

Workgroup 4: Willie Janeway

Adirondack response to climate change

Vision Excerpts

By increasing the use of biomass from private forests, we reinforce the self-reliance that has traditionally been part of this region's character, lowering our use of fossil fuels.

We manage the forest using science-based stewardship that helps to protect it against threats of climate change and invasive species.

Over the next 25 years, we adapt our lifestyles and our hamlet and village architectures to the new realities of a warming planet and an aging population.

Our core vision is of interdependent yet self-reliant communities that:

- *Significantly reduce fossil fuel use* through:
 - Greater attention to energy efficiency and
 - Conversion to diverse distributed renewable energy sources and a smart grid:
 - Biomass for heating, sourced from private forest in sustainable volumes
 - Solar, wind and geothermal in community and individual settings
 - Synfuels created from woody biomass and agricultural waste
 - More use of electric vehicles charged with "green" power
 - Hydro from refurbished dams throughout the Park
 - Human muscle power in the form of biking and walking on improved and safer inter-hamlet bikeways and trails
 - More use of shared transportation systems (Regional busses, local delivery services, rail)

The next twenty five years will be a period of painful change in global and American society. An aging population, accelerating climate change, environmental disasters -- the list goes on. Our response is to protect our Adirondack resources; the value of the Park's ecosystem services (clean air, clean water, and open space) inexorably rises for both humans and the environment.

Over more than 125 years, the Adirondack Park has become the largest and most important of the US Northern Forests. Its ecological diversity and large forested areas play a major role in the tracking and scientific understanding of the effects of climate change. Our strong research community gives us new information to protect the forest and inform policy. Adapting to climate change brings hard choices with regard to the Forest Preserve, including ways to expeditiously control damaging invasive species. We have better science and more options now to keep the Park's forest lands and waters more resilient and resistant to nuisance species, while also providing welcoming habitat for desirable southern species moving northward.

Events

#78 Regional Growing Season Extended Significantly

#105 Changes in Species in the Park Begin to Show

#107 Climate Change Makes It More Attractive to Live In the Park

#106 Climate Change Refugees Moving into Region

#37 Climate Science Skepticism Fades

#104 Regular Severe Weather Events Stress The Park

#103 Three No Snow Winters in a Row Close Many Businesses

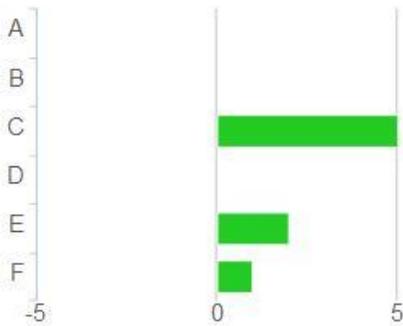
#94 Carbon Sequestering Payments Flow to Forest Landowners

#93 Forest Preserve Valuation Methods Updated

Regional Growing Season Extended Significantly

Tapping into geothermal energy sources, use of high tunnels and other season extenders are very widespread. Also, hardier crop varieties have been developed. Low-cost green houses are used by some, sometimes heated by waste heat from electricity generation or as part of a centralized thermal heat generation scheme. Many of these approaches come from farmers in Quebec that have been working these issues for a long time. Warmer climate is also a factor. Some of these projects aim for availability of produce throughout the full year, which opens up major institutional markets like the schools.

Influenced Scenarios



Likelihood



Evidence

Rivermede Farm Solar Thermal Demo Project Funded

The farm in Keene Valley will use solar thermal to heat soil beds in existing greenhouses that are expected to produce all year.

This is one of 8 demonstration projects from the regional sustainability plan done a year ago that you can read here.

Turn to page 78 of the 2013 REDC grant booklet here for more details

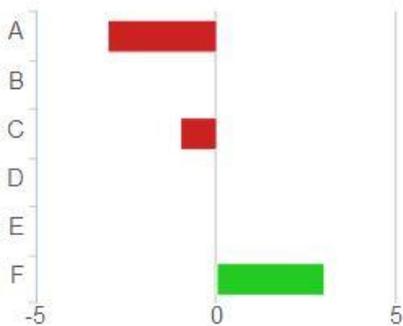
New North Country Food Grant Includes Season Extenders

Log in to add evidence

Changes in Species in the Park Begin to Show

Climate change is affecting the types of species that live in the Park. The fall foliage is muted as sugar maples in particular have a hard time. Many species move north (boreal birds, pine marten, moose, loon, etc.) and are less frequently seen in the Park. And some species whose range was north of the Park move south too.

Influenced Scenarios



Likelihood



Evidence

Unusual Butterflies Appear

The Giant Swallowtail Butterfly (the largest in North America) appears in our region, moving north.

Read the article here.

Willow Tarmigan Appearing in the Region

Some Boreal Birds Declining

Climate Change Impacts Showing on Farms

Arctic Snowy Owls Showing up in the ADKs

2032 : Climate Change

1 Comments

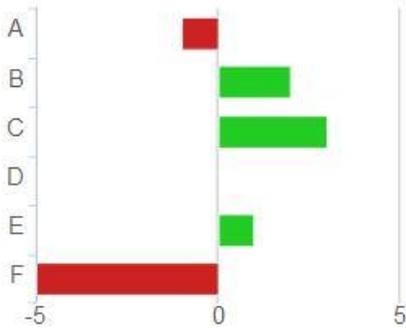
Climate Change Makes It More Attractive to Live In the Park

Although climate change is bad for many parts of the globe, on balance it has actually made the Park more attractive as a place to live with less harsh winters, a longer growing season and a lush landscape that is more like Pennsylvania and Virginia used to be. It certainly is more attractive than the deep south or southwest that are now becoming unbearably hot and dry and where people are moving out. The change has been gradual enough that the ecosystems are adapting along with the people who live here.

Evidence

[Log in to add evidence](#)

Influenced Scenarios



Likelihood



[Log in to vote](#)

2032 : Climate Change

0 Comments

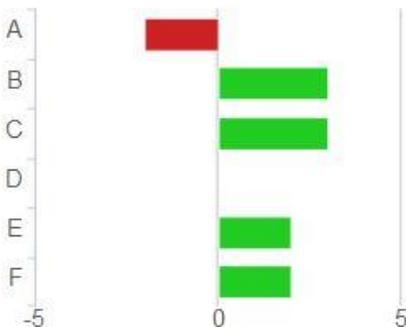
Climate Change Refugees Moving into Region

Climate change is making other parts of the country uninhabitable (floods, fires, droughts, no water, etc.) and people are moving back to the Northeast in general and the Park in particular. Texas and Oklahoma are seriously desertified. Some low-lying NYC metro areas must be evacuated.

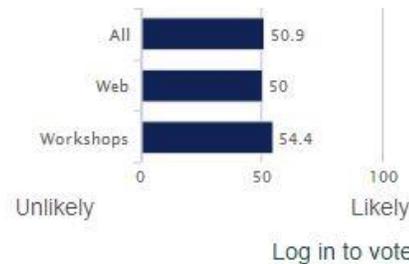
Evidence

[Log in to add evidence](#)

Influenced Scenarios



Likelihood

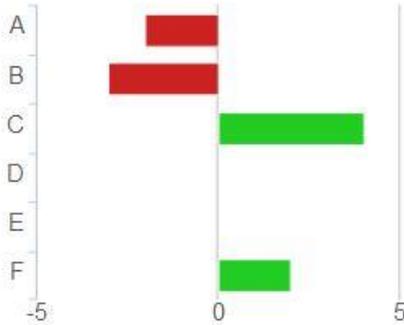


[Log in to vote](#)

Climate Science Skepticism Fades

Long-lasting droughts, more hurricanes, floods, record temperature years a number of years in a row all contribute to the understanding that climate change is real and so is the science behind it. All the conversation now is about 'wise adaptation' to it.

Influenced Scenarios



Likelihood



Evidence

▾ **PBS Documentary Describes Student Efforts Aimed at Climate Change**

The new PBS film follows high school students in Lake Placid, Saranac Lake and Tupper Lake as they prepare for the Youth Climate Summit.

[Find out about the film here.](#)

▸ **5 Ways Climate Change is Showing Impacts Here**

▸ **NSF Grant Supports New Class "Communicating Climate Change"**

▸ **January 2014 4th Warmest on Record**

▸ **Climate Change Skeptics Still Around 1/4**

▸ **Even Texans Admit Climate Change is Happening**

▸ **Ice Records in Newcomb show shortening winters**

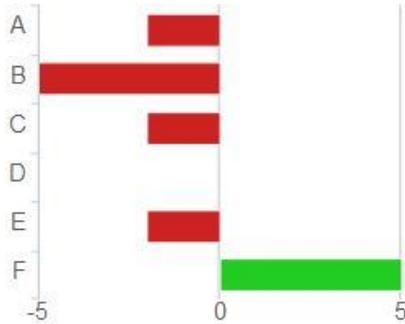
▸ **Winter logging season getting shorter**

▸ **New data shows temperatures highest in 4000 years**

Regular Severe Weather Events Stress The Park

Climate change has put more water vapor in the atmosphere and caused more precipitation. There are now regular heavy floods in winter and spring. Severe and violent thunderstorms cause blowdowns and fires, and there are more frequent power and communications outages. They regularly tear up roads and destroy bridges which are increasingly difficult to repair before the next disaster. All this puts pressure on Federal Disaster relief, local government and local emergency services.

Influenced Scenarios



Likelihood



Evidence

State Adds \$3m to Keene and Jay Flood Resilience Budget

The 2 towns had been promise \$6m if they created a credible plan. Many NYS towns were part of the same program. The plan produced by Keene and Jay won a state-wide award that resulted in an added \$3m for a total of \$9m.

[Read the news story here.](#)

125 New Weather Stations Coming to NYS

Buyouts of Flooded Homes in Essex County Completed

Numerous Rt 73 Flood Damaged Bridges to be Replaced

DEC Decides to Remove Storm Damaged Marcy Dam

FEMA Flood Plain Mapping Near Completion

State Puts \$6m Into Keene and Jay Flood Work

Tropical Storm Irene in August 2011

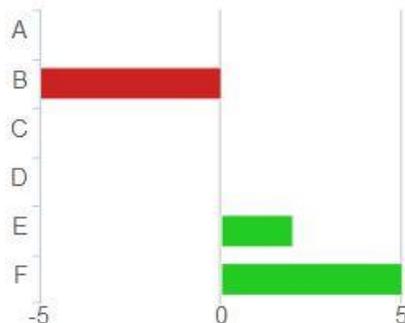
Lake Champlain reaches record levels and floods

June 2013 flooding

Three No Snow Winters in a Row Close Many Businesses

Three winters in a row with very low snowfall have forced many winter recreation businesses to close. Winter visitors used to account for 1/3 of annual tourism revenue, but that has dropped by half. The activities worst hit are snowmobiling and cross country skiing. Ski areas w/o snowmaking close or open only occasionally, often staffed by volunteers. In general, the Adirondacks loses winter visitors to other regions.

Influenced Scenarios



Likelihood



Evidence

Snowmobile Registrations Grew 22.5% in 2012-13

Snowmobile registrations in 2012-13 increased 26,300 to 116,725. That is a 22.5% increase in one year!

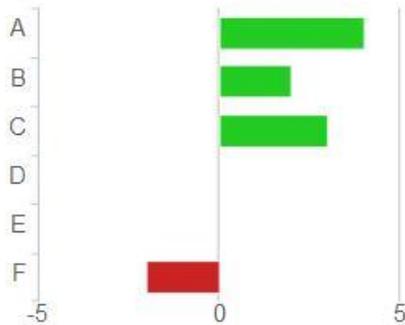
[Read the news story here.](#)

[Log in to add evidence](#)

Carbon Sequestering Payments Flow to Forest Landowners

Funds from cap-and-trade systems or carbon taxes begin to flow to ADK forest land owners. The State as well as private land owners receive the new cash flows. Specific amounts are dependent upon surveys made by certified foresters who design forest management programs to maximize growth, thus maximizing carbon consumption.

Influenced Scenarios



Likelihood



Evidence

Older Trees Grow Faster Than Younger Trees

New experiments suggest older trees a better at carbon absorption than younger trees, contrary to prior science. More needs to be learned. This could be good news for the Forest Preserve.

Read the popular press about it here.

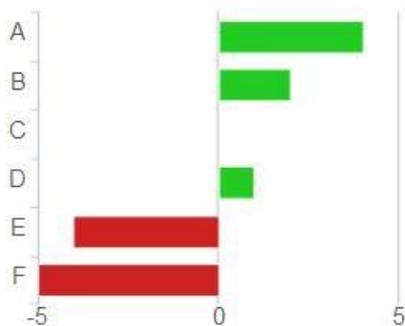
Carbon offset prices have collapsed

Log in to add evidence

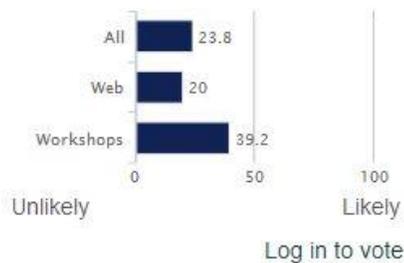
Forest Preserve Valuation Methods Updated

In an effort to boost State payments in lieu of taxes to their "fair share", new assessments now include values for clean water sent downstate, recreation, carbon sequestration, and preserving biodiversity.

Influenced Scenarios



Likelihood



Evidence

Log in to add evidence