

CLIMATE AND HEALTH ADAPTATION

MOVING THE NEEDLE AT THE LOCAL LEVEL

2021

DEVELOPED BY THE NEW YORK STATE ASSOCIATION OF COUNTY
HEALTH OFFICIALS IN PARTNERSHIP WITH THE
NEW YORK STATE DEPARTMENT OF HEALTH



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EXECUTIVE SUMMARY

Climate change is impacting New Yorkers. [ClimAID](#), a report developed by the New York State Energy Research and Development Authority (NYSERDA), projects that temperatures may increase by 4-9°F by the 2080s and that slight increases in precipitation overall will be marked by more frequent intense precipitation events and warm seasonal droughts. While actions to mitigate greenhouse gas emissions globally and in New York State (NYS) may impact whether these future projections become reality, the effects of climate change that are already being felt will continue into the foreseeable future. As a result, it is important to identify public health risks associated with climate change and implement adaptation actions to reduce those risks (see CDC graphic below).

Local action is critical for climate adaptation efforts. To support local health departments in addressing climate change in their communities, the NYS Association of County Health Officials (NYSACHO) and the NYS Department of Health (NYSDOH) embarked on an interactive project in early 2020. The intention was to enable local health departments to identify their climate adaptation priorities, identify local partners to work with to address these priorities, and encourage participation in a workshop to “move the needle” on climate adaptation efforts. The idea was presented via a webinar and followed-up with county-by-county conversations. We appreciate the time and thought that the staff in local health departments contributed to the discussions around their priority climate adaptations, which reflected the state's diversity in geography and urbanicity. Although the COVID-19 pandemic delayed plans to implement the workshops, we look forward to continuing discussions in the future and perhaps creating forums for local action. For now, we hope that this digital package is a helpful resource for any county level discussions that are taking place.

IMPACT OF CLIMATE ON HUMAN HEALTH



<https://cdc.gov/climateandhealth/effects/default.htm>



BACKGROUND

NYSACHO and NYSDOH have expanded their existing partnership to advance climate and health adaptation work at the local level. NYSDOH is funded by the CDC to implement the Building Resilience Against Climate Effects (BRACE) framework, which involves assessing climate-related health vulnerabilities, projecting future health impacts associated with climate change, then identifying, implementing, and evaluating adaptations (i.e., interventions) which can reduce the risk of these health impacts. NYSDOH also receives funding from CDC for the Environmental Public Health Tracking Program, which seeks to enhance environmental health surveillance capacities and make data available to support decision making. Resources from both of these programs were leveraged to advance the goals of this project.

Together, NYSACHO and NYSDOH initially proposed five regional meetings in NYS in an effort to engage local health departments and key local government agencies in climate and health related activities. These meetings were intended as a forum for local health departments and their partners to identify and discuss possible opportunities to collaborate on local level climate and health adaptations. As the COVID-19 pandemic evolved, it became clear that local health departments were completely engaged in response activities and even virtual workshops were not practical. For this reason, the project was put on hold. However, we thought it was important to share what we had learned so far, and also provide resources we have gathered to support ongoing efforts.



PRIORITY AREAS

Over the course of a two week period in February and March 2020, NYSACHO and NYSDOH had the exciting opportunity to participate in planning calls with county staff across the state. We discussed previously completed climate adaptation work as well as activities underway at that time. We focused on priority areas of concern and the organizations or individuals in local communities who could serve as partners in expanding on accomplishments or in addressing local impacts from a changing climate.

We spoke to almost 50 local health department staff in 32 counties; in every region; in both rural and urban areas. To illustrate the range of staff involved in climate-related activities, we spoke to public health nurses, emergency coordinators, sanitarians, health educators, epidemiologists, planners, and outreach coordinators. We spoke to directors of environmental health, vector control, preventive services and research and evaluation. We spoke to Commissioners, Administrators and Public Health Directors.

The following is a summary of the priority areas identified by counties:

- Vector-borne disease
 - surveillance, population control, community education and outreach, provider education, trailhead signs and posting
- Extreme weather/heat vulnerability
 - vulnerable populations, cooling centers, buddy system
- Food Security
 - Farmer's Markets, vulnerable populations, vulnerability mapping, farm to school program
- Harmful Algal Blooms
 - education and outreach, signs and postings
- Flood mitigation and storm response
 - recreational water quality, public and private drinking water quality, septic systems, lake shore resiliency
- Funding Opportunities/cross-cutting grants
- Complete Streets/Built Environment/Healthy Neighborhoods
- Emergency Response Framework
 - shelters, temporary housing, disaster preparedness
- Leveraging Existing Community Resources
 - education and outreach, networking and information sharing, partnerships with EMS
- Environmental Improvements
 - fleet management, food inspection, recyclable materials, energy reduction, environmentally-friendly farming practices, composting
- Air Quality
- Climate Action Plans; Climate Smart Communities; Climate Vulnerability Assessments
- Policy Development
- Communication Plans

During the conversations, counties gave many examples of successful local and regional efforts related to these priority areas



CLINTON COUNTY

MUNICIPAL BUILDING UPGRADES

PRIORITY AREA: ENERGY EFFICIENCY

The following items are primarily actions that happened as a result of NYSERDA grants, received by Buildings and Grounds and/or Economic Development Director Renee McFarlin, and intended to assist in reducing greenhouse gas emissions by improving energy efficiency. This work illustrates local government leadership in transitioning to a cleaner energy infrastructure.

Over the past 10 years, Clinton County has replaced many office lights and outdoor lighting with LED lighting. County municipal buildings are estimated to be 30% LED currently, and are expected to be closer to 45% LED after the next grant cycle is implemented. An electric vehicle (EV) charger with two spaces has been added to the visitors lot at the Government Center, in addition to two EV chargers with four spaces at the Plattsburgh International Airport. Several facilities have been converted from oil based heating to high efficiency natural gas boilers. Higher efficiency motors with variable frequency drives were added to many air handling units. The current grant is for \$150,000 to do more of the same conversions throughout County Facilities. This grant includes 1,100 LED lighting fixture upgrades, improved high efficiency motors at the Government Center, and high efficiency boilers at Ellenburg and Plattsburgh County Highway Garages.



STORIES FROM THE FIELD

JEFFERSON COUNTY

COMMUNITY EDUCATION ON TICK-BORNE DISEASE

PRIORITY AREA: VECTOR-BORNE DISEASE

Jefferson County Public Health Service (JCPHS) has partnered with both traditional and non-traditional partners in our efforts to prevent tick borne diseases. Changing climate patterns represent one factor that is contributing to changes in the geographic distribution of ticks. Educational sessions have been held with medical providers, businesses and government departments who have employees who may have a higher risk of contact with ticks. Groups have included land surveyors, highway workers who cut grass, parks and recreation staff, gardeners, farmers, and trail heads. We provided tick borne disease prevention trail signs and materials to many organizations to post on trails as a reminder.

<https://www.cdc.gov/lyme/resources/toolkit/2ColorTrailSign.pdf>

Resources provided have included DEET repellent wipes, CDC's bookmark How to Remove a Tick, NYSDOH's Tick ID Card, CDC's Lyme Disease: What You Need to Know booklet, and tick removal kits(both purchased and those provided by NYSDOH). JCPHS has provided education regarding ticks to schools by both in person sessions and tabling at events. A YouTube educational video was made at the beginning of the pandemic. Health education teachers in schools were provided the link to the video and offered tick educational materials (NYSDOH's All About Ticks) so they could continue lessons virtually. There have been 203 views of the video.

<https://www.youtube.com/watch?v=xYsCNhPoV8Y>

Additionally, JCPHS partnered with Cornell Cooperative Extension of Jefferson County to provide tick educational workshops.

<https://www.morningagclips.com/ticked-off-workshop-sept-12/>.



STORIES FROM THE FIELD

SCHENECTADY COUNTY

NYS OFFICE FOR THE AGING: NYS AGE-FRIENDLY PLANNING GRANT PROGRAM

PRIORITY AREAS: VULNERABLE POPULATIONS; POLICY DEVELOPMENT

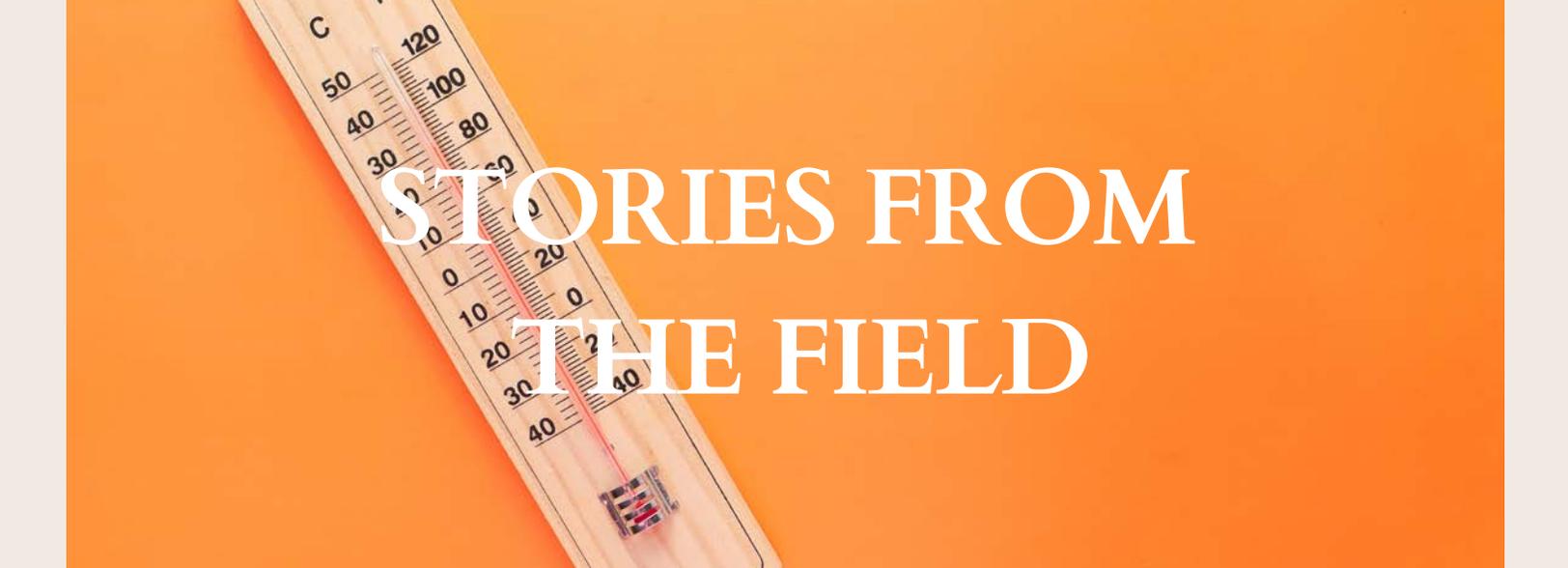
Schenectady County Public Health Services and other county partners/stakeholders will create an age-friendly coalition to work towards becoming a certified Age-Friendly community following the AARP/World Health Organization (WHO) process. This coalition will be led by Schenectady County Public Health Services with assistance from the Schenectady County Department of Senior and Long-Term Care Services (SLTCS). Aging populations are more vulnerable to some of the health impacts of climate change. Efforts to coordinate and target programs to support this population will build resiliency in this population. Partners from all over the county will be invited to participate within the coalition as their work pertains to the 8 Domains of age-friendly communities and smart growth principles. The purpose of this coalition is to act as the advisory board regarding the development of a three-year age-friendly community action plan based on the results of a community needs assessment (CNA). Administration of the CNA will be led by Schenectady County Senior and Long-Term Care. The goals and objectives- which will be identified via the CNA, focus groups, and outreach- will be presented to the coalition, who will be responsible for identifying and working with champions throughout the county to create a Schenectady County Age Friendly Community Action Plan for implementation and monitoring of identified attainable goals and objectives. This plan will be printed in book form, and our community partners and local governments will each be provided a copy.



SCHENECTADY COUNTY (CONTINUED)

NYS OFFICE FOR THE AGING: NYS AGE-FRIENDLY PLANNING GRANT PROGRAM

The Schenectady County Department of Senior and Long Term Care Services (SLTCS) and Schenectady County Public Health Services (SCPHS) will be gathering feedback from the community regarding livability as it pertains to the 8 Domains of Livability. The aggregated survey results will be shared with the Schenectady County Age-Friendly Coalition to analyze and determine the priority needs of the community within each of the 8 Domains. Utilizing a logic model, the coalition will work to identify and address the priority needs of the community, and it will be required that each recommended solution incorporate at least one Smart Growth principle. When working to identify feasible Smart Growth Principles, the Schenectady County Age-Friendly coalition will look to its partners involved in economic development, housing, engineering and planning, and transportation to provide critical feedback regarding suggested projects and highlight those that will have the largest benefit to all residents and visitors. The Smart Growth principles included within the action plan will be implemented with the goal of enhancing natural resources, energy conservation, historic preservation, transportation, housing, economic development, and public health which will protect community assets, promote positive growth and promote livability.



STORIES FROM THE FIELD

WESTCHESTER COUNTY

WESTCHESTER COUNTY CLIMATE CRISIS TASK FORCE

PRIORITY AREAS: VULNERABLE POPULATIONS; VULNERABILITY MAPPING; HEAT VULNERABILITY

In early 2019, the Westchester County Climate Crisis Task Force (CCTF) was launched to assess local vulnerability to projected climate impacts, and to develop comprehensive greenhouse gas mitigation and adaptation plans for Westchester communities. The CCTF is composed of sector-specific focus areas such as transportation, land use, water, energy and waste, and has integrated a cross-sectoral focus on public health, equity and community resilience.

To highlight some of the unique climate-related vulnerabilities across Westchester County, maps, web applications and story maps have been created to help provide context, identify sensitive populations and areas, and create opportunities to better inform planning and decision-making. A story map, [The Westchester County Climate Crisis Task Force: Addressing Local Impacts of a Changing Global Climate](#), was created to introduce the CCTF. A web application entitled [Westchester County Assets and NOAA Projected Sea Level Rise](#) allows for people to explore sea level rise projections in relation to critical assets their communities, and the Westchester County Heat Vulnerability Index was adapted from New York State Department of Health data and embedded into a [Heat Vulnerability in Westchester County](#) story map to provide context and critical information to Westchester County residents. These tools have been used in public presentations and community forums to inform decision-makers as well as communities. They integrate scientific data and understanding and provide relevant, community-based information to aid in analysis and planning. These maps are also being used to inform other municipal-level adaptation planning programs, such as the NYS DEC Climate Smart Communities program and comprehensive plan development. Frontline nonprofit and community-based organizations are using them to inform citizenry and aid in preparedness planning, and they have also been integrated into teaching about climate and health at area universities.



STORIES FROM THE FIELD

YATES COUNTY

HARMFUL ALGAL BLOOM PROJECT

PRIORITY AREA: HARMFUL ALGAL BLOOMS

In response to the occurrence of harmful algal blooms (HABs) in the Finger Lakes region, Yates County Public Health, in partnership with Keuka Lake Association (KLA), Seneca Lake Pure Waters Association (SLPWA), Canandaigua Lake Watershed Association (CLWA), and Cornell Cooperative Extension (CCE) of Yates County developed educational signage for public beaches, launches and other public and private lake access sites. Signs were designed to educate individuals visiting lake access sites about how to identify a harmful algal bloom (HAB), to avoid it if one is present at the location upon arrival, and resources for additional educational and reporting information. Changing climate patterns represent one factor that is thought to contribute to the development of freshwater HABs.

Both metal and laminated signs were dispersed between Spring and Fall of 2020 in a variety of locations within the Keuka, Seneca, and Canandaigua lake areas. The Signs could be displayed on existing structures or on a metal pole that was provided for them to be displayed on. The project took a family friendly approach to educate and warn residents and visitors, as well as included a QR Code to scan for additional information. The signs featured pictures of blooms from both Keuka and Seneca Lake. The quality of the signs will allow them to withstand environmental elements and continue to be present in our communities for several years. The taskforce will continue to educate the community of HABs and other environmental concerns in our communities moving forward.

YATES COUNTY (CONTINUED)

HARMFUL ALGAL BLOOMS

LOOK OUT FOR

HARMFUL ALGAL BLOOMS

Cyanobacteria blooms, sometimes referred to as **harmful algal blooms (HABs)** can affect the water quality and aquatic life in a waterbody. Some HABs produced by bacteria can create toxins that may also harm people, animals, and the local environment.

HOW TO IDENTIFY A HARMFUL ALGAL BLOOM
Algal blooms can make the water appear green, blue, brown, or red.

HABs can be blue, bright green, or brown—they may look similar to spilled paint, pea soup, or greenish colored particles floating on the water's surface. However, only professional water testing can confirm if HABs and toxins are present - so if you see it, avoid it!

The NYS DEC has monitoring programs to report blooms. Visit the NYHABS website (<https://www.dec.ny.gov/chemical/77118.html>) or scan the QR code for more info.

SCAN QR CODE
For More Information

EXPOSED?
Shower immediately. See a doctor or vet if symptoms occur.

SYMPTOMS OF EXPOSURE
Vary depending on how the person or animal was exposed.

Ear, eye, headache, nose, skin and throat irritation

Paralysis, respiratory illness and seizures

Abdominal pain, diarrhea, liver and kidney damage and vomiting

Drooling, diarrhea, low energy, not eating, stumbling, tremors and vomiting

WHEN IN DOUBT, STAY OUT!
Stay away from the water when a suspected HAB is present.

DON'T
Play with scum or mats on the shore

DON'T
Let animals drink water, eat algae or swim

DON'T
Swim

DON'T
Fish or wade

DON'T
Boat or kayak

Seneca Lake **PURE WATERS** Association

Cornell Cooperative Extension
Yates County

Public Health
Yates County, NY

EPA



FUNDING OPPORTUNITIES: BY TOPIC

In our conversations with local health departments, many expressed an interest in knowing more about funding that might be available to support climate adaptation activities. To that end, the following list is current as of May 2021.

Both general and topic-specific sources are provided, as well as NYS-specific resources. Many people we spoke to were also interested in learning more about communication and collaboration for climate change adaptation, so links to those resources are provided as well.

ENVIRONMENT RESTORATION

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

<https://www.dec.ny.gov/lands/5091.html>

Grants program and funding opportunities for the Hudson River Estuary.

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

<https://www.dec.ny.gov/animals/77710.html>

Deadlines: March 1; August 1

Trees for Tribs: statewide program that has been working to reforest New York's tributaries.

NUTRITION AND AGRICULTURE

US DEPARTMENT OF AGRICULTURE

<https://www.fns.usda.gov/cfs/farm-school-grant-program>

Farm to School grant program.

WASTE REDUCTION

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

<https://www.dec.ny.gov/chemical/4776.html>

State assistance programs for waste reduction, recycling and household hazardous waste programs.

WATER INFRASTRUCTURE

NYS ENVIRONMENTAL FACILITIES CORPORATION

<https://www.efc.ny.gov/grant-programs>

Funding opportunities for clean water infrastructure and water quality.

FUNDING OPPORTUNITIES: GENERAL



FEDERAL GRANTS SEARCH ENGINE

<https://www.grants.gov/web/grants/search-grants.html>

A search engine for grant opportunities.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

<https://www.fema.gov/grants>

Funding opportunities in hazard mitigation and emergency preparedness.

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

<https://www.dec.ny.gov/pubs/grants.html>

Grants for environmental conservation projects.

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

<https://www.dec.ny.gov/energy/109181.html>

Deadlines: July 30; October 29

Climate Smart Communities Grant Program and Zero Emission Vehicle (ZEV) Program.

NYS POLLUTION PREVENTION INSTITUTE (NYSP2I)

<https://www.rit.edu/affiliate/nysp2i/funding>

Funding opportunities for businesses, nonprofits, community groups, municipalities, and similar organizations that are registered with New York State.

NYS GRANTS GATEWAY

https://grantsgateway.ny.gov/IntelliGrants_NYSGG/module/nysgg/goportal.aspx

A resource for viewing grant opportunities and submitting grant applications, grant contracts, and claims for payment online.

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

<https://www.dec.ny.gov/about/92815.html>

New York State's Environmental Protection Fund (EPF): funding for capital projects that protect the environment and enhance communities.



NEW YORK STATE RESOURCES

NYSDOH CLIMATE, WEATHER, AND HEALTH

<https://www.health.ny.gov/environmental/weather/index.htm>

Provides information on the impacts of climate change on health and how NYS is building community resilience and developing strategies to protect New Yorkers' health in a changing climate.

NYSDOH BUILDING RESILIENCE AGAINST CLIMATE EFFECTS: CLIMATE AND HEALTH PROFILE

<https://www.health.ny.gov/environmental/weather/docs/climatehealthprofile6-2015.pdf>

Provides public health professionals in NYS a summary of the public health impacts related to the changing climate. It identifies the populations who are most vulnerable to these health impacts and includes a section detailing collaboration and next steps on this important public health issue.

NYSDEC CLIMATE SMART COMMUNITIES

<https://climatesmart.ny.gov/>

Information on the CSC program, steps to become a CSC, and steps to complete actions and gain certification.

NYSDEC CLIMATE CHANGE

<https://www.dec.ny.gov/energy/44992.html>

Offers information on impacts of climate change in NYS and adaptation strategies. Information on reducing greenhouse gas emissions and what the state is doing to address GHGs and adapt to climate change is provided.

NYSERDA CLIMATE CHANGE

<https://www.nyserda.ny.gov/All%20Programs/Programs/Environmental%20Research/Climate%20Change%20Research>

Provides information on the projects NYSERDA supports that are related to climate change and the ongoing funding opportunities NYSERDA offers to communities in NYS to help address climate change.



NEW YORK STATE RESOURCES

NYS CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT (CLCPA)

<https://climate.ny.gov/>

Provides information on the Climate Act and the ongoing efforts NYS is taking to reach its goals and reduce greenhouse gas emissions.

NYC DEPARTMENT OF HEALTH AND MENTAL HYGIENE CLIMATE AND HEALTH

<https://www1.nyc.gov/site/doh/health/health-topics/climate-change-and-public-health.page>

Includes information on how climate change is impacting health in New York City.

NYS CLIMATE CHANGE CLEARINGHOUSE

<https://www.nyclimatescience.org>

Provides climate change data and information relevant to New York State to support scientifically sound decision making.

NYS OTDA COOLING ASSISTANCE BENEFIT

<https://otda.ny.gov/programs/heap/#cooling-assistance>

Provides guidance to those seeking cooling assistance.

NYSERDA RESPONDING TO CLIMATE CHANGE IN NEW YORK STATE REPORT

<https://www.nyserdera.ny.gov/About/Publications/Research%20and%20Development%20Technical%20Reports/Environmental%20Research%20and%20Development%20Technical%20Reports/Response%20to%20Climate%20Change%20in%20New%20York>

Link to the ClimAID report for NYS and supplemental materials.



OTHER RESOURCES

CLIMATE AND HEALTH:

A GUIDE FOR CROSS-SECTOR COLLABORATION

<https://www.cdc.gov/climateandhealth/docs/CrossSectorClimateandHealth.pdf>

Developed by the CDC to support health department staff in conducting cross-sector outreach for climate adaptation planning. The ten sectors included in this guide can be important partners for effective climate adaptation planning.

ADAPTATION CAPABILITY ADVANCEMENT TOOLKIT (ADAPT-CA)

<http://arccacalifornia.org/adapt-ca/>

This resource from CalBRACE helps local governments assess overcoming common institutional barriers. It is intended to assist local governments with overcoming common institutional barriers and improving agency capabilities.

CLIMATE AND HEALTH ADAPTATION GUIDE FOR MICHIGAN COMMUNITIES

https://www.michigan.gov/documents/mdhhs/ClimateHealthPlanningGuide_2020_10_2_accessible_704110_7.pdf

A guide intended to help communities develop a climate and health adaptation plan or to integrate climate and health concepts into existing initiatives.

CDC CLIMATE AND HEALTH PLANNING WORKSHEET

https://www.cdc.gov/climateandhealth/pubs/CDC_PlanningWorksheet-508.pdf

This leave-behind worksheet is designed to help community groups coordinate efforts to adapt to the local health impacts of our changing climate. It is intended to help facilitate shared community response planning with key stakeholders. The Health Impacts Cards (described in section I) are designed to complement this planning worksheet. It is recommended that the worksheet only be used after the audience has been exposed to the topic of climate and health through other means such as an introductory presentation, videos, or discussion.



NEXT STEPS

In our conversations with local health departments, it was clear that the impacts of climate change on the health of local communities are as varied as the place and the people. For some, flooding and water quality loomed large. For others, it was vector-borne disease, extreme heat, food security and more. In some counties, partners from other local agencies, schools, and non-profits were already collaborating to provide education on or mitigate climate impacts. Other counties, had not yet had a chance to contemplate such partnerships. Wherever counties are on this spectrum, we hope that they will be able to move forward and that this resource is helpful.

We will continue to look for opportunities to support climate change adaptation at the local level, and we hope that NYSACHO and NYSDOH continue to be valuable resources in this process.



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