

SIGNS OF CLIMATE CHANGE IN THE CAYUGA LAKE WATERSHED

Temperature

- ❖ Increased frequency of summer heat stress
- ❖ Warmer lake and stream temperatures
- ❖ Warmer winters, reduced snow and ice cover duration
- ❖ Longer frost-free period

Rainfall, hydrology

- ❖ Increased frequency of high rainfall events (> 2 inches/24 hours) and flooding
- ❖ Increased frequency of short-term summer water deficits
- ❖ Changing seasonal and regional patterns of rain, snow, streamflow, groundwater

ECOSYSTEM/COMMUNITY IMPACTS AND INDICATORS

Physical Impacts

- ❖ Heavy rainfall and flooding damage to roads, culverts, shoreline and docks, farms, homes
- ❖ Increased soil erosion losses and sediment loading to waterways
- ❖ Increased fertilizer and chemical loading to waterways
- ❖ Dry creeks and wells during prolonged drought periods

Biological/Ecological Impacts

- ❖ Heat stress negatively affecting human health, crops and livestock, biodiversity
- ❖ Insect pests, weeds, and invasive pressures increasing
- ❖ Aquatic weeds, invasives, HABS increasing in lakes and streams
- ❖ Increased flooding and drought reducing productivity of farms and natural areas, and negatively affecting human health

Socioeconomic Impacts

- ❖ Expansion of flood zones in urban and rural areas
- ❖ Costs of infrastructure repair and/or proactive adaptation investments affecting individuals, insurance costs, tax policy
- ❖ Farmer opportunities with longer, warmer summers, but also new water, heat stress, weed and pest challenges
- ❖ Climate Justice Issues: Inequity in vulnerability and capacity to adapt among communities, businesses, individuals