LAND-USE IN THE CROSSHAIRS:

EVALUATING THE USE OF CONSERVATION SUBDIVISIONS

IN ATHENS-CLARKE COUNTY, GA

by

STEPHANIE MELISSA SHELTON

(Under the Direction of Marianne Cramer)

ABSTRACT

In post-war America, cities rapidly expanded into undeveloped areas creating a sprawl of low-density development. This resulted in a landscape with degraded natural resources that discourages social interaction. In recent years, environmental planners have tried to strike a balance between growth and natural resource conservation. Conservation subdivision (CSD) ordinances are one of the tools that have seen increasing use nationally. For the past decade, Athens-Clarke County (A-CC), GA, has been struggling to address poor land-use resulting in the adoption of a conservation subdivision ordinance. Developments proposed under this ordinance have been heavily criticized by both the public and private sectors. By evaluating these developments against criteria derived from the A-CC Comprehensive Plan, this research determined the ordinance to be inconsistent with community-derived goals. Using the same criteria, changes proposed to the ordinance in the recent re-drafting process are evaluated and determined to be more consistent with these goals.

INDEX WORDS: Conservation Subdivisions, Georgia, Environmental Planning, Rural Land Use, Athens-Clarke County.

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DEDICATION

This Thesis is dedicated to Freida Thomas and Lois Shelton.

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CHAPTER 1

INTRODUCTION

> Insist on rights of humanity and nature to co-exist in a healthy, supportive, diverse and sustainable condition *(First Hannover Principle, McDonough and Braungart 1992).*

Purpose of Thesis Study

This thesis is a contribution to a larger multidisciplinary effort to conceive of patterns for built communities that will allow for human population increases while sustaining the health of both human societies and ecological processes. Land-use planning is just one of the puzzle pieces in this broad effort: cultural values, economic equity, landscape ecology, environmental education, and many other areas contribute to this effort. Conservation subdivision ordinances, which allow residences to be clustered on a site in order to protect natural resources on the remainder of the site, are one type of land-use tool used to balance urban growth and environmental conservation. This thesis evaluates conservation subdivisions because they are a planning tool that has recently come under fire in Athens-Clarke County (A-CC) by failing to meet community environmental and land use goals. The purpose of this thesis is to examine conservation subdivisions in the context of Athens-Clarke County, and make recommendations for changes to the jurisdiction's ordinance that will make the use of this planning tool more consistent with community environmental and land-use goals.

In the wide spectrum of sustainable design, conservation subdivisions sit somewhat uncomfortably in the territory between 'site-sensitive development' and 'conservation planning'. The benefits to developing a site as a conservation subdivision rather than as a standard subdivision are difficult to refute: the footprint of development is reduced and more of the existing landscape is retained and conserved, incurring conservation benefits without reducing the property's economic return. The promises of this arrangement are many, yet the potential benefits as well as the limits of conservation subdivisions as a tool are largely a factor of how they are being used in the context of larger-scale municipal or regional planning. There are a great many unanswered questions and research possibilities within this topic, and the increasing use of conservation subdivisions nationally and regionally as a development type and planning tool suggest there is a need for further and ongoing inquiry into their use. This thesis contributes to the subject of conservation subdivisions by examining their use as a planning tool in a context-specific case study.

Background

In the fall of 2002, the author was a member of a group research project entitled *Evaluation of Conservation Subdivisions in Cherokee County, Georgia* (Aten, et al. 2002). This project addressed the question of whether conservation subdivisions were in practice providing protection to environmental services, as they are commonly promoted as doing. The research assessed water quality and stream health as well as the structure and composition of riparian and adjacent upland vegetation as a means of addressing this important question. While the project succeeded in establishing baseline data at eleven

sites, as well as addressing some weaknesses in the county ordinance, it quickly became clear that it was difficult to assess conservation subdivisions strictly in terms of what was happening on-site.

Environmental assessments were influenced by adjacent-site impacts as well as past land uses. Further, it was found that while some environmental services, such as infiltration and canopy retention, are served by default, when land was left open and not developed, other conservation objectives were not necessarily met when site designs and larger scale planning efforts failed to address specific conservation goals. It was generally observed that when the focus of planning and design efforts is reduced to the setting aside of 'open space', neither human nor ecological communities are served to their full potential, and in some cases both are poorly served. The need to look beyond the scale of individual property boundaries became apparent during the Cherokee County project, and suggested the approach for this research in Athens-Clarke-County.

Athens-Clarke County became the focus of this research effort in January 2003, by way of local events. Concerns over the apparent failure of conservation subdivisions to achieve local land-use goals had led the Athens-Clarke County government to declare a moratorium on permitting developments under its conservation subdivision ordinance, a mere two years after its adoption in the zoning code. What had led to widespread dissatisfaction with conservation subdivisions in such as short period of time? What exactly 'wasn't working' with conservation subdivisions? In Cherokee and Cobb Counties, residents had reacted negatively to the perceived density of cluster developments, and there were some signs that residents in rural Athens were having a similar response. At the same time, local land trusts and smart growth leaders were

alleging loopholes in the ordinance and poor site-construction methods as other problems. It was becoming clear that there was a need to identify the source, or sources, of conservation subdivision failings. The moratorium allowed planning staff the opportunity to redraft the current ordinance, and this presented a further opportunity: to focus the energy of this research on identifying problems in the ordinance and proposing changes.

On behalf of this effort, the author participated with other stakeholders and environmental groups in a redrafting process led by the A-CC planning staff over the course of six months, from February 2003 until present, July of 2003. This included participating in stakeholder group work sessions, attending public meetings and events, submitting independent written comments and recommendations to planning staff following draft versions, communicating with local commissioners, and participating with the land trust in their work sessions and written responses to planning staff. This research also pursued formal interviews with individuals having an interest or involvement in conservation subdivisions, from landscape architects to city planners and planning commissioners to rural residents, among others. In this sense, my thesis juggled research with an effort to advocate for local change. In addition to a more focused inquiry into the relative merits and loopholes of the local ordinance, this thesis also takes a broader perspective on conservation subdivision use in A-CC, reflecting on the role of community in local planning as well as on the use of this development type as part of a county-wide planning and growth strategy.

Organization

My thesis is organized as follows: Chapter Two examines historical efforts in planning and design to balance human and environmental needs, and leads up to recent planning tools, including conservation subdivisions that address this balance. Chapter Three focuses on Athens-Clarke County, and describes the recent state of land use that led the Athens community to pursue the goals and objectives described in the 1999 Comprehensive Plan. The role of community in local planning and the adoption of conservation subdivisions in A-CC are also considered in this chapter. Chapter Four profiles projects proposed under the current ordinance and evaluates them against community planning goals. Chapter Five evaluates the potential effects of the proposed ordinance against community planning goals. Chapter Six considers issues raised by conservation subdivisions in Athens-Clarke County that fall beyond the scope of the ordinance, and makes specific recommendations for ways to realize fuller potential from this planning tool. Chapter Seven provides concluding thoughts by summarizing what other communities who wish to use conservation subdivisions as a planning tool need to consider when doing so.

CHAPTER 2

BALANCING GROWTH AND GREENSPACE: A SHORT HISTORY

Introduction

The act of balancing urban growth and environmental conservation is not new, but has come into sharper focus as context and values shift in the late 20th century. As communities move from city to suburb, people are beginning to recognize inherent values in ecological communities, yet we are still looking for patterns around which to organize our goals and tools with which to orchestrate balance. This chapter looks for the threads of our present day efforts to find these patterns by revisiting the pattern-making of the past. The struggle today to understand the limits and potential of environmental planning tools such as conservation subdivisions is a part of this history.

The industrialization of major cities in the late nineteenth century led humans to seek to mitigate the perceived (and real) negative health and social effects of urbanization by designing a role for 'nature' in the city. At the same time, designers were laying out towns and new residential communities on the peripheries of cities to meet an increasing need and desire for low-density housing. In the mid twentieth century, as populations continued to move out of urban centers and suburbanize rural areas, the destructive potential of floods and other environmental processes on human settlements became more palpable, and communities endeavored to engineer protection from natural forces.

An environmental consciousness gradually coalesced as the impact of Rachel Carson's Silent Spring influenced Ian McHarg's approach with a new imperative. A few planners and designers began to identify a utilitarian value in working *with* rather than against environmental processes, and some began to also recognize an inherent value in the conservation of natural processes and habitats. This chapter investigates the historical thread of the role of greenspace and perceptions of greenspace in residential design and city planning as it winds its way through the garden-city movement, makes the transition to garden-suburb of Olmsted, and is then reinvented in the philosophy and methodology of Ian McHarg in the mid-twentieth century.

The introduction and widespread adoption of zoning codes and ordinances which pushed cities towards separation of uses, coupled with design and development practices that emphasized mass production over individual form, had a pronounced impact on the presence of open space. Exponential growth in the second half of the nineteenth century, chiefly in the form of low density housing in formerly rural areas, fostered a resurgence of design and planning efforts seeking to redress 'quality of life' through various means. This included a renewed interest in land-use planning which sought to set limits on growth and reintroduce greenspace as a necessary element in both existing cities and new suburban developments.

Randall Arendt is a planner who has emerged in recent decades to address increasing concerns about the negative impacts of suburbanization on rural character and environmental degradation. As this chapter demonstrates, the concepts of cluster design and open-space zoning are not original to Arendt. Nonetheless, he deserves sole credit for defining and promoting conservation subdivisions as a planning and design tool, and

for articulating the steps necessary for their design and implementation. Arendt, in Rural by Design (1994), Conservation Design for Subdivisions (1996), Growing Greener (1999), and Hamlet, Village, Town (2000) describes the use of conservation subdivisions, including model ordinances, case studies, and design strategies. This chapter looks back at individuals and movements in planning, design, residential development, and environmental planning history that inform the present use of conservation subdivisions.

Planning and Design History: Bringing greenspace into cities and cities into greenspace

Industrialization and the rapid expansion of late nineteenth century cities spawned some of the earliest efforts by western cultures to incorporate natural areas into urban centers. Cities like London (which boasted 6.5 million residents in 1890) and New York were rapidly expanding out into the surrounding countryside, engulfing neighboring cities and towns. Movements both in Europe and America during this time reflected the struggle to devise solutions to the multiple social and environmental problems which issued from the industrialization of cities, towns and the intervening countryside.

Many of the active reformers of this era adopted a holistic social approach to the perceived problems of the day. William Morris and Edward Bellamy, whose works fall outside most standard landscape histories, are notable contributors in a broader sense to this reform movement. Both authored utopian novels in News from Nowhere (Morris 1891) and Looking Backward (Bellamy 1888) respectively, which suggested future alternatives to the emerging urban-industrial model. William Morris's novel, along with the Arts and Crafts Movement he founded, was based on a return to a traditional agrarian-based land use and socialist-oriented community model. Morris's philosophy took direct

aim at the new manufacturing-based economy, in which an individual's livelihood and living conditions distanced him from a physical relationship with the natural world and its processes (Hitchmough 1997). Much of William Morris' thinking mirrors present day concerns over urban sprawl, loss of farmland, deforestation, and even the quality of home construction. What is compelling about the many utopian novels and societies during this time period in both Britain and America is the idea that a collective vision could be fashioned around work, community and the natural environment, with the idea that this would lead ultimately to the betterment of self and society.

This is consistent with the current recognition that sustainable societies must be concerned not only with environmental issues, but with social and economic dimensions as well. This is reflected in William McDonough sustainable design triad as the three "E's" of sustainability: "Ecology, Equity and Economy" (2002). That 'environments' broadly, both built and natural, could have a profound impact on the mental, moral, and physical health of humans was a novel concept in the 19th century, and one that has played a role in design and planning ever since.

Ebenezer Howard and Patrick Geddes in Europe, and Frederick Law Olmsted in America were compelled by many of the same issues that motivated Morris and other utopian novelists. Modern historians and writers frequently cite the ideas of Ebenezer Howard as the genesis of city and environmental planning today. The premise behind Howard's new town designs was to improve the 'quality of life' (a new term, but an old concept) of its inhabitants by combining the better elements of cities with the positive attributes of the countryside. He favored '"the spontaneous movement of the people from our crowded cities to the bosom of our kindly mother

earth, at once the source of life, of happiness, of wealth, and of power'" (Howard *in:* Parsons 2002, 5). Inasmuch as Howard's garden cities featured bringing towns into the countryside, his plans also expressed the idea of bringing countryside into the town. Hub-and-spoke layouts described a regular pattern of central parks and gardens, civic services, residential and industrial bands, and an outlying ring of agricultural allotments.

In the master plan for Welwyn Garden City, (Figure 2.1), city elements are organized around existing railway lines and roadways were sited along existing lanes so that natural features could be preserved (Miller 2002, 125). Formal garden grids are provided within the city, an informal park unfolds across the northern side of Welwyn, and the entire city is encircled by working farmland in "Agriculture Belts". The notion of designing and building a new town that would be self-contained and self-sufficient was novel, and it is not without reason that Howard is recognized for the Garden City concept: his concepts of "urban decentralization, zoning for different uses, the integration of nature into cities, greenbelting, and the development of self-contained 'new town' communities…laid the groundwork for the entire tradition of modern city planning." (Gates and Stout 1996, 312).

The Garden-City concept inspired planners and designers in many parts of the world**.** Patrick Geddes, a Scotsman, is rightly credited with many revolutionary concepts, including site-specific planning, the site survey, and the role of citizen input in participatory planning. Ian McHarg and Lewis Mumford were later heavily influenced by Geddes' "regionalist" perspective and his consideration of the physical and environmental components of a site in planning (LeGates and Stout 1996, 330).

Figure 2.1: Welwyn Garden City (Louis de Soissons in: *Miller 2002)*

Geddes published Cities in Evolution in 1915, in which he proposed a new approach for systematic and regional-scale planning. The degree to which site analysis and,

more recently, community-based planning are internalized (at least in theory) in modern planning and design speaks to Geddes' contribution.

In America, similar ideas were afoot. Frederick Law Olmsted, widely recognized for his designs of large urban parks and park networks, was deeply concerned with the effort to create livable cities and towns. Lauded for his contributions to park blocks and greenway networks in urban areas, Olmsted was driven, like Morris, Howard, and Geddes, to respond to the negative affects of urban industrialism. In his speech *Public Parks and the Enlargement of Towns*, Olmsted represented his broad understanding of the "physical, the social, the political, and the cultural, and of the inter-connectedness of those aspects of the urban whole" (LeGates and Stout 1996, 302). Olmsted saw the potential for parks and greenspace as a curative to the decivilizing effects produced by urban areas. He begins:

> "We have reason to believe, then, that towns which of late have been increasing rapidly…are likely to be still more attractive to population in the future; that there will in consequence soon be larger towns than any the world has yet known, and that the further progress of civilization is to depend mainly upon the influences by which the men's minds and characters will be affected while living in large towns" (Olmsted 1922).

If we are to rightly understand Olmsted, the presence of greenspace in cities, far from being a mere amusement or diversion, affects nothing less than the very 'progress of civilization' and the 'minds and characters of men'. Bringing the ameliorating effects of the countryside into the harshness of the city was the means by which Olmsted intended to positively affect the mores and behaviors of the cities' human inhabitants.

Riverside, Illinois, a 'garden suburb' designed by Olmsted in 1868, expressed Olmsted's desire to construct a self-contained residential community that used natural elements as a central organizing feature. Riverside departed from the standard grid of residential street layout, making liberal use of curvilinear streets and winding lanes that connected back upon themselves. While the neighborhood featured a linear park along its central river, it lacked the other 'town elements' that would come to be expressed in Howard's' garden-cities in the form of shops, industry and civic institutions. However, Riverside was intentionally located at a major railway terminus -- a planning approach that foreshadowed present day transit-oriented design. The Olmsted model was ultimately a less radical and holistic vision than that of Howard or Geddes, yet it likely had a greater impact on the evolution of the American landscape, particularly in residential neighborhood form.

Residential design in twentieth century America vacillated between formal and informal layouts. Fulton (2002) identifies and describes an intellectual and philosophical divide between designers and planners, some favoring formal designs oriented on a regular street pattern around civic buildings, and others promoting informal design pattern of curvilinear streets organized around greens and parkways, such as Riverside. While greenspace was utilized in both types of designs, 'natural features' and park like swaths were a central organizing feature in the more Olmstedian informal designs (Figure 2.2), while formal and gridded layouts tended to express greenspace generally as geometric 'greensward' type space.

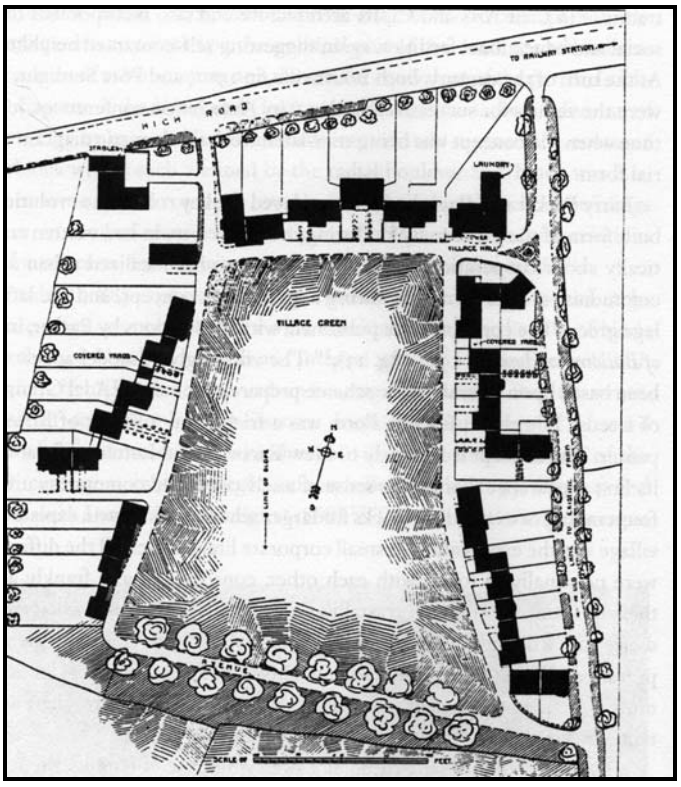

Figure 2.2: Example of Greenspace as Central Organizing Feature. Including informal house/lot layout, houses face village green (Raymond Unwin in: *Miller 2002)*

Radburn, New Jersey, designed by Clarence Stein and Henry Wright in 1929, is perhaps the most frequently invoked design from this era (Figure 2.3). Randall Arendt, in many of his texts as well as in a recent lecture at the University of Georgia, projected an image of Radburn and described its finer points as a means of describing the potential to design pleasing neighborhoods via clustered houses and integrated open space. By the 1920s it was becoming clear that suburban design was a much more dominant trend than that of new town construction. Radburn, as a purely residential suburb, lacked most of the garden-city features, but:

> "was not completely inconsistent with the overall philosophy of metropolitan growth…which called for a planned and orderly decentralization of the population into smaller nodes that were safe, affordable, and accessible to

> open space….In accepting such a role, however, Radburn became the model of the garden suburb, influencing virtually all subsequent suburban development, including those suburbs designed during America's supposed amnesia period after World War II" (Fulton 2002, 666).

An interesting element of Radburn is its response to the new presence of the automobile. Stein and Wright, Radburn's designers, separated the car from pedestrian areas by providing auto-servicing streets between residential clusters with pedestrian-only streets within clusters (Jellicoe 1966). People could also traverse the neighborhood via an informal walking trail system that provided access by way of the greenspace zones.

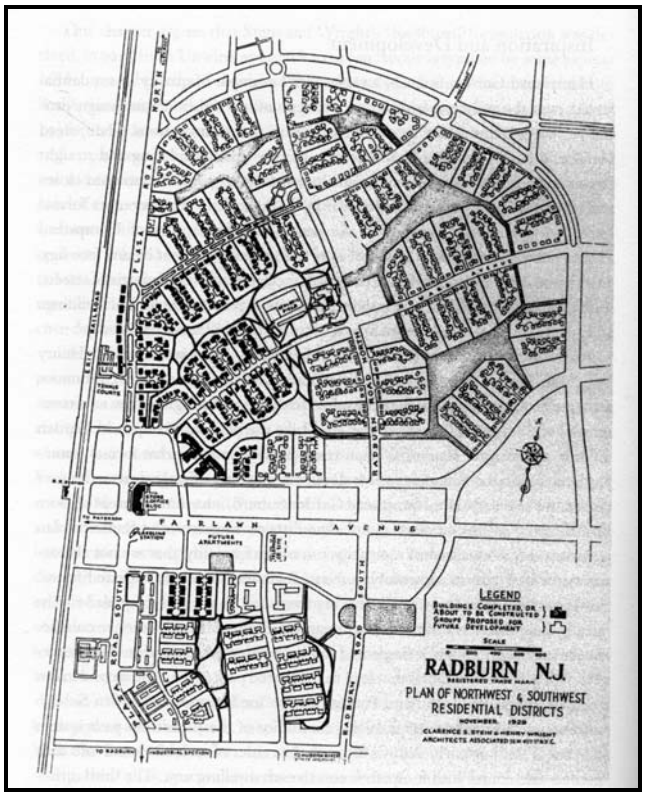

Figure 2.3: Plan for Radburn, NJ (Stein and Wright in: Parons 2002)

The plan shows clustered development with groups of residences organized around pedestrian streets, and segments of greenspace between clusters. While their forms may shift from plan to plan, open spaces and greenspace are used with intent

and purpose in all these designs. They never appear, as they do in modern residential development, to be 'leftover spaces' -- the bits and pieces remaining after roads and house-lots have been mapped out on the site. To this day Radburn is a thriving neighborhood.

In their designs and philosophies both Howard and Geddes were clearly trying to do more than simply mitigate the negative effects of burgeoning industrialization. They were pursuing a broader vision in planning and design to create communities that reconciled social needs, fostered a relationship with the natural world, and fed the individual human spirit. To do this, they attempted to design comprehensively, giving their cities workspaces, social spaces, living spaces, and natural spaces and then expressing the relationship between these.

Howard and Geddes concerned themselves with larger issues, such as the notion that communities should have collective ownership of their city (Howard), and that citizens should be part of the design and planning process (Geddes). Howard envisioned the incremental phasing of development in which town expansion would keep step with project financing and investment. Many current planning and design trends draw on or employ these same strategies. Greenbelt planning, urban growth boundaries, localized agricultural markets, traditional neighborhood development movements, and other physical planning efforts all have their roots in the early garden-city milieu. Most of these movements have taken place as separate paths, failing to integrate all the elements. Nonetheless, it is significant that some form of open space protection had remained a consistent thread throughout the evolution of the post-garden city designs. Fulton goes on to observe

that these early designs would become "bastardized for mass consumption by the production-oriented American real estate development industry: Local streets (became) service lanes" and "greenways toward which homes were oriented could be converted to golf courses or sliced up into fenced backyards in keeping with the American taste for private space" (Parsons 2002).

Planning and Design: Environmental Planning

By the mid-20th century the 'darker' forces of nature were beginning to exert themselves on the suburbanized populace. John McPhee recounts, in his many works, true-life narratives of human-geologic-environmental clashes during the later twentieth century across America. From the earthquakes and mudslides of California to the flooding of the Mississippi, nearly all these events seemed to be related to ill-conceived engineering projects or poorly located development (McPhee 1993). The creation of the Tennessee Valley Authority (TVA) and similar institutions during this time implemented 'flood-plain zoning' and other strategies that adopted the philosophy expressed in one Readers Digest headline that read "Let's Plan the Damage Out of Floods" (Rome 2001). After decades of failed engineering, communities began weighing the dollar costs when considering where to locate new development.

By the nineteen sixties, a few brazen communities were beginning to take proactive measures to prevent environmental damage by controlling human development around natural processes rather than trying to control natural processes. In some instances these actions resulted in cities gaining natural assets that had not previously been viewed as 'amenities'. For example, Milwaukee bought 5,000 acres along its rivers

and streams as a flood control measure, and in the process created a greenway network for public recreation and wildlife trails (Rome 2001, 179).

Authoring Design with Nature in 1969, McHarg espoused an approach to land planning that attempted to balance human needs with existing physical and biotic resources in the landscape. Though recalling some of the philosophical tenets of Patrick Geddes, this book was revolutionary. His methodology was equally radical, and was based on the scientific evaluation and comprehensive mapping of all environmental elements, from soils and topography to vegetation and wildlife, then overlaid with existing cultural uses. In the 1970s, McHarg and his team designed The Woodlands, a new town development on 200,000 acres outside of Houston, TX. The design employed an extensive site analysis process, inventorying vegetation, soils, and hydrology. Their findings about the various site aspects informed the location of residences and other built elements, and also suggested means of using natural processes to handle stormwater in vegetated swales and minimize erosion by retaining a maximum amount of on-site vegetation, both in open space areas and throughout the site (Wilson et al. 1998).

This idea of 'designing with nature', while never truly mainstreamed, enabled a powerful paradigm shift in the fields of landscape architecture and planning that have remained, to a certain extent, through today. Rome (2001) describes how Ian McHarg understood the inherent dualism of natural processes: their destructive forces which pose a threat to humans and their habitations, and conversely the work they do in providing services vital to human health and quality of life such as clean air, water, and wildlife habitat, and he believed that "a sound open-space plan would ensure the continued operation of beneficial 'natural processes while protecting people from natural hazards"

(Rome 2001, 182). McHarg understood that different environments had different structures, processes and functions, and that each required a unique design approach and management technique. For McHarg, "values and prohibitions" of natural processes should guide "the positive pattern of development" as well as open space planning (Rome 2001, 183). McHarg pilloried the prevailing attitudes of conservationists and planners along with developers, and held that "the proponents of nature emphasize preservation … (which is) a negative position, one of defense, which excludes positive participation in the real and difficult tasks of creating noble and ennobling cities in fair landscapes'" (McHarg *in:* Rome 2001, 185). McHarg recognized that a new, comprehensive, and knowledge-based approach to design and conservation would be necessary were we to take on this "difficult task". The 'build nothing anywhere' sentiments of conservationists were unproductive, he held, and contributed to ongoing bad design just as much as the 'build anything everywhere' approach of developers.

Cluster Design to Conservation Subdivisions

By the 1960s, the Federal Housing Administration was beginning to encourage a new development type called 'cluster housing' (Whyte 1968, 209). Seemingly novel, it was actually a model based on Radburn and other experimental neighborhood developments of the 20s and 30s that was now being experimented with on a somewhat wider scale. A 1963 publication by the Urban Land Institute and the National Association of Homebuilders entitled "Innovations vs Traditions in Community Development", described a series of different 'design studies' that featured different models for clustering homes on smaller lots as a means of leaving open space. These

development types were being promoted to developers as a means of saving on infrastructure and site development costs, but also because this residential type would "allow a greater percentage of land to be allotted for open space provided that the clusters are well designed and road areas are reduced"(Urban Land Institute 1963, 12). The articles in this publication address the need to use land more efficiently[1] and propose not only design strategies but also the model zoning code language that would allow such development to take place (Urban Land Institute 1963, 103-108). Zoning code changes were to focus on overall densities rather than minimum lot sizes.

In the 1980s a planner by the name of Randall Arendt combined some of the features of residential cluster design with an environmental planning approach. His innovation was first to combine these ideas, but more importantly, to understand that the concept would need to be communicated to both communities and developers in a meaningful way. Arendt seized the idea of the golf-course community as a development type that was recognizable to developers as well as to the general public, describing the concept as a golf-course neighborhood without the golf course (Arendt 1996). Developers would retain the environmental resources on a given development site by designing the property with smaller lot sizes, and homebuyers would recognize the conserved land as a desirable amenity (See Figure 2.4).

[1] Amusingly, one article writes about the curvilinear street pattern as a dying fad: "Like every other trend in a rapidly changing national economy, the 'curvilinear era' was a transitional one. Many of its accomplishments proved beneficial –some debatable. Its imprint upon the face of America is irretrievable and cannot be erased." (Farnum Kerr Associates New Concept Studies in Land Development and Subdivision)

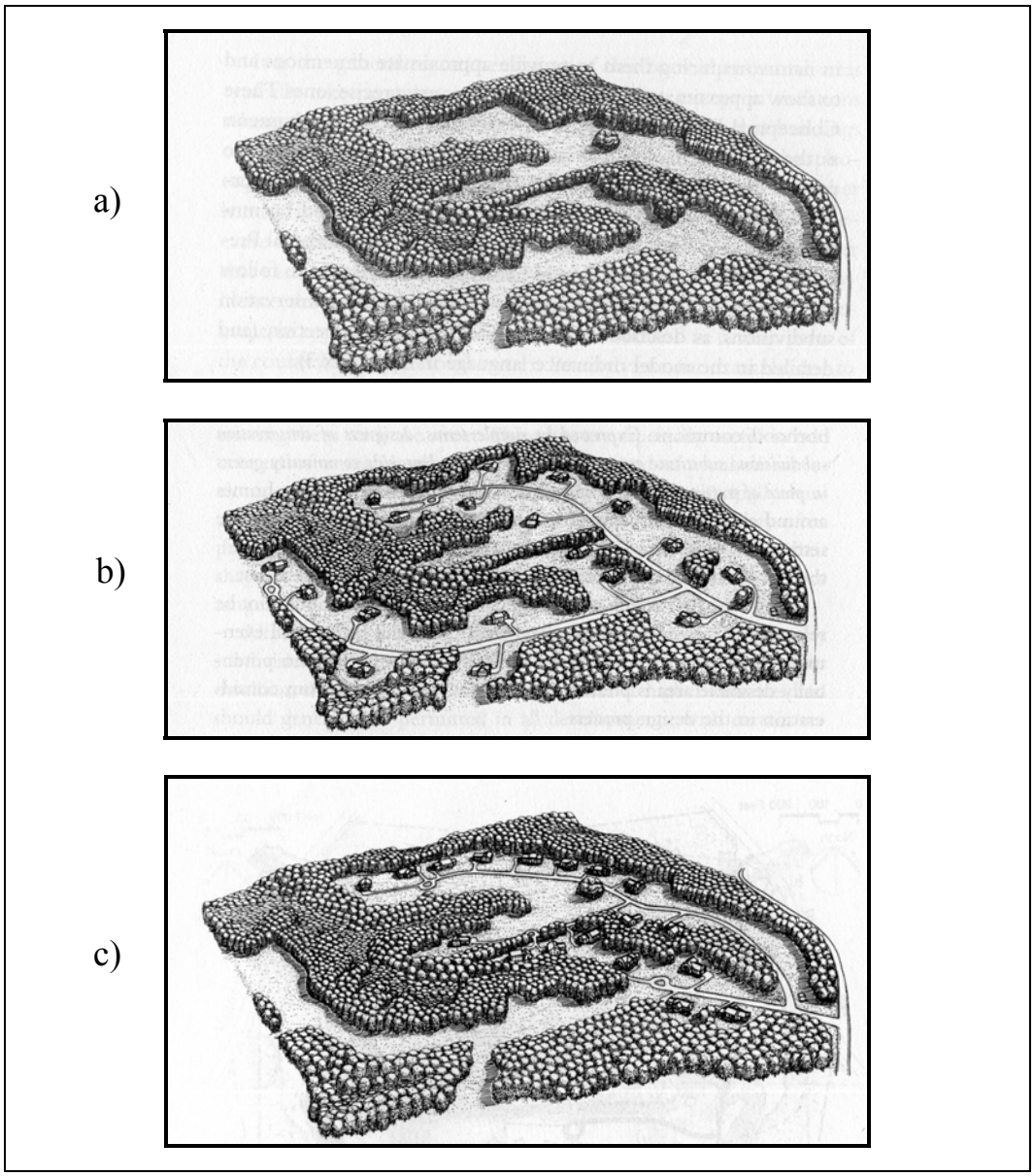

Figure 2.4: Alternatives for Land Development (Arendt 1986). Undeveloped land (a) may be developed in the standard way (b) or as a conservation subdivision (c).

Developers would get the same number of units out of a parcel of land, and the smaller lot sizes would be compensated in sales price by the 'added value' of co-ownership of the adjacent open space.

Arendt developed a "four-step design process" (Conservation Design for Subdivisions 1996), clearly inspired by the McHargian approach, for laying out parcels

on newly developed property. His methodology began with the identification of the site features and natural resources, then locating the house sites, then placing the roads and paths, and finally designating the lot lines. The resulting design could thus preserve existing property values and also accommodate the conservation of "the remaining natural areas and cultural resources that make our communities such special places to live, work, and recreate" (Arendt 1999, xxv). Arendt, particularly in Growing Greener (1999), emphasizes the placing of conservation subdivisions within a larger planning framework in order to achieve contiguous open space design.

William Whyte had been similarly adamant that open space design not be chaotic, stating "The key is for the local government to anticipate the development that is inevitable and to lay down in advance the skeleton of an open space network to which each developer will contribute as the area is built up"(Whyte 1968, 221). Arendt sees municipal comprehensive planning as playing an important role as a "key operating component of a local growth management system focused on land conservation, with the long range goal being the protection of an interconnected network of protected lands throughout the community"(1999, 19).

Arendt's conservation subdivision concept has become increasingly popular, although it remains far from mainstreamed as a development type. What is unfortunate is that most counties that do adopt conservation or cluster-type zoning ordinances do not also apply Arendt's mandate to integrate the use of conservation subdivisions into a larger planning framework. Athens-Clarke County is progressive in this respect, as it is integrating this planning tool as part of a county-wide growth strategy. Equally promising is the use of conservation subdivisions within a district zoned for all new

development to follow the conservation design model, allowing greater chance of contiguous open space connectivity. Nonetheless, A-CC has failed to integrate conservation subdivision use effectively into a larger community-wide greenspace plan, as will be discussed in future chapters.

Zoning

The early twentieth century also saw the application of zoning systems as a means of locally guiding land use and development patterns. Zoning regulations were initially a response to perceived incompatible uses in close proximity. The 1927 case of Euclid v. Ambler (involving a brick factory located near a residential neighborhood), upheld the right of municipalities to enforce codes that would separate distinct land-use categories into separate same-use zones. While there were clearly some problems that required better solutions (such as large industrial plants in neighborhoods) the results of a half-century of zoning are often viewed as mixed. New Urbanists, in particular, frequently cite zoning codes as the 'DNA' of bad design and sprawl. Anton Nelessen (whose firm conducted the Visual Preference Survey in 1997 for Athens-Clarke County), stated it thus: "What was validated for health, safety and welfare in 1927 has destroyed communities and created negative visions which today are the catalyst for the reformulation of small communities" (*In:* Wilson 1966, 194).

Zoning codes frequently prevent design innovations and are notoriously insensitive to individual sites and contexts. Most zoning reform proponents are not arguing for laissez-faire development, they are rather advocating for alternative

planning strategies that do a better job at achieving desirable patterns of design and growth. Many planners and designers, such as Duany-Plater-Zybeck (DPZ) are finding that communities looking to change current negative growth patterns and visual aesthetics are stymied by their own zoning codes that effectively spawn undesirable development and prevent innovative and desirable projects. The design and planning of DPZ, as well as several landscape architects and architects interviewed for this thesis, have expanded to include working actively with local municipalities to reshape their zoning codes to permit "good" design (personal communication with Landscape architect C 2003, personal communication with Planner-Architect 2003).

A Primer on Planning Tools

Planning Tools for Conservation

In the last ten to twenty years, the effort to balance patterns of human and conservation uses of land has spawned a new generation of hybridized planning tools. Although it forms the basis of the McHargian methodology, the point that planning *itself* is an act of conservation -- if conservation is one of the goals and values behind planning objectives -- is easily overlooked even by environmental advocates. Many cities have addressed the conservation of natural resources and the creation and/or preservation of greenspace for public uses, in their future plans. A number of strategies for conserving greenspace and open space have evolved in recent decades, as cities look for creative ways to acquire and fund such efforts.

It is clear that land developed for residential or commercial uses will yield higher returns for land owners. Hence one of the biggest challenges in designing greenspace into cities is compensating property owners for differences in land valuation. Rome, in Bulldozers in the Countryside (2001), gives an excellent environmental history of the shifts and changes in legal and social perceptions of the 'community rights' versus the 'individual rights' regarding land use. The takings clause of the Fifth Amendment, which guarantees property owners protection against taking of rights or value without just compensation, lurks in the background of many land planning decisions. While federal case history has shifted (towards property rights) in recent years, most planning decisions are weighed against state legislative case history. For this reason, states such as Oregon have been able to quash takings claims against restrictive land planning tools that would have been overturned in other states.

The Planning Toolkit

This section briefly describes a handful of planning tools frequently used to achieve conservation goals in developing areas. Some of their potential benefits and limits are listed. All the planning tools below are established legal planning tools and have withstood court challenge, although case law varies from state to state. These tools in practice are not as clear cut as they are presented below, and are often used in combination with traditional zoning tools, or with each-other. Many can be used either as voluntary or mandatory programs, or may be incentive based. Local governments and planning staff decide how to manipulate these tools to meet local land use goals. The conservation easement, as a legal instrument of land protection,

is described in more detail following the discussion of planning tools. Sources used in this description include: (Stokes 1989, Pruetz, 1997, Little1990).

Large Lot Zoning

Description: Mandating large minimum lot sizes or mandating very low densities, usually 1:10, 1:25 and larger, but in some communities 1:2, 1:5

Potential Benefit: Intended to preserve open space and rural character and sometimes agricultural land uses. Very large acreages, >100, have worked in some locations. Widely used by governments seeking to conserve open space.

Limitations: Tends to generate 'leapfrogging' development and low density sprawl. Does not conserve or manage land for specific uses and values (excepting agriculture-sized lots) Discouraged by most planners for use as a conservation tool.

Purchase of Development Rights (uses conservation easements)

Description: Landowner agrees to sell development rights to a land trust or government easement holder, while retaining ownership of the land and other use rights. Used for land conservation for farmland, habitat.

Potential benefits: An organized system/agent can create selection criteria for desirable land (location, habitat quality, etc), and pursue land acquisition based on program goals. Governments can levy bonds or special option tax assessments to obtain funding. Gives landowner equitable return on land value.

Limitations: Can be expensive to purchase large areas, depending on land values. Limited use for public egress. May be difficult to acquire contiguous properties.

Conservation Subdivision (uses conservation easements**)**

Description: Requires a portion of property area to be set aside for conservation purposes, while allowing no net loss of residences based on underlying zoning by permitting houses to be clustered on smaller lots than otherwise permitted. Some programs allow 'density bonuses' for conservation goals such as additional open space, but most are 'density neutral', meaning no net change in yield from underlying zoning.

Potential benefits: Varies greatly by ordinance and usage. Can require specific natural resources to be conserved in open space areas. Allows more groundwater infiltration, less site clearing. Allows for smaller total development 'footprint' on a given property. No net loss of value to property owner/developer if underlying zoning is retained. No cost to public. Conservation areas can preserve natural resources and provide resident amenities.

Limitations: Does not reduce auto dependency or encourage alternative transportation by locating away from services. Develops land in greenfields rather than near existing services. Does not support affordable housing. Difficult to create greenspace networks. Adjacent neighbors may object to clustered residences and smaller lot sizes.

Transfer of Development Rights (TDR) (uses conservation easements)

Description: A TDR program works by taking the development rights from one property, where a community has determined development is less desirable, and transferring the development credits to a second piece of property that has been designated by a community as more desirable for development. This is done by assigning 'credits' for

developing a determined number of units to one property, and allowing the property owner to sell his or her credits. It requires state enabling legislation, which Georgia now has, and it requires participating areas to establish 'sending zones' and 'receiving zones.' *Potential benefits*: Can be voluntary or mandatory. Potential for conserving larger land areas as development is being relocated out of area rather than clustered onto portion of existing property. Can provide property owner with equitable return on property value. Potential for contiguous property protection with some programs. Can be used with a TDR "bank", that buys and sells credits, eliminating need for an immediate buyer. *Limitations*: Can be complex to set up in communities, difficult to explain. Dependent on market balance in land prices between areas. Requires community to establish 'receiving areas' of higher densities which residents frequently oppose.

Greenbelts and Urban Growth Boundaries

Description: First used in England as a means of creating a boundary between developed land and natural landscapes. A delineated line or border established by a municipality. *Potential benefits*: Directs development to areas of existing services, preserves farmland, environmental benefits of air and water quality from greenbelt, maintains viable farmland.

Limitations: Legally challengeable as "takings". No equitable return for property owners outside boundary; does not retain permanent greenspace, just land-banks greenspace; does not target conservation areas based on landscape qualities. Arguably impacts affordable housing.

Conservation Easements

Three of the tools described above use conservation easements as a way to protect culturally significant areas and ecologically important greenspaces. A common analogy used to explain the concept of easements is to describe the rights of property ownership as equitable to that of a bundle of sticks, in which each 'stick' represents a different 'right' that is associated with the property. For example, the mineral rights, the right to timber harvest, the right to clear or develop, are all legally separable as rights. A conservation easement works when a property owner willingly decides to sell or donate one or more 'sticks' from his or her bundle that promotes the protection of a conservation resource on the property. When this happens, the owner continues to own the property, but a second party, typically a land trust or government body, 'holds' the easement. Easement holders are legally responsible for monitoring the property for misuse, maintaining and enforcing the specific 'right' that has been sold or donated, and protect the easement from future potential legal challenge in perpetuity.

The specific terms and nature of the 'right' being transferred can vary, and is specific to each easement as described in the legal document of the easement. Conservation easements are sometimes described as 'negative' easement types because they are based on use restrictions, i.e, what you can't do with the land. For this reason public access is not well served by this legal tool. Public greenways and trails are usually held in place through right-of way easements or fee-simple land acquisition. Although in a conservation subdivision property owners typically have

recreational uses stipulated in the terms of the easement (personal communication with land-use lawyer 2003).

Restrictive Covenants

Restrictive covenants are an instrument for land protection often used with conservation subdivisions. A covenant "runs with the land" and as such is not affected by transfers of property ownership. Restrictive covenants are "deed restrictions" that are legally transferred with the sale of property. Covenants are legally challengeable after twenty years, and so are considered a less attractive choice for permanent protection under the law. A permanent restrictive covenant has recently been drafted for use with the Georgia Governors Greenspace Program which is intended to withstand legal challenge over longer periods of time (Georgia Community Greenspace Program 2003). The specific terms written into the legal easements or restrictive covenants should relate to the nature of the land and the intended purpose of its conservation. This seems like an obvious point, and where land trusts are writing and holding easements it is generally true. However, where governments or homeowners associations are acting as covenant holders, the conservation intention for the land can remain undefined and the potential for conservation may be reduced.

Summary

The relationship between 'Garden Cities' and 'Conservation Subdivisions' may seem muddied in the course of residential and land use design over the last century, but there is a persuasive and unbroken line of intent. Conservation

subdivisions can be understood as today's effort to create meaningful communities that recognize a need for human and ecological coexistence. Howard, Olmsted, Geddes and others, understood that cities devoid of greenspace were not cities that met basic human physical, psychological, and social needs. The problem in the beginning was scarcity of nature in the human community. When people began converting the countryside to suburbia, the problem reversed – nature was everywhere and no one could contain its' forces. The revolution of McHarg and others was to understand that the way to beat nature was to work with it to harness human design to natural patterns and processes. Today we are contending with a landscape legacy that comes to us as a matrix of fragments and in-between pieces. Our job becomes to find ways to organize meaning out of chaos, and to prevent future chaos from being wreaked on the landscape. Conservation subdivisions may be one way of finding this path.

CHAPTER 3

LAND-USE AND THE ROLE OF COMMUNITY IN ATHENS-CLARKE COUNTY

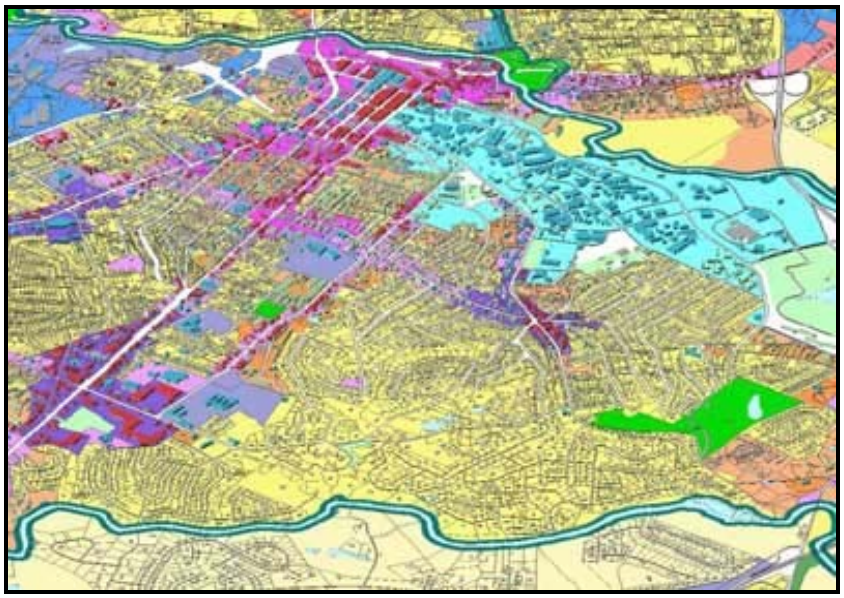

Figure 3.1: Regional Growth Strategy for A-CC (Fregonese-Calthorpe 2003).

> There is no particular future that is preordained for any community. A wide range of alternative futures exist, and, realistically, 'staying the same' is usually not one of them. The real choice facing communities…is whether to try to actively shape those internal and external forces bringing change or to passively accept unplanned, haphazard development patterns and try to cope with the results…To a greater extent than many people believe, the future is a matter of choice. *(Arendt 1999)*

Introduction

"Group Sees Erosion: 'Bad' Ordinances", screamed the front page headlines of the Athens-Banner Herald in November of 2002 (Shearer 2002). "Expert Says Sprawl is in Athens' Future" (Shearer 2003), proclaimed the front page several months later. Two years after they had been adopted in Athens-Clarke County, conservation subdivisions

had failed to produce the kind of rural growth and broader land-use and environmental goals that had been envisioned and outlined by the community. This chapter discusses the reasons why the current conservation subdivision ordinance in Athens-Clarke County was adopted in the first place. But the ordinance cannot be discussed in isolation. It is part of the larger A-CC zoning code for the county which was developed by the A-CC government and consultants Fregonese-Calthorpe Associates as part of the '97-'99 Comprehensive Plan and Future Land Use Plan for Athens-Clarke County. It is easy to say conservation subdivisions are not 'working', but we need a means of measuring if they are working or not, and to what degree: we need a yardstick against which to judge the relative 'effectiveness' of conservation subdivisions. The broad community goals outlined in the Comp Plan and Future Land Use Plan are excellent benchmarks, and are justifiable benchmarks because of the participatory planning process that was used to create them.

Contexts: The Changing Landscape

Low Density Land Use

In the 1990s Athens started ranking on the kind of lists that weren't likely to be reprinted on brochures available at the Visitors Center. A 1997 study by the National Resources Conservation Service showed that Athens (when grouped with its surrounding counties) was growing faster than Atlanta –long the poster child city for sprawl (NRCS 1997). The survey noted that urban land use in the Athens area had almost doubled from 1982-1997, increasing from 48,500 acres to 94,600 acres. Almost all regions across the country grew to accommodate population, but not all had seen the rate of land use

outpace population increases by wide margins. While Athens-Clarke's population had increased by 36.2% over fifteen years, the amount of land now classified as "urban" had increased at the rate of 51.3%. The numbers were even dimmer when the surrounding five counties: Barrow, Jackson, Madison, Oconee, and Oglethorpe were included: the population in this area increased by 58%, while land use change increased by 95.1% (Shearer 2001). A 2001 article in USA Today ranked Athens 16th in a list of "the nations most sprawling cities" (June 2000). In July 2001, The Brookings Institute published findings on sprawl in "Who Sprawls Most? How Growth Patterns Differ Across the U.S." (Fulton et al 2001). Athens was bubbling just under the top ten, ranking 13 out of 300 cities surveyed. The following graph illustrates data collected in this study, which compared the percentage change in population to the percentage change in land converting to 'urban uses'. (See Figure 3.2)

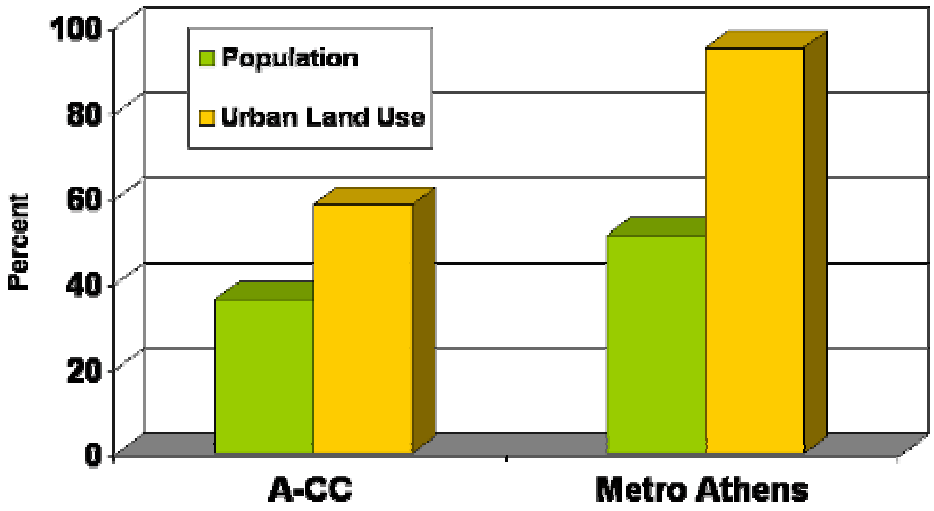

Figure 3.2: Change in Sprawl in the A-CC from 1982 - 1997 (Fulton et al. Brookings Institute 2001).

Another factor measured was urban density, or the number of people per "urbanized acre". Compared to Western states, the South as a whole consumed three

times as much land to accommodate roughly the same number of people: where the West had an average density of 3.59 people per acre of urbanized land, the South averaged 1.37 per acre (Fulton 2001, 8). The A-CC Existing Land Use map (See Figure 3.3) clearly shows the fragmented patterns of past development. Note the yellow patches that designate low-density residential which are scattered throughout the light green 'agricultural' at the edges of the county.

Environmental Resource Loss

A recent project conducted by the Natural Resources Spatial Analysis Laboratory (NARSAL), out of the University of Georgia's Institute of Ecology, documented change in land cover types from 1974 to 1998. This data shows vividly how development patterns have played out in the loss and fragmentation of natural resources in A-CC (See Figure 3.4-3.5). These images show the spread and fragmented pattern of increasingly urbanized land in the county, along with the loss of greenspace in declining agricultural areas as well as forests and other landscapes (NARSAL 2003). Other research on the impacts of sprawl on canopy vary in their findings, with 5% to 25% canopy losses documented (1997 NRSL). Not all of the effects of low density development on natural resources are easy to quantify. Loss of canopy cover and increased car commuting conspire to negatively impact air quality, as we hear daily of impending non-attainment status in the Athens-metro region (Shearer 2003-B). Water quality, along with the ecological health of local streams and rivers, is also impacted. Higher rates of impervious surface associated with lower-density land-use reduces the infiltration of groundwater and sends stormwater speeding across roads and parking lots, picking up pollutants on the way to local creeks and rivers. Deeply incised stream channel banks,

already damaged from two centuries of cotton farming, are chiseled away even further. These types of impacts are often incremental and can be difficult to quantify, although creeks and rivers can also feel the immediate impact of new development. For instance, when the site for the local Milford Hills subdivision was recently cleared and graded, a heavy rainstorm sent a hillside of newly graded mud into the Oconee River. On the other hand, the new 'Target' shopping center on Atlanta Highway solved its 'creek problem' by burying the entire length along its property into a large culvert[2], transferring their "problems" downstream.

Economic Impacts

A recent University of Georgia study examined six counties across Georgia and documented the tax burden city-dwellers bear for suburban development, as opposed to commercial/industrial or farm/forest/open space uses. The findings indicated that residential uses resulted in higher expenditures for local governments, as the increased costs for providing and maintaining infrastructure and services were not sufficiently offset by property tax revenues (Dorfman 2002). According to one local source, however, local housing prices in the upper range, above $200,000, tend to generate enough property taxes to support the cost of their services in Athens-Clarke County (personal communication with A-CC Planning Commissioner, 2003-1).

The Region

One of the important observations from this information, particularly the data on sprawl, is the regional-scale that defines many of the problems. Environmental problems such as water and air quality are not defined at county-wide scales. Transportation and

[2] The creek in question, like a great many in this county, was not on the official map of state waters, and as such was not subject to local and state regulations that would have prevented culverting.

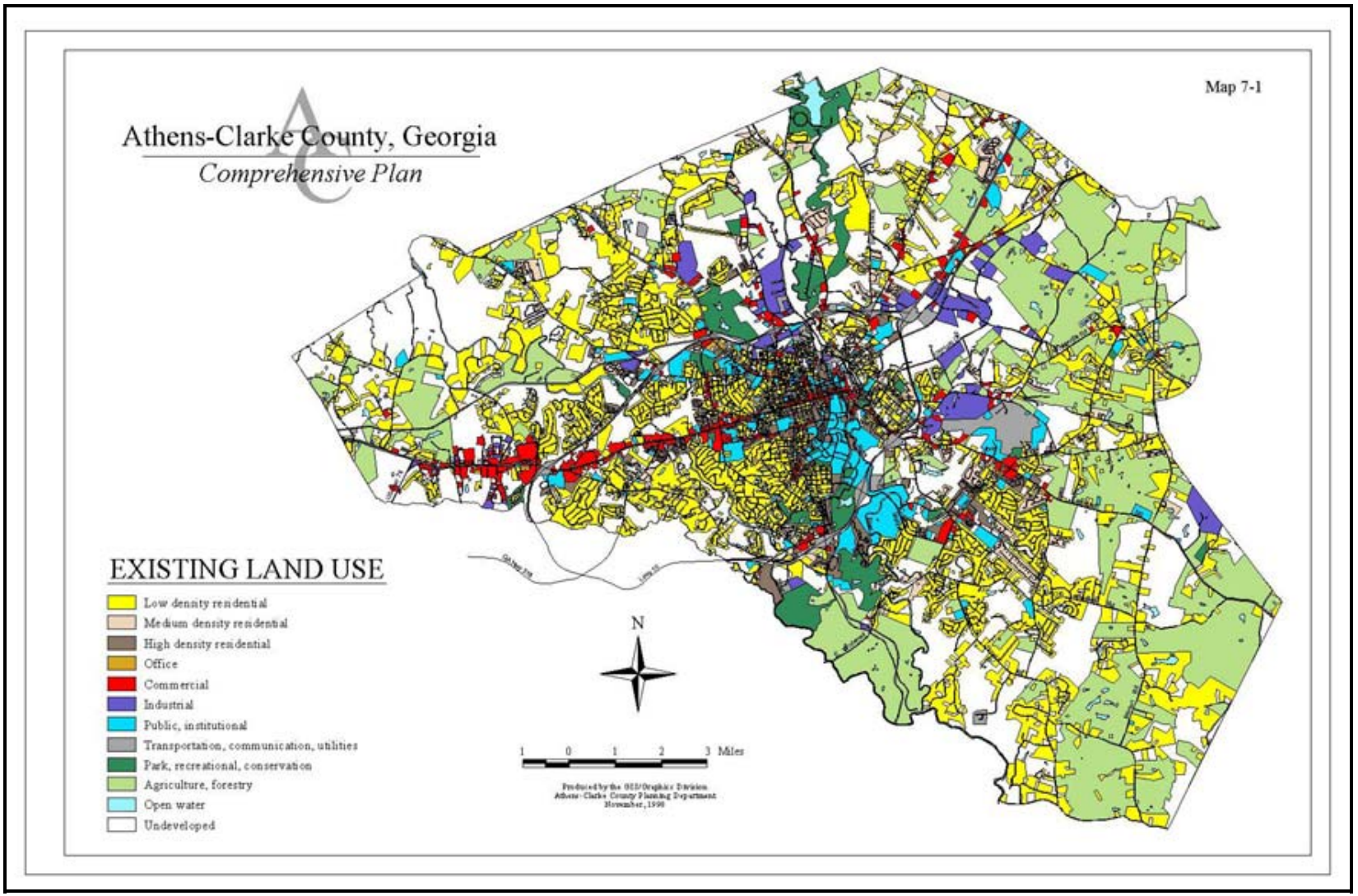

Figure 3.3: Map of A-CC Existing Land-Use

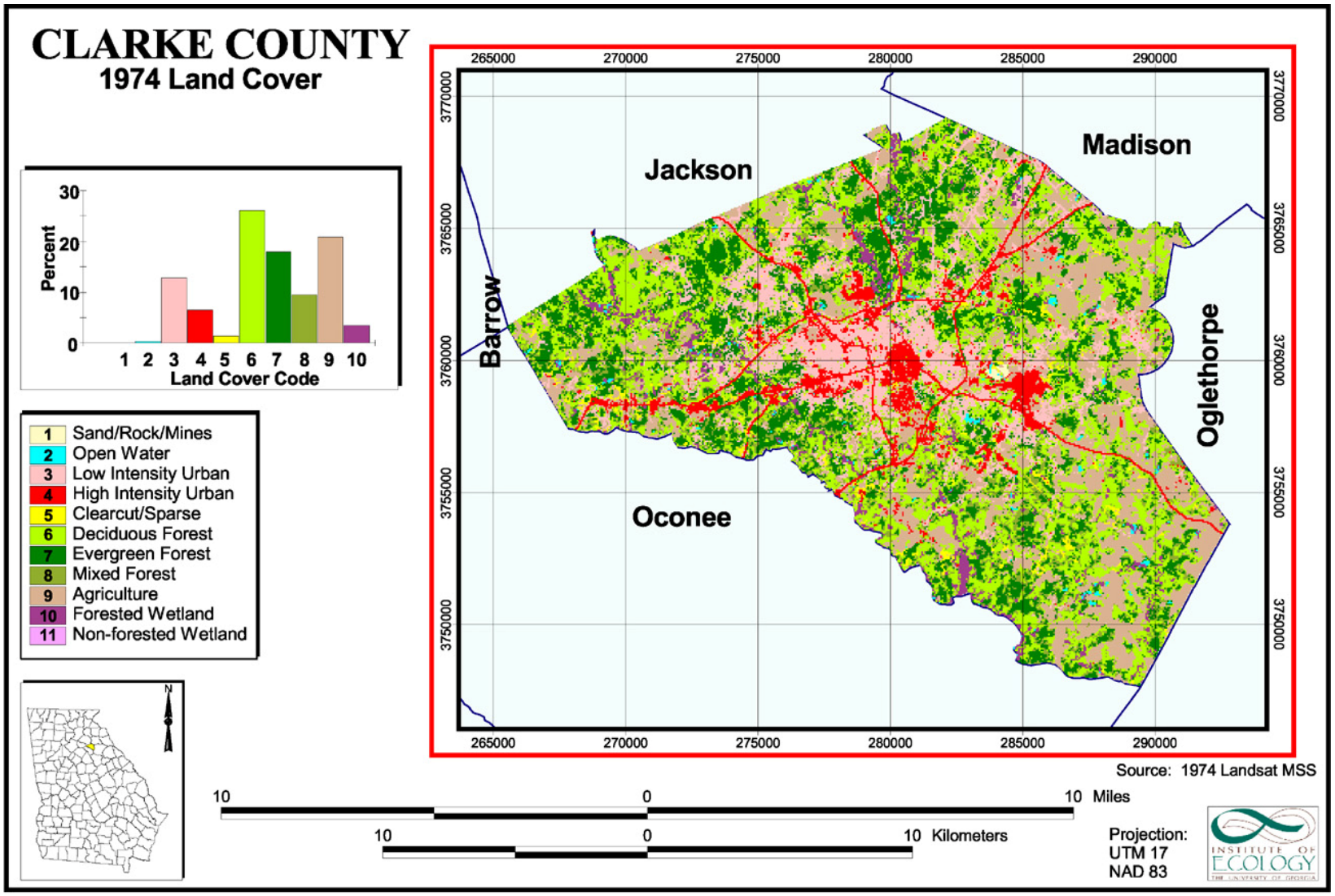

Figure 3.4: Land Cover for Clarke County in 1974

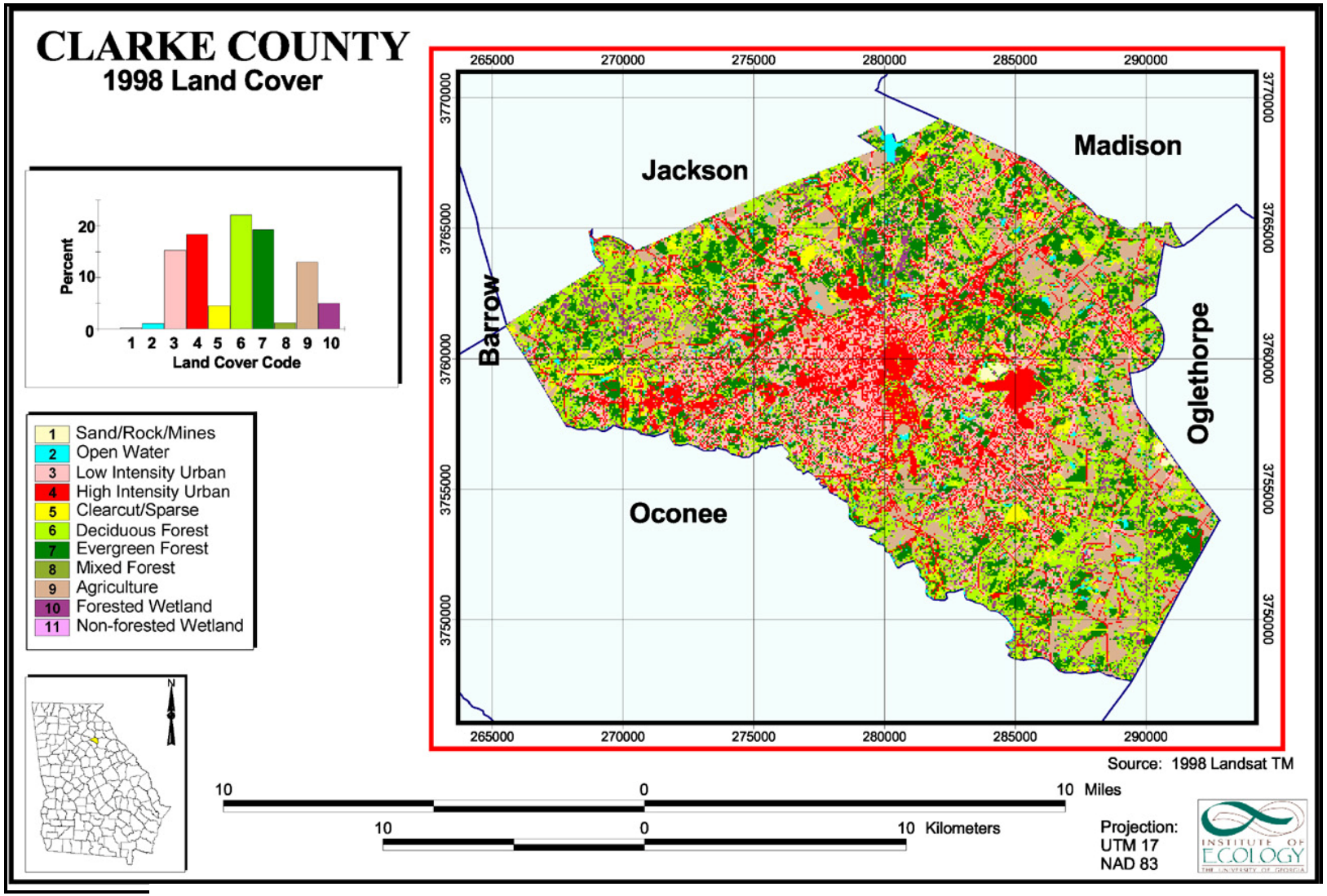

Figure 3.5: Land Cover for Clarke County in 1998

infrastructure are a factor of regional commuting patterns, and regional differences in land prices and regulatory requirements drive patterns of residential and commercial development. Oconee County, Athens' neighbor to the south, has a future growth strategy based on locating development along the A-CC-Oconee border. Looser planning regulations in Oconee have resulted in a build-up of big-box commercial development along the county-line. Athens-Clarke does not exist in a vacuum, it is a major employment and commercial center surrounded by formerly agricultural but increasingly residential-commuter 'bedroom' communities. Several of the neighboring counties have water or sewer service along A-CCs' border (RDC 1997). While this is not a thesis on regional land use and growth, it must be observed that separating the fate of A-CC from that of the surrounding counties is an impossible task. To date, different goals, problems, resources, and growth rates have kept this larger regional area from working together.

The visual impacts of sprawl are noticed first by communities, particularly when a beloved view is marred by development, or parking lots proliferate along roadway corridors. The loss of basic environmental services such as air and water quality can also be palpable, and the flooding of local streams and rivers is frequently a wake up call to communities (Rome 2001). Other impacts of poor land use are less tangible to people. Habitat loss and landscape fragmentation, for example, are less well recognized from visual clues in the landscape, and our cultural biases and aesthetic traditions incline us towards landscape forms that do not always promote ecological health. An excellent collection of writings addressing this topic can be found in Placing Nature: Culture and Landscape Ecology, edited by Joan Nassauer (1997). Loss of community life and social interaction can happen gradually, or are interpreted by people as being an inevitable part

of ‘progress and change’. Regardless, the impacts are tangible when a suburban mother spends an average of 17 days a year in the car (Knapp-Public Lecture 2003), or non-driving senior citizens or children are isolated in their homes.

A Windshield Tour of Rural and Suburban Athens

Throwing ominous numbers around is all well and good, but what motivates many Athenians to demand changes in current land use patterns are not jarring statistics but their own daily experience of the physical world around them. This section of the ersatz ‘site inventory’ of Athens-Clarke is a very brief visual tour of the current character of the AR and outer suburban segments of the county. It is in no way comprehensive, nor does it represent a statistical cross-section of typical features. It is, however, an honest effort to visually express the kind of views from the road a several-hour drive through the county might produce. Images show the scenic and the not-so-scenic, the banal and the dramatic, the new and the old. The intent of this exercise is to provide mental images for the reader to carry through the remainder of the discussions, and also to provide some kind of visual idea of what Athenians are reacting to when they speak of urban sprawl.

The Comprehensive Plan and a Future Vision for A-CC

Components of the Future Land Use Vision

In reaction to these patterns of land use and their associated problems, Athenians ultimately took proactive measures. In 1999 the Athens-Clarke County government approved the Comprehensive Land Use Plan. What the Comprehensive Land Use Plan

Figure 3.6: Windshield Tour of the AR, June 2003, part 1.

Figure 3.7: Windshield Tour of the AR, June 2003, part 2.

(referred hereafter as the Comp Plan) did was establish a future growth strategy for the community. There are three distinct parts to the Comp Plan:

1. *Guiding Principles, Objectives, Strategies and Polices* (See Appendix A).

Based on the findings of the Visual Preference Survey and a series of community work sessions, the Guiding Principles are intended to act as "broad community-wide 'need statements'", and designed to encompass a variety of related issues (A-CC Planning Department 1999, Chapter 8, 2).

2. *The Future Land Use Plan* (A-CC Planning Department 1999, Chapter 9).

The FLU plan presents both a physical mapping of land use locations (Figure 3.6) and a text description of the characteristics of each zone. The stated purpose of the map is to serve as a guide to making land use decisions. A zoning map (Figure 3.7) accompanies the FLU and delineates specific zoning districts.

3. The revised Zoning Code

> To implement the new future growth scenario, and in a pedestrian-friendly manner, a complete land-use code rewrite was undertaken by Fregonese-Calthorpe Associates and staff. The new zoning code ensures a high level of design compatibility while streamlining development review and providing for the development community in meeting these standards.
>
> *(Fregonese-Calthorpe Associates 2003)*

The third leg of the planning process was to revise and approve the local zoning code, bringing it in line with the goals of the Comp Plan by altering or adding to the code as needed. While the Zoning Code that was approved in 2000 adhered to the general strategy of the Future Land Use Plan, it also watered down some of the intentions of the FLU by implementing lower densities for in-town areas than had been envisioned. As discussed later in this chapter, in the AR (rural Athens) the densities implemented in the Zoning Code were ultimately much higher than the Comp Plan and FLU described: 1:1 as

opposed to 1:5 or 1:10. The current conservation subdivision ordinance was integrated into the zoning code as part of the revisions made during this time.

Summary of Community Goals for Land Use and Conservation

Controlling and reversing past trends towards low density sprawl are the primary objectives of the strategies for growth (See Figure 3.6). The intention of the Comp Plan and Zoning Code is to do this by permitting higher density infill while at the same time down-zoning rural areas. On a county-wide basis, development is directed inward rather than outward, in an attempt to counter the prevailing patterns of low-density residential sprawl and "strip commercial" along road corridors. The Comp Plan and Future Land-use Plan introduced higher-density zones closer to the historic city-core, such as the "Residential Mixed Use" classifications which suggested RM-1 and RM-2 areas where 120:1 and 24:1 would be base densities. However, the Zoning Code (Figure 3.7) watered these categories down, changing "Mixed-Use" to "Mixed Density" in the RM-2 and RM-3 zoning categories, with underlying densities of 12:1 and 25:1 respectively. The roughly 26,000 acres (of a 78,000 acre total county area) given a 'rural' designation were defined in the Comp Plan and FLU plan as averaging 1:5 or 1:10 units per acre. This zone is clearly visible as the broad green half-moon that wraps the county across its northwestern to southeastern borders. However, the ultimate densities defined for the AR in the Zoning Code were 1:1.

Goals derived from the Comprehensive Plan and Future Land-Use Plan

In this research, the 'evaluation criteria' used to measure the effectiveness of conservation subdivisions are general community goals distilled from the Comp

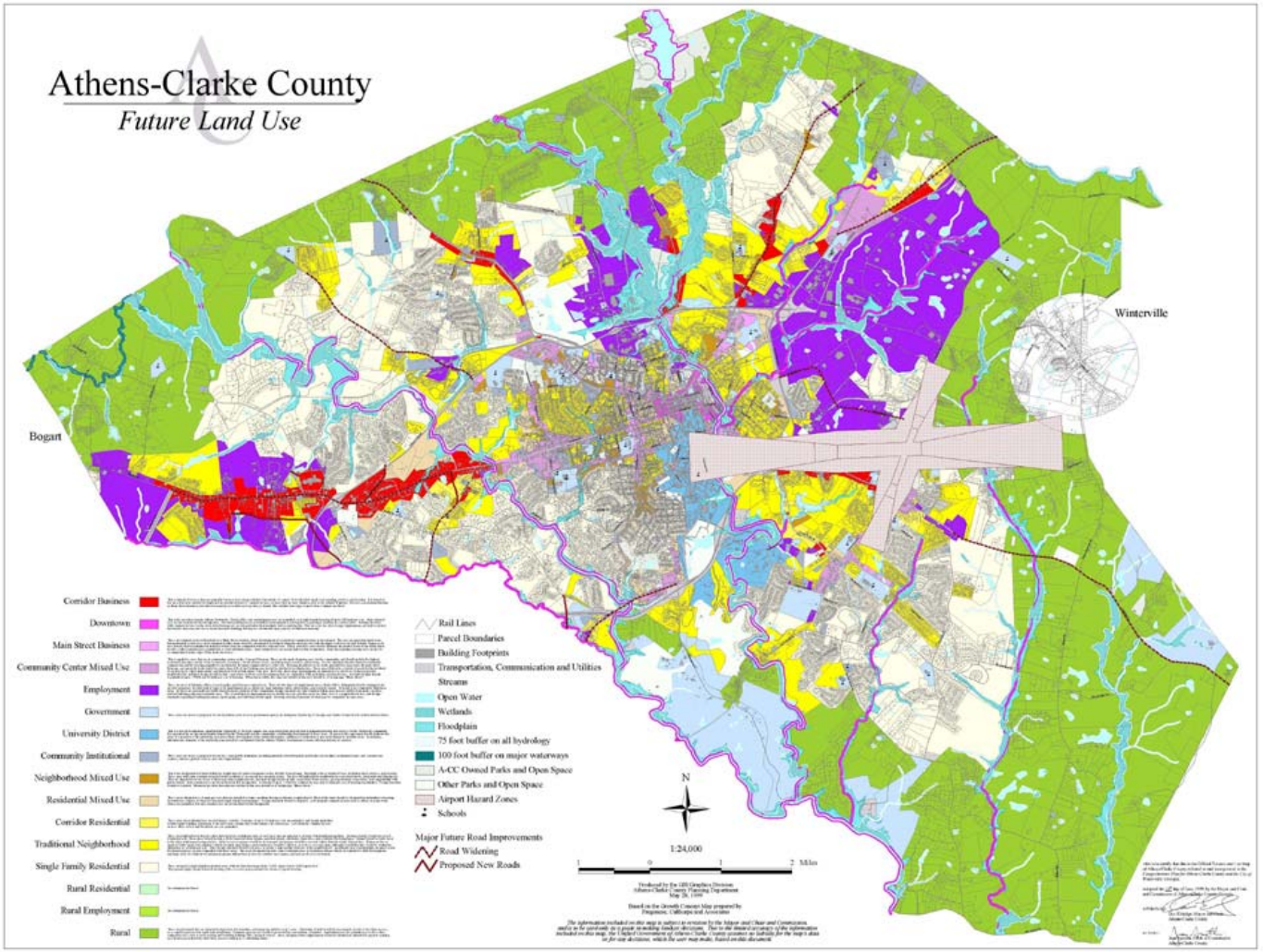

Figure 3.8: A-CC Future Land Use Map

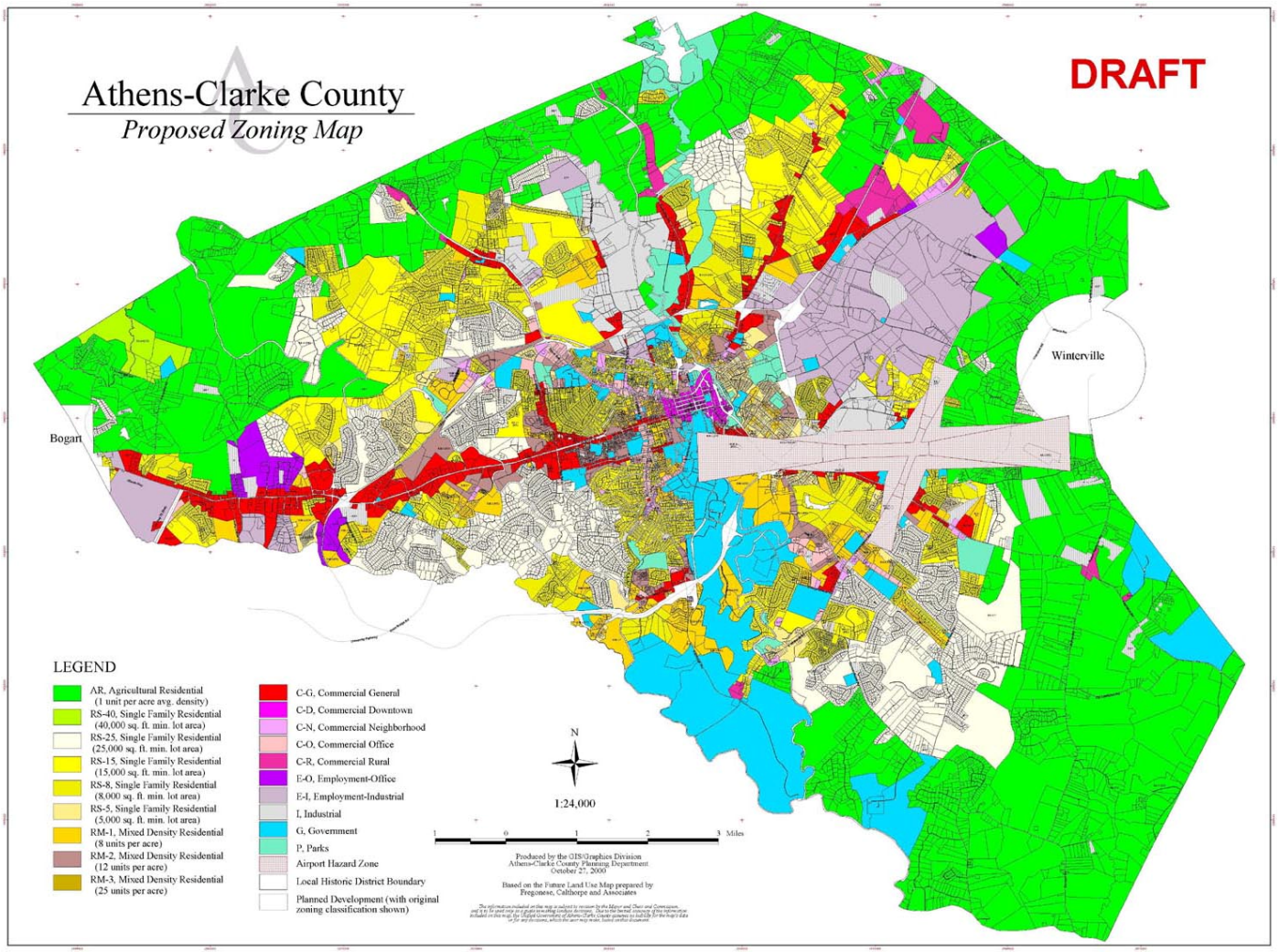

Figure 3.9: A-CC Proposed Zoning Map

Plan and Future Land-Use Plan. The Comp Plan is over 500 pages long, yet there are several key themes repeated throughout the document. The desire to curb sprawl, the interest in conserving natural resources, and the intent to include the citizens of A-CC in planning are all clearly articulated goals that apply to the entire future of the County. The desire to protect rural areas in the county from growth that would impact 'rural character' is a goal that is specific to one part of the County, but is included as the fourth 'criteria category' because conservation subdivisions are specifically implemented in this zone. These four categories serve as excellent benchmarks against which to judge the performance of conservation subdivisions in A-CC under the current ordinance from '01-'03. These categories: *Reduce Sprawl, Protect Natural Resources, Encourage Community-based Planning*, and *Preserve Rural Character*, are defined briefly as follows.

Reduce Sprawl

As stated, the overall land use goal of the Comp Plan is to redirect development back into urbanized areas while discouraging development in rural parts of the county, thus combating current sprawling growth patterns. Many components of the plan are directed towards this goal. In the A-CC plan, it is the proposed lower densities in the AR that were intended to serve this function, not the use of conservation subdivisions, per se. Conservation subdivisions are a means of effectively using land on a specific development site, but they still represent development and so impact existing roads, utilities and other infrastructure. In the words of one local landscape architect, "Even if you live in a conservation subdivision, you are still getting in your SUV to drive into town, to drive your kids to school, to drive to the store…it's still sprawl". There is some

confusion within the text of the Future Land Use Plan regarding the place for residential development in the AR. Section 9.10 Rural Lands Protection states:

> The implementation of this plan requires that only agriculture and rural residential uses be permitted, along with other compatible rural uses. Prohibited uses in this area would be commercial, industrial, and *residential subdivisions*. It is the goal of this plan that overall densities of this area not exceed 10 acres per unit (A-CC Planning Department 1999, Chapter 9, 19, *emphasis mine*).

However, a variant on this definition of rural is described earlier in Chapter 9, as follows:

> These are rural lands that are intended to have very low densities, averaging one unit for every 5 acres. Clustering of units would be encouraged, on lots of less than one acre … (A-CC Planning Department 1999, Chapter 9, 6).

The conservation subdivision ordinance does not include reducing sprawl as an objective listed in the 'purposes' section of the code.

Protect Natural Resources

Protecting natural resources is prominent in the Guiding Principles of the Comp Plan, and is also a feature of the analysis section of the Comp Plan. Natural resource protection is an objective of several 'purposes' within the ordinance. The Guiding Principles "Environmental" section, in Chapter 8, page 3, lists a number of general and specific goals and objectives for protecting natural resources. The leading 'Guiding Principle' reads: "To preserve the beauty of our community and act as responsible stewards of the natural environment." The other enumerated goals involve the intention to protect all general categories of natural resources, specifically emphasizing stream protection and water quality. The Natural Resources chapter of the Comp Plan, Chapter Four, includes a number of maps with inventoried resources. In Chapter 9, the Rural Land Protection subheading discusses the goal of pursuing open space acquisition through easements and the holding of development rights "in order to ensure the long

term maintenance of a greenbelt around the community" (1999, Chapter 9, 19), but does not detail the means of conserving specific natural resources beyond this statement.

Encourage Community-based planning

'Community Relations' is a major subheading in the Guiding Principles and, its leading statement is "To include the community in an open process of public decision making"(1999 Chapter 8, 2). Community planning districts at the neighborhood level, and "promoting community awareness and involvement in land use issues affecting neighborhoods" are also dominant themes (1999 Chapter 8, 3). Community participation is not a goal enumerated in the current conservation subdivision ordinance.

Preserve Rural Character

Preserving rural character is discussed in the Guiding Principles Land Use section, which states objectives that include the maintenance of a clear boundary between urban and rural areas, and the preservation of land for agriculture and forestry activities. Rural character is invoked in Chapter Nine, but is not defined. The conservation subdivision ordinance also identifies rural character in its list of purposes.

<u>The Process: Community and the Comp Plan</u>

By the mid 1990s, land-use in Athens-Clarke County was an issue of widespread community concern, in part due to dramatic changes in the rural landscape which were an increasing cause of concern among Athenians. For example, from 1995 to 2003, over 50 feature stories, editorials, and letters addressed land-use issues in A-CC and the region. Government leadership and community leaders during this period were interested in revisiting a future plan for growth and development in A-CC. The Comprehensive Land-

Use Plan planning process was thus designed to include a high degree of citizen and stakeholder participation. While this level of community-participation is not nationally unprecedented, the '97-'99 Athens Comp Plan process was clearly unique to the A-CC. As one long-time planning board member said "you should have seen the process in '84… (the previous comp plan)…they held a few meetings to get public feedback, about twelve people came, and that was it" (personal communication with Planning Commissioner 2003-1). While the state of Georgia requires all communities to have comprehensive plans, most of these are conducted by area Regional Development Centers (RDC). A cursory survey of RDC comprehensive plans for Jackson, Ogelthorpe, Madison and Oconee counties revealed a process and product similar to that described for Athens in '84. In some instances, identical sections of recommendations (particularly relating to land use tools) appear in multiple comp plans. Athens did not wish to have an 'off the shelf' land use plan, and consciously selected an outside professional consultant. John Fregonese, of Fregonese-Calthorpe, was hired, and established the framework for the planning process. A 189 person community 'vision committee' convened in hundreds of meetings over the remaining two years, − doing charrettes, giving feedback to planners, and discussing the issues. Other committees addressed specific needs, such as a 'guiding principles' and 'transition team'.

Today, a rosy historical glow is cast over the proceedings of the Comp Plan, with the entire planning process being largely celebrated for being both thorough and inclusive. Those who participated take a more measured assessment, and reflect a wider range of opinions. It seems clear that some sectors of the community were not well

represented, particularly members of the African-American community.[3] Another alleged problem was the process of defining the Guiding Principles, which one participant described as "boiler-plate", meaning that the hired consultant-planners (Connie Cooper of Cooper-Ross) were using "off the shelf" principles, and community members were merely asked to discuss their relative merits. But to generalize, more participants reflected on the planning process as being positive and productive.

Invoking the Comp Plan

The most remarkable outcome of the Comp Plan process has been the creation of a vocal community constituency that is not only intimately familiar with the contents and meaning of the Comp Plan, Land Use Plan and Guiding Principles, but will use them. In the three years since the Comp Plan, the 'invoking of the land use plan' has become a hallowed tradition at the podium in city hall, in letters to the editor, and in street-corner conversation. Land use and urban planning issues are the topic of a regular column of Athens weekly Flagpole Magazine, and the Guiding Principles are posted on the website of a local smart growth organization. I think it is fair to put some of this down to the nature of a college town, but long-time residents will be the first to tell you that this kind of 'collective land-use consciousness' is a newcomer to town.

The divide between goals expressed in the Comp and Future Land-use Plans, and the Zoning Code and Map came to a head in December 2000. The battle that ensued galvanized a collective planning-advocacy force, now fresh from a two year urban-primer course in defining the Comp Plan. In late 2000, the Athens Mayor and Commission were preparing to approve the newly revised land-use Zoning Code – the last gem in the Comp

[3] In the opinion of participants I spoke to, "every effort" was made to include all demographic groups, without success. "land use is just not perceived as an issue that is relevant to in-town minority groups",.

Figure 3.10: Land Aid, December 2000 (Athens Grow Green 2003)

Plan crown -- and effectively the blueprint for future growth and development. After a year of hammering out other issues in the proposed code, one contentious item remained unresolved: the underlying density in the AR (Agricultural-Residential) zone. Conservation subdivisions were introduced as a form of cluster-open space zoning that was to be the only allowable development type in the AR. The debate swirled around the underlying density, and conservation subdivisions as a planning tool were not a hot topic of conversation. A few commissioners saw the combination of conservation subdivisions with a 1:1 underlying density as a good compromise between development interests and environmental advocates. Environmentalists, on the other hand, viewed it as a bum deal in light of the high densities along with a newly facilitated planning approval process. The development community was generally suspicious of 'conservation subdivisions', viewing them as a potentially unmarketable development type. Linda Ford, a

commissioner at the time, proposed an overall AR density of 1 unit per 1 acre. This 1:1 was called Option A. The density options before the commissioners were as follows:

Option A: 1:1
Option B: 2 AR zones, 1:1.6 and 1:5
Option C: 2 AR zones, 1:5 and 1:10
Option D: proposed no change, meaning a property owner could subdivide three one-acre lots every 3 years.

Many citizens were up in arms over the higher density proposals of Options A and B. For the next month, the papers were flooded with articles and letters, people crowded the courthouse and city hall for meetings, and voting sessions were marked by candlelight vigils on the courthouse steps. A smart-growth advocacy group called Athens Grow Green formed to contest the 'Option A' proposal, and organized a street festival called Land Aid 2000 attracting 2000 people. A local rock star even took the stage to support "a rational land use plan that considers the public interest as well as private interests". When the commission finally voted to approve the zoning code with Option A, it was a shock that reverberated through the community.

It was still reverberating in November of 2002 when four new commissioners and a new Mayor swept into office: "Voters Seeking Change: Decision 2002*"* (Reid 2002-2), "'Sprawl' Spreading to Election: Growth, Environment Loom Large in A-CC "(Shearer 2002-1); "Commission Candidates on Development, Sprawl*"* (Reid 2002-1) Several months later in January 2003, densities in the AR were back on the table in the form of a moratorium on conservation subdivisions and a redrafting of the ordinance.

Conservation Subdivisions as a Planning Tool

Ultimately, it is difficult to understand all the factors that led to the use of conservation subdivisions as a planning tool. They clearly held promise as a tool that

would retain the rural character of the AR zone, as well as serve larger growth strategies that aimed to prevent the spread of development into the rural zones and re-direct it back to the more urbanized parts of the county. Conservation subdivisions also have obvious appeal in that being density-neutral they allow property owners equitable value from their land, where the underlying density is unchanged.

The obvious difficulty in A-CC lies in the underlying densities being inconsistent with the land use goals, making it more difficult for conservation subdivisions to meet other environmental and land-use objectives. Certainly their ability as a tool to meet anti-sprawl goals by preventing ongoing low-density residential development is tied closely to the density question. A-CC is now in the difficult position of having to down-zone the underlying density in the AR to allow conservation subdivisions to fulfill their original purpose. At the same time, this raises the potential for "takings" claims, -- an issue that conservation subdivisions as an isolated planning tool do not usually face. Conservation subdivisions also were easier to apply than Transferable of Development Rights (TDRs), the other leading planning tool for balancing property values with rural conservation. TDRs require state enabling legislation, which was not passed at the time, and a lengthy and often contentious public process that requires the identification of "sending" and "receiving" zones.

The ability for conservation subdivisions to meet the community goals identified in the Comp Plan, such as the preservation of scenic vistas, the protection of environmental resources, the retention of 'rural character', and the inclusion of community in the planning process, is currently under debate. A number of additional goals have been added to conservation subdivisions through the purposes described

within the ordinance itself. Density has played such a central role in the design as well as the economic viability of conservation subdivisions to date that it will be challenging to tease out other elements in the ordinance.

Summary

The sprawling growth and disappearing countryside that Athenians were noticing in the '80s and '90s were not just figments of local imagination: Athens was a leading player on the national sprawl scene, in part due to regional growth effects, and the results were evident in the local landscape. The Comp Plan was a decisive event in the land use history of Athens-Clarke County, in terms of both the document itself as well as on the development of a community consciousness created by the process itself. The Comp Plans' participatory planning process did something else: it created a vocal and land-use savvy community constituency that was to play a pivotal role in ensuring that land use goals were aligned with land use tools, and that what was happening 'on the ground' was consistent with the future the community said it wanted. While this chapter presents the County's local land-use and planning background, it is also meant to provide a historical interpretation of the social attitudes and events that have influenced, and will continue to influence, local land use decisions and change into the future.

CHAPTER 4

EVALUATING CONSERVATION SUBDIVISIONS IN ATHENS-CLARKE COUNTY

Introduction

Two years had passed since the approval of the Comprehensive and Future Land Use Plans. Conservation subdivisions, now saddled with the contentious 'Option A' zoning density of 1:1 in the AR, had been the active planning tool during this time, and no one in the community seemed any happier. Environmental groups, homeowners in the AR, local land trusts, and even developers and landscape architects, were complaining loudly, frequently and unhappily about this new entity called a 'conservation subdivision'. In the words of one elected commissioner: "When the residents of Homewood Hills and the members of Athens Grow Green are both upset about the same thing, there has got to be something wrong" (personal communication with Commissioner, 2003). The general perception, from the standpoint of both environmental groups and current homeowners in the AR zone, was that multiple loopholes were allowing undesirable projects to be designed and developed. At the same time, developers and designers were livid over a planning process that they viewed as unclear and wholly unpredictable.

The purpose of this chapter is to identify and evaluate what went wrong; to provide some analysis of where conservation subdivisions went wide of their mark. Discussion will begin with a brief description of the basic tenets of the current conservation ordinance. The eight conservation subdivision projects that were proposed

under the current ordinance will then be presented and described briefly. The chapter will conclude with an evaluation of the current ordinance, taking the project designs and concerns voiced by the community into consideration, and using the broad categories distilled from the Comprehensive Plan in chapter three to frame the assessment.

The Conservation Subdivision Ordinance

The conservation subdivision ordinance was adopted in 2001 by the A-CC Government as an addition to the Zoning Code approved in 2000. Key features of the current A-CC ordinance can be outlined as follows:

- 1 unit per 1 acre underlying density. (See Figure 4.1)
- Development credit for areas of the property that are "unbuildable", i.e. wetlands, floodplains, steep slopes.
- Open Space requirement of at least 50% of the total property area (See Figure 4.2). 75% of open space must be contiguous, and land must be protected with a conservation easement or restrictive covenant
- Special Permit procedure for development approval, which requires Mayor and Commission vote.
- Lot sizes may be as large or small as desired, except where the absence of sewer requires ½ acre minimum lot sizes.

In addition to the general terms of the ordinance, the document lists nine specific "purposes" within the document itself. These reflect the range of objectives conservation subdivisions are intended to address. These purposes can be understood as serving in addition to the general goals expressed for land use, the environment, and community

process for Athens-Clarke-County in the goals of the Comp Plan, as well as for the goals expressed specifically for the rural AR zone.

9-25-14 Conservation Subdivision Development Standards for AR zone

1. Promote environmentally sensitive and efficient uses of the land.

2. Preserve Open Space and unique or sensitive natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands, wildlife habitats, and unique topography, as well as historic or archeological resources.

3. Permit clustering of structures on less environmentally sensitive soils which will reduce the amount of infrastructure, including paved surfaces and utility facilities, necessary for residential development.

4. Reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation in residential development.

5. Conserve a portion of the property as Open Space in perpetuity.

6. Promote interconnected greenways and corridors throughout the Community.

7. Encourage street designs that reduce traffic speeds and reliance on main arteries.

8. Conserve scenic views and reduce perceived density by maximizing the number of houses with direct access to, and views of, Open Space.

9. Promote other purposes of the Zoning Regulations, Subdivision Regulations, Soil Erosion and Sedimentation Control Ordinance, Protected Environmental Areas Ordinance, and other ordinances and policies of Athens-Clarke County.

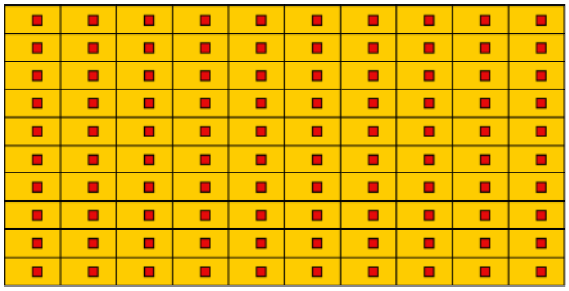

Figure 4.1: Diagram of Density Yield. Theoretical layout is shown for underlying density in AR for a 100 acre parcel at 1 unit to 1 acre. Yellow squares represent 100 1-acre lots.

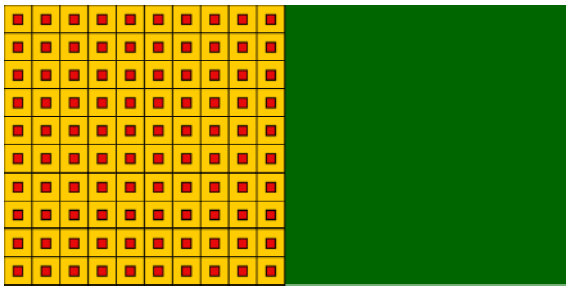

Figure 4.2: Diagram of Conservation Subdivision Layout. Theoretical layout is shown for underlying density on a 100 acre parcel at 1:1 with 50% Open Space. Yellow squares represent 100 ½-acre lots. Green area represents 50 acres open space.

Conservation Subdivision Project Profiles

Between March 2001 and January 2003, when a temporary moratorium was called on conservation subdivisions, eight designs were submitted as conservation subdivisions or as planned developments (PDs) that followed the general tenets of the conservation subdivision ordinance The next eight pages (Figures 4.4-4.11) present general project descriptions for these conservation subdivision designs. The table that follows these plans (Table 4.1) presents some of the basic features of the projects, such as property size, lot number, lot size, amount of open space, percent of unbuildable land on property, and so on. A critical evaluation of the projects will follow the eight project profiles.

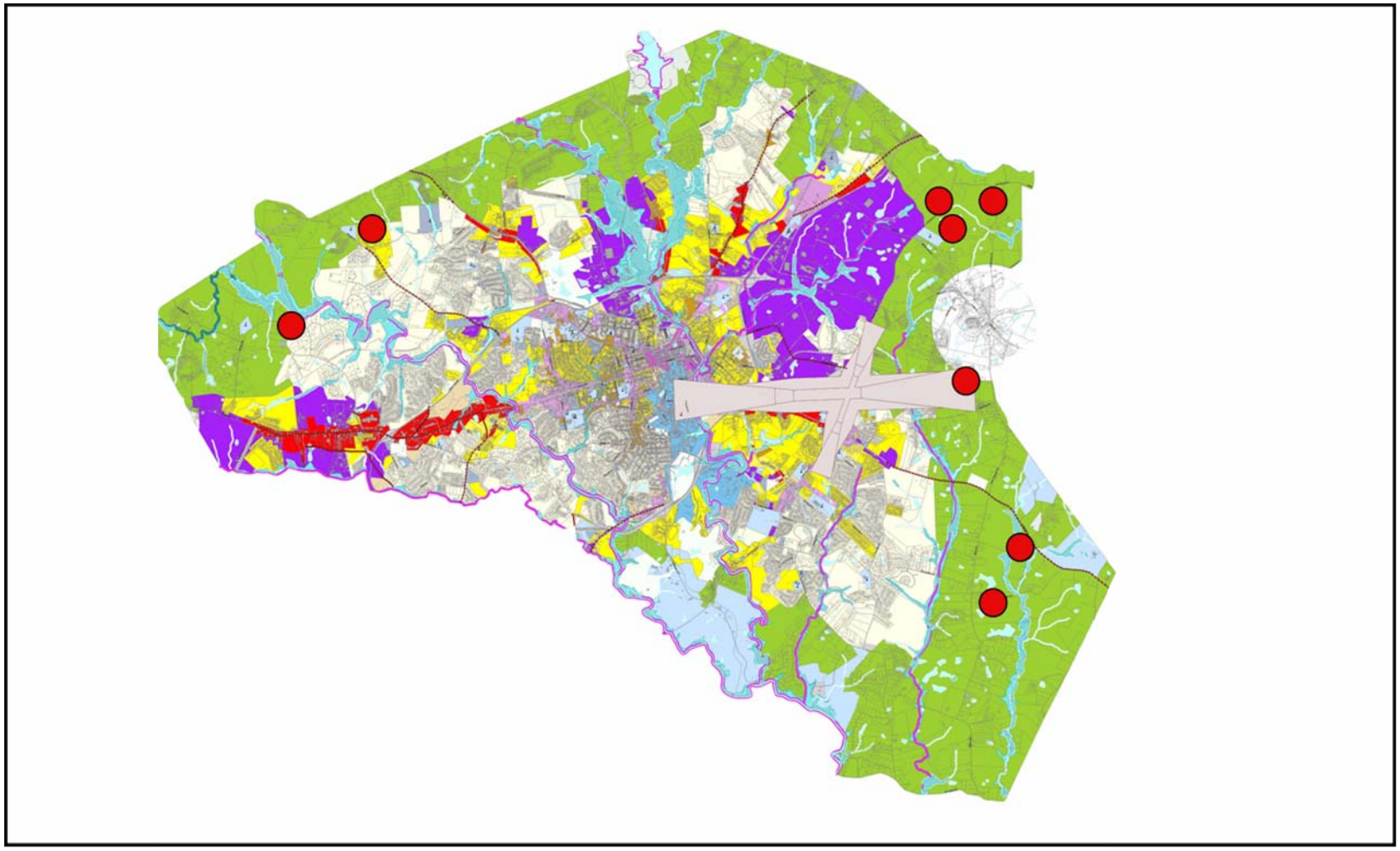

Figure 4.3: Location of Conservation Subdivisions in A-CC. Red dots show locations of proposed conservation subdivisions in the AR zone.

Figure 4.4: Plat of Nature Walk Conservation Subdivision (Beall-Gonnson and Co. 2001)

Nature Walk was approved in 2001 as a Planned Development (PD), just before the official approval of the current ordinance, It was planned using the tenets of the new ordinance. It is sited on 95 acres and features 94 lots, and has a total of 51% open space Nature Walk is adjacent to St. Joes Catholic School, currently under construction, in the western part of A-CC off Lavender Road. Low density subdivisions are frequent in the general area. Currently Nature Walk is partially under construction, with half of the lots built out and occupied. Houses range in price from $110,000-130,000. The Oconee River Land Trust holds a conservation easement on the open space.

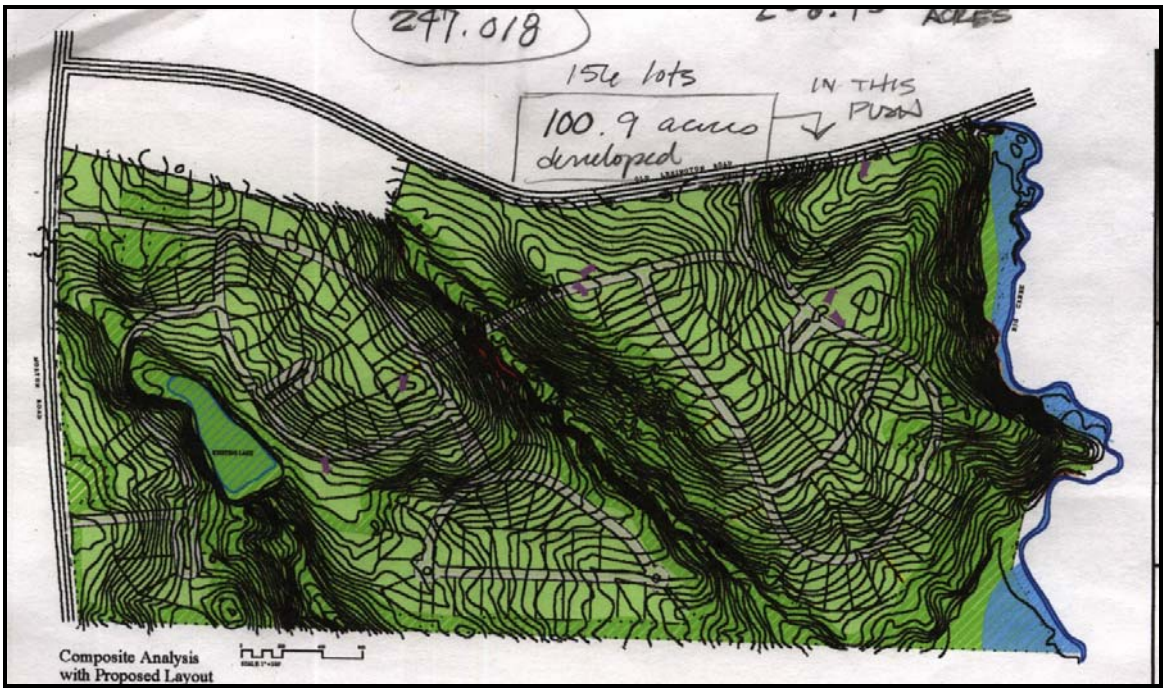

Figure 4.5: Plat of Morton Road/Porterfield Farm Conservation Subdivision (Bob Smith and Associates 2002)

Morton Road, also known as Porterfield Farm, was not approved. The property contains a total of 247 acres and is designed with 156 lots and 51% open space. It is sited on a fallow soybean field bordered by woodlands on the Eastern side of county. The surrounding area features pastoral vistas, single homesteads, and some 1980s era low-density residential developments to the south. There is a historic cemetery on the western side of the property, and the eastern edge is adjacent to Big River Creek. Several acres of the property are impounded lakes. Bob Smith and Associates, Landscape architects, did the initial design. Houses were sited on average half-acre lots, and aimed for a higher-end market of $250,000 houses. The 51% open space was intended to be donated to the Oconee River Land Trust and placed under conservation easement. A decision is currently pending in a lawsuit between the property owner and the A-CC government over the denial of the project, which was based on results of a traffic impact analysis.

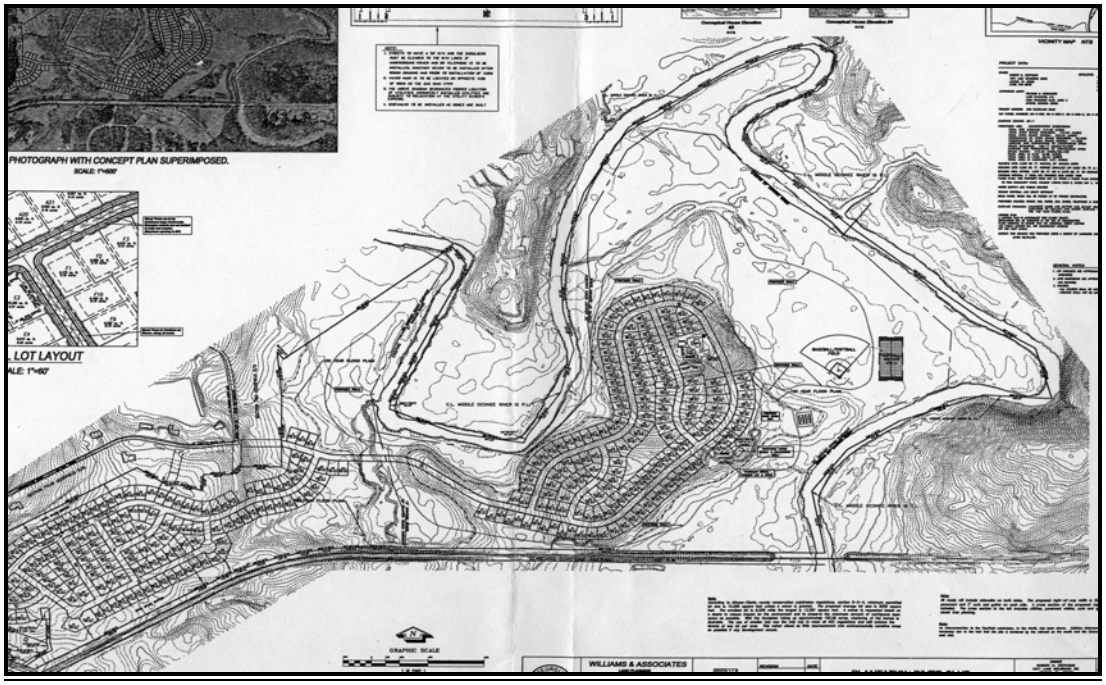

Figure 4.6: Plat of Cleveland Road Conservation Subdivision (Williams and Associates 2002)

Cleveland Road was denied for approval due to neighbors' protests over density and traffic impacts. The project was designed on a 316 acres parcel of land, and the design featured 315 lots and 71% open space. The property is adjacent to Deerfield subdivision to the north, Sedgefield to the west, and other subdivisions to north and south. The surrounding properties are zoned: AR to the north and RS-25 and RS-15 along the other sides. 60% of the site features floodplains and wetlands. Open meadows and scattered trees are along the western periphery. The intent of the developer was to have a local land trust hold a conservation easement on the open space. The project was ultimately denied by Mayor and Commission vote due to neighboring resident concerns over high densities, small lot sizes, and traffic impacts to area roads.

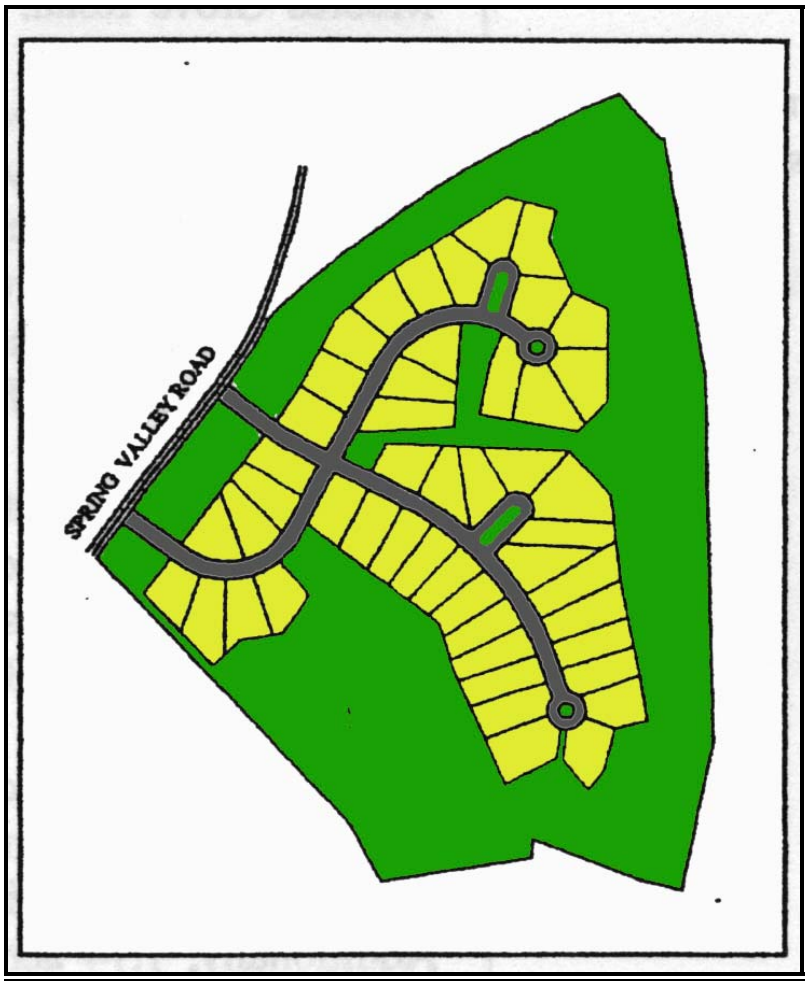

Figure 4.7: Plat of Spring Valley Farms Conservation Subdivision (Bob Smith and Associates 2001)

Spring Valley Farms was approved in 2001. The project is designed on a 316 acres parcel of land, and the design featured 315 lots and 71% open space. The property is adjacent to Deerfield subdivision to the north., Sedgefield to the west, and other subdivisions to north and south. The surrounding properties are zoned: AR to the north and RS-25 and RS-15 along the other sides. Open meadows and scattered trees are along the western periphery. The intent of the developer was to have a local land trust hold a conservation easement on the open space.

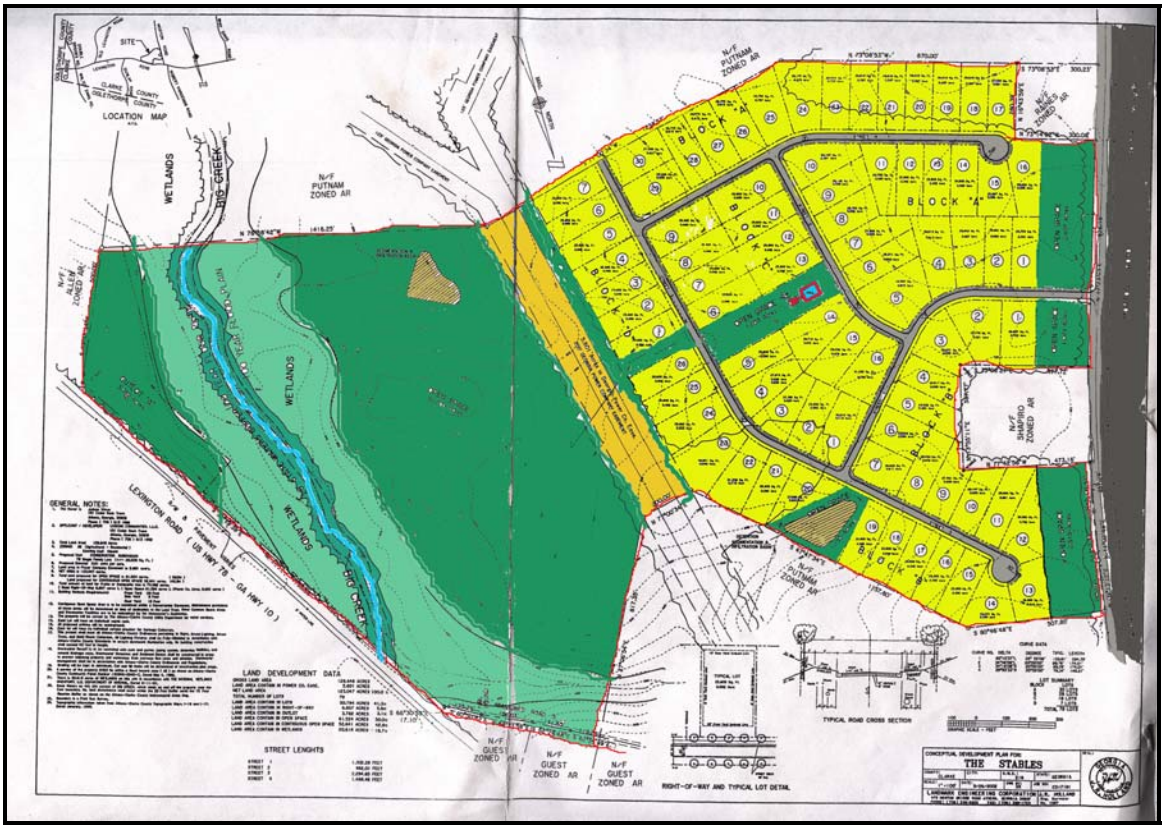

Figure 4.8: Plat of The Stables Conservation Subdivision (Landmark Engineering Corporation 2002)

The Stables was denied by Mayor and Commission vote. The project site is located on a parcel that touches Lexington Hwy and Old Lexington Road. It is 123 acres, and the design features 79 lots and 50% open space. Big Creek runs through property as does a power easement. It is unknown what the targeted housing price was to be, or if the property owner intended to place the open space under easement with a land trust. The absence of municipal sewer on the site required the use of half-acre lots. In areas with soils unsuitable to septic were designed into formal greenspace 'squares'. Planning staff did not like this design because it seemed too similar to standard development.

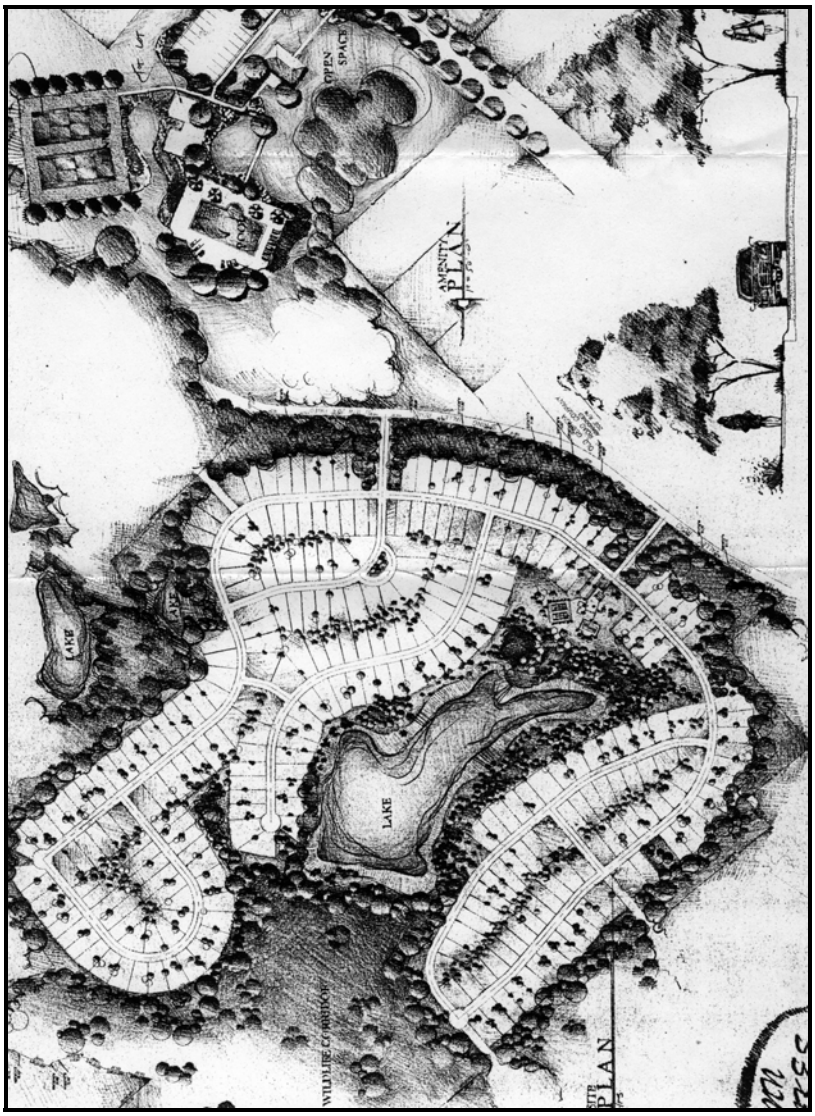

Figure 4.9: Plat of Autumn Lake Conservation Subdivision (Williams and Associates 2001)

This project was proposed in 2001 denied by Mayor and Commission vote. It is sited on 289 acres in the Northeastern portion of the AR, near Athena drive and Spring Valley Road. Its' design featured 289 lots and 52% open space. Surrounding zones are AR and E-1 (industrial), low density residential, and a manufactured home community. Buck Branch Creek runs through the property. The property owner sued the A-CC government over the project denial, and a decision is currently pending. The intention for the open space was for a local land trust to hold the conservation easement.

Figure 4.10: Photo of Martin Meadows Conservation Subdivision (Beall Gonnsen and Co. 2002)

This development was approved as a Planned Development (PD) for use as a conservation subdivision, and is currently in the early stages of construction. The property is 126 acres and the design features 62 lots and 76% open space. Martin Meadows is sited on Robert Hardman Road and adjacent to mobile home park on west, and subdivisions Chelsea Estate and Windfall Heights to the south. Roadway views are scenic and pastoral. The property includes the owners' residence, and contains several ponds, mown grass and forested periphery. Houses are to be priced in the $250+ range, and the intent is for the Oconee River Land Trust to hold conservation easement on the open space.

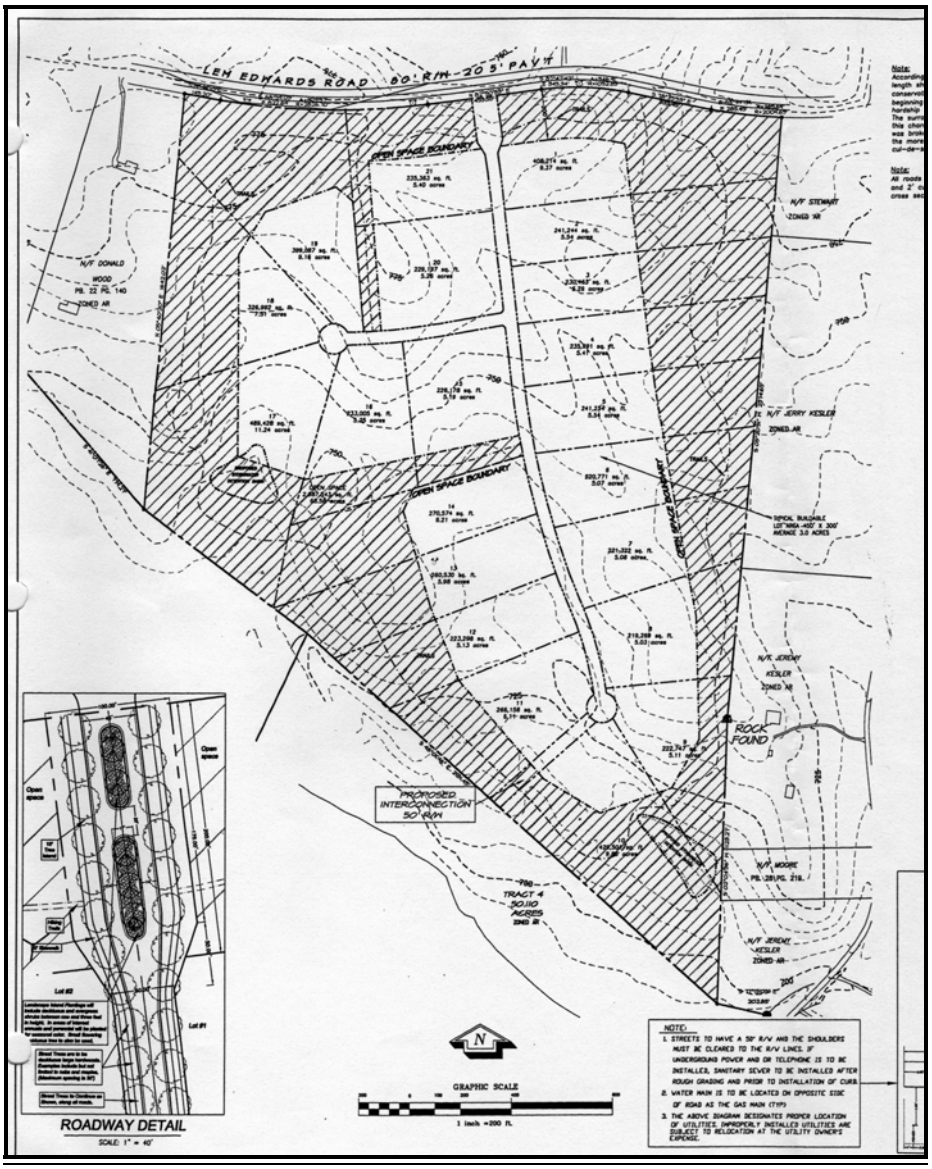

Figure 4.11: Plat of Lem Edwards Conservation Subdivision (Williams and Associates 2001)

This project design for Lem Edwards was denied due to legal concerns over the open space located within the property boundaries of the lots. The total property area is 136 acres, and 21 lots were designed on the site, averaging 6.5 acres in size. 50% open space was to remain under easement. The property is in the Northeastern part of the AR, on Lem Edwards Road near Charlie Bolton Road.

The chart on at the end of this chapter (Table 4.1) summarizes some of the general project facts, and allows for some general trends to be assessed. There are several things that are worth noting. First, out of the eight projects proposed, five plans were denied and only three were ultimately approved by Mayor and commission vote. Projects that were denied tended to feature high numbers of lots proposed (closer to the 1:1 ratio), and protests staged by adjoining neighbors citing traffic increases, inappropriate lot sizes, and overall density. It is interesting to note that while a 1:1 yield was permitted, only three of the eight projects took full advantage of this density, with an average yield (excluding Lem Edwards, which proposed an overlap of open space and private lots) of 1:1.4. The total acreage proposed for development was 1,417 acres, of which an average of 56% (822 acres) was to be protected as open space. Developers getting lot credit for "unbuildable" portions of properties was one of the contentious issues revolving around conservation subdivisions. Table 4.1 indicates that for the six projects for which 'unbuildable' percentages could be determined, an average of 20% unbuildable was evident, with a range of 0% to 56%. Considering that 1064 lots were proposed, this indicates an additional 212 lots credited to the yield of the proposed projects taken as a whole. Other items noted in the table are proposed wastewater systems, of which four were sewered, and four septic. Finally, project plans were executed by three different landscape architecture firms and one engineering firm.

Discussion and Evaluation of the Ordinance and Projects

Four general goals from the Comprehensive and Future Land Use Plan are used to evaluate the previous conservation subdivisions, considering both the design and the

effects on county-wide growth patterns. These broad goals, which were defined in the previous chapter, are: reduce sprawl, protect natural resources, encourage community-based planning, and preserve rural character. The following assessment will draw on the information just presented from the proposed projects to evaluate the current ordinance, using these four categories to organize the discussion.

Reduce Sprawl

Low-density development and sprawl have been encouraged rather than discouraged since the new ordinance was implemented. This is due to:

1) The underlying density established at 1:1
2) The method of calculating lot yield

Density: The current 1:1 zoning in the AR allows for many more units to be built on any given site than was intended or envisioned by the A-CC community. One of the first clues that the new ordinance was not achieving the broader land use goals of the community, were in the number of residential development projects that were quickly proposed to locate in the AR, following the adoption of the ordinance. The locations of projects showed clearly that development was "leapfrogging over the RS zones and into the rural belt" (personal communication with Planning Staff A 2003).

While the number and average density varies somewhat from project to project, it is noteworthy that in 2002 alone the *total number* of units being proposed to be built in the AR was over 1000. By contrast, the Housing section of the Comp Plan (Chapter Two) identified 550 as the number of units that need to be built each year in the entire county, in order to keep pace with projected rates of population growth. Hence an area

that represents only 30% of the county land area is alone potentially accommodating twice the necessary growth[4] for the entire county.

> It appears that the current density allowance…may have led to the unintended consequence of actually encouraging residential development to look towards the AR district instead of RS zones. Based on the size and lot yields of conservation subdivisions submitted during the past several months, it appears that more residential building lots are currently under consideration in the AR than in other single-family residential areas (A-CC Planning Commission *Memorandum to Mayor and Commission Members,* January 2003).

Projects like Cleveland Road (Figure 4.4) and Autumn Lake (Figure 4.7) featured 315 and 289 units (respectively) alone, totaling 604 proposed new houses. To add insult to injury, the development was all taking place in the 26,000 acres that had been specially identified for rural preservation, chiefly because land prices were lower than elsewhere and large parcels of land were still available for development. The allowance of density credit for unbuildable land, discussed shortly, also made development in the AR more attractive.

Calculation of Lot Yield: The method of calculating lot yield was also contributing to sprawl in the AR. As the ordinance now stands, a given land parcel yields exactly the number of lots as there are acres of land, without having to subtract from the calculation land that is classified as 'unbuildable'; chiefly wetlands, floodplains, and slopes in excess of 25%. The trouble with the inclusion of unbuildable land in the density calculation is that property owners and developers were essentially getting credit for land that could not be built on if developed under conventional means. In other words, if a developer was building a standard subdivision on a piece of property elsewhere, and 15 acres of the site happened to contain wetlands, the developer could not

[4] The number of total units proposed in ACC in 2002: see if I can get this info. Total built?

locate homes on those sections of the property (although house lot boundaries could be located in these areas). If this same project were a conservation subdivision in the AR in Athens, however, those 15 acres would translate into fifteen additional units, they would just need to be sited out of the environmentally sensitive area.

It is not uncommon to see unbuildable credit being given in conservation ordinances elsewhere, and there are sometimes sound reasons for it. For example, in municipalities where Conservation development and conventional development are both available options for someone seeking to develop property, some incentives are necessary to make the choice of conservation design a more viable option, and this is one means. Also, in many municipalities regulations on the protection of environmental areas lag badly, and the development of sensitive sites on property is all too common.

Athens, in recent years, has been much less likely to allow waivers for development of sensitive sites, and has created an environmental areas map to show their locations in the county. Nonetheless, it is important to keep in mind that just because a developer is unable to locate the footprint of a structure within one of these areas does not mean that floodplains or steep slopes cannot be graded or otherwise altered, or that a building variance will not be granted (Wenger and Fowler 2000). Several project designs in 2002, the Cleveland Road project in particular, raised the red flag regarding unbuildable density credit, and caused many Athenians to cry foul and point to the current ordinance as an inherently flawed document.

Lot Size: Lot sizes are less directly linked to sprawl, but can be related. William Whyte, Randall Arendt and others have pointed to large lot sizes as a factor encouraging poor land use. The current ordinance does not prescribe a maximum lot size. However,

the 1:1 yield and the 50% open space requirement meant that in 7 out of 8 of the proposed and/or built conservation subdivisions in A-CC, only one –Lem Edwards— featured lot sizes larger than one acre. The space requirements led all other projects to locate lot sizes averaging 0.6 acre in their developments (See Table 4.1). Lots on properties that are not served by sewer must be no smaller than 25,000 sq. ft, to accommodate health department regulations regarding drain field sizes. Because clustering capacities are impacted by half-acre minimum lot sizes, this can be a limiting factor for site-sensitive design. Lot sizes have been a contentious issue, particularly with the Cleveland Road project, because quarter and fifth acre lots were adjacent to 2.5 acre existing properties.

Protect Natural Resources

Open Space and Residential Layout: Assessing natural resource protection in conservation subdivisions can be tricky. There are different natural resource categories, and conservation subdivisions typically meet each category with different levels of success. The natural resources the ordinance itself intends to protect are the following "intents of the ordinance" (9-25-14):

> 2. *Preserve…natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands, wildlife habitats, and unique topography*
>
> *4. Reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation*
>
> *6. Promote interconnected greenways and corridors throughout the community*

As observed in the Cherokee County project, many natural resources are challenging to assess. It is clear that the current ordinance preserves some environmental services in that it requires 50% open space. Groundwater infiltration and the retention of

existing vegetation on at least 50% of the site are benefits realized from any conservation design when compared to a standard site development model. Floodplains, wetlands and riparian systems are likely better protected with this ordinance than they would be under current state and local regulations. All A-CC conservation subdivision proposal sites that featured streams or wetlands provided greater buffers for these areas than required by law (See Figures 4.5, 4.6, 4.7, 4.8). However, the allowance of density credit for unbuildable portions of property indicated that some developers were actively seeking properties with high percentages of unbuildable land because there was a higher payoff for this land in the AR than other parts of the county. Were this true, it would suggest that these natural resources were not being well served by the ordinance overall, as their presence was functioning as a development draw, making dense development close to natural resource areas more attractive to developers. In the projects assessed (See Table 4.1) unbuildable areas average 20%, but this includes the Cleveland Road project which had close to 60% floodplain. The influence of unbuildable as a driver of development is difficult to assess.

The protection and conservation of wildlife habitat, and the creation of habitat corridors, is less well met by the current ordinance. It is significant that the ordinance requires 50% open space, of which 75% must be contiguous. However, consideration of larger scale connectivity is not currently promoted by the ordinance as intent item # 6 suggests. The missing piece is a county-wide greenspace plan that identifies potential conservation areas by conservation type. The A-CC Environmental Areas map is a step towards this, as it locates hydrological features such as groundwater recharge areas, flooplains, streams and wetlands. However, there is no current map of vegetation types

or canopy cover at the county-level that would help determine the location of potential habitat networks.

The site designs for each property also have an impact on habitat viability, in terms of how the spatial requirements of different species match (or don't match) the spatial organization of the open space areas. Reviewing the site designs for the eight proposed projects shows a range of approaches to open space design. Consider the contrasting arrangement of houses and greenspace in the following two designs: Spring Valley Farms (Figure 4.5) and The Stables (Figure 4.6). In the Spring Valley design, the open space wraps the lots around the perimeter, and is effectively the left-over spaces around the residential lots. The landscape architect of this design did not feel the open space would be useable or valuable to the future residents of the subdivision, and it provides a large proportion of 'edge' to interior space. The design of The Stables takes another approach, clustering units on one portion of the lot while retaining the open space in a larger area. The degree of edge, the size of interior area, and other spatial elements all relate directly to the immediate and future health of ecological communities e.g. Dramstad 1996, Carroll and Meffe 1997. A discussion of landscape ecology principles is beyond the scope of this evaluation, but the point that spatial considerations of habitat health are not currently being considered is important to make. Interviews with planning staff indicated that the Spring Valley Farms layout was more in keeping with staffs' concept of what a conservation subdivision should look like (Personal Communication with Planning Staff C 2003). Planners appreciated that every lot was adjacent to open space, with views and immediate access, in the Spring Valley design. By contrast The

Stables was literally scorned as being "a conventional cookie-cutter subdivision stuck onto some open space" (Personal Communication with A-CC Planning Staff 2003).

Site Development: The environmental impacts of site development are not currently being considered, although the removal of vegetation and control of sedimentation are specifically addressed in number 6 in the ordinance 'intents'. One lightening rod for these problems has been Milford Hills[5], a subdivision in East Athens that, while featuring protected open space and clustered housing, was never, in the eyes of the planning staff, intended to be a conservation subdivision. Nonetheless, it bears many similar features and is widely understood, by neighbors and the general community, to be a conservation subdivision. While large areas of the back half of the property along the river were put under a conservation easement held by the Athens Land Trust, the front segments were cleared and graded. The amount of earth moved on the site was tremendous, as the design called for terraced housing sections and featured a massive crater-like detention 'pond' at the center. Heavy spring rains that occurred during site grading caused massive amounts of erosion and sedimentation, overcoming silt fencing and erosion control measures –including blowing out a large constructed sediment trap. The Athens Land Trust, aghast at the destruction, sought greater erosion control enforcement and monitoring from the City, but ultimately had to conduct multiple site visits to monitor the site during the rest of construction.

Martin Meadows, a more recent conservation subdivision (approved as a PD), caused residents to turn out at a local meeting to protest what was seen as unnecessary tree removal and earth moving. Spring Valley Road has raised similar concerns.

[5] Milford Hills is widely referred to as a conservation subdivision by citizens, but it was developed as a PD, and deviated enough from the terms of the ordinance that it was not included in the projects assessed here.

Neighbors and environmental groups are commonly discomfited by the environmental impacts of site development seen around town. However, in these cases many are reacting to the fact that these projects were being touted as "conservation" developments, and yet appeared to be 'development-as-usual'. As one angry resident stated in a letter to the planning office, "the very term conservation subdivision is an oxymoron". Another meeting attendee said "As I speak they are cutting down trees…huge trees...and they've been at it all day…I just don't understand -what kind of conservation is that?!" (A-CC Public Meeting 2003-1).

Some natural resource benefits are being conserved under the current ordinance, particularly when compared to standard development under the same density allotments. However, open space is not currently being identified for its specific natural resource quality, nor is it being designed with the conservation and enhancement of that quality in mind. The impacts of site development are not in line with the specific goals of the ordinance, nor with the larger goals of the Comp Plan, which aim to "reduce the impact of development on the natural topography and existing vegetation through limiting land disturbance activities and clear-cutting"(A-CC Planning Department 1999, Chapter 8, 3).

Encourage Community-Based Planning

The Planning Process: The current ordinance does not address the goals of community-based planning or improved planning processes. Environmental groups and area residents are not the only ones disgruntled about the current ordinance. Developers and the landscape architects they hired to layout the site and shepherd it through the planning process are incensed. While most projects submitted were making it past the planning staff and through the planning commission, the special use permitting process

required a mayor and commission vote of approval, and the majority of proposals were not making the cut. Months and months and thousands of dollars later, project proposals were being denied that, in the words of one landscape architect, "followed the ordinance to the letter"(Personal Communication with Landscape Architect 2003-1). As the previous chart shows, out of eight projects submitted only three were approved, and only Spring Valley Road followed the pure procedure as a Special Use Permitting Procedure and Conservation Subdivision use. Other plans were approved as "PDs" (Planned Developments), with a Conservation Subdivision use. The degree of frustration with the planning process was not insignificant: two lawsuits against the government are currently pending on two conservation subdivision projects that failed to achieve final approval.[6]

Other difficulties with the planning process include interpretational differences regarding what constitutes 'good' conservation subdivision design. The differences between Spring Valley Farms and The Stables, discussed earlier, illustrate this problem. It became clear early on that different people often held widely divergent opinions about the same design. What was touted by some as a great 'Arendtian design'[7] would be railed against by others as a typical cookie-cutter subdivision. While this opinion was frequently associated closely with the values and interests of the person making the judgment, it equally often appeared arbitrary. This issue will be explored further in the following chapter. The result of design differences was a great deal of frustration and justifiable irritation on the part of the project designer and the developer he or she had engaged as a client. Designers and developers on the whole do not hold the planning staff or planning commissioners responsible – they saw the Mayor and Commission as

[6] To a degree, research into these two particular projects was hampered by the unwillingness of some parties to discuss them, given the active lawsuit

politicizing the process and reacting to a 'selfish' public. At the same time, neighbors in adjacent subdivisions and adjoining properties were equally incensed by a process that did not include them. They felt as though they had to battle to get input in project designs that were already on the verge of approval.

The Comp Plan addresses community involvement in planning explicitly in the Guiding Principles. One of the three Guiding Strategies of "Community Relations", as identified earlier, is to "Create a process for promoting community awareness and involvement in land use issues affecting neighborhoods"(A-CC Planning Department 1999 Chapter 8, 2). Communities have traditionally had to take a reactive rather than proactive approach to land use, and this was a good example. Most AR residents I spoke with told me they did not want to oppose all development, they just wanted to be 'at the table' earlier in the design process in order to express their hopes and concerns for a development project they would have to live with.

Preserve Rural Character

Underlying densities of 1:1 clearly make the preservation of rural character impossible. Densities of both 1:5 and 1:10 with clustering are recommended by the Comp Plan in its description of rural land use zoning and policy. In terms of consistency with the Future Land Use Plan, the 1:1 density zoning in the AR is producing development that cannot accommodate the conservation of rural character, does not result in a clear delineation between rural and suburban land uses, and encourages development in the very place the community said it did not wish it to be. Conserving scenic views are a leading prescriptive in accommodating rural character. The twin goals of "clustering structures" and "reduce perceived density by maximizing the number of houses with

[7] Randall Arendt's name was continually invoked to support any opinion or position

direct access to, and views of, Open Space" (9-25-14, 3. and 8.) are clearly at odds with each other. Views from the road, and also onto development sites from existing AR residences, is a driving factor in the debate over conservation subdivision design. The preservation of rural character is impacted by conflicting goals, which will be addressed in the concluding chapter.

Summary

Both the project designs and the county-wide growth and development patterns furthered by conservation subdivisions proposed to date, are inconsistent with many of the key goals defined in both the A-CC Comp Plan and in the ordinance 'purposes'. Table 4.2 summarizes the findings from this chapter's evaluation of current conservation subdivision projects and the A-CC conservation subdivision ordinance, and points to the overall inconsistence with the goals of the Comprehensive Plan. Conservation subdivisions are currently encouraging sprawling low density development, impacting natural resources, ignoring the role of community in planning and design, and failing to conserve the rural character of the roughly 26,000 acres on the periphery of Athens-Clarke County. As a planning tool that emerged as an ungainly compromise from the controversy over the zoning code and its high density 1:1 rural designation, it is understandable that conservation subdivisions ran afoul of so many stakeholders so soon after adoption. The following chapter will explore recommendations for redrafting the current ordinance in order to better address community concerns about conservation subdivision use in Athens.

Table 4.1 Major Facets of Conservation Subdivision Ordinance

Ordinance requirement	Explanation	Results/ examples	Consistent w/ Comp Plan?
Density 1 house: 1 acre density in AR if develop more than 2 lots every 2 years, project must be a Conservation Subdivision in this zone	Technically part of the zoning code and not the Ordinance itself, this is the underlying density approved in 12/00 by the Mayor and Commission. It regulates the underlying density of the AR. Only single family.	1:1 has resulted in large numbers of homes being planned in the AR (Cleveland Rd = 315 lots) The total proposed number of houses (via submitted Conservation Subdivision Plats) has been over 1200 in 2 years in the AR. Only 550 units/yr total are needed to keep pace with growth	**No** Comp Plan describes 1:5 and 1:10 as rural densities
Yield Plan Otherwise "unbuildable" portions of land included in calculation of lot yield	Standard development cannot take place in floodplains/etc. Developers in AR can't build in these areas but get 'lot credit' for the unbuildable land area on a piece of property	This provision has attracted developers to land with environmentally sensitive areas. the Cleveland Road land was 60% in floodplain and wetland, developer got extra 60 units	**No** Development should be sited away from sensitive areas. incentives should direct growth towards existing infrastructure, not greenfields
Site Development Minimizing land disturbance and vegetation removal to reduce erosion is stated goal, but there is no requirement in ordinance to reduce disturbance on developed portion	Tree and soil protection areas should be identified on plans, along with method of protection (tree fencing etc), no teeth to requiring site-sensitive development	Milford Hills, (technically a PD) saw Massive earth-moving, cut and fill grading, etc. Erosion control measures not enough to keep sediment washing into Oconee River.	**No**
Open Space Design/protection 50% of gross area required open space, 75% contiguous roads cannot cross contiguous area management plan required, restrictive covenant OK for protection of Open Spc.	50% is reasonable goal, however, including unbuildble means Open Space credit for areas that would not be otherwise developed. Management Plan unclear requirement	Much variation in layout, open space location and form Some sites exceed 50%, average is 58% Cluster homes with segregated Open Space not encouraged by planning: E.g. difference btwn Spring Valley and The Stables Mgmt plans non-existent. Nature Walk only Conservation Easement	**Yes and No** Yes, Clustered homes with open space; No, Conservation Easements are the only Protection in Plan, not covenants
Planning Process Special Permit or PD	Type II process requires planning commission & M&C vote	Only 3 out of 7 approved to date, only Spring Valley as Special Permit/CSD Martin Mdw PD/Nature Walk pre-ordinance	**No** Comp Plan stresses ease of procedures; community involvement in planning

CHAPTER 5

REDRAFTING THE ORDINANCE: MAKING CONSERVATION SUBDIVISIONS WORK IN ATHENS-CLARKE COUNTY

Introduction

Conservation Subdivisions are not currently accomplishing the objectives they were established to meet. Citizens and the local government have committed themselves, over the past six months, to redressing the perceived problems with the ordinance and refashioning it to better meet community goals. This chapter looks closely at the effort to redraft the Conservation Subdivision Ordinance, and attempts to evaluate the effects that recommended changes will have. These questions are addressed using the four categories defined in chapters three and four: sprawl reduction, natural resource protection, community participation, and the preservation of rural character.

The Author's Role in the Redrafting Process

In the interest of discussing the methods and biases of the author, I will briefly review the nature of my role in the process of redrafting the conservation subdivision ordinance. An active interest in this thesis topic arose from a desire to see conservation subdivisions used effectively in Athens-Clarke County. I became involved in advocating for changes to the current ordinance because of concerns about the current land-use patterns in this community. I therefore wished to identify the problems and potential

solutions regarding conservation subdivision use not only for this thesis, but also to see workable solutions implemented in the community. In this sense, I have been conducting research while at the same time advocating for change. These two roles informed each-other, as a strong desire to arrive at meaningful solutions drove the need to fully understand the scope of the issues, the positions of the stakeholders (of which I was one), and the specific context. I recognized early on that while my prior study of conservation subdivision use in Cherokee County, Georgia, might inform an understanding of the larger issues, it would not necessarily suggest local solutions.

I became involved with other stakeholders and environmental groups in a redrafting process led by the A-CC planning staff over the course of six months, from February 2003 until present, July of 2003. This included participating in stakeholder group work sessions, attending public meetings and events, submitting independent written comments and recommendations to planning staff following draft versions, communicating with local commissioners, and participating with the land trust in their work sessions and written responses to planning staff. The content of the proposed draft ordinance evaluated in this chapter is a product of this interactive process: some proposals originated with planning staff while others were based on input from participating stakeholders, including myself.

Revisiting the Conservation Subdivision Ordinance

The Redraft Process

"We knew this would be coming back to us, we just didn't think it would be this soon", said a senior staff member in the A-CC planning office, referring to the

moratorium that had just been placed on Conservation Subdivision Development. In January 2003, the Mayor and Commission called a temporary moratorium on the ordinance to allow staff the time to assess the problems and make the necessary changes. It was effectively a way of sending the ordinance 'back to the shop' for repairs. The process was to take four months, but has been extended twice and is now looking to be finalized after seven months. As this thesis is being finalized, the process is entering its sixth month.

There was initial agreement that the review process should include stakeholder participation. A public 'review committee' was considered, but planning staff expressed concern, based on prior experience, that this would "bog down the process" and "get sidetracked" (Personal communication with Planning Staff 2003-1).

In the end, planning staff met with stakeholders and advocacy groups in two day-long work sessions, in what was for A-CC planning a unique and so far successful approach to planning. Separate work sessions were held for two identified major interest groups: the development, real estate, landscape architect, and property owner constituents formed one group, while the second group was composed of resident-homeowners from the AR district along with environmental and advocacy groups including representatives from area land trusts, and Athens Grow Green. Planning staff then put together a draft that addressed some of the changes that had been discussed at the work sessions, and made it available for comment. Many of the individuals and groups that had attended the original work sessions remained involved, giving staff written or verbal feedback as the drafts progressed.

In April 2003, Athens Grow Green sponsored Randall Arendt to come to Athens, lecture and conduct a work session with invited planning commission, the Mayor, and the city commissioners. Mr. Arendt toured several Athens projects with a planning commission member and grow green member, and submitted written comments to planning staff regarding the ordinance. His visit and opinions were featured in an Athens-Banner Herald Story, where he condemned the 1:1 density, encouraged a design process that included stakeholders and blasted Milford Hills with its' "fanny first" houses that showed backsides to the street, and "bomb crater" detention pond (Shearer 2003-3).

The tone at most of the ordinance redraft sessions with stakeholders was positive and consensus-oriented. Public meetings, three in the AR zone and one at the public library, did not attract large crowds but did feature moments of contentious outbreaks. Several property owners expressed anger and frustration over any shifts in density allowances, and several residents adjacent to a property in the process of site clearing expressed their anger over site construction and tree removal. In June a joint work session was called for the Mayor and commission and planning commission to discuss the final draft. One of the major features of the final draft was the introduction of a new zoning district within the AR, called the RR, or Rural Residential. Planning staff described the RR as a zone defined by the proximity of sewer, with an allowable density of 1:5 standard development or 1:2.5. During this session commissioner comments led to the RR being taken off the table, in part because of the advocacy work on the part of Athens Grow Green.

As this thesis goes to press, the Mayor and Commission have approved an extension of the moratorium for an additional three months, to give staff the chance to

finalize changes. The general political consensus is that Mayor and Commission will approve the proposed ordinance, perhaps with minor changes. What will the effects of these changes be? Many of the stakeholders, including myself, believe that the changes being effected in the proposed ordinance will bring conservation subdivisions more in line with larger community land use goals.

The remainder of this chapter is an effort to extrapolate the potential outcomes of changes currently proposed in the draft ordinance. This will begin with a chart comparing the current ordinance and the proposed ordinance. This will be followed by a discussion of how these changes might be expected to affect the way conservation subdivisions are being designed and built in Athens. This evaluation looks at how the proposed ordinance will affect the design aspects of conservation subdivisions in the residential and open space patterns, and also considers the potential overall effects of the proposed ordinance on development and land use patterns in Athens-Clarke County.

The Proposed Ordinance: Key changes

Changes being proposed to the Conservation Subdivision Ordinance have turned what was an eight page document into a dense 24 page tract. Appendix B provided at the end of this thesis contains a chart prepared by Athens Grow Green during the redrafting process, and helps to clarify many of the components of the ordinance. The major provisions of the proposed ordinance are highlighted in the following points. Diagrams accompany key points for further illustration. The implications of these major changes will be discussed further in the evaluation of the proposed ordinance.

Density (See Figure 5.1 a-c)

- Underlying Density changed from 1:1 to 1:10 (a)
- Conventional subdivision development permitted in the AR at 1:10 (b)
- Conservation subdivisions granted 100% density bonus, meaning effective density of 1:5 (c)

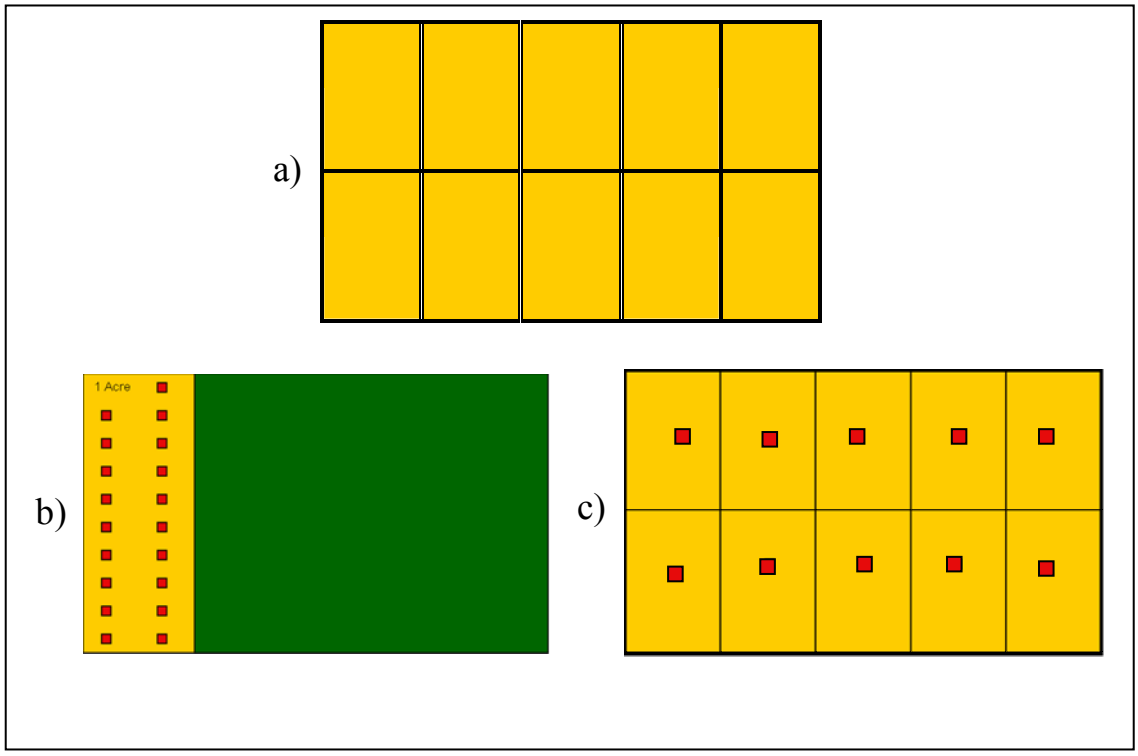

Figure 5.1: Graphic Representation of Yield and Development Options in the AR. Underlying density 1:10 (a) can be developed as a CSD with 100% density bonus (b) or as a conventional subdivision (c).

Lot Yield

- No credit for unbuildable acreage on sites
- Yield Plan required for submission prior to preliminary design

Lot Size

- Minimum lot size of 10 acres for conventional subdivisions (See Figure 5.1 b)

- Maximum lot size of 1 acre for conservation subdivisions, except where adjacent to existing subdivision lots in which case lots must be of equal or greater size than existing lots. (See Figure 5.1 c)
- Minimum lot size of ½ acre where no sewer, minimum lot size of 1.2 acres where no sewer or water

Design Process and Standards

- Pre-planning with stakeholders participating early in design process
- "Four-Step" Arendtian design process intended to identify and design intended to prioritize conservation resources above built elements
- Primary and Secondary conservation resources identified
- 50% open space minimum, 4:1 length to width ratio
- Permanent protection via conservation easement or covenant
- 75% of lots must be adjacent to open space
- List of permitted and prohibited uses of open space
- Open space management plan required
- 200 foot vegetated buffer between public road and development
- Use-by-Right approval process (planning staff decision)

The table on the following page (Table 5.1) extrapolates several key points from the proposed ordinance, and applies new these requirements to several existing proposed projects. This is done to view the effects of changes on general yields, density, and amount of open space when current project facts are subjected to the terms of the proposed ordinance. Factors that are changed include the underlying density, (from 1:1

to 1:5), the removal of unbuildable from the calculation of yield, and the maximum lot size of 1 acre.

Table 5.1: Comparison of Characteristics of Selected CSDs.

	Nature Walk	The Stables	Spring Valley	Cleveland Road
Current Ordinance:				
Buildable Acreage	95	123	85	316
% Buildable	100%	100%	100%	100%
Lot Yield	95	79	85	315
Proposed Ordinance:				
Buildable Acreage	95	106	77	183
% Buildable	100%	86%	90%	57%
Lot Yield (1 : 5)	19	21	15	36
Effects on Percent Open Space:				
Current Ordinance	51%	50%	54%	71%
Proposed Ordinance (0.5 acre lots)	89%	81%	89%	89%
Proposed Ordinance (1 acre lots)	77%	75%	78%	87%

Total reductions in yield brought about by density reductions and the subtraction of 'unbuildable' credit are the most significant impact of the proposed ordinance, and this is apparent in the results presented in the table. Overall for the four projects in the table, the lot number decreased to 18% the original number; from 514 lots to 91 lots. The results also indicate a significant increase in the average open space percentages of projects; of the four surveyed the averaged open space was 79% for acre lots, and 87% for ½ acre lots, which further demonstrates the significant impact of lot size on open

space. This is chiefly due to the maximum lot size mandate, which works to reduce the overall development footprint while maintaining the same overall number of lots. Densities are the most radical change, as could be expected in a shift from 1:1 to 1:5.

Design Implications of the Proposed Ordinance

Reduce Sprawl

Density: The proposed change in the underlying density of the AR from 1:1 to 1:10 is the single biggest change in the proposed ordinance, and will bring the ordinance in line with the Comp Plans intention to direct growth to areas of existing services rather than rural parts of the county. The planning work sessions quickly revealed that a 1:5 overall target density for the AR was a feasible compromise for environmental groups, AR residents, and developers. As expected, large property owners in the AR were opposed to any change from the current 1:1 allotment throughout the debate because they did not wish to see their property value decreased. The proposed ordinance recommends 1:10 as the base density, but developing as a conservation subdivision will grant 100% density "bonus", meaning 1:5 will be the effective overall density. Figure 5.2 shows the different development options available under the proposed ordinance, with their respective densities and lot sizes. A hypothetical 100 acre property will yield 10 lots. Developing the property as a conservation subdivision gives the developer a 100% 'density bonus', doubling the total yield from 10 lots to 20 lots, with *maximum* lot sizes of 1 acre (See Figure 5.2(b)). Developers may also choose to develop a standard subdivision, but the underlying density will remain at 10 lots, with a *minimum* lot size of 10 acres. Figure 5.2(c) illustrates this option on a hypothetical 100 acre lot. These

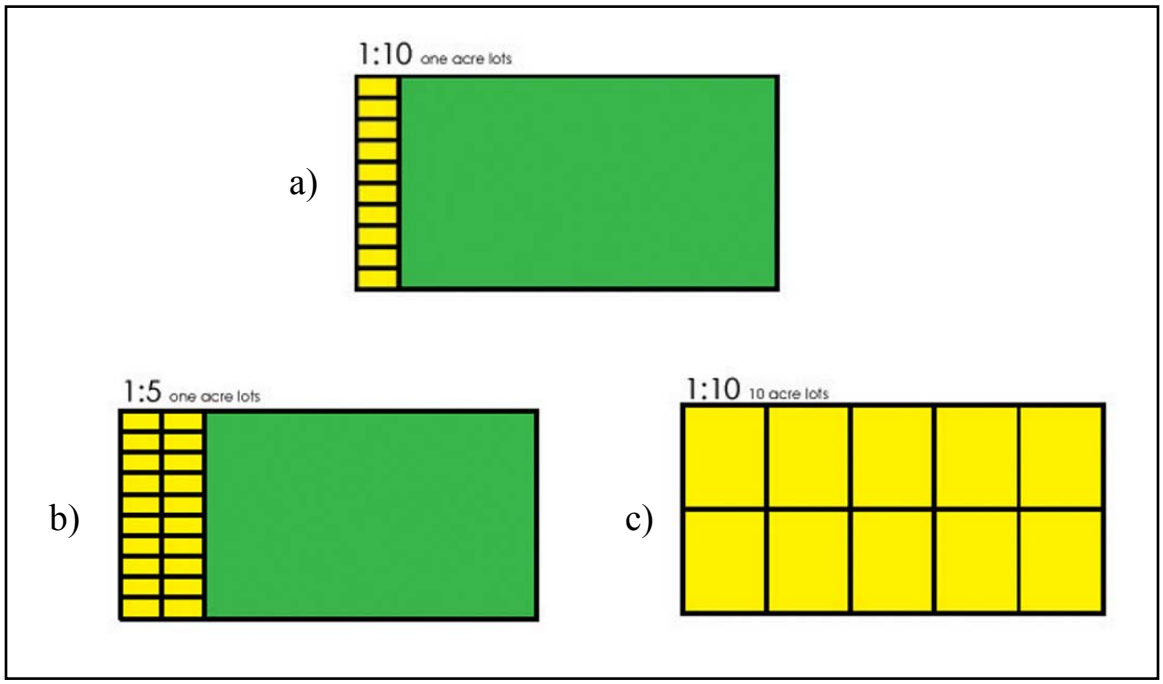

Figure 5.2: Graphic Representation of Density Options in the AR. While the underlying density is 1:10 (a), developers can double the lot yield by developing the property as a conservation subdivision (b), with lot sizes not exceeding 1 acre. They can also develop a standard subdivision at 1:10, where minimum lot sizes are 10 acres (c).

changes in density will shift the county-wide growth pattern trends away from development in the AR, improving the chances for A-CC to meet its intention of discouraging low density development in rural parts of the county and redirecting it back towards existing infrastructure.

Hence the proposed ordinance reflects an 80% reduction in lots a parcel of land will yield (other factors aside) when compared to what the ordinance currently allows (See Table 5.2). The Comp Plan justifies the change, stating: "It is the goal of this plan that the overall densities of this area not exceed 10 acres per unit" and also, "These are rural lands that are intended to have very low densities, averaging one unit for every five acres" (A-CC Planning Department 2003, Chapter 9, 19). Again, there is some unresolved discrepancy between these two passages, but it would be reasonable to

interpret the two development options currently proposed, a 1:10 standard design or 1:5 conservation design, as meeting these guidelines.

Lot Size: The relationship between sprawl and large-lot zoning is revisited in the proposed ordinance. In the redrafting process, I was a strong proponent of implementing a *maximum* lot size requirement in the new ordinance. Mandating a maximum lot size is another way of allowing a larger portion of the total parcel area to be conserved for its existing natural resources. In the hypothetical 100 acre property proposed earlier, 20 acres of land would be developed in lots, with an additional 5-10% developed as roads and right-of-ways[8]. This would leave a minimum of 70% of the land set aside for potential conservation. Unfortunately, minimum lot sizes remain limited by septic requirements: sewer and water service allows 15,000 sq. ft. lots, 25,000 if water and septic, 51,000 if well and septic. Roughly 10% of the AR is lacking both sewer and water, and in these areas the 1.2 acre minimum lot size is a handicap for good site design. A much larger portion of the AR will require $\geq$.5 acre minimum lot sizes due to the absence of sewer. Regional health department standards set lot size requirements for septic, and are typically slow to adopt alternative septic-system designs based on shared septic systems. This is unfortunate as shared septic systems could be implemented with more stringent maintenance requirements managed through the neighborhood Homeowners Associations, effectively making them a much better choice for water quality than standard stand-alone septic (Arendt 1994, 212). Conservation subdivisions are development types which, by their very nature, should allow for sensible but flexible

[8] This simplified adjustment does not consider the revised yield plan, which would remove undevelopable land from the total yield potentially increasing the open space beyond 70%.

alternative technologies that are environmentally sensitive. As it now stands, a developer interested in implementing ecologically sound technologies will be unable to do so.

Lot Yield: The calculation of lot yield changes that have been made in the proposed ordinance will not have a significant impact on encouraging or discouraging sprawl. Table 5.1, which extrapolates several existing projects, shows that the reduction in yield due to density changes far outweighs the percentage gained from unbuildable for most AR property. Sites like Cleveland Road, in which 60% of the property was in floodplain and wetland, and the developer was getting lot credit for these portions of the land, are exceptions. Subtracting the unbuildable site areas from the total acreage counting towards lot yield would have reduced the number of allowable lots by 127 -from 316 to 189. For some projects, it is difficult to see how the proposed ordinance would manifest itself in this aspect of the design. The Stables, for example, has 129 acres total, 79 lots total, and 21% unbuildable land. Subtracting unbuildable from the total acres would have still permitted 102 lots, which is more than are currently being proposed.

Conserve Natural Resources

Natural resource conservation will be better served under with the proposed ordinance, although the benefit to some conservation resources is limited. First, the major changes in density make it difficult to weigh the relative other effects of changes to the ordinance. The proposed ordinance integrates Arendt's Four-Step design program, which uses the prevailing site conditions to help designate the locations of conservation areas. The proposed ordinance also differentiates between primary conservation areas, where floodplains, riparian zones, steep slopes, wetlands, and endangered and threatened

species habitat are required to be located, and secondary conservation areas, in which it is suggested that other resources be protected.

While the required amount of open space is 50%, as in the current ordinance, the lower densities coupled with the maximum lot size make it likely that most developments will see, as observed earlier, at least 70% of the total area conserved as open space. What is less easy to determine is the *form* this open space will take under the proposed ordinance. While there seem to be clear benefits to habitat conservation from the greater area retained as open space, several key elements impose limitations on the design of open space for the appropriate conservation of healthy ecosystems and habitat areas. The first is the vegetated buffer requirement of 200' between structures and the road. Additional buffers are newly required on the sides and back of the property if lots are adjacent to existing neighboring houses. Second, as with the current ordinance, 75% of the open space is required to be contiguous. In the proposed ordinance, however, roads are allowed to cross open space without discounting the 'contiguous-ness'. Open space is also required to have a 4:1 length-to-width ratio, and be at least 75 feet wide. It is difficult to understand how this last requirement will be evaluated, as the open space generally follows an irregular shape throughout the property.

One open space design requirement that is original to the proposed ordinance has potentially negative ramifications for the conservation of open space that is well designed for both human recreational use and plant community and wildlife habitat needs. This is the mandate requires that 75% of the lots be immediately adjacent to the open space. The designs that will result from this standard will create much higher edge-to-interior ratios than desirable for habitat conservation. The potential to impact existing natural resources

on the site, particularly through the increased chance of invasive species introduction, is much higher with this form of layout. This standard is driven by the desire to allow all houses to have extended backyards and borrowed views into the open space commons. While this may be an amenable design option on some sites, it conflicts with several other stated goals of the ordinance, including the desire to foster community through clustered residential design, and the desire to allow for open space that serves habitat conservation as well as passive recreation.

The ecological qualities of the open space as well as the 'community' quality of the residential areas remain in question. The following diagram (Figure 5.3) illustrates, on the hypothetical 100 acre property, considered in the absence of conservation resources, several different layout options available given the proposed ordinance.

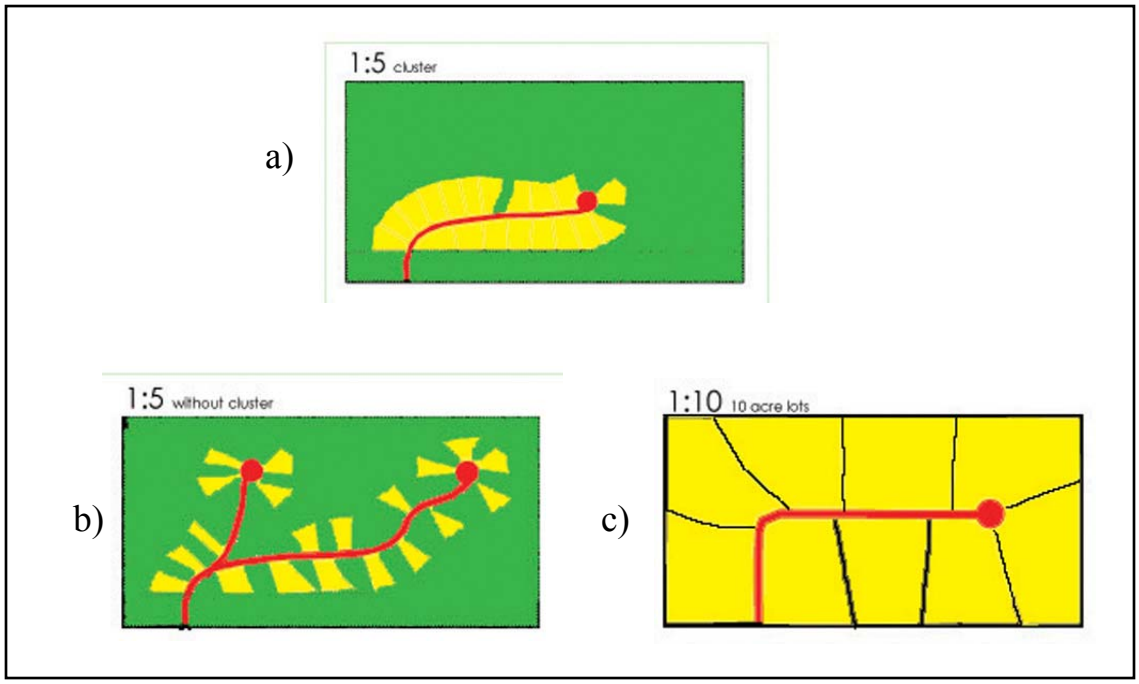

Figure 5.3: Graphic Representation of Possible Lot and Open Space Layout Options under the Proposed Ordinance. Shown are: (a) Conservation-Clustered Option; (b) Conservation-Open Layout Option: and, (c) Standard Subdivision Option.

Figure 5.3(a) shows a 'clustering option', in which 20 1-acre lots clustered on the site, and includes the 200' road buffer. The second also shows 20 1-acre lots, but these are diffused throughout the site. Both sites feature the same lot sizes, lot number and yield the same % of contiguous open space.

In the absence of specific site constraints, both designs are possible given the proposed ordinance and the current market tastes of homebuyers. The market range for property on this site would be quite high, given the fact that only 20 lots will be built and sold the developer will aim for a higher market range to recoup the loss of volume and cover land and development costs. The developer can maximize the sense of privacy and large lot experience by siting the houses in a manner similar to the second image (b), and the only cost will be added road length.[9] Open space requirements can still be met, with possible questions as to the mandated 4:1 ratio. A third 'large acre' option allows standard subdivision development if the lots are 10 acres or larger. While the negative implications of large-lot zoning have been discussed, most members of the development industry do not believe there is currently anything but a small niche market for 1:10 standard, and that development will therefore occur in conservation form if at all.

The buffer requirements and the 75% adjacency requirement conspire to drive the lots towards the center of the site, and encourage a less efficient use of land on the site overall. A good site designer with conservation as well as community goals in mind could execute a site layout that contributed, rather than diminished, from the quality of human and ecological communities on the land. However, the proposed ordinance

[9] Those I spoke to in the development industry stated that the infrastructure costs savings via clustering is overrated. This view was upheld by Kara Hinrichs in interviews she conducted with developers (2001).

handicaps this effort by the inclusion of the aforementioned requirements, and an underlying lack of clarity or understanding about the purpose of the design goals.

Site development: As in the current ordinance, environmental impacts of site development are not addressed adequately. Vague references to 'only clearing vegetation and grading where necessary' leave a great deal open to the interpretation and judgment of the contractor. The issue has reemerged in recent conversation with planning staff and Mayor and Commission in recent weeks. A proposal for the addition of site-sensitive development language has been made, following the continued recommendations of environmental proponents, and planning staff is currently looking for ways to address this in the proposed ordinance. A great many conscientious site developments have built within small construction envelopes to minimize vegetation and soil disturbance, including the UPS corporate headquarters in Atlanta and the Southern Living offices in Birmingham, both built on sites containing mature trees (Wilson1998). Dewees Island on South Carolina limited impact on its residential development to 7500 sq. ft. per lot, on a development project that will disturb less than 5% of the total land area (Wilson 1998). The several conservation subdivision projects in A-CC that have been built, or are currently undergoing construction, have not implemented site-sensitive development techniques in their construction practices. Excessive grading and tree clearing has characterized several projects (Figure 5.4). There are local examples of developments that have not had negative site impacts. Landscape Architects I spoke to sited different reasons for heavy handed site development practices, including roadway engineering requirements, contractor unwillingness, and design challenges inherent in getting

Figure 5.4: Photo of Clearing and Grading at a Conservation Subdivision in Athens (Photo by autho, June 2003).

the maximum lot number onto the available area. Landscape Architect Robinson Fischer designed the office park site that houses his office (Figure 5.5) off Research Road in Athens by siting the building into the existing topography and retaining the natural vegetative cover everywhere on the site that wasn't the immediate building footprint or road. After 20 years, trees within 10 feet of the building are healthy and thriving. Randall Arendt, on a recent trip to Athens, expressed skepticism that trees could be saved close to buildings, but there is ample evidence that this can be done successfully (Waskowski 2001).

There are several ways to regulate the impact of site development. The traditional approach could be characterized as one of damage control. Local and State regulations require erosion control measures to be designed, implemented, and monitored for compliance. Rather than mitigate for soil disturbance caused by cut-and-fill and

vegetation removal, a better strategy is to address the source of the problem. A tree conservation ordinance is one means of limiting site disturbance, and is one more commonly found as a municipal regulation. Tree ordinances can be effective if they are strong, -- too often tree replacements are allowed to mitigate for removal with poor results. Frequently, tree ordinances carry light penalties or are not enforced, causing contractors and developers to factor penalty fees into their costs and develop sites as they wish. Andy Wasowski, in his book The Building Envelope (2001), sites numerous examples of "construction envelope" strategies, in which developers are limited to

Figure 5.5: Photo of Site Sensitive Design and Construction by Robinson Fischer Associates (Photo by author 2003).

impacting only a defined area, usually within 20'of the building outside the actual footprint of the building. It is worth noting, as several commissioners have in discussing their opposition to the clear-cutting and excessive disturbance of sites, that older subdivisions in Athens were frequently developed with an aim to preserving the topography and vegetation of the site. As one commissioner said, "You can't tell me that's impossible to do! They did it in my neighborhood thirty years ago…why can't they do it now?" (Federation of Neighborhoods meeting 2003).

Finally, local developers could stand to get savvier about the economic returns to be had from a site with intact vegetation and mature trees. There is a glaring need to address site construction impacts in the proposed ordinance, and clear evidence that doing so is not only possible but will provide economic returns for the developer. Construction envelopes point to one viable strategy for approaching this problem, but care will need to be taken to identify any impediments in local building codes and particularly road building requirements.

Community Based Planning

The current ordinance does a much better job at addressing current problems with the planning process. Chapter Four's discussion of the planning process under the current ordinance identified two major areas of concern. The first of these was the lack of transparency for the developer and designer as they sought project approval and moved through to an unpredictable outcome in the special permitting process. The second concern was that area residents and neighbors had no input in the design process until it was effectively too late, putting them in the position of opposing the project altogether rather than negotiating changes. Both of these issues are addressed in the proposed ordinance. The proposed ordinance makes the approval process use-by-right, meaning the project need only be passed on by planning staff and planning commission, but is not subject to a vote by Mayor and Commission. This would, in the eyes of many, depoliticize the process, and make the outcome known. Most if not all of the stakeholders and advocacy groups at the table agree that use-by-right is desirable, given a good ordinance. Several elected commissioners, however, object. Despite broad stakeholder support for use-by-right, because final approval lies with the Mayor and

Commission it is possible that this feature will be excluded in final vote. It is possible that Mayor and Commission will compromise with a sunset clause, in the procedure would revert to use-by-right at after a predetermined time. Another major feature of the proposed ordinance is a 'front loaded' participatory design process. Adjacent residents would be notified, as well as commissioners, planning commissioners, and area land trusts, of the project proposal. A 'site walk' on the property with the above parties (excepting area residents due to liability concerns from the A-CC legal representative) will be held, and participants will discuss the site design possibilities.

Rural Preservation

The proposed ordinance will better serve the protection of rural character in the AR. Conservation Subdivisions are acting in part as a growth tool, and the lower densities will keep development out of the AR in the short term. Whether the market and developers will favor the standard development at 10 acre lot sizes option over the greater lot yield/smaller lot size of conservation developments is still a debated question. Most of the development community I spoke to feel that the 10 acre lots were a niche-market only, and that few buyers could afford such large-acre properties. If developers determine there is a greater payoff from ten 10 acre lots than from twenty 1 acre lots, this would certainly impact the amount of open space that is retained in the AR. The commonly held concept of rural character allows for ten acre lots, but there are already examples of 'estate' developments on some properties in the county that do not accord with the visual aesthetics of rural character. Many in the development community also believe that even with the density bonus, 1:5 as a conservation subdivision currently has a relatively low marketability, as the price of land and development would lead to very

exclusive housing rates in these developments. For example the project proposed at Morton Road and Old Lexington featured 189 houses at a 1:1 density, and the sale price for these homes was in the $200,000 range. If only 41 houses were to be built, assuming land prices remained steady, the houses would need to sell for more than twice the previous figures, at minimum. What is more likely is that land prices will drop, and potential sellers will 'sit' on their land until values increase. A fair number of property owners in the AR own their land outright, and so for them development may prove viable. It is fair to note that many in the development community did not feel conservation subdivisions would be marketable the first time around, mainly due to unfamiliarity with the concept.

If development in the AR does prove unmarketable for the near future, does this further the goals of the land use plan? In some ways it does. The AR would serve as a temporary urban growth boundary, directing growth to areas of the RS zones, most likely in the greater ring of Athens just inside the AR. At the same time, the counties surrounding Athens will continue in their current trend, encouraging development of both commercial and residential growth along county lines (RDC 1997 Future Land Use Plans for Northeast Georgia). Rural character and open space will be maintained for a while, while growth builds up on either side of the greenbelt.

Alternate Futures for the AR

Several alternate futures are possible though none are knowable. Most of the possibilities suggested here were asserted by different individuals, all with knowledge of development and local markets. In one scenario, population growth and development pressure, in concert with a swing in the local political pendulum back to property-rights

oriented commissioners will lead Athens to reconsider development densities and increase the underlying zoning in the AR, spurring development. These developments may or may not include conservation goals. In another scenario, as Athens fills in and development builds just outside county lines, the value of the land will increase to the point where low density conservation subdivisions become marketable. In the opinion of one area landscape architect, the intent of Fregonese-Calthorpe in the design of the Athens Future Land Use Plan was just this: to effectively use the AR zone as a "land-bank", spurring smart growth infill in the short term while holding land for development in the future, much like an Urban Growth Boundary. This theory has been disputed by others who also participated in the Comprehensive Plan process, who do not believe there was a "hidden agenda" behind the greenbelt, while admitting it could inadvertently act in that way (personal communication with Planning Commissioner 2003-B).

Another scenario considers the future application of additional planning tools such as Transferable Development Rights, in which property owners are allowed to sell the development rights as 'credits', which are then transferred to another area more suitable for development. Somewhat higher density areas within the AR, such as the proposed "RR" zone at 1:2.5, might accompany a TDR program, allowing property owners to recoup more value from their property, while locating development into more suitable locations. The potential viability of a TDR program in Athens is an open question. The current elected body has expressed interest in exploring its feasibility, and the Mayor has spoken of the intent to pursue the issue after the current process of revising the ordinance is completed. The most promising aspect of TDRs is the stated interest expressed in this community at the grassroots for the concept, at least in theory.

I believe TDRs are potentially a better solution for the rural areas of Athens-Clarke than are conservation subdivisions. They direct all growth to more suitable locations while returning fair value to the property owner (Pruetz 1997). It is easier to achieve contiguous tracts of land being placed under easement with TDRs, rather than properties with a mix of greenspace and scattered houses. The Achilles heel of TDRs has always been the determining of the "receiving zones", or areas into which development might be directed at higher densities. Local opposition to those near receiving areas can be acute. If TDRs are to succeed in Athens, the planning process that leads to them must be based on the active participation of neighborhood organizations. The implementation of neighborhood planning units, (NPUs), for which there is currently local interest, should take place prior to actively investigating TDRs.

Summary Recommendations

The following recommendations are a summary of changes I advocated during the redrafting of the ordinance. Athens Grow Green, Athens Land Trust, and Oconee River Land Trust worked with each other on recommendations as draft revisions were made, and I was party to this effort. I particularly advanced an argument on behalf of a one-acre maximum lot size (Figure 5.6), a construction envelope (Figure 5.8), and spoke against a standard development alternative, the inclusion of 'impoundments' in the open space, the requirement that lots adjacent to existing subdivisions be of equal lot size (Figure 5.9), and open space design standards that would result in poorer quality open space, namely the 75% adjacency requirement. The inclusion of a Map of Existing Resources was discussed early in the planning process but was not promoted as much as it should have

been, chiefly because it fell outside the specifics detailed within the ordinance. I supported several ideas in spirit that I failed to vocally advance, although in retrospect were important. These include advocating for fish-friendly culverts or clear-span bridges where roads cross waterways (Figure 5.10), the removal of curb and gutter requirements, alternatives to standard septic that would allow smaller lot sizes, and the implementation of a graphic pattern book as a guide for developers and designers based on spatial principles of landscape ecology. The following list is divided by the categories used in the evaluation. It outlines first, recommendations I promoted during the redrafting process, second, recommendations that still need to be incorporated in the proposed ordinance, and third, recommendations outside the scope of the ordinance.

1. <u>Recommendations promoted in redrafting process by evaluation categories</u>

Sprawl

- Implement overall densities of 1:10 in the AR, with 1:5 densities developed as a conservation subdivision.
- Remove unbuildable land from lot yield calculation
- Implement maximum lot size of 1 acre with no minimum lot size

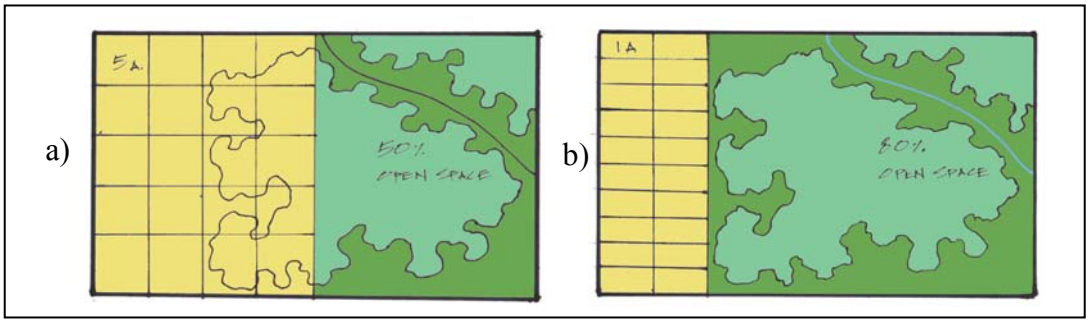

Figure 5.6: Effects of Maximum Lot Size on Conservation Subdivisions. (a) illustrates site layout with 5 acre maximum (or minimum) lot size; (b) illustrates 1 acre maximum lot sizes. Both sites have the same total number of lots (20).

Natural Resources

- Permanent protection of open space using conservation easements as legal instrument of protection
- Implement 'construction envelope' of 20 feet around buildings and roadways, outside of which no disturbance to topography or vegetation will occur.
- Require open space areas to be identified by conservation resource type on all plats and text references to site; i.e. Woodland habitat, Agricultural Uses, Scenic, and label specific isolated resources such as vernal pools and specimen trees.
- Require a management plan for the greenspace, where management relates to sustaining the health of the resource being protected

Community Participation

- Include stakeholders in the design process from the beginning. Require stakeholders to 'walk' the property where development is being proposed.
- Make the planning process a Use-By-Right rather than a special permit process

Rural Character

- Implement densities as above
- Distinguish in ordinance between rural character qualities. Address conflicts between 'cluster' ideal and scenic viewshed ideal.

2. <u>Recommendations for changes still needing to be made in the proposed ordinance</u>

- Remove 75% adjacency clause from Open Space Design Standards

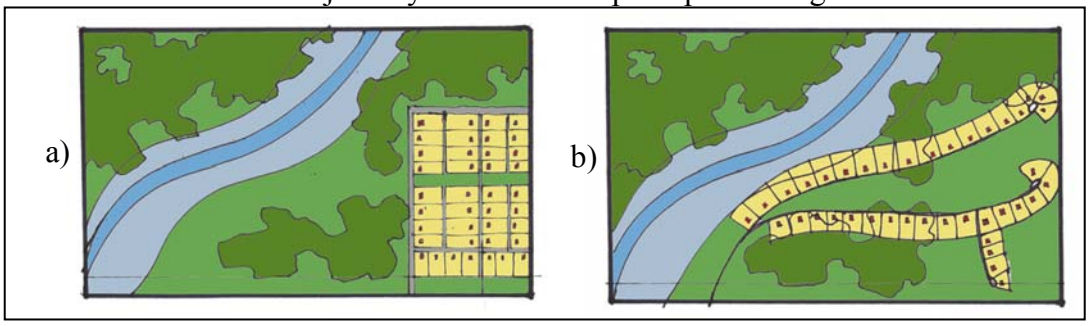

Figure 5.7: Conservation subdivision layout with required 75% open space-lot adjaceny. Shown: (a) layout without 75% adjacency requirement,(b) with adjacency requirement. Both sites have 40 lots.

- Implement construction envelope or similar site-sensitive development clause

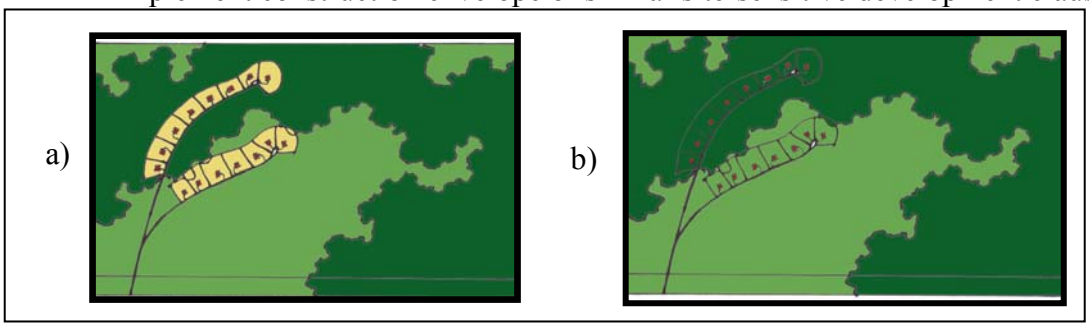

Figure 5.8: Construction Envelope. Shown: (a) current proposal allows site clearing and grading as needed. (b) proposes limiting clearing and grading during construction to areas within ~20 feet of roads and structures.

- Require that lots next to existing subdivisions be no less than half the size of the neighboring lot (rather than the same size or larger)

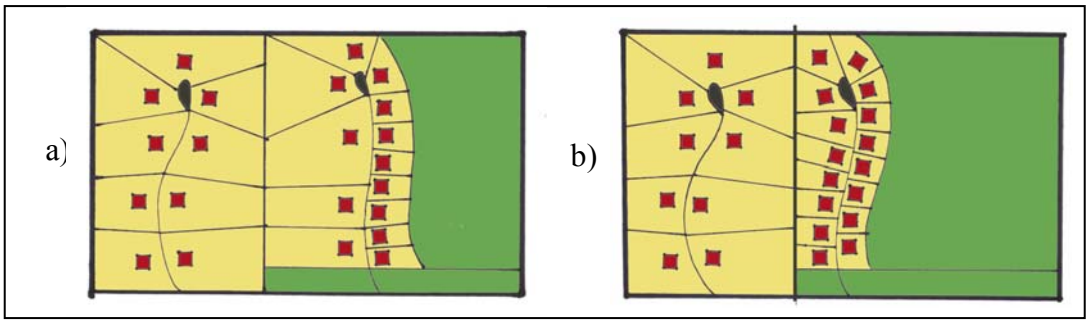

Figure 5.9: Conservation subdivision lots adjacent to standard subdivision lots. Shown: (a) current proposal to require equal or greater than adjacent, existing conventional lots; (b) Adjacent conservation subdivision without lot-size requirement.

- Require that roads crossing streams use bridges or fish-friendly culverts

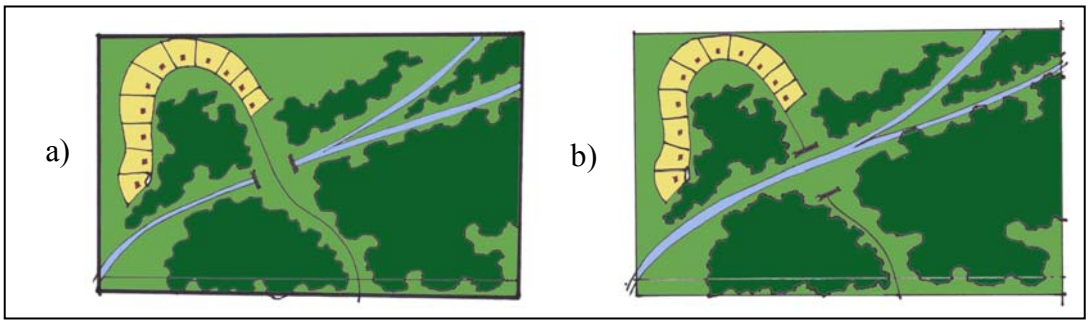

Figure 5.10: Minimizing stream disturbance with road crossings. Shown: (a) conventional culverted stream crossing; (b) clear-span bridge or fish-friendly culvert installation.

- Implement a county-wide map of existing environmental resources that includes vegetation, hydrologic and topographic features overlaid with existing land uses and properties. Use this map to identify potential greenspace networks and the locations of specific environmental resource types to target for protection

3. Recommendations for Government actions outside the ordinance
    - Work with A-CC Public Utilities to allow proven alternative environmental materials or technologies.
    - Work with Regional Health Department to allow alternative wastewater systems
    - Create a graphic pattern book for the planning department to share with designers and developers which illustrates potential design layouts and strategies, and visually describes the site design process. Pattern book should visually describe basic landscape ecology principles for designing spatial arrangements of open space for ecological habitats

While the ordinance details are important to consider, it is easy to become singularly focused on the ordinance minutia as one attempts to reply to each new draft version produced by planning staff. This can make it difficult to reflect simultaneously on the bigger picture. The following chapter steps back from evaluating the ordinance to explore some of the broader issues that affect the use of conservation subdivisions.

CHAPTER 6

BEYOND THE ORDINANCE: ISSUES AND INSIGHTS TO CONSERVATION SUBDIVISION USE IN ATHENS-CLARKE COUNTY

Introduction

My thesis has focused on the conservation subdivision ordinance in Athens-Clarke County primarily because of its timeliness as a community and government planning issue, and because key dysfunctional aspects of local conservation subdivision use rest in the ordinance itself. It is clear that redesigning the ordinance is not the last word on making conservation subdivisions work effectively or of achieving community defined goals for land-use and environmental conservation. Politics, economics, social values, regional forces, and many other factors act in concert with local land-use and can impact the use of conservation subdivisions and the realization of community goals with great force. Lowering the densities in the AR is not necessarily the solution to stopping sprawl or gaining greenspace for ecological or public use. But it *is* likely to slow growth in the AR until land prices and market forces catch up. The Athens community and government need to understand this as an opportunity: a window of time for exploring ways to integrate healthy and functional greenspace back into our community.

To contend with the issue effectively, four issues must be addressed. First, the community must recognize the cultural values that drive design. Second, planners, designers, land trusts and the community need to move beyond the 'cordon and conserve'

model of land protection and take up active stewardship if conservation objectives are to be met in the future. Third, greenspace conservation needs to be considered at county and regional scales. Finally, the ongoing process of land-use planning and management must be understood as a heuristic process with the community as leaders.

The Role of Cultural Values as Drivers of Residential and Greenspace Design and Planning

Different open space areas serve different kinds of conservation resource needs, and require different conservation strategies for their design as well as their management. Integrating this principle into practice in the design and stewardship plans for different properties is challenging and not currently being practiced in most landscapes in Athens and elsewhere. 'Rural-character' preservation is the primary driver of open space design in A-CC. Many ambitious objectives are expressed in the list of purposes in the proposed conservation subdivision ordinance. Consider the following "purposes" selected from the fourteen listed in the proposed ordinance (A-CC Planning Dept. 2000, section 9-27-1:

- Preserve in perpetuity unique or sensitive natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands, and wildlife habitats.
- Encourage interaction in the community by clustering houses and orienting them closer to the street, providing public gathering places and encouraging the use of open space, play areas, and community facilities as focal points in the neighborhood.
- Conserve scenic views and reduce perceived density by maximizing the number of houses with direct access to, and views of, dedicated Open Space.
- Protect prime agricultural land and preserve farming as an economic activity.
- Protect the character of surrounding neighborhoods and the quality of life of adjacent residents.
- Require interconnected greenways and corridors throughout the Athens-Clarke community.

The treatment of open space in the conservation subdivision ordinance, designs, and design review by planning, reflects a favoring of certain conservation goals over others, both currently and potentially via the revised ordinance. The 'retention of rural character' in practice translates to 'obscuring development from view of roads and neighboring homeowners'. This goal will continue to drive the location of house sites and open space design, to the exclusion of other potential conservation goals. There are several reasons why this is the case. First, preservation of biodiversity is a complex science of ecological spatial dynamics, particularly when overlaid with human uses. The specialized knowledge that could contribute to this end does not currently exist at either the planning level, the land trust level, or the citizen advocacy level. Contrastingly, there is strong common community consensus on the value of scenic views and agricultural vista preservation. The cultural preference for pastoral vistas with a "sense of depth", and "spaced trees and smooth ground" has been well documented (Kaplan and Kaplan and Ryan 1998). Third, an active and vocal constituency of current residents in the AR district is advocating for visual stasis in the vicinities of their homes and local driving routes.

That is not to suggest that it is not desirable for communities to preserve rural character. Rather, it is to submit that the impetus to conserve rural character is driving planning and design to the exclusion of other conservation goals. This is largely because scenic vistas are an aesthetic recognized as a common cultural value, whereas the ethic of conservation and the landscape aesthetic of healthy habitats and ecosystems more often are not collective goals. Even when habitat conservation is the goal, a lack of specialized knowledge can hamper efforts to make effective design or planning decisions. The

potential opportunities to conserve or even restore habitat and species diversity to sites will be squandered if greenspace design and management fail to consider multiple conservation goals. A comprehensive greenspace plan, as addressed later in this chapter, can assist in differentiating between various open space types, and matching different conservation categories to specific land parcels.

What is the current process for determining site layout and resource conservation? The proposed conservation ordinance establishes a design process that tries to address the need to design for specific site resources, be they pastoral views of farm fields, wildlife habitats or ancient burial sites. A prepared site analysis map and map of existing resources provides, in theory, the basis for the site design. The Randal Arendt "four step design process" asks the site designer to identify the open space first, and then site the houses, streets, and lot lines (Arendt 1999). This process is intended to encourage the designer to identify the specific open space resource, and design around it. This is a far cry from standard development in which developers design sites in spite of existing resources, but it nonetheless falls short of what is possible.

What is needed is a means of designing layouts for greenspace that are suited to the specific needs of the resource being protected. There are several obstacles to this goal. The first is, as has been stated, a failure to recognize that farms, native grass meadows, and woodlands with walking trails all have different design requirements and different management needs. A Toolkit for the Evaluation of Land Parcels for Green Space Planning (Kramer and Dorfman 2003) is an excellent reference for prioritizing land parcels based on specific natural resource and other greenspace qualities. It is designed as a "toolkit…to facilitate the selection of land parcels to complete the county

green space planning process", and provides means for identifying and ranking land for specific greenspace attributes (Kramer and Dorfman 2003).

The conservation of biological diversity in particular requires specialized knowledge. The optimum design and spatial arrangement of habitat area varies from species to species, as do species' migratory patterns and population movements. The science of landscape ecology has, in recent years, begun to shift its emphasis from the spatial dynamics of species and landscapes in large parks and wildlife reserves, to the landscape matrix of private land. In this country, 27.3% of the land base lies under state or federal control, leaving 72.7% under the control of private landowners (Haeuber and Hobbs 2001, 272). The recognition that ecological processes happen at spatial scales that are larger than even significant reserve areas has led land managers to see the limitations of the 'cordon and conserve' strategy (Haeuber and Hobbs 2001, 272). The *SLOSS* debate over patch scale arrangement (single-large-or-several-small) is becoming moot, as we increasingly recognize that both are necessary (Meffe and Carroll 1997). As Leslie Sauer observes, "no single site can preserve biodiversity, but the gradual accumulation and linkages of such sites can build up populations…the biodiversity crisis is here in our backyards and parks" (Sauer 1998, xvi).

A community Comprehensive Plan that recognizes the need for greenspace in is an important first step, but we are missing a spectacular opportunity when we focus on simply accumulating open space rather than planning for open space to fulfill specific objectives. Environmental planning has come a long way. Zoning codes addressing 'wildlife corridors' and 'contiguous open space' were unheard of a short time ago. But planners and designers are still confused about what is being protected and why. Because

meshing habitat conservation needs with human communities is a complex task, designs and plans that deal with 'open space' tend to focus on open space goals that are clear, that speak to cultural aesthetic ideals, or that have outspoken community advocates. There is a pressing need to counter this trend by a) recognizing how cultural and aesthetic values influence our priorities about land conservation, and b) engaging professional expertise and scientific knowledge about designing and planning for ecosystems in human modified landscapes. An excellent resource on this topic is "Wildlife Habitat Design in Urban Forest Landscapes" (Raedeke and Raedeke 1995).

Both the current and proposed conservation subdivision ordinances in Athens reflect a propensity toward scenic goals to the detriment of ecological health -but human community 'health' can also suffer. Well planned and designed communities that are human-scaled and foster, rather than discourage, social interaction can be discouraged because of the predominance of rural character values. Although the two ordinances both state the 'intention to foster community through residential site design that favors the clustering and street-orienting of houses', designs are unlikely to take such forms.

There are many efforts to effectively measure and map the spatial elements and dimensions that foster healthy lively communities and neighborhoods -- a sort of human-cultural landscape ecology. This interest has given way to what is called 'traditional neighborhood design' (TND), to the point where local zoning codes are being revamped to allow for or encourage these spatial arrangements. The community benefits that are recognized in these design types, however, are challenged when confronted with the paradigm of rural character. Again, the preservation of status-quo viewsheds and formerly farmed fields trump the kind of lot scale and street-grid that describe TNDs.

"Protecting the character of existing neighborhoods and the quality of life of adjacent residents" will drive the site designs of conservation subdivisions away from other viable conservation goals; specifically layouts that might favor species that require habitats to spatially reflect larger mass-to-edge ratios.

Scenic and pastoral vistas from roadways clearly have preservation value. However, current biases towards scenic roadway vistas must be recognized as being the cultural 'default' setting for design. Then it will be easier for community and ecological goals to also be reflected, where applicable, in the designs and management plans of conservation subdivisions. A giant step forward towards achieving this objective would be to develop a county (or better yet) regional 'Map of Potential Conservation Areas', as discussed later in the text, and allow this to guide the identification of different conservation resources and application towards design and planning projects.

The Role of Land Stewardship

Land trusts, as potential receivers of conservation easements, are in a unique position to influence and educate government planners as well as private landowners about design that enhances biodiversity. Land Trusts and environmental groups have been in the vanguard of supporters for a tighter ordinance, such as the one now being proposed. Frustrated by the environmental impacts to sites during construction, and a recognition that densities under the current ordinance were making good site design difficult, they have been at the table advocating for changes. Land trusts, as the arbiters of conservation, are the natural advocates for measures to conserve biodiversity. In working with members of local land trusts, the author found members to be earnest,

engaged, and hardworking in their effort to foster the restraint of development rights on area properties through easements. At the same time, individuals with specialized ecological habitat knowledge, such as conservation biologists or landscape ecologists, were absent from the active board in my brief experience with them. An active-management perspective was also distinctly absent, in part due to financial restrictions but due in equal part to an adherence to a 'cordon and conserve' landscape *preservation* paradigm. This is another lost opportunity. Financial limitations are a difficulty, but one possible tool mentioned by Randall Arendt seems feasible. He recommends granting a density bonus of several additional units in a project, with the net proceeds from the sale of the house/s going into an endowment fund that would generate a source of income for land trusts to use for active stewardship efforts. This was suggested to members of the land trust board, but there was resistance to the idea of additional houses.

Land trusts are also in the position to both sustain healthy landscapes and redirect the trajectory of disturbed landscapes through their management activities. The current thrust of land trusts is more one of monitoring and enforcement; making sure only permitted uses of the land are taking place on it, and being prepared to legally defend land easements from potential future challenge. From this standpoint, the easement holders and the open space owners –the residents of a conservation development- are potentially squared off against each other rather than collaborators on behalf of sustaining the health of the total landscape. The potential for fostering a land ethic among the residents of conservation subdivisions is high if members of the community actively engage in the management of the greenspace areas (Sauer 1998). Conservation subdivisions give land trusts a unique opportunity to educate communities about land

conservation, not through leaflets or strict use regulations, but by integrating the community into active restoration activities in their landscape. If anything, this is one of the most compelling arguments for conservation subdivisions as a broad concept: the possibility of reversing the suburban trend of estranging humans from natural elements and processes and reforging their connection to the natural world.

Land trusts are not the only possible agent for this role. Some municipalities, such as the City of Bellevue in Washington State, have proactive government parks and recreation departments (Springgate and Hoesterey 1995). Springgate and Hoesterey write of the role of public education and stewardship as integral to the viability of Bellevue's' urban forest and parks, where "community and urban forestry programs are sustainable only when public support, funding and community involvement is nurtured as carefully as the systems we wish to preserve and restore"(American Forests 2003).

Land trusts and the Athens government each have roles to play in this regard. Land trusts are flexible and responsive, can make creative use of human knowledge and skills, and are motivated by a strong conservation ethic. Governments have stability, the capacity to coordinate action on different scales, and the legal ability to assess revenue generating measures for land acquisition and stewardship. The new A-CC *Environmental Coordinator*, a staff position recently funded by the local government, would be an excellent person to address this new mandate. Land trusts and local governments working together would be better positioned to advance local conservation efforts.

Integrating the Use of Conservation Subdivisions into a More Effective Greenspace Planning Framework

Greenspace Planning and Environmental Resource Conservation in A-CC

For conservation subdivisions to fulfill their potential they must be part of a larger framework of greenspace planning within Athens-Clarke County and the wider region. A-CC drafted a community greenspace plan in 2002, but it has several weaknesses and has never been well integrated into practical planning efforts. The plan was developed to participate in the Georgia Governors Greenspace program; a program instituted in 2000 (and currently unfunded for FY 2004) to grant funds for land acquisition to rapidly growing counties to designate 20% of their county area for greenspace conservation. A-CC identified 954 acres as currently protected greenspace, out of 15, 567 acres total needed to make the 20% mark. The plan suggests multiple strategies for conserving land, including a TDR program, SPLOST funds for land purchase, an extension of the current Greenway system, and conservation easements. An Environmental Areas Ordinance, passed in 2000, identifies floodplains, wetlands, and groundwater recharge areas, and accounts for over 5,000 acres. However, TDRs and open space zoning in the AR zone form the backbone of land acquisition sites described in the A-CC plan.

There are several weaknesses with the current plan. First, it fails to establish clear categories for conservation types. "Non-Programmed Recreation Space" (which can be publicly or privately owned) and "Private Greenspace" are two large conservation categories encompassing roughly 7,000 acres total. (River Corridors, Groundwater Recharge Areas, Educational or Special Uses, and Archaeological/Historic define the other categories). Corresponding maps (See Figures 6.1-6.2) show existing and future potential conservation areas, shown as green-colored swaths in rural and suburban areas.

The A-CC greenspace plan is currently focused on quantity to the exclusion of quality, and does not provide for a means of linking specific conservation resources with specific properties or land parcels. It works by simply identifying available acreages in an attempt to generate a 20% total area. The Governor's Greenspace Plan recognizes that communities will not be able to target only higher quality landscapes, but it is in the county's best interest to take a more knowledgeable and deliberate approach to greenspace planning. Again, while there are some natural resource values served simply by holding land from development, creating or sustaining environmentally healthy and socially meaningful places requires another level of intent and planning.

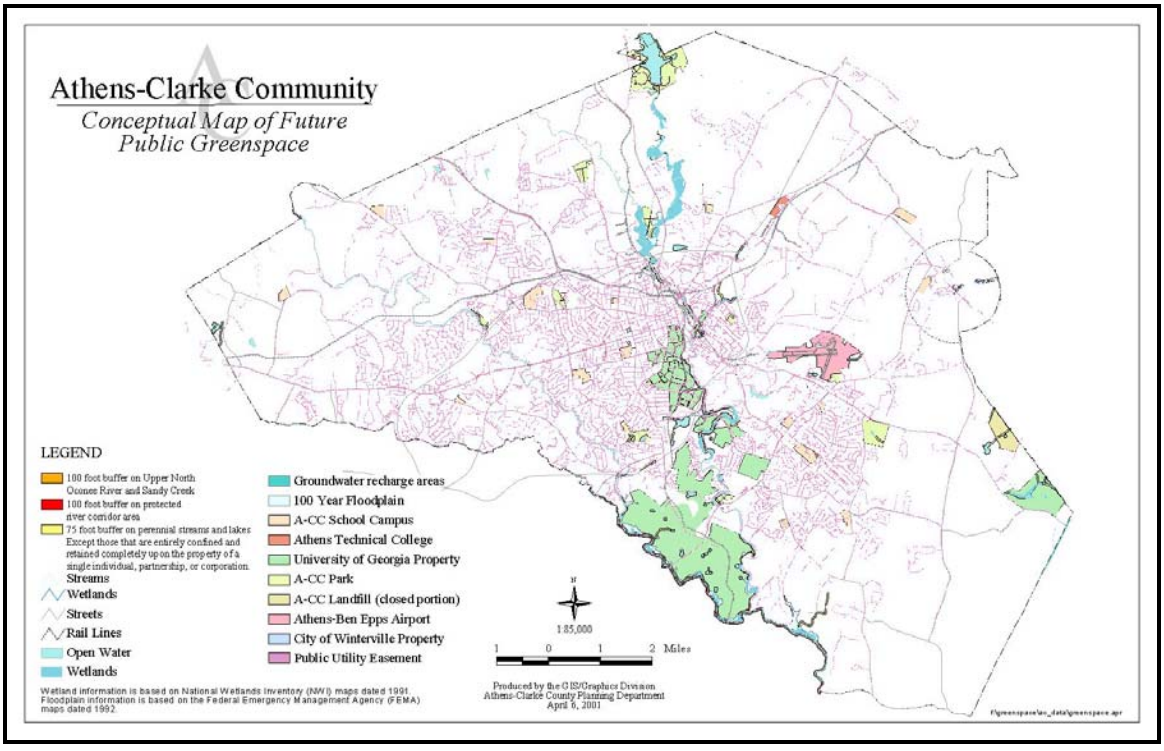

Figure 6.1: Conceptual Map of Future Public Greenspace in A-CC (A-CC Planning Department 2002).

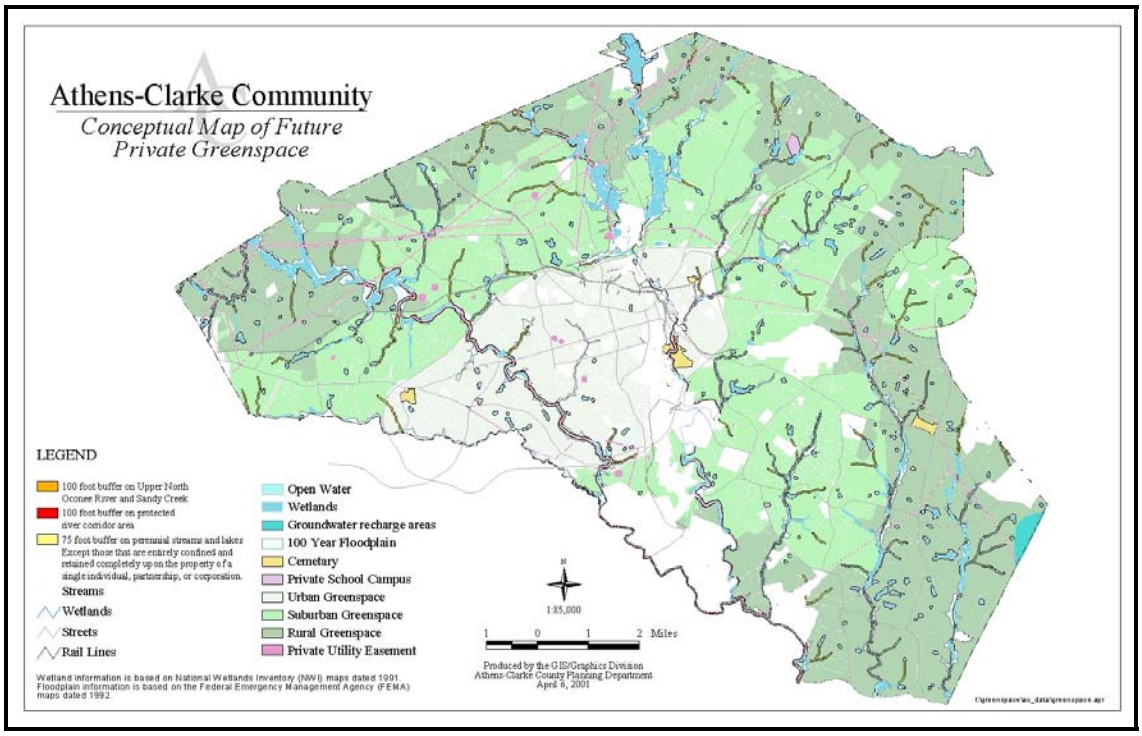

Figure 6.2: Conceptual Map of Future Private Greenspace in A-CC (A-CC Planning Department 2002).

The community, planning staff, and government, are fooling themselves into thinking that coloring the map green (See Figure 6.1) is the same as conserving and maintaining. Other countywide efforts have also addressed greenspace planning. The Athens Greenway Commission has worked tirelessly (it is now over 30 years since the initial concept proposed by Charlie Aguar) to create a county-wide master plan of public recreational greenways, with connecting bike-pedestrian hubs to city parks of different scales. These plans, many of which were designed by students in the School of Environment and Design, used buffered corridors along the North Oconee and Middle Oconee Rivers to define the location of the Greenways. Property owner opposition in some neighborhoods to the adjacent proposed greenway scaled back some segments of the plan, at least for now, while in-town segments are currently going forward with local SPLOST funding. The recent opening of the first segment of the Greenway, linking

downtown Athens to Sandy Creek Park, has the potential to shift sentiment in favor of its future extension. City planners could work to build on or support the greenway master plan.

Greenspace Planning: Regional Examples and Regional Scale Planning

Several regional examples suggest potential alternatives to A-CC's current strategy towards county-wide greenspace planning, and also point to the potential for multi-county regional planning. Jackson County, as part of the Georgia Greenspace Program, prepared a greenspace plan that identifies a range of specific protection priorities and conservation resources types ranging from agricultural to scenic to recreational to wetlands and floodplains. Conservation categories are mapped by category, with specific planning and acquisition tools are identified for each category (Jackson County Greenspace Plan 2000). Gwinnett County, with assistance from UGA's Institute of Ecology Office of Public Service and Outreach, developed an award-winning "Open Space and Greenway Master Plan". This plan also identifies greenspaces by "target "categories and identifies and maps these by type. The plan includes the prioritization of parkland in urbanized areas, "prime wildlife habitat" areas, and even "restoration of stream banks in urbanized areas", among others (Gwinnett County 2003). Conservation and planning tools are identified, along with potential funding sources.

There is a great need to address greenspace conservation at a regional planning scale. For Athens-Clarke and the surrounding counties this represents a challenge, although not one as necessarily formidable as regional land-use or transportation planning. The Upper Etowah and Lake Allatoona Regional Greenspace Initiative (Boring et al. 2001) is a proposed project that suggests ways to address watershed-scale

greenspace planning across county borders. The plan documents layers of varied conservation resources across the watershed, from habitat corridors to floodplains to steep slopes. It goes beyond data collection and planning tool identification to "work for inter-jurisdictional cooperation and planning" among counties in the watershed. The plan identifies PDRs and TDRs as planning tools that lend themselves to inter-county planning better than conservation easements. This resulted in the implementation of conservation subdivision "corridors", within which any new development was required to cluster residences and dedicate greenspace via PUD or Conservation Subdivision zoning overlays. Such corridors, following rivers or other geographic features, could run across county lines, potentially resulting in connected greenspace bands.

Regional planning will be a challenge for Athens and its neighbors given a disparity and often conflict of interests. Despite this, greenspace planning, when implemented with incentive-based planning tools, stands a decent chance if county leaders can see the future benefits from such present day action. Certainly more and more municipalities are becoming savvy to the economic benefits that accrue to their communities when they prioritize such planning measures (Trust for Public Land 2003) (Nelson 2002). The planning strategy implemented in the Etowah project could be applied to the Upper Oconee Watershed through a joint partnership venture between A-CC and the University of Georgia (See Figure 6.3).

Community Map of Existing Resources

Randall Arendt, in his review of Athens-Clarke County's Conservation Subdivision Ordinance and Comprehensive Plan, identified the 1:1 underlying densities as a problem, and made several other suggestions about the planning process (Arendt

2003). However, there was one additional point he emphatically made beyond this: the need "to supplement the Comprehensive Plan to include a 'County-wide Map of Potential Conservation Lands'"(Arendt 2003). The purpose of such a map is to clearly identify the many conservation potentials and resources of both public and private land: not merely their general locations as the current A-CC greenspace maps do. When overlaid with current property parcel boundaries and land uses, it can produce "an extremely useful working document that shows the pattern of resources in relation to undeveloped properties -which is where future changes will occur" (Arendt 1999). Such a map is also useful to designers, who are able to view the larger landscape context within which they are designing.

Athens has recently created the Environmental Areas Map (Figure 6.4), showing groundwater recharge, floodplain, and wetland areas for use in planning decisions. It also has the current protected greenspace map created as a component of the Community Greenspace Plan. It would be a natural step to layer these, and then add wildlife habitat, vegetative cover, productive farmland, woodlands, and historic and archaeological features, all set on a basemap showing roads, properties and land uses. This more comprehensive document could serve as a guide for future development plans as well as proactive community land acquisition. In Arendt's words, "the principle purpose of this is to establish an overall structure for the open space network, and to show everyone how the open space in any particular, individual subdivision would fit into this broader framework" (Arendt 2003).

Finally, such a document, when incorporated into the Comprehensive Plan, can serve as a legal basis for zoning and planning decisions. The ideal effect of such a

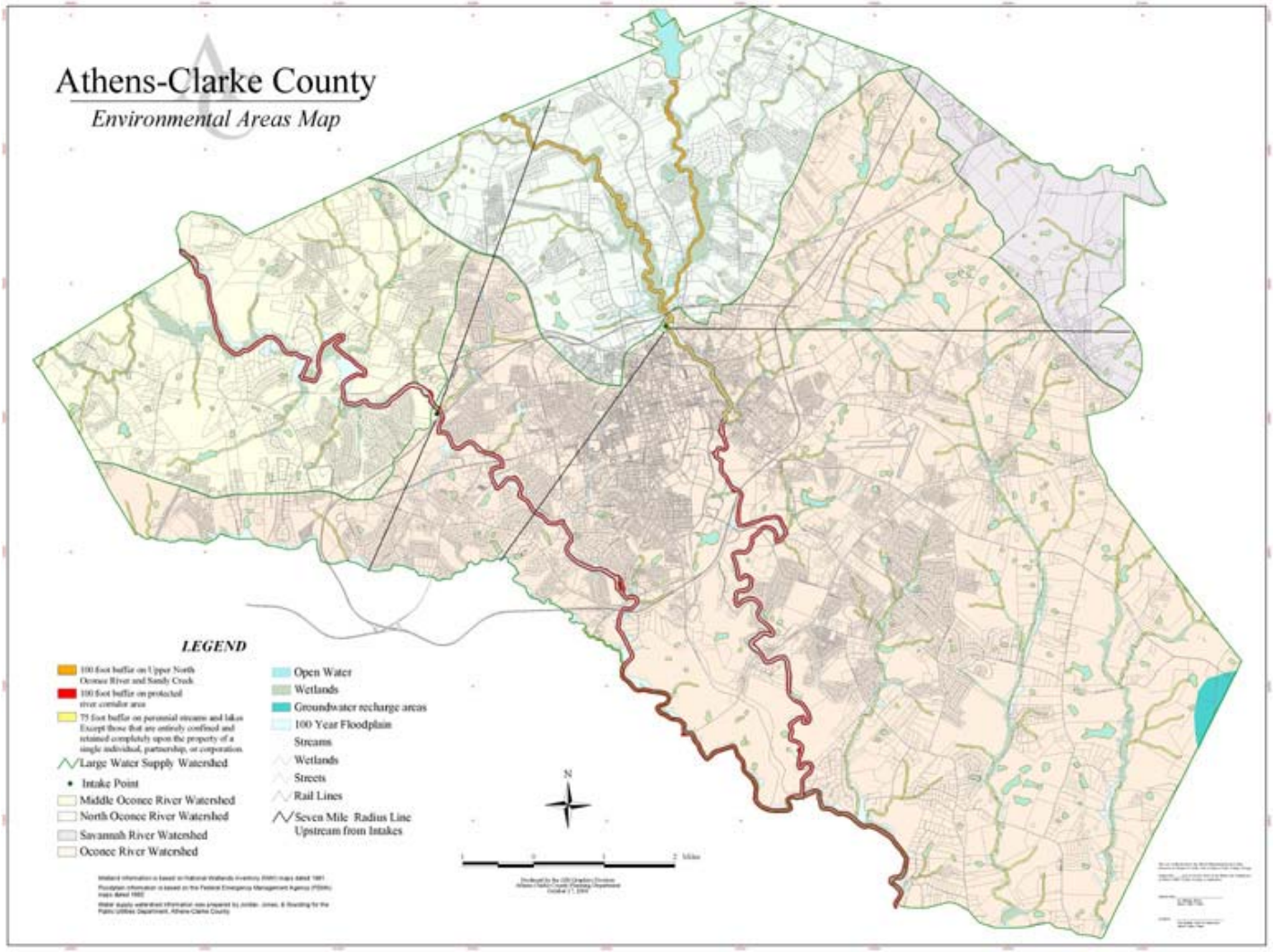

Figure 6.3: A-CC Map of Environmental Areas

Figure 6.4: Upper Oconee Watershed Land Use Map (NARSAL 2003).

planning strategy would be its potential to simultaneously guide informed greenspace networks while also guiding smarter patterns of growth in the built environment. While consideration appears to have been given to most of Mr. Arendt's comments, the incorporation of this most basic master planning element was not addressed in the revised/proposed ordinance pending approval.

Summary

Conservation subdivisions are a planning tool that can be used to reduce development pressure, allowing the AR to act as a greenbelt and urban growth boundary. The proposed ordinance will have this effect where the current ordinance does not. However, conservation subdivisions have the potential to work on a larger greenspace-planning scale. This is not a goal well served by either the current or proposed ordinance, which do not distinguish within the general category of "open space" nor work towards conservation goals at appropriate scales. To allow conservation subdivisions to function better in conserving and sustaining natural resources, planners and the community as a whole will need to understand green resources at a finer scale while planning for them at a larger scale.

The creation of a map of 'green resources' at a county-wide or watershed level will be a huge leap forward towards conserving meaningful resources in this county. Cultural aesthetics that favor the scenic landscape over the ecologically healthy one will also need to be addressed: the environmental education of future landscape designers and planners is an important step towards this difficult objective. Finally, the landscapes that are conserved will need to be knowledgably designed and actively managed for

ecological goals, if they are to retain their structure and function in a matrix that overlaps with existing and future cultural uses.

CHAPTER 7

CONCLUSION: A REFLECTION ON THE LIMITS AND POTENTIALS OF CONSERVATION SUBDIVISION USE

This conclusion adopts the perspective of counties and municipalities considering the use of conservation subdivisions as a planning tool for balancing development and natural resource conservation. It draws on lessons learned from Athens-Clarke County as a specific planning case-study, and identifies broad issues that must be considered in order to understand and appreciate both the limits and potentials of conservation subdivisions.

Conservation subdivisions as a site-sensitive development practice

Conservation subdivisions can function on several scales, and communities need to appreciate how these scales are different in order to use conservation subdivisions effectively. The first scale is that of the individual property. Here conservation subdivisions represent a site-sensitive design approach: way to design a site which is already zoned for development by minimizing the development 'footprint', retaining a portion of the site for the conservation of natural resources, and retaining the property's full economic value. To take full advantage of on-site resource conservation, planners and designers need to appreciate, and be able to identify and design for, the different resource opportunities that different sites will present. Counties wishing to use conservation subdivisions as a site-sensitive design tool would do well to adopt Randall Arendt's site design guidelines which first identify a site's conservation resources, and

second design for the locations of built features. Designing a site for specific conservation resources is new to most designers and developers, and local governments should consider working with conservation ecologists and landscape architects to develop a "pattern book" describing different design approaches for different conservation contexts. Counties wishing to allow natural resource-conscious development should think beyond the planning and design of these developments and consider mitigating the impacts of the construction process itself by including resource-conscious practices such as 'construction envelopes' or strict guidelines on site clearing and grading. Finally, the management of greenspaces in conservation communities over time should also be considered by local governments when adopting this tool, as ecological community health over time will not be well served by protecting and then neglecting these landscapes. Local government planning staff should recognize and support area land trusts as an excellent resource for this function. Land trusts, working with environmental professionals, can assist in designing management plans and in engaging the residents of each conservation subdivision in ongoing education and stewardship.

Conservation subdivisions as a county-wide growth and development tool

Conservation subdivisions also function on a second and broader scale as a planning tool, and for this reason must be used in coordination with a county's comprehensive growth plan. On this larger scale, conservation subdivisions can act as a planning tool for 'building in' greenspace and natural resource conservation as development and growth occurs. Counties considering this planning tool should recognize that conservation subdivisions are not -- when used alone -- an effective tool for countering sprawl. Yet conservation subdivisions can be combined with other

planning tools, such as low-density zoning as in the case of A-CC, to realize other goals such as the preservation of rural areas. Down-zoning in rural areas can also serve a smart growth agenda by making rural or greenfield development economically unfeasible, and hence redirecting growth back towards the center of the county.

For conservation subdivisions to effectively provide for both contiguous greenspaces and higher quality resource conservation, the use of this and other tools must be part of a larger greenspace planning framework. The key element in this framework is the Map of Existing Resources (Arendt 2003), which should form the backbone of all design and planning decisions. This Map, ideally created in GIS, should reflect the qualities and complexity of existing natural resources by types, in a useable format. It should consist of natural resource layers combined with existing land-uses and property lines, and serve as the chief tool for targeting appropriate sites for future greenspace and future development.

Conservation subdivisions as one tool in the planning toolkit

Community planning goals must be clear. If the intent is to exclude future development from an area, or protect large contiguous areas without the fragmenting effects of even small numbers of residential clusters, then planning tools other than conservation subdivisions may be more appropriate. 'Urban growth boundaries' are legally challengeable and are a better tool for managing short-term smart growth than long-term natural resource conservation. Transferable Development Rights programs are more difficult than conservation subdivisions to initially implement, but may be more effective at conserving larger land areas, and for this reason are a more effective tool for preserving agricultural landscapes (Pruetz 1997). Counties wishing to conserve

greenspace for the recreational use of the general public should also look to tools other than conservation subdivisions, in which concerns over privacy intrusion and landowner and easement holder liability may factor. Public greenspace should be part of county natural resource conservation planning, but may be better planned through right-of-way purchasing or fee-simple land acquisition.

Conservation subdivisions in regional greenspace planning

Counties wishing to use conservation subdivisions as part of their 'toolkit' for balancing growth and environmental resource conservation must ultimately consider a regional framework for planning. Patterns of long-distance commuting and regional job centers have made it impossible to address sprawl and other poor land-uses in a county-by-county fashion. Municipalities are increasingly recognizing the cost-benefit of conserving greenspace in their communities, as the relationship between 'quality of life' and the economic vitality of a region are increasingly acknowledged. For this reason, multi-county and watershed-scale greenspace planning may be more quickly recognized by neighboring counties as a place to start regional planning.

The role of community in conservation planning

Counties and regions looking to employ planning tools and other strategies as a means of staging conscientious development patterns and conserving natural resources must engage the community in planning efforts. Successful communities, both nationally and regionally, have community-based planning as a shared feature in common. As the Athens-Clarke County case study demonstrated, including the community and stakeholders in planning is not just a means of garnering input and support for a specific plan, although this is clearly important. It is also a means of effectively creating an

educated, interested and vocal support system for the goals behind whatever planning tools are implemented. In an ideal world, planning objectives would be met after a specific tool was decided upon and implemented. However, there are far too many context-specific variables to allow even seasoned planners to predict how a tool will "work" when it is dispatched into a community. In fact, it is far more likely that a tool will have to be modified, or even revisit the drawing board, before its performance will match expectations. The community, in this regard, functions in part as a 'watchdog' but in a larger sense as a 'steward': keeping an eye on original goals while managing tools to be consistent with objectives. Planning that is community-based, takes an incremental approach, and integrates new knowledge into future strategies, is the best available formula for success, whatever the goals may be.

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APPENDIX A

A-CC COMPREHENSIVE PLAN GUIDING PRINCIPLES

(Source: A-CC Comprehensive Plan, 1999)

GUIDING PRINCIPLES, OBJECTIVES, STRATEGIES, AND POLICIES for the Athens-Clarke County Comprehensive Plan

Adopted on November 3, 1998and Later Adopted on June 15, 1999 as part of the Athens-Clarke County Comprehensive Plan

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Introduction

Based on the results of the Visual Preference Survey, and the findings of each planning element prepared by Athens-Clarke County Planning Staff, a set of Guiding Principles, Objectives, Strategies, and Policies was developed. This portion of the Comprehensive Plan process was facilitated by Connie Cooper of the planning consulting firm of Cooper-Ross, sv, of Birmingham, Alabama.

The Guiding Principles are broad, community-wide "need statements," designed to encompass a variety of related issues. These related issues are referred to as Guiding Objectives, which are specific items that need to be addressed. The Guiding Strategies are the methods identified for addressing the Guiding Objectives, and the Guiding Policies are the specific action steps that are recommended to implement the Guiding Strategies.

GUIDING PRINCIPLES, OBJECTIVES, STRATEGIES, AND POLICIES FOR ATHENS-CLARKE COUNTY AND THE CITY OF WINTERVILLE

COMMUNITY RELATIONS

Guiding Principle: To include the community in an open process of public decision making.

- Guiding Objectives:

A. We will actively encourage and facilitate citizen involvement in the planning and decision-making processes of our government.

B. We will take pro-active steps to coordinate various public sector agencies with the Comprehensive strategies and policies of Athens-Clarke County.

- Guiding Strategies and Policies:

1. Create a process for promoting community awareness and involvement in land use issues affecting neighborhoods.

2. Identify community planning districts to increase involvement in the planning and implementation of improvements at the neighborhood level.

3. Involve public sector agencies in the community planning district process.

ENVIRONMENTAL

Guiding Principle: To preserve the beauty of our community and act as responsible stewards of the natural environment.

- Guiding Objectives:

A. We will be responsible stewards of the natural environment.

B. We recognize the importance of ensuring adequate supplies of quality water through the protection of ground and surface water sources.

C. We will protect environmentally-sensitive corridors and utilize appropriate spaces to create a community-wide system of greenways and open spaces.

D. We consider as critical importance to our community the preservation and protection of flood plains, wetlands, stream corridors, wild life habitats, tree

canopies and unique topography.

E. We will develop and manage our land and transportation network to ensure the quality of our air and water.

F. We will support enhanced solid waste reduction and recycling initiatives.

- Guiding Strategies and Policies:

1. Complete public and private infrastructure improvements and site development in a manner that protects the quality of the natural environment; we shall do no harm.

2. Set back buildings and paved parking areas from the North Oconee, Middle Oconee River, McNutt Creek, Cedar Creek, Trail Creek, Sandy Creek corridors a minimum of 200 feet in the rural area and 100 feet in the urban area; set back from tributaries to these rivers 75 feet; and create a non-disturbance area of 50 feet along any flowing water course. (All measurements are from the top of the bank and on each side.)

3. Incorporate the connection, maintenance and enhancement of greenspace in all new development.

4. Protect the aquifer recharge area of southeast Athens-Clarke County from urban development by limiting development densities.

5. Prohibit development of structures in the floodway.

6. Discourage and strictly regulate development in the flood fringe area.

7. Reduce the impact of development on the natural topography and existing vegetation through limiting land disturbance activities and clear cutting.

8. Improve standards for minimizing impervious surface areas in construction of residential and non-residential development.

9. Identify and protect wetland areas.

10. Cluster development in a manner to protect environmentally-sensitive areas such as habitats, flood plains, and open space.

11. Establish a non-point source pollution program that emphasizes a comprehensive watershed approach.

12. Utilize alternative fuels in the Athens-Clarke County transportation fleet.

13. Promote pre-cycling and increase the capture of recyclable materials from

residential and non-residential users.

GROWTH AND ECONOMY

Guiding Principle: To support growth that protects community resources and sustains the high quality of life we want in Athens-Clarke County.

- Guiding Objectives:

A. We will adopt measures to manage and control the growth of our population as much as possible.

B. We will adopt measures that will enhance the future profile of our population.

C. We will actively participate in and support regional growth planning in the twelve counties of Northeast Georgia. \

D. We will enhance Athens-Clarke County as the commercial, tourist, educational, medical, arts and recreation center of Northeast Georgia.

E. We will encourage the retention, expansion and creation of businesses that enhance our economic well being.

F. We will encourage the development of Downtown as a vibrant center for culture, government, dining, residential and retail diversity.

G. We will protect and capitalize on the historical heritage of the community as a major economic development tool.

H. We will promote and support the growth of the "Arts Industry."

- Guiding Strategies and Policies:

1. Use the Comprehensive Plan's guiding housing strategies and policies as central tools for managing and controlling growth of Athens-Clarke County's population.

2. Limit the amount of urban development within Athens-Clarke County to areas that can be reasonably served by public infrastructure.

3. Develop an economic development strategy that encourages high paying business and industry that employ and train a skilled labor force.

4. Establish an atmosphere in which entrepreneurial enterprise is nurtured in Athens-Clarke County.

5. Develop an economic development strategy that promotes Athens-Clarke County as the commercial, tourist, educational, medical, arts and recreation center of Northeast Georgia.
6. Develop incentives that encourage the arts to expand within Athens-Clarke County.
7. Promote Athens-Clarke County as a retirement community.

LAND USE

Guiding Principle: To enact land use policies that avoid urban sprawl.

- Guiding Objectives:

A. Our community will use land effectively to avoid the costs and problems associated with urban sprawl.
B. We will preserve the rural character and the opportunity for agricultural and forestry activities to remain a vital part of our community.
C. We will develop a recognizable transition from the urban to the rural areas of our community.
D. We will support urban and suburban development where it can be adequately served by public facilities as designated in the Comprehensive Plan.
E. A higher level of urban services (sewer, water, fire, police, recreation, etc.) will be provided to areas of our community that we want to develop at urban-level densities.
F. We will be committed to redeveloping and enhancing existing commercial and industrial areas located within our community.
G. We will encourage developments that provide a mix of shopping, housing and jobs.
H. We will support opportunities for residential and non-residential in-fill development that positively impacts the character of existing neighborhoods.
I. Recreation and greenspace will become an integral facet of our community's land use.

- Guiding Strategies and Policies:

1. Create incentives for agricultural areas on the periphery of the urban area to remain as productive agricultural lands by using techniques such as transfer of development rights, conservation easements and open space subdivisions.
2. Designate areas that are predominantly rural in character as a boundary for limiting expansion of urban development.
3. Extend water and sewer service into existing and future urban areas where urban densities are desired and consistent with the Comprehensive Plan.
4. Promote increases in residential densities in areas that meet community design standards, environmental constraints and available infrastructure capacities.
5. Make as a priority the development of mixed uses, redevelopment and revitalization of existing underutilized commercial and industrial areas over development of new land for commercial purposes.
6. Permit appropriately designed mixed use developments that facilitate efficient and attractive employment and residential opportunities and enable these areas to function as centers of community life.
7. Facilitate, through incentives and standards, commercial development and redevelopment as distinct commercial centers while discouraging "strip commercial" (development characterized by shallow commercial frontages along major thoroughfares, with multiple curb cuts, large front yard parking, single-storied and often single-purpose buildings, with minimal pedestrian access).
8. Encourage redevelopment and in-fill over development of new property on the periphery of the urban area.
9. Implement redevelopment of Downtown-East.
10. Encourage downtown parking structures to incorporate retail opportunities.
11. Encourage development of additional retail shopping and restaurants in the downtown area.

LIFE-LONG LEARNING

Guiding Principle: To establish Athens-Clarke County as a community that supports life-long learning for its citizens.

- Guiding Objectives:

A. We will recognize the importance of providing life-long learning opportunities for ...
   - Cultivating the strengths of our citizens
   - Enhancing our job skills
   - Understanding the environment
   - Increasing our cultural enjoyment
   - Exploring retirement interests
   - Affording personal enrichment

B. The neighborhood public school concept is the foundation of our community's long-term prosperity.

C. University and vocational education will continue to be life-long learning opportunities for our residents and visitors.

D. The long term prosperity of our community will be supported by the educational function of our parks and recreational services, public libraries, museums and other cultural amenities.

- Guiding Strategies and Policies:

1. Establish and maintain an effective working relationship between the Athens-Clark County and the Board of Education to develop mutually beneficial locations for schools and appropriate land uses adjacent to and/or near school property.
2. Promote the concept of neighborhood schools in future development, as well as, promote the same concept regarding the use of schools that are currently located near or in close proximity to existing neighborhoods.
3. Support other existing educational institutions and encourage development of new opportunities to educate Athens-Clarke County citizens.
4. Communicate with the University of Georgia to encourage commitment to accommodate the needs of non-traditional learners by providing access, services, and instruction, in accordance with the University of Georgia's Comprehensive Educational Plan.

MOBILITY

Guiding Principle: To support transportation policies that offer viable alternatives to the automobile.

- Guiding Objectives:

A. Land use policies shall encourage transportation corridors that support multiple modes of transportation and enhance the aesthetics of the community.

B. The multi-modal transportation network will be used to support efficient land use, minimize traffic congestion and facilitate community-wide and regional mobility.

C. We will ensure that urban density will be located in areas that are conducive to walking and biking and are served by transit.

D. We will coordinate high density land use with public transportation.

E. The greenway corridor will be expanded and connected to support individual transportation needs.

F. Transportation and greenway corridors will be supported by the community standards of aesthetics, urban design and environmental stewardship.

H. We will take measures to ensure that vehicular traffic will not harm the residential nature of our neighborhoods.

I. T raffic calming features that slow the speed of traffic and enhance safety and aesthetics without creating congestion will be a part of our street network design.

- Guiding Strategies and Policies:

1. Adopt an Official Street Map identifying the planned location of all new major roadways and connections, including alternate transportation pathways, between major residential and commercial developments.

2. Design all new and reconstructed roadways to reflect community standards of aesthetics, environmental stewardship and urban design.

3. Design new or reconstructed streets to accommodate fully multiple functions, including pedestrian movements, parking, alternate modes of transportation and local vehicular circulation.

4. Include sidewalks and bicycle lanes in the design of all new or reconstructed roadways.

5. Use public transit, such as the Athens Transit System, as a tool to organize the arrangement of higher density land uses, particularly multi-family developments, in the community.
6. Encourage high density development adjacent to the multi-modal center.
7. Provide increased access via a county-wide network of greenways or pathways.
8. Plan east-west mobility in the northern part of Athens-Clarke County in a manner that discourages urban sprawl.
9. Address increased capacity within the Athens Perimeter through multi-modal options and high occupancy vehicle incentives.
10. Create internal circulation networks within commercial and industrial developments to avoid over-dependence upon Athens-Clarke County's arterial street network.
11. Design parking and circulation routes within commercial centers as distinct streets with landscaped sidewalks, shade trees, small courtyards and short-term curb parking.
12. Provide for vehicular circulation routes in new neighborhoods that distribute traffic evenly, avoid excessive traffic and speed on any one street and have street block lengths not exceeding 600 feet.
13. Require internal street systems within multi-family and non-residential developments that enhance circulation and provide for on-street parking.
14. Integrate traffic calming designs and techniques to reduce the speed of traffic as a part of all development and redevelopment.

NEIGHBORHOODS AND HOUSING

Guiding Principle: To assure that neighborhoods reflect standards that respect the history and character of the community.

- Guiding Objectives:

A. Our neighborhoods will be interactive communities where people have easy access to schools, parks, residences and businesses through walkways, bike paths, roads and public transportation.

B. Our neighborhoods shall be strongly linked to the neighborhood public school concept.

C. Our growth strategies will continue to provide resources that support revitalization of neighborhoods and effectively address the physical environment of the disadvantaged.

D. We will adopt measures to increase the percentage of owner-occupied housing.

E. We will accommodate our diverse population by encouraging a harmonious mixture of housing types and uses.

F. Neighborhoods will adhere to design standards that respect the community's historic character.

G. "Classic and traditional" neighborhood development ideals will be used in our land use regulations to implement the Comprehensive Plan.

- Guiding Strategies and Policies:

1. Complete a housing inventory every five years to monitor the health of the housing market.
2. Encourage housing policies, choices and patterns that move people upward on the housing ladder from dependence to independence.
3. Increase opportunities for low-to-moderate income families to move into affordable owner-occupied housing.
4. Work toward programs that deconcentrate assisted housing through dispersal throughout the community and create incentives for mixed income developments.
5. Increase investment in the housing stock through housing rehabilitation programs, utilization of housing codes, and general neighborhood improvement programs.
6. Determine ways to limit the number of rental units and encourage owner-occupied housing units.
7. Encourage owner-occupied housing in the Downtown area.
8. Encourage mixed use developments/redevelopment of residential, office, commercial and public uses in potential redevelopment areas utilizing the Downtown East development planning process.
9. Adopt "traditional neighborhood design" guidelines that
   - Encourage efficient urban residential densities

- Orient homes to the street
- Encourage the use of front porches
- Incorporate landscaped pedestrian pathways
- Reduce the street's importance as a thoroughfare
- Provide public gathering places; and,
- Have conveniently located local shopping. \

10. Develop park facilities in accordance with the Leisure Services Master Plan.
11. Encourage parks and community facilities to be located as focal points in neighborhoods.
12. Develop guidelines that require new or retrofitted residential development to provide common open space, walking paths and bicycle lanes that are easily accessible to the development.

PLAN IMPLEMENTATION

Guiding Principle: To reflect both a strong legislative and financial commitment to implementing the Comprehensive Plan.

- Guiding Objectives:

A. We will make a strong commitment to implementing the Comprehensive Plan.
B. We will identify the necessary financial resources to implement the Comprehensive Plan.
C. We will ensure that proposed zoning decisions are consistent with the Comprehensive Plan.

- Guiding Strategies and Policies:

1. Develop and implement a system to evaluate our progress on the Comprehensive Plan.
2. Create an analytical method ("land use budget") to measure the impact of land use decisions on the amount of residential, commercial and industrial available in Athens-Clarke County.
3. Develop a new zoning ordinance and map to respond to the recommendations of the Comprehensive Plan.

4. Adopt formal policies and procedures for amending the Land Use Map as a separate action from zoning.
5. Undertake sector/corridor and neighborhood planning to assure application of and the compatibility with the Comprehensive Plan.

UNIVERSITY RELATIONS

Guiding Principle: To recognize that The University of Georgia and Athens-Clarke County will work in concert to address mutual needs.

- Guiding Objectives:

A. We will work jointly with the University in developing strategies to address student, university and community issues of mutual concern.
B. We will integrate land use and infrastructure planning efforts of Athens-Clarke County with the University of Georgia and develop mutual implementation strategies.

- Guiding Strategies and Policies:

1. Fully integrate the University's 10-Year Campus Master Plan into Athens-Clarke County's Comprehensive Plan's land use initiatives.
2. Support strategies that will accommodate University growth without removing additional property from the tax digest.
3. Define an ongoing working relationship that will assure a partnership in the development and redevelopment of all aspects of University infrastructure.
4. Work with the University to address the negative impacts of student housing on traditional single family neighborhoods.
5. Develop a certified system for accrediting off-campus housing that ensures a minimum level of safety and quality of life and promotes keeping University housing in the private sector.
6. Increase efforts to work with the University to address traffic impacts and transit needs of students, faculty and support staff.
7. Coordinate with the University of Georgia to prepare students for employment and life-long learning and accommodate the needs of non-traditional learners by

providing access, services, and instruction, in accordance with the 1997 University System of Georgia Comprehensive Plan.

8. Encourage the University to increase the amount of recyclable material going to Athens-Clarke County Materials Recycling Facility.

URBAN DESIGN & AESTHETICS

Guiding Principle: To use sound design standards to govern development.

- Guiding Objectives:

A. Landscaping, lighting, signage, underground utilities and building design will be used to add value to our community.

B. Green space will be a major component within our neighborhoods, along our streets, parking lots and within commercial and industrial developments.

C. We will encourage mixed-use development and design standards that are more human-oriented and less auto-oriented.

D. Design standards will guide development in order to contribute to our community's character and sense of security.

E. Our gateways and corridors will have design standards that add visual value thus creating a "sense of place" to our community.

F. We will apply design standards that reduce the adverse visual impact of the automobile in both commercial and residential areas of our community.

G. Civic buildings will be located, designed and accessible to public transportation in a manner that enhances the community.

H. We will apply urban design and aesthetic standards to neighborhoods and other developments as they are retrofitted.

I. We will encourage historic designation for eligible sites and neighborhoods.

- Guiding Strategies and Policies:

1. Develop and implement design standards for new development and redevelopment that address architectural composition (both material and form), site circulation, site and

parking lot landscaping (including tree planting standards for parking lots), signage, lighting and noise level standards.

2. Adopt design standards for the Downtown.
3. Use "overlay" zones within gateways and arterial corridors to control signage, improve aesthetics, promote more landscaping, and require special protection for adjacent residential areas.
4. Encourage configuration of large commercial centers into "blocks" that promotes additional development or allows for redevelopment of the site for new tenants, uses, or ownership patterns.
5. Orient buildings within development/redevelopment to encourage walkability, interaction among businesses, clear visibility of entryways and centralized open space.
6. Require the use of landscaping, reduced parking standards and site orientation to minimize the impact and visibility of parking areas.
7. Minimize the visibility of trash pickup and vehicular storage.
8. Incorporate street shade trees as an important part of residential and non-residential development.
9. Place all utilities underground or along rear or side yard easements in new development, in any redevelopment that requires a building permit and, as the opportunity becomes available, in any existing development.
10. Appropriately design and integrate signage within all development.
11. Require all future multi-family developments to meet specific design standards.
12. Create design standards that recognize the unique qualities of defined neighborhood to guide appropriate residential and non-residential in-fill development and redevelopment.
13. Incorporate the use of "crime prevention through environmental design" standards to make neighborhoods and business areas more secure.
14. Develop standards for property maintenance.
15. Adopt regulations that prevent unnecessary land disturbance and vegetation removal (i.e., excessive slope removal and clear-cutting).

APPENDIX B

COMPARISON BETWEEN CURRENT AND REVISED CONSERVATION

SUBDIVISION ORDINANCES

(Source: Athens Grow Green, as modified by author 2003)

Proposed Ordinance	Current Ordinance
Underlying AR density:	
AR is split into 2 zones: AR=1 unit/10 acres	AR=1 unit/acre overall* *Large conventional subdivisions prohibited: Only two lots may be subdivided every two years.
Density allowed if development is a Conservation Subdivision:	
100% density bonus: AR=1 unit/5 acres	AR=1 unit/acre
Method of calculating number of lots allowed on a given parcel for a CS:	
Developer prepares a "Yield Plan," a realistic conventional subdivision layout. This is based on the underlying density of the area (for example, 1/10 in AR). This must show a layout that could actually be built given site features, including wetlands, floodplains, steep slopes and soils. In the AR conservation subdivisions receive a 100% density bonus (not the case in RS zones).	1 unit/gross acre (in other words, you can include unbuildable land, the area that will be taken up by roads, etc. If a 100 acre parcel had 50 acres of swamp, you would still be allowed to build 100 houses with a conservation subdivision.)
Design Process	
Pre-Planning Site Visit. This is a new requirement. The developer, designer, Planning Staff, and up to 5 Planning Commissioners shall attend; adjacent neighbors and representatives of the locally active Land Trusts shall be invited. The developer must bring the following: Site Context Map (showing the location of the site within its neighborhood context; includes natural and human-made features within 1000 feet, or 2000 feet if the site is larger than 100 acres. Existing Resources and Site Analysis Map (showing detailed analysis of the site and land within 500 feet, showing topography, steep slopes, ponds, streams, wetlands, 100-year Flood Hazard zones, vegetative cover, soils, view sheds, geologic formations, all existing human-made features, easements. The purpose is to walk the actual site and discuss the developers preliminary ideas before any plans have been drawn.	No such visit required. No Yield Plan required. Site Analysis Map required (showing steep slopes, soils, water bodies, wildlife habitats and corridors, protected Environmental Areas as defined by ACC, vegetation, current land use, easements, scenic views, cultural resources).

Sketch Plan. After the Pre-Planning Site Visit, the developer's designer prepares a Sketch Plan, indicating "initial thoughts about how the special or noteworthy features of the site may be preserved while providing for the allowed density." It includes a schematic layout of the open spaces, house lots, streets. It is prepared using Randall Arendt's Four-Step design process: 1)determine areas to be protected. 2)locate house sites, 3)locate streets, 4) draw in lot lines	N/A
Conceptual Plan. After the Planning Commission reviews the Sketch Plan, the developer submits the Conceptual Plan, which includes the layout from the Sketch Plan, all the engineering and an Open Space Management Plan.	Plat requirements of any subdivision.
Open Space Requirements:	
Primary Conservation Areas.	
These are required to be contained within the protected Open Space: 100-year floodplain 100 or 75-foot riparian buffers slopes above 25% (5000 ft contiguous area) wetlands endangered or threatened species populations or habitat archaeological sites and burial grounds	The Open Space must contain: 100-year floodplain wetlands slopes above 25%
Secondary Conservation Areas.	
These should be included within the Open Space: important historic sites important wildlife habitat healthy native forests at least 1 acre in area healthy trees greater than 18 in. dbh scenic viewsheds prime agricultural lands at least 5 acres area existing trails slopes 15 – 25 % (5000 ft contiguous area) septic system drain fields	N/A
Area:	
At least 50% of the gross area.	At least 50% of the gross area
Shape and Size:	
Land that counts toward the Open Space requirement must be at least 1 acre, have a length-to-width ratio of no less than 4:1, and be at least 75 ft wide. Village Greens may be ½ acre in area. 75% of the Open Space shall be contiguous, but may be bisected by a street right-of-way.	Land that counts toward the Open Space requirement must be at least 1 acre; and at least 75% of the Open Space shall be contiguous.
Connectivity:	
The Open Space shall adjoin any neighboring areas of open space or protected areas.	N/A
Location:	
The Open Space shall be adjacent to at least 75% of the lots.	N/A

Permitted Uses of the Open Space:	
Conservation of natural or historic resources Meadows, wetlands, game preserves, etc. Trails built of porous materials Passive recreation areas Active recreation areas, but only if they take up 10% or less of the Open Space, and are not located in the Primary Conservation Areas Agriculture that follows BMPs (not allowed at all in Primary Conservation Areas) Landscaped stormwater management facilities and wastewater facilities (not allowed in Primary Conservation Areas) Drainage, access, and underground utility easements	May be landscaped May be left with natural vegetation cover Recreational facilities Specifically permitted underground utilities Conservation of natural or historic resources Meadows, wetlands, game preserves, etc. Parks, community gardens Agriculture (no mention of BMPs) Landscaped stormwater management facilities and wastewater facilities
Prohibited Uses of Open Space:	
Golf courses Impervious surfaces Agriculture that does not follow BMPs Planting of invasive exotic species such as kudzu, Chinese privet, Japanese honeysuckle Impoundments Active recreation areas (except as above)	Roads Parking areas Improvements other than recreational facilities or permitted underground utilities
Ownership of Open Space:	
The owner of the Open Space may be a homeowners' association; a private conservation organization such as a Land Trust; or Athens-Clarke County.	Not specified.
Management of Open Space:	
The developer must submit this plan with the Conceptual Plan; it must include the following: Permitted and prohibited uses Who owns the Open Space Who will manage the Open Space and how, including provision for long-term capital improvements Mechanism for permanent protection Provision that any change to the Plan be approved by ACC Provision for enforcement of the Plan	Says that maintenance shall "be provided for" and management plan shall be submitted for approval at time of application. Permitted and prohibited uses Allocation of responsibility and guidelines for maintenance of Open Space Provisions for long-term capital improvements Cost estimates and means of funding maintenance Provision for enforcement by neighbors, ACC, or Land Trusts
Permanent Protection of Open Space:	
The Open Space must be permanently protected, and the land disturbance permit shall not be issued until the instrument of permanent protection is placed on the land. The Open Space may be protected by: Permanent Conservation Easement in favor of a qualified Land Trust Permanent Conservation Easement in favor of ACC Permanent restrictive covenant in favor of ACC Equivalent legal tool if approved by ACC	Says that "adequate guarantee" of permanent retention as "open space" shall be provided; but is not very specific; and does not predicate granting of land disturbance permit upon demonstration that permanent protection instrument is in place.

Buffer	
200 foot undisturbed or planted buffer along all public roads; all lots and structures that face the buffer shall have front orientation toward the buffer	200 foot undisturbed buffer along all public roads
Lot Sizes	
Maximum: 1 acre if sewer and/or water are available; Minimum: 51,000 sf if served by well and septic 25,500 sf if served by water and septic 8,000 sf if served by water and sewer	Maximum: N/A Minimum: 51,000 sf if served by well and septic 25,500 sf if served by water and septic 15,000 sf if served by water and sewer
Use by Right	
Yes	Special use requiring Commission approval
Available in other zones besides AR	
Yes	No