

Appendix

Dated April 30th, 2023

Appendix A

Working Document - GROW 2023 PLANNING CALENDAR

GROW Meetings

Environmental/Educational Events

Meetings	Events	Newsletters (due 15 th prior mo.)	Snippet
January 12th	Nicor Energy Efficiency (Liz) Sat/Sun. Jan 21 th /22 nd : 9a-10a	Low-Salt Streets (Lee)	New Commissioner search (Lee)
February 2nd			Reusa-Palooza
March 2nd	CUB Solar for All (Liz) Sat/Sun. Mar 25 th /26 th : 9a-10a	Tree Equity Heat/ Flooding	~Energy Efficiency ~Recycling Rules of the Road ~Reusa-Palooza
April 6th	April 29th Shredding Event MWRD-Tree Saplings/Rain Barrel Raffle-Drug Take back Arbor Day April 28th Earth Day April 22nd	Waste not...want not! Food Waste Prevention Week April 10-16	Picture on what not to do (Sign Up 2024 Event) iNaturalist City Nature Challenge April 28th- May 1st Pictures May 2nd-May7th ID
May 4th Planting Month	May 10th Adult Bike Safety/Maintenance/ Ride May 13th Village Clean-Up & Kid/Parent Bike Safety/Ride May 20th Midwest Grows Green - Sustainable Landscaping	Why Plant Native and Leave the Debris? Sustainable Landscaping Amendment vs Chemical Weeds Chart	Composting - 1st Week of May Awareness Week IFSC (Library Event?)

June 1st	June 8th @ 6:30p Jeff Swano Benefits of Green Infrastructure F/U Biking Engagement - Bike to Work Month? Solar Power Hour?	No Mow June & July Bike to Work Month	Biking Rules of the Road
July 6th	Fourth Of July Parade GROW Table Climate Reality Speaker	American Duty to Remove Buckthorn - Updated Ordinance and Why	Invasive Species List
August 3rd	Westchester Fest-No		
September 7th	9/9 Prairie Fest 9/23-24 Reusa-Palooza		
October 5th	10/7 Tour deProviso 10/7? I Love Native Plants Sale - Dave/ Holly Peterson	Composting	
November 2nd	Pumpkin Smash	Replacement Hedges	
December 7th	WM Event? Buckthorn Christmas in Proviso		

Appendix B

Working Document: 2023 Climate Action Plan for the Village of Westchester
1/28/2023

1. Demonstrate Leadership to Reduce Emissions

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Establish local sustainability targets that support regional climate objectives.	€	Med	Enabling GHG Reduction	Done	C4, CEJA, CMAP, MMC
b. Build and support a resilient local economy that supports climate objectives.	\$\$	High		Y / N	
c. Integrate smart technology into operations to effectively manage resource consumption.	\$\$\$	High		Y / N	
d. Adopt the Greenest Region Compact and a GRC-based sustainability plan aligned with the regional climate objectives.	\$	Med	Enabling GHG Reduction	Y / N	Baseline scoring of GRC pending.
e. Demonstrate sustainability in municipal operations, purchasing, and through public events.	\$	High	Enabling GHG Reduction	Y / N	

2. Decarbonize Energy Sources

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Procure clean energy for municipal operations. Build renewable energy and energy storage capacity.	\$\$\$	High	High	Y / N	May utilize ILSPA to lower cost depending on location within Village
b. Engage the community to choose clean energy through procurement, aggregation, financing, community solar, and other collaborative programs.	\$	Low	Enab	Y	GROW Solar Chicagoland, Illinois Solar for All, (CS2 pending review)
c. Partner with utilities to complete decarbonization of the local grid, collaborate to decarbonize the multi-state regional grid.	\$\$\$	High	High	Done	CEJA Legislation Passed, State Implementation Underway
d. Explore renewable district energy solutions.	\$\$\$	High	High	Y / N	

3. Optimize Building Energy

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Retrofit municipal buildings, facilities, and streetlights for maximum efficiency.	\$\$	Low	Low	Y / N	
b. Support electric space and water heating through demonstration and education.	\$\$\$	Med	High	Y / N	
c. Engage residential and commercial property owners to optimize building efficiency. Leverage programs such as demand response, energy efficiency, and PACE financing.	\$	Low	High	Y	Nicor and ComEd Energy Efficiency Programs

4. Implement Clean Energy Policies

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Support robust building energy conservation codes, benchmarking, and building performance standards to optimize energy efficiency for retrofit projects.	\$	Med	Enab	Y / N	State Codes and Stretch Codes being updated
b. Require high performance, all-electric, and net zero building construction.	\$\$\$	High	High	Y / N	

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4. Implement Clean Energy Policies (Continued)

Strategy	Cost	Effort	Effect	Plan?	Comments
c. Modernize municipal franchise agreements to leverage investment in clean energy and reduce costs to residents.	\$\$\$	Med	High	Y / N	
d. Adapt zoning codes and streamline development processes to accelerate investment in solar and other renewable energy systems.	\$	Med	Enabling GHG Reduction	Y / N	Standardized Solar Permitting App Free/ Available, SolSmart Adoption
e. Support state policies to advance clean energy	c	Low	Enabling GHG Reduction	Y / N	Village lobbyist

5. Decarbonize Transportation

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Create accessible and reliable networks of electric vehicle (EV) chargers.	\$\$	High	Enab	Y / N	ComEd Beneficial Electrification Grant Opportunity
b. Transition fleets to low- and zero- emission vehicles and encourage others to do so. Encourage the switch to electric passenger vehicles. (Consider planned replacement at end of life and total cost of ownership in financial analysis)	\$\$\$	Med	High	Y / N	ComEd Beneficial Electrification Grant Opportunity
b.2. Transition diesel fleet vehicles to B20 biodiesel (examples: Oak Park, Elmhurst, Warrenville, Carol Stream, Arlington Heights, Moline)	\$ - \$	Low	Med	Y / N	No modification to vehicles or fuel storage req'd. State gas tax does not apply to B20. Interim solution until vehicle end-of-life.
c. Support strong national fuel efficiency standards.	\$	Low	High	Y / N	
d. Enact and enforce anti-idling policies.	\$	Low	Low	Y / N	Enforcement?
e. Adapt development processes to accelerate investment in EV charging infrastructure.	\$	Med	Enab	Y / N	EV Ready, ComEd Beneficial Electrification Grant Opppty

6. Reduce Vehicle Miles Traveled

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Prioritize transit oriented development and transit-supportive development.	\$\$	High	High	Y / N	
b. Promote multi-family housing development near transit stations and along transit routes.	\$	Med	High	Y / N	
c. Collaborate to enhance regional transit and expand capacity.	\$\$\$	High	High	Y / N	Existing RTA accessibility
d. Plan and design roadways and corridors to benefit all road users and promote active transportation.	\$\$	High	Combined High w/below	Y / N	Complete Streets Implementation
e. Build and maintain safe, resilient, and accessible active transportation infrastructure.	\$\$	High	Combined High w/below	Y / N	Complete Streets Implementation

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6. Reduce Vehicle Miles Traveled (Continued)

Strategy	Cost	Effort	Effect	Plan?	Comments
f. Encourage walking, biking and transit use through education, incentives, and collaboration.	\$	Low	Combined High	Y / N	Tour de Proviso, Bike to Work
g. Strategically manage parking policies to promote active and public transportation.	\$	Med	Combined High	Y / N	Bike Racks, Street parking assessment.

7. Manage Water and Waste Sustainably

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Capture landfill emissions and eliminate pipeline methane emissions.	\$\$	Med	High	Y / N	
b. Capture and convert wastewater biogas to energy.	\$\$\$	High	Med	Y / N	
c. Increase composting and biological treatment of waste. Utilize compost and biosolids in landscapes.	\$\$\$	High	Low	Y / N	
d. Support circular economies.	\$\$	High	Combined High	Y / N	Reusa Palooza
e. Increase the volume of waste that is recycled and composted.	\$\$\$	Med	Combined High	Y / N	WM Contract Discussion, Pumpkin Smash, How to Compost
f. Reduce energy needed to deliver safe drinking water and shift operations to clean energy sources.	\$\$	High	Low	Y / N	
g. Reduce energy needed to manage wastewater and shift operation to clean energy sources.	\$\$	High	Low	Y / N	
h. Encourage water conservation.	\$	Low	Low	Y	Nicor Energy Efficiency

8. Sustain Ecosystems to Sequester Carbon

Strategy	Cost	Effort	Effect	Plan?	Comments
a. Grow and manage public landscapes to optimize ecosystem services and support	\$\$	High	Sequestration	Y/N	
b. Encourage property owners to install and maintain sustainable and native landscapes.	\$	Med	Sequestration	Y	Native Plant Education and Sale
c. Plant trees and sustain the urban forest.	\$	Med	Sequestration	Y	CRTI Grant, Public Works, Ongoing
d. Encourage citizen tree stewardship.	c	Med	Sequestration	Y	Citizen Meetings
e. Preserve soil through low-impact development and restore soil integrity.	\$\$\$	High	Sequestration	Y / N	

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Appendix C



Energy
Efficiency
Program



Save money and energy this winter

The Village of Westchester, Green Residents of Westchester (GROW), and Nicor Gas have teamed up to help you save energy and reduce your monthly energy bills.

Enjoy a free continental breakfast while you learn about:

- ❖ Free energy-saving products
- ❖ Home assessments
- ❖ Additional free improvements that may be available to you

Join us on either of the following dates:

Saturday, January 21
9 a.m. – 10 a.m.

Sunday, January 22
9 a.m. – 10 a.m.

Westchester Village Hall
10300 Roosevelt Road
Westchester, IL

The Nicor Gas Energy Efficiency Program is funded by Nicor Gas customers in compliance with state law.

Appendix D



Green Residents of Westchester (GROW)

Ecological Commission

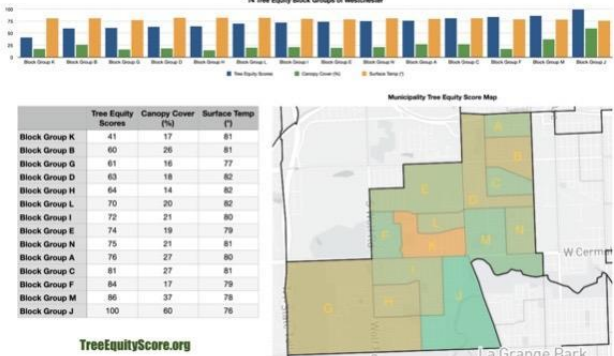
Tree Equity, Heat & Flooding

By: Nicole Molinaro - GROW Commissioners

On February 9th Chicago Region Trees Initiative held a Partner Recognition Celebrati where I learned that heat is a silent killer as well as the #1 weather killer in the US. (<https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths>)

Of the 74 severe storms that occurred in 42 years almost a quarter were in the last three years. 47% of severe storms happened within the top 6 years of 2003, 2017, 2020, 2021, 2011 & 2022

Canopy trees and understory friends like shrubs, herbaceous and ground covers help mitigate heat and severity of storms. As a Tree City USA and recent recipient of the 2022-24 Urban & Community Forestry Grant, it's not a matter of "if" your parkway will get a tree it is when your parkway will.



Westchester has committed to planting diverse natives on public property whether through the Tree Replacement Program or our 50/50 program. Utilizing the 50/50 program allows the resident to pick the tree they want on the parkway which helps the village to plant more trees within the year. We can do more as residents to mitigate heat islands and help infiltrate water by planting with a permaculture plan that includes diverse "guilds" on our private property. Land conservation and restoration of a monoculture of grass is environmental justice work. Planting tree friends can reduce stress on our water and sewer pipes by holding water at ground level to share with larger trees when in need. Trees will always find a water source and increasing capacity by planting native friends with tap roots decreases the likelihood roots will seek out your pipes.

The Tree Equity Score includes Priority Indicators like Surface Temp, Health Risk Index, % of People in Poverty, % of Seniors (65+), % of Children (0-17), % People of Color & % of Unemployment. As you can see surface temp increases with lack of canopy coverage and lower TE score. Block Group K is last at 14th with a TE score of 41, which begins at Canterbury and Mandel Ave and includes HighRidge Park, Intermediate School, St. Joseph property, Single and 2-3 Family residences and some Restricted Businesses along Cermak to Mannheim. An almost 20 point Tree Equity difference from Block Group B which means that if your parkway doesn't have a tree, and you live in one of these areas, it will soon and planting tree friends on your property contributes to overall community health and mitigation of heat and flooding. Collectively we can make a difference together not only for Westchester but for all of Proviso. Not sure where to start? GROW Ecological Commission is a resident led public body to help provide information to any environmental questions you may have. We generally meet the first Thursday of the month and our next meeting is March 2nd at 6:30pm.

Possible Parkway Tree Options 2023

	Growth Form	Mature Height	Mature Width	Flower Color	Fall Color	Misc
Shingle Oak	Single Trunk	40 feet	40 feet	Yellowish catkin	Russet Orange	Butterfly Host, Loved by Birds
Ironwood	Single Trunk/ Shrubby/ Clump	42 feet	20 feet	Yellowish catkin	Yellow	
Quaking Aspen	Single Trunk/ Shrubby/ Clump/ Colonizing/ Spreading	30 feet	15 feet	Yellowish catkin	Yellow	Butterfly Host, Soil Stabilizer, Loved by Birds
Tulip Tree	Single Trunk	60 feet	40 feet	Cream	Yellow	
Chinquapin Oak	Single Trunk	50 feet	50 feet	Yellowish catkin	Orange Yellow	Butterfly Host, Loved by Birds
White Oak	Single Trunk	50 feet	50 feet	Yellowish catkin	Red Purple	Butterfly Host, Loved by Birds
Osage-orange	Single Trunk/ Shrubby/ Thorns	20-40 feet	20-40 feet	Greenish Yellow Males wither away, Females non-edible fruit	Yellow Green	Small Mammal Host



Sticks and Stones Preschool Fundraiser Native Plant Sale

Partner Possibility Place Nursery

Money raised will be used to build ecological areas
around Preschool & Westchester Community Church



Make sure to see this banner above when ordering
[https://www.possibilityplace.com/order-online?
partner=sticksandstones](https://www.possibilityplace.com/order-online?partner=sticksandstones)

Appendix F

Westchester

2019 municipal emissions summary

This local emissions summary was developed as part of the 2019 greenhouse gas emissions inventory for northeastern Illinois. The summary is not an exhaustive inventory but captures greenhouse gas emissions from most major sources. It is intended to help decision makers understand key emissions sources and provide communities with the information needed to begin developing emissions reduction plans. For more details on the methods and data sources used to prepare the summary, please refer to the [local emissions summaries methodology](#).

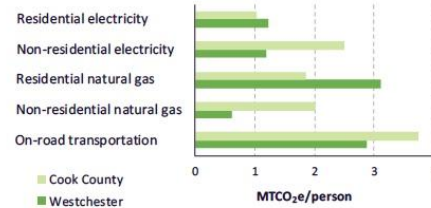
Emissions summary

2019 emissions summary (MTCO₂e)

Residential electricity	20,827
Non-residential electricity	19,949
Residential natural gas	52,492
Non-residential natural gas	10,396
On-road transportation	48,645
Waste sector	7,688

MTCO₂e = metric tons of carbon dioxide equivalent

2019 per capita emissions

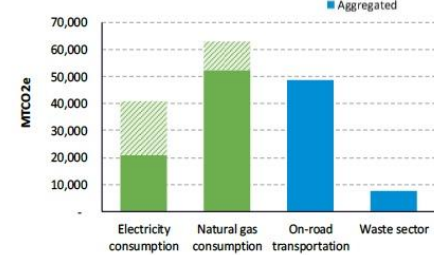


Community characteristics

Population	16,892
Jobs (full- and part-time)	10,789
Median household income	\$86,623
Share of owner-occupied housing units	92%
Land area (acres)	2,359
Tree coverage*	26%
Impervious surfaces*	49%
Greenest region compact member	Yes

*percent of land area

2019 emissions



On-road transportation emissions breakout



Energy characteristics

2019 energy consumption

Residential electricity (kWh)	53,534,196
Non-residential electricity (kWh)	51,279,383
Residential natural gas (MMBtu)	988,287
Non-residential natural gas (MMBtu)	195,734

kWh = kilowatt hours; MMBtu = million British thermal unit

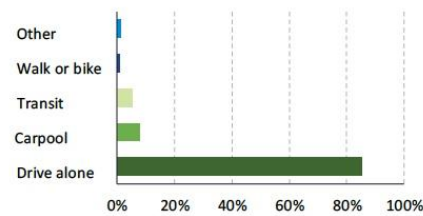
Renewable energy information

Solar potential (megawatts)	76
SolSmart designation	NA

Data not available for all municipalities

Transportation characteristics

Mode of travel to work



Electric vehicle information

Electric vehicles	19
Public charging stations: level 2	0
Public charging stations: DC fast	0
Public charging stations: total	0

2019 municipal emissions summary | Westchester

2019 per capita energy consumption

	Westchester	Cook County	CMAP Region
Residential electricity (kWh/person)	3,169	2,614	2,844
Non-residential electricity (kWh/person)	3,036	6,417	7,279
Residential natural gas (MMBtu/person)	59	35	38
Non-residential natural gas (MMBtu/person)	12	38	38

kWh = kilowatt hours; MMBtu = million British thermal unit

Transportation details

	Westchester	Cook County	CMAP Region
Vehicles per household	2.0	1.7	2.0
Electric vehicles (% of passenger vehicles)	0.1%	0.2%	0.2%
Share of residents with at least moderate walkability	99%	85%	64%
Share of residents with at least moderate transit access	95%	92%	74%
Residential vehicle miles traveled (per household)	18,644	14,123	17,165

Data are not available for all municipalities

January 2023 release

Appendix G

<http://nemo.udel.edu> - Delaware NEMO is an educational program for local decision makers that addresses the relationship between land use and natural resource protection, with a focus on watersheds.
(<http://nemo.udel.edu/manual/chap2web.pdf>)

Impervious Cover

Impervious cover is any surface in the landscape that cannot effectively absorb or infiltrate rainfall. This includes driveways, roads, parking lots, rooftops, and sidewalks. When natural landscapes are intact, rainfall is absorbed into the soil and vegetation. These mediums naturally slow down, spread out, and soak up precipitation and runoff. Water percolating into the soil becomes a stable supply of groundwater, and the runoff is naturally filtered of impurities before it reaches creeks, streams, rivers, and bays.



Excess impervious cover creates a landscape that cannot absorb or infiltrate rainfall.

As areas become more developed, the amount of impervious cover increases, and natural filter systems are no longer in place to intercept the runoff. This has serious implications for water quality and flood control. Typical pollutants in runoff from impervious areas include pesticides, oil, litter, fertilizers, sediment, salt, and bacteria. A growing body of scientific literature has shown that groundwater recharge, stream base flow, and water quality measurably change and can decrease as impervious cover increases. Studies have shown a direct relationship between the intensity of development, as indicated by the amount of impervious surface, and the degree of damage in a watershed.

The Implications of Impervious Cover

Water bodies become degraded as the percentage of impervious cover in a watershed increases. Hydrologically, this means reduced volumes of water to recharge base flows and increased runoff from rains, increasing peak flows. These two things, respectively, exacerbate drought and flooding impacts. According to the National Weather Service, major floods can develop from as little as 2.2 inches of rain over a six-hour period in northern Delaware, one-third less precipitation than is needed to trigger the same degree of flooding in less-developed parts of the state. Center for Watershed Protection studies indicate that the size of one-hundred-year floods (or floods that have a one percent chance of occurring in any given year) can potentially double in watersheds with impervious cover levels greater than 20–30 percent.¹

The other impacts on water quality include chemical, physical, and biological degradation. Chemically, an increased presence of bacteria, nutrients, pathogens, and sediment in receiving waters can limit the viability of drinking water and recreational activities. Physically, decreases in stream bank stability, the amount of large woody debris, and channel roughness consequently lower the quality of habitat available for biologic species. Biologically, species diversity declines, biological interactions are altered, and pollution-tolerant organisms become more prevalent.

Based on research in Delaware and elsewhere, streams can show signs of degradation and can be considered stressed in watersheds where the impervious coverage exceeds 10–15 percent. Impervious cover can be an important and measurable indicator of stream water quality and watershed health. Therefore, it is important to understand the

typical percentage of impervious surface associated with various urban and suburban land uses. Table 1 illustrates the typical impervious surface coverage for land uses common in Delaware and other states.

Most developed land uses exceed the threshold of 10–15 percent impervious cover, which defines a healthy watershed or stream system. It may initially appear from Table 1 that dispersed development would be desirable; that building homes on lots of one or two acres with scattered commercial areas (the “sprawl scenario”) would result in the lowest percentage of impervious surface coverage. However, on a regional or watershed level, greater overall water supply and quality protection is achieved through more concentrated development. Under the sprawl scenario, development is spread over a much broader area, and additional impervious area in the form of roads would be needed to link the dispersed houses and communities together. University of Delaware Water Resources Agency research estimates that roadways are typically 50 percent impervious cover, including the median and rights of way. Therefore, dispersed development can result in a significant increase in the total impervious cover in the watershed. Concentrated development results in greater protection for the overall watershed, as a much larger percentage of the watershed is left in its natural condition, preserving water supply and quality. In addition, such centralized development can be directed away from sensitive areas, such as stream banks, to minimize the negative impact on water quality.



Additional impervious area, in the form of roads, is needed to link dispersed communities

Table 1. Typical Percent Impervious Coverage of Land Uses in Delaware

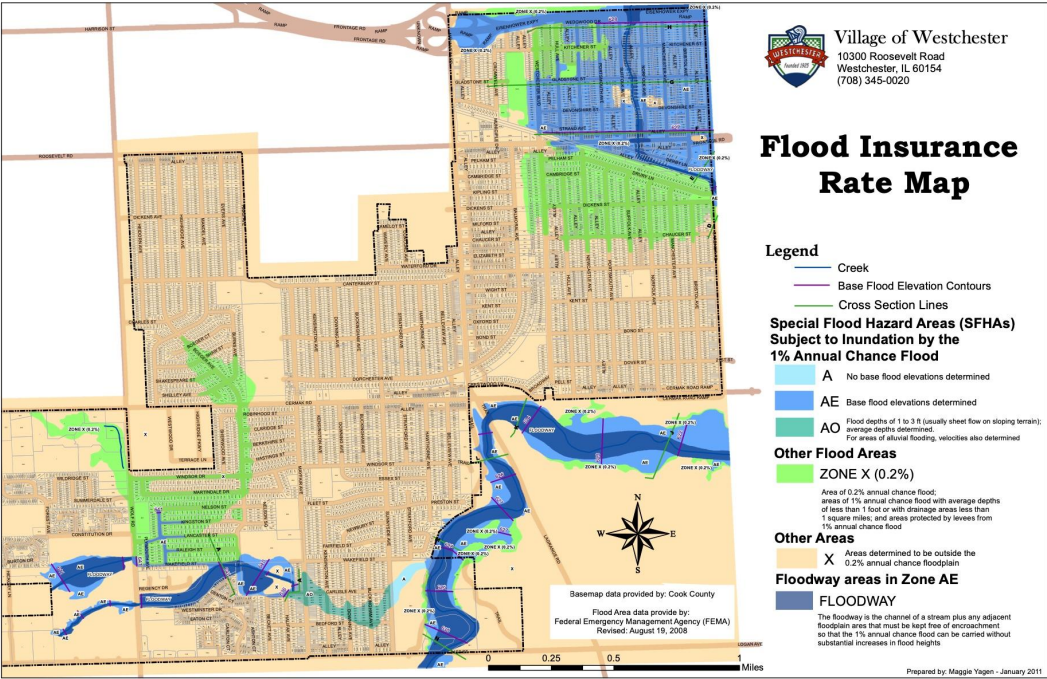
Land Use	% Impervious Cover
Commercial and business district	85%
Industrial	72%
Residential district with 1/8 acre or less lot size (town houses)	65%
1/4 acre lot size	38%
1/3 acre lot size	30%
1/2 acre lot size	25%
1 acre lot size	20%
2 acre lot size	12%

Sources: University of Delaware, Water Resources Agency, 1998; USDA, Soil Conservation Service, TR-55, 1983.

As land-use decision makers are evaluating development projects, it is important that they understand the connection between land use and impervious cover percentages

and their impact on water bodies. A decision maker can minimize the percentage of impervious cover and its impact through informed and educated decision making. Being aware of the implications of high percentages of impervious cover in a concentrated area and taking steps to reduce and mitigate it accordingly is a key tool in reducing the negative impacts of impervious cover.

Appendix H
Westchester Flood Map



Appendix I
Westchester Flood Tracker
Google Form 6.30.21
Citizen tracked for the betterment of our community.
29 responses, 25 locations.
<https://goo.gl/maps/SM2FCwQW2mMDNWWL8>

