SCENIC HUDSON
land ■ parks ■ advocacy

CLIMATE CHANGE IN THE HUDSON VALLEY

- Bloom dates of many plant species are 4-8 days earlier on average than they were in the early 1970s.
- Average rainfall is increasing and days with snow cover are decreasing.
- Sea level in New York Harbor is 15 inches higher today than it was in 1850.
- The Hudson River has become warmer over the last 60 years.
- Scientists have suggested a correlation between increased river temperature and a decrease in certain fish species (e.g., tomcod and rainbow smelt).
- A variety of local amphibians have experienced a change in breeding patterns, with many starting their "calling" up to two weeks earlier than 100 years ago.

Potential future impacts of climate change on the Hudson Valley include:

- Accelerated sea level rise, from both ice melt and expansion of the seas due to temperature increase, will cause erosion along the river's shoreline and flooding in waterfront communities. High projections for the Mid-Hudson Region are 9 inches in the 2020s to 71 inches by 2100; for the New York City/Lower Hudson Region, 10 inches and 75 inches, respectively. Rising sea levels and storms will cause localized floods and threaten shoreline infrastructure and development.
- A 6-foot rise in sea level in the Hudson River Valley would present risk of inundation and flooding to thousands of people and households, and would affect rail lines, brownfields, hazardous waste sites and wastewater treatment plants.
- Sea level rise will result in loss of tidal wetlands along the Hudson River.
- Climate change impacts may cause people to migrate from the New York City metro area to the Hudson Valley, resulting in additional development pressure on open space.
- Warmer temperatures will lead to an increase in the frequency of high-intensity storms and more damage to the landscape, including conserved lands, farms and parks.
- Increased precipitation will result in flooding and increased stormwater runoff, impacting water quality and quantity and potentially impacting water supplies.
- Changing temperatures will: 1) result in increased impacts on species' breeding patterns, migration patterns and bloom times; 2) exacerbate invasion of exotic species; and 3) affect growing seasons for agriculture.
- Changing temperatures may lessen recreational opportunities, especially in winter.
- Changing temperatures may facilitate the spread of disease, e.g., Lyme disease and the Zika virus.