



# Climate Action Plan 2024

Township of Montclair



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# Letter from Mayor Spiller



My fellow Montclair Residents:

Montclair has been working hard to do our part to combat climate change – a global issue affecting us all. Our town has not been exempted from its effects, as recent flooding has shown us. We have been diligently working to make improvements, including working with the Army Corps of Engineers to mitigate issues around flooding.

In other areas as well, Montclair continues to lead the way, ensuring our environment is safe for ourselves, our families, and future generations.

We have installed Electric Vehicle chargers in town parking garages, participated in the groundbreaking Regional Energy Aggregation program, created a new Vision Zero task force, and utilize the PSEG energy efficiency program. We will continue to work to make improvements, including reducing our overall greenhouse admissions, expanding access to zero emission vehicles, and improving transportation efficiency.

With the goal of reducing greenhouse gases by 50, 65, and then 80 percent by 2050, we will be continuing to lead by example. We are serious about our commitment to help create a healthier environment. In July 2021, we successfully passed a resolution at the Montclair Town Council authorizing the Montclair Environmental Commission (MEC) to create a Climate Action Plan for the township.

Our Climate Action Plan comprises a series of strategic

measures designed to reduce our carbon footprint, enhance energy efficiency, and protect our local environment. It is crucial that we all play a role in this transformative process, and I am confident Montclair residents will step up to help lead in these efforts. I encourage you to embrace the opportunities this report presents, and to get involved in our community's collective effort to combat climate change.

I want to express my gratitude to all the dedicated individuals and organizations who have contributed to the development of this plan. Together, we are shaping a healthier, more sustainable future for Montclair.

Thank you for your continued support and dedication. Montclair's future is indeed bright.

Sincerely,

A handwritten signature in black ink that reads "Sean Spiller". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sean M. Spiller

Mayor, Township of Montclair



# Land Acknowledgment

As the stewards of Montclair’s environmental and climate goals, we bear an additional responsibility to tend to the land and to our human and non-human relatives. We acknowledge the rights that Indigenous Peoples, the Lenape, maintain to this land, their ancestral homelands, as well as the role they play historically and currently in caring for the land on which Montclair stands.

From [The Lenape Center](#):

Lenapehoking is the Lenape name for Lenape land, which spans from Western Connecticut to Eastern Pennsylvania, and the Hudson Valley to Delaware, with Manhattan at its center. Due to centuries of colonialism perpetuated by genocide, forced displacement, and systemic oppression, today the Lenape Diaspora is dispersed throughout the U.S. and Canada. The Lenape diaspora includes five federally recognized nations in Oklahoma, Wisconsin, and Ontario.

To view a map of indigenous ancestral territories, go to <https://native-land.ca/>.

To learn more about the Lenape, visit the website of The Lenape Center at <https://thelenapecenter.com/>.





# Acknowledgments

This Climate Action Plan was written by Ben Rich, Suzanne Aptman, and Bill Martens with input from members of the 2023 Montclair Environmental Commission: Keith Brodock, Imke Oster, Janine Salvador, Mac Carbonnell, and Gray Russell.

Contributions were made by Township Environmental Affairs Coordinator Lisa Johnson and members of Montclair Climate Action, led by David Korfhage, including Rona Cohen and Ivy Sheibar, with research by Montclair Kimberley Academy student and Environmental Action Club President Ellis Fertig.

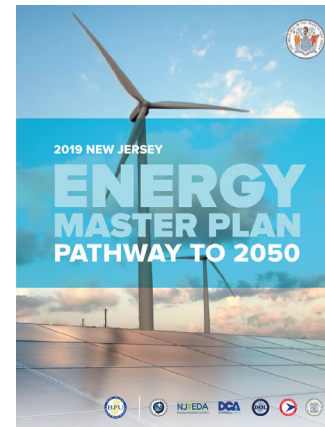
Graphic Design by Paul Korfhage

We appreciate the hard work of this dedicated group of people.

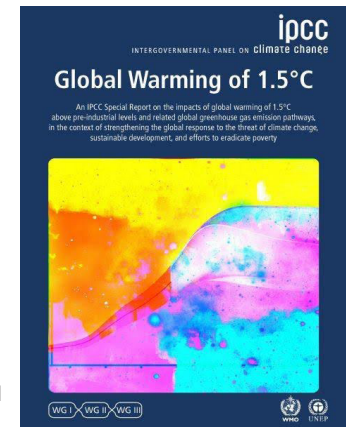


## What's inside the Montclair Climate Action Plan?

In July 2021, the Montclair Town Council passed resolution R-21-162 authorizing the Montclair Environmental Commission (MEC) to create a Climate Action Plan for the Township. The Montclair Climate Action plan is a strategic framework and guide for Township administration, businesses, and residents to reach suggested carbon emission reduction targets by 2030. This plan is informed by the [Intergovernmental Panel on Climate Change \(IPCC\)](#) which calls for a 50% global reduction in greenhouse gas (GHG) emissions by 2030. In addition, it aligns with the overall goals established in the 2007 New Jersey Global Warming Response Act mandating an 80% reduction in GHG emissions in New Jersey by 2050; [New Jersey's Global Warming Reduction Act 80 x 50 Report](#), providing strategies to meet those goals; and the more concrete goals established in the [2019 New Jersey Energy Master Plan](#).



2019 New Jersey Energy Master Plan (left)



Intergovernmental Panel on Climate Change (right)

**This plan provides strategies and actions for members of the Montclair community to reduce or eliminate carbon emissions by conserving energy, consuming clean electricity, and using clean transportation.**

With 2030 only six years away, this plan recommends actions with the greatest value payback in emissions reductions (i.e., lowest cost per emission reduction). Equity and affordable access to the same benefits were considered and are reflected in the recommendations.

This plan is a living document that should be formally revisited every three years and informally reviewed annually to make adjustments based on regulatory and market developments and learnings from local action.

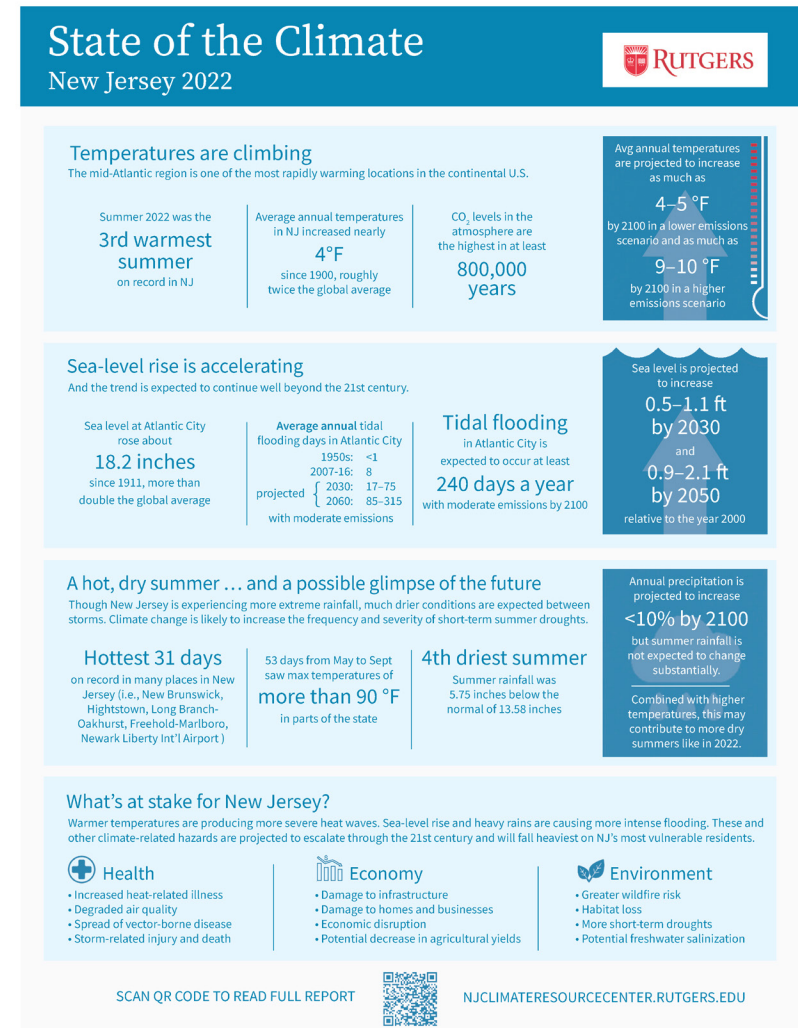
# Purpose

In 2018, the world received a severe warning with a deadline. Scientists across the world reported via the Intergovernmental Panel on Climate Change (IPCC) that **the global community must reduce emissions by 45% by 2030 and by 100% by 2050 to avoid the most severe effects of climate change.** This Climate Action Plan (CAP) is based on that guidance. In 2020, the state of NJ released [New Jersey Global Warming Response Act 80 × 50 Report](#), known as the 80×50 plan, which provides strategies for reducing greenhouse gas emissions by 80% by 2050. The following year, Governor Phil Murphy committed to powering NJ with [100% clean energy by 2050](#); and in 2023, he accelerated that target [by 15 years, to 2035](#).

## Purpose of this Plan: A Call to Action with Concrete Steps

The recent reports from the IPCC make clear that it is urgent to reduce greenhouse gas emissions by 2030 to avoid the worst impacts of climate change. The 2015 [Paris Agreement](#) adopted at the United Nations climate conference known as COP 21, and the [UAE Consensus](#) reached in 2023 during COP 28, are global agreements among hundreds of countries agreeing that meaningful action must take place quickly. The federal government, state government, and local municipalities are increasingly defining strategies and concrete actions to move the world in that direction. They know that the cost of inaction will outpace the cost of action.

We are also aware of the local problems caused by climate change, as severe precipitation events, flooding, drought, and heatwaves are becoming more prevalent. This plan offers actions to reduce Montclair's greenhouse gas emissions and should be used as a reference when making decisions for the municipality, for residents, and for business owners.



Source: <https://njclimateresourcecenter.rutgers.edu/wp-content/uploads/2023/04/SOTC-2022-infographic-042523.pdf>



# Evidence Humans Are Driving Climate Change

The scientific consensus on climate change is clear: Human activity is creating the majority of greenhouse gases causing global warming. Here are some sources of information with evidence that humans are driving the changing climate we are experiencing today.

[NASA - Vital Signs of the Planet](#) - NASA's climate science page with evidence, causes, and solutions.

[NOAA - Climate](#) - National Oceanic and Atmospheric Administration website focusing on climate change.

[EPA - Climate Change](#) - US Environmental Protection Agency website on Climate Change.

[IPCC - Intergovernmental Panel on Climate Change 6th Report on Climate Change](#) - The world's scientists collaborating to put climate science all in one place for governments to base policy decisions on.

[National Climate Assessment](#) - Quadrennial report by 14 federal agencies that conduct or use research on global change and its impacts on society.

[Skeptical Science](#) - Website devoted to collecting evidence via peer-reviewed journal articles and debunking myths.

[NJ Flood Mapper](#) - Website showing where NJ will be affected by sea level rise at various levels.

## Carbon Dioxide

↑ **420**  
parts per million (current)

## Global Temperature

↑ **1.1**  
°C since preindustrial

## Arctic Sea Ice Minimum Extent

↑ **12.6**  
percent per decade since 1979

## Ice Sheets

↑ **425**  
billion metric tons per year

## Sea Level

↑ **4**  
inches since January 1993

## Ocean Warming

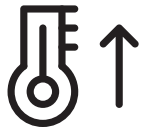
↑ **345**  
zettajoules since 1955

Data from [climate.nasa.gov](https://climate.nasa.gov) as of April 22, 2023

# Climate Change Impacts to Montclair



Extreme heat will exacerbate cardiovascular and respiratory conditions and diabetes. Montclair's elderly, young children, those lacking access to air conditioning, and outdoor laborers will be impacted the most.



Montclair's natural habitat will be disrupted by temperature changes. Plant and animal species that are native to New Jersey or migrate through New Jersey will be impacted by climate change, in combination with other stressors.



Montclair's elderly, young residents, and outdoor workers will suffer more from heat stroke. Pets will also be affected by the intense heat. Montclair residents without air conditioning as well as outdoor workers are at risk of heat-related illnesses and death.



Changing climate conditions influence the level and concentration of pollutants such as ground-level ozone (O<sub>3</sub>), and particulate matter. Ground level ozone is a strong lung irritant that has been associated with increased hospitalizations for pneumonia, chronic obstructive pulmonary disease (COPD), asthma, and allergies.



Flooding from heavier rains disrupts businesses, taxes our roads, infrastructure and waterways, damages property, and increases risk of injury and death. Infrastructure damage from flooding and storms threatens access to medication and can disrupt electricity to power medical equipment for those with existing medical conditions.



Droughts brought on by climate change increase the frequency of wildfires, which increase particulate matter emissions as well as ecological and infrastructural damage. Droughts impact crops and livestock, threatening the security of our food supply.



Vector-borne diseases are expected to expand their ranges, including tick-borne illnesses and mosquito-borne diseases. An increase in precipitation and extreme weather events increases the risk of contracting food- and water-borne diseases.



Extreme weather, changing weather patterns, damaged food and water resources, and polluted air impact humans' physical and mental health. Impacts include increases in trauma and shock, post-traumatic stress disorder (PTSD), compounding stress, anxiety, substance abuse, and depression.

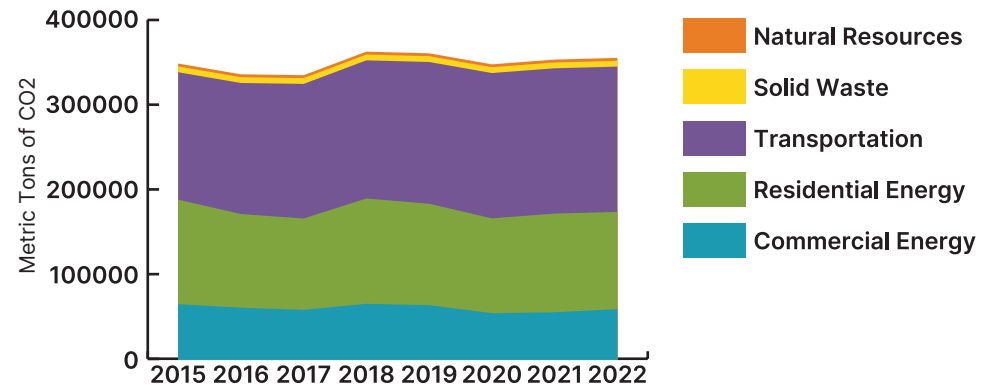
# Montclair Greenhouse Gas Inventory

The majority of greenhouse gas (GhG) emissions in Montclair come from transportation, electricity use and natural gas consumption for thermal heat, hot water, and cooking.

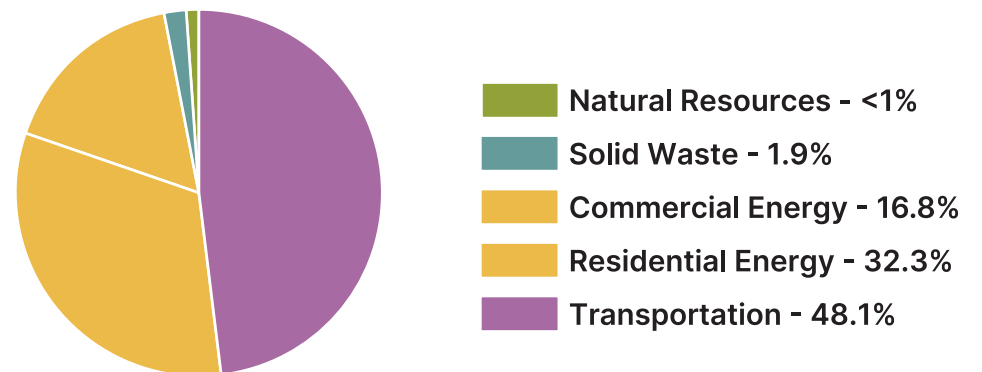
This data was provided by [Sustainable Jersey](#) in collaboration with PSE&G, the utility that provides Montclair with electric and natural gas service.

Note that Montclair has increased greenhouse gas (GHG) emissions since 2015 and the IPCC SR15 Report, stating that we must reduce our emissions by 50% by 2030, came out in 2018. This graph demonstrates the importance of creating a plan and carrying out the action steps to reduce greenhouse gases.

## Montclair CO2 Emissions Trend 2015-2022



## Montclair 2022 CO2 by Source





# Greenhouse Gas Reduction Goal

Under the 2015 Paris Agreement, the global community agreed that in order to avoid the worst effects of climate change, we must keep Earth's average temperature from rising more than 2°C above pre-industrial levels and pursue efforts to limit the temperature increase even further to 1.5°C.

This Climate Action Plan is Montclair's effort to help meet this challenge, and establishes a goal to reduce 80% of emissions by 2050 from the baseline year of 2015.

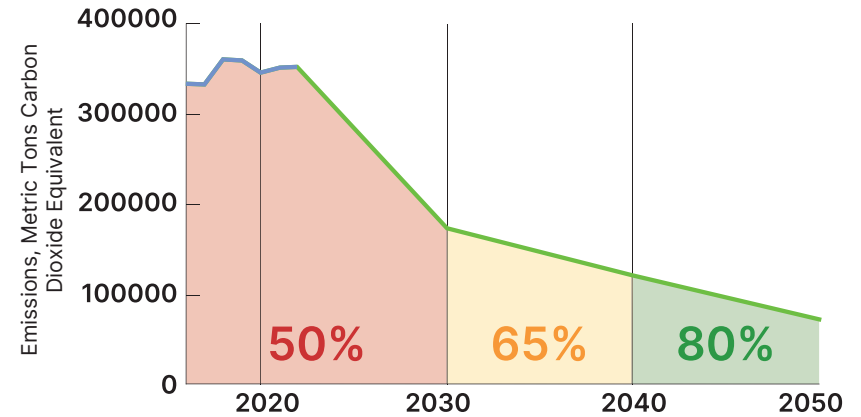
	Baseline	Baseline	2030 Target	2040 Target	2050 Target
	2015	2022	50% Reduction	65% Reduction	80% Reduction
Annual community-wide GHG emissions (MTCO <sub>2</sub> e)	347,510	354,864	173,755	121,628	69,502
Population (estimated)	39,295	39,821	42,547	44,173	45,799
Annual per-capita community-wide GHG emissions (MTCO <sub>2</sub> e/person)	8.84	8.91	4.08	2.75	1.52

# Greenhouse Gas Reduction Goal

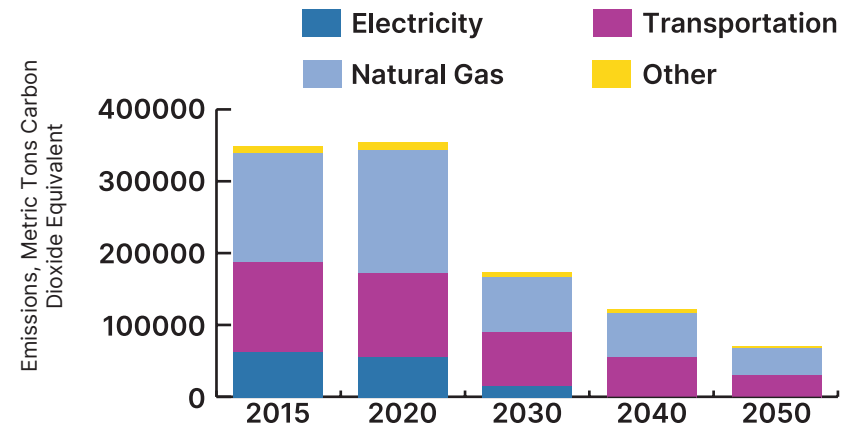
This goal is in alignment with the goals contained in the IPCC's "Special Report: Global Warming of 1.5°C" (SR15), and with the New Jersey Master Plan goals.

As the population of Montclair changes, so does the quantity of greenhouse gas emissions reductions for which each person is responsible.

## Montclair Township GHG Targets



## Montclair 2022 CO2 Targets by Source



## Reaching Our Goals - Clean Energy

### Overall Goals

Reduce Montclair's CO2 emissions by 50% by 2030 (compared to 2015)

Reduce Montclair's CO2 emissions by 80% by 2050 (compared to 2015)

The 3 main principles guiding actions to reduce climate impacts are:

1. Energy Efficiency and Electrification
2. Use Clean Electricity
3. Use Clean Transportation

By electrifying appliances that currently burn fossil fuels, using renewable energy, and switching to electric vehicles, you can reduce your emissions and be part of the solution.

### Montclair Residents: Key Priority Strategies & Key Milestones

In Table 1 are the **key priority actions** that will drive the most emissions reductions by 2030. Residential and transportation emissions comprise 68% of Montclair's total emissions.

### Municipality & Businesses: Milestones & Key Priority Strategies

The Municipality and commercial sectors (made up of businesses, schools, and municipal buildings) contribute less emissions collectively than residents. However, given the important role these sectors play in raising public awareness, concrete actions must be taken in those areas. Municipality, business, and school emissions represent 32% of Montclair's emissions.



# Implementation Plan

Table 1: Montclair Residents

Pathways	New Jersey State-wide Goals & Metrics	How The State Goals Translate to Montclair	
		Montclair Targets & Metrics	Key Priority Strategies
<p><b>1. Conserve Energy</b> Reduce energy consumption and increase affordability.</p>	<p>NJ Clean Energy Act mandates annual 2% reduction in electricity use state-wide and .75% annual reduction in natural gas use.</p>	<ul style="list-style-type: none"> <li>• 40% homes audited &amp; energy retrofitted/ upgraded by 2030.</li> <li>• Every NEW heating, cooling and cooking system installed is electric by 2030.</li> </ul>	<p>Residential homes become super energy efficient and appliances for space and water heating and cooling no longer rely on oil and natural gas for power.</p>
<p><b>2. Clean Electricity</b> Energy that we do consume is supplied by renewable electricity sources.</p>	<p>Governor Murphy Executive Order 315 requires 100% clean electricity by 2035. Currently set at 54% by 2027.</p>	<ul style="list-style-type: none"> <li>• 100% renewable content supplied through PSE&amp;G by 2035. We estimate 70% by 2030.</li> <li>• Continued participation in the SEA energy aggregation program enrolled in the Round 3 enhanced content program and increased enrollment in the 100% clean content by RGEA.</li> <li>• Most viable roofs have solar PV by 2030.</li> </ul>	<p>Residents maximize renewable electricity consumption through participation in energy aggregation, and rooftop solar PV installation. Community Solar Projects allow buildings with shaded rooftops to purchase locally produced solar energy.</p>
<p><b>3. Clean Transportation</b> Transportation is electrified and/or carbon-free.</p>	<p>Light duty Zero Emission Vehicle sales ramp up to 100% by 2035.</p>	<ul style="list-style-type: none"> <li>• Increase the number of EVs on the road.</li> <li>• 15% multi-unit dwellings have EV chargers by 2025 and 50% by 2030.</li> </ul>	<p>Residents switch to BEV at time of new car purchase or ASAP. Charging infrastructure for renters meets demand. Schools require new buses to be Electric School Buses using available grant funding.</p>

# Implementation Plan

Table 2: Municipality & Businesses

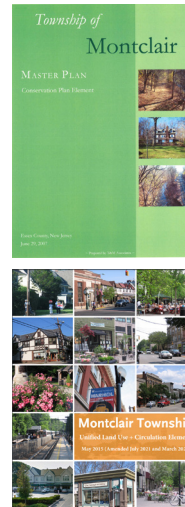
Pathways	New Jersey State-wide Goals & Metrics	How The State Goals Translate to Montclair	
		Montclair Targets & Metrics	Key Priority Strategies
<p><b>1. Conserve Energy</b> Reduce energy consumption and increase affordability.</p>	<p>NJ Clean Energy Act mandates annual 2% reduction in electricity use state-wide and .75% annual reduction in natural gas use.</p>	<ul style="list-style-type: none"> <li>• By 2030, all municipal properties have been audited &amp; upgraded. All new space and water heating systems are electrified. New municipal construction is built to highest green building codes.</li> <li>• Commercial property owners have audited &amp; deep energy retrofitted/upgraded by 2030.</li> <li>• Every NEW heating, cooling and cooking system installed is electric by 2030.</li> </ul>	<p>Municipal and commercial buildings become highly energy efficient through deep energy retrofits. As existing heating, air conditioning, and hot water systems in municipal and commercial buildings come to the end of life, including the Bond-funded upgrades of school HVAC infrastructure, replace with high efficiency heat pump equipment.</p>
<p><b>2. Clean Electricity</b> Energy that we do consume is supplied by renewable electricity sources.</p>	<p>Governor Murphy Executive Order 315 requires 100% clean electricity by 2035.</p>	<ul style="list-style-type: none"> <li>• All viable roofs have solar PV by 2030.</li> <li>• Those without solar PV by 2035 benefit from the state’s 100% clean electricity standard.</li> </ul>	<p>Municipal buildings maximize renewable electricity consumption through rooftop solar PV and/or geothermal installations. Commercial buildings maximize renewable electricity consumption through rooftop solar PV.</p>
<p><b>3. Clean Transportation</b> Transportation is electrified and/or carbon-free.</p>	<p>Advanced Clean Car II rule requires zero emission vehicles sales to reach 100% of new light duty vehicle sales by 2035</p>	<ul style="list-style-type: none"> <li>• 100% of Montclair light duty fleet is BEV by 2035.</li> <li>• 100% of full fleet is BEV by 2050.</li> </ul>	<p>Expedite electrification of municipal fleet to raise public awareness, to be a role model, and to increase familiarity with EVs. Install sufficient EV charging stations for renters and visitors.</p>

# Implementation Plan

The Implementation Plan is organized by types of emissions, from most impactful to least, and it includes information about resiliency to supplement documents already guiding the Township of Montclair. The sections include Transportation & Land Use, Energy, Natural Resources, and Waste Management.

## Relationship to Other Plans

The CAP does not replace nor revise the sustainability goals included in other community plans such as the Conservation Element of the Master Plan, or Sustainable Montclair Planning Guide. The CAP aims to complement these plans by being a reference guide to give focused direction to actions that specifically address climate change.



## [Montclair Master Plan: Unified Land Use + Circulation Element](#)

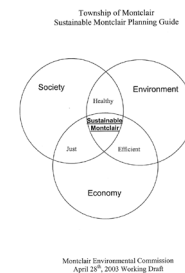
## [Montclair Master Plan: Conservation Element](#)

The Montclair Master Plan includes 2 sections that discuss environmental sustainability. The Unified Land Use + Circulation Element includes information about climate change issues, resiliency, stormwater, a climate change hazard and vulnerability assessment, and township initiatives. The Conservation Element includes strategies to maintain water quality and green spaces in the Township and doesn't mention Climate Change. There are sections on energy efficiency and incorporating bike lanes, which are helpful in combating climate change.

In future editions of the Montclair Master Plan this CAP should be referenced.

## [Sustainable Montclair Planning Guide](#)

The 2003 Sustainable Montclair Planning Guide lays out a plan to achieve very modest sustainability goals and includes steps to achieve those goals. This is from an era before electric vehicles, and building codes or ordinances requiring that new buildings not have natural gas hookups. The CAP is designed to be the next step to move Montclair forward based on the science and technology created in the time since the Sustainable Montclair Planning Guide was created.







# Energy

49.0% of Montclair's GHG Emissions





**Residential buildings** are the second largest source of greenhouse gas emissions in Montclair after transportation, followed by commercial buildings, making buildings the overall greatest source of emissions. Actions taken by homeowners and rental building owners offer the biggest potential to reduce emissions. Homes and multifamily dwellings must switch to electric appliances, especially HVAC equipment, and purchase renewable energy to reduce their emissions to zero. Climate change is expected to lead to a rise in the number of heat waves and their duration, which will increase building energy use of air conditioning.

We must accelerate adoption of electric appliances to reduce natural gas consumption. Some families and businesses have already replaced furnaces, boilers, water heaters, and stoves powered by natural gas with electric appliances.

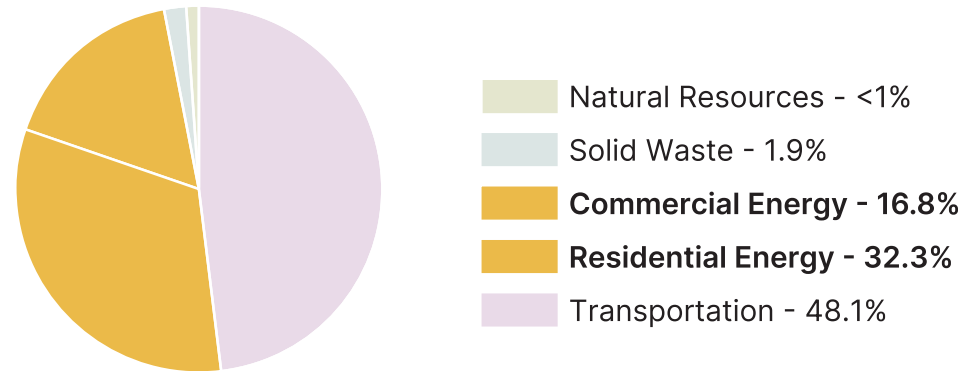
**The 3 primary pathways to reduce emissions from buildings are:**

1. Switch to 100% renewable energy
2. Use electric appliances
3. Improve energy efficiency



A variety of energy efficiency programs and certifications exist for homes to achieve a low- or no-carbon footprint.

Montclair 2022 CO2 by Source



While the township of Montclair contributes a small percentage of the overall greenhouse gas emissions in the state, the impact of switching municipal buildings to all electric appliances and utilizing 100% renewable energy will serve as a public model for others to follow, which will have an outsized impact on the community at large. This type of switch takes leadership and vision, so the people hired to make decisions about facilities must have an understanding – or be motivated to gain an understanding – of how to facilitate such an important change.





# Energy - Objectives

Number	Description	GHG Reduction Potential
<b>Objective: Reduce emissions in the built environment</b>		
1.0	Create an education campaign to encourage residents to reduce the amount they drive by biking, walking, and using public transit, drive an EV, fly less, buy renewable electricity, weatherize their house, eat less meat, install a heat pump, install an induction stove, and install solar panels.	High
1.1	Require municipality's management-level employees to create and implement a plan to reduce greenhouse gas emissions.	High
1.2	Require that municipal buildings implement upgrades and energy retrofits. Leverage financing through New Jersey Energy Savings Improvement Program (ESIP) and the <a href="#">New Jersey Clean Energy Program</a> .	Medium
1.3	Require a certified energy audit and disclosure at time of sale or lease for older residential, commercial, and multi-family buildings.	Medium
1.4	Pilot a targeted electrification outreach effort with a time-bound incentive – esp. for oil-based furnaces – discount on virtual consultations. Target end-of-life users, as it costs less to replace and target oil/propane users (10% of homes) than natural gas users.	Medium
1.5	Require that each municipal department integrate Climate Action Plan steps into their guiding documents to reduce scope 1 and 2 building carbon emissions to zero.	Medium
1.6	Require large commercial buildings and multi-family buildings to benchmark and report their energy performance.	N/A



# Energy- Objectives

Number	Description	GHG Reduction Potential
1.7	Investigate the ability to provide energy efficiency incentives to middle-income homeowners, addressing a gap in the NJ Clean Energy Program.	N/A
1.8	Adopt policies and programs to ensure new buildings in the community achieve near-zero/net energy/fossil fuel-free performance.	N/A
1.9	Find funding to provide rebates to offset the cost of qualifying energy-efficiency upgrades and weatherization.	Medium
<b>Objective: Increase the supply of low-carbon, affordable, reliable energy</b>		
1.10	Pursue Renewable Government Energy Aggregation (R-GEA) at a price lower than the default electricity rate for residents.	High
1.11	Complete an assessment/feasibility of solar generation potential on all municipal properties and identify plan to implement solar PV or solar thermal systems on appropriate buildings using grants.	High
1.12	Pursue community solar and ensure maximum participation of low- to moderate-income households.	Medium
1.13	Complete the microgrid project for which Montclair already has a state grant and evaluate microgrids at critical facilities such as hospitals, police, and fire stations.	N/A







# Transportation & Land Use

48.1% of Montclair's GHG Emissions





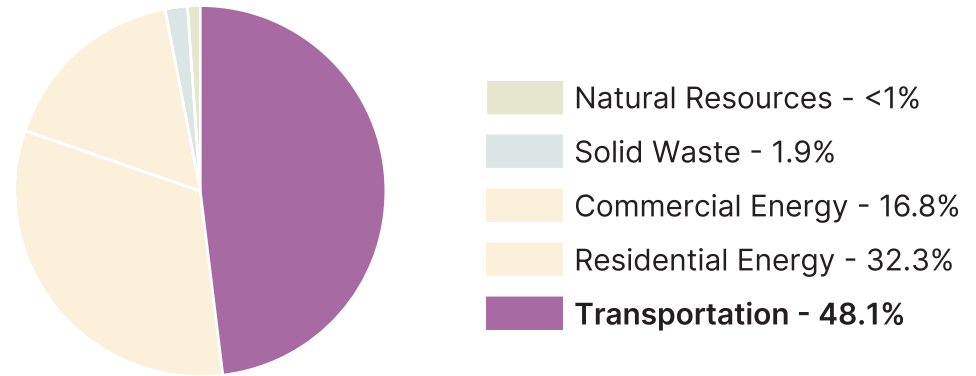
# Transportation and Land Use - Overview

**Transportation** accounts for nearly half of Montclair’s greenhouse gas emissions. Consequently, Montclair can only meet its carbon-reduction goals by taking serious steps to decrease emissions from transportation. Broadly speaking, there are two ways to reduce such emissions. One is to electrify cars and other means of transportation currently powered by fossil fuels. Montclair can make a significant impact by modeling the use of EVs in its own fleet, and by ensuring the existence of charging infrastructure that residents (especially residents who rent) can use to charge their vehicles.

While EVs have half of the environmental footprint of an internal combustion engine (ICE) vehicle in life-cycle analyses, eliminating this footprint entirely can be achieved by reducing vehicle miles traveled (VMTs). This includes getting people out of cars and into other means of movement: walking, biking, public transportation. Biking and walking are shifts that people can make now, and have little to no (in the case of e-bikes) carbon footprint environmental footprint. Montclair can encourage this transition away from cars by taking steps to make Montclair a more walkable and bikeable city, such as transit-oriented development, bikeways, and vision zero reforms. Working together, these policies can put Montclair on a rapid path to a zero-carbon emissions transportation system.

Montclair has long had a commitment to promoting both activity mobility and public transportation. As long ago as 2003, the Montclair Sustainable Planning Guide included a recommendation for the creation of a north-south bike lane and increased bike parking at train stations. The

Montclair 2022 CO2 by Source



2007 Conservation Element of the Master Plan included recommendations to improve pedestrian access in certain areas, as well as increasing bicycle parking. The Master Plan recommends transit oriented development, promotion of biking and walking, the creation of an EV-powered shuttle service around town, and further investment in EV charging stations. In short, Montclair has already committed itself to many climate-friendly policies in transportation and land use, but has not effectively followed through. This climate action plan foresees further action in these areas, to better mitigate the effects of climate change.



# Transportation and Land Use - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 1: Expand access to zero-emission vehicles</b>		
2.1	Transition fleets and public transit vehicles to zero-emission vehicles.	High
2.2	Promote the installation of visible and accessible EV charging stations for use by the public.	High
2.3	Encourage use of electric delivery vehicles by 2030.	High
2.4	Create targeted EV campaigns twice a year to homeowners & renters. Touchpoints: Township social media/email, billing inserts, live events, etc. Maintain a general outreach campaign that incorporates EV education.	Medium
2.5	Require all new developments to provide EV charging infrastructure in appropriate locations.	N/A
2.6	Promote the benefit of installing EV chargers to multi-unit dwelling (MUD) owners (appeal, property value) with driveways. Ensure they are aware of grants and incentives for MUD chargers. Touchpoints: Township mailing list, during home improvement/electrification permits, via renters, etc.	N/A
<b>Objective 2: Promote mixed-use development and pedestrian and transit-oriented, location efficient neighborhoods in order to promote efficiency and reduce vehicle miles traveled</b>		
2.7	Incorporate Green Building into the Conservation Element of the Master Plan and effectively put into place development based on the principles of transit-oriented and location-efficient development.	High





# Transportation and Land Use - Objectives

Number	Description	GHG Reduction Potential
2.8	Create a 15-minute city plan to ensure that 90% of residents can access their daily non-work needs by foot or by bike.	High
2.9	Develop a form-based code (as recommended in the Master Plan) that will ensure location-efficient and transit-oriented building design and siting and improve the development review and permitting process, increasing its predictability for developers.	N/A
2.10	Use incentives such as density bonuses and parking credits to promote affordable and accessible housing development that is transit-oriented and location-efficient.	N/A
2.11	Prepare plans and update zoning regulation in selected areas to encourage mixed-use, transit-oriented and location-efficient development.	N/A
<b>Objective 3: Encourage a reduction in automobile usage (vehicle miles traveled) by promoting alternate forms of transportation such as walking and bicycling, as recommended in the 2016 Master Plan Reexamination Report</b>		
2.12	Create interconnected bike lanes to encourage people to use bikes instead of cars and connect to the Greenway when complete.	High
2.13	Fully implement the SAFE Plan and Vision Zero Task Force.	N/A
2.14	Create a transportation and mobility plan to move towards active mobility (biking and walking) and away from car-based transit (similar to the Active Transportation Plan of <a href="#">Montclair, California</a> ).	N/A
2.15	Designate, mark and maintain a north-south bicycle route and install bicycle storage areas at all train stations (as recommended in Montclair's 2003 sustainability report).	N/A



## Transportation and Land Use - Objectives

Number	Description	GHG Reduction Potential
2.16	Implement a township shuttle service, as recommended in the 2023 Master Plan (pp. 138, 154, 155, etc.).	N/A
2.17	Ensure public transportation ridership by instituting an intensive, continuous transit information and education campaign that includes elements such as public wayfinding signs, wifi-enabled, and real-time information about transportation options.	N/A
2.18	Create a Parking Management Plan to reduce paved space and encourage public transit use where available.	N/A
2.19	Promote alternatives to car ownership such as car sharing and bike sharing (i.e. - Zip Car, Greenspot, Zagster) and implement curbside management locations for the staging and loading of passengers to support the shift to ridesharing (i.e. - Uber, Lyft).	N/A







# Natural Resources

<1% of Montclair's GHG Emissions

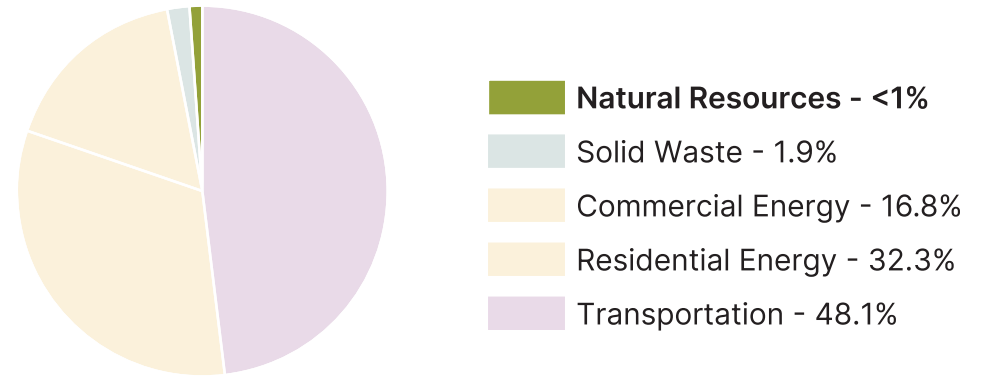


# Natural Resources - Overview

**Reducing emissions** of greenhouse gases is only half the battle when it comes to addressing climate change. Other steps are also necessary, and Montclair's management of its natural resources has a key role to play in those other steps. Proper management of natural resources can sequester carbon, by using plants and soil to promote uptake of carbon dioxide. Natural resource management thus plays a direct role in slowing down climate change. At the same time, effective use of resources can help promote resiliency, through the use of natural methods to reduce flooding, high temperatures, and other dangerous effects of a changing climate. Taken together, policies that promote proper management of natural resources are vital in addressing both climate change and its effects.

As with other areas in this plan, Montclair, in its planning documents, has long advocated for policies that support climate-friendly use of natural resources. From promoting tree conservation, to development of green space in small municipally owned lots, to promoting effective stormwater management, the town's 2007 Master Plan Conservation Element advocates a number of policies that align with broader climate goals. While some actions have been taken (such as the 2012 adoption of a tree ordinance), there is more to do.

Montclair 2022 CO2 by Source





# Natural Resources - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 1: Protect and enhance local natural resources that provide carbon capture; reduce flooding and heat island impacts</b>		
3.1	Direct a municipal employee to oversee municipally managed land and ensure it is managed in a manner that protects and enhances natural resources.	Medium
3.2	Update the Master Plan Conservation Element to include sustainability elements and protect open space that mitigate the effects of climate change.	N/A
3.3	Establish a campaign to educate residents, landscapers, municipal staff, garden clubs, and other practitioners about low maintenance landscaping, protecting native species and preventing the spread of invasive species.	N/A
3.4	Limit ecosystem stressors such as deer population and invasive species Ecosystem stressors are dynamics that impair or compromise the function or productivity of the system.	N/A
3.5	Evaluate each municipally owned property for potential as preserved open space before selling for private development.	N/A
3.6	Enforce and strengthen current ordinance requiring a minimum 1:1 tree replanting ratio for public trees or \$250 fee. ( <a href="#">Ordinance 324-5 Tree Replacement</a> ).	Medium
3.7	Implement a data-driven plan to protect and expand tree canopy, monitoring its effect on carbon sequestration, water quantity and quality; maintain an inventory of public street trees to monitor their health and survival; and identify new planting areas to increase the number of public trees, especially in environmental justice areas.	N/A





## Natural Resources - Objectives

Number	Description	GHG Reduction Potential
3.8	Revise the township tree planting list, given expected climate changes and the importance of maintaining species diversity.	N/A
3.9	Incorporate green infrastructure such as bioswales and street tree plantings into all future right-of-way improvements, and explore “greening” underutilized space, with the goal of converting 15% of existing impervious surfaces to green infrastructure.	N/A





# Materials Management & Waste Reduction

1.9% of Montclair's GHG Emissions



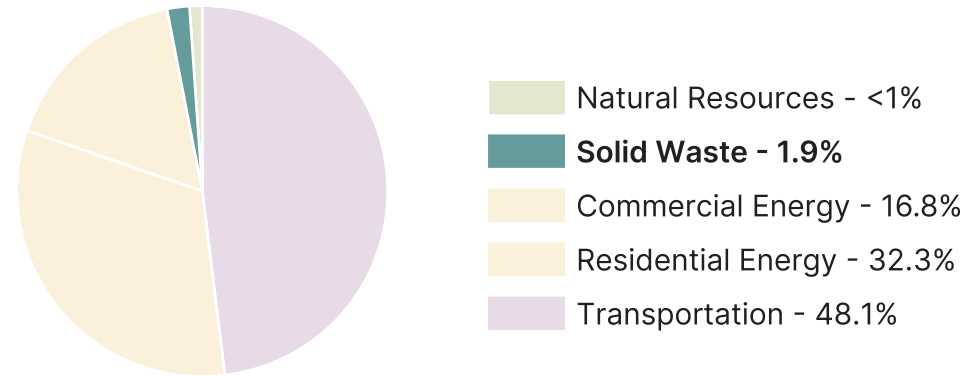


## Waste and Carbon Emissions

While waste only accounted for an estimated 2% of Montclair's overall carbon emissions in 2021, according to the Montclair Greenhouse Gas Inventory, efforts to reduce waste offer multiple environmental, health, and economic benefits. Montclair's waste is sent to the Covanta incinerator in the Ironbound section of Newark. Emissions from the incinerator cause adverse health effects to nearby residents of Newark, creating a major environmental justice issue, and contributing to climate change. Diverting waste from the incinerator – through source reduction, recycling, and composting – reduces emissions of carbon and other pollutants and alleviates these negative health and environmental impacts.

In addition, waste prevention, reuse, and recycling provide opportunities to reduce upstream emissions from the mining of raw materials, the manufacturing process, and the transport of finished goods, and thus have an impact that is broader than direct emissions reductions from waste. Montclair has the opportunity to start building a circular economy through more sustainable purchasing decisions, and create jobs in industries such as composting, repair, and reuse to close the loop.

Montclair 2022 CO2 by Source

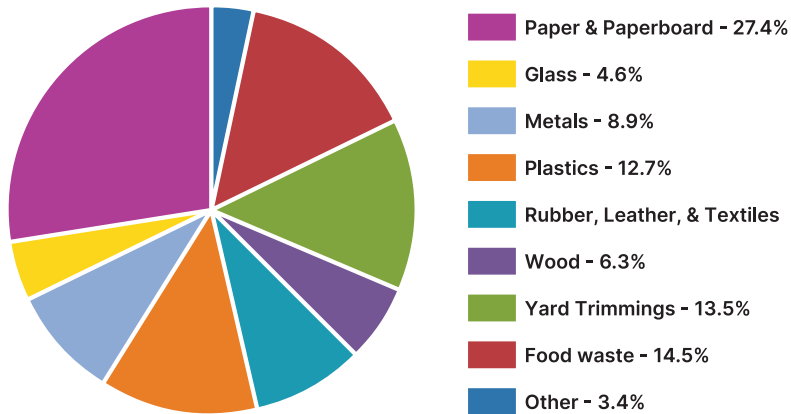


# Materials Management - Overview

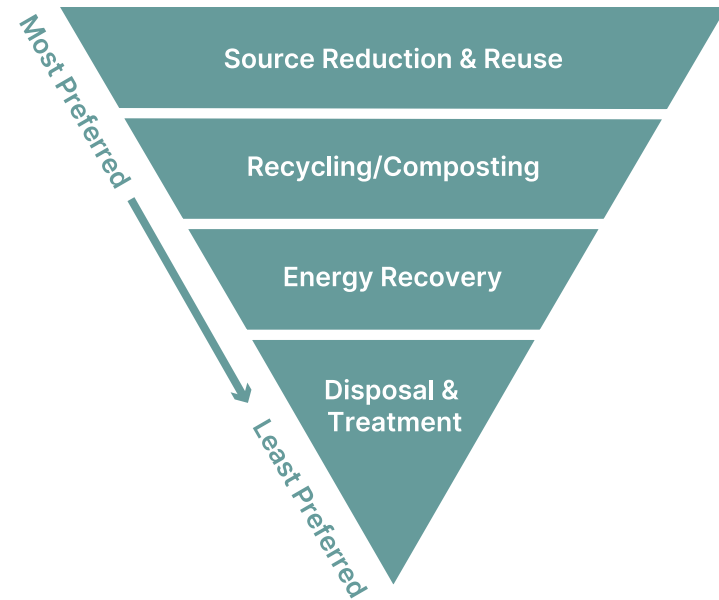
High priority waste actions include:

1. Developing a zero waste plan by conducting a comprehensive waste audit; establishing waste-reduction targets; and strategies for achieving them.
2. Encouraging reuse.
3. Providing enhanced recycling education.
4. Implementing a pilot program for residential curbside food scraps collection.

2012 Total MSW Generation (by material)  
251 Million Tons (before recycling)



## The Waste Hierarchy



The waste hierarchy ranking refers to the “3Rs”: reduce, reuse, and recycle, which classify waste management strategies according to their desirability in terms of waste minimization, and their benefit to the environment. The most preferred option is to prevent waste, and the least preferred choice is disposal in landfills and incinerators.



# Materials Management - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 1: Adopt a holistic waste-management strategy to reduce greenhouse-gas emissions from waste produced by municipal operations and the community.</b>		
4.1	Develop a Zero Waste Plan that establishes township-wide aggressive waste-reduction targets and strategies for achieving them.	High
4.2	Expand waste reduction education programs for residents, businesses, schools, and institutions.	Medium
<b>Objective 2: Reduce waste production through reuse and reduction.</b>		
4.3	Facilitate material reuse and exchange opportunities throughout the community.	High
4.4	Support and enhance state policies to reduce single-use plastics and other disposable items at Montclair restaurants, and other establishments.	Medium
4.5	Promote programs designed to advance sustainable business practices, such as the New Jersey Sustainable Business Registry.	Medium
4.6	Institute construction reuse diversion and recycling policy.	Medium
4.7	Encourage affordable and accessible reuse programs for foodware cups and containers.	Medium





# Materials Management - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 3: Increase residential, commercial, and institutional recycling rates.</b>		
4.8	Expand recycling <a href="#">education efforts</a> in Montclair and enforce mandatory recycling for residents and businesses. Reduce “wish-cycling” which leads to contamination of recycled material.	High
4.9	Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025. Work with the State to ensure that food waste recycling facilities are located within 25 miles of Montclair.	High
4.10	Work with the County and State to provide educational opportunities for township residents to dispose of hazardous items.	High
4.11	Expand residential composting opportunities for food waste, with a goal to develop and implement a pilot program for the curbside collection of food waste for single-family and multi-family residential properties, to enable the composting of at least 2,000 tons annually.	High
<b>Objective 4: Optimize management of waste generated by municipal facilities and BOE properties</b>		
4.12	Establish a diversion rate target for solid waste from municipal facilities, based on waste audit of current waste production and disposal practices.	Medium
4.13	Develop a plan to implement Environmentally Preferable Purchasing (EPP) Practices at the municipal level.	Low
4.14	Pursue opportunities to reduce water usage.	Low







# Resilience, Mitigation, & Adaptation





## Overview

Climate resilience means successfully coping with and managing the impacts of climate change in Montclair while preventing those impacts from worsening. Incorporating climate justice into resilience means prioritizing the well-being of people and communities most exposed to climate harm and least able to cope with it. This could involve, for example, ensuring that low-income housing has air conditioning, putting at-risk communities first in line for money for pre-disaster planning, and investing in measures to keep people who are elderly, disabled, homeless, or living in poverty safe during a hurricane or extreme heat event. With Montclair's progressive history, climate justice must be the centerpiece of our resilience plans.

## Vision

Vision: All Montclarions are prepared for the impacts of climate change, with a priority of ensuring the well-being of members of the community most exposed to climate harm and least able to deal with it.

To achieve this vision, we will need to prioritize the biggest threats and hazards to Montclair specifically. Montclair will see increasing impacts from climate change in multiple ways. Using the past as our guide, plus the expected impacts going forward, Montclair will need to prioritize managing the effects from flooding, excessive heat events, and power outages.

## Flooding

Montclair has Special Flood Hazard areas identified already: 7.5 percent of the approximately 11,000 tax parcels in Montclair are within one or more flood zones. However, according to [floodsmart.gov](https://www.floodsmart.gov) (FEMA's flood information website), over 20 percent of all National Flood Insurance Program flood insurance claims are filed by people outside of mapped high-risk flood areas. As Montclair continues to grow, combined sewer systems (which should be separated) designed for past population and rainfall levels will be undersized, further contributing to flooding from rainfall and water quality and public health concerns.





# Resiliency - Overview

## Excessive heat

Excessive heat has led to multi-day school closures, the early opening of a town pool, and invitations to cooling centers: libraries and municipal buildings, in 2023 alone

## Power outages

In NJ, due to significant investment that was made post Superstorm Sandy, power interruptions have been less frequent. Post Tropical Cyclone Ida in 2021, 125,000 PSE&G customers lost power, compared to the 2.1 million who suffered outages during Sandy. None of the improved stations that had flooded during Sandy or Hurricane Irene suffered service interruptions during Ida. However, even with this investment in infrastructure, Montclair needs to plan its own local resilience programs to prepare and protect its citizens when we do have outages.

In addition, we will need to assess the most at-risk communities, and put in place the plans to protect those communities in each instance of a hazard. This will include public notification systems, support procedures, and advocacy and preparation between emergencies.

Montclair Township's municipal government has already begun planning for adapting to the impacts of climate change in section [2.7 Sustainability Element of the Master Plan](#).

Montclair Township has an [interactive Stormwater Map](#) so residents and business owners can see where flooding is most likely to occur.

The [EPA Environmental Justice Screening Tool](#) shows that people in the South End of Montclair have increased risk of health issues due to exposure to particulate matter, ozone, and other pollution.



# Resiliency - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 1: Protect lives, property, and critical facilities from the impacts of stormwater flooding.</b>		
5.1	Develop a multi-layer map of Montclair’s stormwater system including storm drains, outfalls, flooding zones, etc.	Low
5.2	Establish a stormwater utility to fund the installation and maintenance of stormwater infrastructure, preferably green infrastructure and projects identified in the Stormwater Mitigation Plan.	Low
5.3	Update <a href="#">Complete Streets Policy</a> to include <a href="#">Green Streets guidelines</a> .	Low
5.4	Create a stormwater ordinance for redevelopment projects.	Low
5.5	Develop a maintenance plan to ensure that stormwater drains are kept free of debris that clogs grates, resulting in flooding in unanticipated places.	Low
5.6	Develop a system for better understanding and predicting when and where storms will trigger flooding.	Low
5.7	Leverage new technology including sensors to monitor and maintain the stormwater system.	Low
5.8	Install green infrastructure demonstration projects on municipal property.	Low
5.9	Provide green infrastructure training to key municipal personnel including Public Works, Engineering, Planning and Parks and Recreation to ensure proper installation and maintenance of green infrastructure on public property.	Low
5.10	Set a target for the reduction of impervious cover town-wide, and educate residents and businesses on how to implement it.	Low



# Resiliency - Objectives

Number	Description	GHG Reduction Potential
<b>Objective 2: Build municipal and community capacity to prepare for and respond to various effects of climate change</b>		
5.11	Institutionalize climate preparation planning and best practices in municipal operations and decision-making, and monitor effectiveness.	Low
5.12	Plan and create underground stormwater retention on municipal lots/fields including BOE schools and properties.	Low
5.13	Assess and improve Montclair’s public notification systems such as Register Ready, Access Montclair and Everbridge to better prepare for and meet community needs during extreme weather events.	Low
5.14	Engage first responders, municipal inspectors, and other public-facing personnel in identifying vulnerable community members, e.g., the oxygen-dependent, wheelchair users, low-income and undocumented and streamline the process to include in the Register Ready database.	Low
5.15	Increase ability to provide real-time updates on flooding, excessive heat, road closures and downed power lines; and review and update communication processes related to these events during Emergency Operations Center (EOC) operations and during normal day-to-day situations.	Low
5.16	Install job boxes equipped with supplies and/or permitting gates at locations prone to flooding to improve response time and increase safety.	Low
5.17	Set and meet targets for the number of community members signed up to receive emergency alerts for impacts from climate events.	Low





# Resiliency - Objectives

Number	Description	GHG Reduction Potential
5.18	Coordinate with Essex County to improve waterways to move stormwater throughout surrounding towns.	Low
<b>Objective 3: Prepare for the impact of climate change on human health</b>		
5.19	Increase collaboration of outreach efforts among municipal departments and partner organizations on prevention, early identification and treatment of health impacts due to climate change (Health Dept., Corner House, Montclair Senior Resource Center, Human Services, Sustainable Montclair, etc.).	Low
5.20	Assess vulnerability, magnitude, and capacity to respond to the health-related impacts of climate change, and incorporate recommendations to address them in the Emergency Operations Plan.	Low
5.21	Develop and distribute culturally appropriate and accessible materials about the health impacts of climate change, with particular attention to underserved community members.	Low



# National & Statewide Climate Policies

[NEW JERSEY'S ENERGY MASTER PLAN \(EMP\)](#) is a strategic plan to accomplish the state's goal of 100% clean energy by 2050. It will play a role in Montclair's ability to meet its CAP goals.

[NJ CLEAN ENERGY & UTILITY PROGRAMS](#) provide rebates and incentives to residential and commercial customers for energy efficiency upgrades and renewable energy projects. They are a source of funding for energy efficiency and renewable energy actions in this plan.

[PROPERTY ASSESSED CLEAN ENERGY \(PACE\)](#) financing is being considered by the NJ State Legislature. PACE is a funding mechanism for energy efficiency, renewables, and resiliency improvements.

The [REGIONAL GREENHOUSE GAS INITIATIVE \(RGGI\)](#) is a market-based program among New Jersey and 11 other Northeastern states to reduce GHG emissions by placing a cap on emissions from large power plants in the region. Proceeds from RGGI can be used for energy efficiency, renewable energy, bill payment assistance and GHG abatement.

[A CARBON FEE AND DIVIDEND](#) is a market-based mechanism for reducing carbon emissions. In the past the U.S. House of Representatives proposed a fee on carbon at the point of extraction to encourage market-driven innovation of clean energy technologies to reduce greenhouse gas emissions. Research shows that such a fee and dividend approach is highly effective at reducing greenhouse gas emissions.

Updates to the [INTERNATIONAL ENERGY CONSTRUCTION CODE® \(IECC®\)](#) that require higher energy efficiency minimums for new construction and major renovations is necessary to realize lower emissions from the built environment.

# Resident, Business, Municipal, and School Climate Action Plans

To accomplish the goals set forth in the Montclair Climate Action Plan, all stakeholders must take decisive action. The following single-page guides are designed to be a quick reference for people to understand what actions to take and which actions have the greatest impact.

The 3 main principles guiding actions to reduce climate impacts are:

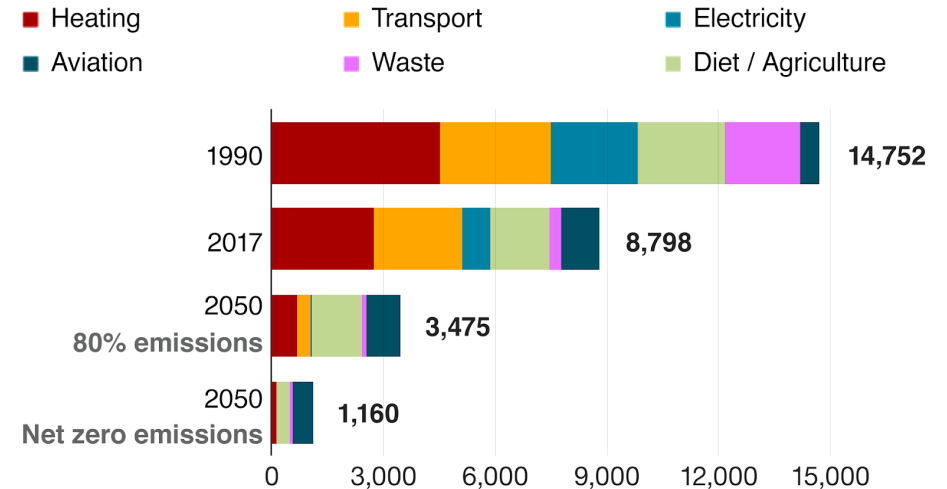
1. Energy Efficiency and Electrification
2. Use Clean Electricity
3. Use Clean Transportation

Each Climate Action Plan includes links to funding sources and information available at the state and national levels to ease the transition.

If every resident, business owner, school administrator, and municipal employee takes steps to reduce emissions, we will achieve our goals thereby doing our part to slow the negative effects of climate change.

## Household emissions in 1990, 2017 and 2050

Annual emissions, kilogrammes of CO<sub>2</sub>



Source: Climate Change Committee/BEIS (2019)



From <https://www.bbc.co.uk/news/science-environment-48596775>



# Montclair Homeowner Climate Action Plan

Higher Priority Actions	Lower Priority Actions
<p><b>Switch electricity to 100% clean energy.</b></p> <p>You can purchase energy from renewable sources for your home at any time</p>	<p><b>Reduce waste, compost food and organic matter</b></p> <p>Do this in your backyard or hire a company to pick up compost for a fee. Montclair Township sells backyard composters, contact the Sustainability Director at 973-509-5721</p>
<p><b>Replace household appliances with electric instead of natural gas or oil.</b></p> <ul style="list-style-type: none"><li>• Electric furnace or boiler</li><li>• Electric water heater</li><li>• Induction stove or electric stove</li></ul> <p>Money is available for energy efficient appliances through the PSE&amp;G Home Energy program at <a href="http://homeenergy.pseg.com">homeenergy.pseg.com</a></p> <p>The Energy Star rating shows you which products meet high efficiency standards. <a href="http://www.energystar.gov">www.energystar.gov</a></p>	<p><b>Purchase carbon offsets and become carbon neutral certified.</b></p> <p>Carbon offsets:</p> <ul style="list-style-type: none"><li>• <a href="http://www.goldstandard.org">www.goldstandard.org</a></li><li>• <a href="http://www.myclimate.org">www.myclimate.org</a></li><li>• <a href="http://www.3degreesinc.com">www.3degreesinc.com</a></li></ul>
<p><b>Replace internal combustion engine (ICE) vehicles with electric vehicles</b></p> <p>Money is available to help pay for EV charging stations at <a href="http://nj.myaccount.pseg.com/myervicepublic/electricvehicles">nj.myaccount.pseg.com/myervicepublic/electricvehicles</a></p>	

# Montclair Condo Owner and Apartment Dweller Climate Action Plan

Higher Priority Actions	Lower Priority Actions
<p><b>Switch electricity to 100% clean energy.</b></p> <p>You can purchase energy from renewable sources for your home at any time.</p>	<p><b>Reduce waste, compost food and organic matter</b></p> <p>Hire a company to pick up compost for a fee.</p>
<p><b>Replace household appliances with electric instead of natural gas or oil.</b></p> <ul style="list-style-type: none"><li>• Electric furnace or boiler</li><li>• Electric water heater</li><li>• Induction stove or electric stove</li></ul> <p>Money is available for energy efficient appliances through the PSE&amp;G Home Energy program at <a href="http://homeenergy.pseg.com">homeenergy.pseg.com</a></p> <p>The Energy Star rating shows you which products meet high efficiency standards. <a href="http://www.energystar.gov">www.energystar.gov</a></p>	<p><b>Purchase carbon offsets and become carbon neutral certified.</b></p> <p>Carbon offsets:</p> <ul style="list-style-type: none"><li>• <a href="http://www.goldstandard.org">www.goldstandard.org</a></li><li>• <a href="http://www.myclimate.org">www.myclimate.org</a></li><li>• <a href="http://www.3degreesinc.com">www.3degreesinc.com</a></li></ul>
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Higher Priority Actions	Lower Priority Actions
<p><b>Switch electricity to 100% clean energy.</b></p> <p>You can purchase energy from renewable sources for your business at any time</p>	<p><b>Reduce waste, compost food and organic matter</b></p> <p>Do this in your backyard or hire a company to pick up compost for a fee. Montclair Township sells backyard composters, contact the Environmental Affairs Coordinator at 973-509-5721</p>
<p><b>Replace appliances with electric instead of natural gas or oil.</b></p> <ul style="list-style-type: none"> <li>• Electric furnace or boiler</li> <li>• Electric water heater</li> <li>• Induction stove or electric stove</li> </ul> <p>Money is available for energy efficient appliances through the PSE&amp;G Energy Efficiency Program program at <a href="http://www.bizsave.pseg.com">www.bizsave.pseg.com</a></p> <p>The Energy Star rating shows you which products meet high efficiency standards. <a href="http://www.energystar.gov">www.energystar.gov</a></p>	<p><b>Purchase carbon offsets and become carbon neutral certified.</b></p> <p>Carbon offsets:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.goldstandard.org">www.goldstandard.org</a></li> <li>• <a href="http://www.myclimate.org">www.myclimate.org</a></li> <li>• <a href="http://www.3degreesinc.com">www.3degreesinc.com</a></li> </ul> <p>Carbon neutral certification:</p> <ul style="list-style-type: none"> <li>• Carbon Trust: <a href="http://www.carbontrust.com/what-we-do/assurance-and-labelling/carbon-neutral-certification">www.carbontrust.com/what-we-do/assurance-and-labelling/carbon-neutral-certification</a></li> <li>• SCS Global Services: <a href="http://www.scsglobalservices.com/services/carbon-neutral-certification">www.scsglobalservices.com/services/carbon-neutral-certification</a></li> </ul>
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Higher Priority Actions	Lower Priority Actions
<p><b>Switch electricity to 100% clean energy.</b></p>	<p><b>Reduce waste, compost food and organic matter</b></p> <p>Do this in your backyard or hire a company to pick up compost for a fee.</p>
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# Montclair Schools Climate Action Plan

Higher Priority Actions	Lower Priority Actions
<p><b>Switch electricity to 100% clean energy.</b></p> <p>You can purchase energy from renewable sources at any time</p>	<p><b>Reduce waste, compost food and organic matter</b></p> <p>Do this in your backyard or hire a company to pick up compost for a fee.</p>
<p><b>Replace appliances with electric instead of natural gas or oil.</b></p> <ul style="list-style-type: none"><li>• Electric furnace or boiler</li><li>• Electric water heater</li><li>• Induction stove or electric stove</li></ul> <p>Money is available for energy efficient appliances through the PSE&amp;G Energy Efficiency Program program at <a href="http://www.bizsave.pseg.com">www.bizsave.pseg.com</a></p> <p>The Energy Star rating shows you which products meet high efficiency standards. <a href="http://www.energystar.gov">www.energystar.gov</a></p>	<p><b>Purchase carbon offsets and become carbon neutral certified.</b></p> <p>Carbon offsets:</p> <ul style="list-style-type: none"><li>• <a href="http://www.goldstandard.org">www.goldstandard.org</a></li><li>• <a href="http://www.myclimate.org">www.myclimate.org</a></li><li>• <a href="http://www.3degreesinc.com">www.3degreesinc.com</a></li></ul> <p>Carbon neutral certification:</p> <ul style="list-style-type: none"><li>• Carbon Trust: <a href="http://www.carbontrust.com/what-we-do/assurance-and-labelling/carbon-neutral-certification">www.carbontrust.com/what-we-do/assurance-and-labelling/carbon-neutral-certification</a></li><li>• SCS Global Services: <a href="http://www.scsglobalservices.com/services/carbon-neutral-certification">www.scsglobalservices.com/services/carbon-neutral-certification</a></li></ul>
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# Montclair Greenhouse Gas Inventory

Metric Tons of Carbon Dioxide Equivalent (MTCO2e)									
Sector	Includes	2015	2016	2017	2018	2019	2020	2021	2022
Commercial Energy	Use of electricity by the community, use of fuel in heating/cooling equipment (e.g., boilers, furnaces)	65,174	61,051	58,549	65,643	64,043	54,631	55,716	59,361
Residential Energy	Single-family homes and most multi-family dwellings	122,598	109,916	107,157	123,518	118,992	111,257	115,758	114,072
Transportation	On-road passenger, transit and freight vehicles	149,539	153,272	157,915	162,104	166,292	170,480	170,480	170,480
Solid Waste	Generation and disposal of solid waste by the community	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800
Wastewater & Water	Operation of water delivery facilities, use of energy associated with potable water, generation of wastewater, process emissions from the operation of wastewater treatment facilities	3,400	3,400	3,400	3,400	3,400	3,400	3,400	3,400
<b>Total</b>		<b>347,510</b>	<b>334,895</b>	<b>333,821</b>	<b>361,466</b>	<b>359,527</b>	<b>346,567</b>	<b>352,154</b>	<b>354,113</b>

1) Does not include fuel oil (negligible)

2) Transportation uses Sustainability Institute data for 2015 and 2020, straightlined. 2021 and 2022 use 2020 data.

3) Solid Waste and Wastewater & Water estimated based on Princeton % of total emissions

4) Commercial Energy and Residential Energy from PSE&G