Tourism related construction has fostered an increase in impermeable surfaces, which increases polluting run-off into streams and rivers. Greater competition among entertainment- related businesses has propagated a signage and construction escalation that blights the view-shed of these two major gateway corridors. Entering the GSMNP through Pigeon Forge requires one to travel down a six-lane highway where the frontage on both sides is dominated by hotels, outlet malls, restaurants, and various amusements.

## Impacts on Water Quality

Adjacent land development has had a greater impact on water quality on the Tennessee side of the Park than on the North Carolina side. A study by Christion (2000) concluded that water quality of rivers and streams on the North Carolina side of the GSMNP was generally high. The two larger rivers, the Oconoluftee and the Tuckasegee, had remarkably high water quality for streams with several metropolitan areas discharging into them. Both rivers had macro invertebrate scores of "Good" or better, and fecal coliform readings were well below the harmful bodily contact value. Few streams on the North Carolina side of the GSMNP were severely degraded or threatened. The one major degraded water body is the Pigeon River, which has elevated dioxin levels and discoloration issues. The process that spawned the dioxin was eliminated years ago, but the sediments in the river still have high concentrations (Ibid). North Carolina is utilizing a Total Maximum Daily Load (TMDL) to address the dioxin problem.

In contrast, the study found water quality on the Tennessee side generally degraded: East Tennessee rivers and streams adjacent to the Great Smoky Mountains National Park, were in greater peril than those in Western North Carolina. All but five water bodies were listed on the Federal EPA 303(d) list of degraded water bodies.

The five bodies not listed on the 303(d) were Abrams Creek, Cosby Creek, Hesse Creek, Webb Creek, and the Little River (except for the portion at

the confluence with Fort Loudon Lake). Of these five, Webb Creek and Hesse Creek have had elevated fecal coliform levels, at times exceeding the bodily contact value of 200 cfu per milliliter. If the trend continues, they might be listed as threatened. The portion of the Little River on the 303(d) list is an impounded section.

### **The Little Pigeon River System**

The Little Pigeon River System is comprised of the East Fork, Middle Prong and West Prong. The West Prong flows through the cities of Gatlinburg, Pigeon Forge, and Sevierville. Along with the Little River, it is one of the two largest water courses on the Tennessee side with headwaters in the GSMNP. All three branches of the Little Pigeon River are on the Federal 303(d) list. As of the date of the study, there were no recovery plans to clean up any of the 303(d) listed river segments.

### **The Little River System**

The upper section of the Little River is one of the cleanest large streams in East Tennessee. However, the lower section approaching the Alcoa area is degraded. The 303(d) listed segment is the impounded portion emptying into Fort Loudon Lake. Additionally, two tributaries are listed on the 303(d): Crooked Creek and Ellejoy Creek. Both have elevated fecal coliform and suspended solids. Three other tributaries to the Little River are listed as threatened: Nails Creek, Pistol Creek, and Stock Creek (ibid).

The Little River is a trout stream from its headwaters in the GSMNP, through Tuckaleechee Cove. The river is in good condition till just above Crooked Creek (till river mile 33, the Little River is a Tier 2 stream—a good quality body). Failing septic systems in Tuckaleechee Cove have produced occasional high fecal coliform events in the Tier 2 section (Ibid).

### **Factors Influencing Tennessee Water Quality**

Most land adjacent to the Great Smoky Mountains National Park on the Tennessee side is privately owned. Unplanned development tourist attractions, without regard to effects on the park and the natural environment, combined with an under-funded Tennessee Department of Environment and Conservation (TDEC), have contributed to the low water quality common on non-park lands on the Tennessee side of the GSMNP (Ibid).

### **Data Availability**

Like North Carolina, Tennessee has implemented a basin-wide approach to watershed management. However, Tennessee was in the fifth year of its first five-year basin cycle. North Carolina was in the fourth year of its second five-year cycle, and had a significant head start over Tennessee in producing Basin Reports, as well as addressing degraded stream segments. Tennessee has produced its first round of basin reports. It was more difficult to obtain water quality information for Tennessee water bodies prior to the publication of basin reports because basin reports for many bodies of interest near GSMNP had not been published. When the first basin-wide cycle is completed, and all reports

issued, data acquisition should become easier. TDEC ultimately wants to have all reports and hydrological data available through a cross-referenced database accessible via the Internet. North Carolina already has such a system. Budget woes in Tennessee make this an unlikely possibility in the near future (Ibid).

## **Water Quality Plan for Blount County, Tennessee**

Rapid population growth in Blount County fueled development over the past ten years. The population grew from 85,969 in 1990 to 105,823 in 2000, a twenty-three percent increase. The projected population is 139,000 to 145,000 in the year 2020 (Ibid). Blount County performed long range planning from 1996 through 1999 to address and manage growth issues. The Blount County Plan was adopted in June of 1999 , and the Zoning Map went into effect September 1, 2000. Water quality issues were mentioned as a primary concern during the seventeen public meetings held in regard to the 1999 Plan. It was decided that a water quality plan was needed to protect the rivers and streams so valued by county residents. The following statement was agreed to by 87.5% of citizens participating in the process “The lakes, rivers and streams in the county should be protected as part of our natural environment and drinking water resource, and as part of our scenic and recreational resource” (Lamb et al. 2003).

The 1999 County Plan contained many popular provisions that were incorporated into the 2003 Water Quality Plan. The 2003 Blount County Water Quality plan proposed several initiatives and recommendations:

- Conduct a study of pollution sources of the Little River to secure the drinking water supply and maintain a cherished resource
- A separate Water Quality Plan should be formulated for the Little River Basin in conjunction with Alcoa, Maryville, Rockford, and Townsend (it was determined that this was beyond the scope of the 2003 Plan)
- Create an Advisory Committee to formulate a pollution prevention program
- Adopt more stringent septic field standards specific to Blount County (via revision of minimal state standards)
- More stringent enforcement and penalties for violations
- County should develop its own pollution prevention program
- County should undertake a county wide sewer study and plan
- Formulate a county-wide drainage plan that addresses quantity and quality of run-off (seek technical assistance)
- Amend subdivision and other development regulations to require retention of natural cover, additional ground cover, as well as minimal disturbance during construction phase

In August 2001, a contract was signed to conduct a county-wide Integrated Pollutant Source Identification study (IPSI). The study produced detailed data about land cover, pollution constituent loads, and other data about the health of watersheds in Blount County. A series of GIS maps were produced

and utilized in the formulation of the Blount County Water Quality Plan, along with the 2000 305 (b) report.

The County must also address storm water issues associated with Phase II Storm Water issues under the EPA Clean Water Act. The Blount County cities of Maryville, Alcoa, Rockford, as well as urbanized areas of the county are included in Phase II coverage. These cities and the county must apply for storm water discharge permits from the State of Tennessee. The application deadline was March 2003. The Water Quality plan will parallel efforts required to fulfill obligations under Phase II (Ibid).

The County determined that its water quality policies would mirror the six components of the Phase II Storm Water program:

### **Public Participation**

Public Participation will take the form of presentation at public meetings and gatherings, partnerships with private entities, and distribution of pamphlets during the permitting process. The use of ready modules for this purpose by the Tennessee Growth Readiness Project was also proposed.

### **Education**

Educational opportunities are to be offered on a countywide basis. They will utilize public meetings, newspapers, TV and radio, handouts, and brochures in addition to specific courses for developers and contractors, county officials and enforcement officers. Blount County Soil Conservation District will target

agriculture and forestry issues. TDEC has already developed training programs on erosion and sediment control.

### **Construction Storm Water Management**

This is a priority issue for the county. It was recommended that the county have appropriate regulations for erosion and sediment control and that Best Management Practices (BMP) of the “Tennessee Erosion and Sedimentation Control Handbook” (Second Edition, March 2002) be utilized. An Erosion and Sediment Control (ESC) plan must be included in the site design, and will be tied to the permitting and approval process prior to grading. There should be an individual present on the construction site responsible for ESC. This person is to have taken the TDEC course Fundamentals of Erosion Control, or an equivalent course. This person will be responsible for inspection and maintenance of ESC measures. Periodic inspections by county staff were also recommended. Five staffers had taken the TDEC course as of the date of the report. Small sites will also be required to utilize erosion control measures. The permitting process will be the engagement point with small-scale construction sites. Zoning and subdivision regulations should also incorporate ESC measures.

### **Post-Construction Storm Water Management**

Plans for post-construction management of storm water should be included in the design stage of the project. Plans should include mechanisms for maintenance of BMP's after completion of the project. Water quantity and quality must be addressed along with designed measures for proper long-term

maintenance. Attention should be focused on maintenance of natural drainage, retention ponds, and bio-engineered drainage structures.

### **Illicit Discharge Elimination**

The county should provide a means of reporting illicit discharges and prepare protocols for following up on complaints. The nature and jurisdictional boundaries of the illicit discharge will determine the appropriate action and lead agency. Any that fall within county jurisdiction should be addressed in an efficient and timely manner. Those outside county jurisdiction should be referred to the appropriate entity in a timely manner.

### **Government Operations Good Housekeeping**

The county shall adopt policies and procedures to insure its operations follow established ESC measures and BMP's. This includes government operations such as schools, courts, maintenance and construction, etc. County officials and department heads will undergo training to this end.

The implementation time frame was listed as five years, making April 2008 the target for full implementation. The plan is to be reviewed every three years, along with 1999 Policies Plan. Public meetings will be held and amendments made as necessary from citizen input.

## **Non-point Source Pollution Inventories and Pollutant Load**

Protection of the Little River was one of the most important priorities of the citizens of both Tuckaleechee Cove and Blount County. The Little River is the

primary source of drinking water for Blount County, and is also a valuable recreation source. Canoeing, tubing and fishing are common activities. TVA conducted a Pilot Study of Non-point Source Pollution for the Tuckaleechee Cove Watershed. The method was later applied to all of Blount County. The Blount County Study was published in February 2003, by the TVA Little Tennessee Watershed Team based in Lenoir City, Tennessee. Contributions to fund this project from Blount County, TVA, and TN Department of Agriculture totaled \$145,000.

Non-Point Source (NPS) water pollution has become the most recognized source of surface water degradation. It is responsible for 73 percent of the oxygen-demanding loadings, 84 percent of nutrients, 98 percent of bacteria counts, and 99 percent of suspended solids in the nations waters (Jennings, 2000). States report that NPS pollution is the leading remaining cause of water quality problems in the United States (Ibid). The State of Tennessee assessment reports indicated that NPS pollution contributed to about 68 percent of the streams' miles that do not support designated uses in the Tennessee Valley (Ibid).

Pollution from NPS sites cannot be monitored and controlled in the same way as point sources. Control strategies for NPS pollution generally proceed from two basic principles, both involving land-use practices (Ibid). First, increasing the ability of the land to retain water reduces runoff to lakes and streams. Secondly, citizens can help control the amount and kinds of pollutants

that are released into the waterways. This can be accomplished via recycling of waste, care in disposal of waste products, and the use of best management practices (BMP's). BMP's are methods that reduce the likelihood of constituent transport into waterways (Ibid). Examples of BMP's include silt fencing, retention ponds, minimizing land disturbance during construction, and no-till farming.

One way of identifying NPS pollution is by the use of aerial photography (Ibid). Land activities can affect stream quality. The amount of pollutants that can be washed from an area depends on the land use and land cover (LULC) type. Aerial inventories provide a means of screening areas that have a potential effect on stream quality. Land-use data are used as surrogate indicators for potential stream quality impacts associated with NPS activities, when stream quality data is not available (Ibid).

This information can be used to improve and protect the water quality in Tuckaleechee Cove and Blount County by identifying those areas that have the greatest potential negative impacts.

The Tuckaleechee Cove Project was a prototype for future NPS Inventories in Blount County. TVA's Geographic Information and Engineering Department is expected to receive more work from Blount County and other counties with the success of the NPS Inventory of Tuckaleechee Cove. This valuable information resource should prove helpful to Tuckaleechee Cove and Blount County in their efforts to protect the water quality of the Little River. The

centerpiece of the study was aerial photography, field data checks of chemical data, and other conditions in Blount County.

### **Color infrared (CIR) photography**

Aerial photography acquired in late winter-early spring was used to identify farming and management practices in the study area. Using late winter-early spring photography provides for minimal leaf cover to allow for ground visibility (Ibid).

### **Land Use and Land Cover (LULC)**

Standard mapping conventions established by the USGS were used for interpretation and determination of LULC classes. This type of mapping allows land-use and water quality impairment to be evaluated (Ibid).

### **Animal-impact Sites**

Animal-impact sites were characterized by type, method of confinement, and proximity to a perennial or an intermittent stream. Animal sites were identified and labeled as cattle, horse, dairy, swine, or poultry (Ibid).

### **Road Condition**

The base data for roads was taken from 1:24000 USGS topographic maps. Road networks were updated to the date of the photography (April 17, 2000) and classified as paved or unpaved. Road conditions were noted if any significant erosion features such as cuts, fills, and eroding ditches were present (Ibid).

### **Stream-bank Condition**

Drainage conditions relating to land-use and livestock operations were mapped. Characteristics mapped were natural stream-bank erosion, stream-bank disturbances due to animal access, and channelization; in addition, perennial, intermittent, and ephemeral streams segments were mapped. Also, stream segments passing through pastures that did not have signs of animal activity but were “potential animal-activity” sites due to the lack of fencing along the stream-bank, were mapped (Ibid).

### **Riparian Condition of Streams**

A band of vegetation adjacent to a stream is referred to as the riparian zone. Riparian zones are beneficial to water quality in that they aid in the filtering of nutrients and other pollutants and help in the prevention of stream-bank erosion. The vegetative features mapped for perennial streams were as follows: vegetative type, percent coverage of the vegetative type, quality of the vegetative cover, and width of the vegetation (Ibid). The type of vegetation was interpreted as either woody, grass, or bare.

### **On-site Septic Systems**

Stressed, or potentially stressed, on-site septic systems were interpreted as having a distinctive moisture pattern, suspicious moisture pattern, or a suspect location (Ibid).

### **Field Verification of Signature**

The site visit in Tuckaleechee Cove was coordinated with the Blount County Soil Conservation Office. In addition to verifying signatures in the field, the remote sensing team was able to better understand the problems in the watershed and to determine relative information needed in the final product (Ibid). Ten maps were produced from the data.

### **Total Suspended Solids**

Total Suspended Solids were low in the vicinity of GSMNP, but increased in the Townsend/Tuckaleechee Cove area, an indicator that development was already impacting the Little River.

### **Land Use in Blount County**

Land use in the county was 25.89% GSMNP, 1.69% Open water, 9.47% Residential, 3.56% Commercial, 24.10% Agriculture, 35.29% Forest/Woodland. Roughly 87% of the county was undeveloped.

### **Phillip Mummert of the Little River Watershed Association**

One of the individuals responsible for initiating the study was Phillip Mummert of the Little River Watershed Association (LRWA). Mr. Mummert is a TVA employee and is a core member of the LRWA. LRWA's primary activities have been river cleanup, and creating measures to increase awareness of resource protection issues and public access on the Little River throughout Blount County. LRWA had a budget of approximately \$8000 prior to a recently

received grant, which has allowed them to hire a half-time coordinator. Mr. Mummert stated that lack of an administrative point person has inhibited the LRWA from being more actively involved in protecting the Little River. Mr. Mummert also stated that public access to the river has met resistance from landowners who fear or dislike the idea of recreational use of the river adjacent to their property. This remains one of the more contentious issues. There are few places where the public can access the Little River. Mr. Mummert sees the future of the LRWA as a “clearing house for information.” Having a dedicated person to answer phone calls and coordinate events should improve the effectiveness of the organization (Mummert, 2001).

### **Field Check by Author**

Protection of the riparian zone of the Little River and its tributaries will have to be an essential component of a protection plan for the watercourse. Field checks by the author indicated that some cabins along the river were constructed on the river’s edge, or right over the river, using stilts and concrete. Not only was this true of some older cabins, but also of some cabins recently constructed or under construction. This is a particularly destructive practice that is in conflict with the community’s desire to protect the water quality of the river. Some of the lots on which the cabins were constructed were so small and near the river that the bank had to be walled and reinforced with concrete to support the structure. Other examples of problems observed included private camping

areas with concrete down to the water's edge. Fortunately, only a small portion of the riverbank was altered in this fashion, but this problem needs to be addressed. This practice is probably in violation of the Tennessee Aquatic Resource Alteration Permit (ARAP) provision. It requires a permit for any disturbance of the bank or channel of a waterway. The disturbance must be justified and should not adversely affect the watercourse, unless a higher purpose is involved (such as water supply or flood prevention). Given the budget shortfalls in the State of Tennessee and lack of manpower at the regional TDEC office (located an hour away in Knoxville), there is probably little possibility of enforcement without active local citizen involvement.

### **Regional Planning for Blount County, Tennessee**

Blount County, like Sevier County, had no County-Wide zoning authority prior to 1997. Rapid growth of the county and the negative aspects of sprawling strip development in Sevier County breathed new life into the idea that perhaps some form of land use controls applicable to unincorporated areas was desirable. Despite past failures, a referendum was passed November 5, 1996 accepting County Land Use Planning. The measure received 62.3 percent of the vote. It passed in all but five of the twenty-seven precincts (Blount County Election Commission, 1996).

As in Tuckaleechee Cove, there was a minority of citizens who were strongly opposed to the concept of zoning. The Blount County Planning

Department (BCPD) decided that citizen input would be a primary factor in determining the County's approach to implementing the plan. They held two series of public meetings, the first from April to June, 1997, and the second from September to November of 1997 (BCPD, 1997). Seventeen workshops were held during the first series, and 289 citizens participated. The citizens were asked two questions: "What is good about Blount County which should be preserved for the future?" and "What needs to be changed in Blount County to make a better future?" (Ibid).

The most frequent responses to question #1 ("What is good about Blount County which should be preserved for the future?") included characteristics of rural, small-town, and natural settings, such as beautiful and scenic landscapes, agriculture, and farmlands, lakes, rivers, streams, mountains, a quiet and peaceful setting, an unspoiled natural environment, small town atmosphere, and lack of tourist commercialization. The second tier of responses involved the lack of land use restrictions. Many people cited this as one of the great aspects of Blount County. The school system was the third most frequently cited aspect to be preserved.

The most frequent responses to question #2 ("What needs to be changed in Blount County to make a better future?") involved some form of land use management. This included zoning and other measures to protect mountains and ridge-tops, floodplain management, junk control measures, building codes and permits, and controls on billboards and other visual pollution (Ibid). The second

most frequently mentioned item was improved education. The third most frequently mentioned item was that there should be no land use regulations allowed in the county (especially zoning).

In the aggregate, there seemed to be widespread support of preserving a rural/small town character, paying particular attention to the preservation of the natural setting. Some form of land use control was generally favored. Heritage preservation was also cited as important. People were satisfied with taxation levels and the ample parks and open space in the county. Education, law enforcement, and government were also generally given high marks (Ibid).

The second round of citizen input workshops involved the participation of 450 citizens, and focused on formulating objectives and implementation strategies. Questions posed attempted to identify priorities and acceptable methodologies to achieve them. Forty-three questions were asked ranging from questions about ridge-top protection to impact fees and zoning ordinances. People were generally in favor of actions to protect scenic and environmentally sensitive areas.

Objective Policy 1C was favored by eighty-five percent of participants. Policy 1C said, "Our beautiful and scenic environment should be protected, including commonly shared views, ridge-tops, lakeshores, and river banks" (Ibid).

Objective Policy 1E received 73.4 percent agreement. This policy said, "New commercial development in Townsend and Tuckaleechee Cove should be consistent with the small town and Appalachian heritage look of the area."(Ibid).

Objective Policy 2B, which stated, “Development on mountains and ridge-tops should be regulated to protect sensitive areas of slope and viewscapes,” received 76.25 percent agreement. (Ibid).

Objective Policy 2F stated, “Billboards, signs, towers and other structures which could impact the views of the county should be regulated.” It received 80.17 percent agreement. ”(Ibid).

There were also questions on implementation options:

- Zoning received 63.83 percent support
- Development Impact Fees received 64.05 percent support
- Land Conservancy received 55.77 percent support
- Ridge-top Development Ordinance received 65.36 percent
- Recommended Examples of Good Design received 53.38 percent support
- Parks and Open Space Protection received 65.58 percent support
- Flood Plain Zoning Ordinance received 59.69 percent acceptance (Ibid)

The Blount County Plan was adopted in June of 1999. The zoning plan and map went into effect September 1, 2000. Tasks left to complete included updating building codes, formulation of a voluntary open space and farmland protection plan, designing guidelines for rural character and scenic view protection, creating measures to encourage the formation of private farm and open space protection groups, reviewing septic field standards, studying and

formulating county-wide drainage plan, creating a feasibility study of county-wide sewer system, and providing an alternative means of transportation.

The Flood Plain Resolution was introduced in February of 2000. It was structured to allow Blount residents to obtain flood insurance (BCPD, 2000).

The Plan for Mountain Areas was introduced, but delayed in implementation in order to obtain greater citizen input. Mountain areas are characterized by steep slopes, hazardous geology, and thin soils often not suitable for proper septic field drainage (BCPD, 1998). The heart of the plan is slope. Areas with greater than 15 degrees slope are problematic for development. In Blount County, nearly half of the land area is characterized by steep slopes, particularly the southeastern portion of the County in the vicinity of GSMNP. Steep slope areas are recommended for low-density residential development. Certain geologic formations were noted for particular hazards such as fracturing and acid run-off from metamorphic rocks. The Mountain Area "shall be defined as all land from the base of the north face of the Chilhowee Mountain range southward" to the GSMNP Boundary, with elevations usually in excess of 1,200 feet (Ibid). The best method to implement the plan has not been decided. Johnson County in upper East Tennessee had special state legislation passed to address development on ridge-tops above 3,000 feet in elevation. It is unclear if Blount County might be able to receive similar treatment (Ibid). There is not specific enabling legislation to allow Blount County to formulate its own Ridgetop Ordinance. Some alternative means must be found to achieve this objective.

Zoning can address some of the issues combined with septic field regulations (Ibid).

Blount County participates in meetings of the Tuckaleechee Cove Advisory Board (TCAB). The policy of Blount County towards Tuckaleechee Cove is to “Encourage and support efforts of the Tuckaleechee Cove Advisory Board to formulate a plan along with input from the citizens of Townsend and Tuckaleechee Cove.” The County wishes to continue involvement, but feels it is the responsibility of the Tuckaleechee Cove community to take the lead in the process (BCPD, 1999).

Blount County is also subject to Tennessee’s 1998 Growth Management Act (Public Chapter 1101). The law states that growth plans be developed by counties in conjunction with their municipalities, using coordinating committees whose composition is determined by law. According to Section 7© (1) these plans must determine:

- Urban growth boundaries for municipalities
- Planned growth areas for counties
- Rural areas for counties (farmland, forest, wildlife areas, and other open space)
- The plan should be “ based on analysis of present and future needs”

English and Hoffman (2001) stated “it appears that relatively little substantive attention is being paid to the rural areas component of growth plans.” They also argued that the law implies that an environmental assets analysis

should be undertaken (PC 1101 does not explicitly state that one be done). PC 1101 only requires that counties and municipalities agree on urban growth and planned growth boundaries. There is no explicit requirement for resource analysis for rural areas, nor any requirement to designate and protect rural areas within the county. Rural areas are often an afterthought in the process. They concluded that urban growth boundaries in isolation do not protect rural areas from inappropriate development (Ibid).

## **Community Based Planning Initiatives in East TN Region**

Several East Tennessee communities have performed visioning exercises and have proceeded to act on recommendations of visioning goals and objectives.

### **Gatlinburg**

Gatlinburg established the Gatlinburg Gateway Foundation (GGF) to address concerns, and to take a more proactive approach to community problems. According to the foundation, “The mission of the Gatlinburg Gateway Foundation is to advocate positive action and civic responsibility to achieve an environmentally sensitive and economically prosperous gateway community to the Great Smoky Mountains National Park” (GGF, 2000). GGF commissioned a study by the Sonoran Institute to examine present conditions and to make recommendations for improving Gatlinburg. The documents produced were The Profile of Gatlinburg and the follow-up Recommendations. The report did not

make timid recommendations. It called for a new way to envision Gatlinburg, one that moves it away from competing with Pigeon Forge and Sevierville in terms of amusements and fad entertainment development. Below are some of the major recommendations of the Sonoran Institute Report:

- Develop local leadership
- Empower environmental design review board
- Address water quality concerns
- Identify project critical sites in the area
- Showcase assets by better land use controls
- Improve aesthetic quality of signs in Gatlinburg through phased standards, private incentives and technical and financial assistance
- Build upon the walk-ability of Gatlinburg
- Develop a new regional transportation system
- Improve entrances to the city
- Develop attractions that highlight mountain heritage and inspire repeat visitation
- Develop public and private funding sources to implement projects

The report found the business and government sectors of the community were strong and active. The non-profit sector was weak and tended to rely upon the business and government sectors to make decisions and initiate projects. It

recommended a strong non-profit sector be created to manage projects and address community concerns.

Gatlinburg could reinvent itself in fifteen years, much like Chattanooga did, according to the report. The business community seems to recognize that greater profits and long-term financial stability can be had by changing the direction of the city (Ibid). The city has completed the first phase of the River Walk and is embarking on other initiatives. Some ideas include burying utilities, and creating projects aimed at cleaning up degraded waterways in the area, two of which are listed on the federal 303(d) list. Another major project recently completed is the Aquarium of the Smokies, which provides Gatlinburg with an attraction that is family-friendly and sustainable.

### **Pittman Center**

Pittman Center is a small community about eight miles northeast of Gatlinburg along Highway 321 and Route 416. The community is near the northern border of the GSMNP, and is comprised of 5000 acres of mountains, valleys, and streams of exceptional quality. In contrast to Pigeon Forge and Gatlinburg, Pittman Center has retained it's rural character and residential focus. Visioning exercises were conducted by the FutureScapes Project (a joint venture of the East Tennessee Design Center and TVA). The Goal of FutureScapes was to help mountain communities preserve their mountain heritage and natural landscapes, yet still develop a vibrant and sustainable economy. "It is very rare for a small town to be able to say why it exists and what it wants to be in the

future. Pittman Center had a vision before FutureScapes work began, and that vision directed the planning process” (FutureScapes, 1995). The community-wide workshops yielded the following visioning goals:

- Preserve water quality
- Preserve the community’s mountain heritage
- Enhance the natural environment and open space
- Build a local economy which promotes the other goals and provides good jobs and good investment returns
- Build with an excellence worthy of the environment (Ibid)

A plan was derived from visioning goals and objectives. The central idea was that the community would be a low-density residential community with a village center and defined commercial development along Highway 321. Homes will be on large tracts or cleared clusters. Small-scale inns, bed and breakfasts, and lodges will be built carefully into the landscape well off the highways. No new commercial development will be built along highway 416. New residential development will be encouraged in clusters set back from the highway. Highway 321 will be developed as a scenic highway with buildings set back 100 feet and maintaining natural vegetative screens. Signage will utilize natural materials and must conform to design standards (no billboards). Protection of mountain ridges should be encouraged (Ibid). A trail system will connect residential and activity areas, and parking areas will be hidden by buildings or vegetative screens.

## **Cosby and Southern Cocks County**

Cosby is located east of Gatlinburg in Southern Cocks County along Highway 321 and Highway 32. Cocks County borders North Carolina and is adjacent to the northern border of the GSMNP, and west of the Cherokee National Forest. Cosby is one of the least utilized entrances to the GSMNP. Cosby Campground is the least visited camping facility within park boundaries (UT Graduate School of Planning, 1997). Cosby is a relatively undeveloped “diamond in the rough” that is expected to come under development pressures as visitation to GSMNP increases (Ibid). The University of Tennessee School of Planning conducted surveys and public meetings to ascertain community desires and to formulate plan recommendations for southern Cocks County.

The main thrust of the plan was to center development around the Highway 321 and Highway 32 area of Cosby, and away from the National park boundary. This intersection is already the main center of development activity. Current development has no particular pattern and is unrestrained (Ibid). The plan focused development along already well-traveled routes between Newport and Gatlinburg. It facilitated the development of a pedestrian oriented village center while protecting the park boundary from development. The report also recommended protecting the scenic nature of the highway and discouraging development along the Pigeon River (Ibid).

## **Nine Counties One Vision**

Nine Counties One Vision is a regional planning effort involving the nine counties of East Tennessee in the so-called VOL area code (865). The combined population of the planning region is 787,400, with Knox the largest single county with 375,039 residents. The citizens of Anderson, Blount, Grainger, Jefferson, Knox, Loudon, Roane, Sevier, and Union counties generated 8,827 ideas during the first round of twenty public meetings held throughout the region (Nine Counties One Vision, 2000). These ideas were subsequently narrowed down to forty-eight concrete goals by later working groups. Task forces were assigned to the top seventeen the goals. The taskforces were charged with creating strategies to achieve the stated goals (Nine Counties One Vision, 2000).

Participants in the process expressed desires to manage changes in the region, while still allowing for economic growth and diversity. Among the issues of concern were the proliferation of low-wage jobs, the environmental impact of rapid growth, and the state of public education (Ibid).

The agency's operating budget for the first 15 months was \$400,000, paid for by a variety of sponsors, including The Knoxville News-Sentinel. The process is funded through Dec. 31, 2004. However, there simply isn't enough money to sustain any kind of major initiative, according to Lynne Fugate, the executive director of the process. She points out, "that means the responsibility of seeing the goals achieved is on the shoulders of the volunteer task forces" (Ibid).

"Our job for the next years is keeping the task forces going and being the point for the community," Fugate said. "We're a facilitator; we're not about building another entity or bureaucracy" (Ibid).

## **Park Transportation Management Models**

Popular National Parks share common problems with rapidly growing cities: sprawl, pollution, and peak traffic congestion. The traditional approach to alleviating traffic congestion in cities (widening roads) is generally not desirable in national parks, particularly ones that are in natural areas. Parks, like rapidly growing cities, realize that management of transportation options must be the paradigm, rather than capacity upgrades of roads.

The problems are due to the over-reliance on private autos, rather than too many total visitors. A park's ability to accommodate visitors is a function of the number of visitors, and the modes of transportation utilized by visitors (National Parks, 2002). Personal automobiles and RV's consume more fuel and land area than other means of transportation. Zion, Acadia, Yosemite and Grand Canyon National Parks provide, or will soon provide public transportation to major attractions within park boundaries, and to some gateway communities as well. Zion and Acadia have successfully launched their systems. The Greater Yellowstone Region (GYR) is also examining transportation alternatives. One idea proposed for GYR is to link the public transportation system to regional airports in order to make car-free visitation a possibility (Ibid).

## **Grand Canyon**

The Grand Canyon consistently has one of the highest visitation rates of all the National Parks. During peak season, Grand Canyon averages about 6,000 cars per day, which compete for a limited number of parking spaces. Grand Canyon National Park has proposed a \$14 million light rail system to shuttle as many as 4,000 visitors per hour to the popular South Rim Area. It would be the first light rail system established in a national park. Light rail was chosen in order to eliminate the need to provide parking for buses at Mather Point, the primary intermodal hub. The system will be operated on a contract basis, with the service provider receiving a portion of each entrance fee. The Village of Tusayan will most likely be the inter-modal hub for visitors. Alternative fuel buses will provide transportation to areas not served by the light rail system (Wood, 1999).

The light rail system is a manifestation of the General Management Plan for Grand Canyon National Parks. The current plan guides development from 1995-2010. Its main goals are:

- Limiting the number of visitors in certain areas of the park during peak season
- Allowing private vehicles only in certain areas
- Increased access via public transportation, hiking, and biking
- Improving housing, visitor services, and resource protection

The eventual removal of private vehicles from the South Rim will be accompanied by expansion of public transport, increased pedestrian spaces, increased overnight camping and lodging, and a new visitor's center. Still much controversy remains about the nature and intensity of development for the Tusayan community (Ibid).

### **Acadia**

Acadia National Park is on the central coast of Maine and encompasses 47,000 acres on Mount Desert Island (roughly half the island). Acadia receives about three million visitors per year. One of the most popular attractions is the Park Loop Road, a twenty-seven-mile narrow road, which becomes extremely congested during peak season (Wilson, 2000). By the mid 1990's, congestion reached a point where residents, business people, and tourists began to complain to elected officials. The Mount Desert Island League of Towns (MDILT) met with park officials to discuss the problem. Meanwhile, a private company called Downeast had already begun a transportation service out of the town of Bar Harbour for \$2 per ride. Initial ridership was low.

Acadia National Park, MDILT, and Downeast, jointly applied for funding from the Maine Mitigation and Air Quality (CMAQ) funds, and the four towns voted for proportional funding. Local businesses, through the Chamber of Commerce, Friends of Acadia, and other organizations contributed. The park contributed by adding a portion of each visitor's fee. Downeast used the funding

to purchase eight propane buses and launched the free shuttle service to the park and local communities in June of 1999.

Ridership increased by 600 percent, with nearly 3,000 passengers per day using the service during peak season. It was estimated that vehicles miles were reduced by 1.3 million as a result of implementing Island Explorer shuttle service (Ibid). The response necessitated an increase in capacity, which was achieved thanks to a competitive grant from the Federal Highway Administration's Alternative Transportation program. Nine new buses were added, and ridership increased by an additional 40 percent (ibid). "It's not a park operation...It's a community transit operation. We've had to cut some new pathways through bureaucracy," said Tom Crikelair, former general manager of Downeast (Ibid).

Established working relationships, and an inclusive planning process helped make the system a success. The current Island Explorer system has seven bus routes originating from the Village Green in Bar Harbour, which spread out and cover a large part of Desert Island. Popular park destinations, campgrounds and hotels, harbors and ferry terminals, the airport, as well as schools, post offices, and other places are on the routes. The system was awarded a grant to act as a test site for Department of Transportation (DOT) Intelligent Transportation System (ITS) program. The ITS grant will provide visitors with real time parking availability, bus arrivals and departures, weather updates, and other community information. An additional 2 million dollars will go to upgrade buses and other infrastructure.

Len Bobinchock, the superintendent of Acadia National Park, stated that “It’s a partnership...The system must serve both the park and the community.” The planning process engaged all parties with a vested interest, and they in turn became some of its strongest supporters (ibid).

## **Zion**

“We’re restoring peace and tranquility and getting rid of noise and pollution...I’ve not heard a single word of dissent,” said park spokesman Denny Davies about the public shuttle bus system established in Zion National Park (Las Vegas Review Journal, May 24, 2002).

“There was an enormous positive impact in taking cars out of the canyon...It changed the noise, the pollution...the feel. This is the way a park should be,” said Kirk Scott, General Manager of Zion Canyon Transportation (Wilson, 2000).

“A far greater experience is now really guaranteed for visitors to Zion, and that has spilled over into the community,” says Glen Hill, town manager of Springdale. “They’re staying longer and spending more” (Ibid).

The system began in May 2000, in response to terrible peak season traffic congestion and rising levels of lead and other heavy metals. Soil samples taken parallel to the Virgin River, which flows through Zion Canyon, registered high levels of heavy metals attributed to automobiles. The Shuttle service was the result of six years of planning, which involved the NPS, FHWA, Zion National Park, McDonald Transit Associates, the Utah DOT, the community of Springdale,

State of Utah, and the Utah Congressional Delegation (Ibid). Previous attempts had been made in the 1970s, but all the factors came together in the 1990's. The Congressional Delegation from Utah and Zion National Park secured Department of Interior (DOI) funds, and the neighboring gateway community of Springdale secured Utah DOT funds, in addition to Federal Highway transportation enhancement funds in 1997 and 1998 (Ibid). The town of Springdale created bus stops and shelters, cross walks and traffic calming islands, in addition to more parking for visitors within city limits. Businesses and citizens entered the process to address civic life issues and business opportunities. The park issued a nationwide Request for Proposal for a transportation provider. McDonald Transportation out of Waco, Texas won the bid. They started with 30 propane buses on May 23, 2000, and had 1.3 million passenger trips by the end of the season in October.

Cars are banned from the park except for a few special passes. Parking is at the new Visitor Center or in the town of Springdale. Visitors board propane buses to enter the park. There are two lines emanating from the Visitor Center: The northern line stops at several places within the park; the southern line stops at several locations in the town of Springdale. The cost is covered by a dedicated portion of the \$20 admission fee (Ibid).

### **Lessons and Common Elements**

The common element in successful visitor transportation systems is partnerships. National Parks, local communities, county government, state

agencies, federal agencies, citizens, and the business community, must be involved in the process if it is to be successful. Community support is crucial to project success.

## **Impact Fees and Performance Zoning**

### **Impact Fees**

Impact fees are charged to developers in order to offset the cost of expanding and improving public facilities necessary to service new development. This includes roads, water and sewer, drainage, parks, solid waste, highways, police and fire, or other public service offerings (Nelson, 2003). Some also include schools as part of the impact fee. Many states exclude schools in the impact fee calculation.

The jurisdiction must perform an assessment of infrastructure and assess fees based on the marginal impact of the new development. Sometimes the developer is allowed to pay via donation of land for public use or by creation of permanent conservation easements (Ibid).

### **Performance Zoning**

Performance Zoning is an alternative form of land use control that seeks to conserve natural resources while allowing for maximum flexibility for the developer. It is particularly useful for environmentally sensitive areas. It limits the amount of intrusion into the most sensitive areas of the parcel, while allowing the developer to choose the type of structure or structures that maximize profitability (DOE, 1996).

The parcel is mapped to determine the distribution of sensitive habitat. A list of standards is generated by the municipality which guides required minimum open space, maximum density, and maximum impervious surface. Higher building densities and clustering are often used to meet requirements. The developer can choose townhouses, apartments, single family, or other, as long as he adheres to listed minimums(Ibid).

## **Chapter Summary**

Many challenges face the State of Tennessee, and East Tennessee region in the vicinity of GSMNP. High rates of urban sprawl, loss of prime farmland, declining air quality, and low water quality in the vicinity of GSMNP are all daunting issues. Little financial help can be expected from the State of Tennessee or the federal government due to high budget deficits of each. Significant change will have to come from local and grass roots efforts under these conditions.

There are also positives within the region. Community based planning efforts have taken root and have achieved some success. Counties in the vicinity of Knoxville and GSMNP have signed a compact to study alternatives to address high summer ozone levels. GSMNP is in the midst of long-term planning to address peak season transportation concerns. Blount County has instituted zoning and other measures to address aspects of rapid growth in the county. There is a detailed and sophisticated Water Quality and Land Use study, and the

Blount County Water Quality Plan. There are also the examples set by Zion, Arcadia and Grand Canyon National Parks.

This is the context of the process in Tuckaleechee Cove. Despite the challenges and threats to GSMNP, there is also great inertia, promise and goodwill to address the challenges of the GSMNP region.

## CHAPTER FOUR: DOCUMENTS AND INTERVIEWS

Tuckaleechee Cove was fortunate to have at its disposal ample regional expertise and funding sources to apply towards its Visioning and Preliminary Development Planning efforts. Most small communities cannot marshal the necessary funds and technical expertise that were channeled into the effort in Tuckaleechee Cove. Three major documents resulted: the Tuckaleechee Cove Nonpoint Source Water Pollution study (Chapter Three), the Townsend-Tuckaleechee Cove Development Plan Phase One, and the U.S. Highway 321/State Route 73 Highway Design Alternative. Many capable people living in Tuckaleechee Cove, Blount County, and the East Tennessee region, made contributions to the effort.

Participants involved in the process were interviewed to provide additional insight into the process in Tuckaleechee Cove. Those involved in City of Townsend Government, Townsend Planning Commission, Tuckaleechee Cove Advisory Board, Blount County Planning Department, Barge Waggoner consulting firm, Metropolitan Planning Commission, and Smoky Mountains Convention and Visitors Bureau were interviewed. Additionally, the author made several visits to the area and attended a meeting of the City of Townsend Planning Commission.

## **Townsend-Tuckaleechee Cove Development Plan Phase 1(TCDPP1): Inventory and Visioning Process**

### **Stated Goal of Document:**

The goal of the Tuckaleechee Cove Planning process is to conduct a study and develop a strategy for the future of the Tuckaleechee Cove area which reflects the community's desired quality of life. This process has been undertaken by the Tuckaleechee Cove Advisory Board (TCAB), a 12-member body comprised of local citizens and government officials appointed by the Blount County Commission to facilitate the planning process (Barge Waggoner, 1997).

### **Document Format**

The document is approximately 200 pages long and is comprised of four major sections and appendices:

- Inventory of Natural and Physical Features
- Inventory of Regional and Local Information
- Visioning Process
- Recommendations for Phase II
- Appendices (Water quality, Traffic Counts, Focus Group Results, etc)

Section one is titled: Inventory of Natural and Physical Features and contains soils and topographic maps, floodplain data, water quality data, land ownership information, and utilities. Key points of section one:

- Large areas of crop and grazing land remain open in the Cove, while most businesses are located along State Highway 321.
- Steep slopes surround the Cove, concentrating development in the valleys and rolling hills.
- Flood hazards (100 year) are mostly parallel to the Little River, sometimes encompassing sections of Highway 321.
- Concentrations of metals and organics have increased and occasional high fecal coliform events have occurred in the Little River.
- A list of local property owners was available on CD-ROM.
- There are no sewers lines in the Cove (the nearest pump station is six miles north near Heritage High School). Utilities such as electricity, cable TV, and water were available.

## **Section II : Inventory of Regional and Local Information**

This section examined the demographic trends and economic trends in Tuckaleechee Cove and Blount County. It began with a brief examination of the origins of Townsend as a self-sufficient frontier community, later turning into a logging community, and then incorporation in 1921. It is now a major gateway community of the GSMNP. Key points of section two:

- Townsend's population peaked in 1930 at 402 residents (329 current)

- Townsend Census Division population increased ninety-five percent from 1960 to 1990, while Blount County rose seventy-three percent over the same time span
- Few non-whites live in Tuckaleechee Cove (less than one percent)
- Tuckaleechee Cove has a large retiree population
- Median 1990 household and per capita incomes were well below Blount County and State averages
- Poverty levels were close to Blount County averages
- Manufacturing was the largest single employer at twenty-five percent. The tourism sector employed forty-four percent of City of Townsend residents
- Most residents worked in Blount County (seventy-six percent)
- Approximately sixty-six percent of housing units were less than thirty years old
- Most housing units were owner occupied (eighty-three percent)
- Blount County ranked third in the region in travel related revenue with 3.8 million dollars in tax receipts
- Tuckaleechee Cove GSMNP entrance received 1.5 million visits in 1995
- Townsend Visitors Center received 171,323 visits in 1995
- Few recreational facilities, such as playgrounds, existed
- There was limited public access to the river

### **Section III: Visioning Process**

The Tuckaleechee Cove Visioning Process consisted of four special interest focus group meetings, four community focus group meetings, and a mail survey sent to Cove residents and property owners. Results from focus groups and surveys were compiled to form a general vision for Tuckaleechee Cove. Special Interest Focus Groups were the Senior Citizens and Garden Club, Volunteer Fire Department and concerned citizens, Tourism Council and Townsend Advisory board, and appointed and elected officials. The community groups represented four geographic areas, including Upper End, Lower End, Townsend area, and Laurel and Dry Valleys. Average attendance was about ten to fifteen people per meeting.

Six questions were formulated for focus group participants to address:

- What is best about living in the cove?
- What are the treasures/special places?
- What issues does the cove face?
- How do we deal with these issues?
- What is the future vision of the cove?
- Consensus on “vision” for the cove?

Meeting notifications were mailed to each of the households in the Cove, posted throughout the community, and also published in the Maryville Times.

## **Summary of Most Frequent Responses to Focus Group Questions**

Question #1. What is best about living in the cove?

First Tier: Peace and quiet; natural beauty; sense of community; heritage and proximity to the “Smokies”

Second Tier: Established “home” ties; small town atmosphere; arts and crafts; rural with proximity to major metropolitan areas; good place to raise a family; low crime; not like Pigeon Forge

Question #2. What are the treasures/special places?

First Tier: “Smokies”; Little River and tributaries; Tuckaleechee Cavern

Second Tier: Cultural attractions and swinging bridges

Question #3. What Issues does the Cove face?

First Tier: Population growth and development; need for zoning and/or planned growth; seasonal traffic; public facilities and infrastructure

Second Tier: demand for services; preserve quality of life, commercialization; water quality, disunity from outside interests

Question #4. How do we deal with these issues?

First Tier: Sewers to protect river; need more public facilities; unify community and get people involved

Second Tier: More representative form of government; better communication with residents; equal treatment by City regarding growth; regulate sources of pollution; encourage property owners not to “sell out”;

Single governing body; adopt land use controls; extend city limits; etc

Question #5. What is the Future vision for the cove?

First Tier: Maintain existing character; protect quality of life and environment; establish and preserve public open areas in the cove; better design guidelines to blend with and protect natural environment; keep community treasures; not like Pigeon Forge; no amusements

Second Tier: Landscaping to blend in with natural environment; Open Foothills Parkway; No strip development; better public services; good local jobs; sewer and other utilities; refrain from telling people what to do with their land; develop identity

Question#6. Consensus on vision for the future of the cove

Maintain peaceful/natural beauty of the cove; right of property owners to develop; fair and equitable distribution; blend new development with natural environment; accommodate all incomes; retreat/crafts/retirement community; heritage concept of design; maintain outdoor recreation; and better public services

Questionnaire

The questionnaire was sent to the 2,536 Tuckaleechee Cove residents and property owners. The survey was enclosed in a newsletter which explained the visioning process.

The survey was returned by 360 recipients, yielding a 14.2 percent return rate. Of the respondents, 85.8 percent were property owners, and half receive their income from tourist related businesses. Of property owners, 78.7 percent said they intended to use their property for personal construction. Only 15.4 percent bought property for investment purposes. Average length of ownership was twenty-one years. Retired persons comprised 40.2 percent of respondents, while comprising between 14 to 21 percent of the population of the Cove. Forty-six percent of respondents received income from a tourism related business sector. Which contrast with only approximately 24 percent for the Tuckaleechee Cove as a whole. The response pattern indicated that the survey was not a representative sample of the population. However, it still has utility.

### **Community Vision**

Statement: “I know that change is going to occur, but I like Tuckaleechee Cove like it is. I hope it doesn’t change too much in the future.” With this statement, 90.9 percent of respondents agreed or strongly agreed.

Statement:” Private Property rights are important, but someone who owns property in the cove does have an obligation to his or her neighbors not to spoil the beauty of the area.” With this statement, 93.7 percent of respondents agreed or strongly agreed.

Statement: “There are many community “treasures” in the cove such as the ridge tops and the river. Although these treasures may be privately owned, they are important to the community as a whole and the community has a

responsibility to protect them.” With this statement, 91.4 percent of respondents agreed or strongly agreed.

Statement: “Tuckaleechee Cove is an undiscovered “diamond in the rough” that just has not yet been discovered by tourist. When it is, I hope to be successful making money from tourists as the people in Gatlinburg and Pigeon Forge.” With this statement 70.2 percent of people expressed disagreement. However, of respondents with their primary residents within the cove, 24.3 percent agreed or strongly agreed with the statement.

### **Open-Ended Questions**

The last six questions of the survey were open-ended questions which were similar to the six posed to focus group participants. Responses mirrored those of the focus groups. Love of the natural environment, peace and quiet, a desire to not be like Pigeon Forge, concerns over utilities, traffic issues, and managed growth based on cooperative approaches and concern for property rights were dominant replies. There was definite consistency with focus group responses.

### **Consensus on Vision**

Tuckaleechee Cove was envisioned as a quiet resort community in the vein of Hilton Head, NC. It should maintain its residential base, while promoting commercial development in harmony with the natural environment. This would be achieved through cooperative means with an open and fair governance

structure, respectful of property rights. Some major themes and goals espoused by participants are listed below:

- Protect and maintain natural assets such as the Little River
- Preserve peace and quiet and small-town atmosphere
- Protect rights of property owners
- Provide more effective transportation options
- Provide sufficient infrastructure (sewer and water, etc.) while limiting tax burden on citizens
- Encourage a spirit of cooperation and teamwork
- Open and honest communication for problem solving
- Fair and open government/leadership inclusive of all interests
- Encourage development of small local businesses in harmony with natural environment that provide good local jobs (Ibid)

Few property owners viewed their real estate in purely investment terms. It appears preservation of the residential base was the primary motivator of most participants.

## **Section IV: Recommendations for Phase II**

The desire to maintain a small-town atmosphere in harmony with the natural environment, yet protect private property rights was not viewed as mutually exclusive.

The study recommended the following actions be taken by the Tuckaleechee Cove Advisory Board to achieve stated aims:

Examine processes and procedures utilized by successful and less successful gateway communities.

- Research traditional methods and alternative methods of implementing a land use and development guidelines plan.
- Develop a newsletter and survey instrument to solicit public opinion on options.
- Conduct a series of public meetings to present options and feedback from surveys, and solicit additional input.
- Select a preferred alternative and begin a process to design more specific strategies and objectives (Ibid)

## **U.S. Highway 321/State Route 73 Highway Design Alternative**

### **Stated Goal of Document**

To examine an alternative road design for the 4.8 mile stretch of U.S. Highway 321/State Route 73 through Tuckaleechee Cove (Barge Waggoner, 1998).

## **Document Format**

The document began with a discussion of the background and history of the design process. It then examined public participation and the resulting design criteria. A discussion of design aspects of the five segments was followed by recommendations for Off Right of Way Design standards.

Residents of Tuckaleechee Cove successfully lobbied the Tennessee Department of Transportation (TDOT) to look at alternative designs for the expansion of U.S Route 321. Highway 321 was a two-lane highway with no turning lanes, which ran through the center of Tuckaleechee Cove. Highway 321 accommodates over 1.5 million visitors a year to the GSMNP. During peak season, traffic congestion can be severe. To mitigate peak season traffic problems, TDOT approved funding for the widening of Hwy 321 in 1996 (Ibid).

During the fall of 1997, TDOT held a public meeting to present two design proposals. Alternative "A" was a five-lane design with a continuous left-turn lane down the center. The cross sectional length, including paved shoulders, was 84 ft. Alternative "B" was similar to Alternative "A" except it had a 22-foot-wide grass median with breaks for left turns. The driving lanes and drainage systems (curb and gutter) were the same for Alternative "A" and Alternative "B". Alternative "A" would have produced an 84-foot-wide, 4.8 mile long strip of pavement through the middle of the cove. Alternative "B" was even wider, to accommodate the grass median. Neither proposal pleased residents. They felt it would change the rural character of the area (Ibid).

The Tuckaleechee Cove Advisory Board and the City of Townsend enlisted the aid of the East Tennessee Design Center (ETDC) to spearhead the search for an alternative highway plan, a plan that would be environmentally and aesthetically more benign than the TDOT proposals. Engineering and architectural/landscape design firm Barge, Waggoner, Sumner, and Cannon, Inc. (BWSC) were given the primary design task. ETDC facilitated a design charrette, which included TDOT and BWSC. A community input and consensus-building process was utilized during the charrette. It used citizen input as the basis for generating design proposals (Ibid). Prior to the meeting, 250 notices were sent to all businesses and property owners along Hwy 321, asking them to participate in the charrette. The general public was notified via flyers and newspaper ads. Several groups participated including Townsend Heritage Council, Area Church Groups, GSMNP, Foothills Land Conservancy, SAMAB, Keep Blount Beautiful, Little River Watershed Association, City of Townsend and Blount County officials, State Senators and Representatives, and others.

The design team also reviewed a summary of the visioning process, and developed a set of working assumptions on which to base the design. The Four Assumptions were as follows:

- Highway 321 will be widened.
- Base alternatives are the two TDOT proposals ("A" and "B").
- The eleven themes from the visioning report represent the future vision of the cove.

- The design team will attempt to reflect the community consensus on the design of Highway 321.

After focus group presentations and interactions with citizens and officials, the design team decided upon twenty objectives to be incorporated into the design. Major themes included:

- Protection of water quality of Little River and enhancement of public access
- Use of oil skimmers, and cooling of run-off to protect Little River
- Abundant landscaping with native plants
- Pedestrian and bicycle circulation must be integral and safe
- Expansion of greenways (including trail underpasses)
- Road should not compromise rural character
- Road should be low speed and traffic calming
- Future transportation and utility needs should be considered
- Project funded by a variety of sources (TDOT, ISTEPA, local)
- Use of frontage roads and parking behind structures
- Use of voluntary design guidelines for structures
- Frontage roads and other measures to reduce curb cuts

Special attention was given to protecting the Little River from run-off pollution during the construction phase. Best management practices would be utilized and properly maintained during the course of the construction process. It

was noted that distinct segments existed, and that they should be treated differently. For instance, the segment near the entrance to the GSMNP would be treated differently than the section near the proposed Town Center. However, all design proposals had to fit within the twenty design objectives. For example, it was recommended that signage and guardrails should look more like park signage, and guardrails should be made of material that weathers to an earthy or rust color rather than standard TDOT galvanized metallic tones.

### **Author Observation of Construction Process**

The project involved an extensive amount of land disturbance along the right of way. The associated archaeological dig was the largest and most expensive conducted in the State of Tennessee to date, according to an archaeologist present at the dig. Additionally, measures to protect the Little River and tributaries, such as silt fences, were extensively used and maintained during the construction process, much to the credit of the construction company and supervising agencies.

### **Off Right of Way Design**

The report stated that the “scale, character, aesthetic quality and density of development along the corridor will have a greater impact on the cove than the highway itself.” It made the following recommendations to guide development adjacent to the Highway 321 corridor:

- Employment of frontage roads and minimization of curb cuts
- Minimum parcel size for developments to encourage clustering

- Parking in rear of buildings and site planning standards
- Maximum square footage for any individual business
- Accommodate pedestrian and bicycle access
- Heritage Concept as basis for design
- Preserve key views and vistas
- Design review for all new developments
- Utilities placed underground for all new developments and plan for eventual removal of overhead lines
- New businesses along the river should provide buffers
- Consistent type and style for street lighting
- Signage standards and the elimination of billboards
- Establishment of new Town Center near Wears Valley Road intersection  
Suggested uses included retail, lodging, post office, library, museum, public/institutional, a small park and residential
- Establishment of a commercial district for high traffic volume businesses such as a large grocery store, hotels, retail, and services

T      The Town Center District provides a visible focal point for the community. It was recommended that it be developed as a Planned Unit Development (PUD) in order to maximize the probability of orderly and cohesive development. It was also recommended that buildings be limited to 25,000 square feet in area and

access drives along Hwy 321 should be limited. This is in keeping with goals and objectives established during the visioning process.

### **Framework for Development Standards**

The framework is based on the eleven visioning statements and the twenty guidelines generated during the highway 321 charrette. Design guidelines for Off Right of Way areas should seek to do the following:

- Preserve and enhance the natural character of the cove, views and vistas, especially environmentally sensitive areas
- Flexibility and efficiency in the street and utility system, and the ability to accommodate a variety of potential businesses and land use requirements
- Provide setting and image conducive to tourism oriented businesses
- Design guidelines and protective covenants should provide a framework for creative and quality site design, while maximizing present and future utility and property values (Ibid).
- To provide a safe and welcoming environment conducive to business which preserves the welfare of residents
- Ensure that design of infrastructure and individual site improvements are in keeping with Heritage Concept.

The Heritage Concept seeks to preserve history, culture and scenery of the cove. The over-arching theme is of a pioneer-era Appalachian Mountain Community. A “pioneer” appearance is desired rather than a non-thematic

contemporary one with out-of-scale buildings and amusements like Pigeon Forge.

### **Interview with Mr. Herb Handy of the Smoky Mountains Convention and Visitor's Bureau**

Mr. Herb Handy is director of the Smoky Mountains Convention and Visitor's Bureau (SMCVB) and has held the post for nearly three years. He resides in Maryville, Tennessee and has a cabin in Wears Valley (a valley adjacent to Tuckaleechee Cove). He is also involved with the Tremont Environmental Education Center and enjoys fly fishing. Mr. Handy was interviewed in March of 2001.

The primary activity of SMCVB is the promotion of tourism in Blount County, and its revenue source is a tax on overnight accommodations (a Bed Tax) in Blount County. This includes hotels and motels, cabins, and campgrounds. The SMCVB advertises in magazines, publishes literature on Blount County accommodations, has an internet site, answers telephone inquiries, and makes referrals. SMCVB represents all lodging providers, and makes recommendations based on the customer's preferences (such as cabin versus hotel, or woods versus river or lake). They then provide a list of Blount County lodging providers fitting customer preferences.

Tourism is second largest business segment in the State of Tennessee, following healthcare. In Blount County, revenues from tourism have increased

significantly over the last decade. Tax revenues from accommodations totaled about \$400,000 in 1992, and climbed to over \$1,140,000 by 1999 (Ibid). Growth has averaged about ten percent per year. The majority of growth has been in cabin rentals.

The increase in revenues from accommodations has been welcomed by the county, although some the negative impacts have been un-welcomed. Mr. Handly owns a cabin in Wears Valley (located adjacent to Tuckaleechee Cove) and has seen how the area has been rapidly transformed by poor-quality development. Wears Valley was once a lot like Tuckaleechee Cove, but market forces and rapid development has fueled unplanned growth in cabins and second homes. Ridges and hills are often the preferred building locations. The result has been scarred ridges and hills from poorly conceived and constructed roads, and cabins and vacations homes dominating a once beautiful natural view shed. This is a fate Tuckaleechee Cove has thus far been spared (Ibid).

Mr. Handly does not believe the Wears Valley pattern of development is good for Tuckaleechee Cove. Tuckaleechee Cove is one of the last relatively unspoiled gateway communities to the GSMNP. According to Mr. Handley, "It should capitalize on its uniqueness," and strive to be an alternative to more commercialized areas (Ibid). It cannot compete with the amusements of Sevierville and Pigeon Forge and has a more viable future as a Heritage Community. Protecting and maintaining the quiet nature of the community,

uncluttered views, and environmental treasures is the economic approach best suited to its circumstances, according to Mr. Handly (ibid).

The number of hotel and motel beds in Tuckaleechee Cove has not increased significantly over the last twenty years. Most hotels were built prior to 1980, and only two new hotels have been built since (Hampton Inn and Maple Leaf Lodge).

The relatively slow growth in the number of hotel beds is due to the expense of establishing large septic drain fields. Land along Highway 321 is expensive and is projected to cost as much as \$100,000 an acre if proper utilities existed. The drain field necessary for a hotel is large (roughly equal to the area of the lot). This makes it difficult for investors to profitably build hotels in the cove. In order to protect water quality and preserve the source of most of the County's water supply, Blount County and TDEC have been hesitant to allow more drain fields near the Little River. Land in the valley sometimes does not perk well, and several septic systems are already failing.

Septic system constraints are also why there are so few restaurants in Tuckaleechee Cove. The grease and oils clog drain fields and can drastically reduce the effectiveness of a septic system. The few restaurants present have limited hours, and many close during the winter months. The problem of grease and oils can be addressed by sand filtration systems, which are essentially small sewage treatment plants. A few newer establishments have them, such as the

Hampton Inn and the Village Market grocery store (Ibid). The lack of restaurants and bars was noted as a negative in competing with other tourist areas.

Some established hotel/motel families feel threatened by the possibility of increased competition from newer hotels (if sewer lines were added). Occupancy rates are high for existing hotels (especially during peak season). The market could probably support more hotel beds in the cove, but the concerns of existing owners needs to be addressed. The infrastructure restraints have ameliorated development pressures. Mr. Handy stated that “Big money might be the downfall of everything.” A large project with big financing could rapidly alter the character of Tuckaleechee Cove. The sewage treatment concerns could be alleviated by a mini-sewage treatment facility (if the permits were granted). There does not appear to be any such projects on the immediate horizon; however the opportunity to address growth concerns is now, before outside forces act.

### **Redesign of Highway 321**

SMCVB supported the widening of Highway 321, while some in the community were opposed to it. The project demonstrated that government could work fast and cooperatively when necessary. The Governor wanted to address the issue that East Tennessee had not gotten its share of money from the Highway Fund. The State already owned right of way for expansion, and did not have to buy additional land or relocate people. The project could be completed in

two years, and Tuckaleechee Cove/Townsend was identified as a good place to initiate a project in the region.

Mr. Handly believed people did not get involved until they “saw the Bulldozers,” and that the relationship has been somewhat adversarial. Many “significant Native American artifacts were found”—including some human remains. Native Americans were in an uproar and slowed down progress. SMCVB tried to expedite the process by talking with government officials and archeologists. Many visitors were concerned as to the effects and blight on the cove. The road project was called a “big scar” down the middle of the cove during construction. SMCVB tried to explain to visitors that the road would be a good thing. They produced press releases, made personal contacts, and conducted tours of some of archaeological sites.

### **Interests Groups in Tuckaleechee Cove**

According to Mr. Handly, there are three major divisions or points of view:

- Retirees wanting peace and quiet and no growth
- Existing businesses not wanting additional competition
- Large land owners wanting sewer (sell land for maximum profit).

### **Challenges Identified by Mr. Handly:**

- Lack of loyalty due to absentee land ownership
- Uncertainty about direction coupled with lack of quality leadership
- Poor communication and lack of coordination between Tuckaleechee Cove and elements of Blount County government

- Tuckaleechee Cove lacks comprehensive approach to tourism
- Build alliance between City of Townsend and SMCVB (historical problem)

### **Relationship with National Park Service**

Mr. Handly believed it important to maintain lines of communication with officials and managers of the GSMNP. Blount County is dependent on the park as an attractor, much more so than Pigeon Forge and Gatlinburg. Additionally, a large portion of the county is within GSMNP boundaries.

The attractor that brings people through Tuckaleechee Cove is Cades Cove. Cades Cove has become a bad visitor experience in peak season. Blount County needs to work with GSMNP officials to insure access to Cades Cove remains open. The decision as to how to handle traffic is a difficult one, but Blount County must be actively involved. Mr. Handly anticipates some sort of parking area as a component of the plan. Tuckaleechee Cove is the most likely location for a parking facility.

Mr. Handly was not happy with communication between the county and NPS when he took over directorship of SMCVB. He resolved to improve communication. Most park officials and their families live in Sevier County; thus, it has been more difficult for Blount County to get “the ear” of park administrators. Also, the county did not invest as much energy as it should have to bridge the gap with park officials.

Mr. Handly recognizes that the primary mission of park officials is to preserve and protect park resources and that some of the Park’s decisions might

be contrary to tourism. This circumstance necessitated cultivating and maintaining a positive relationship with park officials. To facilitate better communication, Mr. Handy made periodic visits to Park Headquarters, and made himself known to officials there. He asked if Blount County could be of assistance. He also asked Cades Cove Ranger Steve McCoy to join Leadership Smokies. Leadership Smokies was formed to help Blount County and GSMNP officials to get to know each other and their functions (county officials visit aspects of the park, and park officials visit county functions). Visits were to different aspects of the county, such as industry, government, charity, etc. Leadership Smokies is affiliated with the Blount County Chamber of Commerce.

Mr. Handy reported that the National Park Service has been more active, and has become a better partner to Blount County.

#### **Opportunities and Recommendations According Mr. Herb Handy**

- Some land owners do have a larger sense of loyalty. They support the basic concept of BWSC Development Plan. They want to prevent strip development and institute design standards similar to Hilton Head.
- New view of SMCVB : Must be able to fulfill expectations of visitors for good roads, water, restaurants, while simultaneously preserving the community so it remains a desirable place to stay for residents.

#### **Tuckaleechee Cove is a Different Political Entity.**

Tuck Cove is different and needs to be managed differently, perhaps as a special management district. Blount County Looks at Tuckaleechee Cove as a

different political entity. Zoning rules for city areas do not fit business sectors like cabin rentals. Rental Cabins have shared water and sewage, high seasonal population.

Mr. Handley claims, "We are a different animal, and need to be treated as different animal." Gatlinburg has "Premier City Status." Nowhere else in Sevier County can you get liquor by the drink. Tuckaleechee Cove might need Premier City Status as well.

### **Interview with Susan Buchans March 24, 2004.**

Miss Buchans has been the City of Townsend Planning Commission Planner since August 2001. She is contracted through the Tennessee Local Planning Office. Her tenure roughly coincides with the beginning of major construction and widening of State Highway 321.

#### **Her Function:**

She provides planning technical assistance for the Planning Commission and Board of Zoning Appeals. Specific question regarding the zoning ordinance and its implementation are usually posed to her. She acts in an advisory role to the City of Townsend Planning Commission.

She has little involvement in the "Master Plan," which is being managed by the firm Barge-Waggoner. In regards to the Master Plan, she mentioned a "heritage themed" design focus was preferred by the community, and that it

would be handled most likely on a voluntary and advisory basis. Zoning law does not allow much latitude in regulating “aesthetic design of structures.”

**Question:** How does the process in Townsend mesh with efforts or interests of unincorporated parts of Tuckaleechee Cove and Blount County, State of TN, and Park Service planning initiatives?

**Answer:** Miss Buchans stated she knew of no Tuckaleechee Cove wide planning efforts on the immediate horizon, other than current functions/efforts of TCAB. Current planning efforts (involving her work) are strictly limited to the confines of the City of Townsend.

**Question:** What has been the prime motivator driving recent initiatives to update zoning and other associated regulations? Was it the Expansion of Highway 321?

**Answer:** She cited no particular force was driving the process, but said it was more of a dynamic of the current group of Planning Commission Members and the community responding to both positive and negative practices of other GSMNP regional communities, and a desire to promote the twin goals of tourism development and protection of the environmental and scenic treasures of the area. One example she gave was the current development of RV Park Standards. People have witnessed really good and very poor examples in the region, and wish to incorporate the more positive aspects into the Revised Regulations for Townsend. She also cited the generally “thoughtful” and “open-minded” nature of the Townsend Planning Commission. They have a sincere

desire to do their work correctly. They are patient, and are willing to study potentially useful methods and measures, according to Miss Buchans.

**Question:** What measures are being considered to address the goals stated in "Townsend Outline For The Future"?

**Answer:** Parking standards are currently under review. Alternative remedies are being examined. Protection of the Little River is one of the highest priorities of the community. Finding the right mix of remedies that are both cost-effective and that also protect the Little River from nonpoint source and thermal pollution, is difficult. The Planning Commission must also provide access for the disabled. The work on this issue is ongoing.

The Townsend Planning Commission seems committed to updating the existing zoning, and associated regulations. They recently finished updating lighting and signage regulations. These measures are meant to protect the city from excessive light pollution (which makes it difficult to see the stars) and discourage the visual blight of flashing and out-of-scale signage. The changes have taken time, but the Planning Commission seems committed to a thorough examination of available options, in order to accommodate the tricky balance of cost-effectiveness and protection of treasured aspects of the community.

Blount County has joined the National Flood Insurance Program. The City of Townsend is looking to do so as well. This will require that measures be taken in regards to land use along the Little River.

## **Interview with Mr. Edward Stucky of the Townsend and Blount County Planning Commissions: March 2004**

### **Biography of Mr. Edward Stucky**

Having grown weary of corporate life, Mr. Stucky dreamed of being able to live in or near the Smoky Mountains. He tried many times, unsuccessfully, to find a job in his field near the mountains. He and his wife, Virginia, then pursued opening a cabin business in the region. They spent two or three years looking for property suitable for a cabin rental business, and in 1994 located a piece of property in Townsend.

They moved to Townsend in September of 1995 and began building their first rental cabin. Mr. and Mrs. Stucky have built eight vacation cabins and have a total of nine vacation rental units.

A friend and fellow vacation rental business owner, Reed Jopling, was serving on the Townsend Planning Commission. When an opening occurred on the Townsend Planning Commission in 1997, Mr. Jopling nominated Mr. Stucky. Mr. Stucky was subsequently appointed to the Planning Commission. Mr. Stucky is now serving under his fifth mayor of Townsend (Mr. Kenny Myers) and is serving his third year as Chairman of the Planning Commission.

As business owners, Mr. Stucky and his wife got involved with the Smoky Mountain Convention and Visitors Bureau (SMCVB) and Blount Chamber of Commerce. Mr. Stucky now serves on the Blount County Planning Commission, Townsend Planning Commission, and the Tuckaleechee Cove Advisory Board.

**Question:** The planning process in Townsend has intensified over the last several years. What factors have energized the process and moved it forward?

**Answer:** The historical basis of motivation driving the process in Townsend is rooted in Gatlinburg. In the late 70's, downtown Gatlinburg had become saturated, and in the 80's that saturation spurred the growth of Pigeon Forge. Pigeon Forge took off like a rocket and grew unbelievably fast. By the late 80's and early 90's many people were fed up with the commercialization of Gatlinburg and Pigeon Forge and the demand for lodging began to spill over into Townsend from those people that still wanted a quiet mountain vacation.

With the spill over and demand for lodging growing in Townsend, the city fathers, the Chamber/SMVB and the county became concerned that Townsend might end up another Pigeon Forge.

The concerns mentioned above led to the formation of TCAB in 1991 or 1992. The purpose of TCAB was to look at the greater Tuckaleechee Cove area. Townsend had a government in place, but it only had jurisdiction over a very small piece of Tuckaleechee Cove. TCAB has no continuing funding. Members serve on a volunteer basis and can only accomplish goals by advising or making requests to legislative bodies, i.e. Townsend City Commission, Blount County Commission and/or Planning Commission.

**Question:** Who were/are the groups or individuals most active in the Tuckaleechee Cove planning process? What motivates them?

**Answer:** Carl Koella (now deceased) was in the Tennessee Senate at the time and a resident of Tuckaleechee Cove. I believe he was very instrumental in getting a grant funded to have a major needs and goals assessment study done of the Cove. TCAB was birthed, in part, to oversee this study and carry its findings forward.

TCAB members are appointed by the Blount County mayor and confirmed by the County Commission. TCAB has no legislative powers but serves as an advisory board looking out for the entire area from Walland to the Park boundary, and the Sevier County line at Wears Valley. TCAB is made up of a broad spectrum of local residents, business people, local government officials and GSMNP representatives:

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Chairman - Herb Handly, Sr. Vice President SMVB, Blount Chamber

Tom Tally - Tally Ho Motel, TCUB, lifetime resident of the Cove

Sharon Stinett - Docks Motel

Ed Stucky - Top of Townsend and Townsend Planning Commission

Kenny Myers - Mayor Townsend (current mayor serves)

Mike Walker and John Keeble - County Commissioners

John Lamb, Director Blount County Planning

Teresa Cantrell - Rep from GSMNP

Maribel Koella - Real Estate - wife of now deceased Carl Koella

Rick Russel - Barge, Waggoner, Sumner & Cannon – Consultants

As to motivation of individuals, TCAB members have a sincere desire to preserve the beauty and heritage of Tuckaleechee Cove through planned growth.

**Question:** I am most curious about the relationship between the process in Townsend versus Tuckaleechee Cove as a whole, Blount County and Great Smoky Mountains National Park (GSMNP).

**Answer:** There is no formalized process, however you can see from the member make up of TCAB, that there is a link between all four entities you questioned -- Townsend, Tuckaleechee Cove, Blount County and GSMNP. It was TCAB's intent to insure that their voice was heard when they requested that someone from Tuckaleechee Cove be appointed to the Blount County Planning Commission. Fortunately, the area is small and the number of active players is some what limited; as a result, cross pollination of ideas occur almost without forethought. That isn't to say that there should not be some more formalized processes.

**Question:** How does the Process in Townsend mesh with efforts or interests of unincorporated parts of Tuckaleechee Cove, in addition to Blount County, State of Tennessee, and National Park Service planning initiatives? In other words, are the basic principles and guidelines utilized in Townsend part of a Cove wide or County Plan, or is it limited to Townsend? If it is limited to Townsend, are there ongoing negotiations to plan on a Cove wide basis?

**Answer:** The planning process in Townsend, for the most part, is autonomous. By legal definition the only area the Townsend Planning

Commission (TPC) has any jurisdiction over is the corporate limits of Townsend proper. The TPC is very concerned about the greater Townsend area i.e., Tuckaleechee Cove as a whole. However it cannot act in any official capacity. Members of the TPC are also members of TCAB (Mayor - Kenny Myers, myself and now Teresa Cantrell - GSMNP employee), so there is a natural flow of information between the two bodies. I am also a member of the Blount County Planning Commission, so I can and do act as somewhat of a liaison with greater Blount County issues.

As to GSMNP, the Park has generally been good about keeping the City informed, and the City has in the past hosted citizen general information meetings with the Park providing speakers to give updates on current park affairs. As I mentioned previously, TCAB has a standing position to be filled by a representative from the Park Service - Teresa Cantrell fills that position and also just received an appointment to the TPC.

Townsend has attempted to annex additional land so that consistent standards would be applied to a larger portion of Tuckaleechee Cove. However, many of the annexation efforts have failed due to resistance by local residents. Annexation has been further hampered by state legislation passed within the past few years. The legislation essentially eliminated the economic benefits of annexing land with existing businesses and put stringent controls on where and how a city can annex.

**Question:** During the Planning Commission meeting, an Issue regarding the appearance, form, and stormwater issues of a proposed structure (Little River Railroad) was on the agenda. It was clear that present regulations do not allow the Commission to deal with qualitative aspects of design.

**Answer:** You are correct - our regulations do not currently deal with qualitative aspects of design. For the most part our zoning regulations have remained static for many years. However, about five years ago a significant amendment was made to our regulations dealing with the appearance of cell towers. Whether this particular regulation will hold up has not been tested -- as towers have only been added outside the corporate limits of Townsend. Last year we made a significant revision to the regulations dealing with RV parks & campgrounds - these regulations dealt with a number of qualitative issues. This year we added a major section on lighting standards aimed at quality of life (not allowing commercial lighting to affect adjoining property owners and minimizing effects on the night sky). The TPC did establish the ongoing rewriting/updating of our zoning manual as one of our Annual Planning Objectives.

Since the purpose of the Planning Commission is to protect the Health, Safety and Welfare of the community they serve -- architectural appearance issues begin to stretch the limits i.e., one could argue in the case of the Railroad building that a "metal" building is far more safe than a "wood" building would be.

There have been attempts by the Townsend Heritage Council (another area committee which is not currently active) to develop some recommended

architectural and/or appearance suggestions - however lacking funding and paid staff to work on materials, little has come of the effort.

**Question:** What measures are being considered to address the goals stated in "Townsend Outline for the Future"? How will the community achieve a quality-built environment themed toward a "mountain heritage." What ideas or approaches seem most favored by the community? What communities were cited as models? Have any of these been studied or visited? Please provide specifics regarding protection of the Little River, sewage/septic issues and present and desired relationship to GSMNP.

**Answer:** This question strikes to the very core of the issue Townsend is struggling with. Townsend proper has limited property left for major commercial development. Thus far the town has been fortunate in that new structures built within the last five to ten years have been built with the heritage theme in mind. That has happened because those building in the valley cared about the valley and wanted to fit with what has made Townsend the unique place it is. However, in reality the saving grace for Townsend and greater Tuckaleechee Cove has been the lack of sewer. The lack of sewer has acted as the brakes for development. If sewer had been made available, I fear the cove would have already been well on its way to becoming another Pigeon Forge.

Sewer is a double-edged sword. From some perspectives, sewer is needed to protect the Little River. However, if sewer is made available, the valley could be quickly covered with buildings and pavement, which creates

another major threat to the river -- storm water runoff. The planning commission has become more proactive in dealing with storm water, and is currently looking at alternatives to pavement -- i.e., pervious pavement, pervious pavers and allowance of gravel for limited parking needs.

The new lighting standards were developed in anticipation of growing commercial activity and are aimed at protecting the night sky. There is probably more we should and could be doing in terms of design standards.

CAB last year coordinated a trip west, in which several members of TCAB and a City Commissioner/Planning Commissioner (Paul Reynolds), visited Springdale, Utah and Sedona, Arizona. Both of these are gateway towns -- one to Zion National Park and the other to a national forest. The GSMNP encouraged the trip and it was, in part, feedback from this trip that got us started down the path to writing the lighting standards. Another purpose of the trip was to see the alternative transportation systems in use in both these locations. Of these two towns, Springdale, Utah probably comes the closest to matching the issues facing Townsend. I expect that more will come of these trips.

Springdale faced some strong opposition and major hurdles when they began molding the town into a model gateway. Tuckaleechee Cove has many land owners that are fiercely independent, and while they don't want the valley to lose its character, they at the same time don't want anybody putting restrictions on what can or cannot be done with a piece of property. When the county was

debating county-wide zoning, some of the strongest resistance came from the rural areas, including Tuckaleechee Cove.

Townsend will proceed slowly with annexation, while TCAB will continue to seek ways in which guidelines, zoning regulations, and perhaps even design goals can be implemented, which are specific to the cove and independent of greater Blount County.

Townsend and TCAB have had good relations with the GSMNP, and the park is concerned with Townsend as a gateway. However the park serves a huge constituency outside Townsend, so there will always have to be compromises. The majority sentiment of the locals is that they don't want change, but change is inevitable, and if it isn't managed, no one will like the results. So the bottom line is that we have to continue to move forward with deliberate speed, but at a pace that can be sold into the local environment.

**Question:** What changes do you project five years hence... ten Years hence?

**Answer:** In five years the Park will be in the initial stages of implementing the transportation alternatives that are currently under study. Hopefully, Townsend will have some architectural design guidelines in place, and perhaps a Zoning Overlay covering Tuckaleechee Cove will exist within the greater Blount County Zoning Regulations.

Ten years hence there will be noticeable, but limited commercial growth, with a creative appearance (I hope) that supports the heritage and beauty of the mountains around us.

### **Follow-up Interview, John Lamb of Blount County Planning Department: March 2004**

**Question:** Any forthcoming initiatives related to the Tuckaleechee Cove area and other areas in the vicinity of GSMNP? Any new regulations or other measures associated with entry in the National Flood Insurance Program (NFIP)?

**Answer:** The County was accepted into the NFIP about October 2000. Townsend just recently adopted flood plain regulations. The County has not adopted any new flood plain related regulations since 2000.

**Question:** Any progress on additional protective measures for Tuckaleechee Cove and other areas in the vicinity of GSMNP?

**Answer:** There has been no progress on any general measures unique to Tuckaleechee Cove. The County did amend the zoning regulations to ease up on requirements for vacation rental cabins in response to issues raised by cabin owners in the Cove.

**Question:** Any progress on creating "Special Entity Status" or a special district for Tuckaleechee Cove?

**Answer:** The move to incorporate the whole Cove seems to have died. There is still talk on developing a special zoning overlay for the Cove, but no specific movement.

**Question:** Please give a general overview of the Blount County philosophy/perspective on how it handles development in the Tuckaleechee Cove region?

**Answer:** The Cove is treated the same as any other area in the County. The County has extended an offer to consider recommendations coming from the Cove and TCAB, but no specific recommendations have been forthcoming. TCAB has requested specific consideration of Cove issues in a forthcoming county-wide growth plan, and the County supports this. The County continues its representation on TCAB.

**Question:** What do you see happening in the Tuckaleechee Cove area in five years, ten Years, in terms of Government structure or regulations and guidelines?

**Answer:** I will not speculate at this time.

### **Summary of Interview with Ms. Kelley Segars**

Ms. Segars is a planner with the Knoxville/Knox County Metropolitan Planning Commission (MPC) and Knoxville Regional Transportation Organization (TPO), in the Comprehensive Planning Division. She specializes in long-range

planning, bicycle planning, and intermodal planning. She is one of the principals working on the Cades Cove Opportunities Plan for GSMNP.

Cades Cove is the most popular single attraction in GSMNP. About two million visitors per year tour the Cove via the eleven-mile loop road that rings the valley. During peak season, as many as 4,000 vehicles per day fill the Cove, causing severe traffic congestion. It can take hours to complete the loop as a result, while exacerbating already the bad summer ozone problem.

The success of the Cove as a visitor destination also carries a cost. High levels of visitation are expected to rise even higher, which will make it more difficult to provide visitors with a high quality experience. Maintaining the integrity of the natural and cultural resources with current staff and infrastructure while managing this level of visitation has become a challenge. It has become increasingly difficult for the National Park Service (NPS) to maintain intact the rural, pastoral and cultural setting of this special place. Thus, the Cades Cove Opportunities Study was undertaken.

The process is at the end of the current phase—public input and generation of alternative plans— which will lead to the pursuit of an Environmental Impact Statement (EIS), which will determine the viability of listed alternatives.

Five alternatives have been selected for study. One is a “No Action” or status quo scenario. The other four are “Action” alternatives. Alternative three is a reservation system. Alternatives four and five are types of public transportation.

As the Environmental Impact Statement process moves forward, the proposed alternatives will undergo changes.

According Miss Segars, some of the notable fears or concerns expressed during the public comment period were:

- Access to gravesites within Cades Cove.
- Fear that traffic volumes will be reduced, and thus effect businesses along the route into the GSMNP via Tuckaleechee Cove.
- Loss of private vehicle access in general
- Suspicion or rumors of “ulterior motives” of Park planners

Perpetuation of false ideas and statements by opponents of the Park Planning Initiative was such that pamphlets began circulating stating the real motivation for the Cades Cove study was to restrict public use in order to “re-introduce Elk into the Cove”. These allegations were false, but they illustrate the extent to which some individuals were willing to go to derail the process.

Miss Segars cited the Zion National Park system of using extant parking at hotels, restaurants and smaller dispersed lots, as a model. Several people, including Herb Handly, visited the Zion area to observe the system and had favorable opinions. It actually increased visitation to businesses in the gateway communities near the park.

## **Effort to Incorporate Tuckaleechee Cove**

The Tuckaleechee Cove Task Force (TCTF) was formed to examine methods of creating a management unit for all of Tuckaleechee Cove. Kenny Myers, the current mayor of Townsend, sent a request to the Municipal Technical Assistance Service (MTAS) regarding taxation and legal factors involved in dissolving Townsend and subsequently re-incorporating of all of Tuckaleechee Cove. Mayor Myers asked about sales tax revenue distribution, revenue sharing after annexation, revenue estimates for the proposed Tuckaleechee Cove area, and property tax requirements for new incorporations (Darden, 2003).

On January 13, 2004 Ron Darden of MTAS wrote a report in response to Mayor Myers inquiries. Mr. Darden stated that the annexing municipality would only receive the local share of revenue from the newly annexed areas: "Where a city expands its boundaries by annexation, the city shall receive the local sales tax, less 50% for education, the wholesale beer tax, the income tax on dividends, and all other such taxes distributed to counties and municipalities" This constitutes a small revenue share relative to expenses. Further, the county maintains its revenue stream for a period of fifteen years after annexation (Ibid).

Mr. Darden said that "Cities may not presently incorporate into rural areas as designated in the 20-year growth plan developed by Blount County and incorporated cities." Mr. Darden recommended that TCTF verify that the proposed area is within the planned growth area for Blount County (Ibid).

According to Mr. Darden, a new incorporation into the county's planned growth area would require:

- A referendum by the citizens of Townsend to surrender their current private act charter
- A detailed proposed plan of services be attached to the incorporation petition
- A plan of services within six months after the incorporation
- A public hearing on the plan of services
- The plan of services be published in a newspaper of general circulation in the area
- A population of fifteen hundred people for a mayor aldermanic charter
- The collection of a property tax to equal the amount of state shared taxes
- The property taxes be levied and collected prior to the receipt of any state shared taxes
- The property tax levy to include real property and personal property

State shared revenue was estimated to be about \$298,000 based on the projected population of 3,000 people in Tuckaleechee Cove. This would require the Tuckaleechee Cove property tax to be roughly \$298 per household (using three people per household). This figure excludes commercial property (Ibid).

Residents would save money by improved fire coverage and lowering of insurance costs. Significant savings would result from upgrading from the current Class Nine protection to a Class Five protection status (Ibid).

Expansion of City limits will require additional measures. According to Mr. Darden, "If the City of Townsend surrenders its old charter and the new incorporation includes territory that was not a part of the old city, it appears that two referenda are required: One to surrender the charter, and one to incorporate the new territory" (Ibid). Getting both referendums passed, plus approval of the service plan and approval of a second property tax on the citizens of Tuckaleechee Cove, is a tough political sell, one very unlikely to pass.

Mr. Darden made the following recommendation:

If your goal is to merely control development and preserve the existing area, a planning or zoning organization may better serve that goal. The City of Townsend could form a regional planning commission, if the county would extend the boundary outside the city, and the Mayor of Townsend would appoint the members. You might even look at forming a community planning organization or a historic zoning district. The State Planning Office can assist you in developing a workable planning organization that may accomplish your goals (Ibid).

Mr. Darden also recommended that Townsend consider applying for Premier Resort City status. This status would allow them to receive 4.59 % of

the state sales tax collected instead of a per capita distribution. In order to qualify, Darden says, " 40% of the assessed real property values must be associated with resort facilities such as restaurants, motels, bike trails, and other facilities" (Ibid). The legislation requires a population of 1,100 or more (Ibid).

### **Townsend Planning Commission Meeting**

The author attended a meeting of the City of Townsend Planning Commission (TPC) on Thursday, March 11, 2004. Present were Susan Buchans, the contracted Planner, Commissioner Edward Stucky, Commissioner Paul Reynolds, Mayor Kenny Myers, other Planning Commission members, and citizens of Townsend.

One of the most notable aspects was the relaxed nature of the proceedings. People were friendly and most seemed to know each other well. Despite the relaxed atmosphere, the proceedings moved along in a steady and professional manner. Chairman Stucky and the other commissioners were attentive to citizen requests, but were frank in stating the extent of commission powers to address issues of concern.

The commission was in the midst of addressing parking concerns, in particular, how to supply adequate parking that allows access for the disabled and is cost-effective to businesses, while minimizing stormwater runoff to the Little River. Permeable pavement options were being studied, as well as the possibility of a mixture of different options such as pavement for handicap

parking places, and allowing the use of gravel for general parking (slope permitting).

## **CHAPTER FIVE: STATUS AND CONCLUSIONS**

### **Challenges Faced by Gateway Communities**

The tourist trade can enrich local businesses and land owners and can generate large tax revenues; however, the tourist trade also exacts a price from the surrounding community. Common problems experienced in rapidly developing gateway communities are environmental degradation, visual blight, low wages, seasonal unemployment, and loss of residential base.

#### **Environmental Degradation**

Rapidly developing gateway communities tend to suffer from degraded water quality due to increased run-off from impermeable surfaces, high bacterial counts from failing septic systems, and alteration and destruction of protective riparian cover. Traffic problems and air pollution are also common during peak season. Finally, park animals can be stressed due to edge effects from encroaching development and loss of important feeding and migration corridors.

#### **Visual Blight**

Visual blight is generally associated with signage and architecture that is out-of-scale, or out-of- place in the surrounding environment. Competition among businesses drives them to have ever larger signs and façades in order to outdo the neighboring establishment. This tends to spiral out of control.

## **Low Wages & Seasonal Unemployment**

One of the great social problems of tourism based economies are they tend to provide low skill jobs. Pay is usually well below a living wage, and income inequality is high compared to other forms of economic development (Tooman, 1997). Most tourism jobs leave no room for advancement and tend to provide few if any benefits. High seasonal unemployment is also common (Ibid).

### **Loss of Residential Base**

Where no land use controls are present, rapid conversion of residential and agricultural land to commercial uses is probable. Rising land values and taxes force homeowners to sell or move. Housing is not economically competitive with hotels and amusements. Private residences are, in time, converted to rental housing for tourists. A town can cease to exist as a social entity once this spiral takes hold.

Tourism must be managed if communities wish to preserve their social fabric and be good stewards of adjacent protected areas. Planning and management of the type and intensity of tourism allows a community to minimize the negative effects and enhance the positives of tourism. A laissez faire tourism policy will most likely produce a degraded natural environment and loss of community, via loss of residential base.

## **Strategies Employed to Address Challenges**

Park superintendents have no legal authority outside of park boundaries, and many gateway communities are in unincorporated areas with little or no land use controls. This lack of sufficient jurisdictional authority means that citizens and local entities must take the lead in reversing the downward trend seen in many gateway communities. For most exemplary gateway communities, success comes as a result of grass roots efforts. Citizens and the nonprofit sector often take the lead. Communities near Acadia and Zion national parks have shown that communities can be good stewards and still make money from tourists. Other gateway communities around the U.S. are following suit. The elements of success employed by progressive gateway communities are:

- Exercises to determine aggregate community vision
- Inventory treasured and environmentally sensitive areas
- Supplemental efforts to gain support of uncommitted stakeholders
- Establish objectives and targets
- Use stakeholders to help gain funding and necessary support from government and private entities
- Establish government and nonprofit structure with sufficient authority to achieve goals and objectives
- Create mechanisms to monitor progress and make changes

One of the most critical elements in successful plan implementation is stakeholder support. Without it, little can be accomplished. Large numbers of people can participate in visioning exercises, and the vision might seem widely accepted. This can give leaders the false impression that crucial stakeholder support is present even though this may not be the case. One should canvas and gain allies in critical subgroups as well. Large land owners might be a group requiring additional focus. Although few in number, they possess the large tracts of land most likely to be developed. They may need reassurance that they are not going to lose potential benefits as a result of the planning process. A vision resisted by important stakeholders is unlikely to be realized. Resistant stakeholders can delay, or effectively destroy a planning effort.

The common element in successful visitation planning efforts is partnerships. National Parks, local communities, county government, state agencies, federal agencies, citizens, land owners, and the business community must be involved if it is to be successful. Stakeholder support is crucial to project success. Stakeholders, in turn, become the strongest supporters and champions of the process.

### **Current Status of Process**

Communication among Blount County, TCAB, GSMNP, and the City of Townsend seems to be regular, amicable and well-established. Blount County supports TCAB efforts to address issues in Tuckaleechee Cove. However,

communication amongst local governments, large land owners, and certain business entities could be improved. The historical contention between people in Townsend versus unincorporated areas of Tuckaleechee Cove still exists, and attempts to incorporate the whole of Tuckaleechee Cove have effectively ceased.

Community vision is well established and documented. It appears to have general acceptance, except for a resistant minority. Two sizable documents have resulted from the visioning process: Townsend-Tuckaleechee Cove Development Plan: Phase I Inventory and Visioning, and U.S. Highway 321/State Route 73 Highway Design Alternative. The successful petition of TDOT to change the design demonstrated the resolve of the community.

Environmental inventories are detailed and extensive. Blount County and Tuckaleechee Cove have comprehensive information on land use and water quality. Blount County has a water quality plan and has proposed that a separate plan be produced for protecting the Little River Basin.

The GSMNP has moved into the EIS stage of the Alternative Transportation Plan for Cades Cove. A preferred alternative will be chosen and implemented within five years. The peak season traffic management plan chosen might designate Tuckaleechee Cove as the inter-modal hub.

Townsend has started a process to address issues within city limits. Townsend has revised lighting standards to protect the night sky, is addressing RV park standards, surface parking standards (permeable and impermeable

ratios), and will soon update zoning regulations. These are all positive and forward-thinking steps.

As Mr. Edward Stuckey indicated in Chapter Four, Townsend cannot afford to annex much new land under the revised State of Tennessee annexation standards (Stuckey, 2004). The progressive measures being undertaken in Townsend apply to a small percentage of the land area of Tuckaleechee Cove. Most of Tuckaleechee Cove is unincorporated and within the zoning jurisdiction of Blount County. No large land development projects are imminent in Tuckaleechee Cove.

At present, Tuckaleechee Cove does not have sufficient landowner support to address issues on a Cove-wide basis. This will be necessary for meaningful cove-wide changes to occur.

The question of how to bring resistant land owners into the process remains a perplexing one. Owners of large tracts realize that maximum price per acre is obtainable only if sewer lines are installed. Even if an entity could afford to build a small sewage treatment plant, there would be no assurance of getting the permits from Blount County and TDEC to operate the facility. Perhaps some owners have reasoned that they have little to gain by joining into a planning process that would add additional restrictions on them while producing few new financial gains. Altruism only goes so far.

There are also those happy with the status quo. They want no new development and wish things to stay more or less as they presently exist. The

problem is the status quo is not working either. Some septic systems in Tuckaleechee Cove are already failing. Occasional high summer fecal coliform readings are clear signs that the exclusive use of drain fields is probably not sufficient to protect the Little River. Subsequent development using drain fields will only exacerbate the bacterial pollution of the Little River, as evidenced by high fecal coliform readings.

Under present conditions, the county has the greatest ability to enact uniform standards over the largest area of Tuckaleechee Cove (via the zoning process). However, the limitations of traditional zoning render it inadequate to fulfill the goals set forth in visioning exercises. An historic, or other type of overlay, can add additional protective measures. This is a start and is being examined by Blount County.

### **Progress Forward: Alternatives Scenarios**

The author has identified three potential paths to move the planning process forward. These are identified by three approaches: Planning District Approaches, Incorporation Based Approaches, and Sewer Catalyst Approaches.

#### **Planning District Based Methods**

Planning District Approaches are the easiest to implement under present circumstances. They are the least expensive and politically most feasible of currently available options. Blount County is pursuing just such an approach. Tuckaleechee Cove is already under the zoning authority of Blount County.

Additional protections can be afforded by creating a variant on the Historic Overlay for Tuckaleechee Cove areas excluding the City of Townsend, which has its own zoning authority. The Historic Overlay allows greater control over qualitative aspects of design. This will facilitate development of the “Appalachian Pioneer Village Theme” desired in the visioning phase.

The use of additional protective measures for the Little River might be accomplished through the progressive development of more stringent County encouragement and enforcement of BMP's. Flood Zone zoning rules might be utilized to help protect riparian cover. The Aquatic Resource Alteration Permit (ARAP), if enforced, might help with stream bank alteration problems. A combination of measures might be needed to help protect the Little River from further degradation.

### **Tuckaleechee Cove Zoning District**

Townsend and Tuckaleechee Cove can also form their own planning district. The State of Tennessee Planning Office can assist in this effort (Darden, 2004). Blount County would have to give permission to Townsend to extend its boundaries. The governance structure would need to be designed to give fair and equal representation to all Tuckaleechee Cove residents. A referendum might also be required (Ibid).

Tuckaleechee Cove might consider applying for additional powers to address ridge-top development and other novel management tools such as performance zoning (Ottensman, 1999).

Tuckaleechee Cove might also consider applying for Premier Resort Community Status. Since Tuckaleechee Cove will not be incorporated, they might need legislative variances (Ibid). They could use County and State assistance in managing BMP's, ARAP and other tools to protect the Little River.

### **Incorporation- Based Methods**

Incorporation approaches require the creation or expansion of corporate boundaries in order to create an entity with sufficient authority to achieve the vision of Tuckaleechee Cove residents.

#### **City of Tuckaleechee Cove**

Dissolution of Townsend, and re-incorporation as a new greater Tuckaleechee Cove entity has been proposed. This approach requires that Townsend vote to end its charter and join with Tuckaleechee Cove as a new municipal corporate entity. As stated in Chapter Four, the requirements are that two referendums be passed: one to dissolve the City of Townsend (Townsend residents only) and another to form the new corporate entity of Tuckaleechee Cove (all Tuckaleechee Cove residents). There also has to be a plan of services, a hearing on said plan, and the assessment and collection of property taxes equal to the state portion. This must occur before the state contributes its share of matching dollars. Funding for expanded service would have to come from a bond or other source to generate the necessary capital.

The City of Townsend has modest means and could not fulfill the service plan without a large infusion of money. For instance, a new fire engine (of

modest size) can cost \$250,000. If one also includes building a firehouse, support vehicles, insurance, and training and equipping the firefighters, it might cost a million dollars to get Class Five fire service established (Ibid). Additionally, hiring, training, and equipping new police units is expensive. Other duties of the incorporated entity would also need to be financed. Incorporation under current law is an expensive process, and would have to be financed by property taxes and other taxes on the people of Tuckaleechee Cove (Ibid). This is why the effort to incorporate is seen as politically unfeasible. The cost of Incorporation, without appreciable new benefits, is a tough political sell.

### **Annexation by Townsend**

Annexation of additional land in Tuckaleechee Cove by the existing City of Townsend has been tried. The financial constraints making Tuckaleechee Cove-wide incorporation unfeasible also inhibit the ability of Townsend to expand. Townsend would only receive the local share of sales taxes and would not receive additional revenue until fifteen years after annexation (Ibid). This means Townsend must find other means of paying for annexations or proceed at a slow pace. In Chapter Four, Mr. Stuckey stated that Townsend has chosen to follow a cautious approach to future annexations.

### **Sewer Line Catalyst Strategies**

During a Planning Commission meeting, the author noted a complaint by a citizen regarding the smell from a sand filtration unit utilized by a local business. Such units must be well-maintained to insure proper functioning. Even these

modern mini- sewage units produce undesirable effects. Septic drainage fields are the most common sewage treatment option used in Tuckaleechee Cove. As time passes, drain fields become clogged and have to be replaced. When they fail, they can leave curious wetting of surface soil and can contaminate both ground and surface waters. This problem worsens as both the number of drain fields and the population increase. This situation cannot continue. A sewer system is the best long-term option for protecting the Little River and groundwater from bacterial contamination. This scenario uses the assumption that a sewer system will be necessary within a five to seven year time window.

In Chapter Four, Herb Handy stated that land values would skyrocket if sewer were available. Prices exceeding \$100,000 per acre would not be out of the question. This would induce rapid development. Thus, it is imperative to have a plan in place before the approval of sewer lines is granted.

A strategy to quickly bring resistant land owners to the table is to promise to actively support the installation of sewer lines if the land owners faithfully participate in a cove-wide planning process--that is, to make completion of a cove-wide plan and governance structure a pre-condition to allowing sewer lines to be installed.

The financial incentive to participate would be huge. Those interested in profiting from potential development would want to accelerate the process out of financial self-interest. This might be the carrot to induce them to participate in and actively support the process.

Those wanting little or no new development might not be happy about this change. However, they must acknowledge that deterioration of septic systems will require the community to take action in the not-too-distant future. They might as well harness this situation to codify sought-after protections. The present situation is not based on anything legally binding. Cove residents will not want to install sewer lines by TDEC mandate without having a plan in place. They could quickly see the cove lost to strip-type development. Protection of the quality of life in residential areas can be addressed in the planning process.

Preservation of the residential base should be one of the pre-condition pillars of the agreement. Provisions to keep the tax burden low on residents must also be part of the plan. Property taxes for owner occupied residences and residential rental property (for long-term residents) should be kept as low as possible. Measures to keep commercial uses out of residential areas should be created as well. In general, fees and taxes should be borne by tourists rather than local residents. The use of Impact Fees can also help to offset the cost of development borne by residents. Developers would pay a fee to offset the costs to public infrastructure. Use of Impact Fees will require proper enabling legislation, but might be ideal for the situation in Tuckaleechee Cove (see Chapter Three for details). The visioning process would shape the details of how this would be accomplished.

The process should also address long-term planning, open space, water quality, lighting standards, design review, and other qualitative aspects of development.

### **Political Framework**

The major problem with incorporating Tuckaleechee Cove is the financial cost of incorporating. If sewer lines are added to the equation, the potential benefits change the arithmetic for land owners. Instead of just more taxes, land owners would reap big returns in increased land values, which would more than outweigh the increase in taxes.

The economic benefits of incorporating make it a sound investment over the long term, especially if grants and federal funding pay for much of the initial cost. A City of Tuckaleechee Cove would qualify for Premier Resort City Status and would be politically more acceptable than Townsend attempting to annex additional land. Planning for sewer lines would be best done under a governance structure that can accommodate the various interests groups and has the authority to make decisions without having to coordinate with multiple government agencies.

### **TCAB Initiation of Process**

TCAB could sponsor a comprehensive planning process that links installation of sewer lines in Tuckaleechee Cove to the initiation and completion of a cove-wide planning process. The process would have performance clauses such as approval of TDEC and Blount County for anti-degradation measures to

protect the Little River, would reflect community vision, and would be balanced in its treatment of stakeholders. It would seek to preserve residential areas, yet promote quality commercial development. It would apply to all of Tuckaleechee Cove, as well as to adjacent areas if desirable. Grants and federal dollars would be pursued to fund both the engineering studies and primary construction of the system. It might be possible to link it to the intermodal hub alternative being examined as part of the Cades Cove Peak Season Management Plan. Such a facility would require large numbers of bathrooms, thus suitable sewer facilities. Federal dollars might result.

### **Memorandum of Agreement on Special Entity Status**

A memorandum of agreement among Blount County, TDEC, state legislators in the region, and the governor would be drafted. It would promise that a bill granting a “Special Entity Status” for Tuckaleechee Cove will be presented to the Tennessee Legislature. It would pledge that an engineering study and the pursuit of potential funding sources for sewer lines will be undertaken upon completion and ratification of the cove-wide plan. The legislation would be fast-tracked upon fulfillment of planning requirements. It would grant powers necessary to utilize novel methods like performance-based zoning, design review, ridge-top protection, and other measures necessary to fulfill resource protection goals; liquor by the drink and other advantages as a Premier Resort City would also be included in the legislative package.

This suite of measures would allow Tuckaleechee Cove to have high-quality inns, restaurants, and bars, and be creative in its approach to protecting the natural beauty of the area. Incorporation of Tuckaleechee Cove would make granting these provisions easier, especially in the pursuit of Premier Resort City status. With all of these measures in place, Tuckaleechee Cove could produce a significant income stream, yet maintain its unique charm.

### **Plan Benefits**

The planning process will hopefully produce measures that assure residents they will have a peaceful and relaxing place to live. Business owners should experience record profits and the ability to operate all year round. Restaurants, bars and hotels will be able to operate in winter without fear of septic drain fields malfunctioning. Tourists wanting a quiet winter get-away would sustain business throughout the winter and spring. This process can yield a win-win situation for all parties involved.

The GSMNP region would be recognized as having a progressive gateway community and would gain positive publicity, fostering the reversal of negative stereotypes of Appalachian gateway communities. Another benefit is that people are often willing to pay more for a higher-quality product. Positive experiences produce more return visits and word-of-mouth advertising. The fact that the area would not be cluttered and hastily developed would continue to be a selling point to many people.

Tuckaleechee Cove can be the example illustrating that the State of Tennessee is concerned and committed to the protection of natural and cultural resources.

## **Conclusion**

Blount County should continue developing an Overlay District for Tuckaleechee Cove. This will provide interim protection and is the most feasible immediate option. The City of Townsend should also continue its progressive efforts.

However, the future of the planning effort will require the sewer situation to be addressed. Conditional installation of sewer lines might be the best hope of bringing holdouts into the cove-wide planning process. A holistic approach integrating sewer lines and comprehensive planning would accelerate business activity in Tuckaleechee Cove, and insure preservation of the quality of life dear to residents.

The GSMNP Environmental Impact Statement (EIS) process might necessitate construction of large bathroom facilities to accommodate visitors at the proposed Intermodal Station. This convergence of circumstances might make incorporating sewer lines into the planning process inevitable.

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## **VITA**

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