

*Conservation Advisory Council*  
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## **Mount Kisco Conservation Advisory Council Climate Change Report for 2014**

### **Part 2**

### **Mitigation**

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## Introduction

Mitigation efforts to fight climate change include strategies to reduce emissions of greenhouse gases and to remove greenhouse gases from the atmosphere. Since the main source of greenhouse gas emissions is burning fossil fuels for energy much of the focus is on reducing the demand for energy and using energy sources that do not produce greenhouse gas emissions. For mitigation efforts to be successful on a global scale local communities have to play an important role. In home rule states such as New York the role of local communities is particularly important since local governments control most land use decisions. Mitigation efforts have been underway for several years in Mount Kisco, but as seems to be universally true at all levels of government from local up to national these efforts are not up to scale of what is needed to avoid the worst effects of climate change. The agreed on goal internationally to avoid the worst effects of climate change is to keep the increase of mean global temperature above preindustrial levels to below 2°C (3.6°F). (It should be noted that some scientists such as James Hansen<sup>1</sup> think the target temperature should be considerably lower such as about 1°C [1.8°F]). We are currently around 0.85°C (1.5°F).

At the 2014 NYS Conference on the Environment held in Binghamton, keynote speaker John Rhodes, the CEO and President of NYSERDA, said that New York State is trying to develop strategies to scale up their programs on climate. The Climate Smart Communities program of the New York State Climate Change Office is specifically targeted to assist communities that do not have enough resources of their own to deal with climate change mitigation and adaptation such as Mount Kisco. At the Westchester Climate Change Summit held in White Plains, Mark Lowery, Climate Policy Analyst from the Climate Change Office, noted that a problem they are having is getting enough communities involved as less than 150 of the hundreds of eligible New York State communities so far are participating in the Climate Smart Communities program. Mount Kisco is a participant. The speakers at the two conferences discussed many actions that communities could take and Part 2 of this report describes some of these actions for mitigation. At the end of this report there is a short list of Conservation Advisory Council recommendations to scale up mitigation efforts as well as make progress on adaptation.

## Green Building Codes

Green building codes are used to provide more energy efficiency for new buildings and major renovations than are provided by the required minimum energy efficiency codes. At the Westchester Climate Change Summit, Nina Orville, Executive Director of Sustainable Westchester, a non-profit organization that was recently formed from the merger of the Northern Westchester Energy Action Consortium (NWEAC) and the Southern Westchester Energy Action Consortium (SWEAC), gave some examples of what communities in Westchester are doing to reduce greenhouse gas emissions. One such action was the adoption of green building codes. So far five Westchester communities have adopted green building codes. These communities are Bedford, Tarrytown, Hastings, Greenburgh, and Yonkers. The CAC obtained detailed information about the green building codes that these five communities adopted at a conference on green building codes that was held at Sarah Lawrence College in February 2014. Below is a table showing for each community's code the type of building covered by the code, the energy standard used, a link to the code, and contact information.

<b>Municipality</b>	<b>Building Type</b>	<b>Energy Standard</b>	<b>Link to Code</b>	<b>Contact Information</b>
Bedford	Residential – up to 4 family;	Energy Star or Bedford Custom Code	<a href="http://ecode360.com/15778809">http://ecode360.com/15778809</a>	Steven Faietta, Building Inspector: sfaietta@bedfordny.info
Greenburgh	(1) Residential – one or two family dwelling or multiple single-family dwelling (townhouse) of three stories or less. (2) All town-sponsored projects and all commercial projects within the Town that include 4,000 gross sq ft or more of conditioned space	Energy Star	(1) <a href="http://ecode360.com/15748861">http://ecode360.com/15748861</a> ; (2) <a href="http://ecode360.com/13704907">http://ecode360.com/13704907</a>	John Lucido, Building Inspector: <a href="mailto:jlucido@greenburghny.com">jlucido@greenburghny.com</a> or Thomas Madden: tmadden@greenburghny.com

<b>Municipality</b>	<b>Building Type</b>	<b>Energy Standard</b>	<b>Link to Code</b>	<b>Contact Information</b>
Hastings	Any project requiring a building permit – Commercial, new construction and certain additions and alterations	Varies. Some LEED standards, some Energy Star, some other energy standards	<a href="http://hastingsgov.org/Pages/HastingsNY_Documents/01BA42C1-000F8513">http://hastingsgov.org/Pages/HastingsNY_Documents/01BA42C1-000F8513</a>	Sharon Kivowitz: <a href="mailto:sharonkivowitz@gmail.com">sharonkivowitz@gmail.com</a> or Devon Sharma, Building Inspector: <a href="mailto:dsharma@hastingsgov.org">dsharma@hastingsgov.org</a>
Tarrytown	Residential/Commercial	2012 IECC	<a href="https://archive.org/stream/gov.law.icc.iecc.2012/icc.iecc.2012#page/n47/mode/1up">https://archive.org/stream/gov.law.icc.iecc.2012/icc.iecc.2012#page/n47/mode/1up</a>	Dr. Carole Griffiths: <a href="mailto:carole.griffiths@liu.edu">carole.griffiths@liu.edu</a>
Yonkers	(1)New and existing city-owned buildings, including schools; (2)Non-residential: +15,000 sq ft and residential: +25 units. Projects that receive IDA incentives	(1) 15% above ASHRAE 90.1-2010; (2) Depends on construction type and scope: Energy Star New Homes Version 3, NYSERDA Multifamily Performance Program, HERS Index of 85, ASHRAE 90.1-2010, 2010 Energy Conservation Construction Code	<a href="http://www.yonkersny.gov/Index.aspx?page=2918">http://www.yonkersny.gov/Index.aspx?page=2918</a>	Brad Tito, Sustainability Director: <a href="mailto:Brad.Tito@yonkersny.gov">Brad.Tito@yonkersny.gov</a>

## Smart Growth

John Nolan, Professor of Law at Pace University School of Law and Counsel to the Law School's Land Use Law Center, gave a presentation at the Westchester Climate Change Summit which was titled "Climate Management through Land Use Law Planning and Regulation." In this

presentation he described why smart growth, i.e., compact development, can reduce per capita greenhouse gas emissions compared to the pattern of suburban sprawl development. Two key features of smart growth that are responsible for reducing per capita emissions are that multi-family housing is more energy efficient than single-family housing and fewer personal automobile trips are taken per person.

### ***Multi-family housing has important advantages over single-family housing.***

Single-family homes use and waste more energy and emit more carbon dioxide. A particular problem with single-family homes is that they have more square footage to heat and cool. Also, single-family homes are harder to make energy efficient.

### ***Smart growth reduces use of personal automobiles***

It has been calculated that 17% of carbon dioxide emissions in the US comes from the tailpipes of personal automobiles. It has also been found that suburban residents make up to 15 vehicle trips per day per household. Facilitating compact development is an important measure for reducing carbon dioxide emissions from personal automobiles.

### ***Markets now favor smart growth***

Professor Nolan said that he has spent much of his career trying to find ways to reduce suburban sprawl but it has been a difficult task because markets have favored sprawl. However, he noted that recently the market has changed and now what he advocates is compatible with the market. He presented a slide which said “For the first time in the modern era, promoting smart growth, sustainable neighborhoods, and mixed use, compact development near transit is favored by market and economic forces.”

### **Complete Streets**

Gray Russell, Sustainability Director for Montclair, New Jersey, gave a presentation at the Westchester Climate Change Summit that was titled “A Climate Showcase Community.” One of the policies adopted by Montclair to address climate change as well as safety is called the Complete Streets policy. This policy is meant to ensure that in both new construction and reconstruction, travel by pedestrians, bicyclists, public transit, and motorized vehicles and their passengers be safely accommodated. In her presentation Nina Orville noted that in Westchester, a Complete Streets policy has been adopted by Lewisboro, Dobbs Ferry, New Rochelle, Hastings, Somers, White Plains, and Westchester County.

## **Peat Moss Should Not Be Used in Gardens**

Professor Nicholas Robinson, University Professor for the Environment at Pace University, who moderated a panel at the Westchester Climate Change Summit, said that to limit global warming peat moss should not be used for gardening. Peat moss is the decomposed product of the moss. Peat can be derived from different materials, but in North America most peat is from Canadian sphagnum moss.

### ***The connection between using peat moss in gardens and global warming***

Peat companies are destroying peat bogs, which are fragile, unique, and valuable bog ecosystems, by removing the peat. As the mosses grow, they absorb carbon dioxide, and this carbon dioxide is sequestered within the moss structure as the mosses turn to peat. There is a huge amount of carbon contained in these bogs. However, when the bogs are drained for peat extraction or otherwise disturbed, the peat begins to decompose and the carbon dioxide is released back into the atmosphere. To fight climate change it is therefore critical to keep the peat bogs undisturbed which keeps the carbon dioxide trapped in the plants. The use of peat moss for gardens should therefore be banned. But it remains available so one thing communities can do is inform their citizens about the connection between global warming and use of peat moss in gardens.

## **Recommendations**

### ***Participate in the Climate Smart Communities certification program***

The Climate Smart Communities Certification Manual describes more than 120 individual actions communities can take to earn points toward certification. (Communities may submit documentation to the Office of Climate Change for more than 100 of these actions now. Review procedures for the remaining actions are under development and those actions will be added to the list of reviewable actions in the near future.)

The Conservation Advisory Council recommends that at a minimum the Village/Town of Mount Kisco complete the 13 priority actions of the certification program some of which the Village has already done. These actions are the following:

- Pass a resolution adopting the Climate Smart Communities Pledge
- Create a community task force focused on climate mitigation and adaptation
- Appoint a Climate Smart Community coordinator
- Create an internal green team focused on climate mitigation and adaptation
- Develop a government operations greenhouse gas emissions inventory
- Establish a government operations emissions reduction target
- Establish a community emissions reduction target

- Develop a government operations climate action plan
- Develop a community climate action plan
- Conduct energy audits of local government buildings
- Conduct a vulnerability assessment
- Review existing community plans and projects to identify climate adaptation strategies as well as policies or projects that may increase vulnerability.

### ***Incorporate a low-carbon vision of Mount Kisco into the Comprehensive Development Plan***

We recommend that concepts such as renewable energy technologies and smart growth be incorporated into our Comprehensive Development Plan. This would allow the Comprehensive Development Plan to form a basis for the adoption of new zoning regulations that reflect strategies to reduce greenhouse gas emissions. In addition, if a community climate action plan is developed this climate action plan could be adopted as part of the Comprehensive Development Plan.

### ***Adopt Green Building Codes***

Green buildings should be adopted for new buildings and major renovations. Since buildings usually stand for many years, increased energy efficiency of buildings can lead to large cumulative reductions in greenhouse gas emissions. Several communities in Westchester have adopted green building codes and their experience can be used for deciding on what type of green building codes to adopt.



## References

1. Hansen J, Kharecha P, Sato M, et al. Assessing “dangerous climate change”: required reduction of carbon emissions to protect young people, future generations and nature. PLOS Collections December 3, 2013. DOI: 10.1371/journal.pone.0081648. (<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0081648>)