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Zoning's Centennial: A Complete Account of the Evolution of Zoning into a Robust System of Land Use Law—1916-2016 (Part IV)

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ZONING'S CENTENNIAL: A COMPLETE ACCOUNT OF THE EVOLUTION OF ZONING INTO A ROBUST SYSTEM OF LAND USE LAW—1916-2016 (PART IV*)

John R. Nolon[1]

I. Fracking as an Industrial Use Under Zoning[2]

Is there currently a more controversial land use, environmental, and economic issue in America than fracking? Just listen to the ongoing debates:

"Fracking is great!"

"No, it's terrible!"

"It will mitigate climate change."

"No, it won't."

"Fracking cannot be made safe, even through proper regulation."

"Yes, it can."

"Even if it can be done safely, don't go there, because it will take our focus away from promoting renewables."

To quote Kurt Vonnegut: "So it goes."[3]

*Dear Reader: Please note that this is the fourth and final part of a four part series of articles that had spanned through the last 3 issues starting with this past October, Volume 39, Issue 9 release and ending with this January, Volume 40 Issue 1 release.

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Meanwhile, fracking is happening and local governments are subjected to many of its associated risks. They either need to act, or know—clearly and convincingly—why they should not. The federal government has stopped far short of comprehensive regulation of fracking; the states' regulations range from fair to poor, sometimes preempting local regulation but most often sharing regulatory authority over land use impacts.

The stakes couldn't be higher. "Think about it," as the fracking industry advertisement says; does the federal or state government, as part of their fracking regulations, control any of these local impacts?

- Pressures on housing supply and costs;
- Radical changes in community character;
- Loss of habitat and species;
- Deterrent effects on local growth;
- Impacts on recreational resources;
- Effects on agricultural land and operations;
- Causation of soil erosion and sedimentation;
- Creation of visual blight; or
- Increases in the cost of public health services.

The Land Use Law Center and our partners at the Yale School of Forestry and Environmental Studies have examined dozens of local fracking regulations and identified three dozen local impacts and risks found in the purposes section of their laws. With respect to a few of these impacts, federal or state regulations may require some level of mitigation, but these fall far short of controlling highly specific impacts felt in existing neighborhoods and on local environmental assets. Federal and state regulations are indifferent, as well, to the land use objectives of the comprehensive plan in any given community.

This indifference and the preemption of local control of fracking in some states are hard to understand. Why should this be more complicated than regulating any other intense industrial use? (Cement manufacturing comes to mind.) Why don't we allow it in industrial zones and subject it to a number of conditions as a specially permitted use? If imposing conditions can't fully protect local interests, why can't the fracking application be denied? Why should this one impactful land use be treated differently?

Consider that zoning is one of several responsibilities that local governments are delegated by their state legislatures. Think of these responsibilities as a three-legged stool. First, zoning determines how property is used and developed, and therefore dictates how valuable it will be. Second, localities have the power to impose property taxes on the assessed value of the land that they regulate. Third,

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municipalities are expected to use property tax revenues to fund municipal operations, provide capital infrastructure, and carry on the business of local government.

Given the complexity, comprehensiveness, and utility of these linked powers and duties, the judiciary is rightfully cautious about implying that state statutes that regulate fracking are intended by the legislature to inhibit local prerogatives. The importance of local land use regulation and the intertwined functions of local governments raise a *presumption against preemption*, in my view, that must be overcome to convince most state judges that their legislatures intended to preempt local zoning. Judges are inclined to say that if the state legislature passed statutes integrating zoning, taxation, and expenditure, why would they, in the case of fracking, remove one leg of the stool?

What has happened in Pennsylvania is instructive. Under previous state oil and gas law, the state courts had determined that local governments could regulate but not prevent fracking under local zoning. Following these judicial decisions, the state legislature adopted Act 13, which preempted local control.[4] The Act required local governments to include fracking as a permitted use in all zoning districts.[5] This Act was invalidated by *Robison v. Commonwealth*, which held that it failed to protect neighboring property owners from harm and created irrational land use classifications.[6] The power of municipalities to adopt comprehensive plans, to separate land uses through zoning, and the derivative rights of land owners, in the *Robinson* court's view, trumped state oil and gas legislation that, on its face, preempted local regulation.[7]

The court explained that zoning power was but "an extension of the concept of public nuisance which protects owners from activities that interfere with use and enjoyment of their property," citing the seminal *Village of Euclid v. Ambler Realty* case.[8] Essentially, the Act required municipalities to create zoning incompatible with their comprehensive plans; if mining and gas operations were to be included in all zones, as the Act required, zoning ordinances would inherently not comport with their comprehensive plans.[9] Thus, the court found, the state's interest in regulating fracking processes sits in direct conflict with local zoning interests.[10]

II. Water Scarcity and Land Use Planning[11]

Another major zoning issue that has come up recently is water scarcity and how to deal with it in land use planning. When zoning was created, the availability of cheap and plentiful water was an unquestioned assumption. In zoning's blueprint, there are few designs for water supply planning. This is the case even though land use planning determines water demand; the number and type of buildings allowed under zoning determine the per capita water use in a given community. Water supply planning was traditionally the province of the municipal water district, a separate water and sanitation district, or similar entity. Most of these were organized under state statutes that were originally—and remain today—legally disconnected from the zoning and land use planning enabling acts. Water demand and water supply planning have never been connected legally or institutionally.

This separation is a serious flaw in the legal system, particularly in those states with drought, limited snow melt, and declining surface and ground water supplies. Recent U.S. Drought Monitor reports state that 38 out of 50 states are abnormally dry.[12] Sixteen of them are in a moderate drought, nine are in a severe drought, two are in extreme drought, and California is in an exceptional drought.[13]

According to EPA, relief is not on the horizon: "Scientists project that climate change

will make some of these extreme weather events more likely to occur and/or more likely to be severe."[14] Relatedly, according to NASA, "continued increases in human-produced greenhouse gas emissions drive up the risk of severe droughts in these regions."[15]

These predictions highlight the importance of connecting water supply and land use planning. Not only can land use planning reduce emissions, but, as the Land Use Law Center's recent experience in the Interior West demonstrates, land use planning can also reduce per capita water use by up to 140 gallons per day.[16] With the populations of these states projected to increase—by as much as 100% in Colorado—reducing per capita consumption is the logical point at which to begin a comprehensive plan to balance supply and demand.[17]

Zoning that permits large lots, low-density, and dispersed development increases water use per household. Compact, mixed-use development requires less water per household than single-family housing. The infrastructure requirements of both types of development are quite different.

In Utah, planners have determined that water demand drops from approximately 220 gallons per capita per day at a density of two units per acre, to about 110 gallons per acre at a density of five units per acre.[18] More modestly, increasing residential density by 20% can yield a 10% per capita water savings.[19] A study of household water use in Sacramento, CA showed 20-30% less water use in a new urban development than in the suburbs.[20] Because of these significant effects, the link between land use patterns created by local zoning and water conservation needs to be clearly understood. Very few other water planning strategies can have a greater effect on limiting consumption.

Communities should begin by integrating water-efficient land use patterns and strategies into their comprehensive plans. Once this initial step is completed, this vision can be implemented through changes to the zoning code that permit water-efficient land uses in areas targeted for development, discourage development in areas targeted for conservation, and foster building types and landscapes that minimize the use of water.

Similarly, communities with limited room to grow can modify systems to accommodate higher densities and infill development. New forms of zoning, rather than those found in traditional residential zoning district provisions, can be adopted; ones that use new and varied ratios regarding setbacks, lot coverage, open space, livability space, and parking.

Building and land use regulations can reduce water use in several other ways; for example, by mandating water-efficient interior and exterior fixtures and by requiring exterior landscaping practices and plants that reduce water use.

The Land Use Law Center's *Integrating Water Efficiency into Land Use Planning in the Interior West: A Guidebook for Municipal Planners* discusses and illustrates several options for communities to consider in their efforts to foster water-conserving land use patterns, such as:[21]

- Incorporate water-conserving land uses into as-of-right permitted uses;
- Foster water-efficient densities by permitting accessory dwelling units;
- Incorporate water-conserving land uses into conditionally permitted uses;
- Conditionally permit water-intensive uses upon water-conservation measures;
- Condition rezoning on water-conserving practices;

- Incentivize water conservation through bonus density zoning;
- Use planned unit development regulations to foster water conservation;
- Create a water conservation floating zone;
- Use overlay zoning to designate areas appropriate for conservation and those prioritized for growth; and
- Establish a transfer of development rights program with sending districts to preserve green infrastructure and receiving districts to channel economic development.

Which of these options to choose depends on a number of factors, including the current land use configuration and types of buildings in the community. The pattern of development fostered and types of buildings allowed by zoning must respect the current architecture and land development of the community and build gradually from that base. The biggest factors to consider are density, the utilization of present infrastructure, and the cost of needed additional infrastructure.

III. Shaping and Attracting Economic Development[22]

Zoning historically assumed that the private market would inform developers what to build for maximum profit. Its job was to shape individual developments into appropriate human development patterns. The essential land use question, of course, is what type of a community is desirable and feasible to create. Changing demographics, financial markets, and environmental conditions require constant rethinking and restocking zoning's toolkit.

Today's ascendant demographic groups, such as millennials, immigrants, and senior households, prefer "walkups," that is, walkable urban places.[23] They have driven the real estate market toward urban centers and challenged urban planners to shape livable, sustainable, and lively neighborhoods. Fortunately, climate change mitigation also requires walkups, where buildings use less energy, water, and materials, and fewer vehicle trips are taken, resulting in fewer vehicle miles travelled. Zoning occupies a central position in creating the strategies needed to respond to these new market signals.

The Land Use Law Center's field laboratory is the Hudson Valley Region in New York. Ten years ago, our attention was captured by the changing demographics in the region and its apparent effect on the region's cities. To focus our energies, we organized a Mayors' Redevelopment Roundtable, a network of mayors, corporation counsels, and development commissioners representing the region's 12 largest urban communities. Our strategy was to work with the planning, legal, and development staff of the member communities on urban revitalization to identify common issues; conduct research; identify best land use practices; and provide assistance in implementation. In these places, zoning needs to attract economic development, rather than to simply shape it.

This is a report from the field; a quick summary of some of the issues selected for implementation and a few illustrations of best practices implemented. The highest priorities among the mayors were, not surprisingly, to increase tax ratables, keep expenditures in check, and improve their communities' aging infrastructure. These, they intended to accomplish through five strategies: job development, sustainable development, infill development, scattered site projects, and distressed property remediation. We found that zoning, land use regulations, and their associated strategies were effective tools to accomplish these objectives.

Job Development: In this context, job development comprises new employment opportunities for millennials, immigrants, and low-income residents. New development brings

with it several opportunities to generate new employment prospects. Building and infrastructure development, including renewable energy projects, create construction jobs and jobs for those who serve construction projects. Many of these jobs require skilled, union labor, but a percentage of them can be filled by less skilled workers, including the young women and men who live in distressed neighborhoods. The City of Newburgh led the way among Roundtable communities, insisting, during the land use review process, that all new and rehabilitation projects and municipal capital projects include local workers and provide them with the necessary training. This objective can be furthered by bonus density zoning to provide the funds developers need for training and supervision.

Sustainable Development: This topic aggregates transit-oriented development, promoting renewables, energy conservation in new and renovated buildings, affordable housing and balanced gentrification, designing for density, and green infrastructure, among others. The City of New Rochelle, through fast tracking the planning and rezoning of its downtown, offering density bonuses, and creating traffic improvements, stimulated a transit-oriented development project around its central transit station that is leveraging redevelopment of adjacent sites.[24] Yonkers created its own list of criteria for sustainable, or green, projects and requires compliance through its power pursuant to the State Environmental Quality Review Act to mitigate adverse environmental impacts by imposing mitigation conditions. Green buildings, for example, mitigate climate change (an adverse environmental impact). Peekskill is increasing zoning density and expanding land uses permitted in its waterfront transit neighborhood, as well as developing its parking lots there to create a sustainable neighborhood that will prime the pump for further downtown redevelopment.[25]

Infill Development: Cities can accomplish many goals through infill development, which emphasizes the development of vacant lots, reuse of abandoned and underutilized buildings, and creative development of open spaces adjacent to corporate, medical, educational, and non-profit buildings. The City of Mount Vernon adopted numerous criteria from the USGBC's LEED-ND program to guide its rezoning of a transit station area in a developed neighborhood to shape the redevelopment of its remaining infill lots. [26]White Plains is planning a significant Transit Oriented Development program concentrated on the coordinated development of infill sites in proximity to its commuter rail station.[27] This plan begins with two projects comprising 561 rental apartments, retail space, and parking within a short walk of the city's Transit Center.[28]

Scattered Site Projects: In some communities, development opportunities are scattered throughout their downtowns and adjacent urban neighborhoods. Prioritizing the development of a few such sites in order to leverage development nearby is a strategy of interest to the Roundtable communities. The Village of Brewster adopted an urban renewal plan that shaped its rezoning to encourage development of scattered sites throughout the neighborhoods within walking distance of its train station.[29] The Village of Port Chester selected five market-ready "hot spots" for redevelopment as the first step in warming up the market in adjacent neighborhoods.[30]

Distressed Property Remediation: In order to revitalize downtowns, other neighborhoods, and infill sites, areas of concentrated distressed properties need to be addressed. Buildings and properties there provide an opportunity for affordable housing for existing residents, workforce housing for needed new employees, and sites for job development itself. The City of Poughkeepsie is planning a large-scale downtown-focused project that will use flexible

zoning, coordinated transit, pedestrian and bike ways, development on underused parking lots, and a variety of funding sources to initiate pump-priming projects in the area.[31] Newburgh created the first city-wide land bank in the State of New York, which is acquiring vacant lots and buildings, selectively demolishing some of them, promoting community gardening and security devices, and preparing sites for private market development, stimulated by new zoning techniques it recently adopted.[32]

All of these projects and strategies create tensions among local interest groups and require the cooperation of multiple stakeholders, such as property owners, developers, equity advocates, city departments, taxpayers, and local resident leaders. They call for new approaches to project development and approval, including the use of consensus building techniques for community decision-making. Lawyers who are trained in conflict resolution and settlement are particularly needed to advise their clients and local officials how to achieve economic development through strategies like those implemented through the Mayors' Redevelopment Roundtable. In these stories can be glimpsed the collaborative and creative work that needs to be done in zoning's second century.

IV. Open Space Zoning Turns to Sequestration[33]

When the Land Use Law Center was asked in 1994 to report to President Clinton's Council on Sustainable Development, we concluded that under present zoning, the amount of open space in the Hudson Valley Region would decline from 70% then to 30% by 2050. This estimate was calculated based on the rate at which large tracts of land were being subdivided into smaller, mostly residential parcels. At work were the mechanics of sprawl. Zoning maps adopted by the 256 municipalities in the region created a blueprint for future development, most of which would be residential subdivisions. Once zoned for single-family housing, local planning commissions approve subdivisions, applying standards in subdivision regulations that are adopted by local legislatures.

This erosion of open space, here and throughout the nation, gave rise to a movement. Land trusts came of age as open space concerns stimulated donations of land, development rights, or funds that could be used to acquire such land. Local voters began to approve bond resolutions or support real property tax increments to secure funds to purchase and set aside open space. State support for open space preservation manifested itself in a number of ways that involved direct appropriations, taxes, state bonds, tax exemptions, and local financing schemes. These land purchase and donation initiatives signaled a commitment to mitigate sprawl and its ill effects on the quality of life in developing communities, one parcel at a time.

In the aggregate, these funds allow the purchase of a small percentage of the land that needs to be preserved in order to change the ratio of open space to developed land that we projected in our report. This realization—here and elsewhere—led to an effort to prioritize purchases based on lands that matter most. In the eyes of some communities, this meant the purchase of lands that created a historic viewshed; for others, it meant acquiring land that provided needed ecosystem services. In still others, it meant creating a connected landscape that provided for the movement of critters, water, and people through unfragmented natural areas.

A parallel—but too often disconnected—movement sprung up at the local level through changes in land use regulations and procedures. Some communities began to inventory their undeveloped parcels, prioritize their contributions to residents' quality of life and

the environment, add open space components to their comprehensive plans, and adopt zoning and subdivision regulations that preserved the natural resources associated with open space. Localities began to create a new blueprint, one that balanced open space preservation and development, through use of land exactions, mandatory clustering of development, deductions of constrained land from counting in developable lot calculations, and overlay zoning that added strict standards to development located in critical environmental areas. These efforts, when coordinated by a comprehensive plan, can achieve open space preservation—one community at a time.

Today, a quarter of a century into this movement, attention is slowly focusing on sequestering lands: those that mitigate climate change by absorbing nearly a fifth of the carbon dioxide emitted by vehicles, buildings, and enterprise. Biological sequestration of CO_2 emissions occurs within the vegetated environment: places like forests, pastures, meadows, and croplands. These landscapes naturally absorb and store carbon.

The local and state initiatives that have evolved to preserve and enhance open space provide a basis for a broader sequestration policy, one that builds on available legal technology and existing norms to respond to the looming global perturbation of climate change. The need, however, is to bring these local efforts to scale, particularly when the objective is to achieve a goal as ambitious as climate change mitigation.

With federal and state involvement, the efforts of land trusts and localities can transcend their one parcel and one community at-a-time impacts. Consider two recent examples.

In New Zealand, in heavily forested zones, the federal government identifies carbon accounting areas, uses geospatial mapping systems, establishes metrics, and measures increases in sequestration.[34] The owners of forested land are given accounts and issued certificates of tons sequestered; these credits are tradable, depending on the viability of carbon markets (a story for another day).[35] Land trusts and local governments would benefit from such a scheme, especially from the monies it could bring to their preservation efforts while increasing the amount of CO_2 sequestered nationally.

A new law in California opened up opportunities to receive compensation for the carbon value of forests and a land trust in eastern Maine is leading the way. The California law requires polluters to reduce their carbon emissions over time, but allows them to use approved "offset" projects to meet up to 8% of their emissions cap.[36] The first group of offset projects announced by the California Air Resources Board listed the Maine-based Downeast Lakes Land Trust preservation project as one of two forest offset projects selected.[37] Proceeds from the sale will allow the land trust to acquire and preserve an additional 55,000 acres of sequestering land.[38]

V. Land Use Law and Climate Change Management[39]

The most salient zoning issue, as we celebrate the end of its first century, is how land use law can be used to mitigate climate change. When a New York City commission[40] (1916) and the Hoover Commission[41] (1922) created zoning, and SCOTUS validated it,[42] (1926), they had no idea that they were arming local governments to battle climate change. When the floating zone was first created in 1950, the Village legislators in Tarrytown could not have known that this and other Neo-Euclidian techniques could possibly evolve to address such an unfathomable menace.[43]

One hundred years have passed, and we are now at work in coastal communities on Long Island helping local leaders adapt to sea level

rise and storm surges. They are digging through our database of strategies and thinking of creating a wholly new zone: an "expanding zone," one that grows as new data about climate change is received. They are trying to get ready to use the "R" word, "retreat," to explain the inevitable to their residents and business owners. They ask us whether they should create a retreat zone, an adaptation zone, and a safe zone to guide future development. They are utterly preoccupied by this ill-defined space between the mean high tide line and an elevation safe (at least for now) from inundation. They are handling and reshaping the tools that New York City, Hoover, the Supreme Court, and a century of local innovation gave them.

Can they adapt floating zoning, overlay zoning, transfer of development rights zoning, density bonus zoning, conservation easements, wetlands laws, and the land use system's other inventions to properly control development in these new zones? If they don't do something of that kind, will they eventually be held liable, legally or politically, for their failure after the next catastrophe occurs or gradual inundation destroys their sole-source drinking water aquifers? How do they account to their children and children's children for their time at zoning's helm?

Other local leaders are focused on mitigating climate change. Of course this phenomenon is global, but urban communities are the principal sources of carbon emissions, which are the primary cause of climate change. The Land Use Law Center has created a Mayor's Redevelopment Roundtable and, through it, currently serves the largest cities and urban villages in our region. These mayors want to know whether they can use zoning's inventions as well. The Presidential Climate Action Project says that "the greatest potential for reducing greenhouse gas emissions . . . is to reduce vehicle miles travelled—the miles Americans drive each year."[44] Hundreds of local governments, including some in the Roundtable, have adopted Transit Oriented Development (TOD) zones and are rezoning for compact, mixed-use development to create "WalkUPs" (walkable urban places). The new demographics—seniors emerging rapidly from their single-family cocoons, mobile millennials looking for lively urban neighborhoods, and immigrants seeking employment—are tipping the urban-suburban balance, and they are being zoned in through TOD and other zoning strategies. Our mayors are interested as well in other tools including energy code enhancements, design controls, green infrastructure, and other techniques to make their neighborhoods safe, lively, and livable places.

Zoning is adaptable to new challenges as it responds to changing conditions. We defenders of zoning are reminded, however, that zoning is parochial, extending only to municipal boundaries—far, far short of the reach it needs to effectively manage global climate change. We are also told that localities have limited assets and staff capacity to handle sophisticated problems. We point out that land use law is essential to mitigation. It regulates buildings, which consume 40% of the energy produced in the U.S.[45] It is responsible for vehicle miles travelled, which contribute 26% of CO_2 as personal vehicles motor from origin to destination over a landscape created by zoning.[46] Further, the natural landscape, which sequesters 18% of CO_2, can be diminished or enhanced by zoning.

We are advised to pay attention to top-down, mostly federal solutions as our preferred path to a new era of effective climate control. This endless debate was sharpened in Paris at the Conference of the Parties in 2015.[47] Building on an insight of the UN Climate Change Conference in Warsaw in 2013, the Paris COP memorialized the NDC: Nationally Determined Contributions.[48] The Paris agreement turns climate policy upside down, changing the focus

from nation-state dominated action to include on-the-ground solutions, guided, bolstered, and supported by state and national governments.[49] This new approach operates from the bottom up, engaging "sub-national" entities, cities, states, corporations, NGOs, etc., to demonstrate how they can contribute to climate change mitigation.[50]

This debate will continue. In March 2016, the U.S. submitted its NDC to the UN, relying primarily on stricter emissions standards for coal-fired energy generation plants and similar top-down contributions.[51] China, the world's leading emitter, took a different approach; its NDC include emission reductions that rely on the construction of green buildings, renewable energy in buildings, low-carbon community operations, low-carbon transportation systems, and promoting pedestrian- and bicycle-oriented neighborhoods.[52] By 2020, China says, 30% of travel will be by transit and 50% of new buildings will be green.[53]

China will have to allocate resources to the municipal level to implement its NDCs. The US can follow suit. Funding, data, and technical assistance—conditioned on intermunicipal or regional cooperation—can remove the barriers to zoning's larger success. Such a program, funding actors in a system where all politics is local, can truly be a bipartisan effort, one that is much more likely to pass our curious Congress than most top-down solutions. This may be the path to Zoning's New Century.

VI. An Agenda for the First Decade of Zoning's Next Century

On the cusp of its second century, land use law is ready to be used as an essential strategy for sustainable economic development and climate change management: a man-made tool capable of repairing damage done by an alarming man-made problem.

In honor of this anniversary, here is a land use law agenda for the first decade of zoning's second century.

1. **Reduced carbon emissions**. The 2015 Conference of the Parties to the International Convention on Climate Change in Paris called on participating nations to list the strategies they will use to mitigate climate change. These are called Nationally Determined Contributions or NDCs and they are to be submitted to the UN so that it can evaluate their cumulative results. By 2020, when a new submission is due, our NDCs must be grounded as well on land use strategies that reduce vehicle miles travelled and energy consumption by reshaping settlement patterns and revising building construction protocols. This is the first order of business for zoning's second century.

2. **Retreat and resilience:** Much of our population is settled along coastal waterways and flood plains. Many more are in the drought-prone southwest where the summer's heat threatens livability and sparks wildfires. Retreating from the most dangerous of these areas is highly controversial, but an inevitable result of the changing climate. Land use law is evolving to plan for and manage the gradual retreat from some of these danger zones and to make others resilient through proper placement and construction of buildings and infrastructure. The loose confederacy of strategies now being developed must become a clear blueprint of best practices for states and localities to adopt.

3. **Reduced liability for preventing dangerous development.** A quarter of a century ago, the U.S. Supreme Court, in *Lucas v. South Carolina Coastal Council*, held that land use regulations that prevent all economic development

are takings and require full compensation for the affected owner. Justice Scalia, writing for the majority noted that changed circumstances and changed knowledge could be used to soften this rigid total takings rule. Properly constructed no-build regulations in climate change's danger zones must be validated by the use of this dictum to liberate regulators from the liability that has stifled common-sense adaptation strategies.

4. **Creating livable neighborhoods for the new demographics**. Land use regulations can create livable neighborhoods for the nation's emerging households: young individuals and couples (millennials), immigrants, and seniors who are leaving single-family neighborhoods. Most prefer urban living, but only in neighborhoods with a proper mix of services, entertainment, restaurants, and transportation alternatives. These places are where society has invested in infrastructure and where jobs and housing are needed to revitalize urban neighborhoods and reduce per capita carbon emissions. The many solid innovations already in place must be shaped into a common agenda for implementing this objective.

5. **Creating transportation alternatives.** Technology is making cities smarter. They are using new media, communication, and transportation software to lower the costs and increase the amenities of urban living. Foremost among these is transit oriented development that connects mixed-use buildings with transportation services in transit station areas and makes the connections obvious and accessible to residents and workers through smart technologies.

6. **Managing neighborhood transitions.** As this agenda evolves, it could result in gentrification—-the displacement of low and moderate income residents, a result clearly counter to the basic precepts of sustainability. The faint outlines of a strategy for managing this transition without displacement are becoming visible. They involve job development and training for current residents, remediating distressed properties (while making them affordable), including affordable units in new housing projects, and close attention to quality of education and public safety, among other initiatives. Here, land use planning and regulation must be coordinated with other disciplines for progress to be made.

7. **Resolving the fair housing dilemma.** The *Inclusive Communities Project* case, decided by the Supreme Court in 2015, determined that zoning that disparately impacts racial minorities may be invalid under the Fair Housing Act. This requires careful thought and action by affluent communities where whites and single-family zoning predominate. How to create an inclusive community through land use regulations is an elusive objective. Equally challenging is the issue of distributing limited federal and state housing dollars and tax credits. These resources historically have been allocated to communities with low and moderate income populations: where the need is, as they say. The Court indicated that this kind of steering may violate the Fair Housing Act because it perpetuates segregation. To the extent that limited subsidies are allocated to more affluent areas, they are less available to mitigate gentrification in revitalizing urban neighborhoods. This is a public policy quandary of critical importance, one that must be resolved in the first decades of zoning's new century.

8. **Protecting urban food sheds.** The local food movement is inherently sustainable, and innovative farmers are producing crops close to urban centers. Critical to the success of this strategy is the preservation of high quality farm land in defined food sheds. Land use laws must be adjusted to permit farmers in critical areas great flexibility to use farm land to meet market needs and diversify their on-site land uses and to provide zoning incentives to do so. Zoning that permits residential development of farm land must be reformed to protect the most fertile soils and farms.

9. **Reducing water demand and protecting water quality**. As the domestic population expands, water consumption will increase in areas with limited potable water supplies. Land use regulations can foster settlement patterns that reduce per capita water use by emphasizing smaller lots and higher density development. This combined with regulations that require water smart facilities and water-conserving landscapes can reduce per capita consumption by half or more. At the same time, development that serves the nation's growing population must be governed by local land use laws that protect ground and surface water from pollution. This requires more communities to adopt water pollution controls developed over the past two decades as local environmental law.

10. **Making local land use strategies an intentional objective of state and federal initiatives**. The power of local governments to control land use is not likely to be taken away during the early decades of zoning's new century. This power and its proper use must be harnessed for this agenda to be realized; integrating local land use authority must become an intentional objective of state and federal policy. Returning to item one on this agenda, elevating land use strategies to become a core component of the nation's NDCs is an important, if not necessary, method of doing this.

ENDNOTES:

[1]Distinguished Professor of Law, Counsel, Land Use Law Center, Elisabeth Haub School of Law. The author acknowledges the significant work of his research assistants, Allison Sloto, Kara Paulsen, and Ollia Pappas.

[2]*See* John R. Nolon & Steven E. Gavin, *Hydrofracking: State Preemption, Local Power, and Cooperative Governance*, 63 Case W. Res. L. Rev. 995 (2013); John R. Nolon & Victoria Polidoro, *Hydrofracking: Disturbances Both Geological and Political: Who Decides?*, 44 Urb. Law. 507 (2012). John R. Nolon, *Pace/Yale Land Use Collaborative launches beta version of online fracking governance tool for local governments*, Land Use Prof Blog, http://lawprofessors.typepad.com/land_use/2016/01/pace-yale-land-use-collaborative-launches-beta-version-of-online-fracking-governance-tool-for-local-.html (last updated Jan. 25, 2016).

[3]Kurt Vonnegut, Jr., Slaughterhouse-Five or The Children's Crusade: A Duty-Dance with Death (Delacorte Press, 6th ed. 1969).

[4]*See* 58 Pa. Cons. Stat. Ann. § 3303 (West Supp. 2013).

[5]*Id.*

[6]Robinson Twp. v. Commonwealth, 52 A.3d 463, 484-85 (Pa. Commw. Ct. 2012).

[7]*Id.* at 480-94.

[8]*Id.* at 481.

[9]*Id.* at 480-94.

[10]*Id.*

[11]*See* Elisabeth Haub School of Law at Pace University Land Use Law Center, Integrating Water Efficiency into Land Use Planning in the Interior West: A Guidebook for Municipal Planners (Western Resources Advocates) (forthcoming).

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[32]*Id.*

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[42]Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

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