THE INTERFACE OF LAW AND GEOGRAPHY REVISITED:
DEVELOPING MORE EFFECTIVE GROWTH MANAGEMENT PLANNING IN ARIZONA

by

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ABSTRACT: Arizona has experienced tremendous growth in the last several decades, typically characterized by sprawling suburban, polycentric or edge city development. Unchecked growth or "sprawl" has generated intense debate amongst various interest groups and has emerged as a major political issue in Arizona. This paper employs a dualistic approach to land use planning in recommending geographical and legal methods for interpreting growth and improving growth management in Arizona. The paper first examines the geographical and legal history which led to Arizona's development boom and then makes recommendations for changes in Arizona law to improve growth management, including such options as state-mandated growth planning, the establishment of urban growth boundaries, provisions for state trust lands, more stringent subdivision regulation, and increased impact fees. The paper concludes by addressing some of the socio-economic and political realities of the proposed approaches.

I. Preface

A. The Interface Between Law and Geography in Effective Land Use Planning

All around us, both in natural environments or those substantially altered by humans, we find a dynamic interface between law and geography. Every acre of land in this nation is controlled by laws and regulations. Rutherford Platt, esteemed doctor of both geography and law, asserts that law is "a major factor in the way humans use their resources and design their patterns of settlement" (Platt, 1996, xiv). Law thus has a profound influence on the physical, biological, cultural, economic, and spatial characteristics of land, which geographers seek to observe, describe, measure, map, interpret, or predict. Platt was one of the first scholars to emphasize the part both fields should play in any effective approach to land use planning. In his 1975 essay, Land Use Control: Interface of Law and Geography, Platt explained that

> "[t]he opportunities created by the fact of owning a piece of land are diminished to some extent by the [legal] rules under which such land may be used. Thus land may be suitable from a geographical standpoint for a ten-storey apartment building or a mobile home park. From a legal standpoint, however, local zoning regulations or private deed restrictions may prohibit such uses. The way in which land is ultimately used is therefore determined by its geographical and legal characteristics jointly - neither in itself is sufficient to comprehend the land use decision process" (Platt, 1975, 3).

From a geographical perspective, land has both physical and locational attributes, the traditional "site" and "situation" which developed out of Carl Sauer's man-land philosophy (Sauer, 1925). The geomorphology, soil, subterranean minerals, flora and fauna, and even the climate are all attributes of site, while the relationship of the particular land to all other land describes its situation. Thus, Platt asserts,

> "land use geography seeks to explain the functional interrelationships of units of land to each other and to larger systems of land use-for example, communities, regions, nations, and the Earth...geography asks *what* land is like, *why* it is used in a particular way, and whether it could be better utilized to achieve specified goals" (Platt, 1996, 29).

From a legal perspective, the same piece of land is "characterized by the nature of its ownership and by the public and private rules under which it may be used" (Platt, 1975, 3). Land use law, states Platt,

> "addresses *how* desirable uses of land may be achieved, and *who* has the authority to decide among competing uses. Law is concerned with the process by which land is allocated for various purposes through the recognition and exercise of private rights and public powers to influence the use of land" (Platt, 1996, 29).

In the terminology adopted by the late James E. Vance, Jr., law acts as a "morphogenetic agent" in the formation of the human environment (Vance, 1977).

B. Thesis Statement And Methodology

Growth management, as a component of land use planning, is becoming increasingly common nationwide, especially for states, counties, and cities with growing populations or threatened resources. Perhaps nowhere is the effective interplay of geography and law more necessary than in places with high rates of development and comparatively recent attempts at land use planning. The State of Arizona is just such a place, with slow historical growth, yet one of the highest growth rates in the nation over the last several decades. Therefore, this paper applies Platt's dualistic approach to land use planning in recommending geographical and legal methods for interpreting growth and improving growth management in Arizona.

First, the paper examines the geographical and legal history which led to Arizona's development boom. This section begins by introducing some geographic methodologies used to interpret and model development patterns as they changed over time. In this same section, the paper

describes the reaction of planners, lawmakers, geographers, and others to the phenomenon of unchecked growth, popularly known as "sprawl," a condition which has generated intense debate amongst various interest groups and has emerged as a major political issue in Arizona.

Next, the paper discusses how changes in the law might be used to better manage Arizona's growth, including options such as state-mandated growth planning, the establishment of urban growth boundaries, provisions for state trust lands, more stringent subdivision regulation, and increased impact fees. The proposed legal changes for Arizona each include a comparative analysis of laws in other states, providing some examples of the "geography" of law; a U.S. map is included to demonstrate the various state standards. Lastly, the paper addresses some of the socio-economic and political realities of the recommended approaches, and proposes a reasoned approach to the issue of regulatory "takings" of land.

II. The Geographical And Legal Background Of Arizona's Development Boom

A. Adopting A Geographical Perspective

Using Platt's approach, this paper first seeks to interpret Arizona's growth and ask why its land is being used in a particular way. Arizona's land development boom has many causes, but can perhaps be best understood through factors which geographers Lloyd and Patton term "generational" and "regional" (Lloyd and Patton, 1999, 246-48). From the generational perspective, Arizona's sprawling development can be explained in the context of the decades-long exodus of people from central cities and towns to the suburbs, a movement which has had profound effects on urban form. From the regional perspective, this growth pattern was greatly accelerated by the relatively recent macro-migration from the "Manufacturing Belt" of the Northeast and Midwest to the "Sunbelt." Lastly, Arizona's sprawling growth has also been significantly enabled, if not encouraged, by the state's traditionally pro-development policies.

B. The Evolution of Urban Form: From Central City to Edge City

In the decades following World War II, rising incomes, FHA mortgages, construction of the interstate highway and beltway systems, and increasing reliance on the automobile (encouraged by a government policy which kept gasoline prices low) led huge numbers of middle class Americans to

seek the suburban "American Dream" (Diamond and Noonan, 1996). This exodus from the central city had a tremendous effect on the American landscape. In Edge City, Joel Garreau describes the commitment to the suburbs as "the most radical change in a century in how we build our world" (Garreau, 1991, ii).

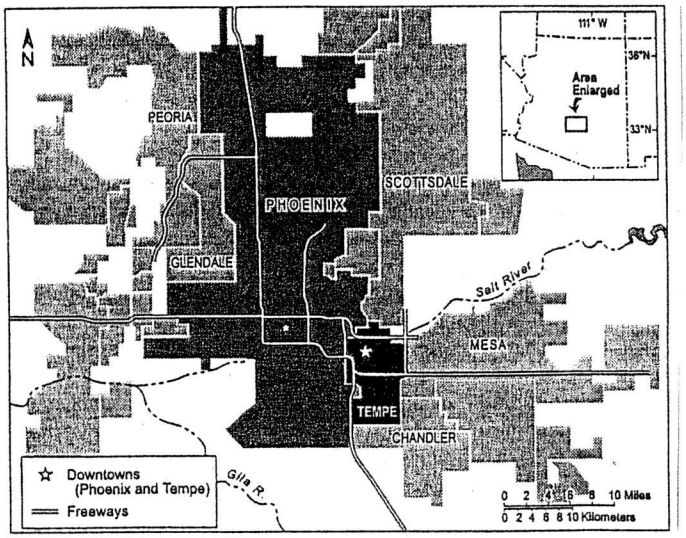
As the highway system grew, urban geographers adapted Burgess' classic concentric ring model (Burgess, 1925), which suggests that economic rent encourages certain uses of land to occur in rings that develop in successive phases around a modern city center, by superimposing radial highways on it, thus stretching the rings outward where they intersected the highways and forming a starlike urban form (Hartshorn, 1992, 232). Eventually, large, somewhat self-sufficient suburban sectors began to develop around a downtown partially or mostly independent of the core of the traditional city. Geographers responded by generating models of "urban realms" in which multiple suburban downtowns coexisted with the traditional downtown of the central city, which acted as an economic and cultural anchor (Vance, 1977; Muller, 1981, 8-11). Metropolitan Los Angeles became an archetype of the new urban form in geographical literature, as the downtown core was rivaled by surrounding suburban downtowns such as Costa Mesa, Anaheim, Newport Beach and Santa Ana (Hartshorn, 1992, 234). Garreau coined the term "edge city" to describe the self-sufficient urban structures, which many would not have recognized as cities in the traditional sense in the 1950's. Scheer and Petkov distinguish the morphogenetic differences between traditional downtowns and edge cities in several ways: (1) the process by which streets are first laid out; (2) scale; and (3) the relationship between the fundamental form elements of streets, land subdivision, and built objects (Scheer and Petkov, 1998, 298-99). Geographers have come to refer to collections of these separate urban centers or edge cities in one metropolitan area as urban policentric forms or structures (Clark, 1994).

C. A Regional Transformation: Just Add Water and Watch it Grow

In the mid-1950's, millions of Americans began leaving the Manufacturing Belt and moving to the Sunbelt, bringing about a huge demographic, economic, and spatial shift (Hartshorn, 1992, 67-72). Their residential preferences weighed heavily in determining urban and suburban growth and form;

this macro-migration acted as a powerful catalyst to the micro-migration from city to suburbs. In comparison to most of their counterparts in the East, many cities and towns throughout the Southwest had few constraints to expansion, such as major natural barriers, entrenched land uses or industries, complex infrastructure networks, or pre-existing neighboring urban areas. States like Arizona had plentiful and inexpensive land, so the only initial limitations to expansion were the extreme summer heat and lack of water. The heat problem, of course, was solved by the proliferation of domestic air conditioning or heat pumps. The water supply problem was first solved by pumping water from the subterranean aquifer and, eventually, by the diversion of water from the Colorado River via the Central Arizona Project (Porter, 1992, 23).

Prior to the Sunbelt macro-migration, Arizona's growth rate was moderate, but between 1950 and 1970 the population grew from 750,000 to 1,775,399 (U.S. Census Bureau, 1999). Phoenix was a small city in 1950, with a population of 106,818, ranking 99th among U.S. cities. From 1950 to 1970, metropolitan Phoenix's population grew by 300% and its urbanized land area grew by a staggering 630% (extrapolated from data by U.S. Census Bureau, 1999). Much like the Los Angeles of a decade or two earlier, Phoenix became surrounded by the booming edge cities of Tempe, Scottsdale, Mesa, Glendale, and Peoria, even as its urban core seemed to be dying.



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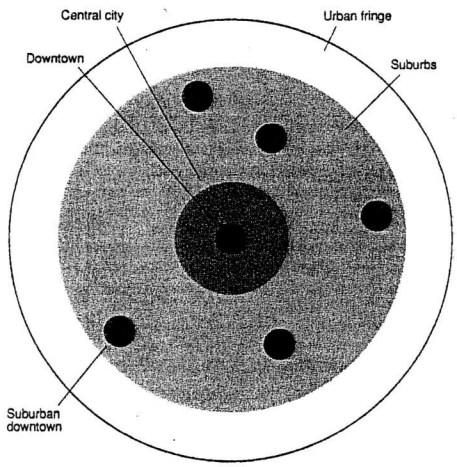

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In the early 1950's, downtown Phoenix accounted for 35% of the regional market share of retail sales; by the early 1970's, retail sales had plunged to 3% (Russell, 1986, 102). The change in land use has been so great for cities such as Los Angeles, Phoenix, and Tucson that some geographers have suggested that traditional perceptions and models no longer suffice to describe the altered urban form and social patterns, and advocate a new, postmodern paradigm (Schmandt, 1996; Dear and Flusty, 1998; Wyly, 1999).

D. The Great Debate: Arizona's Early Responses to Sprawl

Having addressed what makes Arizona unique and why its land development occured in particular forms, one is prompted by Platt to use geographical and legal perspectives to ask, respectively, whether Arizona's land could be better utilized to achieve specified goals and how and by whom these goals can be achieved.

The proliferation of suburban sprawl created a multitude of land use problems for city and suburban officials and citizens (Cobb, 2000). Given the basic tenet of both economic geography and real property law that a private landowner behaves as a "reasonable man" and seeks to use his land to its highest and best economic use, it is apparent that land needed for collective benefit requires some form of intervention in the private market mechanism. However, by the early 1960's, it became obvious that it would be fiscally impossible to effectuate local or regional land use plans through public acquisition (Platt, 1975, 1). So planners and legislators began seeking alternative land use control techniques not requiring outright public purchase. These include, among others, subdivision regulations, impact fees and other exactions, moratoria, timing controls, transfer of development rights, wetland and floodplain regulations, conservation or scenic easements, and various growth comtrols. Many other regulatory factors affect land use patterns, most notably zoning. Land use zoning has been very controversial, and criticisms that some zoning ordinances are both a cause and a remedy of unsatisfactory land use patterns have promoted many proposals for reform, including adoption of comprehensive plans based on model land development codes.

A movement for growth management began in Arizona in the late 1970's, especially in response to "wildcatting" of informal subdivisions, which sprang up in the desert environment

miles from the nearest town. Rampant growth from a wave of retirees and baby boomers generated increasing public concern in Tucson and Phoenix in the Sonoran desert to the south, and Flagstaff and touristy Sedona in the mountains to the north. The familiar refrain was that "Tucson didn't want to become another Phoenix, Phoenix didn't want to become another Los Angeles, and smaller communities didn't want to end up looking like any of them" (Colton and DiTullio, 1999, 5).

However, Arizona has traditionally been a very pro-development, laissez-faire state, so growth management advocates rarely gained any leverage in electoral politics. As the Maricopa County chief of comprehensive planning put it, "[w]e're dealing with a culture problem here" (Porter, 1992, 24). Developers, industry leaders, and politicians consistently argued that sprawl was not a problem, but an economic blessing. They pointed to findings by some scholars that sprawl is the clear preference of the market and that the resulting polycentric forms enabled many people to live in the suburbs, which typically have lower land development costs and are safer than the central city metropolis (Gordon and Richardson, 1997). Using federal transportation data, Gordon and Richardson also contended that polycentric forms have comparatively less traffic congestion (at least initially). As well, some studies indicate that polycentric forms may provide businesses with more locational options, thus increasing economic efficiency (U.S. Office of Technology Assessment, 1995). Such studies cautioned that efforts to modify the market through growth management techniques might drive up land and housing costs (Audriac, Shermyen, and Smith, 1990; Gordon and Richardson, 1997).

Still, the vast majority of studies have found that planned, compact development patterns generate more efficient land use and maximize infrastructure, creating less fiscal, capital, social, and environmental costs than sprawl development (Burchell and Shad, 1998; Burchell, 1997; Handy, 1992; Duncan, 1989; Frank, 1989; Windsor, 1979; Real Estate Research Corporation, 1974). A recent review by Burchell examined data from several previous studies and came up with the following estimates: fiscally, road costs for planned developments are 25% lower, utility costs are 15% lower, and annual capital costs for schools within planned developments are 3% lower; planned development did not appear to increase housing costs, and could potentially afford a 6%

savings; and, in terms of land consumption, planned development consumes 60% less land overall, 40% less agricultural land, and 83% less environmentally sensitive land (Burchell, 1997). Sprawl has been heavily criticized on environmental, agrarian, and aesthetic grounds. Many scholars emphasize that a major land-use inefficiency generated by suburban sprawl and edge cities is that they are often developed on choice agricultural lands (Platt, 1996). Agricultural lands have been lost in the Phoenix and Tucson areas and ranch lands and Ponderosa pine forests have been lost around Flagstaff and Sedona (Casado, 1999; Brandt, 1996). Sprawl developments also tend to provide less public open space, and geographer Katharyne Mitchell observes that public spaces in edge cities are typically places of consumption in a corporate landscape, thus having a far less satisfactory social benefit than traditional public spaces that foster a "culture of congregation or reflection or localized activities" (Mitchell, 2000, 444). James Kunstler laments that sprawl has turned much of our countryside into "a wasteland of cartoon architecture and parking lots" (Kunstler, 1993, 30-40). Most studies of sprawl have ultimately concluded that "proper antidotes to sprawl lie in educating taxpayers about the actual costs of sprawl, and also changing government policies to encourage development to locate where it costs less and to adopt regulations and policies that promote more efficient use of land" (Morris, 1999, 4).

Planners in several of Arizona's cities have made attempts to promote urban infill and reduce sprawl, but as growth expert Douglas Porter observed, "the western desert syndrome - add water and watch it grow - is contriving to confound attempts to corral centrifugal forces that are spreading settlement across huge swathes of southern Arizona" (Porter, 1992, 20). More than three-quarters of Arizona's population live in the sprawling regions extending out from Phoenix and Tucson (Porter, 1992), and vast expanses of sparse settlement separate nodes of edge city developments radiating out from metropolitan Phoenix into surrounding Maricopa County. With the intention of promoting central urban development (as opposed to suburban sprawl), Phoenix initiated an "Urban Village Concept" as part of its 1985 general plan. As well, in 1991, Phoenix completed the Arizona Center office and retail project and adopted a downtown development plan to turn the "hub and heart of the metropolitan area" into a pedestrian-oriented urban place (Porter,

1992, 22). Nevertheless, new suburban developments continued to emerge in relatively unpopulated areas of the county (Porter, 1992).

Tucson, in Pima County, also experienced a backlash against sprawl (Logan, 1995). In 1992, Tucson was the third-fastest growing employment center in the U.S. (Porter, 1992). The city began updating the comprehensive land use element of its general plan to address issues such as historical heritage, environmental problems, and capacity of public services and facilities (Porter, 1992). While this helped to control development patterns and impacts somewhat in the city, sprawl persists in the greater Tucson metropolitan area (Logan, 1995). The ill effects of sprawl have also been felt in smaller cities such as Flagstaff and Sedona. Both cities made efforts toward landscape preservation and sustainable growth, but the conflict between proponents of sprawl and smart growth continued (Casado, 1999; Brandt, 1996).

One of the major barriers to effective growth management in Arizona is the fragmentation of authority over land use amongst many local governments. Maricopa County, which controls development in unincorporated sections of the county, began to amend its comprehensive plan in the early 1990's with the intention of establishing a "growth ring" around the existing urbanizing area (Porter, 1992, 24). The county planning commission even took the radical (at least in Arizona) step of imposing a partial moratorium on approvals of large-scale developments, pending further evaluation (Porter, 1992). But developers and business leaders in small towns quickly realized that if towns annexed huge acreages of land, they could easily avoid county regulations. In Pima County, for example, where environmentalists and county planners were deeply concerned about sprawl and the loss of desert habitat for saguaro cacti and pygmy owls, towns such as Marana and Oro Valley worked closely with developers to annex proposed developments to escape growth provisions (Sonoran Institute, 2000; Porter, 1992).

Despite the aforementioned attempts by planners to manage growth, sprawl development continues to boom. Arizona's population grew by 27.4% (1,003,000 persons) between April 1990 and July 1998, a growth rate second only to neighboring Nevada (U.S. Census Bureau, 1999). Projections reflect that the population is expected to grow from between 4,798,000 and 4,838,000 in

2000 to between 6,412,000 and 7,729,000 in 2025 (U.S. Census Bureau, 1999). Metropolitan Phoenix issued the highest number of building permits in its history in 1998, a fact reinforced by a 1998 Census Bureau report indicating that surrounding Maricopa County was the fastest growing county in the nation (Colton and DiTullio, 1999, 4). As Porter correctly predicted in 1992, "[t]he developing areas of Tucson and Phoenix will continue to gobble up pristine desert environments until and unless the state or the local governments arrive at some consensus for governing growth at the metropolitan scale" (Porter, 1992, 24).

E. Growth Management Comes to Town, or Has It?

The debate over addressing Arizona's growth at the state level has been fueled by various approaches vying for the general public's support (Sonoran Institute, 2000). In 1998, newly-elected Arizona Gov. Jane Hull proposed a planning reform program called Growing Smarter (Colton and DiTullio, 1999). Aware that polarizing the growth issue might result in adoption of a very progressive growth management scheme, developers, industry and other progrowth interest groups shrewdly joined forces with moderate business and conservation groups to modify Growing Smarter and quickly push it through the state legislature. The Arizona legislature approved a revised version of the bill, called Growing Smarter Plus, in 1998, but many environmentalists and planners felt that the act merely paid "lip service" to growth management and that it was pushed through the legislature merely to block the more progressive Citizens' Growth Management Act which was being proposed by the Sierra Club, public interest law groups, and other organizations (Colton and DiTullio, 1999, 8). In fairness, Growing Smarter Plus did require that land use plans be adopted or readopted every 10 years, a satisfactory response to the reality that local comprehensive plans were often outdated, poorly amended, or simply ignored. Growing Smarter Plus maintained key elements of Arizona's existing land use framework, while adding specific but contradictory growth management provisions that did not substantively strengthen local jurisdictions' ability to manage growth (Sonoran Institute, 2000). Growing Smarter Plus did not address the consistency of local planning powers or impact fee assessments, did not establish statutory limitations on local governments' power to downzone property, did not deal with the

problem of wildcat subdivisions, and did not give due consideration or resources to the Growing Smarter Commission's recommended growth policies (Colton and DiTullio, 1999, 8). In some significant ways, it weakened local authority to manage growth and moved Arizona out of the mainstream of American land use law (Sonoran Institute, 2000).

The Citizens' Growth Management Act made it onto the 2000 ballot as an initiative (CGMI), but it failed to pass for several possible reasons. First, many feared that the proposed legislation was so draconian that it would cause economic harm (Gordon and Richardson, 2000) and increase housing costs (Ruesga, 2000). Second, the CGMI required that growth management plans, and any future exceptions to plans, be approved by the public, but the citizens of Arizona were wary of a system of planning or development by plebiscite (majority or supermajority rule) (Colton and DiTullio, 1999, 6). Although initiatives and referenda are becoming increasingly common, planning by plebiscite often meets with resistance when individual landowners fear that decisions about their land will not be made with the rationality and expertise of professional planners (Mandelker, Cunningham, and Payne, 1995, 547-565). Third, while most citizens, and planners for that matter, believed that most land use planning should be done locally, they felt that counties and municipalities needed the proper tools (and financing) to create and implement the plans. The CGMI failed to provide either guidance or financing from the state.

III. Recommended Legal and Geographical Approaches to Growth Management

A. Introduction

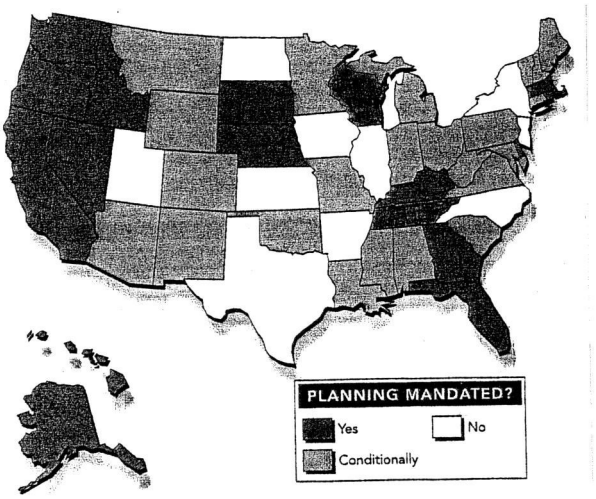
The State of Arizona must take on a stronger role in local planning if growth management or sustainable development are to meet with greater success. Arizona's history shows that short-term economic gains from sprawl development are a powerful disincentive to local growth management, so, without a strong state role in local planning, "the political will to act is often missing" (Cobb, 2000, 20). In this sense, Growing Smarter Plus was at least a step in the right direction for growth management, but to fully address the problems created by sprawl, more progressive approaches should be adopted.

This paper suggests some alternative approaches that, while not intended as a specific, synergistic model, could increase the effectiveness of local growth management. The recommended changes are based upon the preceding geographical research, analysis of the efficacy or deficiency of existing Arizona law and the CGMI, a survey of relevant statutes or approaches in other states, review of applicable judicial decisions, and consideration of the American Planning Association's Growing Smart℠ legislative guidebook, which provides model statutes for planning and management of change (American Planning Association, 2000). The proposed approaches consist of state-mandated growth planning, the establishment of urban growth boundaries, provisions for state trust lands, more stringent subdivision regulation, and increased impact fees.

B. Growth Management Plans

The specifics of growth management programs vary greatly from state to state. However, land use planning, with at least some element of growth management, is unconditionally required in Alaska, California, Delaware, Florida, Georgia, Idaho, Kentucky, Massachusetts, Nebraska, Oregon, Rhode Island, South Dakota, Tennessee, Washington and Wisconsin (Cobb, 2000, 21-22). The more progressive of these states, such as Oregon, have extensive planning codes, strong state control and a hierarchy of land use departments, commissions and quasi-judicial boards to review and interpret land use decisions and enforce regulations (Johnson, 2000, 47-58; Rohse, 1987). In response to long-term heavy growth, Florida adopted a Growth Policy Act designed to reduce sprawl, promote community redevelopment, provide urban infill incentives, and protect coastal, wetland, wildlife and agricultural resources. FLA. STAT. ANN. §§ 163.2514-3167 (2000). Growth plans are enforced locally, but municipalities best conforming to state guidelines are given funding priority. Id. Some states require land use planning and growth elements only under certain circumstances, if, for example, a local planning commission has been established (Cobb, 2000). Other typical "triggers" or conditions for planning elements include rapid growth rate, population thresholds, environmental or natural resource protection, and historic preservation. States in this category include Alabama, Arizona, Colorado, Connecticut, Indiana, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New Jersey, New Mexico, Ohio, Oklahoma,

Pennsylania, South Carolina, Vermont, and Wyoming (Cobb, 2000, 21-22). The remaining states either make land use planning optional or do not provide for it at all.



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Arizona's present growth management policy, which includes the provisions added by Growing Smarter Plus, is extremely unusual, if not contradictory. On the one hand, existing Arizona law does not allow the state to require that local governments adopt growth management plans. ARIZ. REV. STAT. § 9-461.13 (2000). Based on this research, no other state has such a restriction. On the other hand, existing law provides for land use planning with growth area and open space elements. See id. § 9-461.05(C, D). The land use element includes standards for population density and building intensity, promotion of infill and compact forms of development, and provisions for air quality and energy; the growth area element calls for a rational pattern of land development, economical infrastructure, and coordinated conservation of significant natural resources and open space areas. Id. This section of the existing statute is comparable to provisions in Maryland's Smart Growth Areas Act (MD. CODE. ANN. § 5-7 (2000)) or the new Tennessee growth statute (TENN. CODE. ANN. § 1101 (2000)), and would seemingly place Arizona among the

more progressive states in the second category (Johnson 2000, 25-36; Finucan, 2000, 69-76). However, Arizona law makes these planning goals very difficult to achieve by requiring most local governments to either obtain landowner consent for any open space or growth area plan elements or, in the alternative, provide an economically viable designation allowing affected landowners to build one dwelling on every acre. ARIZ. REV. STAT. § 9-461.06 (2000). This is a very significant and unusual condition "hidden" in the statute; it threatens the constitutional grant of police power to local governments, makes planning for open space and urban areas much more difficult, and has profound implications for local planning, especially for counties and municipalities with any existing or proposed minimum zoning of more than one acre.

A progressive alternative would involve state law requiring every county and all municipalities to adopt local growth management plans; amendment, or even abolition, of the existing landowner consent condition would be contributive, if not essential. Somewhat like the CGMI, plans would be designed to: control sprawl through urban growth boundaries and infill incentive areas; require developers to pay the full cost of additional public facilities; protect air and water quality, preserve natural open space and historic areas; and promote multimodal transportation and affordable housing. To satisfy the goal of affordable housing, in particular, growth management plans should be required, or strongly encouraged, to establish minimum density requirements, mandate mixed housing types, and create clear and objective development approval standards (Ruesga, 2000, 1083-84; Morgan, 1984).

There are benefits to allowing communities and counties freedom to create plans based on their own unique goals, location, character, and needs, outside a system of state bureaucratic control. However, creating growth plans and administration to handle them requires both expertise and money, and this can be especially problematic for smaller communities. The CGMI completely overlooked this critical factor. In Florida, growth plans are enforced locally, but municipalities best conforming to state guidelines are given priority for state, federal pass-through, and private activity bond funding; Florida also created a Growth Management Trust Fund to provide grants to help pay the costs of local visioning programs. FLA. STAT. ANN. § 163.2514-3167 (2000). Oregon provides

funding and provides guidance through a state planning hierarchy and quasi-judiciary with a strong role in overseeing growth management (Johnson, 2000, 47-58; Rohse, 1987). Any growth management program for Arizona which is state-mandated, yet locally created and enforced, should extend beyond a mere framework for growth management (via the enabling statute), providing advisory or financial assistance from the state to be truly effective.

C. Urban Growth Boundaries

An urban growth boundary (UGB) is a line indicating the outermost limit of a city's planned expansion for a given period of time. A UGB must be precisely described, either by legal description or, preferably, by a map of sufficient scale to be "site specific," enabling determination of whether any parcel of real estate is inside or outside the boundary (Rohse, 1987, 231-35). A boundary typically must be approved by the city which it surrounds, and often by the county in which the city is located. The area outside a city's corporate limits, but within its UGB is referred to as an urban growth area (UGA). UGBs are evaluated periodically, based upon population growth, need for land, and other goals in a city's plan, and expanded accordingly.

Most states do not require UGBs but the number of states and cities mandating or encouraging them is on the rise. UGBs are unconditionally required in Oregon and Washington (Cobb, 2000, 21-22). Oregon has the strictest growth policy in the nation, requiring every municipality to establish UGBs complying with state standards (Johnson, 2000, 47-58; Abbott, Howe, and Adler, 1996). UGBs are conditionally required in Florida, Maine, Maryland, and Tennessee (Cobb, 2000, 21-22). These four states typically use UGBs to maintain population growth thresholds or to preserve important cultural, natural, or agricultural resource areas. In Maryland, growth priority areas are based on population, and are a condition for receiving state infrastructure funding. MD. CODE. ANN. § 5-7 (2000). Tennessee adopted a comprehensive growth policy which combines land use planning and annexation (Cobb, 2000, 24). UGBs must encompass the entire municipality and provide an area sufficient for 20 years of projected growth. TENN. CODE. ANN. § 1101 (2000). Land outside the UGB can then be designated as a rural area, preserving agriculture, recreation, forestry, and wildlife for 20 years (Finucan, 2000, 69-76). Once a

UGB has been established, municipalities can only annex territory within the UGB. Counties or municipalities that fail to establish growth plans and UGBs are denied state and federal "pass-through" funding for transportation, community development, and tourism. As previously noted, Florida adopted a Growth Policy Act, designed to reduce sprawl, which provides developers with incentives to infill urban areas. FLA. STAT. ANN. §§ 163.2514-3167 (2000).

Increasingly, municipalities have begun adopting growth management plans or UGBs where a state program is lacking. UGBs have been created in Lexington, Kentucky, Boulder, Colorado, Minneapolis-St. Paul, Minnesota, fifteen San Francisco Bay Area communities, including San Jose, and other towns (Bollier, 1998). Lexington adopted a UGB to protect its surrounding bluegrass country and horse farms; the rationale is that while development has some short-term economic benefits, development might destroy a priceless resource without which Lexington could lose its unique character, tourism base, and a long-standing sector of its economy (Cobb, 2000, interview).

UGBs have received both praise and criticism. Most planners hold that contiguous, centralized, high-density development leads to more efficient and livable environments (Audriac, Shermyen, and Smith, 1990). At least one scholar has expressed concern that the less permanent UGBs are, the less likely they are to prevent development from "leapfrogging" to fringe areas not contiguous to existing urbanized areas (Kelly, 1993, 135), but a 1998 study found that development inside Oregon's UGBs tends to be contiguous to the urban core rather than dispersed, in keeping with state policies on urban form (Weitz and Moore, 1998, 436). Coordination among municipalities or Portland's regional government allowed most localities in Oregon to restrain developers from leapfrogging out to a cheaper periphery (Bollier, 1998).

UGBs are designed to create long-term benefits for both urban areas and rural hinterlands, but some suggest that they may cause increases in land and housing costs in the short-term (Ruesga, 2000; Gordon and Richardson, 2000; Audriac, Shermyen, and Smith, 1990). However, fair housing laws have allocated affordable housing in towns in the Portland area, also allowing suburban subdivisions to be built using less land per household (Bollier, 1998). The average price of a home in the Portland metropolitan area in 1996 was only $139,400, about the same as Reno

and Denver and less than Seattle, San Diego, and the San Francisco Bay area (National Association of Realtors, 1997). It has also been argued that Portland is not an accurate indicator of a UGB's potential for increasing housing cost because nearby Washington state serves as an outlet for home buyers (Gordon and Richardson, 2000), but a study by Nelson (1994) revealed that well over 90% of Oregon's new residents between 1980 and 1989 located within UGBs. Gordon and Richardson (2000) have also argued that UGBs in Arizona would have significant negative economic impacts, but planners in Oregon expect Portland to grow to approximately 2.5 million people by the year 2040, while maintaining its economic vitality and high quality of life and limiting its geographic area to less than 400 square miles (Metro Regional Government, 1997).

All of the aforementioned states or municipalities imposing growth boundaries have found them to be successful in achieving intended planning goals. The Audriac study (1990) cautioned the use of growth boundaries in Florida, yet Florida ultimately found growth boundaries to be a necessary element of its now-successful statewide growth management scheme. The growth boundary aspect of Maryland's planning reforms has been heralded for its success in protecting the environmental and historic resources around Chesapeake Bay (Johnson 2000, 25-36).

Existing Arizona law prohibits the state from requiring any local government to establish urban growth boundaries. ARIZ. REV. STAT. § 9-461.13 (2000). Yet in an apparent contradiction, existing law requires local plans with land use and growth area elements, including standards for population density and building intensity, promotion of infill and and compact forms of development, a rational pattern of land development, and conservation of significant natural resources and open space areas. Id. § 9-461.05(C, D). However, as previously observed, these goals are nearly impossible to achieve because a separate section of the statute prohibits the effectuation of open space or growth area elements without obtaining a landowner's consent or allowing the landowner to build at least one dwelling unit per acre. See id. § 9-461.06(M).

A proposed alternative requires that all municipalities establish UGBs to limit sprawl, protect natural areas, and economically provide for public services. The proposed UGBs would be no larger than necessary to accommodate population growth for a twenty-year period, like the

Tennessee standard. Given the pro-growth attitude of many Arizonans, it might be wise to "soften" restrictions by allowing growth plans to be enforced locally, as in Florida, while simultaneously encouraging municipalities to follow state guidelines by offering state funding. It might also be advisable not to require local governments to justify exceptions to growth boundaries under the strict "compelling circumstances" legal standard, as the CGMI required, but only require them to demonstrate a "legitimate governmental interest."

UGB regulations should include the following growth management tools, based on findings by Oregon's Department of Land Conservation and Development: infill and redevelopment strategies; minimum density zoning; specific development plans; interim development standards; and transportation-efficient land use strategies (Weitz and Moore, 1998, 426). Infill incentive areas, with vacant lots or deteriorating structures for example, could be based on the Florida statute, and should reduce the cost of additional public services to be paid for by developers. As previously discussed, the goal of affordable housing can be best met by creating fair housing regulations (Bollier, 1998) and by encouraging municipalities to establish minimum density requirements (thus discouraging large lot sizes), provide mixed housing types (including multi-family rental units and possibly mobile homes), and create objective and timely development approval standards (thus decreasing costs associated with delay) (Ruesga, 2000, 1083-84; Morgan, 1984). To be most effective in Arizona's edge cities, UGB regulations should also encourage (and allocate funding for) the creation or adaptation of street and utility networks to better support urban-type density. "If we want a higher density, more flexible, and more visually coherent development pattern in new growth areas, the key is to limit development parcel sizes, and to link parcels and streets" (Scheer and Petkov, 1998, 309).

D. Long-Range Local Plans For State Trust Lands

The State of Arizona acquired 9.5 million acres of land when it gained statehood. In 1981, the state began rezoning large expanses of this trust land to increase their value for eventual sale to developers to offset education, highways and other state expenditures (Porter, 1992, 24). Planners and environmentalists have sharply criticized this effort because it encourages "wildcat"

developments on fringe lands, destroying the habitat and greatly increasing costs of infrastructure and services for local governments. In 1998, Arizona voters narrowly approved a $220 million spending package to acquire and preserve state trust lands as open space (Colton and DiTullio, 1999, 4). This is an especially important issue for Arizona, because of the potential effects of Proposition 100, which passed in the November, 2000 election. The proposition imposes a 3% cap (279,000 acres) on state trust lands that can ever be protected. Pima County (under its Sonoran Desert Conservation Plan) and Maricopa County have already collectively identified over 1 million acres of state lands as conservation areas, so there may not be room under the cap for habitat protection in the rest of the state (Sonoran Institute, 2000). The state land department is currently required to create five-year disposition plans for urban and nonurban lands, which gives local governments some short-term certainty for planning (Colton and DiTullio, 1999, 7), but local governments can't predict which trust lands the state might sell to developers, making long-term plans for open space and infrastructure very uncertain.

In general, state law is assumed to be sovereign, and thus both preempts and is "immune" to local control. See U.S. CONST. art. IV. Existing Arizona land use law adheres to this strict, traditional approach, because it prohibits the state from requiring that local growth management plans be applied to state lands; instead, local growth management plans must be coordinated with state land department conceptual plans. ARIZ. REV. STAT. §§ 9-461.13(A)(3), 9-461.05(A), 11-821(A) (2000).

An alternative approach localizes land use control by requiring state plans for state lands to conform to county and municipal land use and growth management plans. Similar approaches are increasingly prevalent throughout the nation. The American Law Institute's Model Land Development Code provides that state development is subject to regulation by local governments in their exercise of powers granted to them by the Code, unless exempted by statute (American Law Institute, 1976, § 12-210). Quite a few states have crafted exceptions to the general rule of state preemption, providing that if a local plan meets state legislative standards, state agencies must conform to the approved local plan. Florida, for example, provides that if a local plan conforms to

specific state requirements, then all state agencies must recognize the local plan as if it is state law, and must conduct their operations in a manner consistent with the local plans. FLA. STAT. ANN. §§ 163.2514-3167 (2000). Similarly, Oregon, which certifies local comprehensive plans, provides that local planning ordinances are applicable to any publicly-owned property. ORE. REV. STAT. § 227.286 (1999). In Rhode Island, which has a procedure for state review and approval of local comprehensive plans, state projects must conform to approved local comprehensive plans. R.I. GEN. LAWS § 45-22.210(E) (1999). An Ohio court has held that the state need not obtain permits from local governments, but that the state must attempt to comply with the local zoning scheme or demonstrate that compliance is impossible given the state purpose and use. Brownfield v. State, 407 N.E.2d 1365 (Ohio 1980). California also requires that state lands bureaus cooperate with local planning agencies, but California allows local school districts and any other "local agency" to exempt themselves, as agents of the state, from local zoning regulations under certain circumstances. CAL. GOV'T CODE §§ 53090 to 53096 (1999). The proposed alternative would, like the state statutes above, probably make municipal and county planning more efficient, predictable, and specific to the needs and character of different communities.

E. Subdivision Regulation

Land splits in the hinterlands are almost always dependent on how state statutes define "subdivision;" only land splits falling within the definition will trigger the application of subdivision controls legislation (regarding reasons and methods for subdivision regulation, see generally Yokley, 1981). These statutes vary greatly in terms of the number of lots that it takes to be subject to the legislation (2 to 5 generally), the size of the lot splits that count (one to more than 100 acres), and the time period in which successive splits may be made (Rohan, 2000, ch. 45, 16-20). Out of 35 states specifically triggering subdivision regulation based on number of lots, 13 states set the limit at two lots, 10 at two or more, 6 at three lots, 1 at four lots, 5 (including Arizona) at five or more lots. Id.

Existing Arizona law allows developers quite a lot of flexibility to develop land because it uses a broader definition of subdivisions and land splits (six or more divisions of less than 36

acres) than most states. ARIZ. REV. STAT. §32-210 (2000). Thus, Arizona has seen an explosion in the development of "wildcat" subdivisions, the ultimate symbol of sprawl (Sonoran Institute, 2000). Such subdivisions usually involve a developer making fast money by selling parcels of land, typically in unincorporated rural areas or in areas where local agency review and control of such developments is limited. Wildcat subdivisions often destroy natural resource land, stretch the financial (budgetary) and distance limits of local governments by creating a demand for facilities and services far from the nearest municipality, and surprise prospective homeowners who are unaware of the consequences of purchasing land which may not have adequate infrastructure or services (groundwater, sewer/septic, roadway, fire, police, and medical services).

One of the least complicated means of addressing the "wildcatting" problem is to reduce the number of parcel splits constituting a subdivision (from six to two, for example), though this approach would admittedly limit the ability of some landowners to develop their land. Because many of these parcel splits occur in rural areas, another means of addressing the problem is to increase the amount of acreage which counts as a land division (from the present 36 acres to, say, 100 or more). A few western states require that even splits into very large parcels must comply with subdivsion regulations; Montana, for example, requires that each parcel, after a split, be as large as 160 acres to be exempt from subdivision regulation (Rohan, 2000, ch. 45, 16-20). Arizona could also better control development in the urban fringe and suburbs by including condominium developments in subdivision regulations (existing law does not). ARIZ. REV. STAT. §32-210 (2000). Although condominiums typically have the benefit of creating higher density than freestanding homes, they still can cause a strain on local services and can "pioneer" undesirable expansion into the hinterlands (Sonoran Institute, 2000). As well, Arizona could require that land come under the purview of subdivision regulation whenever a new access road is permitted or built; through this "trigger" mechanism, local jurisdictions might obtain advance notice of a landowner's intent, and thus plan accordingly. Lastly, Weitz and Moore (1998, 436) have suggested the use of "urban service" boundaries, which would allow local governments to limit provision of services or infrastructure to fringe developments for a given period.

F. Development Impact Fees

Currently, at least sixteen states have impact fee legislation, but both legislation and the practice of imposing impact fees are on the increase (American Planning Association, 2000, 135-161). The major difference among state impact fee statutes is the degree to which the statutes balance public and private interests in choosing who will pay for public facilities and services needed for new development (Rohan, 2000, ch. 45, 113-117). In fact, the provisions of impact fee legislation are often proposed by the building community or developers to "nail down" details in local laws (Cobb, 2000, interview). This has the benefit of making ordinances more certain and predictable, but it can be costly to communities in that it tends to work to the developers' advantage.

Only a few state statutes addressing impact fees are more protective of developer interests than existing Arizona county legislation; for example, Illinois, Pennsylvania, and Virginia limit the use of impact fees exclusively to roads (American Planning Association, 2000, 135-161). States such as Idaho, Indiana, New Mexico and Nevada expand the scope further to authorize fees for drainage, sewer, water, new facilities, and expansion of existing facilities. Id. Existing Arizona county legislation is comparable to the statutes of these latter states, although it is one of the more complex statutes and thus provides many protections for developers. Existing impact fee legislation requires counties to adopt development impact fee ordinances, create benefit area plans, conduct needs assessments, identify specific facilities in benefit area plans, and provide credits for other developer contributions. ARIZ. REV. STAT. §§ 11-1102, 11-1105, 11-1106, 11-1107 (2000). The legislation also stipulates that impact fees cannot remedy existing deficiencies in urban infrastructure, and cannot be imposed on developments with building permits. Id. §§11-1106, 11-1108.

A more progressive approach is taken in Florida, Georgia, Maine, New Hampshire, Oregon, and Vermont, which expand the scope of fees to address growth, safety, or environmental factors (American Planning Association, 2000, 135-161). The Florida statute, for example, provides that a local government with an adopted urban infill and redevelopment plan, or a similar plan, may exercise special powers for community redevelopment and neighborhood improvement districts,

including the authority to levy special assessments. FLA. STAT. ANN. §§ 163.2514-3167 (2000). Similar impact fee legislation for Arizona would encourage communities to be more public interest-oriented. Such legislation would allow municipalities and counties to impose development fees related to growth management plans and require developers to pay for the full costs of most development.

The costs of impact fees are sometimes passed in part from the developer to the homebuyer (in the form of proportionally increased home price) and/or to the original owner of the land to be developed (in the form of proportionately lower price paid for the land). These costs can be mitigated to some extent by imposing "linkage" fees on commercial development, based on the premise that new industries bring more people into the community thus requiring extension of infrastructure and services (Denbo, 1994, 10). However, communities are reticent to "kill the goose that lays the golden eggs" by driving away their economic bases (American Planning Association, 2000, ch.8, p.137), so it is best that legislation avoid removing all developer protections. New regulations should allow reduced development impact fees in infill incentive areas, as previously recommended, and should provide "credit" to developers for projects which improve public uses or fulfill the goals of land use plans.

IV. Conclusions

Geographical analysis demonstrates that Arizona's explosive growth has been accomodated by suburban sprawl, polycentric urban forms characterized by edge cities, ongoing migration to the Sunbelt, and a traditionally pro-development political environment. These factors have collectively led to the need for more effective statewide growth management regulations in Arizona. Based upon geographical research, analysis of existing Arizona law and the CGMI, a survey of statutes in other states, review of judicial decisions, and consideration of the American Planning Association's Growing Smart℠ legislative guidebook, this paper strongly recommends changes in Arizona's land use laws, including adoption of state-mandated growth planning, the establishment of urban growth boundaries, provisions for state trust lands, more stringent subdivision regulation, and increased impact fees.

Given Arizona's traditionally pro-development policy and the landowner consent clauses in its planning statutes, this paper attempts to recommend changes to land use law in a realistic political and socio-economic context. Thus, the proposed changes have balanced interests by: protecting the quality of life and natural environment for Arizonans through reasonable growth management approaches; providing communities with advisory and financial assistance from the state to create and enforce growth management plans; allowing developers continued protections, waived impact fees for urban infill and furthering growth goals, and credit for providing public amenities; guarding against rapid inflation of housing costs for homebuyers by mandating fair housing, density standards, mixed housing types, and objective development approval standards; and other provisions. However, any growth management program, no matter how balanced, will be greatly limited by Arizona's present landowner consent clauses.

As mentioned several times previously, existing Arizona law requires the prior consent of any landowner whose land would be devalued or restricted by a planning goal or a change in zoning classification, or alternatively allows the landowner to build at least one dwelling per acre. ARIZ. REV. STAT. §§ 11-829 (2000). Arizona is the only state with such a stringent limitation on planning. It is especially unusual in light of the U.S. Supreme Court decision in Lucas v. South Carolina Coastal Commission (505 U.S. 1003, 1027-29 (1992)), which held that a government regulation is only considered a taking without just compensation where it has the effect of depriving private land of "all economically viable use." Further, the Ninth Circuit (the federal appeals court which presides over Arizona) recently confirmed that a planning ordinance that temporarily prohibits most residential and all commercial construction until a new regional plan is developed does not deny landowners all economically viable use of land. Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency (34 F.Supp.2d 1226 (9th Cir. 2000)).

After the Arizona Legislature enacted the landowner consent provision in 1998, as a scheme to address regulatory "takings" issues, many counties and county officials sued, alleging, among other things, that the statute undermined fundamental principles of comprehensive planning and zoning, conflicted with uniformity in land-use law, and improperly delegated legislative authority to

individual citizens. The suits were consolidated in a case styled Pima County v. Schafer, but the case has been tied up in the Arizona courts for two years. The courts have reduced the multiple allegations to two basic issues: (1) Will a statute requiring that a landowner give written consent to any action that changes the zoning classification of the land or that restricts the use or reduces the value of the land result in non-uniform and inconsistent application of zoning ordinances?; and (2) is such a statute invalid as an improper delegation of legislative authority?

The Pima County case is currently pending before the Arizona Court of Appeals on an appeal by right. The case may fully resolve the landowner consent issue, but it would be remiss not to recommend a change in the law that would prohibit the legislature from requiring the prior consent of landowners before effectuating plans or rezoning, while simultaneously protecting land uses, vested land rights and public services existing before a growth plan is adopted.

Many Arizona citizens seem to want to limit the ill effects of sprawl and preserve the natural environment, yet, like the "reasonable" landowner familiar to economic geographers, also wish to use their own real property as they please. Until some change is made, Arizonans will find themselves in a legal and socio-economic dilemma.

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