

Homeowners Associations in Carrboro, NC: Are Their Governing Documents Sustainable?

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Overview

This policy brief addresses the restrictive covenants of Homeowners Associations ("HOAs") in Carrboro, North Carolina that prevent environmental best practices. This brief will explain why we advocate an ordinance that prohibits future HOAs from restricting behaviors that improve efficiency or reduce energy or water consumption.

Introduction to HOAs

HOAs are typically created by real estate developers who build and sell homes. The developer creates an HOA to transfer responsibility for the legal and financial management of the community to the homeowners as a body after selling a certain number of lots. When developing the community that will be governed by an HOA, the builder typically devises a covenant of bylaws and restrictions that are then approved by the state. Upon state approval, the HOA can be officially established, thus allowing the HOA governing body to enforce its bylaws and restrictions with force of law, by fining homeowners that refuse to comply with covenant

standards. In North Carolina, HOAs are considered legal entities and are subject to federal, state, and municipal statutes that govern non-profit corporations and organizations.

Throughout the country, HOA covenants that prohibit practices that many view as environmentally friendly and sustainable are increasingly controversial. For the purposes of this brief, the definition of sustainability encompasses three components, including economic vitality, equal opportunity, and environmental quality. Within this definition of sustainability, economic vitality considers the long-term economic sustainability of the community, while equal opportunity guarantees every community member is treated with fairness, and environmental quality considers the long-term health of the planet. This brief, however, will focus primarily on the environmental component of this definition.

Residents living in HOA-governed communities often are prohibited from sustainable practices such as using clotheslines, installing solar panels, planting vegetable gardens, and having rain barrels. HOAs impose these types of regulations because some residents consider these practices unsightly and damaging to property values. For example, a resident might believe that the only reason a person would use a clothes line is because he or she cannot afford a clothes dryer.

However, there are people who strive to implement environmental best practices such as using clothes lines to reduce their use of the Earth's diminishing natural resources and limit their contribution to climate change. The inability of residents to carry out these innocuous behaviors violates the equal opportunity and social equity part of the definition of sustainability.

Consequently, these restrictions have caused numerous states to introduce legislation that limits or prohibits HOAs from banning sustainable practices, including those previously mentioned.

(See appendix for examples.)

Existing Policies

Although HOA covenants cannot supersede local, state, or federal law, the Town of Carrboro's land use ordinance has a few special provisions for HOAs. The ordinance describes the Town's legal relationship with HOAs in Articles IV and XIII. Article IV Section 15-67 of the ordinance, entitled "Maintenance of Common Areas, Improvements, and Facilities," establishes that HOAs are responsible for maintaining all common areas, improvements, and facilities, including private roads and parking areas, water and sewer lines, and recreational facilities. Article XIII Section 15-201, entitled "Homeowner's Association," clearly defines the HOA as having authority to maintain and exercise control over common areas. Therefore, HOA governing bodies have significant degrees of control within the common spaces of their communities.

According to Dan Coleman of the Board of Aldermen in Carrboro, the Board typically does not have ongoing, structured relationships with HOAs in Carrboro. However, in February of 2009, the Board of Aldermen received permission from the North Carolina General Assembly to adopt an amendment to the Carrboro Town Charter, which would allow Carrboro "to prohibit restrictive covenants that prevent the installation of solar collectors or other devices designed to generate or conserve energy through the use of renewable energy or to capture, store or reuse water" (2/26/09). Prior to the passage of this amendment, which allows the Board of Aldermen to write an ordinance governing future HOA covenants, the Town of Carrboro did not have any direct control over the rules and bylaws established in HOA covenants.

Advantages and Disadvantages of Existing Policies

The Town of Carrboro benefits economically from allowing HOAs to maintain common areas and facilities and conduct improvements. Within the neighborhood, HOAs assume responsibility

for maintaining “private roads and parking areas, water and sewer lines, and recreational facilities.” Under Section 15-67 of Article IV, this authorization releases Carrboro from a significant financial burden of maintaining a community’s infrastructure, all the while collecting property taxes.

One positive aspect of the Town's amendment regarding HOAs is the clear delineation of the responsibilities of HOAs and of the requirements for establishing an HOA. This amendment necessitates that HOAs meet stringent requirements for establishing a corporation and assume significant responsibility for the well-being and viability of the community. Additionally, it benefits the Town of Carrboro in that it establishes strict standards to which HOAs must adhere, thereby resulting in the creation of responsible HOAs interested in sustaining communities and protecting property values.

A primary negative aspect of both of these amendments is that the Town must cede part of its control by granting jurisdiction to HOAs, thereby allowing them to establish rules that may be contradictory to the Town’s greater interests. An example of this conflict is that many HOAs prohibit sustainable, environmentally friendly practices such as installing solar panels or using clotheslines. Because the Town has ceded some jurisdiction to the HOA, Carrboro is unable to impose policies that may be in the better interest of the community as a whole.

The new amendment presents many future opportunities for the Town of Carrboro to permit sustainable practices within HOAs. The amendment allows the Town to prohibit covenant bylaws which hinder energy generation or conservation activities. However, the drawback is that this amendment only allows Carrboro to influence new HOAs and prohibit certain regulations impeding energy and water conservation in their covenants.

Our Proposal

As noted above, many HOAs in the Town of Carrboro have restrictive covenants that prohibit certain environmentally beneficial behaviors. These covenants constitute a legal contract between the HOA and the Homeowner and as such their restrictions are not currently regulated directly by the Town Government. However, as natural resources, notably water and fossil fuels, become increasingly scarce it is critical that town citizens be given the option to effect any and all measures aimed at efficiency and conservation. Therefore, the Town of Carrboro should act to regulate future HOA covenants, which often sacrifice sustainability in favor of appearances and property values.

We propose that the Town of Carrboro exercise its legal right to create an ordinance preventing any future HOAs from restricting behaviors that either improve efficiency or reduce consumption of water and energy. This ordinance should address, in particular, the environmentally beneficial practices most often restricted by HOAs. These include, but are not limited to, installation of solar panels and water heaters, the use of rain barrels and clotheslines, xeriscaping (drought-tolerant landscaping), and planting vegetable gardens. The language of the ordinance should specifically address and name the practices that are currently prohibited by HOAs, so as to avoid any confusion or debate over whether its provisions apply to particular technologies or practices. (See Appendix for a more complete list)

Reasons for our Proposal

The aim of our proposal is to show that measures promoting sustainability as well as efforts to protect property values and neighborhood appearances are not necessarily mutually exclusive. Given the current state of policy concerning HOA covenant restrictions on environmental best

practices, it is paramount that the Board of Aldermen should take a new stance and enact an ordinance that limits the abilities of new HOAs to pass such restrictions. An ordinance of this sort would better reflect Carrboro's reputation as a community committed to progressive values, including environmental stewardship. It is in the best interest of homebuyers and the Town in general to ensure that new HOA covenants do not compromise the Town's interest in sustainability. By prohibiting HOAs from preventing homeowners from participating in environmentally beneficial behaviors, individuals receive more personal liberties to make sustainable decisions for themselves. Many homeowners will take steps to implement the aforementioned currently restricted practices.

Although we recognize HOAs' commitments to protecting property values, given the Town of Carrboro's sustainability goals, it is necessary for the Board of Alderman to create legislation preventing restrictions on environmental best practices. The Town should build on momentum that began with the passage of the amendment last February, which was a critical step in the right direction. An ordinance loses its effectiveness, however, the longer it takes to move through the decision-making process to its promulgation, as new HOAs are established each year that will not be subject to a new ordinance. This ordinance will establish a precedent for environmentally sustainable policies for Carrboro, the state and country as well, which are increasingly significant as concerns over climate change and resource scarcity become ever more urgent.

Appendix: Environmental Benefits of Restricted Activities

I. Clotheslines

- Saves energy and lowers energy bills
- Dryers account for 10 to 15% of domestic energy consumption in the United States
- Save money (more than \$25/month off electric bill for many households).
- Clothes last longer
- Clothes and linens smell better, without the addition of possibly toxic chemicals to your body and the environment
- Conserve energy and the environment, while reducing climate-threatening energy use.
- Encourages moderate physical activity, which you can do in or outside.
- Sunlight bleaches and disinfects
- Indoor racks can humidify in dry winter weather
- Clothes dryer and washing machine fires account for about 17,700 structure fires, 15 deaths, and 360 injuries annually. The yearly national fire loss for clothes dryer fires in structures is estimated at \$194 million
- Demonstrate that small steps can make a difference

"How can I help protect the environment?". Environmental Protection Agency. March 17, 2010
<<http://www.epa.vic.gov.au/whatcanIdo.asp>>.

"A Positive Approach to Change". Project Laundry List. March 17, 2010
<<http://www.laundrylist.org/>>.

II. Composting

- Enriches soils
 - Compost has the ability to help regenerate poor soils. The composting process encourages the production of beneficial micro-organisms (mainly bacteria and fungi), which in turn break down organic matter to create humus. Humus, a rich nutrient-filled material, increases the nutrient content in soils and helps soils retain moisture. Compost has also been shown to suppress plant diseases and pests, reduce or eliminate the need for chemical fertilizers, and promote higher yields of agricultural crops.
- Cleans up contaminated soils
 - The composting process has been shown to absorb odors and treat semivolatile and volatile organic compounds (VOCs), including heating fuels, polyaromatic hydrocarbons (PAHs), and explosives. It has also been shown to bind heavy metals and prevent them from migrating to water resources or being absorbed by plants. The compost process degrades and, in some cases, completely eliminates wood preservatives, pesticides, and both chlorinated and nonchlorinated hydrocarbons in contaminated soils.
- Improves soil retention
- Reduces greenhouse gasses
 - Composting organic materials that have been diverted from landfills ultimately avoids the production of methane and leachate formulation in the landfills. Compost has the ability to prevent pollutants in stormwater runoff from reaching surface water resources. Compost has also been shown to prevent erosion and silting on embankments parallel to creeks, lakes, and rivers, and prevents erosion and turf loss on roadsides, hillsides, playing fields, and golf courses.

- Economic benefits
 - Using compost can reduce the need for water, fertilizers, and pesticides. It serves as a marketable commodity and is a low-cost alternative to standard landfill cover and artificial soil amendments. Composting also extends municipal landfill life by diverting organic materials from landfills and provides a less costly alternative to conventional methods of remediating (cleaning) contaminated soil.
- Can be used for a home garden, reducing the need to buy compost or nutrient additives.

"Environmental Benefits". Environmental Protection Agency. March 17, 2010
 <<http://www.epa.gov/osw/conserves/rrr/composting/benefits.htm>>.

III. Driveway Materials

- Restrictions on using permeable pavers and other alternatives to asphalt or concrete driveways prevent homeowners from reducing their point-source pollution (from homes).
 - Major pollutants from homes linked to driveways are "solids, nutrients, metals, and PAHs (Bannerman et al., 1993; Steuer et al., 1997)."
 - Driveways account for 3 times as much runoff as lawns (21% vs 7% - Bannerman et al., 1993).
 - Steuer et al. (1997) found that although driveways in the studied area only accounted for 4% of area, they accounted for 10% of runoff.
- Asphalt and concrete driveways are 100% impervious, meaning no liquids can filter into the ground under them. This means that significantly more runoff goes into sewers and watersheds from traditional impervious driveways than from alternatives such as permeable asphalt or pavers. Permeable pavers create spaces in between a concrete lattice, allowing for more infiltration and less waste water treatment of polluted runoff.
- This change would indirectly lead to energy and water savings, since both are expended in the process of collecting, mitigating, and purifying polluted runoff in urban areas.
- The pavers create more green area reducing absorbed solar radiation and thereby the temperature of the entire lot.
 - Along with roofing materials, driveway materials are an important factor in temperature regulation and allowing for alternative materials, such as permeable pavers, would reduce the need for intensive air conditioning and cooling and would make each lot, and thus entire developments, significantly more comfortable and cooler in the summer.

Bannerman, R.T. et al. "Sources of pollutants in Wisconsin stormwater." *Water Science Technology*. 28.3-5 (1993): 241-59.

Steuer, J. et al. "Sources of contamination in an urban basin in Marquette, Michigan and an analysis of concentrations, loads, and data quality." *US Geological Survey*. 97.4242 (1997)

IV. Greenhouses

- Provide the gardener with an effective and easy way to grow healthy plants.
- Grow larger plants more quickly than using other agricultural methods of gardening, thereby increasing overall plant production
- Gardener has less fear about constantly changing weather
- Ability to grow seasonal plants any time throughout the year

EPA Staff, *Nurseries & Greenhouses*. US Environmental Protection Agency, 17 Oct. 2007. Web. 15 Apr. 2010
<http://www.epa.gov/agriculture/nurgreen.html>.

V. Home Gardens

Energy intensity of food production:

- Ten calories of fossil fuel energy are required to produce one food calorie.
- Food production accounts for 1/5 of an individual's energy consumption.
- 80% of US energy consumption increases are due to "food related energy flows" (packaging, processing, transporting, storing, preparing food).
- Food-related energy use increased from 14.4% in 2002 to 15.7% in 2007.

Pollan, Michael. "Why Bother?" *The New York Times Magazine*, 20 April 2008:

http://www.nytimes.com/2008/04/20/magazine/20wwln-lede-t.html?pagewanted=1&_r=2&sq=vegetable%20garden%20energy%20benefits&st=nyt&scp=1

Marsh, Kenneth and Betty Bugusu. "Food Packaging – Roles, Materials, and Environmental Issues." *Journal of Food Science*, Vol. 72 Nr. 3, 2007. <http://members.ift.org/NR/rdonlyres/C3FC4F7C-BE99-4124-BA67-A5C3A77D1B05/0/FoodPkgEnviron.pdf>

Energy savings from home gardens:

- Gardeners can produce more energy than consumed by avoiding the use of gasoline-powered tools and fossil fuel-based fertilizers and pesticides.
- Organic gardens use no synthetic fossil fuel-based fertilizers or pesticides.
- Food's carbon footprint includes miles travelled and packaging use, both of which are eliminated when food is produced at home.
- US produce travels an average of 1300 to 2000 miles from farm to consumer.

"Ten Good Reasons to Tend a Vegetable Garden." <http://extension.unh.edu/news/new11604.htm> University of New Hampshire Cooperative Extension, Web. 13 April 2010. "Organic Gardening" <http://powergreenhome.com/garden.html> Power Green Home, Web. 13 April 2010.

McWilliams, James E. "Food that Travels Well." *The New York Times*, 6 August 2007:
<http://www.nytimes.com/2007/08/06/opinion/06mcwilliams.html?pagewanted=print>

"Protect the Environment with a Vegetable Garden" <http://www.ezgarden.com/Articles/Benefits-of-Vegetable-Gardening/Protect-Environment-with-Vegetable-Garden.aspx> EZ Garden, Web. 13 April 2010

"Reducing Food Miles" http://attra.ncat.org/farm_energy/food_miles.html National Sustainable Agriculture Information Service, Web. 9 March 2009

Home gardens' reduction of waste associated with food packaging:

- 31% of MSW generated in 2005 was from materials used for packaging, including glass, metal, plastic, paper, and paperboard
- Food packaging accounts for 50% (by weight) of total packaging sales

Marsh, Kenneth and Betty Bugusu. "Food Packaging – Roles, Materials, and Environmental Issues." *Journal of Food Science*, Vol. 72 Nr. 3, 2007. <http://members.ift.org/NR/rdonlyres/C3FC4F7C-BE99-4124-BA67-A5C3A77D1B05/0/FoodPkgEnviron.pdf>

Examples of national and international gardening programs

Los Angeles Community Garden Council

- Connects individuals with community garden spaces.
- Provide resources for building / establishing community gardens.

Los Angeles Community Garden Council

http://www.lagardencouncil.org/index.php?option=com_content&task=view&id=22&Itemid=39

London: Capital Growth Initiative

- London's city government established the Capital Growth initiative to encourage citizens to establish vegetable gardens in unused urban spaces (schoolyards, old railroads, flat rooftops on houses / commercial buildings).
 - Money incentives: £1000 for each rooftop garden created
- Goals of project:
 - Increase supply of local produce
 - Reduce London's carbon footprint
 - Promote self-sufficiency among city's communities
- Part of efforts to conduct a greener Olympic games

"London: 2,012 vegetable gardens by 2012" <http://sustainablecities.dk/en/city-projects/cases/london-2012-vegetable-gardens-by-2012> Sustainable Cities, Web. 13 April 2010

UK National Trust

- "Window Food" campaign: encourages residents living in London flats to grow produce in window boxes
- 600 acres of window boxes available throughout city to produce food

"The Vertical Vegetable Garden" <http://www.prlog.org/10279859-the-vertical-vegetable-garden.html>

VI. Non-household Animals

Bees

- Improve fertility of gardens
- Cheap, easy access to natural honey

Chickens

- Chickens can be fed on kitchen waste which reduces waste sent to landfills.
- Minimal carbon footprint created as there are no delivery miles incurred.
- Chicken waste can be used as a highly nutritious fertilizer for a garden.
- The chickens can be raised organically and without the use of harmful chemicals.
- The lawn care services they provide replace toxic weed killers, pesticides, and plant growers.
- Home-produced eggs reduce the need for packaging and transport of commercial eggs. A few chickens normally provide enough eggs for a family.
- Gives owner control over the diet and treatment of chickens
- Decreases food safety risks associated with hormones and antibiotics
- Part of the local food movement; a more self-reliant method for producing food
- Chickens/chicken coops are easy and inexpensive to maintain (when compared to most other pets)

Goats

- Grazing eliminates the need for a mower. One mower running for an hour pollutes as much as 450 highway miles in a new car (Union of Concerned Scientists).
- Fresh, organic milk and meat
- Eat food scraps, thereby reducing waste sent to the landfill
- Manure makes great compost

Sheep

- Managed or "prescribed" grazing is good for the environment. A grass-covered sod is the best protection against soil erosion and runoff. The vegetation and soils on grazing lands are a large reservoir for organic carbon. Properly managed, grazing lands help reduce atmospheric levels of carbon dioxide and may reduce greenhouse gas accumulation.
- Use sheep to "mow" lawns rather than traditional mower.
- Manure makes great compost

Labadie, Katherine *Urban Chickens*. Urban Chickens, 15 Apr. 2010. Web. 15 Apr. 2010
<<http://urbanchickens.org/benefits-urban-chickens>>

VII. Rain Barrels

- A rain barrel collects and stores an ample supply of "soft water". Soft water usually contains less chlorine, lime, or calcium than municipal water, making it ideal for a multitude of applications, including: biodynamic and organic vegetable gardens, botanical planters, indoor tropical plants, automobile washing, and cleaning household windows.
- Rain barrels can curb the use of municipal water used to water lawns and gardens, which make up nearly 40% of total household water use during the summer.
- It only takes 1/4 inch of rainfall runoff from the average roof to completely fill the typical barrel.
- Save most homeowners about 1,300 gallons of water during the peak summer months also lowering the homeowner's water bill
- Reduces the volume of water flowing to the sewer treatment facility
- Lowers the percentage of urban runoff
- Provide a backup source of water during times of drought or between rain showers
- Reduce the need for additional tax dollars earmarked for sewer expansion
- Educational tool for teaching residents about water conservation

EPA Staff, *Rain Barrels*. US Environmental Protection Agency, 24 Aug. 2009. Web. 14 Apr. 2010
<<http://www.epa.gov/reg3esd1/garden/rainbarrel.html>>.

GREENCulture, *Rain Barrel Benefits*. The Land Conservancy, 2009. Web. 14 Apr. 2010
<<http://www.conservemc.org/rainbarrelbenefits.htm>>.

VIII. Reduced Lawn Irrigation and Pesticide Use

The benefit of water conservation:

- The treatment and pumping of tap and wastewater consumes energy and produces greenhouse gasses. "If one out of every 100 American homes retrofitted with water-efficient fixtures, we could save about 100 million kWh of electricity per year and avoid adding 80,000 tons of greenhouse gas to the atmosphere (EPA)."

The benefits of not using pesticides:

- The water quality of the area is preserved reducing health risks to people and wildlife. "Pesticides are one of the 15 leading causes of impairment for streams included on States' Clean Water Act 303(d) lists of impaired waters (US Fish & Wildlife Service)."
- The production of pesticides is an energy-intensive process in of itself, and one which uses often uses petroleum as a primary input.

Sustainable Infrastructure for Water & Wastewater. Environmental Protection Agency, 18 Aug. 2009. Web. 22 Mar. 2010 <http://www.epa.gov/waterinfrastructure/bettermanagement_energy.html>.

Environmental Contaminants Program. U.S. Fish & Wildlife Service, 1 Mar. 2010. Web. 10 Apr. 2010 <<http://www.fws.gov/contaminants/issues/pesticides.cfm>>.

IX. Solar Panels

The earth receives a huge amount of energy in the form of solar radiation:

- On average, 1700 kWh per square meter are provided every year by the sun. The total amount which is received on the planet's surface is equal to approximately 10 times the global energy consumption.
- Advantages:
 - Fuel source is essentially infinite
 - Produce energy without greenhouse gas emissions
 - Reliable technology (module lifetime > 25 years)
 - The component materials can be recycled.
- On average U.S. households use 830 kWh of electricity per month, and producing 1,000 kWh of electricity with solar power reduces emissions by nearly:
 - 8 pounds of sulfur dioxide
 - 5 pounds of nitrogen oxides
 - More than 1400 pounds of carbon dioxide
- During its projected 28 years of clean energy production, a rooftop system with a 2-year energy payback and meeting half of a household's electricity use would avoid conventional electrical-plant emissions of :
 - More than half a ton of sulfur dioxide
 - One-third a ton of nitrogen oxides
 - 100 tons of carbon dioxide

Renewable Energy House, "What is PV Energy?" 2008. Web. 12 Apr. 2010. <<http://www.pvcycle.org/index.php?id=8>>

U.S. Department of Energy. "PV FAQs." December 24. Web. 12 Apr. 2010. <<http://www.nrel.gov/docs/fy04osti/35489.pdf>>