

Memorandum

To: Middletown Sustainability Committee

From: Cindy Unangst, Staff Planner

Date: November 10, 2020

RE: **November Green Team Virtual meeting agenda for Tuesday, November 27th**

Cindy Unangst is inviting you to a scheduled Zoom meeting.

Topic: November Sustainability Committee meeting

Time: Nov 17, 2020 05:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/86984686811?pwd=dE04blhwSD11amNxeKIPOGxsNkZWUT09>

Meeting ID: 869 8468 6811

Passcode: 484817

One tap mobile

+13017158592,,86984686811#,,,,,0#,,484817# US (Washington D.C)

Dial by your location

+1 301 715 8592 US (Washington D.C)

Meeting ID: 869 8468 6811

Passcode: 484817

Find your local number: <https://us02web.zoom.us/u/keA0T0uFHj>

Meeting discussion items:

1. October meeting minutes approval
2. Potential new members of committee
3. Tree trail at Cone Branch Trail
4. Memorial Tree dedications
5. MOU with Village at Foxfield Re: Forest Conservation Protection Area
6. Compost bins – 1 left! Greenbelt has extra that we can purchase, but we would need to pick them up.
7. Tree City and Bee City sign locations
8. Bee City USA (Mark) – BASECAMP project (education/habitat creation/IPM plan); street sign location; pollinator habitat discussion (locations/contractor/schedule)
9. Public Education campaign working group
10. Green Talks via Zoom with the Library – film project

- 11. Online Resource Center help from SMC students
- 12. **Comprehensive Plan Sustainability chapter** – we will spend the majority of the meeting discussing this
- 13. December meeting date – third Tuesday – December 15th

GOALS FOR 2020:

PLANT 100 TREES IN 2020 – GOAL REACHED!!				
CREATE A TREE GIFT PROGRAM - GOAL OF \$1000 – TWO MEMORIAL TREES ACQUIRED				
QUANTIFY/SHOW PROGRESS [MEASURABLE GOAL NEEDED] ON 25% CANOPY BY 2025				
HOLD GREEN EXPO - APR 25 – CANCELLED DUE TO COVID				
SUPPORT MES LOOL PROGRAM - FINANCIAL/VOLUNTEER SUPPORT - CANCELLED				
PROMOTE & SELL 20 COMPOSTING BINS – SOLD 19!				
PROMOTE & SELL 25 RAIN BARRELS (GRANT REQUEST)				
EVALUATE & RECOMMEND STREETLIGHT BUYBACK PROGRAM TO TOWN BOARD				
CREATE 2 AC POLLINATOR MEADOW NEAR SOLAR ARRAY				
EDUCATION ON STORMWATER PERMIT PROGRAMS				

FUTURE AGENDA ITEMS:

- Green lectures series
- Habitat advisor volunteers
- Lunch out of Landfills

Sustainability Meeting Minutes
October 20, 2020

Present: Cindy Unangst, Chris Goodman, Mark Carney, Erin Carney, Pam McDonald, Agnesanne Danehey, Jamie Moore, John Lain, and Ann Payne

September meeting minutes were approved as corrected.

- **The Tree planting at North Pointe** drew fewer volunteers than anticipated. Cindy expressed gratitude for the participation of Jean LaPadula's two daughters and friends, Mark Carney and his grandson, and Ann Payne. The sloping soil was very dry and rocky; anticipated rain did not appear; the town will water either today or tomorrow.
- **News Stories:** Our Sustainability Committee was featured in two stories in the Frederick News Post; the North Pointe tree planting and our status as a new Bee City USA.
- **Tree Trail at Cone Branch:** Dr. Roessler is working on the new tree trail at Cone Branch. No update.
- **The Memorial Tree Program** will host its first Memorial Tree (a large Dogwood) and accompanying Memorial Bench dedication on Saturday, November 7 at 10:00am, Linden Boulevard and Cone Branch Trail. Renaming the trail after Mr. Corl will also be marked and honored at that time.

A second large Dogwood will also be installed to honor the memory of a beloved pet belonging to the Kishimoto family.

The next dedication ceremony and planting will be held in fall of 2021. Requests for trees in the interim will be acknowledged as they come in and entered in the record. All orders will be announced at the 2021 Green Expo.

- **Bee City USA (Mark)** – Mark set up a BASECAMP online site for us to communicate and record our progress relating to Bee City. We need to install two 24"x24" official signs. Mark, Cindy, and Drew will determine the exact installation site. It was suggested they be put at town entrances

(pending board approval). We can also customize other signs using the BCUSA logo.

To install the BCUSA Pollinator Garden, we will seek a professional to design, plant, and install the garden. Ann will supply Mark with contact information about contacting Native Havens, run by native plant contractor, James Dillon. North Pointe was one possible site suggested, despite some neighborly objections to the tree planting.

The Base Camp Site allows us the opportunity to identify and plan BCUSA activities and events. Pam, Ann, and others will help Mark select native plants to add to our pollinator plant list.

- **Comprehensive Plan Sustainability** official discussion has been moved to December. Mark will post the Sustainability Chapter on a Google Doc to which we can add suggestions. Pam complimented the work already done. It was suggested that organizational work is needed to pull the contents into a cohesive document. All are invited to jump into this task.
- **Are we green?** To count our solar panels toward our 'greenness' would require a lot of work juggling SRE credits, as the operator purchased the credits. The EPA suggested we purchase wind power credits and retire them. It was agreed that attempting to negotiate the street light issue again might make more sense. Poolesville has apparently successfully done this. Mark will inquire how.
- **Public Education.** There was agreement we sorely lack an educated public on the topic of home owner eco services or replacing turf grass lawns. Cindy reported there were many more responses and interest to the recent 'comp plan' town survey than in the past. Fans of longer grass, however, were not plentiful. We would like to know how many use lawn services? How many would like to employ more sustainable lawn services?
- It was suggested that a step-by-step plan be drawn up to educate the public; that we ensure the town itself models desirable practices; that we create and/or publicize model citizen lawn conversions; that we consider Foxfield rewilding or a Foxfield Section 6 model. We agreed a subcommittee was needed to further develop a public education plan. Mark will create a new Basecamp called "Native Plant Landscaping."

- **Community Compost Service:** Erin Carney reports hearing from Phil Westcott of Key City Composting about a proposal to install for citizens a 64 gallon Rubbermaid drop-off bin with a disposable liner. KCC would pick up the compost weekly for the price of \$1560 a year. Gaithersburg has such a service. Possible locations could be behind the restaurants at Cross Stone Commons, or Wiles Branch where the original compost pickup was planned. Erin will find out if we, the town, would get to keep the ripe compost. There was no action, pending further details and discussion.
- **Welcome to John Lain.** John, from Middletown Glen, sat in on the meeting. His community has interest in topics similar to ours. We look forward to continuing our relationship with John and his community.

Respectfully submitted,

Ann Payne

Details for a MOU with the Village at Foxfield

RE: Forest Conservation Protection Area

The goal of this Memorandum of Understanding is to clarify the roles and responsibilities of each party with regard to the Forest Conservation Area in the Village of Foxfield neighborhood of Middletown. The Town is appreciative of the fact that the residents are supportive of the conservation area and will work to support the goals of the Town to have this area become a mature forest for future generations. It is the hope of all parties that our residents and neighbors continue to enjoy and enhance the naturalization of this area over time as it becomes a real asset for the community, the environment and the flora and fauna.

1. The Town of Middletown (Town) will mow on the east side of the trail to the first line of trees.
2. Residents of the Village at Foxfield (Village) whose property is adjacent to the trail will continue to mow Town property on the west side of the trail that abuts their own residential property.
3. The Town will continue to plant additional trees and augment areas of the Forest Conservation Area as funding becomes available.
4. The Village along with any partners may also plant trees in the Forest Conservation Area with approval of the Town and under the supervision of the Town staff.
5. The Town will be responsible for pruning and care of the trees in the Forest Conservation Area on the east side of the trail.
6. Village residents should not use any fertilizers or weed control products on the east side of the trail, i.e. the Forest Conservation Area.
7. The Town will install signage to indicate the Forest Conservation Area and to alert residents of the natural area.
8. The Town continues to grant to the Village permission to care for some particular weeping cherry trees and the immediate area around them that are on Town property and within the Forest Conservation Area.
9. The Village and the Town will identify a point of contact person through which all communications between the parties shall be conducted.

TOM SUSTAINABILITY SUBCOMMITTEE WEBEX NOTES
10/27/20

	BCUSA	LANDSCAPING	COMPOSTING	IPM
Design	Quantify acreage/report Feb 2022	Review State requirements Plant list/design help	We need host location – Cross Stone Commons/ trash area/ or downtown/ requirements KCC HOA invites -MG/GB/AA	BCUSA – Start with Town program then Community
	Model the town properties most visible Use Monarch Alliance design by Anne Aldridge may used sunny plots on town/front yards	Model the town properties most visible Use Monarch Alliance design by Anne Aldridge may used sunny plots on town/front yards		
Outreach	Use signage to promote Identify nurseries that will cooperate (Ann) - American Meadows/Whites Farm Build community partners/business	March 21, 2021 – Hood College seminar Identify type of interest - survey Incorporate into newsletter Continue awards	Identify type of interest - survey Build community partners/business	
Education	Use signage to promote	Green talks/water bill insert Lawns to Legumes Level I/II/III based on experience with chemical use/explore alt/ready to change Need contacts - Provide GS/BS/4H information/HS Science/Honor/Ecology Club	Use KCC info	
Implementation	Start town prop/develop	We need website with	KCC FEE?	

	private based on survey	selected plants from the native list/attached to Town website		
Schedule	Need education this winter Ready by Spring 2021 Some activities - 2022	North Pointe playground Need education this winter Ready by Spring 2021	anytime	anytime
Big Hairy A** Goals (BHAG)	10 ACRES OF POLLINATOR BY 2022	50% NEW NATURAL LANDSCAPE of TOM homeowners (Turn backyard into State Park) by 2022	All restuarants/Safeway participate & 500 homeowner by 2022	

Town/Private/Company lands for use

Need timeline/how do we grow/

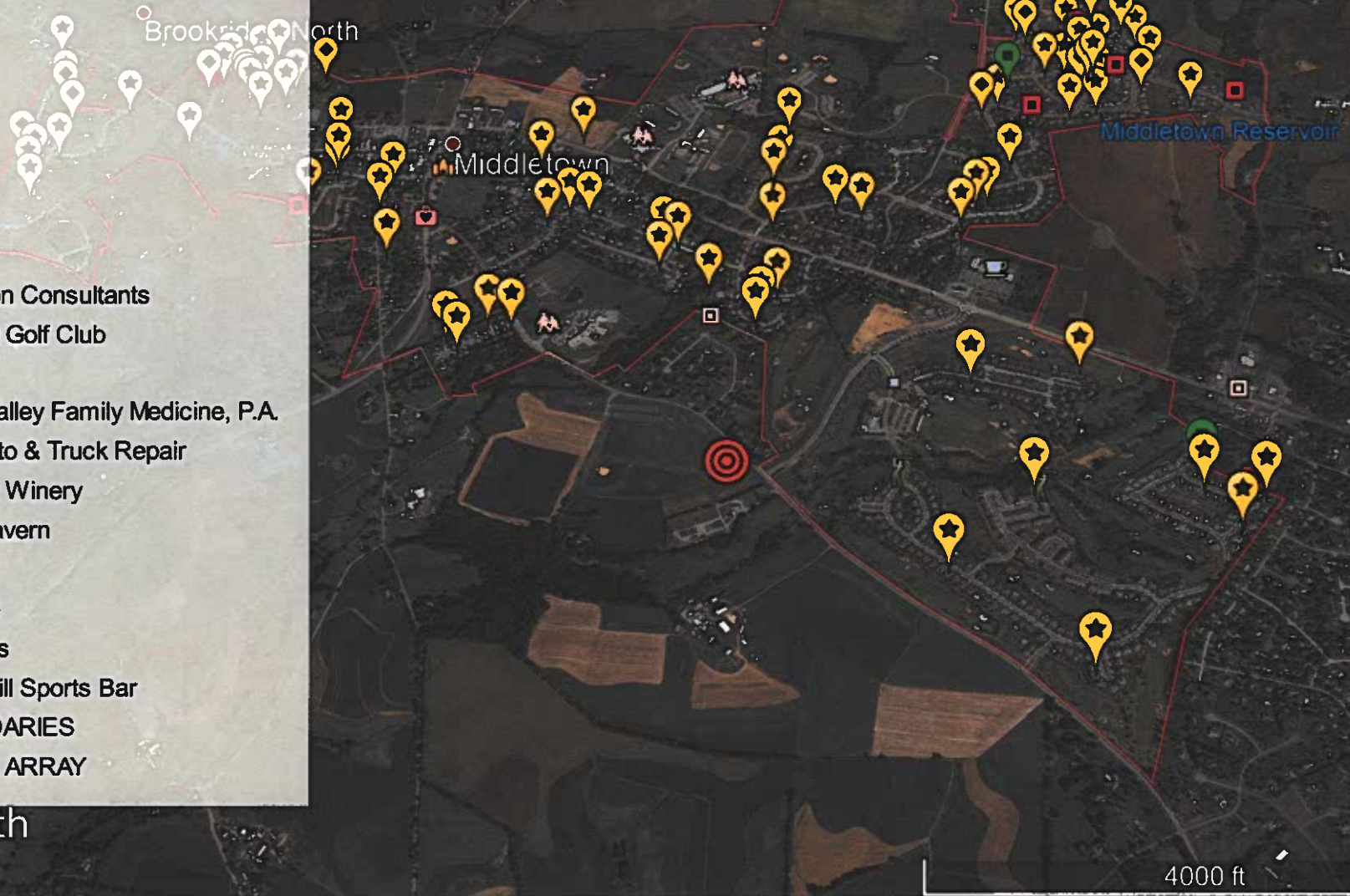
How do keep working on this plan – webex or individuals? NEED FEEDBACK

Solar map

Write a description for your map.

Legend

-  Church
-  Feature 1
-  Feature 2
-  Feature 3
-  Feature 4
-  Feature 5
-  Feature 6
-  Feature 7
-  Fire Protection Consultants
-  Hollow Creek Golf Club
-  Middletown
-  Middletown Valley Family Medicine, P.A.
-  Mid-Valley Auto & Truck Repair
-  Orchid Cellar Winery
-  Schroyer's Tavern
-  Starbucks
-  Surreybrooke
-  TerrEssentials
-  The Valley Grill Sports Bar
-  TOM BOUNDARIES
-  TOM SOLAR ARRAY



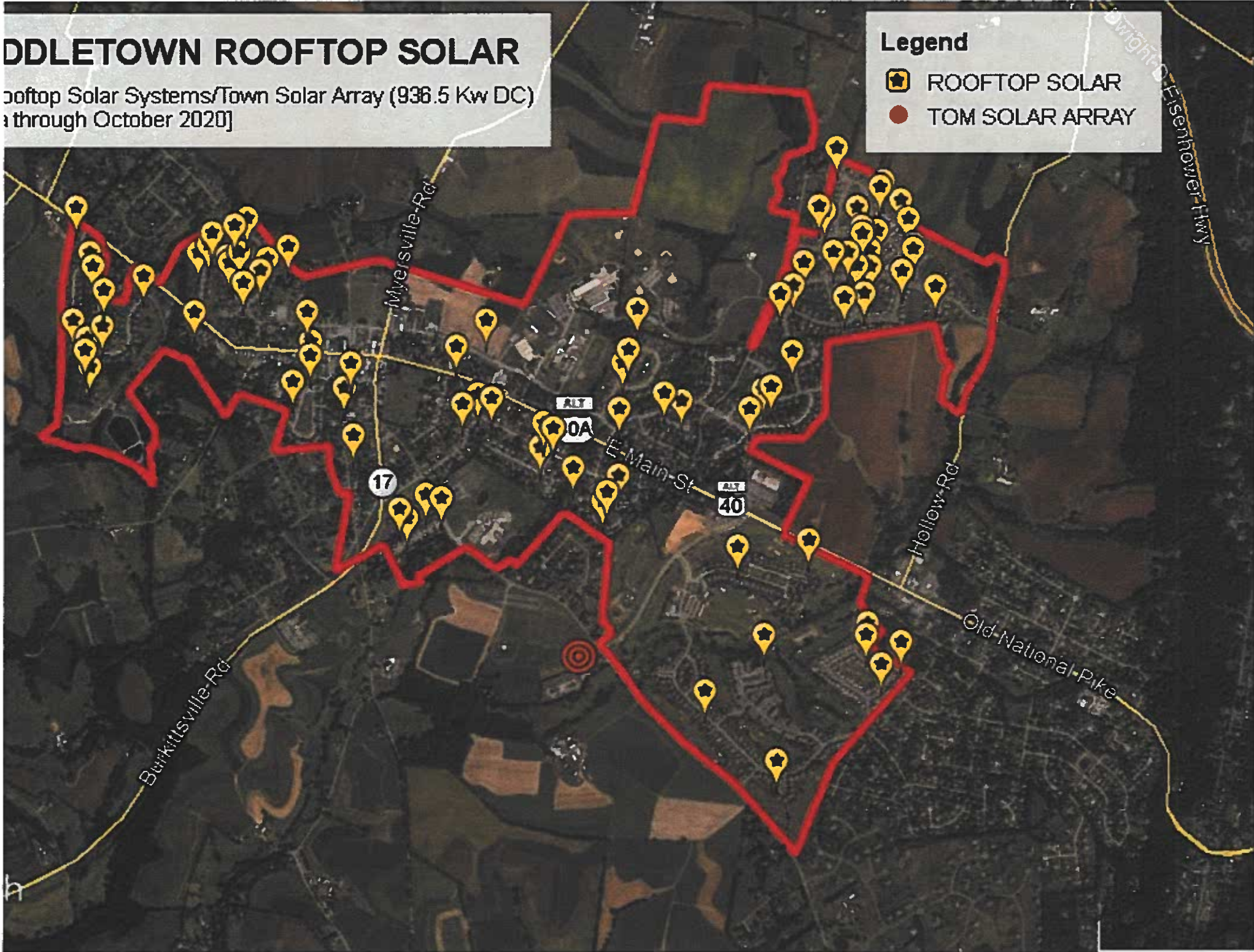
Google Earth

MIDDLETOWN ROOFTOP SOLAR

Rooftop Solar Systems/Town Solar Array (936.5 Kw DC)
[through October 2020]

Legend

-  ROOFTOP SOLAR
-  TOM SOLAR ARRAY



SUSTAINABILITY CHAPTER

The Town of Middletown is committed to fiscally, socially and environmentally responsible land use development. Sustainable development integrates the needs of the Town and its residents in the present generation without sacrificing the ability of future generations to meet their needs by balancing the economy, society and the environment in the process. In looking towards the future, the Town of Middletown will strive towards sustainable living and planning.

Recognizing the importance of sustainability, the Town Board created the Sustainability Committee as a standing committee of the Town in 2016 to manage the Town's sustainability goals and policies. The Committee is made up of twelve members from different backgrounds who serve in an advisory capacity by providing input on initiatives, acting for the Town on various topics, and educating the public.

Sustainability in the Town will be guided by the following objectives:

- Preservation of Open Space and environmental stewardship areas in Town to ensure that the natural environment and the views it provides citizens are preserved into the future. This would include preservation and expansion of fragmented or isolated woodlands into coherent greenways while providing water quality benefits for the Town's water resources.
- Continuation of the preservation of the greenbelt of open spaces and farmland established around the Town. This greenbelt physically separates Middletown from sprawl development in other areas of the County.

FOREST CONSERVATION

In 1991, the State of Maryland enacted the *Forest Conservation Act* to protect forests by making forest conditions and character an integral part of the site planning process. It is regulated by the Maryland Department of Natural Resources but implemented and administered by local governments. The law's intent is to maximize the benefits of forests and slow the loss of forest land, while allowing development to take place. In 2006, the Burgess and Commissioners adopted Subtitle 16 of Title 5 of the Natural Resources Article of the Annotated Code of Maryland as the "Middletown Forest Resource Ordinance." Prior to the approval of any subdivision of land or development which results in the cumulative disturbance of 40,000 square feet or greater, developers must submit a Forest Stand Delineation and a Forest Conservation Plan which are reviewed and approved by the Middletown Planning Commission.

The Town makes every effort to plant trees along stream banks and within floodplains, and in other areas owned by the Town. If forest is being protected as part of a development project, the area must be put into an easement for long term protection. Since the inception of the program, the Town has planted ____ acres on public land and expended \$ ____ collected for the plantings. This is in addition to the street trees that developers have planted in recent subdivisions.

TREE CANOPY

The Town is committed to increase tree canopy, enlisting volunteers and staff to plant trees in public spaces around the Town. A tree canopy assessment done for Frederick County in ___ showed the tree canopy percentage for Middletown to only be 18%. The Town has made a goal of reaching 25% coverage by 2025, and 40% coverage by 2040. *Will include tree map*

- Reduction of the total amount of impervious surface area within the existing Town limits of Middletown through the use of the latest stormwater management and pervious pavement designs.
- Continuation of its rain barrel partnership with the Interstate Commission on the Potomac River Basin (ICPRB) and the Chesapeake Bay Trust and investigation of other sustainable stormwater management practices.
- Reduction of water consumption and wastewater production through enhanced water reuse programs and low-flow technologies.

EROSION & SEDIMENT CONTROL/STORMWATER MANAGEMENT

Clearing or grading land in excess of 5,000 square feet is not permissible without first obtaining approval of an Erosion and Sediment Control Plan from the Frederick County Soil Conservation District. Frederick County also requires developers to submit a “Stormwater Management Plan” with proposed design and calculations for capacities of stormwater drainage systems for any new subdivision or site development. Current stormwater management requirements address both the quantity and quality of stormwater runoff leaving the development site.

The goal of stormwater management plans is to manage stormwater by using environmental site design to the maximum extent practicable to maintain after development, as nearly as possible, the predevelopment runoff characteristics. This would reduce stream channel erosion, pollution, siltation, sedimentation, and local flooding. The goal is also to use appropriate structural best management practices only when necessary. This helps to restore, enhance, and maintain the chemical, physical, and biological integrity of streams, minimize damage to public and private property, and reduce impacts of land development.

WATER CONSERVATION

In order to promote water conservation and decrease runoff to the Chesapeake Bay, the Town of Middletown previously partnered with the Interstate Commission on the Potomac River Basin to create the Rain Barrel Program. The Town now partners with the Scott Key Center to offer rain barrels for sale to town residents for \$40. The Scott Key Center, a non-profit organization whose mission is to provide work for adults with developmental disabilities, produces rain barrels which provides meaningful wages for their employees who manufacture them. The rain barrels are offered each spring for sale to town residents for half of their normal price on a first come first served basis, with a limit of two per resident. The rain barrels are made from food-grade recycled terra cotta barrels that hold 55 gallons of rain water. The high-quality barrels come with a lid for

child safety and a screen to prevent mosquitoes from breeding. An overflow hose is also included. The rain barrel program is advertised on the Town's website, flyers go out with the quarterly town newsletter and e-mails about the program are sent to town residents on the Town's list-serve.

- Reduction of energy consumption and carbon footprint through energy efficiency programs, clean energy programs, alternative transportation fleet options and recycled procurement programs as part of the Town of Middletown government policies.

SUSTAINABLE ENERGY

In the Spring of 2019, the Town replaced the central fuel oil furnace in the Municipal Center with a much more efficient natural gas-powered system that not only will be less expensive for heating the building, but also better for environment with a cleaner gas. The HVAC system in the Municipal Center was replaced in 2017. The more efficient system has been a cost savings to the Town.

Middletown was awarded a \$25,000 grant from MEA in 2017 for a 7.2 kW solar PV system for installation on the town-owned food bank building. The panels were installed in the fall of 2019.

Constructed in the fall of 2015 and commissioned on April 22, 2016, the Town of Middletown has a live 836 kilowatt solar array on 6.4 acres of municipal land. This photovoltaic solar installation is directly adjacent to the East Wastewater Treatment Plant and delivers 1,143 MWh of electricity annually to fully power Middletown's water and wastewater facilities. 100% solar energy is used to power Middletown's water and wastewater treatment facility, which provides 300,000 gallons of clean drinking water a day to Town residents. The solar project was financed using a Power Purchase Agreement (PPA), a third-party contract that enables Middletown to generate low-cost electricity without "out-of-pocket" expense. Frederick, MD's Empower Energies and Reading, PA-based RER Energy Group were co-developers of this project with Sol Systems serving as financing partner. Middletown's solar strategy will keep costs low and predictable for the next twenty years and is expected to save the Town \$10,000 per year. Based on the latest numbers from the solar array project, the Town is still saving money, but not as much as it did the first couple years due to lower electricity costs thru Potomac Edison.

In another part of the facility, 234,400 gallons of wastewater are treated each day. With pollutants removed, this treated water is then used to irrigate the nearby Richland Golf Course. Middletown's wastewater reuse supports the State of Maryland's "Zero Waste Maryland" initiative, which seeks to reduce, reuse, and recycle all waste generated in Maryland by 2040.

EV STATIONS

As a benefit to the community and the motoring public along our Main Street, the Town installed an electric vehicle (EV) charging station in the parking lot of the Municipal Center in spring of 2019. In 2020, PG&E installed an EV station in the Elm Street parking lot, and has plans to install

one in the municipal lot at the corner of East Green Street and North Church Street. Currently the Town does not own any E-vehicles.

MUNICIPAL CARBON FOOTPRINT

A municipal greenhouse gas inventory was completed for Middletown using 2018 as a baseline. A Greenhouse Gas (GHG) Inventory is an accounting of greenhouse gas emissions resulting from activities within a given boundary. These inventories help decision-makers identify the greatest sources of GHG emissions, establish goals, and track progress towards reduction targets.

Emissions are broken down into three categories, or scopes, by the Greenhouse Gas Protocol in order to better understand the source of emissions. Inventory results are typically expressed in Metric Tons of Carbon Dioxide Equivalent, or MT CO₂e, for ease in comparison. This measure converts all greenhouse gases emitted into the equivalent amount of CO₂ by weighing its relative global warming potential.

A municipal GHG Inventory, otherwise known as a Municipal Carbon Footprint, specifically focuses on the emissions associated with municipal government operations. It usually includes emissions from activities under the municipality's operational or financial control such as energy used by government-owned buildings, streetlights, and vehicles, plus emissions associated with other municipal operations such as solid waste, wastewater treatment, landscaping, etc.

Municipal GHG Inventories allow a local government to understand the major sources of its emissions, provide a basis for developing an action plan, and track changes in its carbon footprint over time. Inventories can also be compared to other municipalities; however, it is important to keep in mind that the scope of operations varies widely across different municipal governments. Thus, comparisons are most useful with municipalities of a similar size and between those that provide similar services.

Most of the energy consumed by the Middletown government, 88%, is from electricity, with the remaining 12% from gasoline and diesel fuel used by municipal vehicles and equipment. At the time of the inventory, the town facilities did not use any natural gas, although the municipal office building is now heated with natural gas.

In addition to the emissions associated with energy use (electricity, gasoline, and diesel), Middletown's wastewater treatment processes generate emissions. These emissions, which result from the treatment processes themselves and not the energy used to power the treatment plants, represent about 10% of the total municipal emissions.

The town's water and wastewater operations are the largest contributors to municipal emissions. Within this category, electricity use is the largest component, followed by process emissions and emissions from the department's vehicles. To reduce electricity use for water treatment, Middletown could consider energy efficiency upgrades at its plants or energy recovery strategies. The municipality also pays electric bills for about 600 street and area lights, which contribute about 18% of the town's total emissions. While some municipally-owned lights have been converted to LED, it is not clear how many of the utility-owned lights have been upgraded. If possible, working with the utility to replace streetlights that they own with LEDs could be another effective way to reduce carbon emissions.

- Promotion of Frederick County's single stream recycling program for residents and development and enhancement of government and business recycling programs in conjunction with the County program.
- Continuation of the use of the brown biodegradable paper bags to all Town residents as part of its Yard Waste collection program that eliminates yard waste from the municipal solid waste disposal stream.

SOLID WASTE MANAGEMENT

The Town relies on Frederick County to provide recycling and landfill services. The County's landfill is at capacity and serves as a transfer station to haul waste to a facility in Pennsylvania. Recycling throughout the country has seen a major shift because overseas buyers will no longer purchase contaminated recycling. Containers with food or other residue, trash in the recycling bins, and non-recyclable items can quickly spoil an entire load of recyclables.

Compost is the heaviest part of the waste stream and could be diverted to reduce about 30% of all waste going to the landfill. To facilitate its use, the Town offers compost bins to residents at a reduced cost, and the Town has seen an increase in the number of residents taking advantage of the program. Considering the changes in recycling and the lack of landfill space, Town residents and businesses have an opportunity to reduce our waste stream.

- Promotion of sustainable building practices using the U.S. Green Building Council's LEED program or a similar system for government and commercial construction projects.

Green Building: Environmentally sensitive building and site-design, following LEED Guidelines (Leadership in Energy and Environmental Design), should be encouraged to minimize the potential negative impacts of such things as forest and habitat disturbance as well as stormwater flows on adjacent sensitive areas, aquatic resources, and water quality. Incentive programs for private citizens to incorporate LEED principles in all home construction, repair and renovation projects can be developed. LEED initiatives can help educate the public and ensure that the natural environment is disturbed as little as possible by the impacts of the built environment.

- Cooperation with Main Street Middletown and Frederick County Public Schools to help educate the public, schools, professional associates, business and industry about creating a sustainable community and to establish sustainable policies for all commercial and County buildings and operations in the Town.

TOWN OF MIDDLETOWN SUSTAINABILITY ANNUAL REPORT



Building, operating, and maintaining the Town's infrastructure is essential for today and future generations.

SOLAR PANELS

A 7.2 kW solar panel system was installed on the new bank building at 201 West Main Street in September 2019, providing a \$10,000 credit from the Maryland Energy Administration.

GREEN EXPO

Join us for our 7th annual Green Expo on Saturday, April 24, 2020!

GREEN FUTURE SERIES

Look for our Green Future Series events in 2020!

WASTEWATER

The wastewater from the Town Wastewater Treatment Plant is used to irrigate the nearby Middlebrook Golf Course after it is treated. This year, we began using Maryland's "Zero to Six MGD" technology, which only recycles, treats and reuses 23 cubic gallons of MGD by 2025.

SOLAR ARRAY

Completed in April 2018, an on-site solar array installed in Brandywine Park delivers enough electricity annually to fully power Middlebrook's existing and existing facilities.

COMPOST BINS

In 2018, 100 new 60-gallon compost bins were distributed to town residents. 20 bins are still in use for collection. The bins will help residents and the town to keep it from ending up in the landfill.

RAIN BARRELS

Five barrels were added each spring to some residents for half hour rainfall rain water to prevent water overflows and improve water in the Chesapeake Bay. Over 200 more barrels have been purchased within the past 10 years.

BOILER REPLACEMENT

In Spring 2019, the central fuel oil furnace in the Middlebrook Center parking lot was replaced with a much more efficient natural gas-powered system. Low emissions the heating system for the environment with a cleaner fuel.

EV CHARGING STATIONS

A Level 2 charging station was installed in Spring 2019 in the Middlebrook Center parking lot for low emissions vehicles. In 2020, the Town will install two more EV charging stations in the town's parking lots and the surrounding area to help support the transition to electric vehicles.

44,000 BAGS

Since 1991, Middlebrook has provided paper yard waste bags to its residents. Yard waste bags are picked up once a week from April thru December by the town's trash hauler. The yard waste is taken to the Frederick County landfill where it is turned into mulch. Also, Christmas trees are collected in January.

STREETS & PARKING LOTS

West Green Street received a complete upgrade with new sidewalks, curbs, grass and stormwater management. The lighting was also replaced with energy-efficient LED lights. The Elm Street parking lot received an upgrade in 2019 which included the addition of LED street lights and raised planting bed islands housing native plants.

TREE PLANTING

The Town received 4,000 green trees for the purchase of 174 native trees that were planted in the Middlebrook Center parking lot in November along Middlebrook Parkway. Look for more tree planting opportunities in 2020.

More information is available on the Middletown Green Team page of the town's website.

2019 Annual Sustainability Report

The Town has taken numerous actions over the years to achieve protection of natural features. These actions are described in the Sustainability chapter of this Comprehensive Plan.

1. Yard waste program – Since 1991, Middletown has provided paper yard waste bags to its residents. Yard waste bags are picked up once a week from April thru December by the town's trash hauler. The yard waste is taken to the Frederick County landfill where it is turned into mulch. Also, Christmas trees are collected in January.
2. Improvements to town streets – Various town streets have been upgraded with stormwater management features that include Filterra stormwater biofiltration systems.
3. Stream restoration projects –

4. Pet waste program – The Town implemented a pet waste program beginning in 2008 with dog bag waste stations that have been installed in all of the town parks and along all of the walking trails within the town.
5. Water conservation programs – A Water Conservation Public Alert System was created in the early 2000’s to keep the public informed as to the current status of the Town’s public drinking water system, and established an ordinance that places restrictions on water use which includes penalties for violating water restrictions.
6. Rain barrels – In order to promote water conservation and decrease runoff to the Chesapeake Bay, the Town has offered rain barrels for sale to town residents at a reduced cost.

POLLINATOR CONSERVATION EFFORTS

The Town of Middletown was designated as a Bee City USA municipality in September 2020. As an affiliate, the Town is expected to maintain the certification by reporting on its achievements and celebrate being a Bee City USA affiliate every year. Bee City USA is part of nonprofit Xerces Society for Invertebrate Conservation. The program’s mission is to galvanize communities to sustain native pollinators by providing them with healthy habitat, rich in a variety of native plants, and free to nearly free of pesticides.

The Town’s Pollinator Resolution, approved in November 2017, supports pollinator populations by modeling pollinator friendly practices and by educating its citizens about pollinators, including disseminating information about the ways residents can help sustain the survival of pollinators.

Pollinators support Middletown’s ecosystems and to some extent its economy. They pollinate one out of every three bites of our food. Pollinators also provide food and habitat for wildlife, sustain a variety of plants that themselves improve water quality, prevent soil erosion, store carbon, and color our landscape. Pollinators face a series of challenges including habitat loss and fragmentation, pesticides, climate change, pathogens, and parasites can all impact pollinator populations.

The Town intends to protect natural areas and encourage active management of existing natural areas, including removal of invasive species. Wherever possible, Middletown will restore and enhance pollinator habitat by designating areas to preserve as green space; by planting local, native wildflowers, shrubs and trees and connecting these areas through green corridors. Unused turf grass areas will be considered for pollinator habitat. Problem areas will be addressed through IPM (Integrated Pest Management) and Integrated Vegetation Management, and will combine monitoring of unwanted insects or weeds with diverse control methods, such as manual removal or biological control. The Town will delay using pesticides until other strategies have proven to be insufficient.

Middletown will educate the public about the importance of pollinators and will educate homeowners about reducing lawn and adding pollinator friendly plantings by providing accurate information through newsletters and community events. The Town will look to connect natural areas, and plan for and create “green infrastructure” that connects pollinator habitats. These corridors help pollinators to disperse and find resources such as pollen, nectar, and nesting habitat.

DARK SKY POLICY

The problems of light pollution first became an issue in the 1970s when astronomers identified the degradation of the night sky due to the increase in lighting associated with development and growth. As more impacts to the environment by lighting have been identified, an international “dark sky” movement is advocating for the precautionary approach to outdoor lighting design.

Many communities have passed anti-light-pollution laws and ordinances. In passing a ‘dark sky’ ordinance, Middletown could drastically reduce light pollution and glare and lower excessive light levels. The recommended regulations for outdoor lighting could permit the use of outdoor lighting that does not exceed specified minimum levels for night-time safety, utility, security, productivity, enjoyment, and commerce; minimize adverse offsite impacts of lighting such as light trespass, and obtrusive light; curtail light pollution, reduce skyglow and improve the nighttime environment for astronomy; help protect the natural environment from the adverse effects of night lighting from gas or electric sources; and conserve energy and resources to the greatest extent possible.

HISTORIC PRESERVATION

Historic preservation is an inherently sustainable practice. An immediate advantage of older and historic buildings is that the structure already exists. No energy or waste is necessary for its demolition and far fewer resources are needed for its reuse because much of the materials and infrastructure may already be in place. The repair and retrofitting of existing buildings can be considered the ultimate recycling project, but it also adds value to the community by protecting our neighborhood character and architectural heritage. After all, the greenest building is the one that is already built. EPA promotes downtown revitalization as a tool for improving air quality, more walkable, more dense concentration of uses.

The adaptive use of older buildings for a new purpose is a sustainable alternative to new construction. It conserves land, maximizes the use of existing materials and infrastructure and reduces waste and consumption while also preserving local historic character. Also, according to the US Energy Information Agency, buildings constructed before 1920 are more energy efficient than buildings built between 1920 and 2000. Generally, buildings constructed before the advent of mechanical heating and cooling systems include energy-conserving features in the original design, such as transoms, high ceilings, and large windows for natural light and ventilation. Minor modifications can be made to existing buildings to accommodate their new use and systems can be upgraded to meet modern building codes. Often, these types of projects are subject to local review and are potentially eligible for local, state and federal funding.

It will be the policy of Middletown that...

1. Wetlands, streams, floodplains, forested areas, and steep slopes are not disturbed by development.

2. Streams and floodplains have vegetated buffers that help to restore the natural function of these areas. These buffers are planted in species native to Middletown and the surrounding area.
3. The Town actively seeks ways to lessen its impact on the environment by minimizing energy use, carbon emissions, water consumption, stormwater runoff, and implementing green design standards.
4. To the fullest extent practical, new development uses non-structural techniques and pervious paving to manage storm water and otherwise comply with the highest standards of the Maryland Department of the Environment.
5. Developers seeking annexation will plan their projects to the highest standards for community and environmental design using sustainable building practices.
6. Natural areas and farming remain the dominant use in the greenbelt.
7. An interconnected system of parks, shared use paths, and open spaces is created in and around Middletown. Every resident is within a five-minute walk from a community park and shared use path. *Five minute walk is equivalent to ~1,320 feet. Properties to check on that might not be within a five-minute walk are the following: 208 Ivy Hill Drive, 206 Ivy Hill, 204 Ivy Hill, end of Ifert Drive, 700 block of E. Main, Manda Court, far southeast side of Manda Drive, southeastern portion of Rod Circle. Should also verify properties in Middletown Glen. Are we including school facilities?*
8. All residents and businesses in the Town of Middletown will participate in Frederick County's single stream recycling program.
9. An education program is put into place that teaches the public, school children, and business owners about sustainable development and sustainable living.
10. The use of native species landscaping will be supported and promoted in all subdivisions and site plans in the Town in order to diminish the negative impacts of drought-intolerant or invasive plant and tree species.
11. Adequate shading of paved surfaces will be provided in parking areas and along streets to the extent possible.