Land Conservation and Its Implications on Planning

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*Planning* Magazine is a highly regarded trade magazine for the community planning profession, and it is published by the American Planning Association (APA). The magazine presents articles on various planning-related subjects such as climate change, affordable housing, historic preservation, zoning, and land use. These articles illustrate the issues relevant to planners in contemporary community planning and provide valuable insight and potential solutions. The subject of this memo is land conservation/preservation. Specifically, planning to protect and support agriculture, preserve farmlands and forestlands, protect wildlife habitats, and prevent sprawl. The memo will summarize the contents of eight feature-length articles found in Planning issuespublished within the last ten years.

There are many reasons to preserve the nation's vast landscapes. They contribute to the national economy through agriculture and materials harvesting, allow for outdoor recreational activities, and harbor precious wildlife. Many citizens and planners in the United States understand these reasons. There are many tools that planners and public agencies can utilize to accomplish the land preservation task. According to Tom Daniels in his article *Preserving Large Landscapes*, the primary technique is what is known as the conservation easement (Daniels 2015). This is when private landowners sell the development rights of their land to a land trust or public agency and sign a deed restricting their land to farm use or open space. Through this process, the landowner can maintain ownership of their property, and the state is assured that the property will not be vulnerable to urban sprawl as growth demands in neighboring municipalities push their boundaries outwards. A similar technique is the transfer of development rights (TDRs). Like a conservation easement, TDRs allow landowners to sell the development rights of their land to someone else. The difference is that in TDRs, the buyer transfers the development right to another piece of land in an area where the governing authority encourages more development. This is an ideal technique, as this allows for more urban development—thereby meeting growth demands—while ensuring the preservation of rural lands in the area. Both techniques are favored by governing authorities because all participation is voluntary. This removes the necessity of government interventions like eminent domain and takings clauses, which bring a host of legal and administrative barriers. At a time when farm and ranchlands are converted to other uses at a rate of 2.5 million acres a year (Daniels 2015), these land preservation techniques prove to be extremely valuable.

As mentioned in the introduction, sprawl is a planning issue related to land preservation that is frequently discussed among planners. Sprawl is the most apparent threat to the preservation of farmlands and forestlands, and this has been so since the suburbanization trend in the United States following the Industrial Revolution. Proper growth management in metropolitan areas is the best way to prevent urban sprawl in our communities. One of the best examples of this can be found in Montgomery County, Maryland, through its agricultural reserve program. This program is laid out in the article *Montgomery County's Agricultural Reserve* by Tom Daniels. The government of Montgomery County recognized the importance of preserving their farmlands not only to protect the local agricultural industry but also to preserve the community's rural heritage. In 1980, the County Planning Board drafted a master plan containing three actions. "The ensuing Functional Master Plan for the Preservation of Agriculture and Rural Open Space In Montgomery County called for the preservation of a critical mass of farmland to enable the agricultural industry to continue, incentives and regulations to preserve farmland and rural open space, and an innovative Rural Density Transfer Zone (for the transfer of development rights)" (Daniels 2017). The 93,000-acre agricultural reserve was born from this, including 25-acre minimum lot sizes and a progressive TDR option for every five acres of land. This was the first-of-its-kind land preservation model, and it has been used across the United States since this moment, over 40 years ago. As of the article's writing, Montgomery County, Maryland, has preserved over 70,760 acres of farmland.

Another example also coming out of the State of Maryland is the preservation efforts of Harford County. In the article *Expanding Boundaries*, Avin explains that Harford County adopted what they call a "development envelope." This envelope is a boundary between the county's urban and rural areas. This envelope was adopted over 40 years ago and is now facing trouble as it is quickly running out of space, and the county needs help to meet its projected housing demand. Harford has called upon students and faculty of the University of Maryland to create sustainable ways of addressing these issues. The project team identified a nearby rural community called Creswell as a candidate for inclusion in the development envelope. Following a qualitative assessment of various scenarios, the project team decided that "the Selective TDR scenario had the greatest potential to achieve both the growth and preservation goals while resolving or mitigating their potential contradictions" (Avin 2020). This scenario is estimated to yield anywhere from 8,000 to 20,000 new homes while continuing the county's tradition of land preservation.

Coupled with the planning focus on land preservation, we also see planners specifically focusing on agriculture instead of treating it as a secondary concern. Much of this focus is aimed at farms in highly developed urban counties. This idea is attested by Julia Freedgood in her article *Planning for Agriculture, Not Just Around It*, when she said, "Farms in the most urban counties produce much of the food we eat: 91 percent of the market value of fruits, nuts, and berries; 11 percent of vegetables; and the majority of dairy, poultry, and eggs. This land most threatened by development has claimed 25 million acres since 1982, an area the size of Indiana and Rhode Island combined" (2016). The expansion of urban areas has already threatened many farmlands; there is still time to protect them. Julia also talks about protecting farmlands from pressures other than urban development that planners do not often address. The three main reasons farmers—90% of which operate on 'small' farms—must sell their land are weak economic performance, high land values, and death or retirement (Freedgod 2016). Planners can address this by considering the economics of small agricultural operations in their creation and advocacy of relevant regulations and policies.

Allowing our landscapes to remain open and retain their natural characteristics can harmonize with societal progress or advance other planning goals. Both land preservation and climate change can be addressed by utilizing these lands for solar energy developments. Solar energy is associated with less carbon emissions and less impact on the natural topology of the Earth. As stated in the article *Opportunities for Big Benefits from Large-Scale Solar*, solar energy development provides benefits to localities like job creation, increased capital investment, and increased tax revenue, but it can help in other ways as well. "But the benefits do not stop there. Managed strategically, communities can put solar development to work to meet community objectives beyond economic development and clean energy. Local governments can set large-scale solar performance standards to capture aesthetic, habitat, or environmental conservation; agricultural and farmland preservation; stormwater management and water quality improvement; and even growth management benefits" (Anonymous 2020). Land that public agencies and private landowners want to keep open can be utilized in energy production, thereby contributing to the effort of facilitating growth while remaining *largely* undeveloped. These energy developments often produce aesthetic improvements to these spaces and increase the space's value to the local wildlife inhabiting the area. The article says an increasing number of states, including Minnesota and Maryland, have statutes that encourage large-scale solar sites to "provide native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators, and reduce stormwater runoff and erosion." Flowering ground cover, a landscaped buffer, or a particular style of wall or fencing may be required to provide aesthetic value" (Anonymous 2020). Exploring unconventional ways that land can benefit human living while contributing to the larger landscape is an exciting move forward in community planning.

Another part of land preservation is the protection of the land's natural resources. One of the most valuable resources open landscapes can provide is its access to water. Communities make use of different water sources when supplying water to their residents. As per the article *Can land Use Help Solve the American West's Water Crisis?*, in the case of the western United States, much of the water supply is derived from the Colorado River, which provides water for roughly 40 million people (Sisson 2023). The Colorado River is struggling due to major shifts in the climate, and dependent communities are starting to realize the effects of this. Communities across states like California, Arizona, and Nevada have to adjust their water management systems as drought conditions continue and river usage becomes more detrimental to the overall health of the waterway. Planners are taking many steps to address these concerns. Planners emphasize multistory housing, more efficient home appliances, water reclaiming, and more. (Sisson, 2023). The biggest push, however, is to reduce overall water consumption. This was a large focus of the municipal government of Las Vegas and the Southern Nevada Water Authority, and they reduced water use per capita in the city by 48% from its levels 20 years prior (Sisson, 2023). In a time when climate change becomes a more pressing issue every day, preserving our ecosystems and natural land features is of utmost importance.

In line with the previous paragraph, land preservation as a means of combatting climate change and protecting the habitats of the nation's wildlife should be a top concern for American planners. The question becomes how much of the Earth's landscapes should be conserved. A biologist named EO Wilson proposes that half of the Earth be dedicated to nature. This story comes from the article *Setting Aside Half the Earth for Nature*. Human existence has reached a point where considerations about our impact must be made. The article states, "The global extinction train is barreling ahead, with rates 1,000 times what they were before humans were on the scene. And the end game is terrifying. "If it continues at this rate," she says, "it will eliminate more than half of all species by the end of the century" (Beatley 2018). Planners must consider the ways we use our most precious resource: land. One of the most often-dismissed stakeholders in the planning process is the wildlife with whom we share the Earth. Cities will be among the most powerful drivers in the half-earth vision, as connections to nature occur locally in the physical world. It is not easy to get people to care about the landscapes across the world from them, but it is an entirely different story when it is their own backyard. The charge given to cities that want to participate in the half-earth vision is a commitment to compactness and density to reduce their growing spatial footprints (Beatley 2018). Managing growth in a way that prevents cities from expanding their boundaries into rural areas helps small communities, farmers, and the species with which we cohabitate.

When discussing land preservation, land use, zoning, etc., one topic that comes into play is the government's authority and legitimacy in these actions. Specifically, it comes up when the discussion is centered around private land. America has built a strong foundation on individualism and private property rights, yet from the beginning, there is an established tradition of controlling land use for the people's interests. This idea is covered in *Legitimate Land-Use Planning, Policy, and Regulation*. The United States has a history of controlling how private land is used. We have also changed the 'rights bundle' associated with land ownership over the years, usually due to technological advancements. It was long held that landowners had rights to the air and sky above their property. When the airplane was invented and air travel became a popular means of transportation, the government took control of the sky to build an air highway system. This was not viewed as a taking and did not require compensation because it was done for the greater good of the people and the society in which we live. This idea has been rationalized as far back as the American Revolution. Jacobs writes, "At the time of the American Revolution, founder Benjamin Franklin declared, "Private property is a creature of society, and is subject to the calls of that society whenever its necessities require it, even to the last farthing" (2017). As planners make decisions regarding the physical land of this country, they can do so knowing they are standing on a foundation of legal, cultural, and historical precedence.

Land preservation continues to be a changing, complex, and challenging subject with an array of associations and implications influencing the decisions of community planners. The above article summaries give insight into the great strides and discussions being made in the planning profession.

Bibliography

Sisson, Patrick. 2023. "Can Land use Help Solve the American West's WATER CRISIS?" *Planning* 89 (2) (Summer): 20-22,24-25,27-28. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/can-land-use-help-solve-american-wests-water/docview/2843892582/se-2>.

Avin, Uri, F.A.I.C.P., Kari Nye, and Jerah Smith. 2020. "EXPANDING BOUND ARIES." *Planning* 86 (9) (10): 33-39. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/expanding-bound-aries/docview/2449486970/se-2>.

Jacobs, Harvey M. 2017. "Legitimate Land-use Planning, Policy, and Regulation." *Planning* 83 (11) (12): 39-40. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/legitimate-land-use-planning-policy-regulation/docview/1976407418/se-2>.

Daniels, Tom. 2017. "Montgomery County's Agricultural Reserve." *Planning* 83 (5) (05): 38-39. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/montgomery-countys-agricultural-reserve/docview/1897317041/se-2>.

"OPPORTUNITIES FOR BIG BENEFITS FROM LARGE-SCALE SOLAR." 2020.*Planning* 86 (3) (03): 50-51. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/opportunities-big-benefits-large-scale-solar/docview/2388016076/se-2>.

Freedgood, Julia. 2016. "Planning for Agriculture, Not just Around it." *Planning* 82 (1) (01): 60. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/planning-agriculture-not-just-around/docview/1759327182/se-2>.

Daniels, Tom and Jack Wright. 2015. "PRESERVING Large Landscapes." *Planning* 81 (10) (11): 33-36,38-39. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/preserving-large-landscapes/docview/1753051881/se-2>.

Beatley, Timothy. 2018. "Setting Aside Half the Earth for Nature." *Planning* 84 (7) (07): 40-41. <http://spot.lib.auburn.edu/login?url=https://www.proquest.com/trade-journals/setting-aside-half-earth-nature/docview/2089761091/se-2>.