GREEN BUILDING AND ENVIRONMENTAL SUSTAINABILITY ELEMENT

BOROUGH OF POINT PLEASANT BEACH, NEW JERSEY

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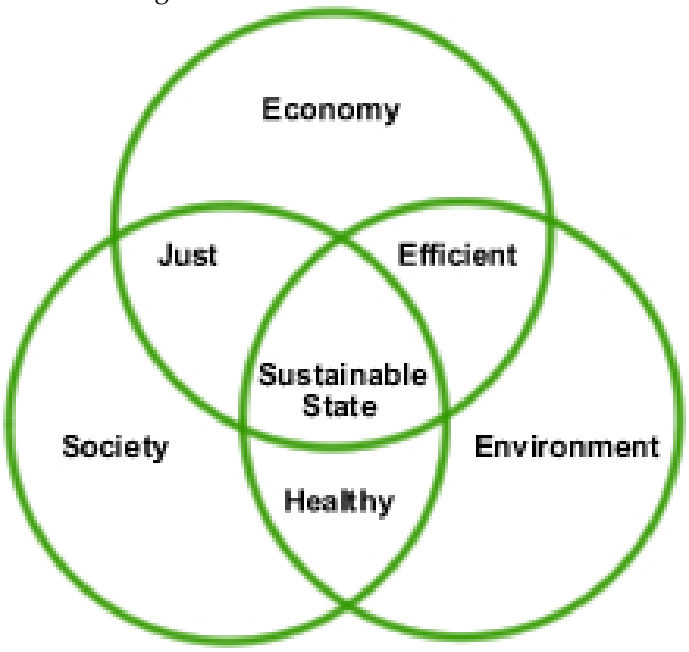
Table of Contents

Introduction

Sustainability is a term used to describe practices and tools that link the environment to the economy and human society. The etymology of this term came from a 1987 report by the United Nations World Commission on Environment and Development ("The Brundtland Commission"), where it describes sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The United States Environmental Protection Agency (USEPA) states that "Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have the water, materials, and resources to protect human health and our environment."[1]



This Element evaluates the existing efforts in Point Pleasant Beach to address sustainability through these different facets. Smart growth is development that serves the economy, environment, and community equally by concentrating development into already existing communities. With an understanding of the existing efforts underway and issues facing Point Pleasant Beach, the purpose of this Element is to define goals and implementation strategies that will sustain and optimize Point Pleasant Beach's quality of life. These goals are as follows:

GOAL 1: Continue Improving the Borough's Sustainability Efforts

GOAL 2: Implement Green Building Techniques into Future Development

GOAL 3: Pursue Clean Energy Alternatives and Reduce Energy Consumption

GOAL 4: Improve Borough's Resiliency Against Storm Events

Green Team & Sustainable Jersey Initiatives

On the local level, "green teams" have served to help municipalities incorporate sustainable practices. These teams generally consist of municipal staff, elected officials, and community volunteers. Many of these green teams coordinate their actions with Sustainable Jersey, a nonprofit organization that provides tools, training, and financial incentives to support communities as they pursue sustainable programs and actions. These actions include physical improvements, plans, studies, and public outreach. For example, actions considering the municipal use of clean energy include the audit and evaluation of existing energy usage as a way to identify and implement

projects that will improve efficiency. Public outreach can include actions such as hosting a "green fair" to introduce sustainability to the broader community.

Municipalities and schools that choose to participate in the Sustainable Jersey program get priority access to grant funding and training. A green team is the only mandatory requirement for participation in Sustainable Jersey. Similar to other sustainability-related initiatives, Sustainable Jersey has established a certification program that municipalities and schools can utilize to quantify their efforts. Based on the number of creditable sustainable actions taken, municipalities can be recognized by Sustainable Jersey as "Bronze Certified" or "Silver Certified." Municipalities with Silver Certification are also eligible for a "Gold Star" recognition for actions in a specific area of sustainability, which are currently limited to the areas of Energy and Waste. The various actions used to accrue points for certification have expiration dates independent of a town's overall certification, and several actions may not be completed twice, as they are used as prerequisites for subsequent actions.

Out of Ocean County's 33 municipalities, two (2) municipalities received Sustainable Jersey certification at the silver level, and six (6) municipalities, including Point Pleasant Beach, received Sustainable Jersey certification at the bronze level.

Point Pleasant Beach achieved Sustainable Jersey certification at the bronze level in 2009, followed by a recertification in 2018 and 2019, demonstrating that the Borough has made a commitment to sustainability and succeeded in implementing the first significant steps. The bronze certification requires an accrual of a total of at least 150 points as recognized by Sustainable Jersey, and, while the borough completed its most recent certification at a total 215, it may wish to reach further certifications such as a silver certification, which requires at least 350 points. To remain certified at the bronze level, Point Pleasant Beach must recertify in 2022. Certified towns are an outstanding group of municipalities that are making important contributions toward the long-term goal of a sustainable New Jersey and world.

To reach the level of Bronze Certification, Point Pleasant Beach participated in a number of different initiatives that showed its commitment to a more sustainable future. The Borough, for example, established a farmer's market—which operates free of charge to vendors on municipal lands—that operates as a part of the Borough's Sunday market. Point Pleasant Beach is also active in fostering a safe environment for its children, adopting both a Safe Routes to School policy as well as an ordinance banning smoking in key public places such as parks and playgrounds. A large portion of the points earned toward the Sustainable Jersey certification came from the Borough's commitment to waste management; a borough-wide ban on single-use plastic bags was adopted, the Green Team worked to educate residents on backyard composting, and the Borough maintains a service at its Recycling Depot for household hazardous waste such as used motor oil, antifreeze, and batteries. Other measures will be noted throughout this Element.

Low Impact Development and Green Building

Sustainable building and development practices help to mitigate and even improve the surrounding landscape and quality of life. In contrast, for example, roads and surface parking areas create more heat in summer months (known as the "urban heat island effect"), which can exacerbate localized air pollution that then affects sensitive individuals, such as older adults and those with asthma. Older buildings may contain drafty windows and doors, resulting in increased energy use and costs for heating and cooling.

LOW IMPACT DEVELOPMENT AND GREEN INFRASTRUCTURE

Development of roads and buildings creates impervious surfaces which inhibit natural infiltration of water, leaving runoff to collect and transport materials, chemicals, or even heat from these surfaces into the ground or waterways, polluting them and causing greater problems. Traditionally, runoff from these surfaces is managed through drains, pipes, outfalls, and basins to collect and quickly remove stormwater, a system often referred to as "gray" infrastructure.

Green infrastructure, or Low Impact Development (LID) refers to design techniques used to manage stormwater in a way that mimics or employs natural processes to capture stormwater where it falls, enabling it to absorb into the ground or planted areas, evaporate, or be stored for reuse, instead of immediately directing it toward a storm sewer. Green infrastructure can include vegetated green roofs, downspout planter boxes, planted strips along roadways and sidewalks, and rain gardens, but can also include rain barrels and porous pavements.

Green infrastructure is often employed in conjunction with gray infrastructure by managing the first inch or two of rain at the source, thereby reducing stormwater pollution from routine weather events, while also freeing up capacity for the gray system during more extreme weather events.

Under existing guidelines from the New Jersey Department of Environmental Protection (NJDEP), major developments are required to incorporate green infrastructure "to the maximum extent practicable" (N.J.A.C. 7:8); however, NJDEP recently acknowledged that this involved a certain measure of subjectivity. In response, the Department recently adopted changes to the state's stormwater management rules (N.J.A.C. 7:8) that will require developers to utilize green infrastructure to meet the minimum stormwater management standards for water quality, groundwater recharge, and stormwater volume control as part of any major developments, which are scheduled for construction starting in 2021.

COMPLETE AND GREEN STREETS

A safe and efficient transportation system is one that meets the mobility and accessibility needs of its users in a safe, timely, and cost-effective manner. The concept of "complete streets" are systems that ensure that roadways can accommodate users of all ages and abilities by providing multiple modes of travel, including

walking, bicycling, mass transit, and the automobile. This is addressed by municipalities who adopt a complete streets program as part of a roadway improvement or development project, where the needs of all users and abilities is considered.

The "green streets" concept offers an additional way to improve and manage stormwater as part of future capital improvements to roads and drainage systems. Green streets incorporate green infrastructure into roadway design, reducing negative effects such as stormwater runoff and greenhouse gas emissions.[2]

GREEN BUILDING

Green building design refers to construction techniques utilized to minimize negative external impacts to the natural environment and human health, and can include conservation of water, wastewater, and energy. Some green building practices even attempt to enhance the surrounding environment using resource-efficient building and design processes. Green building can range from efficient fixtures and appliances, to energy collection (including wind, solar, and geothermal), sourcing of construction materials, maintenance and operations, and community design. It can also include green infrastructure.

Several organizations, most notably the U.S. Green Building Council (USGBC), [3] have created rating systems used to quantify the extent to which "green" building practices were utilized. The USGBC's program, known as Leadership in Energy and Environmental Design (LEED), is used to certify design, construction, operations, and maintenance for new buildings, renovations, operations, and even neighborhoods and municipalities. Similar to the CRS program, various activities are assigned a point value, and the total number of points awarded to a project determine its certification level, which start at "Certified," and then progress to the higher levels of "Silver," "Gold," and "Platinum."

Point Pleasant Beach Borough adopted, in 2015, a Master Plan Reexamination Report and Master Plan Amendments, where, in the Land Use Element, it was recommended that the Borough update its development regulations to build resiliency throughout the municipality. Green building infrastructure techniques, originally prepared as part of the 2015 Master Plan Reexamination, has been reproduced in the following section.

Green Building and Infrastructure Techniques

Green building and infrastructure techniques are an important tool for promoting resiliency in Point Pleasant Beach Borough. They use permeable surfaces (e.g., porous concrete, gravel, mulch, etc.), landscape formations (e.g., channels, depressions), plant material, or other technologies to reduce stormwater runoff by promoting natural infiltration. Their use can promote resiliency by mitigating flooding (i.e., reducing the risk and impacts of flooding) and helping the borough to quickly recover from storms.

In addition, they provide numerous co-benefits, not the least of which are: reducing long-term maintenance and operation costs of stormwater infrastructure; and, capturing runoff pollution (e.g., particulate matter, heavy metals) and preventing their entry into sensitive terrestrial and coastal waterways.

The Land Use Plan Element recommends the incorporation of green building and infrastructure techniques in the borough's development regulations. Recommended green building and infrastructure techniques are described in the following subsections.

DOWNSPOUT DISCONNECTION

Downspout disconnection refers to the rerouting of rooftop drainage pipes to specialized containment devices (e.g., rain barrels, cisterns) and permeable areas, instead of traditional stormwater drainage systems. This allows stormwater runoff from building roofs not only to infiltrate soil, but also to be collected for later use (e.g., watering lawns and gardens), which reduces demand on public water supplies.

RAIN GARDENS

Rain gardens are shallow, vegetated basins that absorb stormwater runoff from impervious surfaces (e.g., rooftops, sidewalks, and streets). Runoff is channeled into rain gardens, and is then used by plants, infiltrated into the ground, and evaporated. They may be installed in a variety of locations and can be an attractive element of site design. In addition, it is important to note that rain gardens can be installed in a variety of locations.

Indeed, they may be installed in any properly graded unpaved space, and in parking lots and paved areas through the construction of specialized planter boxes that collect and absorb runoff.

BIOSWALES

Bioswales are open, linear channels with vegetation, mulching, or xeriscaping that slow stormwater runoff and attenuate flooding potential while conveying stormwater runoff away from critical infrastructure. While they convey stormwater runoff away from critical infrastructure, their permeable surface permits the natural infiltration of stormwater. They are often used as an alternative to, or enhancement of, traditional stormwater drainage systems.

PERMEABLE PAVEMENTS

Permeable pavements help to reduce stormwater runoff, which helps to improve the quality of terrestrial waters and mitigate flooding. With traditional (i.e., impervious) pavement, stormwater runs into drains and inlets, which places a burden on such infrastructure, and may result in the discharge of pollutants (e.g., sediment, oil residue, etc.) into terrestrial waters. Permeable pavements, however, infiltrate, treat, or store rainwater where it falls. Key examples of permeable pavements include pervious concrete, porous asphalt, and permeable interlocking pavers.

GREEN ROOFS

Green roofs are roofs that are covered with substrate and vegetation that enable the infiltration of rainwater. This not only minimizes stormwater runoff, but leads to reduced building operating costs and energy consumption by providing improved insulation of the roof surface, and absorbing less heat on the roof surface (i.e., increasing the roof surface albedo

over traditional roof surfaces). Flat and low-pitched roofs are most suited to green roof development and retrofitting therewith.

TREE COVER

Increased tree cover in developed areas is an important example of green infrastructure. Trees reduce and slow stormwater by intercepting precipitation in their leaves and branches. In addition, their root systems help to aerate soil, which facilitates natural infiltration of stormwater and reduces runoff. Trees also purify the air and can help to cool developed areas by providing shade, and through evaporative cooling and increased latent heat flux (i.e., the dissipation of sensible heat). Tree cover can be expanded within public parks and open spaces, along roadways, and on private lots.

LIVING SHORELINES

Living shorelines are an approach to shoreline stabilization that uses wetland plants, submerged aquatic plants, oyster reefs, coir fiber logs, sand fill, and stone to provide shoreline protection and maintain important habitat areas. They offer numerous benefits over hardened structures (e.g., bulkheads and concrete walls), including protection of the riparian and intertidal environments, improvement of water quality via filtration of upland runoff; and creation of habitat for aquatic and terrestrial species.[4]

Energy

Local governments spend about 10 percent of their budgets on energy.[5] While up-front costs associated with alternative energy systems, sources, and energy-efficient design and equipment are often higher than conventional development, the long-term costs are often mitigated through reduced energy demand. The systems in New Jersey commonly associated with alternative energy are wind and solar power. In addition, heat pumps (a type of geothermal power) are also recognized by the New Jersey Clean Energy Program as a way to minimize outside energy use, which uses the moderated temperature of the earth to manage the indoor temperature of a building, therefore requiring less energy to heat and cool. Renewable energy generation that supplements or replaces the energy needed to power municipal facilities can reduce the amount of energy that needs to be purchased from the grid.

The Borough, since 2010, took steps to increase energy efficiency such as conducting an energy audit for key municipal buildings. This led to Point Pleasant Beach upgrading HVAC equipment, LED lighting, windows, roofing, and water heater units. In 2018, a list of facility energy upgrades and potential projects for municipal buildings was compiled, and then, with the help of the New Jersey Clean Energy Program, the Borough determined what projects would be covered under the Direct Install Program. The Chamber of Commerce was also proactive in outreach to local business members on how to reduce energy usage and operating costs. Similar efforts were made towards the residents of the Borough, where informational panels were set up at the boardwalk to inform residents, as well as a letter regarding energy reduction sent to all residents from the mayor.

Energy is required to maintain Point Pleasant Beach's quality of life and economy. It is necessary for powering vehicles and appliances, heating and cooling buildings, and the ever-increasing number of "smart" devices which often rely upon a power source and wireless internet.

Unfortunately, the use of these non-renewable fossil fuels such as natural gas, gasoline, diesel, and coal contribute to greenhouse gas emissions, which are a global problem with local consequences. The ongoing accumulation of these emissions into the atmosphere will continue to modify the landscape through rising sea levels and exacerbates both routine and extreme weather events. Energy-efficient practices and tools that reduce energy usage can help curb the amount of greenhouse gases that are generated. These practices can include techniques used to maximize energy efficiency, such as the use of LED lighting and "smart" technology that adjusts lighting and heating/cooling in rooms when they are being utilized, but also alternative energy systems such as solar and geothermal.

Incentive programs from the state and federal governments have helped reduce the sticker shock associated with the up-front costs of equipment and installation. Strategic capital investments can help reduce long-term operating costs, such as efficiency measures for construction of new municipal facilities, retrofits of existing facilities, and improvements made during regular maintenance activities (such as replacing lights, appliances, and windows when needed). Such investments can be informed through an "energy audit," which studies energy use and demands from buildings and vehicles, identifying specific action strategies intended to provide the greatest return on investment. The New Jersey Clean Energy Program provides 100 percent reimbursement for energy audits of public facilities.

2019 NEW JERSEY ENERGY MASTER PLAN

Governor Murphy unveiled the finalized 2019 New Jersey Energy Master Plan (EMP) Pathway To 2050 in January 2020, envisioning initiatives to achieve 50 percent clean energy by 2030 and 100 percent clean energy by 2050. The plan concedes that the State's current trajectory will not allow it to meet these goals, so the Master Plan identifies major contributors to the state's carbon footprint—such as transportation and electric generation—and evaluates carbon neutral solutions. In reducing the dependence on fossil fuels, the EMP outlines seven key strategies guiding New Jersey's path to energy efficiency, each with underlying goals and objectives intended to aid the transition to a clean energy future.

While the strategies, goals, and objectives of the Energy Master Plan are geared primarily toward state agencies and policy, many have the potential for replication on the local level, including, conversion of fleet vehicles to electric, installation of electric vehicle charging infrastructure, increasing transportation options, reducing congestion, encouraging transit oriented development, installation of alternative energy systems, improving energy efficiency in new and existing construction, develop shared bike and scooter programs, and incentivize energy efficient purchasing. As such, Goal 6.1 and its underlying objectives seek to encourage municipalities to establish and enact community energy plans that will allow them to identify their

own priorities and obstacles that will allow them to complement the Energy Master Plan. The EMP suggests that a Community Energy Plan could include community redevelopment mechanisms to increase public space, walkability, and bike-ability; decrease congestion and idling; and enable equitable, multi-modal transportation opportunities to improve public health and quality of life. The EMP suggests that solid waste reduction plans, such as through a municipal composting program, could provide numerous benefits, including the reduction in energy resulting from a reduction in waste that is sent to the landfill.

ELECTRIC VEHICLE CHARGING STATIONS

In 2019, the New Jersey State Legislature adopted Senate Bill 606 (P.L 2019, Chapter 267), which made amendments to the Municipal Land Use Law (N.J.S.A. 40:55d-1 et. seq.) and the Local Redevelopment and Housing Law (N.J.S.A. 40A:12a-1 et. seq.), intended to encourage municipalities to consider Electric Vehicle Charging Infrastructure as part of the master plan, periodic reexamination of the master plan, and redevelopment plans. The following summarizes these new requirements.

Land Use, Circulation, and Green Buildings and Environmental Sustainability Plan Elements are required to identify potential electric vehicle charging stations. A green buildings and environmental sustainability plan should encourage and promote the development of public electric vehicle charging infrastructure in locations appropriate for their development, including commercial districts, areas proximate to public transportation and transit facilities and transportation corridors, and public rest stops.

As part of a Master Plan Reexamination, the reexamination shall include a section that recommends locations appropriate for the development of public electric vehicle infrastructure, including commercial districts, areas proximate to public transportation and

transit facilities and transportation corridors, and public rest stops; and recommended changes, in the local development regulations necessary or appropriate for the development of public electric vehicle infrastructure.

For a redevelopment plan, the plan shall indicate the project area's relationship to the development of public electric vehicle charging infrastructure in appropriate locations. The plan shall also include proposed locations for public electric vehicle charging infrastructure within the project area in a manner that appropriately connects with an essential public charging network. The following outlines how Point Pleasant Beach will address this issue.

Accommodating all users into the transportation network will increasingly require attention to electric and other alternative fuel vehicles. Electric vehicles and partial electric vehicles (vehicles with internal combustion engines that are used to extend the range of a vehicle) have become one way to reduce vehicle emissions. Continued advancements in technology, increased competition between automakers, and financial incentives at the state and federal levels have enabled the price of electric vehicles to decrease, making them more competitive with standard internal combustion vehicles.

One of the top impediments to electric vehicle use in New Jersey, however, is the concern that there is insufficient charging infrastructure available, often referred to as "range anxiety."[6] As the Alternative Fueling Stations map indicates, public charging stations in town are still limited. While vehicles can often be charged in a household garage with a regular outlet, a challenge persists for those that live in apartments or do not have a driveway. To begin addressing this issue and expanding the reach of electric vehicles, the State of New Jersey has recently adopted changes to the Municipal Land Use Law and the Local Redevelopment and Housing Law which require communities to identify potential charging sites; the State has also offered grant funding for private developers, employers, and municipalities to develop publicly accessible charging infrastructure. Point Pleasant Beach should consider possible charging infrastructure at locations such as municipal properties and parking lots, as well as at the borough train station.

Resilience Planning

The concept of resilience planning has emerged as an important aspect of managing extreme weather, particularly in the aftermath of Hurricane Sandy in 2012. In this context, resilience refers to the ability of a community to safely manage weather events, from protecting people and property, to allowing them to quickly return to daily life with as minimal interruption as possible. As a result, resilience addresses many aspects of land use, transportation, safety, and operations:

- Identifying ways to remove people, property, and infrastructure from risk to the greatest extent possible, and where these items cannot be moved,
- Identifying approaches that minimize damages.

Resilience, as a component of sustainability represents a comprehensive approach to managing the built and natural environment.

HURRICANE SANDY

The New Jersey Department of Community Affairs (NJDCA) established a Post Sandy Planning Assistance Grant Program, to support long range planning for community redevelopment in municipalities and counties that would address conditions created or exacerbated by the storm, and to provide approaches to rebuilding a community to be more resistant to damage from future storm events and encourage sustainable economic growth.

This program required communities to first prepare a Strategic Recovery Planning Report (SRPR) to evaluate the impacts of the disaster on community features, focusing on planning goals, strategies, and priorities leading to actions that are needed for public safety and economic

recovery as a prerequisite to additional grant funding.

Point Pleasant Beach adopted a SRPR in May 2014. The report documents the extensive damage affecting the borough, including damage done to the Point Pleasant Beach Boardwalk, Fisherman Memorial Inlet Parking Lot, the Point Pleasant Beach Bathhouse and Food Concession Stand, Bulkheads and Dunes, and various municipal parks. The storm highlighted several key vulnerabilities within the borough, such as life-threatening wave action and dune-erosion-caused flooding, that posed major fiscal impacts on the municipal budget. The below is a summarized list of recommendations provided in the Point Pleasant Beach SRPR for reducing future storm vulnerabilities. A number of these have been enacted and continue to be implemented:

- Incorporate the principals of Ocean County's 2014 Multi-Jurisdictional All Hazard Mitigation Plan into the Point Pleasant Beach Borough Master Plan.
- Investigate opportunities for shared services and mutual aid, in particular with adjoining communities, to improve emergency response for a greater number of residents – mutual aid agreement with Bay Head and Mantoloking are in place.
- Consider providing a new generator at the municipal building – done.
- Provide natural gas backup service for generators.
- Provide the Department of Public Works with an emergency staging facility – a site has been secured that will include this use.
- Provide temporary housing for emergency personnel - – a site has been secured that will include this use.
- Update the Floodplain Management Plan.
- Automate and expedite processing of building and zoning permits.
- Reexamine the borough's Master Plan Elements and prepare a sustainability element to address post-Sandy strategies and policies related to hazard mitigation, community resiliency, and forecasted sea level rise and its impacts – this Green Building and Environmental Sustainability Element meets this objective.
- Prepare and adopt a debris management plan – done.
- Revise the borough's zoning ordinance in accordance with the updates of the master plan and floodplain management plan.
- Streamline the development review process.

- Develop a GIS database and user interface to catalog and inventory all infrastructure owned by the borough, including roadways and its stormwater and sanitary sewer collection systems.
- Reinforce existing and provide new bulkheads at various locations – in process.
- Investigate feasibility of providing dunes along entire beachfront.
- Develop recovery information resources (e.g., guidebooks, pamphlets, and websites) and a training program for borough staff.
- Continue to participate in the National Flood Insurance Program.

COMMUNITY RATING SYSTEM

The Federal Emergency Management Agency (FEMA) provides communities the ability to access subsidized flood insurance through participation in the National Flood Insurance Program (NFIP) if they agree to regulate floodplain development based on a minimum set of standards. Under the Community Rating System (CRS), communities that wish to adopt higher standards than the NFIP minimum requirements can receive additional reductions in flood insurance premium rates.

Participation in the CRS program rewards communities for activities that help reduce flood risk, which include:

- A mix of regulatory actions;
- Acquisition of flood-prone properties;
- Floodplain management plans;
- Drainage system maintenance;
- Emergency preparedness and response; and,
- Providing information to the public on flood risk and how to minimize flood damage.

Each activity is credited a certain number of points, which then translate to the percent reduction for the community's flood insurance premiums, of up to 45 percent. Currently, Point Pleasant Beach participates both in the National Flood Insurance Program and the Community Rating System program.

Implementation Strategies

GOAL 1: CONTINUE IMPROVING THE BOROUGH'S SUSTAINABILITY EFFORTS

- Maintain Sustainable Jersey certification.
- Take actions to increase the Borough's certification from Bronze to Silver.
- Reduce impermeable surfaces, heat island impacts, and stormwater runoff through the use of green infrastructure.
- Promote smart growth development in downtown and neighborhood centers.
- Consider enhancing the Borough's Complete Streets Policy.
- Incentivize local businesses to participate in New Jersey Smart Workplaces.
- Consider design standards and supportive zoning requirements around the train station in an effort to incentivize a Transit-Oriented Development (TOD).

GOAL 2: IMPLEMENT GREEN BUILDING TECHNIQUES INTO FUTURE DEVELOPMENT

- Adopt a resolution which promotes green building and infrastructure techniques for commercial and residential developments, redevelopments and expansions.
- Construct or update public/commercial buildings to comply with LEED or comparable green building standards.
- Adopt a borough light pollution reduction policy for public facilities.

- Consider installing efficient landscaping that conserves water and reduces the use of harsh chemicals around municipal buildings.
- Implement a borough-wide composting program.

GOAL 3: PURSUE CLEAN ENERGY ALTERNATIVES AND REDUCE ENERGY CONSUMPTION

- Install electric vehicle charging infrastructure at public facilities.
- Require electric vehicle charging infrastructure as part of future redevelopment.
- Permit electric vehicle charging stations as accessory uses in all zones.
- Consider adopting an ordinance that permits rooftop solar energy production as an accessory use in appropriate zones.
- Promote multi-modal transportation opportunities as part of redevelopment and capital projects.

GOAL 4: IMPROVE BOROUGH'S RESILIENCY AGAINST STORM EVENTS

- Complete assessment such as the "Getting to Resilience: Community Planning Evaluation Tool," which will evaluate readiness to deal with flooding situations.
- Prepare Coastal Vulnerability Assessment to evaluate the borough's assets that may be impacted by sea level rise and storm-related coastal flooding.
- Prepare an Extreme Temperature Event Plan, identifying strategies to properly manage extreme heat/cold events.
- Identify proper emergency communications and educate the public on how to best communicate in times of emergency.

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[1] *Definition of Sustainability*. New Jersey Department of Environmental Protection. www.nj.gov/dep. https://www.nj.gov/dep/ages/definition-sustainability.html. Accessed December 3, 2020.

[2] For example, as part of a 2012 update to their Master Plan Transportation Element, Passaic County adopted guidelines for green streets, providing guidelines about siting and design considerations for green infrastructure, along with information on potential best management practices based on different street types.

[3] While USGBC's LEED program is one of the more well-known and adopted sustainable design assessment and certification programs, particularly in the United States, this should not suggest that it is the only program available. The Living Building Challenge, a program created by the Living Future Institute, is a building certification program that recognizes buildings that produce more energy than they use and collect and treat all water on site, among other requirements. The United Kingdom's BREEAM (Building Research Establishment Environmental Assessment Method) is another sustainable construction certification program, that is used in more than 70 countries (including the United States). There are also "green" certification programs for different products, such as the EPA's Energy Star program, which certifies electronics, appliances, and new homes that utilize energy efficiency. The Forest Stewardship Council certifies forest products that utilize sustainable forestry practices.

[4] 2015 Point Pleasant Beach Borough Master Reexamination and Master Plan Amendments, prepared by Martin Truscott, PP, AICP, LEED GA of T&M Associates, adopted November 4, 2015.

[5] Action: Energy Efficiency for Municipal Facilities. Sustainable Jersey. www.sustainablejersey.com. http://www.sustainablejersey.com/actions-certification/actions/#close. Accessed December 3, 2020.

[6] *Electric Vehicles in New Jersey: Opportunities and Obstacles.* Presentation by Melissa Evanego, Bureau of Mobile Sources, New Jersey Department of Environmental Protection Air Quality, Energy and Sustainability. Northern Transportation Air Quality Summit, August 7, 2018.