



## 5.4.1 Drought

This section provides a hazard profile and vulnerability assessment of the drought hazard for Cayuga County.

### 5.4.1.1 Hazard Profile

This section presents information regarding the description, extent, location, previous occurrences and losses, and probability of future occurrences for the drought hazard.

#### Description

Drought is a period characterized by long durations of below-normal precipitation levels. Drought is different from aridity, which is a permanent feature of climate restricted to regions with typically low rainfall whereas drought is a temporary irregularity. Drought conditions can occur in virtually all climatic zones and vary significantly from one region to another. Droughts are relative to the normal precipitation in that region. Additionally, drought can enhance wildfire/brush fire risk, affecting plant life, agriculture, water supply, aquatic ecology, and wildlife.

According to the 2019 NYS Hazard Mitigation Plan, there are four types of droughts:

- *Meteorological (climatological) Drought:* a shortfall of precipitation over a period of time that creates dry conditions.
- *Hydrological Drought:* changes in surface and subsurface water supplies. Impacts can extend for years beyond the incidence of drought due to factors such as waterbody levels, reduced stream flow, and decreased snow pack.
- *Agricultural Drought:* Droughts that share characteristics of both meteorological and hydrological droughts in the context of agriculture, including crops, livestock and forestry.
- *Socioeconomic Drought* – Population and socioeconomic impacts to drought, including supply, demand, and economic activity.

#### Extent

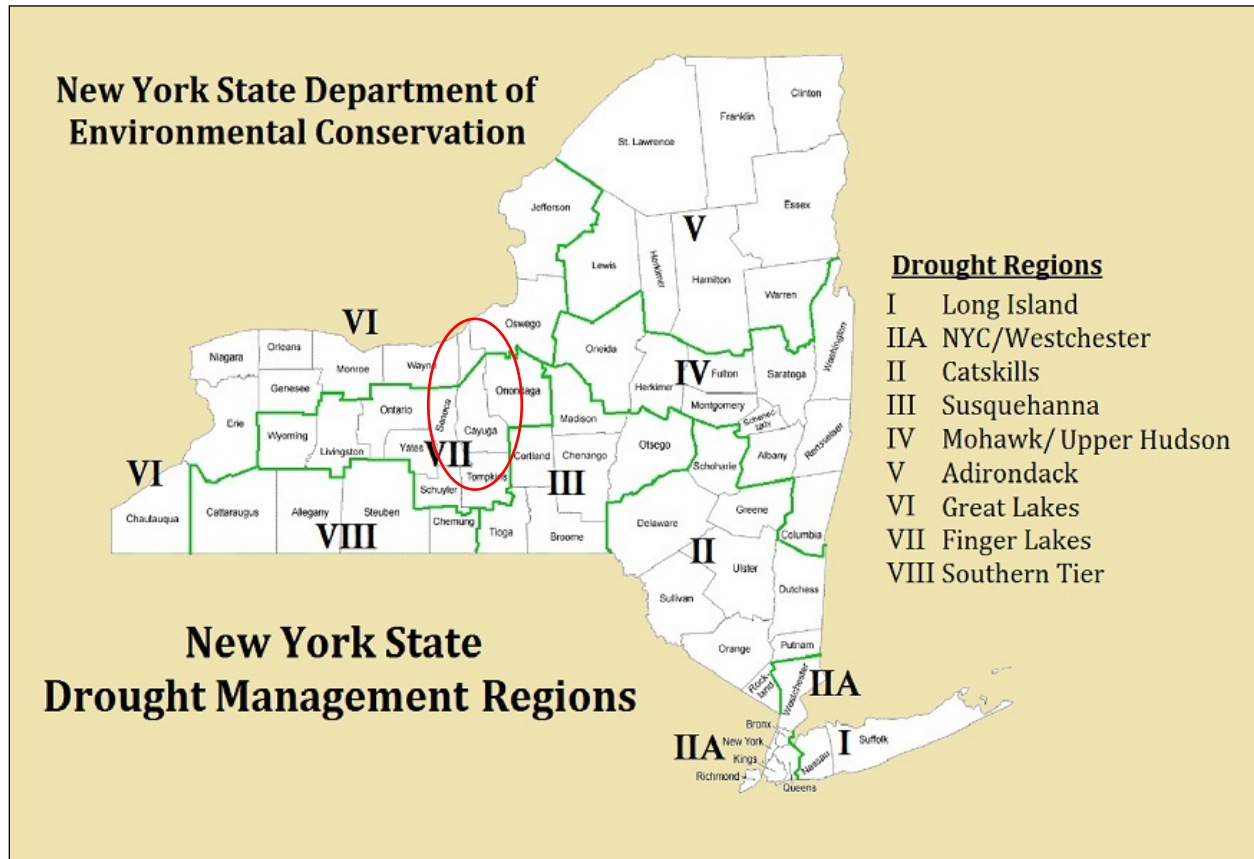
The severity of a drought depends on the degree of moisture deficiency, the duration, and the size and location of the affected area. The longer the duration of the drought and the larger the area impacted, the more severe the potential impacts. New York State applies two methodologies to identify the different drought stages: the State Drought Index (SDI), and the Palmer Drought Severity Index (PDSI).

#### State Drought Index

The New York State Department of Environmental Conservation (NYSDEC) has divided New York State into nine drought management regions based roughly on drainage basins and county lines. NYSDEC monitors precipitation, lake and reservoir levels, stream flow, and groundwater level at least monthly in each region and more frequently during periods of drought. NYSDEC uses this data to assess the condition of each region, which can range from "normal" to "drought disaster" as described in Table 5.4.1-1 (NYSDEC 2018). Figure 5.4.1-1 shows the drought regions of New York State. Cayuga County (circled in red) is located within the Finger Lakes Region (Region VII).



Figure 5.4.1-1. NYSDEC Drought Management Regions of New York State



Source: NYSDEC 2015

Note: The red oval indicates the location of Cayuga County.

The State Drought Index (SDI) evaluates drought conditions comprehensively by determining whether numerous indicators reach dire thresholds. It compares the following four parameters to historical or “normal” values to evaluate drought conditions: stream flows, precipitation, lake and reservoir storage levels, and groundwater levels. The State’s Drought Management Task Force (the Task Force) uses those factors along with levels of water use, duration of the dry period, and season to assess drought within different areas of the state. The data acquired are compared to critical threshold values to indicate a normal or changeable drought condition. The indicators are weighted regionally to reflect the different circumstances within each drought management region (NYS DHSES 2014). Table 5.4.1-1 lists the SDI range of values within the normal stage and the three drought stages.

Table 5.4.1-1. State Drought Index Range of Values

Drought Stage	Drought Index Range	NYS DEC Description
Normal	100 to 150	Normal is considered the standard moisture soil levels found throughout New York State.
Watch	75 to 100	Drought Watch is the first stage of drought. This stage is declared by the NYSDEC and is intended to give advance notice of a developing drought. As this stage, the general public is urged to conserve water. Public water purveyors and industries are urged to update and begin to implement individual drought contingency plans.



Drought Stage	Drought Index Range	NYS DEC Description
Warning	50 to 70	Drought Warning is the second stage of drought. This stage is also declared by the NYSDEC and is a notice of impending and imminent severe drought conditions. A warning declaration includes stepping up public awareness and increasing voluntary conservation. Public water supply purveyors and industries are urged to continue to implement local drought contingency plans. Federal, state, and local water resource agencies are notified to prepare for emergency response measures.
Emergency	0 to 50	Drought Emergency is the third stage of drought. This stage is declared by the New York State Division of Homeland Security & Emergency Services (NYS DHSES), based upon recommendation of the Task Force. It is a notice of existing severe and persistent drought conditions. An emergency declaration is a notice for local water resources agencies to mandate conservation and implement other emergency response measures. A continuing and worsening drought emergency may result in the New York State governor declaring a drought disaster. It is a notice of the most severe and persistent drought conditions. At this stage, a significant proportion of communities in the impacted area likely are unable to respond adequately.

Source: NYS DHSES 2014

### Palmer Drought Severity Index

The PDSI is primarily based on soil conditions. Soil with decreased moisture content is the first indicator of an overall moisture deficit. Table 5.4.1-2 lists the PDSI classifications. Zero is used as normal and drought is indicated by negative numbers. For example, -2 is moderate drought, -3 is severe drought, and -4 is extreme drought. The PDSI also reflects excess precipitation using positive numbers; however, this is not shown in Table 5.4.1-2 (National Drought Mitigation Center [NDMC] 2013).

**Table 5.4.1-2. Palmer Drought Category Descriptions**

Category	Description	Possible Impacts	Palmer Drought Index
DO	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.99
D1	Moderate drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-2.0 to -2.99
D2	Severe drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-3.0 to -3.99
D3	Extreme drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions.	-4.0 to -4.99
D4	Exceptional drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.	-5.0 or less

Source: NDMC 2013

### Location

Droughts can occur in Cayuga County any time of the year. Variations in the normal amounts of precipitation can lead to periods of dry weather and periods of drought (NYS DHSES 2014). Cayuga County is situated between the Great Lakes and the Atlantic Ocean. These water bodies provide significant moisture that generates precipitation throughout the region. In addition, Cayuga County is surrounded by and contains numerous lakes including three of the New York Finger Lakes: Cayuga, Owasco, and Skaneateles Lakes. Numerous streams in Cayuga County flow north and enter the Erie Canal and further north into Lake Ontario. In total, Cayuga County

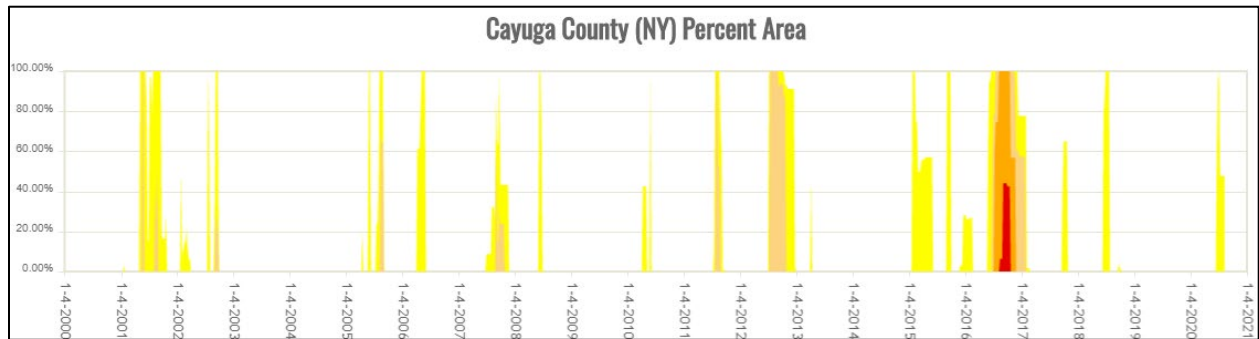


has 31 streams/ rivers including Little Creek, North Brook, Sterling Creek, Yawger Creek, Paines Creek, Owasco Inlet, Dutch Hollow Brook, Owasco River, and Skaneateles Creek. Based on available historical records, even though droughts are less likely to occur in Cayuga County, there are communities that are more susceptible to droughts, especially those that might not be located near or contain larger waterbodies.

**Previous Occurrences and Losses**

Cayuga County does not typically experience severe or extreme drought due to its proximity to the Great Lakes, Finger Lakes, and Atlantic Ocean. Similar to many other counties in New York, Cayuga County has a relatively temperate and humid continental climate and is significantly less likely to experience droughts. The images below shows what percent of Cayuga County that experienced drought between 2000 and 2020.

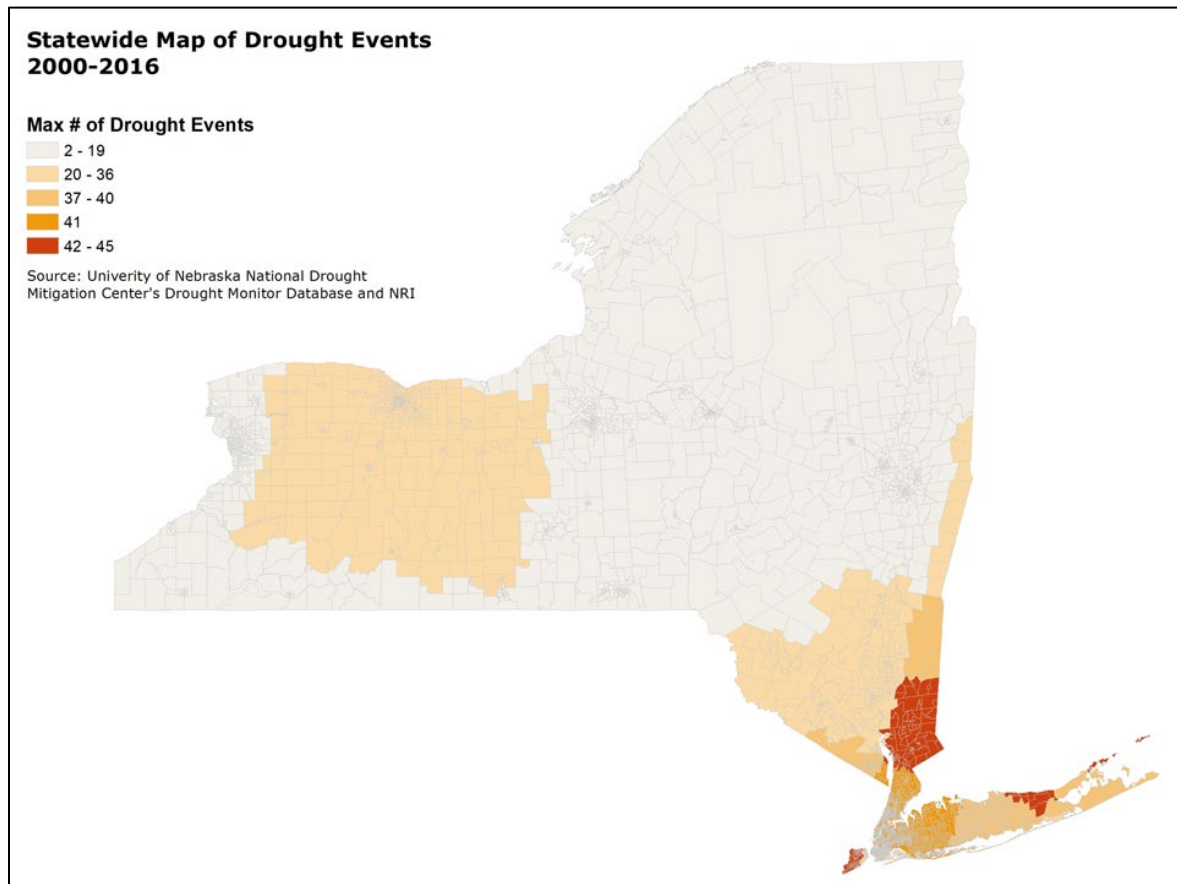
**Figure 5.4.1-2. Cayuga County Percent Area in Drought, 2000 to 2020**



In general Cayuga County is not considered an area for major drought, rather the downstate New York communities, according to historic data from the Mitigate New York Plan, are the hardest hit in regards to droughts between 1998 and 2016. According to the map below from the New York State Hazard Mitigation Plan, part of Cayuga County has experienced between 20 and 36 drought events or abnormal dry weather between 2000 and 2016.



Figure 5.4.1-3. Drought Events in New York State, 2000-2016



The NYSDEC monitors precipitation, lake and reservoir levels, stream flow, and groundwater level at least monthly in each region and more frequently during periods of drought. NYSDEC uses this data to assess the condition of each region, which can range from "normal" to "drought disaster." No drought disasters have been declared for Cayuga County.

#### FEMA Disaster Declarations

Between 1954 and 2020, FEMA declared that New York State underwent one drought-related disaster (DR) or emergency (EM) that was classified a water shortage. Generally, drought-related disasters affect a wide region of the State and thus may have impacted many counties. However, Cayuga County was not included in the disaster declaration.

#### USDA Agricultural Disaster Declarations

The U.S. Department of Agriculture (USDA) keeps records of agricultural disasters. For Cayuga County, in 2012, USDA Agricultural Disasters S3427 and S3441 were declared for drought and in 2016, USDA Agricultural Disaster S4023, S4031, and S4037 were declared (USDA 2020).

#### Previous Events

Based on all sources researched, Table 5.4.1-3 identifies known drought events between 1998 and 2018 that have affected Cayuga County and its municipalities.



**Table 5.4.1-3. Drought Events in Cayuga County between 2014 and 2020**

Dates of Event	Event Details
July 1, 2016	A significant lack of rain since May of this year found many areas in the Finger Lakes and Southern Tier New York regions with as little as 25 percent of normal rainfall through the end of July.
August 1, 2016	Drought persisted and became worse over parts of the Finger Lakes region and Central Southern Tier of New York during August. Rainfall since the late Spring was only recording up to 50 to 80 percent of normal. According to the U.S. Drought Monitor, portions of the area deteriorated from severe to extreme drought. Agricultural interests reported significant stress to non-irrigated crops, and several communities began to place voluntary and mandatory water restrictions on their residents.
August 18, 2016	A weather pattern supporting dry conditions was prevalent across weather New York resulting in below normal precipitation. There were periodic showers and thunderstorms during this time but these were localized with precipitation generally coming from frontal boundaries rather than widespread rainfall from larger systems. Impacts have deteriorated due to hot summer temperatures which increased the evaporation rate and quickly dried out the soil. In addition, below normal snow pack from a mild winter left conditions drier than normal going into spring. These were the primary factors which led to the drought conditions. The driest conditions were across the Buffalo metro area and Niagara Frontier where lake shadowing reduced the frequency of showers and thunderstorms. The USGS ground water level network showed that numerous wells are in the driest 10th percentile. The dry conditions are beginning to have an impact on crops. The area expanded to include Wayne, northern Cayuga, Oswego and Jefferson counties during the second half of the month.
September 1, 2016	Drought worsened over parts of the Finger Lakes region and Central Southern Tier of New York during September. September rainfall amounts were again considerably below the average long term monthly trends. According to the U.S. Drought Monitor, drought conditions continued to deteriorate, and more of the region was classified in extreme drought. Agricultural interests reported significant stress to non-irrigated crops, with many areas reporting expected losses to corn, soybean and hay yields. More communities began to place voluntary and mandatory water restrictions on their residents.
October 1, 2016	A weather pattern supporting dry conditions was prevalent across weather New York resulting in below normal precipitation. There were periodic showers and thunderstorms during this time but these were localized with precipitation generally coming from frontal boundaries rather than widespread rainfall from larger systems. The USGS ground water level network showed that numerous wells were in the driest 10th percentile. The dry conditions impacted crop production.

Sources: NCEI 2020, USDM 2020, NDMC 2020

Note: Many sources provide historical information regarding previous occurrences and losses associated with drought events throughout New York State and Cayuga County. Information about loss and impact resulting from each of many events can vary depending on the source.

### Climate Change Impacts

Temperatures and precipitation amounts are expected to increase within the Western New York/ Great Lakes Region, in which Cayuga County is located. Table 5.4.1-4 lists projected seasonal temperature and precipitation changes within the Central New York ClimAID Region 1 (NYSERDA 2014).

**Table 5.4.1-4. Projected Temperature and Precipitation Change in Region 1 (degree/ percent change)**

Baseline (1971-2000) 47.7 °F	Low Estimate (10th Percentile)	Middle Range (25th to 75th Percentile)	High Estimate (90th Percentile)
2020s	+ 1.8 °F	+ 2.3 to 3.2 °F	+ 4.0 °F
2050s	+ 3.7 °F	+ 4.3 to 6.3 °F	+ 7.3 °F
2080s	+ 4.2 °F	+ 5.7 to 9.6 °F	+ 12.0 °F
2100	+ 4.6 °F	+ 6.3 to 11.7 °F	+ 13.8 °F
Baseline (1971-2000) 34.0 inches	Low Estimate (10th Percentile)	Middle Range (25th to 75th Percentile)	High Estimate (90th Percentile)
2020s	0 percent	+ 2 to + 7 percent	+ 8 percent
2050s	+ 2 percent	+ 4 to + 10 percent	+ 12 percent
2080s	+ 1 percent	+ 4 to + 13 percent	+ 17 percent
2100	- 3 percent	+ 4 to + 19 percent	+ 24 percent





Source: NYSERDA 2014

Snowfall rates in Cayuga County may increase due to reduced freezing of the Great Lakes and Finger Lakes as temperatures warm. However, as the climate continues to warm, temperatures may rise enough to the point where winter precipitation may fall as rain instead of snow (NYSERDA 2014). These fluctuations in snowfall could result in an increase or decrease in the county’s winter snowpack. Reductions in snowpack would increase the possibility of drought.

Extreme heat events are likely to increase throughout New York State, and short-duration warm season droughts will become more common. With the increase in temperatures, heat waves (defined as three or more consecutive days with maximum temperatures at or above 90 °F) will become more frequent and intense. Summer droughts are projected to increase under these conditions, affecting water supply, agriculture, ecosystems, and energy projects (NYSERDA 2014).

By the end of the 21<sup>st</sup> century, the number of droughts is likely to increase, as the effect of higher temperatures on evaporation is likely to outweigh the increase in precipitation. Droughts in the northeast United States have been associated with local and remote modes of multi-year ocean-atmosphere variability that are unpredictable and may change with climate change. Changes in distribution of precipitation throughout the year and in timing of snowmelt could increase frequency of droughts (NYSERDA 2011).

### Probability of Future Occurrences

In the past, Cayuga County has experienced a range of drought conditions from abnormally dry to severe, or D0 to D2, in accordance with the Palmer Drought Category. Based on the historical occurrences and climate projections for the region, it is anticipated that Cayuga County will continue to experience drought events in the future. The county’s communities are equally susceptible to drought events and should consider mitigation actions to reduce the impacts of moderate drought. Based on the periods of time that Cayuga County spent in at least “abnormally dry” conditions from 2000 through 2016, the probability for drought in the county has been determined by the Hazard Mitigation Planning Steering Committee as “frequent” (hazard event has 100% annual probability and can occur multiple times per year).

It is estimated that Cayuga County will continue to experience direct and indirect impacts of drought on occasion, with the secondary effects causing potential disruption or damage to agricultural activities and creating shortages in water supply within communities.

### 5.4.1.2 Vulnerability Assessment

To understand risk, a community must evaluate its assets that are exposed or vulnerable to the identified hazard. All of Cayuga County is exposed to the drought hazard; therefore, all assets in the county (population, structures, critical facilities, and lifelines), as described in the County Profile (Section 4), are potentially vulnerable to a drought. The following text evaluates and estimates the potential impact of the drought hazard on the county.

### Impact on Life, Health, and Safety

The entire population of Cayuga County is vulnerable to drought events (population of 468,050 people [US Census Bureau 2016]). Drought conditions can affect public health and safety, including reduced local firefighting capabilities due to reduced water availability, health problems related to low water flows and poor water quality, and health problems related to dust. If droughts are severe enough, these health problems can lead to loss of human life.



Other possible impacts include recreational risks; effects on air quality; diminished living conditions related to energy, air quality, and sanitation and hygiene; compromised food and nutrition; and increased incidence of illness and disease. The infirm, young, and elderly are particularly susceptible to drought and extreme temperatures, sometimes associated with drought conditions, due to their age, health conditions, and limited ability to mobilize to reach shelters, cooling, and medical resources. Some drought-related health effects are short term, while others can be long term (Center for Disease Control and Prevention [CDC] 2012). Social impacts primarily involve public safety, health, conflicts among water users, reduced quality of life, and inequities in distribution of impacts and disaster relief. Many economic and environmental effects induce social impacts as well (NYS DHSES 2014).

During dry periods, soil water can deplete quickly. If precipitation deficiencies continue, people who depend on other sources of water will begin to feel impacts of the shortage. Those who rely on surface water (and lakes) and subsurface water (groundwater) are usually the last to be affected. A short-term drought that persists for 3 to 6 months may have little impact on these people who are reliant on surface and subsurface water, depending on characteristics of the hydrologic system and intensity of water use (NYS DHSES 2014).

According to the USGS Water Science School, groundwater levels are dependent on recharge from infiltration of precipitation, so when a drought hits the land surface, it can impact the water levels below ground. When rainfall is less than normal for several weeks, months, or years, the flow of streams and rivers declines, water levels in lakes and reservoirs fall, and the depth to water in wells increases. If dry weather persists and water-supply problems develop, the dry period can become a drought.

The water level in the aquifer that supplies a well does not always stay the same. Droughts, seasonal variations in rainfall, and pumping affect the height of the groundwater levels. If a well is pumped at a faster rate than the aquifer feeding it is recharged by precipitation or other underground flow, then water levels in the well can be lowered. This can happen during drought, due to the extreme deficit of rain. The water level in a well can also be lowered if other wells near it are withdrawing too much water (USGS 2019).

### **Impact on General Building Stock**

A drought event is not expected to directly affect any structures; however, a secondary hazard most commonly associated with drought is wildfire. Prolonged lack of precipitation dries out vegetation, which becomes increasingly susceptible to ignition as the duration of the drought extends. Though some structures can become vulnerable to wildfire that are within or near the wildland-urban interface, this is more likely following long periods of drought. Therefore, all assets within wildland urban interface (WUI) areas—including population, structures, critical facilities, lifelines, and businesses—are considered vulnerable to wildfire. The WUI is the area where houses and wildland vegetation meet or intermingle, and where wildfire problems are most pronounced (Radeloff et al 2018). A detailed WUI, divided into interface and intermix areas: intermix WUI are areas where housing and vegetation intermingle; interface WUI are areas with housing in the vicinity of contiguous wildland vegetation.

### **Impact on Critical Facilities**

Water supply facilities may be affected by drought events. The County's water supply system is a mix of public and privately-owned water systems, but much of the rural populations are served by private wells and can be significantly affected by periods of diminished groundwater resources. A short-term drought that persists for 3 to 6 months may have little impact on surface water and subsurface water, depending on characteristics of the hydrologic system and intensity of water use (NYS DHSES 2014).





As mentioned, drought events generally do not impact buildings; however, droughts can impact agriculture-related facilities and critical facilities associated with potable water supplies. Also, those critical facilities in and adjacent to the WUI zone are considered vulnerable to wildfire.

**Impact on the Economy**

Drought events impact the economy including loss of business function and damage and loss of inventory. Industries that rely on water for business may be impacted the hardest (e.g., agriculture, forestry, fisheries, and waterborne activities). In addition to losses in crop yields and livestock production, drought is associated with increased insect infestations, plant diseases, and wind erosion. Drought may lead to reduced income for farmers and reduced business for retailers and others who provide goods and services to farmers. This may lead to unemployment, increased credit risk for financial institutions, capital shortfalls, and loss of tax revenue. Prices for food, energy, and other products may also increase as supplies decrease (NYS DHSES 2014).

Direct and indirect losses to agricultural producers, livestock producers, timber producers, fishery producers, and tourism may include:

- Damage to crop quality and crop losses
- Insect infestation leading to crop and tree losses
- Plant diseases leading to loss of agricultural crops and trees
- Reduced productivity of livestock due to unavailability of feed and mortality rates (e.g., milk production, meat)
- Reduction in tourism and outdoor activities such as hunting, fishing, and boating
- Increased risk of brush fires and wildfires due to dried crops, grasses, and dying trees

When a drought occurs, the agricultural industry is most at risk for economic impact and damage. Crops do not mature during droughts, which results in smaller crop yield, undernourishment of wildlife and livestock, decreases in land values, and ultimately financial loss to the farmer (FEMA 1997). A large majority of the state’s agriculture is rain-fed without irrigation; however, summer precipitation is currently not sufficient to fully meet crop water needs during most years (NYSERDA 2011). Based on the 2017 Census of Agriculture (the most recent version available), 842 farms were present in Cayuga County, encompassing 225,204 acres of total farmland. Cayuga County farms had a total market value of products sold of \$288 million, averaging \$342,042 per farm. The Census indicated that 374 farm operators reported farming as their primary occupation (USDA 2017). Table 5.4.1-5 lists the acreage of agricultural land exposed to the drought hazard.

**Table 5.4.1-5. Agricultural Land in Cayuga County in 2017**

Number of Farms	Land in Farms (acres)	Land in Cropland (acres)	Total Market Value of Products Sold
842	225,204	177,867	\$287,853,000

Source: USDA 2017

In 2017, the top three agricultural products sold in Cayuga County were milk from cows at \$183.5 million; other cattle and calves at \$30.4 million; and vegetables, melons, potatoes, and sweet potatoes at \$9.3 million (USDA 2017).

If the average production (dollar value) per crop type could be identified on a per-acre basis, loss estimates could be developed based on assumed percent damage that could result from a drought. If a drought impacted 40 percent of the agricultural products sold from Cayuga County farms, based on 2017 market values, this would be a loss of \$115.2 million.





A prolonged drought can have a serious economic impact on a community. Increased demand for water and electricity may result in shortages and higher costs for these resources. Industries that rely on water for business may be impacted the most (for example, landscaping businesses). Although most businesses will still be operational, they may be impacted aesthetically. These aesthetic impacts are most significant within the recreation and tourism industry. Moreover, droughts within another area could impact the food supply/price of food for residents within the county.

### **Impact on the Environment**

Drought can impact the environment because it can trigger wildfires, increase insect infestations, and exacerbate the spread of disease (NOAA 2020). Droughts will also impact water resources that are relied upon by aquatic and terrestrial species. Ecologically sensitive areas, such as wetlands, can be particularly vulnerable to drought periods because they are dependent on steady water levels and soil moisture availability to sustain growth. As a result, these types of habitats can be negatively impacted after long periods of dryness.

### **Cascading Impacts to Other Hazards**

Drought may trigger wildfires in the county. As discussed in earlier sections, drought can lead to increasing temperatures and evaporation of moisture, which are ideal dry conditions for wildfire events to occur. Dry, hot, and windy weather combined with dry vegetation is more susceptible to sparking wildfires when met with a spark created by humans or natural events, such as lightning (National Integrated Drought Information System 2020).

### **Future Changes that May Impact Vulnerability**

Understanding future changes that impact vulnerability in the county can assist in planning for future development and ensuring that appropriate mitigation, planning, and preparedness measures are in place. The county considered the following factors to examine potential conditions that may affect hazard vulnerability:

- Potential or projected development
- Projected changes in population
- Other identified conditions as relevant and appropriate, including the impacts of climate change.

### **Projected Development**

As discussed in Section 4, areas targeted for future growth and development were identified across the county. Any areas of growth could be potentially impacted by the drought hazard because the entire county is exposed and vulnerable to droughts. Future growth and development could impact the amount of potable water available due to a drain on the available water resources. An increased use of water resources would not only impact the county's population, but it would also exacerbate impacts to other areas of the county as discussed above, including agriculture and recreational facilities. Refer to Section 9 (Jurisdictional Annexes) for a discussion on potential new development.

### **Projected Changes in Population**

According to population projections from the Cornell Program on Applied Demographics, Cayuga County will experience a slight population decrease through 2040 (less than 10,000 people in total by 2040). Population change is not expected to have a measurable effect on the overall vulnerability of the county's population over time. According to the Cayuga Economic Development Agency, a significant portion of the county population has at least a high school diploma and there is a high percentage of professionals that have bachelor's degrees or higher. Most professionals that live in Cayuga County commute between larger urban centers like Syracuse,



Ithaca, and Rochester and rely on these areas for essential services like education and medical care. As a result, the existing transportation infrastructure is critical to maintain, especially during hazard events. Refer to Section 4.6.2 - Population Trends in the County Profile for a discussion on trends for the county.

### **Climate Change**

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As discussed earlier, summer droughts are projected to increase which may affect water supply, agriculture and ecosystems (NYSERDA 2014). An increased incidence of drought may impact availability of water supplies, primarily placing an increased stress on the population. It is unlikely that structure exposure and vulnerability would increase as a direct result of drought, although secondary impacts of drought, such as wildfire, may increase and threaten structures. If a wildfire were to occur during a drought, emergency services may face complications from a water shortage depending on their water source. Critical water-related service sectors may need to adjust management practices and actively manage resources. Increased incidence of drought may also increase the potential for impacts on the local economy including the production of agricultural products.

### **Change of Vulnerability Since the 2014 HMP**

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The 2014 plan did not include the drought hazard; therefore a change in vulnerability over the performance period of the plan cannot be assessed.

### **Issues Identified**

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The following drought-related issues have been identified:

- Drought events can have significant impact on residents and businesses who rely upon surface and subsurface water supplies within Cayuga County.
- Drought events can have significant impact on agriculture within Cayuga County and markets that rely on agricultural products for their businesses outside of the county.
- Climate change may increase the frequency of drought, increasing the need for mitigation actions.
- Droughts contribute to conditions conducive to wildfires and reduce fire-fighting capabilities.