



Resilient NoMi
Plan . Protect . Preserve

Citizens Guide to Sustainability and Resiliency

for residents, businesses,
and visitors of the
City of North Miami



NorthMiamiFL.gov



This guide was prepared, designed, and written by Brizaga in coordination with the city of North Miami staff for the people of North Miami.



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Introduction

Every day we make decisions that impact our well-being, our environment, and our wallets. When thinking about the future, it is important to integrate resilience and sustainability into what we do to ensure the protection of our planet and natural resources. More and more each day, individuals and businesses alike are focusing on the economic and societal benefits resilience and sustainability have to offer. The benefits are more than just protecting our environment. The City of North Miami, affectionately called NoMi, has diverse cultures, unique flora and wildlife, waterfront properties, small businesses, recreational parks and more, all of which create the fabric of our community. All of these systems require planning and thoughtful actions in order to plan, protect, and preserve them for the future. **It is our duty as citizens of North Miami to be stewards of our home, schools, and businesses and to consciously create a more resilient and sustainable North Miami for now and generations to come.**

Plan. Protect. Preserve. the City of North Miami

The City of North Miami is determined to build a sustainable and resilient city, where our natural resources not only remain in abundance, but also thrive. Numerous locations, ranging from our Central City streets with beautiful tree canopies to the exciting Oleta River State Park – where individuals can engage in fun activities such as biking, swimming, and paddle boarding – are considered local landmarks in our City. Here, residents and visitors alike get to personally connect with nature.

North Miami has taken numerous measures to protect and enhance our community so we can thrive for generations to come. The City has symbolically adopted the Paris Climate Change Agreement, signalling our City's commitment to combating climate change. The City will be creating a Sustainability Committee to identify key stakeholders to serve as champions in promoting a resilient North Miami.

Who is the Citizen?

Whether you are an individual who has resided in the City of North Miami for decades, a student in our local university, a worker or business owner in the community, or simply a tourist coming to experience our extraordinary City, everyone has a role to play in maintaining North Miami's delicate ecosystems. Environmental stewardship should be embraced through every action we take. To accomplish this, intentional and mindful decision making must be a part of our daily processes. The individuals that make up the community of North Miami embody a diverse group of people who all share a common responsibility. Our responsibility - regardless of our occupation, wealth, or status - is to our environment. Once we understand that we are all an interconnected system, we can expand beyond our innate habits and do more to protect and foster our community for future generations.



View of North Miami from Haulover Park



Purpose of this Guide

The purpose of this NoMi Citizens Guide to Sustainability and Resiliency is to promote, educate, and enhance our citizens' ability to live more sustainably and to create a long-lasting resilient community. This Guide provides detailed information on resilient and sustainable practices you can implement in your daily life as well as the environmental, economic, and social benefits of those actions. Sustainability can be a broad topic and many citizens do not know where to start. The **NoMi Citizens Guide to Sustainability and Resiliency** is an easy and reliable source of information that citizens can rely on for simple actions to reduce their carbon footprint. Throughout this guide you will find challenges that impact our City. Whether it is reducing your carbon emissions by driving less or not dumping trash on our street to help protect our waterways, these small actions can add up if everyone does their part. Keep an eye out for the **Resilient NoMi Challenges** throughout this guide, and spark the change in your house, school, business, or community.

Example of Challenge

Resilient NoMi Challenge

Adjust your thermostat by 2° F (lower in the winter and higher in the summer) for a year to reduce your carbon emissions. That is equivalent to using 25.5 gallons of gasoline.



View from 125th Street looking east



Resilient NoMi

Plan . Protect . Preserve

Throughout this guide, there are numerous Resilient NoMi Challenges that individuals can participate in and learn how to become a more resilient and sustainable citizen. These challenges are meant to share examples of different ways you can implement sustainable practices in your daily life. Whether you participate in these specific challenges or not, there is a need for every citizen to change their lifestyle and adopt environmentally conscious habits. In order to enjoy North Miami for generations to come, we must take action now to safeguard our future.

Arch Creek East Environmental Preserve



Enchanted Forest
Elaine Gordon Park



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The only way forward, if we are going to improve the quality of the environment, is to get everybody involved.



- Richard Rogers



Why this Matters to You

Sustainability and resilience are about being proactive instead of reactive. Community members of North Miami hold local landmarks dear to their hearts, including Arch Creek East Environmental Preserve, Oleta River State Park, William Lehman Bayshore Park, and Enchanted Forest Elaine Gordon Park. These ecosystems provide community members with beautiful scenery and exciting activities that allow people to connect with nature first hand. In order to be able to have continued experiences with these parks and open spaces, it is essential that resilient and sustainable action occur at both the individual and collective level.

Sustainability

Sustainability can broadly be defined as minimizing the negative effects on nature in relation to human activity. The critical goal of sustainability is to plan for, protect, and preserve our natural resources without compromising the needs of future generations.

Resilience

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.¹

Greenhouse Gases

Our planet is composed of complex systems all working interconnectedly to create a balanced way of life. In our atmosphere, there are naturally occurring gases such as carbon dioxide, nitrous oxide, methane, and water vapor, which allow our planet to remain a comfortable temperature for life. However, the burning of fossil fuels releases additional carbon dioxide into the atmosphere, causing the undesirable warming of our planet, and thus creating environmental challenges such as sea level rise.

What is a Carbon Footprint?

Every action you do as an individual has a set reaction. A carbon footprint is the calculated measure of (GHG) greenhouse gas emissions per person, relative to the impact our daily activities have on our surrounding environment. For example, driving your car, using your laundry machine, and eating any food product all have a relative carbon footprint. Knowing your carbon footprint helps you to understand your personal impact and entices you to **Plan. Protect. and Preserve.**

Climate Change

There are natural processes that change the Earth's climate. The release of GHGs from the burning of fossil fuel is changing the Earth's climate system. Additionally, human-induced changes like urbanization and deforestation also contribute to climate change. The gradual warming of our planet is impacting the smallest ant to the tallest tree. Even if we are visually unable to see the effects our climate has on our environment, we as a species need to make a change to our behavior. Although fighting climate change is an uphill battle, hope lies within every individual, business, and community collectively working to protect our resources and practice resilience and sustainability.



Since 1950, sea levels have risen 8 inches – 3 of those inches have been in the last 20 years. Southeast Florida is particularly vulnerable because of its relatively low elevation. In recent years, we have seen flooding on more sunny days directly caused by sea level rise.²



Enchanted Forest Elaine Gordon Park



King Tides and Sea Level Rise

South Florida is considered to be one of the most vulnerable locations in the United States that is being affected by sea level rise. The porous limestone rock that we sit on, combined with our moderate high risk areas, makes the City of North Miami severely sensitive to major flooding. King tide season in South Florida occurs during the fall when the water off our coasts is warmest. Water expands when it warms, which creates a seasonal higher than average tide. We are beginning to see king tides outside of the fall in periods in which the sun, the Earth, and the moon are aligned to create high tides. Such changes in our climate reflect our need to build both resilient infrastructures and resilient communities.

One of the challenges with porous limestone is that as sea levels rise, our groundwater does also. This means that in addition to water overtopping seawalls and encroaching from our coastlines, groundwater is pushed closer to the surface. Because of this, there is less ability for the ground to store water from rainstorms, and can lead to what is referred to as compound flooding. This is when different conditions, such as groundwater, rainfall, and septic infiltration, combine worsening flood conditions.

Terms

Groundwater

Water that is held underground in soil or porous spaces and can move freely.

Limestone

A hard sedimentary rock with porous spaces.

PPM

An abbreviation for “parts per million”, it is the ratio of one gas to another. For example, 1,000 PPM CO2 means that out of one million gas molecules, one thousand contain CO2.³

Saltwater intrusion

When saltwater makes its way into a space it is not supposed to be, in such as an aquifer.

10 Tips To Prepare For King Tides

1. Know your flood zone, visit www.northmiamifl.gov/305/Flood-Zone-Mapping to learn about your flood zone.
2. Keep drains and swales clean of trash, leaves, and debris.
3. Report or fix any drainage problems around your property.
4. Relocate electrical panel boxes, furnaces, water heaters, and washers and dryers to elevated locations.
5. Rinse off all your landscaping if touched or covered by flood water due to king tide.
6. Do not walk through flood waters, it is dangerous and can be a health hazard.
7. Follow any signs or alerts for road closures and detour signs to avoid driving through flooded streets.
8. If your car must drive through flood waters, take it through a car wash equipped with an undercarriage sprayer to remove the saltwater.
9. Remove garbage bins once the trash has been collected to avoid washing into the street.
10. King tide season occurs from August through November. You can utilize the NOAA app to stay informed on king tide events around your area.





Water flowing over seawall during king tide at a North Miami residence



According to the Southeast Florida Regional Climate Compact, sea level rise projections for South Florida show a significant increase in sea level by 2060, **likely between 17 and 31 inches.**⁴

If no action is taken to help fight sea level rise, it can lead to constantly flooded streets, which lead to damaged cars, property, and closed businesses because of the inability to get to them.



The Arch Creek Basin park located in North Miami is particularly vulnerable to sea level rise. A study conducted by the Urban Land Institute⁵ that specifically looked at the Arch Creek Basin, found that many parts of this central part of North Miami is subject to flooding and is considered a Special Flood Hazard Area by Federal Emergency Management Agency (FEMA). The City has taken measures to address the flooding in this area, and is continuing to find ways to reduce flooding and increase resilience.

Sea Level Rise Projections

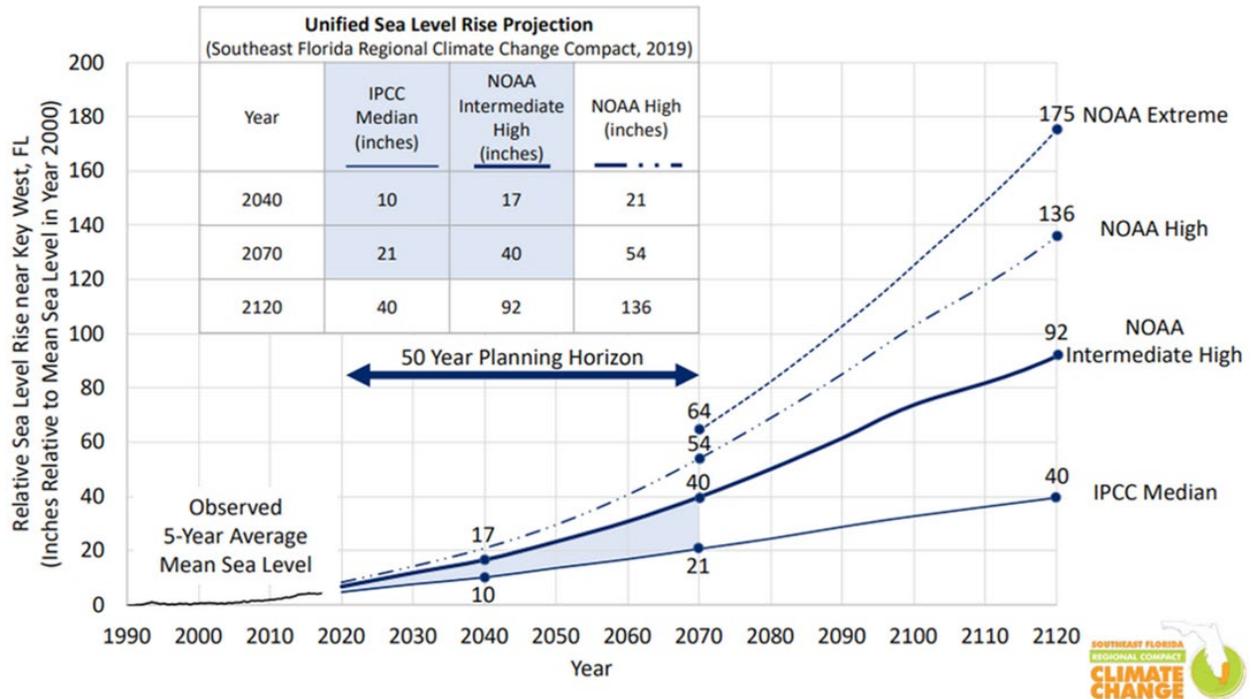
In South Florida, the sea level is projected to rise by more than 3 feet in the next 50 years. This staggering statistic reflects how critical it is to prepare for these rising seas by incorporating both adaptation and mitigation measures. The City of North Miami is committed to addressing flooding and sea level rise. The City is exploring a range of natural and man-made solutions to address our flooding challenges.

Sea level rise has two primary causes: (1) the ocean expands as it warms, and (2) ice on land

melts, increasing how much water is in our oceans. The uncertainty surrounding sea level rise comes from trying to predict how much ice on land is going to melt, when it is going to melt, and how much more water will flow into our oceans. In addition to increasing tidal flooding, rising sea levels will increase the height of storm surge and how far inland storm surge travels, and also cause our groundwater to rise.



The City of North Miami is a proud member of the **Southeast Florida Regional Climate Change Compact**, which is a decade-old partnership among Broward, Miami-Dade, Monroe, and Palm Beach counties, to work collaboratively to reduce regional greenhouse gas emissions, implement adaptation strategies, and build climate resilience within their own communities and across the Southeast Florida region.





The Cost of Inaction

Flooding, if left unaddressed, can negatively affect our economy. If no action is taken to help fight sea level rise, it can lead to constantly flooded streets which may damage cars and property, and lead to closed businesses because of the inability to get to them. This can affect property values and a business's ability to operate. In order to safeguard the future prosperity of our City, we must plan accordingly, protect our community, and preserve our resources. This can be done by sharing information among members of our community and raising awareness through mindful action. **By acting preemptively and investing in your home or business's resilience, you can save money in the long-run and ensure that you're protected from sea level rise for years to come.**

// You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make. //

- Jane Goodall





Resilience

Resilience is the ability to prepare for and respond to events, trends, or disturbances by utilizing methods of adaptation and mitigation to help minimize its effects on the community and its residents. In the City of North Miami, we experience a wide range of weather from hurricanes, heavy rainfall, and sunny day flooding – all of which are growing in strength and duration. Much of the City is located in flood risk areas, where an influx of water through sea level rise inhibits our ability to function as a society. Sea level rise is of vital concern, and is critical, for citizens to be knowledgeable about the environmental, economic, and social risks concerning sea level rise, as well as understand how resilience can mitigate these issues. Knowing how to combat these issues will result in a resilient community.

Environmental Resilience

Environmental resilience means having your surrounding environment be strong enough to withstand any changing climatic condition. Sea level rise greatly affects the City of North Miami’s environment and can be detrimental towards our natural ecosystems, which are not suitable to these current changing climatic conditions. When you give back to the environment, the environment gives back to you. Enhancing the City’s environmental resilience would create long-term benefits that not only support a growing urban community, but also strengthen adaptation measures and reduce the aftereffects imposed by natural disasters.

Terms

Adaptation

The act of changing or creating a new way of functioning to suit changing conditions.

Mitigation

The act of doing something to reduce the severity of another action or event.

Repetitive Loss Property

The Federal Emergency Management Agency (FEMA) defines this as a property which the National Flood Insurance Program (NFIP) has paid two or more claims of more than \$1,000 in any 10-year period since 1978. Basically, these are properties in flood-prone areas that have made multiple flood claims.⁶

Storm surge

An abnormal rise in sea levels associated with a low pressure system, typically tropical storms or hurricanes in South Florida. It is the greatest threat to life and property from a hurricane.

Shocks and stressors

A shock is an out-of-the-blue event that can threaten a community such as a hurricane, coastal flooding, cyber terrorism and/or infrastructure failure. A stressor is an event that may affect the daily fabric of a community such as sea level rise or a global pandemic.

Resilient NoMi Fact



The Van Alen Repetitive Loss Property Project, aka the “Good Neighbors Stormwater Park” was once a repetitive loss property that was developed into a pilot site as part of the stormwater management system. It exemplifies the City’s commitment towards building it’s environmental resilience, while also encouraging a sense of community and unitedness.



Economic Resilience

When disaster strikes, the aftermath of these events causes changes in the economic stability of a City. The associated costs resulting from damages due to a lack of resilient infrastructure can be a financial burden, especially to small businesses. Some changes include small businesses not reopening after disaster strikes or negatively impacting your property value due to flooding. **Small business owners in the City of North Miami have the opportunity to receive the Green Commercial Grant that helps make businesses more resilient.**

Small businesses are especially vulnerable to the consequences of flooding. Many small businesses do not reopen after a disaster. It is important to not only have a plan, but also to understand what your insurance does and does not cover. A licensed insurance agent can assist you with your questions.

Social Resilience

Resilience is more than just strong buildings – it's about building a strong sense of place so that people want to stay and come back after a disaster. It is critical not only to have resilient infrastructure, but also to have resilient communities that unite to withstand the aftereffects natural disasters have. The City of North Miami has the opportunity to build on its united community by sharing and communicating resiliency efforts and supporting one another on the mission to keep North Miami beautiful.

Shocks and Stressors

Natural disaster preparation is a part of every Floridian's life. Living in South Florida, residents are exposed to a wide variety of natural disasters including but not limited to hurricanes, king tides, and extensive flooding. These natural disasters are growing in strength, frequency, and duration due to climate change. Being prepared for these disasters means being resilient. A shock is an out-of-the-blue event that can threaten a community such as a hurricane, coastal flooding, cyber terrorism and/or infrastructure failure. A stressor is an event that may affect the daily fabric of a community. This can include global pandemics, affordable housing, sea level rise, and again, infrastructure. Not only is it important to have the vital necessities such as water, canned goods, and personal supplies, but being financially ready for shocks and stressors can help ease the aftermath of the event.



According to FEMA, spending **\$1 on protecting a property before a disaster can save \$6 on recovering after a disaster.**⁷



Before: Empty lot on 901 NE 144th Street



After: Empty lot converted into the Good Neighbors Stormwater Park





The City of North Miami prioritized its determination towards building a more resilient City by developing the Van Alen Repetitive Loss Project. Dubbed the “Good Neighbors Stormwater Park,” this park enhances the City’s ability to manage stormwater flooding and helps pave the way for future initiatives towards resilience. The City of North Miami celebrates the creation of this park because it not only reduces flooding around the surrounding neighborhood, but also has spaces where visitors can enjoy Florida’s native plant life.





Enchanted Forest Elaine Gordon Park



Who to Contact

For questions regarding stormwater or septic issues, please contact the City of North Miami's **Stormwater Superintendent**



In My City

Good Neighbors Stormwater Park
901 NE 144th Street
North Miami, Florida
Hours: Sunrise to Sundown

Resilient NoMi Challenge



Being knowledgeable about your insurance deductibles means you are prepared for unforeseen circumstances that may occur in the future. Challenge yourself to learn about your insurance deductibles, and work to ensure you have the deductible saved up in the event you have to use your insurance.



Green Your Business

Lighting

1. Take advantage of natural daylight and turn off artificial lights throughout the office. Open your curtains for a small period of time throughout the day to let in sunlight, but make sure to close them to prevent extra heat from entering.
2. Install automatic lighting sensors that turn on and off depending on movement in the room. By having these motion light sensors, you are likely to save money on your electricity bill by preventing lights from being left on by accident.

Cooling

3. Avoid constantly adjusting the temperature on the thermostat. Look into smart technology that controls the thermostat based on your behavior and energy savings. For example, when you leave the office at night to go home, put it on the highest setting to cut back on fuel consumption.

Office Equipment

4. When purchasing appliances or products for your office, choose Energy Star equipment. Energy Star products provide energy efficient appliances and electronics that reduce your energy use by powering down when suspected inactivity occurs.
5. Go paperless! Instead of sharing information through physical documents or constantly printing new pages, opt for sharing documents electronically. Reducing your paper consumption helps reduce the amount of trees being cut down.

Recycling

6. Encourage doing business with other green vendors. When you have an event or a party, try and seek out companies that also prioritize sustainability. This in turn creates a more sustainable community that everyone can enjoy and promotes its importance to other companies in the area.
7. Encourage employees to bring their own mugs, utensils, and plates to eat and drink, or provide reusable plates, cups, and utensils.

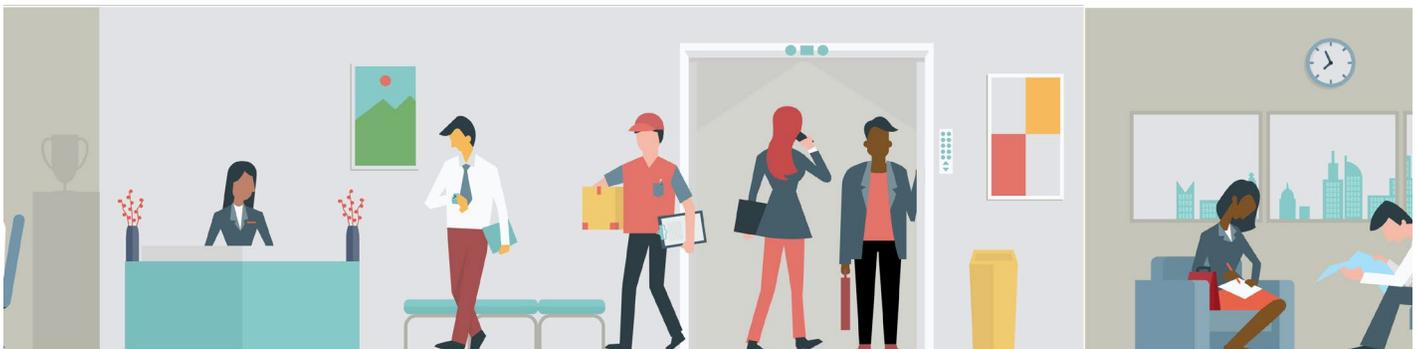
Employee Involvement

8. Educate and share information about sustainable actions with others in your office. Try and advocate around your office to get together and participate in local clean ups, Meatless Mondays, or plastic free days.
9. Create a Green Committee in your office. Have employees brainstorm and get together to come up with fun long-term mechanisms for your business to stay consistently sustainable and resilient.

Building

10. If you own your building, consider getting it LEED Certified. When a building is LEED Certified, it means that it uses the best strategies to: maximize energy savings, increase water efficiency, reduce CO2 emissions, and improve indoor environmental quality.

If you can't do LEED Certification, but you would like to incorporate green retrofits for your small business, check out **North Miami's Green Business Rehabilitation Grant Program**, which offers funding to small businesses that would like to make their business more sustainable.





Green Your Home



Native Landscaping

Incorporating native plants and trees in your yard helps build a more resilient home by creating a sturdier environment that can combat flooding and promote the abundance of pollinators.



Solar Panels

Having solar panels in your home is a great alternative way to power your home and reduce the reliance on non-renewable energy sources.



Water Reuse

Use rain barrels to save up extra water that nature provides us. If you have left over ice or have saved your pasta water, you can use it to water your plants or wash your car.



LED Lighting

LED lighting saves more energy than the traditional incandescent lighting many homes have. This type of lighting has a longer lifespan, lower energy consumption, and reduced maintenance costs as opposed to their traditional counterparts.



Energy Consumption

Electronic appliances, such as TV's and game consoles, may consume as much energy when on standby or even when turned off as to when they are on. When not in use, unplug electronic appliances from the wall or plug them into a power strip so you can unplug them all at once.



Household Water Conservation

Changing some of your daily habits can help conserve water, like turning off the faucet while brushing your teeth or taking 5 minute showers.



Energy Efficient Appliances

Energy Smart appliances are extremely beneficial to your home and wallet because they not only reduce your energy consumption, but also help you save money on your monthly bills.



Resource Conservation

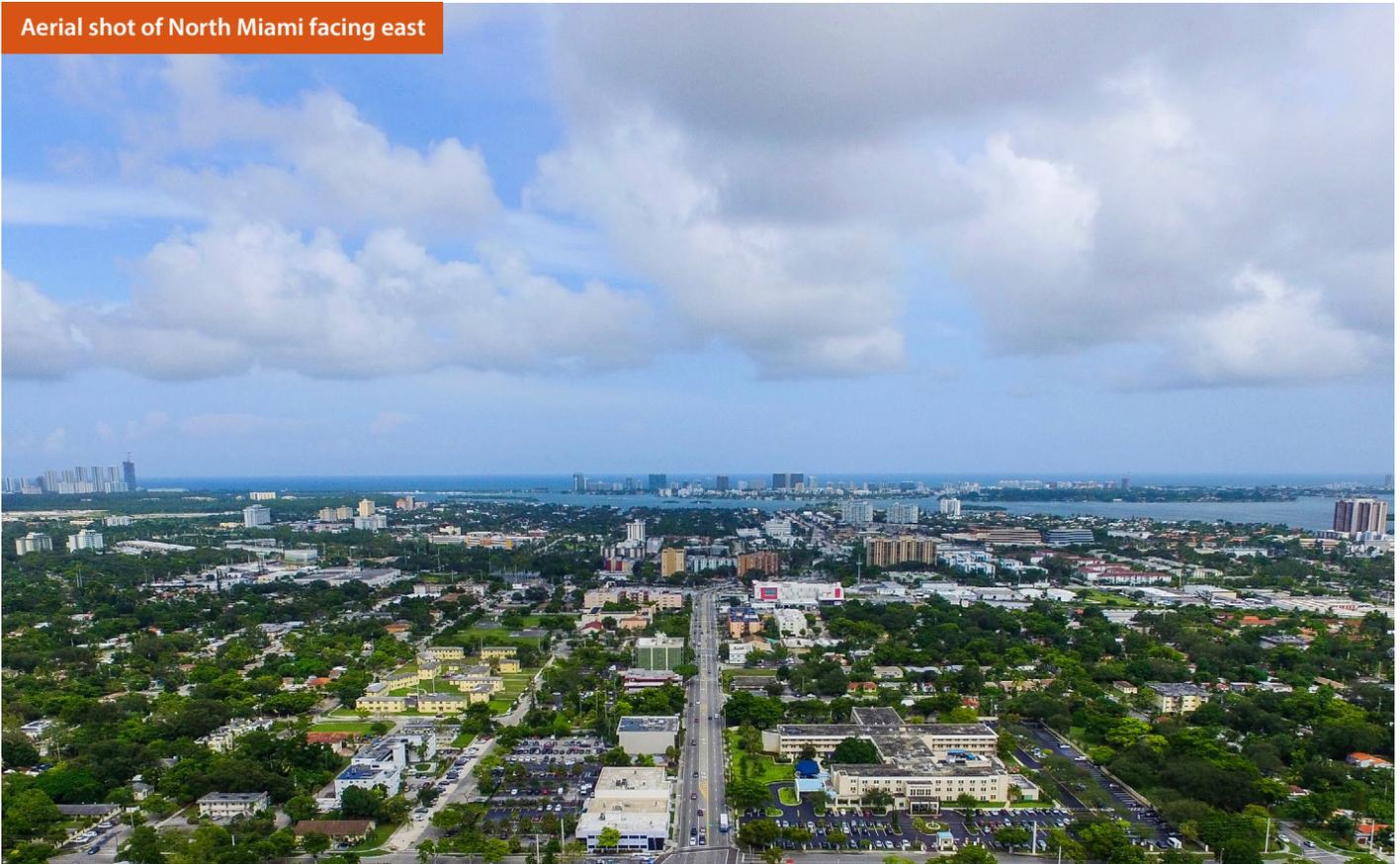
Resource conservation is one of the most important ways in which we can ensure that our natural resources last for generations to come.

Water conservation is crucial because water is the foundation of life and drinkable water is a finite resource not quickly replenished. Energy conservation is critical because every time you drive your car or cool your home, pollutants are being expelled into the air. To create energy, power plants burn fossil fuels and other sources of non-renewable energy that contribute to the warming of our planet. Essentially, the more you conserve energy, the less you contribute to climate change. Energy conservation enables you to reduce your energy use either by minimizing the time spent using electricity or by purchasing energy-efficient products. As our needs are rapidly

growing, the amount of energy required to power the demands of our population may result in environmental catastrophes if no precautionary actions take place. The hope lies within every individual making conscious choices about their consumption and keeping in mind that we share this planet's finite resources with other beings.

The National Audubon Society conducted a study on Compact Fluorescent Lightbulbs (CFLs) and found that if every household in the U.S. were to switch one bulb to CFL, they would **avoid the same amount of pollution produced by driving 12 million passenger vehicles for a year.**⁸

Aerial shot of North Miami facing east





Energy Conservation

Much of our daily activities include some sort of energy consumption. Energy can come in the form of non-renewable energy or renewable energy. Non-renewable energy has been the main source of creating energy and thus the largest polluter. This is done through the burning of fossil fuels, coal, and natural gas. These non-renewable sources of energy are unable to be replenished at a fast enough rate, as opposed to renewable energy. Renewable energy includes solar, geothermal, wind, water, and biomass.

Solar

Solar energy traps the sun’s rays in solar panels and transforms it into a viable renewable energy source throughout your home. Incorporating a solar panel into your home has several benefits that positively affect your home, wallet, and bills. Installing solar panels in your home offers three financial incentives: Florida Net Metering, Florida Property Tax Exclusion, and the Federal Solar Tax Credit. These impressive benefits should incentivize you to see the potential renewable energy has onto your life and the viable savings it could have on your economic stability.

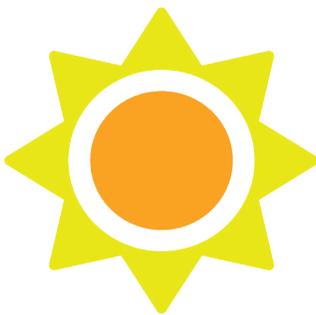
Terms

Non-renewable energy

Extracting energy from resources such as fossil fuels, coal, and natural gas that are not replenished as quickly as they are consumed.

Renewable energy

The ability to produce energy from resources such as solar, water, wind, and geothermal - all of which can be replenished in a human’s lifecycle.



Understanding Solar Power

Florida Net Metering

Gives homeowners the opportunity to sell any excess solar energy back to the grid.

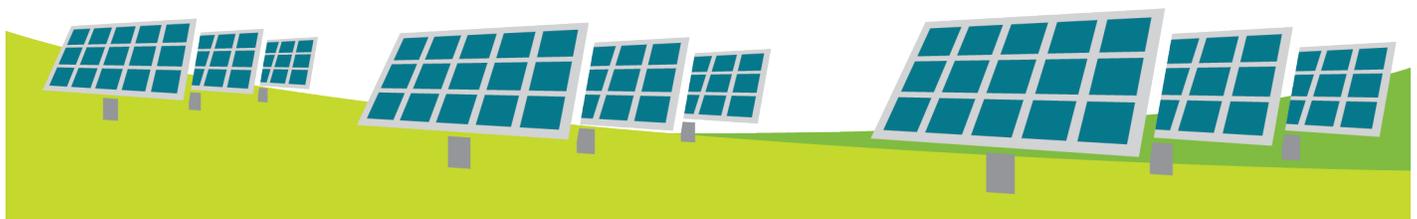
Florida’s Property Tax Exclusion

Your solar system will not result in any additional costs on tax day.

Federal Solar Tax Credit

Knocks off 26%* of the cost of your new solar energy system and applies that rebate as a credit on your income tax.

*The Federal Solar Tax Credit is set to expire 2022

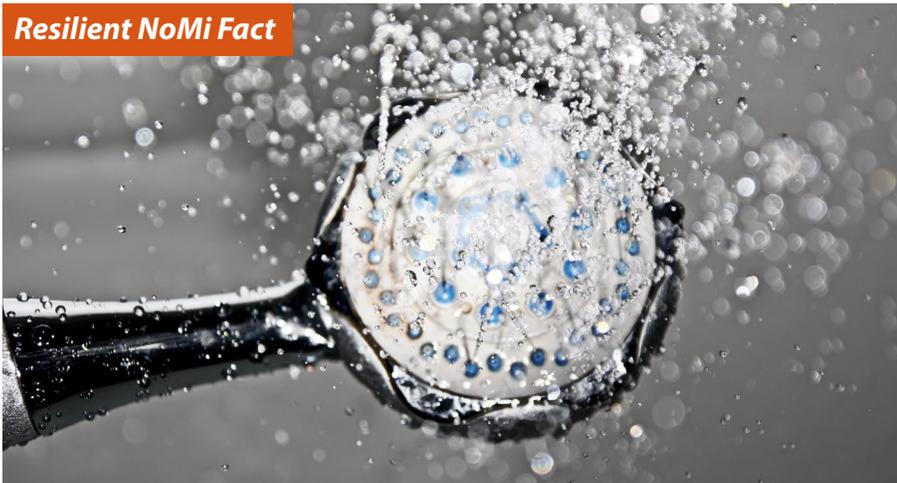




What has the City done?

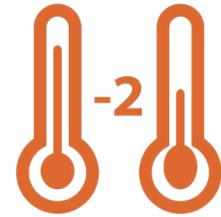
The City of North Miami created the Residential Green Rehab Program's initiative to aid business owners in helping their business become more eco-friendly and environmentally efficient. This matching grant program provides small businesses with seven employees or less up to \$5,000 to retrofit their operation with sustainable elements that will reduce energy costs and in turn greenhouse gas emissions. The grant funds the installation of efficient lighting fixtures and appliances, new insulation, doors, draft/light sealants for windows, and roofs using high albedo materials, and also provides options for small-scale solar energy fixtures.

Resilient NoMi Fact



The City of North Miami incentivizes its residents to become resource conscious by offering rebates and exchange programs. One program is the Commercial Restaurant Spray Valve Exchange, which provides restaurants and cafeterias with low-flow pre-rinse valves in exchange for old water wasting spray valves. The second is the Residential Showerhead Exchange Program, in which the city replaces your showerhead with a new high efficiency fixture that can cut your water use in half.

Resilient NoMi Challenge



Adjust your thermostat by 2° F (lower in the winter and higher in the summer) for a year and reduce your carbon emissions. That is equivalent to using 25.5 gallons of gasoline.⁹

Resilient NoMi Challenge



Maximize your use of natural light: use light colors on walls; keep drapes, shades, and blinds open to allow for light to come in; and keep your windows clean.



Water Conservation

Humans use water for a variety of reasons ranging from drinking water to doing laundry to watering plants. Being mindful of our water consumption and lessening our daily intake has tremendous benefits both economically and environmentally. Our drinkable water supply comes from the Biscayne Aquifer. This aquifer is a critical resource to South Florida and needs to be protected because it is not easily replenished. It is subject to pollutant and saltwater intrusion, and is not generated at a constant rate. Preserving what we already have is not only precautionary, but also essential. Reusing cooking water or collecting rainwater from a rain barrel are innovative ways to safeguard our water consumption.

Water Quality

The Biscayne aquifer runs 4,000 square miles throughout Southeastern Florida and is important to our survival because it supplies multiple communities with clean drinkable water. Connected to the Biscayne Aquifer, the Winson Water Plant directly provides residents of North Miami with clean and safe potable water. Notably, this Aquifer is subject to many disruptions ranging from saltwater intrusion, plastic pollution, and fertilizer run-off all of which find their way to our local waterway through runoff from impervious surfaces. Such issues drastically affect the Biscayne Aquifer's ability to provide safe drinkable water.

Terms

Algae blooms

The rapid boost of algae population which causes discolored pigment in the water and creates a harmful aquatic environment unsuitable to other marine life.

Aquifer

An underground area of porous rock where water can move freely.

Impervious

Areas where water cannot pass through or flow freely, such as asphalt.

Plastic pollution

The accumulation of plastic waste that ends up polluting the surrounding environment by making its way into streets, oceans, and more.

Runoff

When water and other particles move from land's surface to other areas such as bodies of water.



The City of North Miami was awarded "Best of the Best" Drinking Water Taste Test at the Florida Water Resources Conference in 2017 by the Florida Section American of the Water Works Association . Let's try to keep North Miami's drinking water a winner for years to come by joining in on the resilience journey!¹⁰ Help keep our City's drinking water a winner! Do not dispose of harmful items or materials down your drain. Check out page 24 for the full list.



Algae, Climate Change, and Drinking Water

All water is connected. One major issue the State of Florida faces is the increasing frequency of algae blooms due to many conditions including septic tanks, fertilizer, urban runoff, and agricultural runoff. Climate change exacerbates environmental issues by creating more favorable conditions that allow algae blooms and red tide to thrive. The nutrients and pollutants that affect our bodies of water, can also harm our supply of clean drinking water by seeping into our aquifer. In addition, the effects of climate change are further seen when sargassum, a seaweed species, multiply in population and harm surrounding marine life. These seaweed events kill off wildlife such as coral, fish, turtles, and more.

Resilient NoMi Challenge



Use a mug at work twice a day instead of disposable cups for a year. That is equivalent to driving 113 miles in car.¹¹



Wash one less load of laundry a week for a year. That is equivalent to sending out 1.6 million text messages.¹²

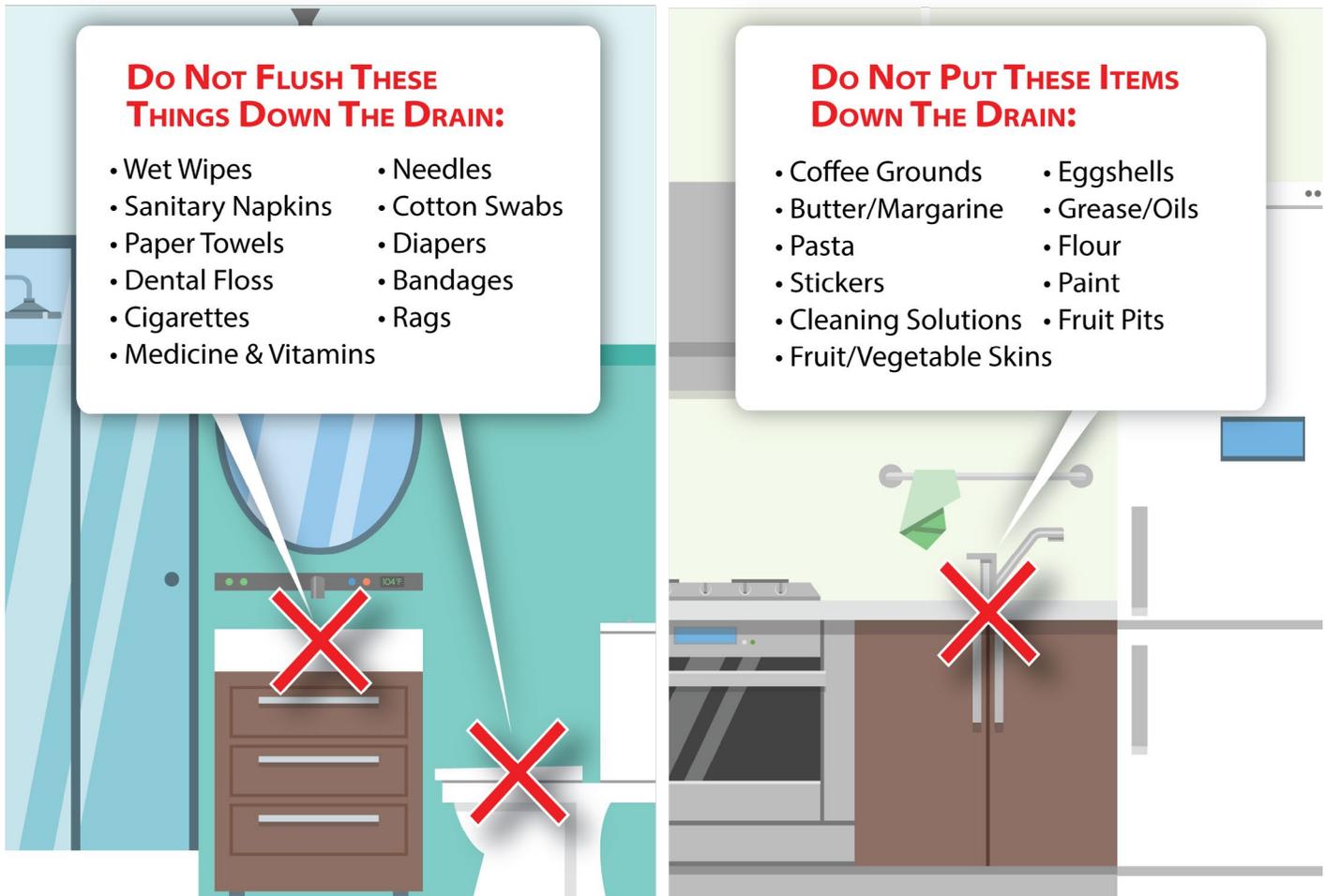
Did you know that all drains lead to the ocean? Help keep your waterways clean and do not put these things down the drain!

Do NOT FLUSH THESE THINGS DOWN THE DRAIN:

- Wet Wipes
- Sanitary Napkins
- Paper Towels
- Dental Floss
- Cigarettes
- Medicine & Vitamins
- Needles
- Cotton Swabs
- Diapers
- Bandages
- Rags

Do NOT PUT THESE ITEMS DOWN THE DRAIN:

- Coffee Grounds
- Butter/Margarine
- Pasta
- Stickers
- Cleaning Solutions
- Fruit/Vegetable Skins
- Eggshells
- Grease/Oils
- Flour
- Paint
- Fruit Pits

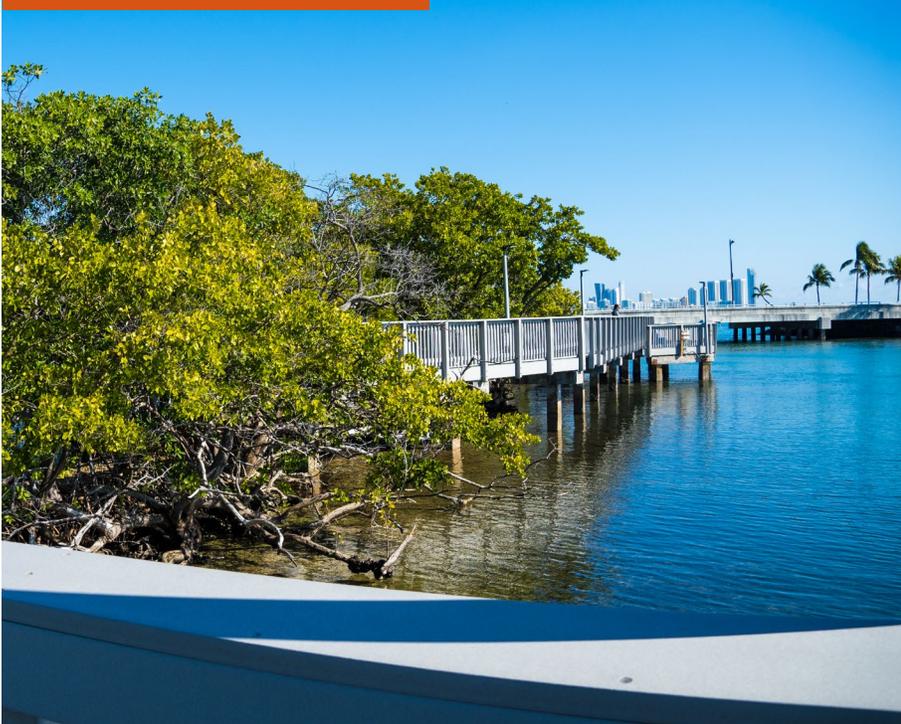




Parks and Open Space Conservation

The City of North Miami has multiple parks and open spaces where residents and tourists alike can enjoy the pristine scenery, unique ecosystem, and exciting activities. Some noteworthy locations to visit in the City include North Bayshore William Lehman Park, Arch Creek East Environmental Preserve, Oleta River State Park, and Enchanted Forest Elaine Gordon Park. You can participate in activities such as swimming or biking, all the while enjoying Florida’s native landscapes. Getting involved in your City means helping maintain its beauty and sharing these experiences with other members of the community. **A great way to get involved is to volunteer your time by participating in waterway or park clean ups, encouraging restaurants to eliminate the use of styrofoam and single-use plastics, or by planting native trees.**

North Bayshore William Lehman Park



Resilient NoMi Challenge



Challenge yourself and others in your community to visit at least three North Miami parks and explore what these ecosystems have to offer. See the full list on Page 47.



Who to Contact

For questions regarding your water quality, please contact the City of North Miami’s **Department of Public Works**

For more information about parks in the City of North Miami, please contact the **Parks and Recreation Department**



In My City

North Bayshore William Lehman Park
12220 North Bayshore Drive
North Miami, FL 33181

Arch Creek East Environmental Preserve
2699 NE 135th Street
North Miami, FL 33181

Oleta River State Park
3200 NE 151st Street
North Miami, FL 33181

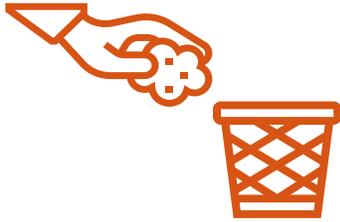
Enchanted Forest Elaine Gordon Park
1725 NE 135th Street
North Miami, FL 33181

Ben Franklin Park
13400 NW 12th Avenue
North Miami, FL 33168

Claude Pepper Park
1255 NW 135th Street
North Miami, FL 33168



Resilient NoMi Challenge



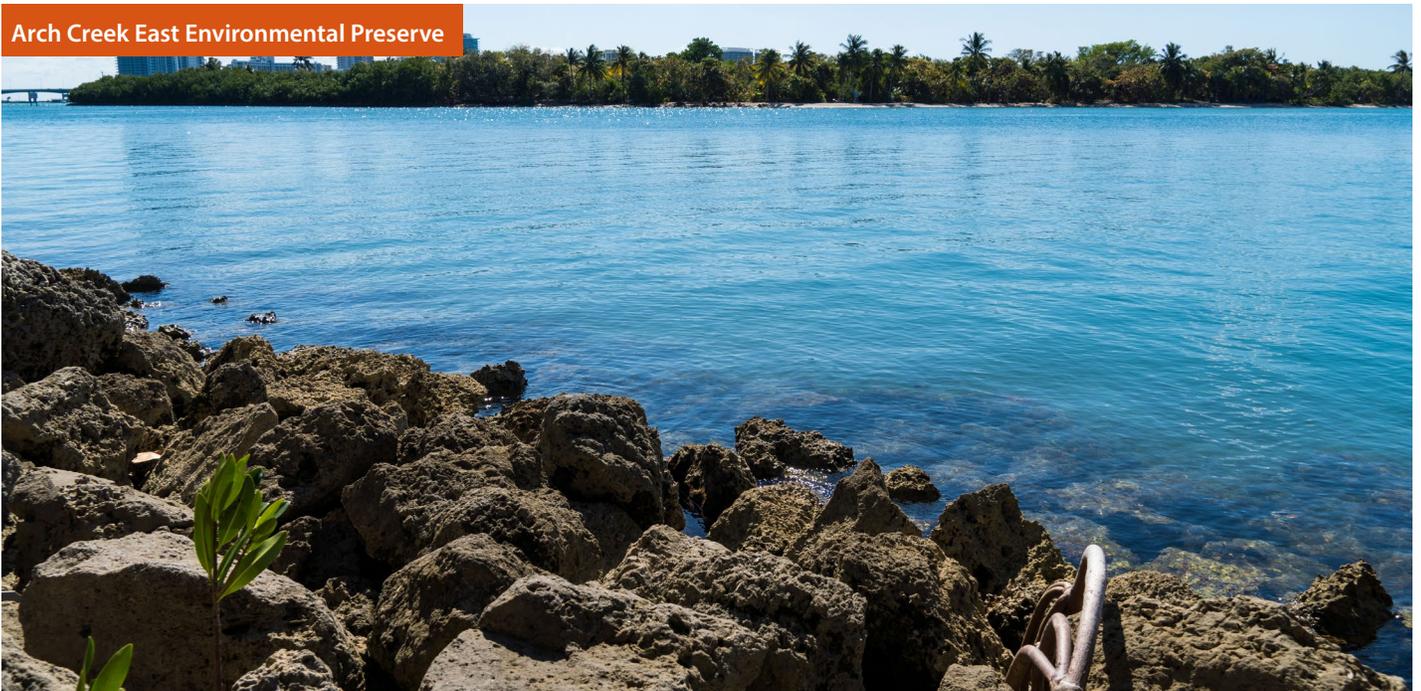
When it rains, trash and debris normally make their way to our storm drains, further clogging and polluting our waterways.

If you spot trash or debris while experiencing our City, challenge yourself to pick it up and throw it away. If you are unable to pick it up, report it to the City's Street Division as an added measure to combat waste pollution.

Enchanted Forest Elaine Gordon Park



Arch Creek East Environmental Preserve





Reduce, Repurpose, and then Recycle

Did you know that every year Americans create an average of 254 million tons of trash? 167 million of it ends up in landfills and incinerators. One of the biggest contributors to our planet's declining health is the amount of trash we produce. There is a lot of confusion when it comes to what can be recycled, what can be reused, and what can completely be thrown away. People regularly forget about the trash they throw away. Out of sight, out of mind is the traditional mindset when it comes to waste. However, it is important to keep in mind that our accumulation of trash may sometimes find its way to our streets, bodies of water, and landfills and negatively affect local ecosystems.

You can reduce the amount of trash thrown away while protecting the environment and conserving natural resources by following the three R rule: reduce, repurpose, and then recycle.

Resilient NoMi Challenge

Challenge your favorite local restaurant to not use styrofoam and single-use plastics such as straws and utensils. You can speak with them directly or write reviews encouraging a plastic free environment.



Follow the 3 Rs:

Reduce, Repurpose, and Recycle

REDUCE

The first step to fulfilling the three Rs is reducing the amount of trash you create. When you see a product you want to buy or replace, it is worth asking yourself two questions: Do I really need that? And is it necessary to my life? Before spending money on an item you believe you need, think about how saving this money has long-term benefits as opposed to short-term satisfaction.

REPURPOSE

Once you have reduced your trash consumption, you can then find ways to repurpose and convert old or discarded materials into something useful and often beautiful. Instead of throwing out old jars, boxes, or anything of that sort, try and find a way you can give that item another purpose in life. After these two steps, you can then see what you are actually able to recycle.

RECYCLE

Three major takeaways need to be considered before putting something into the recycle bin: wash and clean all recyclable materials before putting them into the bin only recycle all empty bottles, cans, and paper; and lastly keep food, liquids, and plastic bags out of your recycling.

Resilient NoMi Fact



The City of North Miami hosts a Green Awareness Fair as an event promoting sustainable vendors as well as encouraging proper waste disposal of both electronic devices and paint. Attending this event supports the North Miami community to become more educated on sustainable measures and also provides enriching exposure to local members of the community helping to build a more sustainable North Miami.



What has the City done?

The City of North Miami has partnered with Waste Pro as a sanitation service for residents. Through this partnership with WastePro, residents can now greatly benefit from potentially reduced quarterly utility bill fees. The City has also partnered with GoGreen EcoBins for cost-free and aesthetically pleasing curbside recycling bins and associated disposal services, to promote a "Clean Streets Initiative" program for recycling and green awareness. Ten new GoGreen recycling bins will be installed along Biscayne Boulevard and NE 125th Street to supplement existing waste receptacles and provide attractive and visible new recycling receptacles.

Volunteerism

Volunteering your time and resources to the environment can be a fun and engaging way to make your community more resilient. Residents can take initiative by picking up litter in their neighborhood, hosting clean up events at local waterways, or donating their unwanted products to local thrift stores. Alongside residents, the City is also taking added measures to incorporate volunteering into their resiliency efforts with the creation of the Clean City Task Force. This team is an internal staff committee that works to ensure that North Miami's streets and buildings are kept clean and beautiful. In addition, the Clean City Task Force now leads clean ups, repairs/paints homes, and funds sustainability initiatives. **To learn more about North Miami's volunteer programs and initiatives, go to Page 47.**



Who to Contact

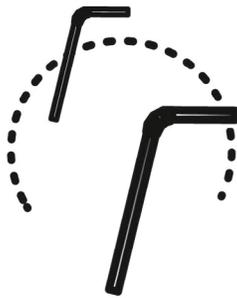
For questions regarding sanitation or recycling concerns, please contact the City of North Miami **Sanitation Manager**

NoMi Community Clean Up



Resilient NoMi Challenge

Reduce Your Waste: Use This Versus That



The average person uses 1.6 straws per day,
Using a metal straw for a year saves 584 plastic straws.



The average person drinks 2 bottles of water per day,
Using a reusable bottle for a year saves 740 water filled plastic bottles.



The average American uses one plastic bag per day,
Using a reusable bag for a year saves 365 plastic bags.



Air Quality and Transportation

Air Quality

The quality of the air we breathe has a direct impact on our health. Living in areas with poor air quality can be detrimental to our health, the quality of our food, and our surrounding environment. **One of the major contributors to poor air quality is the combustion of engines that expel fumes from cars and buses when driving.** Poor air quality worsens in locations with heavily condensed traffic jams. Other activities that reduce air quality include smoking cigarettes, the burning of fossil fuels, wood and crop waste, and using harmful household products.

Indoor Air Quality

When we think of air quality, normally we picture the air we breathe outside. Yet, it is important to take into consideration your home's indoor air quality. Many contributing factors decrease the level of air quality in your home and impact your well-being. Some factors include heavily scented air fresheners, pet residue, and dust. Opening your windows and letting fresh air in as well as cleaning with eco-friendly products are feasible ways to keep your indoor air quality at a safe and enjoyable rate. In addition, changing your AC filters aids in your indoor air quality. For example, the average home without pets should aim to change their filter every 90 days. If your household has pets or individuals with allergies, aim at changing your filter every 45-60 days.

Outdoor Air Quality

Numerous factors affect the quality of the air we breathe. The combustion of fossil fuels, agricultural and industrial processes, and waste incineration all contribute to poor air quality. The City of North Miami is fortunate to have consistently good air quality because of its location. North Miami is not located near any major combustion plant or any agricultural farm that could emit harmful pollutants. Although, the City does have some traffic congestion, there is not a substantial amount high enough that would otherwise cause extremely poor air quality.



Interactive art mural with messaging at 725 NE 125th Street



In North Miami, the average commute time is 30 minutes. In those 30 minutes, 72% drove alone, 10% took public transit, and 9% carpooled.¹³



View of 123rd Street facing west towards Biscayne Boulevard



Transportation

Humans are constantly moving. Whether it is driving a car, bicycling, or jogging, we are always trying to reach our final destination. Many modes of transportation have substantial carbon dioxide emissions depending upon the model of your car, the year it was made, and how well the gas mileage is pertaining to your vehicle. It is understandable that not everyone can go out and buy a new, more energy efficient car. Yet, being knowledgeable about your vehicle and your individual impact is a significant step towards resilience.

Your Vehicle

The production of automobiles creates an enormous carbon footprint because of the materials needed to produce it. Materials such as steel, plastic, and glass all require tremendous amounts of energy to be developed. This issue does not go away when the car itself is ready to be driven. Many engines and other car parts also expel harmful pollutants into the air. It is important to be aware of the type of car you are buying and its relative environmental impact.

Your Commute

In North Miami, the average commute time is 30 minutes. In those 30 minutes, 72% drove alone, 10% took public transit, and 9% carpooled. These statistics reflect an opportunity for residents of North Miami to improve their resilience and try to minimize their individual driving. Communicating and coordinating with friends, neighbors, and family members on potentially carpooling, can be a fun and rewarding way for you and your loved ones to reduce your carbon footprint and enjoy more time together.

Know The Different Vehicle Types

Choosing a vehicle comes with many decisions to be made. Regardless of the aesthetics of a car, understanding its environmental impact is salient. On a global scale, much of the carbon dioxide emissions expelled into our atmosphere comes from cars and other vehicles. These vehicles pollute the air and thus cause the warming of our planet as it traps extra heat. It is crucial to take into consideration the environmental impact your vehicle has, which means focusing on its: power source, engine type, and range.

Power Source - The energy type the vehicle uses | **Engine Type** - The motor that converts the energy
Vehicle Range - The distance the car travel with energy | **Rebates** - Federal tax credit

	Gasoline Powered Car	Hybrid and Plug In Hybrid Car	Electric Car
Power Source	Gasoline	Electric & Gasoline	Electric
Engine Type	Combustion Engine	Dual Compulsion System	Electric w/ Battery Storage
Vehicle Range	300 - 400 Mi.	10 - 50 Mi. Electric & 300+ Mi. Gas	150 - 310+ Mi.
Rebates	None	Yes	Yes





What has the City done?

The City of North Miami is soon completing its first electric vehicle charging station in a series of future installations for public use. This electric charging machine will have two ports to provide charging for two parking spaces. It will be located in the downtown district where the North Miami Museum of Contemporary Art is: 700 NE 124th Street.



Resilient NoMi Fact

Swales are a part of the City's stormwater system and play a key role in reducing flooding. When residents park on these swales, the weight of the car itself disrupts the soil underneath and causes the soil to become compact. Compacted soil prevents water from properly draining, which leads to more flooding. Bioswales are a form of bioretention that can partially treat water quality and are used as an alternative to stormwater piping. Incorporating bioswales in your community is beneficial because they are both functional and aesthetically pleasing. Healthy swales mean a healthy environment and support tax savings from the reduction in road repairs.



Who to Contact

For questions regarding public transit, transportation projects, or road maintenance, please contact the City of North Miami Department of **Public Works and select Transportation**

For information on the NoMi Express Free Bus schedule and routes, contact the City's **Transportation Division**



In My City

**Electric Vehicle Charging Port
MOCA Plaza**
700 NE 124th Street
North Miami, FL 33161

Resilient NoMi Challenge

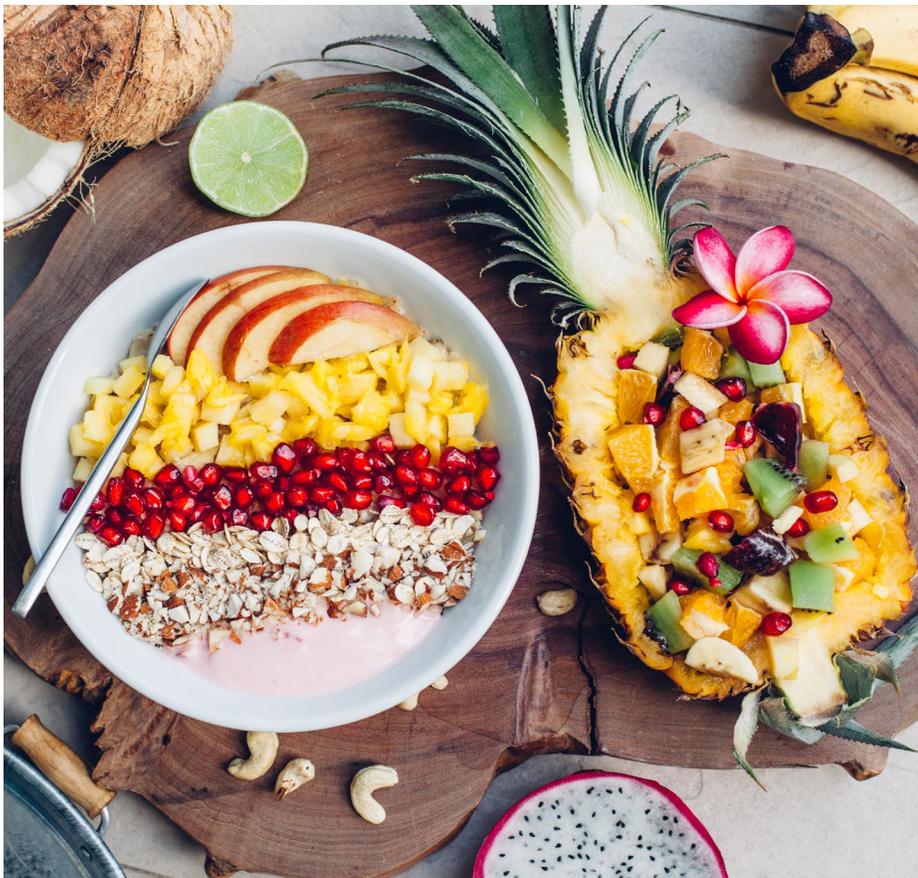


Challenge yourself and others to minimize your personal vehicle use and bike to work or take public transport, like the NoMi Express Free Bus Service to get around the city. By adopting this bicycle or public transit challenge, you are not only reducing your own carbon footprint but are also acting as a role model for others to follow suit and inspire more sustainable actions.



Mindful Eating

Mindful eating means that you are conscious about where your food came from, how it was prepared, and the impacts that food has on your environment. Taking into consideration the enormous amounts of energy, labor, resources, and chemicals it takes to feed our growing planet, it is important to be knowledgeable about how we can lessen unsustainable eating. Shopping for products that are both local and in season, reducing your red meat intake, and increasing your plant-based diet are just a few ways individuals can make smart choices and embrace mindful eating. In the United States alone, agriculture accounts for 10-15% of greenhouse emissions. Carbon dioxide emissions have been at the forefront of global warming concern. Yet, nitrous oxide and methane are two gases emitted by cattle and fertilizers that are more potent than carbon dioxide and thus trap more heat in the atmosphere. To combat these issues, there are several courses of action, all of which are attainable and feasible, that can be accomplished daily on an individual level.



Terms

Composting

Composting is using food waste and storing it in a container where the organic matter can decompose over time and be used as soil fertilizer.

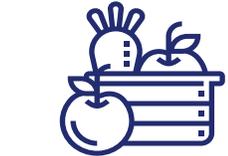
Meatless Monday

Devoting every Monday to cutting meat consumption and instead eating more plant-based foods.

Plant-based

Foods that are derived from plants, including vegetables, fruits, whole grains and more.

Resilient NoMi Challenge



One of the most significant ways to help reduce your carbon footprint would be to start a trend in your household, school, or office and participate in Meatless Mondays. Eating a plant-based meal once a week lessens the burden on vital resources such as water and land. If you want to kick it up a notch, go plant-based all year and reduce your carbon emissions by 1.8 metric tons. That is equivalent to 76 trash bags full of recycled waste instead of going to the landfill.¹⁴



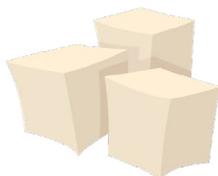
Plant-Based

There are countless delicious plant-based dishes that you can make at home that are not only fast and filling, but also greatly benefit your overall health. Reducing your meat intake and incorporating darker leafy greens, beans, whole grains, and vegetables into your lifestyle even once a week has a profound effect on your body, not just on the planet. Many Americans regularly have an abundant amount of protein in their system as opposed to other key nutrients such as fiber, potassium, and magnesium found in plant-based diets. **By devoting one day a week to solely plant-based meals, you are increasing your vital nutrient intake, lowering your risk of heart disease, and increasing the overall quality of your immune system. Eating more plant-based foods is one of the most considerable ways to reduce your carbon footprint and live a healthy life.**

Resilient NoMi Challenge

Try These Plant-Based Food Substitutes

Tofu



Instead of crispy chicken nuggets

Try crispy tofu

Instead of scrambled eggs

Try a tofu scramble

Avocado



Instead of mayonnaise

Try avocado spread

Instead of chocolate mousse

Try an avocado mouse

Milk



Instead of dairy milk

Try soy, nut, rice, coconut, or oat milk

Almonds



Instead of ricotta

Try an almond cheese

Instead of cream cheese

Try an almond cream cheese

Beans



Instead of beef burger

Try a black bean burger

Instead of ground meat

Try lentils

Mushrooms



Instead of pork bacon

Try shiitake mushroom bacon

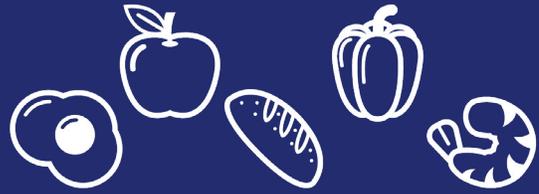
Instead of beef or chicken

Try a portobello mushroom



Food Waste

If food loss and waste were its own country, it would be the world's third-largest emitter surpassed only by China and the United States.¹⁵ Such a surprising and saddening statistic reflects how much room for improvement there is relative to our food disposal. Constantly replenishing your refrigerator, throwing out food based on expiration labels, and not repurposing actual food waste, are common mistakes many individuals make. Food is the source of life and should be utilized in every aspect of its life cycle. **One pivotal way to reduce your food waste is to not shop while hungry.**



The food we waste contributes to 4.4 gigatons of carbon dioxide expelled into the atmosphere each year - roughly 8 percent of total anthropogenic greenhouse gas emissions.¹⁶

Resilient NoMi Challenge



Before You Throw It Away...

Freeze it before it spoils

Try canning or pickling it

Turn it into a stock or broth

Eat the skin of fruits and veggies or put it in your water

Donate it to food banks or local shelter

Compost it



What has the City done?

The City of North Miami has worked with the Age-Friendly Initiative Mini-Grant and developed a community garden located at Clyde W. Judson Jr. Community Center. This garden will provide key nutrients to citizens, including fruits, vegetables, and herbs, as well as become a green space for educational workshops about cooking, healthy eating alternatives, and gardening skills.

Urban Farming

Did you know that the travel required for food to get from its point of harvest to the market is traditionally over 2,000 miles? To combat our food's wasteful supply chain, try incorporating urban farming into your household. Interacting with nature and connecting with plants on a deeper level has a profound effect on an individual's well-being. The City encourages its residents to try to grow their own food so you can save money, know where your food is coming from, and nurture a deeper relationship with the City's unique environment. An easy way to pursue

urban farming can be to incorporate hydroponics into your household. Hydroponics is a way of gardening that uses water that is rich with nutrients as opposed to soil. A great way to grow your own food and conserve water at the same time would be to repurpose your pasta water and use that as the foundation for growth in your hydroponic garden.



In My City

Clyde W. Judson Jr. Community Center

12100 NW 16th Avenue
North Miami, FL 33167

Feeding South Florida Food Pantry Sunkist Grove Community Center

12500 NW 13th Avenue
North Miami, FL 33167

North Miami Earth Day planting event





Conscious Consumer

Product Purchasing

Consumers are becoming more aware of climate change and as a result are also becoming increasingly concerned about the state of our planet. Despite this, many consumers remain unaware of the detrimental effects of their purchasing habits. From buying and shipping goods overseas to purchasing products with excessive packaging, certain habits can be replaced with consciously eco-friendly actions. Various factors, such as a lack of availability and affordability, can be potential deterrents for consumers who are focused on forming sustainable actions. One way businesses and individuals can seek to become more sustainable is to **voluntarily not use single-use plastics or styrofoam**. By adopting this practice, individuals and businesses become conscious about their consumption and in turn encourage members of their community to follow suit.

Identifying Green Products - Label Reading

Smart green consumerism can be an empowering way to save money and interact with others in your community. Sharing knowledge with friends, family, and neighbors about different products enables a sustainable movement within our City and thus benefits everyone as a whole. Many products you buy may have been produced unsustainably or contain ingredients that are unsafe to human health. Identifying green products when purchasing allows for you to use products that are cleaner, greener, and safer for your home and personal health.

Terms

Electronic waste

Energy-efficient products that are both environmentally and wallet friendly.

Label reading

Actively reading product labels and being aware of their benefits and drawbacks.

Resilient NoMi Challenge



Challenge yourself and others in your community by supporting and buying from local shops such as thrift stores or farmers markets. When you intentionally choose to shop second-hand clothing or buy goods from local farms, you are contributing to your local economy and giving back to the small businesses that make up the foundation of our City.



Mobius Loop

Internationally recognized symbol that the item can be recycled; however it will depend on the recycling facilities in the given area



Energy Star

An EPA program that provides information on the energy consumption of products and devices using different standardized methods.



Watersense

An EPA program designed to encourage water efficiency in the United States through the use of a special label on consumer products.



Fair Trade

Help consumers support products that come from farms that have been certified to provide fair wages and safe working conditions (forced child labor is prohibited).



USDA Organic

A program by the USDA in which food or agriculture is grown without synthetic pesticides, synthetic fertilizers, or genetically modified organisms.



Forest Stewardship Council

Helps consumers identify, purchase and use wood, paper and other forest products made with materials from well-managed forests and/or recycled sources.



Rainforest Alliance

Indicates that a farm, forest, or tourism enterprise has been audited to meet standards that require environmental, social, and economic sustainability.



Safer Choice

An EPA program that helps consumers, businesses, and purchasers find products that perform and contain ingredients that are safer for human health and the environment.



Digital

Cell phones, tablets, laptops, gaming devices, the list goes on. Technology has become an integrated part of our day to day life. Just as quickly as we want the latest trend in fashion, we also want the newest gadget. It is apparent that as a society, we are constantly wanting to replace our products and buy the shinier, newer version of it. But, before doing so, it is important to ask yourself - do I really need that new device? If your current device functions as it should, you are engaging in conscious consumerism if you think before you buy. By holding on to that device for a longer period of time or by potentially swapping it back for the newer version, there are ways to minimize your electronic waste disposal. Notably, solid electronic waste can be hazardous to the environment if not disposed of properly. The City of North Miami holds two to three events a year to have E-Waste and shredding trucks come out for the residents to properly dispose of these items.

Thrifting

The fashion industry has become one of the most unsustainable industries globally. It is critical for consumers to be cognizant of the rate in which they are buying, using, and throwing away clothing items. Buying higher quality products at a lesser rate as opposed to consistently buying lower quality products and having to replace them is smart consumerism. Thrifting is a fun and wallet-friendly way of buying products that fit your lifestyle for a discounted rate and also helps lengthen the life cycles of these unique items.

🌿 **Resilient NoMi Challenge** 🌿

Learn To Shop Consciously

Look for coconut oil based items instead of palm oil, which can also be disguised as vegetable oil

Use beeswax eco wrap instead of aluminum foil or plastic wrap

Replace disposable plastic bags with silicone or cotton reusable bags

Avoid products with Volatile Organic Compounds (VOCs) and labels reading: benzene, ethylene glycol, formaldehyde, methylene chloride, tetrachloroethylene, toluene, xylene, and 1,3-butadiene

If available, choose items that have little or no packaging





Eco-Friendly Apps and Websites

In our modern digital world, utilizing mobile apps can be an instantaneous way to gain information and help you flourish in your resilience journey. There are countless apps that provide tips and tricks to help you not only learn easy ways to be more sustainable, but also stay on track as you progress.



Upcycle That

www.upcyclethat.com

Find fun and creative ideas for how to upcycle your old products and repurpose them into something beautiful.



Oroeco

Available for Android

Be a climate hero! See which choices really matter, save money, and earn rewards as you lower your carbon footprint.



Think Dirty

Available in iOS and Android

Learn about the potentially toxic ingredients in your cosmetics and personal care products.



Good Guide

Available in iOS and Android
www.goodguide.com

Find safe, healthy, green, and ethical products with product reviews based on scientific research and ratings.



ReGAIN

Available in iOS and Android

Turn your unwanted clothes into discount coupons.



NOAA Weather Radar Live

Available in iOS and Android

Provides you with real-time information on weather related events in your area ranging from hurricanes to king tides.
Or visit mobile.weather.gov and add to your smartphone's home screen.



Dropcountr

Available in iOS and Android

Connects people and their water utilities on the mobile devices they use everyday.



AirVisual: Air Quality Forecast

Available in iOS and Android

Provides you real-time information on the air quality in your area.

Resilient NoMi Challenge



Reduce your smartphone usage by a hour a day and read a book, spend time outside or watch your favorite show instead. One hour of phone time is equivalent to using and throwing away 139,978 paper towels. ¹⁷



Sustainable Living

Living sustainably means living within your means without compromising the needs of future generations. Conserving our natural resources, improving our personal habits, and being mindful of our actions will ensure that we keep the City of North Miami healthy and beautiful. Resonating with everyone on the utter importance of sustainable living is one of our biggest challenges we face as a species. Building a resilient and sustainable lifestyle means you have to start somewhere. Incorporating sustainability in your decision making when you purchase a home or a household item will reinforce your home's ability to withstand changing climatic conditions.

Home

Both small and significant measures can be taken throughout your home to ensure that sustainable living becomes easy and effortless. Sustainable living does not have to be costly. In fact, by incorporating cleaner energy sources and appliances into your home, you have the ability to save on your monthly bills and at the same time know that you are making conscious decisions with the environment in mind. Building a resilient home does not only mean focusing on the inside. Embracing your home's outdoor resilience means adding native landscaping that helps combat flood issues and promotes a safe haven for local species to thrive.

Smart Energy Home



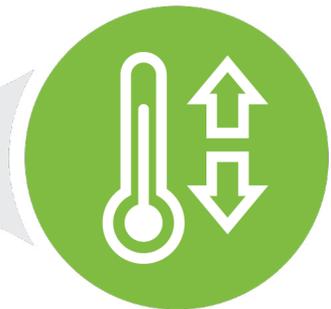
Green Appliances

Buying energy efficient products and incorporating them into your home can be wallet friendly because of the potential savings from these green appliances, as opposed to high emitting greenhouse gas appliances.



Lighting (LED)

Similar to incorporating green appliances into your home, switching from the unsustainable incandescent lightbulb to a LED bulb is an easy, energy-efficient, and wallet-friendly way to improve your home's resilience. In addition, turning off your lights when not in use also greatly benefits both your wallet and the environment.



Thermostat

Much of our home's energy use comes from your heating and cooling system. By implementing a programmable thermostat into your home, you can set different temperatures for different times. This is especially helpful if you are not home during the day, which saves enormous amounts of energy and money.



Resilient Landscaping

Landscaping is a highly effective way of enhancing the quality of your home in terms of reducing your carbon footprint and at the same time beautifying your surroundings. Notably, resilient landscaping can be monumental in controlling stormwater runoff, helping lower your heat and AC bills, and promoting the abundance of pollinators.

Native Florida Trees

Developed land is not an ideal space for supporting life and natural resilient infrastructure. Homeowners have the ability to build a space where abundant life can thrive and help in their resilience journey. When land is cleared and developed, impervious infrastructures are commonly put in place, which does not allow water to move throughout. For example, when water falls on these surfaces, instead of moving freely underground, the water runs off to down-slope areas with the help of gravity and

makes its way into a storm drain or other area where flooding and erosion may occur. By planting native trees, your home is moderately protected by reducing the risks of flooding and runoff. **Native trees not only promote pollinators and benefit native animal species, but also preserve Florida's natural resources.**

Resilient NoMi Challenge



A fun and engaging way to help build more sustainable and resilient habits is to start your own garden. With Florida's beautiful weather, getting outside and interacting with nature allows you to connect and care for your surroundings. Challenge yourself to build your own garden and make your own food or plant native-to- Florida Trees that help shade your home.

The Benefits of Trees

If placed in the right location, a tree can reduce your air-conditioning costs by providing shade

They reduce flooding by absorbing excess rainwater

Trees provide a natural habitat for wildlife and insects

If you plant a fruit tree, you can have fresh locally grown food right on your property



They help remove carbon dioxide from the air, reducing the impact of climate change, thus also improving air quality

Trees add crucial shading and help regulate the climate by minimizing the effects of rain, wind, and sun

A tree can help improve your home's appearance and potentially increase its value

Check out the City of North Miami adopt a tree program and help us plant 300 trees!



Who to Contact

To request services for landscaping or tree removal, please contact the City of North Miami's **Community Planning & Development Department**



In My City

Community Planning & Development
12400 NE 8th Avenue
North Miami, FL 33167



The Monarch butterfly population has massively decreased for the past couple of decades. These pollinators are crucial to our survival because they contribute to the health of our planet and directly help pollinate the crops we grow for food. By planting our native Butterfly Milkweed, also known as *Asclepias tuberosa*, you can support the growth of the Monarch butterfly population. Before buying this plant, make sure to ask your salesperson to ensure that the plant does not have pesticides.

Retention Ponds and Berms

Retention ponds are areas designed to hold water, especially during a rain event. They are an important part of our stormwater system. Berms are elevated land designed to hold water back during a storm, either caused by rainfall or storm surge. Retention ponds and berms are part of the menu of natural solutions to consider when improving the resilience of a property or community.

What has the City done?

The City, alongside Miami-Dade County, is determined to build a more resilient NoMi by adopting the Neat Streets program, which funds planting street trees. Moreover, the City also works with several organizations, including Keep North Miami Beautiful, Adopt a Road, and Sponsor a Road - all of which are actively working towards the collective goal of keeping our walkways and roads clean and our City beautiful.

Habitat Protection

Burrowing Owls are native to Florida and are classified as a State Threatened Species by the Florida Fish and Wildlife Conservation Commission. These pint-sized birds inhabit open, treeless areas such as golf courses, pastures, and vacant lots. Their biggest threat is habitat loss due to development and increasing flooding events. Protecting these native creatures and their habitat is important because they are not only our little fluffy friends, but also a representation of our local community.



Charge for the Future

The purpose of the NoMi Guide to Resilience and Sustainability is to promote, educate, and enhance our citizens' ability to live more sustainably and to create a long-lasting resilient community. This Guide provides detailed information on sustainable practices you can implement in your daily life as well as yielding the environmental, economic, and social benefits related to both resiliency and sustainability. Sustainability can be a broad topic and many citizens do not know where to start. The NoMi Resilience and Sustainability Guide is an easy-to-follow and reliable source of information that citizens can rely on for applicable measures to reduce their carbon footprint, as well as enhance their sustainable and resilient lifestyles on a daily basis.



Children attending an Arbor Day event at Enchanted Forest Elaine Gordon Park



Key City Contacts



Resilience

Page 17

For questions regarding stormwater or septic issues, please contact the City of North Miami's **Stormwater Superintendent**



Resource Conservation

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For questions regarding your water quality, please contact the City of North Miami's **Department of Public Works**

For more information about parks in the City of North Miami, please contact the **Parks and Recreation Department**



Reduce, Repurpose, and then Recycle

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For questions regarding sanitation or recycling concerns, please contact the City of **North Miami Sanitation Manager**



Air Quality and Transportation

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For questions regarding public transit, transportation projects, or road maintenance, please contact the City of North Miami Department of **Public Works and select Transportation**

For information on the NoMi Express Free Bus schedule and routes, contact the **City's Transportation Division**



Sustainable Living

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To request services for landscaping or tree removal, please contact the City of North Miami's **Community Planning & Development Department**

For the latest news and information, please visit the City of North Miami's website and don't forget to follow us on social media.

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Resilient NoMi Challenges

Check off the challenges that you have completed



Resilience

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Being knowledgeable about your insurance deductibles means you are prepared for unforeseen circumstances that may occur in the future. Challenge yourself to learn about your insurance deductibles and work to ensure you have the deductible saved up in the event you have to use your insurance.

Resource Conservation

Page 22

Adjust your thermostat by 2° F (lower in the winter and higher in the summer) for a year and reduce your carbon emissions. That is equivalent to using 25.5 gallons of gasoline.

Maximize your use of natural light: use light colors on walls; keep drapes, shades, and blinds open to allow for light to come in; and keep your windows clean.

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Use a mug at work twice a day instead of disposable cups for a year. That is equivalent to driving 113 miles in car.

Wash one less load of laundry a week for a year. That is equivalent to sending out 1.6 million text messages.

Page 25

Challenge yourself and others in your community to visit at least three North Miami parks and explore what these ecosystems have to offer.

Page 26

When it rains, trash and debris normally make their way to our storm drains, further clogging and polluting our waterways. If you spot trash or debris while experiencing our City, challenge yourself to pick it up and throw it away. If you are unable to pick it up, report it to the City's Street Division as an added measure to combat waste pollution.

Reduce, Repurpose, and Recycle

Page 27

Challenge your favorite local restaurant to not use styrofoam and single-use plastics such as straws and utensils. You can speak with them directly or write reviews encouraging a plastic free environment.



Air Quality and Transportation

Page 32



Challenge yourself and others to minimize personal vehicle use and bike to work or take public transport, like the NoMi Express Free Bus Service to get around the city. By adopting this bicycle or public transit challenge, you are not only reducing your own carbon footprint but are also acting as a role model for others to follow suit and change their unsustainable habits.

Mindful Eating

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One of the most significant ways to help reduce your carbon footprint would be to start a trend in your household, school, or office and participate in Meatless Mondays. Eating a plant-based meal once a week lessens the burden on vital resources such as water and land. If you want to kick it up a notch, go plant-based all year and reduce your carbon emissions by 1.8 metric tons. That is equivalent to 76 trash bags full of recycled waste instead of going to the landfill.

Conscious Consumer

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Challenge yourself and others in your community by supporting and buying from local shops such as thrift stores or farmers markets. When you intentionally choose to shop second hand clothing or buy goods from local farms, you are contributing to your local economy and giving back to the small businesses that make up the foundation of our City.

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3,086 lbs - Reduce your smartphone usage by an hour a day and read a book, spend time outside or watch your favorite show instead. One hour of phone time is equivalent to using and throwing away 139,978 paper towels.

Sustainable Living

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A fun and engaging way to help build more sustainable and resilient habits is to start your own garden. With Florida's beautiful weather, getting outside and interacting with nature allows you to connect and care for your surroundings. Challenge yourself to build your own garden and make your own food, or plant native-to-Florida trees that help shade your home.

Share your completed Plan. Protect. Preserve Challenges
with the City on social, using hashtags
#ResilientNoMi and #ResilientNoMiChallenge



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Visit Our Beautiful City Parks

From spotting dolphins enjoying their natural habitat in North Bayshore Park to kayaking around mangrove forests in Oleta River State Park, the City of North Miami has several parks and open spaces where you can connect with nature and experience exhilarating activities benefiting both your physical health and well-being. Currently, North Miami has a fragile ecosystem whose vital plants, wildlife, and nature activities we could lose if we neglect sustainable practices and preservation efforts. In order to prevent environmental pollution, and alternatively enhance the quality of these parks, it is important to respect nature and not litter.

Alfred S. Besade Park
11825 NE 19th Drive
North Miami, FL 33181

**Enchanted Forest
Elaine Gordon Park**
1725 NE 135th Street
North Miami, FL 33181



**North Bayshore
William Lehman Park**
12220 North Bayshore Drive
North Miami, FL 33181

Arch Creek East Passive Park
2699 NE 135th Street
North Miami, FL 33181

**Good Neighbors
Stormwater Park**
901 NE 144th Street
North Miami, FL 33161

North Miami Athletic Stadium
2555 NE 151st Street
North Miami, FL 33181

Arch Creek Preserve
2699 NE 135th Street
North Miami, FL 33181

Jaycee Park
14195 NE 16th Court
North Miami, FL 33181

Oleander Park
12100 NW 13th Avenue
North Miami, FL 33167

Ben Franklin Park
13400 NW 12th Avenue
North Miami, FL 33168

**Keystone Park
Bobby Hamer Field**
13050 Ixora Court
North Miami, FL 33181

Oleta River State Park
3200 NE 151st Street
North Miami, FL 33181
Veterans Memorial at Griffing Park
NE 123rd Street and W Dixie Highway
North Miami, FL 33161

Cagni Park
13498 NE 8th Avenue
North Miami, FL 33161

Claude Pepper Park
1255 NW 135th Street
North Miami, FL 33167

Kiwanis Park
12100 NW 16th Avenue
North Miami, FL 33167

Volunteer Your Time and Keep Our City Beautiful

The City of North Miami offers multiple volunteer programs to help keep North Miami Beautiful. "Keep North Miami Beautiful" is an organization that hosts many volunteer events/opportunities such as:

Paint it Proud | Earth Day Clean Up | Clean City Task Force

Contact **Community Planning and Development** to learn more about our volunteer opportunities.

You can join in on helping preserve our City's ecosystems by taking individual action. One way would be to encourage restaurants to not use styrofoam or single-use plastics. You can also go a step further and educate friends and family on sustainable practices they can implement into their daily lives such as adopting Meatless Mondays, planting native trees, or participating in waterway clean ups.





Reduce Your Carbon Footprint

Commit to some or all of these simple steps for a year to reduce your impact on our environment. If we all commit to making these small changes together, collectively we will have a greater impact.

<p>Adjust your thermostat by 2° F (lower in the winter and higher in the summer) 500 lbs</p>	<p>Wash your clothes with the cold setting on washing machine 400 lbs</p>
<p>Use a mug at work instead of disposable cups 100 lbs</p>	<p>Compost your organic waste 700 lbs</p>
<p>Wash one less load of laundry a week 50 lbs</p>	<p>Switch from beef to chicken 882 lbs</p>
<p>Use a metal straw instead of plastic straws 537 lbs</p>	<p>Use your own reusable bag instead of 4 plastic bags per week 18 lbs</p>
<p>Keep your vehicle tires properly inflated 327 lbs</p>	<p>Replace a 5-mile car trip with a bike once a week 200 lbs</p>
<p>Reduce your smartphone usage by one hour a day 3,086 lbs</p>	<p>Switch one incandescent bulb to LED 4,049 lbs</p>
<p>Unplug your smartphone charger when it is not in use 15 lbs</p>	<p>Shower for 5 minutes instead of 15 minutes 687 lbs</p>

If you commit to all the carbon reductions in this challenge, you will lower your carbon footprint by **11,551 lbs.**
That is equivalent to:

Driving 13,001 Miles in an average passenger vehicle	Consuming 590 gallons of gasoline
---	--

(Sum up your carbon reductions here)

My Total Reduction of Carbon Emissions

X _____
I agree to follow these carbon reductions for a year

Start Date

If every resident in North Miami committed to all the carbon reductions in this challenge, the City can lower its carbon emissions by **718,760,975 lbs.**
That is equivalent to:

Charging 41 Billion smartphones	Powering 37,621 homes' energy use for one year
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Preparing for a Storm

Best practices for before, during, and after a storm hits



Before:

- Make an inventory of valuables
- Create a storm plan and have a storm kit
- Have a copy of your insurance policy and insurance contact on hand
- Evacuate, if ordered; make sure you have enough food and water for 2 weeks if you stay



During:

- Do not walk into flood waters
- Do not venture outdoors until after the storm has passed and authorities give the all-clear
- Remain in a secure part of your home
- Keep your weather radio and flashlights handy



After:

- Return home only after the all-clear is given by authorities
- Avoid downed power lines and standing water
- Take pictures of your items and property
- Be a good neighbor and help your neighbors



Sources

1. 100 Resilient Cities. (2020). Urban Resilience.
<https://www.100resilientcities.org/resources/>
2. sealevelrise.org. (2018). States | Florida.
<https://sealevelrise.org/states/florida/>
3. CO2 Gas Concentration Defined. (2014, August 20).
<https://www.co2meter.com/blogs/news/15164297-co2-gas-concentration-defined>
4. Harris, A. (2019, December 4). New projections show that South Florida is in for even more sea level rise.
<https://www.miamiherald.com/news/local/environment/article237997454.html>
5. Urban Land Institute. (2016, May 22). A ULI Advisory Services Panel Report Arch Creek Basin.
http://uli.org/wp-content/uploads/ULI-Documents/Miami_PanelReport.pdf
6. FEMA. Repetitive Loss Property Definition. (2015, October).
https://www.fema.gov/txt/rebuild/repetitive_loss_faqs.txt
7. FEMA. (2019, June). Natural Hazard Mitigation Saves: 2018 Interim Report.
https://www.fema.gov/media-library-data/1528732098546-c3116b4c12a0167c31b46ba09d02edfa/FEMA_MitSaves-Factsheet_508.pdf
8. Audubon. (2009, August 1). The Real Deal on Compact Fluorescent Light Bulbs.
<https://www.audubon.org/sites/default/files/documents/CFLs.pdf>
9. Yarrow, J. (2008). How to reduce your carbon footprint. Castle House, London: Duncan Baird.

Greenhouse Gas Equivalencies Calculator. (2020, March 17).
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
10. Florida Section of the American Water Works Association. (2019). Competitions - Drinking Water Contest
<https://www.fsawwa.org/page/DWCWinners>
11. Yarrow, J. (2008). How to reduce your carbon footprint. Castle House, London: Duncan Baird.

Greenhouse Gas Equivalencies Calculator. (2020, March 17).
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
12. Yarrow, J. (2008). How to reduce your carbon footprint. Castle House, London: Duncan Baird.

Berners-Lee, M. (2011). How Bad Are Bananas? Amsterdam, Netherlands: Adfo Books.
13. Dudek, D. (2018). Data USA North Miami, FL.
<https://datausa.io/profile/geo/north-miami-fl>
14. Shrink That Footprint. (2013, February 13). The Carbon Footprint of 5 Diets Compared.
<http://shrinkthatfootprint.com/food-carbon-footprint-diet>

Greenhouse Gas Equivalencies Calculator. (2020, March 17).
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- 15 + 16. Hanson, C. (2018, September 26). What's Food Loss and Waste Got to Do with Climate Change? A Lot.
<https://www.wri.org/blog/2015/12/whats-food-loss-and-waste-got-do-climate-change-lot-actually>
17. Sparks, H. (2019, May 1). A Year of Cell Phone Use Emits as Much CO2 As Two Round-trip Flights.
<https://nypost.com/2019/05/01/a-year-of-cell-phone-use-emits-as-much-co2-as-two-round-trip-flights/>

Additional Sources:

Hawken, P. (2017). Drawdown. Amsterdam, Netherlands: Adfo Books.

Notes



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