



# PRIORITY ACTIONS WEBINAR

August 8, 2019

Samantha A. McGraw, Program Manager

Nancy Quirk, Energy Program Manager

Tracey Woods, Project Research Specialist

@SJ\_Program • #DecadeofImpact

# AGENDA

1. Background of priority actions
2. Selecting priority actions
3. Priority action review
4. Question & answer



@SJ\_Program • #DecadeofImpact

# WHAT IS A PRIORITY ACTION?

- Perceived to be especially important for the sustainability movement
- Areas both at the forefront of our minds and those not as obvious but still important
- Completing 2 or 3 priority actions indicates a diverse sustainability mindset



# CERTIFICATION REQUIREMENTS



2 Priority Actions  
for Bronze



3 Priority Actions  
for Silver



@SJ\_Program • #DecadeofImpact

# PRIORITY ACTIONS

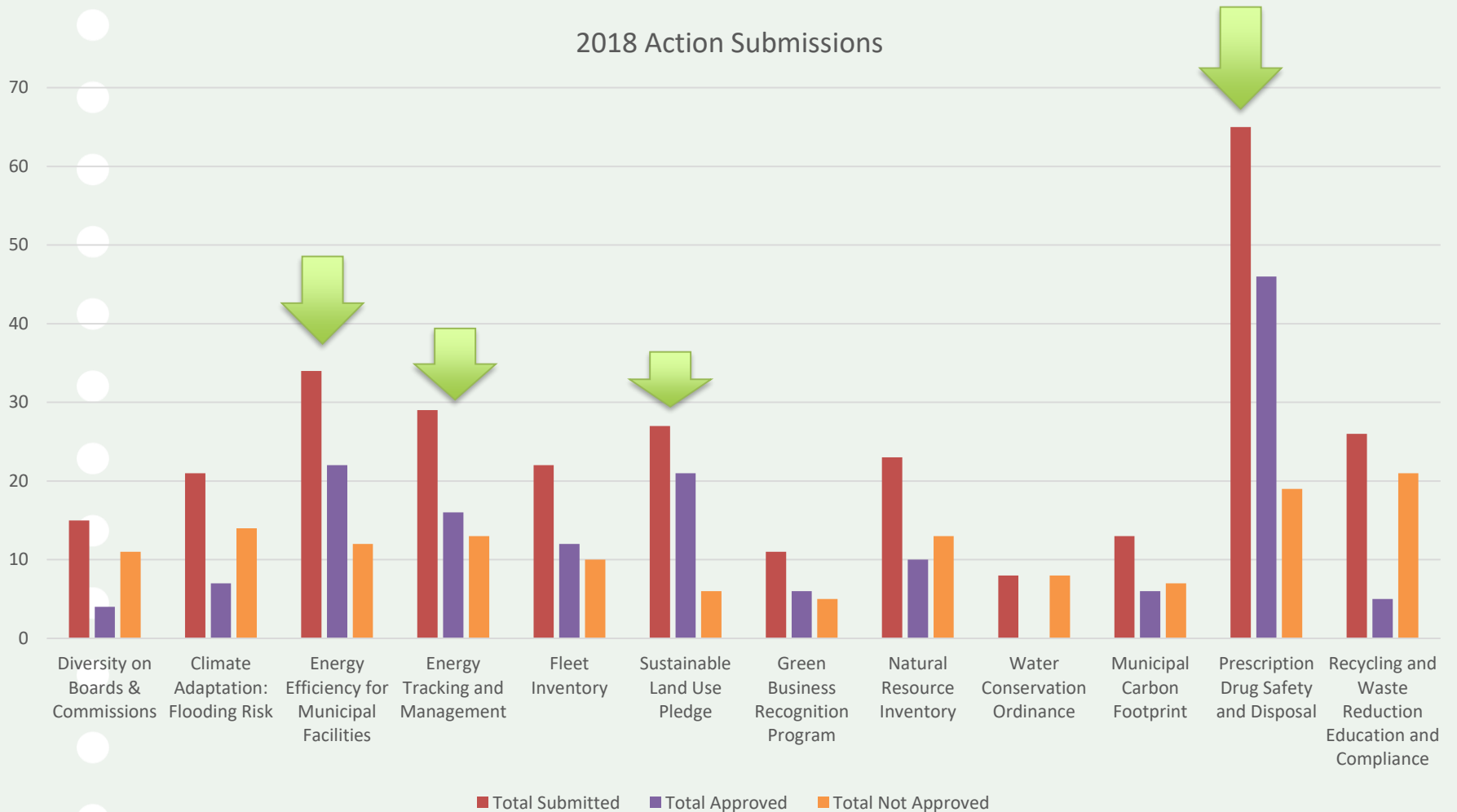
- Climate Adaptation: Flooding Risk
- Diversity on Boards & Commissions
- Energy Tracking & Management
- Energy Efficiency for Municipal Facilities
- Fleet Inventory
- Green Business Recognition Program
- Municipal Carbon Footprint
- Natural Resource Inventory
- Prescription Drug Safety and Disposal
- Recycling and Waste Reduction Education and Compliance
- Sustainable Land Use Pledge
- Water Conservation Ordinance

Priority actions are listed on the [Certification Overview page](#)



# SELECTING PRIORITY ACTIONS

2018 Action Submissions



@SJ\_Program • #DecadeofImpact

# SELECTING PRIORITY ACTIONS

2018 Approval Rates



@SJ\_Program • #DecadeofImpact

# PRIORITY ACTIONS WITH HIGH APPROVAL RATE

- ❖ Sustainable Land Use Pledge
- ❖ Prescription Drug Safety & Disposal
- ❖ Energy Efficiency for Municipal Facilities
- ❖ Energy Tracking and Management
- ❖ Fleet Inventory
- ❖ Green Business Recognition Program





# PRESCRIPTION DRUG SAFETY AND DISPOSAL - Requirements

## Two Options:

- Hold Two Collection Days/Year
- Establish Permanent Drop-Off Location

## Requirements for BOTH Options:

- Description, date and location of the program. If permanent box, provide the address and hours of operation.
- Copies of the educational/promotional materials to advertise program.
- Number of clients served, number of prescriptions collected, total weight in pounds, along with a description of the final disposal of the drugs.
- Link to the municipal or police department website page where information advertising the prescription drug collection program is posted.
- Photo of drop off area.

**Resubmission Requirements:**  
Full update of submission with current documentation.



# PRESCRIPTION DRUG SAFETY AND DISPOSAL - Pitfalls

1. Outdated documentation – 1.5 year look back period.
2. Towns only hold one collection event.
3. Address and hours of operation not provided for permanent drop box.
4. No link to municipal/police department website advertising program.



# PRESCRIPTION DRUG SAFETY AND DISPOSAL – Spotlights

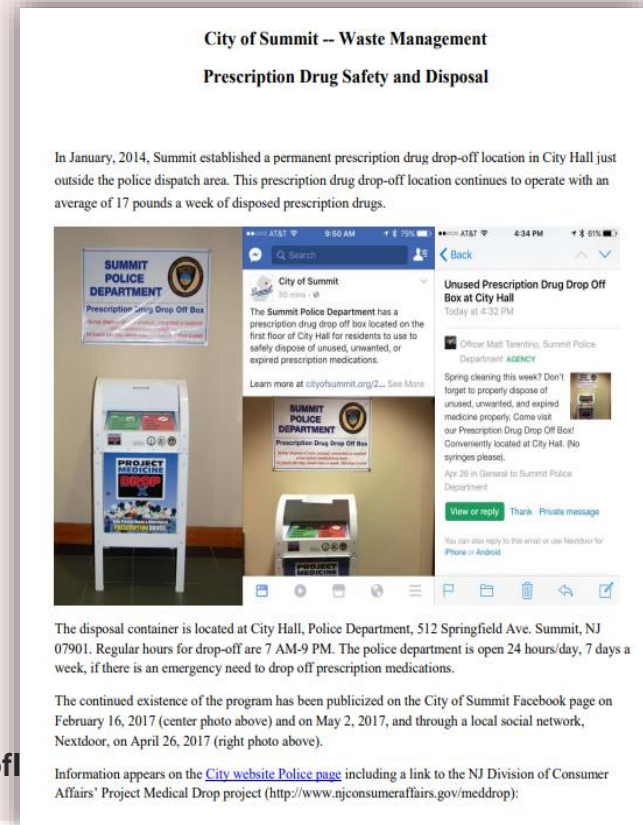
## Rutherford Borough – DEA Operation Take Back

- [Program Information](#)
- [Social Media & Nixle Promotions](#)



## Summit City – Permanent Box

- [Program Information](#)



NJ Program • #Decadeof

# RECYCLING AND WASTE REDUCTION EDUCATION AND COMPLIANCE – Requirements

## 15 Points:

1. Recycling and Waste Reduction Education and Compliance Strategy (use [template](#) linked in action).
2. Municipal recycling ordinance
3. Recycling inspections report
4. Accepted materials flyer
5. Screenshot or link of an updated municipal recycling web page
5. Four notifications of recycling policies/procedures. 2 print and 2 digital required.
6. Two notifications on reducing household waste.

**Additional 5 Points:** Use and promotion of a recycling app



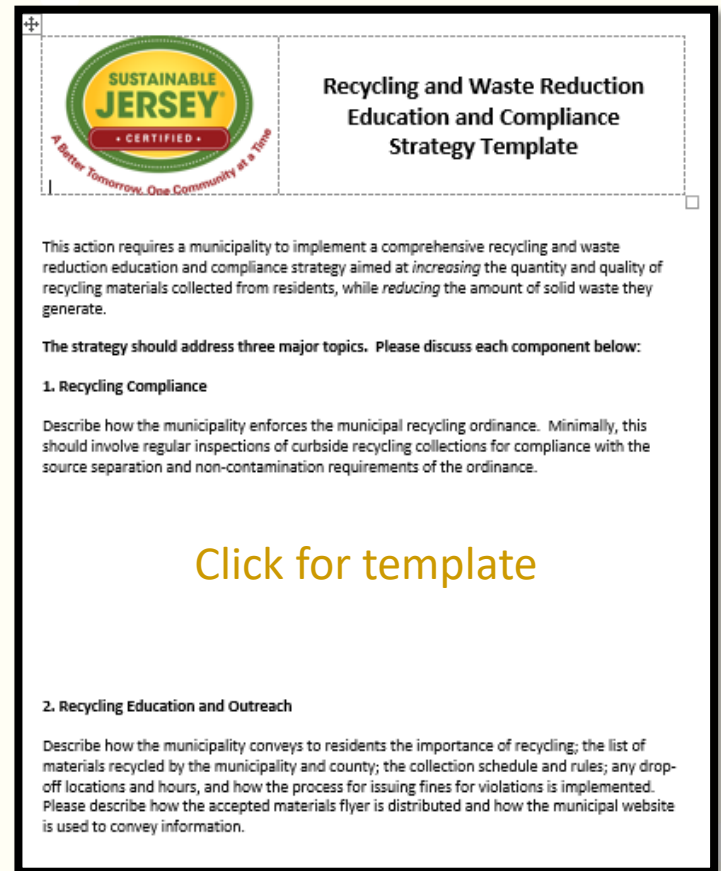
@SJ\_Program • #DecadeofImpact

## **Resubmission Requirements:**

Update description of implementation & new documentation for items 3-6.

# RECYCLING AND WASTE REDUCTION EDUCATION AND COMPLIANCE – Pitfalls

1. Strategy template not used.
2. Report on inspections not provided.
3. Accepted materials flyer (visual depiction of what can/cannot be recycled) not provided.
4. Number and type of required promotional materials not met.



**Sustainable Jersey Certified**  
A Better Tomorrow... One Community at a Time

## Recycling and Waste Reduction Education and Compliance Strategy Template

This action requires a municipality to implement a comprehensive recycling and waste reduction education and compliance strategy aimed at *increasing* the quantity and quality of recycling materials collected from residents, while *reducing* the amount of solid waste they generate.

The strategy should address three major topics. Please discuss each component below:

- 1. Recycling Compliance**  
Describe how the municipality enforces the municipal recycling ordinance. Minimally, this should involve regular inspections of curbside recycling collections for compliance with the source separation and non-contamination requirements of the ordinance.
- 2. Recycling Education and Outreach**  
Describe how the municipality conveys to residents the importance of recycling; the list of materials recycled by the municipality and county; the collection schedule and rules; any drop-off locations and hours, and how the process for issuing fines for violations is implemented. Please describe how the accepted materials flyer is distributed and how the municipal website is used to convey information.
- 3. Recycling Compliance**

[Click for template](#)





# Priority Actions: ENERGY

Energy Tracking and Management

Energy Audit

Local Government Energy Audit (LGEA)

- [njcleanenergy.com/commercial-industrial/programs/local-government-energy-audit/local-government-energy-audit](http://njcleanenergy.com/commercial-industrial/programs/local-government-energy-audit/local-government-energy-audit)

Efficiency Upgrades

- Incentives and financing available
  - NJ Clean Energy Program [njcleanenergy.com](http://njcleanenergy.com)
  - Utility providers (varies by utility)



Track Energy  
Use

Energy Audit

Efficiency  
Upgrades

# Energy Tracking and Management-Requirements

## For base 10 points

- Building portfolio
  - Address
  - Date built
  - Square footage
  - Use
  - Schedule of occupancy
  - Utility account numbers
- Most recent twelve-months of energy use data for all buildings
  - Energy Star Portfolio Manager (ESPM)
  - Share ESPM Account with Sustainable Jersey

## For additional 10 points

- Benchmarking report for each building in the inventory
  - ESPM
- or
  - NJCEP Benchmarking Report
- Demonstrate ongoing Energy Tracking and Management system
  - Identify staff responsible
  - Identify frequency (monthly, quarterly)



# Energy Tracking and Management- Pitfalls

## For base 10 points

- Building portfolio
  - Address
  - Date built
  - Square footage
  - Use
  - Schedule of occupancy
- Recent consecutive twelve-months of energy use data for all buildings

## For additional 10 points

- Benchmarking report for each building in the inventory
- Demonstrate ongoing Energy Tracking and Management system
  - Identify staff responsible
  - Identify frequency (monthly, quarterly)

# Spotlight: Gloucester

## Sample Building Portfolio

a. Name and address

b. Description

square footage

year built

occupancy/use schedule

c. List of utility accounts

### 1. **Municipal Building - 1261 Chews Landing Road, Gloucester Township, NJ 08012**

Stories and Area (sf) - Two-story building with 43,000 sf. There are two buildings attached; offices in 1973 and police building in 1976.

Building condition -

#### Roof

The roof is mostly flat, built up rubber roof where the majority of the HVAC exits are.

#### Walls

The whole building is a brick exterior with a concrete interior construction.

#### Windows

The windows in the facility are in average condition, most windows are 1/4' single pane glass with aluminum frames.

Facility Use  
And  
Occupancy

#### Description

The building is comprised of administrative offices, lounges, courtrooms, holding areas, and surveillance areas.

#### Hours

Monday – Thursday 8:00 am to 5:45 pm. The police building (1/3) is in use 24 hours a day, 7 days a week. The building is occupied with 120 employees.

**HVAC Systems** The building is heated mainly through a baseboard ~~heat and hot water fan coil unit~~ that is offered hot water by a central boiler plant located beneath the police building. The building uses one (1) Weil McLain gas-fired boiler that has an input of 2,049 MBH and an output of 1,632. The boiler efficiency is 80%.

The cooling for the police building utilizes two (2) 20-ton Drake Refrigeration Inc. Air-cooled chillers. The courtroom is cooled by one (1) 5-ton York packaged A/C unit with 125 MBH of gas heat, one (1) 20-ton packaged A/C unit with 400 MBH of gas heat and one (1) 13-ton packaged A/C unit with 250 MBH of gas heat (CEG.) Continuing on the police building, the communications building is cooled by a 3-ton York condensing unit. Lastly, one (1) 2.5-ton Fujitsu split system serves the server room.

Currently, 11 Coleman cooling units with 7 kW electric heat strips provide the municipal offices. With the heat strips they go to; one (1) 2-ton unit, eight (8) 2.5 ton units, and two (2) 3-ton units. In addition, there are two (2) Trane 15 ton split systems condensing unit, which cools the council room.

**Lighting** - Lighting is good in the Municipal Building. Recently the lighting fixtures were replaced with T-8 energy efficiency fluorescent fixtures by in house employees, saving on costs of installation.

# Building Portfolio: Options

## Bernards Township Building Portfolio

Building	Address	Description	Area (sf)	Year Built	Usage Schedule	Utility Acco
Townhall	1 Collyer Lane	Municipal Offices	14,433	1913	8:00am-4:30pm, M-F	JCP&L 10 0 PSE&G 73 3
DPW/Engineering	277 South Maple Ave	Department of Public Works & Engineering Services Building	22,260	1983	8:00am-4:30pm, M-F	JCP&L 10 0 PSE&G 73 3
Library	32 S. Maple Ave.	Library	26,900	1974	9:30am-9:00pm, M-T 9:30am-5:00pm, F 10:00am-5:00pm, S 1:00pm-4:00pm, S	JCP&L 10 0 PSE&G 73 3
Police	1 Collyer Lane	Police Dept.	6,328	1990	24/7	JCP&L 10 0 PSE&G 73 3
Health Dept.	262 S. Finley Ave.	Health Dept.	2,337	1913	8:00am-4:30pm, M-F	JCP&L 10 0 PSE&G 73 381 138 07
BTSA Plant	726 Martinsville Rd.	Sewer Treatment Plant	11,330	1970	6:30am-3:00pm, M-F 6:30am-10:30am S,S	JCP&L 10 00 07 2578 82 PSE&G 73 381 160 08

## Bogota Energy Tracking and Management System

Address	Building	Built	Usage	Sq Ft	Account #
164 Central Ave	Fire House	1915	4 hrs/day	3800	6758820602
	<b>Electric (KW)</b>	<b>Gas (T)</b>			
	<b>Aug-16</b>	2526	12.569		
	<b>Sep-16</b>	2495	13.643		
	<b>Oct-16</b>	1831	67.63		
	<b>Nov-16</b>	1834	212.476		
	<b>Dec-16</b>	1834	496.477		
	<b>Jan-17</b>	1877	792.615		
	<b>Feb-17</b>	1613	628.021		
	<b>Mar-17</b>	1651	557.792		
	<b>Apr-17</b>	1630	363.458		
	<b>May-17</b>	1589	165.08		
	<b>Jun-17</b>	1995	48.26		
	<b>Jul-17</b>	2644	25.078		

Borough Hall | Police-Fire ... (+) : < >

Building Description	Street Address	Total Building Area (sq. feet)	Year Built	Hours of Operation	Used for	NJNG Account	JCPL Account Number
MUNICIPAL BUILDING	1 EAST END AVE	2188	1995	30 hours/week	Administrative Offices and Meeting Hall	7.4641E+10	100018315026
MUNICIPAL COURT (BORO HALL ANNEX)	1 EAST END AVE	1530	1996	31 hours/week	Administrative Offices and Meeting Hall	07464108001	100018319176
POLICE / EOC BUILDING	1 EAST END AVE	2509	1995	168 hours/week	Administrative Offices	7.4641E+10	100051897005
PUBLIC LIBRARY	121 CENTRAL AVENUE	1699	1990	32 hours/week	Public Library and Events	5.4632E+10	100018522316
WATER TREATMENT PLANT	130 LAKE ROAD	1094	1934	168 hours/week	Water Treatment	2.2001E+11	100089577777
PUBLIC WORKS GARAGE	130 LAKE ROAD	4632	1980	28 hours/week	Workshop	7.4642E+10	100017872423
PAVILLION & DOCK	CENTRAL AVENUE & RIVER AVENUE	5980	1990	Night Lighting	Recreation	-	100070050685
BOARDWALK & DOCK STRUCTURE	CENTRAL AVENUE & RIVER AVENUE	38760	1990	Night Lighting	Recreation	-	100059797884

< > ... **Building Portfolio** | Energy tracking 2016 | Ener! ... (+) : < >

# Spotlight: Chatham

- Good data tracking
- Continuous use of ENERGY STAR Portfolio Manager for ten years
- Description explains
  - what was accomplished
  - system used
  - points applied for
  - ongoing ETM system

## Energy Tracking and Management **20 Points** **Bronze Priority** **Silver Priority**

### Program Summary:

CHATHAM BOROUGH'S ENERGY TRACKING & MANAGEMENT Chatham Borough has been tracking municipal energy usage for our three main facilities since 2009, using the Energy Star Portfolio Manager system. Data is input monthly for all three Chatham Borough facilities; the Municipal Building and Police Department, Public Works and Water Plant, and Fire Department, based on invoices received from our gas and electricity vendors. Data from the Energy Star Portfolio Manager system is shared with Sustainable Jersey's Tony O'Donnell, who was given read access. Thanks to this data, Chatham Borough has been able to track the effects of the energy efficiency upgrades that were installed over the past few years following the recommendations of the LGEA audits conducted in 2010. In 2011, energy efficient furnaces were installed in the Municipal Building, allowing the Borough to automatically control and program heating and cooling throughout the building, thereby reducing energy consumption. Energy efficient lightbulbs were also installed in 2011-2012. In 2015, old drafty windows were replaced in the Municipal Building, an historical landmark building. Energy data comparisons were presented to the Chatham Borough Council in May 2012, and quarterly progress reports will be provided to the administration who will work with the Green Team, Public Works and the Borough Engineer to further improve Chatham Borough's energy efficiency. In addition, as the Chatham Borough water plant represents 63% of the Source EUI of its three main facilities, separate and more detailed tracking is performed on the daily gallons pumped by the plant, which drive the energy expenditure. This data has allowed management to recognize pipe leakages, which are repaired as they occur. This data is reported monthly by the Director of Public Works to the Mayor, Borough Council and Administrator. The Borough of Chatham is requesting 20 points for this category, because of the clear demonstrated use of a reliable system to track its energy consumption monthly for the past eight years, and use of a baseline to track and report on our progress, as well as the implementation of energy efficiency improvement projects over the past years.

# Chatham Energy Star Portfolio Manager

**ENERGY STAR® PortfolioManager®**

Welcome Account | Notifications | ENERGY | | Contacts | Help | Sign  
SUSTAINABLEJERS Settings STAR Out  
EY: Notifications

**MyPortfolio** | Sharing | Reporting | Recognition

**Municipal Building and Police Department**

54 Fairmount Avenue, Chatham, NJ 07928 | [Map It](#)

Portfolio Manager Property ID: 2789839

Year Built: 1910

[Edit](#)

[Change Metric](#)

**Weather Normalized Source EUI (kBtu/ft²)** Why not score?

**Current:** 125.2

**Baseline:** 153.0

*Note: Not eligible to apply for ENERGY STAR Certification*

Summary | Details | **Energy** | Water | Waste & Materials | Goals

**Meter Summary**

2 Energy Meters Total

2 - Used to Compute Metrics

[Add A Meter](#)

Current Energy Date  
Apr 30, 2019

[Enter Your Bills](#)

**Energy Use by Calendar**

Site Energy (kBtu)

200k

100k

0k

Jul '14 Jan '15 Jul '15 Jan '16

→ Natural Gas

**Four Ways to Enter Bill Data**

1. Manually
2. Use our [simple spreadsheet](#) (one

**Dashboard** (Metrics current as of 05/30/2019 12:21 PM EDT) [Refresh Metrics](#)

Search by ID or Name

Chatham Borough (3) | Energy Highlights | [Refresh Metrics](#)

[Add/Edit/Delete Groups](#) | [Add/Edit/Delete Views](#)

Name	Energy Current Date	ENERGY STAR Score	Site EUI (kBtu/ft²)	Source EUI (kBtu/ft²)
<a href="#">Chatham Borough Fire Department</a> 2787614	03/31/2019	NA	87.0	137.2
<a href="#">Municipal Building and Police Department</a> 2789839	03/31/2019	NA	61.8	125.2
<a href="#">Water Plant</a> 2789840	03/31/2019	NA	244.8	586.3

First Previous Page 1 of 1 Next Last 100 View 1 - 3 of 3

# ESPM utility bill tracking

09/06/2018 10:44 PM EDT




Total Properties: 1

Property Name	Meter Name	Meter Type	Start Date	End Date	Usage/Quantity	Usage Units	Cost (\$)
Mount Holly Township - DPW	2914377-gas	Natural Gas	1/8/2016	2/8/2016	616.29	therms	518.02
Mount Holly Township - DPW	626025738 electric	Electric - Grid	1/8/2016	2/8/2016	1930	kWh (thousand Watt-hours)	58.68
Mount Holly Township - DPW	2914377-gas	Natural Gas	2/8/2016	3/9/2016	541.5	therms	440.98
Mount Holly Township - DPW	626025738 electric	Electric - Grid	2/8/2016	3/9/2016	1680	kWh (thousand Watt-hours)	53.87
Mount Holly Township - DPW	2914377-gas	Natural Gas	3/9/2016	4/8/2016	274.7	therms	205.56
Mount Holly Township - DPW	626025738 electric	Electric - Grid	3/9/2016	4/9/2016	1490	kWh (thousand Watt-hours)	48.02
Mount Holly Township - DPW	2914377-gas	Natural Gas	4/8/2016	5/9/2016	207.14	therms	161.66


▶ | Property | Property IDs | Uses | Use Details ... ⊕ | ◀  ▶

# Benchmarking

- ENERGY STAR Portfolio Manager (ESPM)
- NJCEP Benchmarking Report  
→ [njcleanenergy.com](http://njcleanenergy.com)






**Energy Performance  
Benchmarking Report For:**




**Public Works Building**  
25 North Jefferson Road  
Whippany, NJ 07981

Prepared by:



TRC Energy Services, NJCEP C&I Marketing Manager

Report Generated August 1, 2014



## ENERGY STAR® Statement of Energy Performance

LEARN MORE AT [energystar.gov](http://energystar.gov)

# 27

**ENERGY STAR®  
Score<sup>1</sup>**

**Highland Park Municipal Building (Borough Hall)**

Primary Property Type: Office  
Gross Floor Area (ft<sup>2</sup>): 15,820  
Built: 1976

For Year Ending: December 31, 2018  
Date Generated: April 08, 2019

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

**Property & Contact Information**

Property Address	Property Owner	Primary Contact
Highland Park Municipal Building (Borough Hall) 221 S. 5th Avenue Highland Park, New Jersey 08904 Property ID: 6308319	( ) - ( ) - ( )	( ) - ( ) - ( )

**Energy Consumption and Energy Use Intensity (EUI)**

<b>Site EUI</b>	<b>Annual Energy by Fuel</b>		<b>National Median Comparison</b>
68.8 kBtu/ft <sup>2</sup>	Natural Gas (kBtu)	521,508 (48%)	
	Electric - Grid (kBtu)	543,685 (50%)	
	Electric - Solar (kBtu)	23,911 (2%)	
<b>Source EUI</b>			<b>Annual Emissions</b>
132.4 kBtu/ft <sup>2</sup>			Greenhouse Gas Emissions (Metric Tons CO <sub>2</sub> /year)
			83

### Energy Benchmarks & Comparisons:

As stated on the previous page, the Example NJ Office Building was benchmarked using the U.S. Environmental Protection Agency's *Portfolio Manager*. Energy intensities, emissions and national average comparisons are calculated using this software.

Energy Intensity	Your Building	National Average Office Building
EPA ENERGY STAR Score	39	50
Site Energy Intensity (kBtu/ft <sup>2</sup> )	115.8	103.0
Source Energy Intensity (kBtu/ft <sup>2</sup> )	296.0	263.0

# Share Your ESPM Account with Sustainable Jersey (sustainablejersey)

ENERGY STAR® Portfolio Manager®

MyPortfolio | Sharing | Reporting | Recognition

### Add Contact

There are two ways to add a contact. First, search below to see if the contact you would like to add has a Portfolio Manager account. If you find the person, send a Connection Request, and when they accept the request, they will be added to your Contacts. Second, if the contact you would like to add does not have a Portfolio Manager account, then you can create an entry within your personal contacts.

Find Contact in Portfolio Manager

Search using any of the criteria below:

Name:

Organization:

Username:

Email:

**Connecting with Other Users**

If you think your contact already has an account in Portfolio Manager, search for them. If you find the person, send a Connection Request, and if they accept they will be added to your Contacts. You can easily [share your property](#) information with your contacts.

**Keeping Personal Contacts**

If the contact you want to add does not have a Portfolio Manager account, you can still add them as your personal contact.

ENERGY STAR® Portfolio Manager®

Welcome zenontc: Account | Notifications | ENERGY STAR | Contacts | Help | Sign Out

MyPortfolio | Sharing | Reporting | Recognition

### Share (or Edit Access to) Properties

Sometimes it's really important to be able to share your property with someone else. Maybe they need to help monitor your property, enter energy information (perhaps automatically) or process applications for recognition. If this sounds like what you need, start out by selecting the property(ies) that you'd like to share and who you'd like to share with them. If you have already shared properties, you can also use this form to edit people's access to your properties.

**1 Select Properties**

We'll get into the details of the level of access later. For now, which properties do you want to share and/or edit access to?

All Properties

**2 Select People (Accounts)**

Select contacts from my contacts book:

Sustainable Jersey (SUSTAINABLEJERSEY)

To select multiple contacts, hold down your Control (CTRL) key and click on each selection. Only your connected contacts appear in this list.

**3 Choose Permissions**

If you only need to choose one permission (because you are doing a single share or you want to give the same permissions for all of your shares), select "Bulk Sharing." If you need to assign different permissions or share with Data Exchange providers, select the 2nd option.

Bulk Sharing ("One-Size-Fits-All") - I only need to choose one permission (either Read Only Access or Full Access) and I want to choose the same permission for all of my share requests.

Read Only Access

Full Access

Custom Access (meters are all shared at the same level)

Exchange Data (You can share in bulk for exchanging data [here](#) or you can assign permissions one by one for each property using the radio button below.)

Remove Access

Personalized Sharing & Exchange Data ("Custom Orders") - I need to give different permissions for different share requests, and/or I need to give Exchange Data permission.

**Sharing with Accounts**

In order to share properties with others (either individuals or organizations), you need to be "connected" with them. To make a connection, go to the "Add Contact" or "Add Organization" page and search for them within Portfolio Manager (they need to have a Portfolio Manager account). Once you find them, send a "Connection" request. After they accept your connection request, they will show up on the list to the left.

**Exchanging Data**

To get started, first [connect with an organization that exchanges data](#). Once you are connected, their name will appear on the selection list on the left. Note: you can now share in bulk for [exchanging data](#).

**Who gets to Share Forward?**

Full Access - Automatically includes "Share Forward" rights

Read Only - Automatically does NOT include "Share Forward" rights

Custom - You decide, along with the individual permissions for property, meter, goals and recognition permissions.

Exchange Data - You decide, along with the individual permissions for property, meter, goals and recognition permissions.

ENERGY STAR® Portfolio Manager®

Welcome SUSTAINABLEJERS EY: Account | Notifications | ENERGY STAR | Contacts | Help | Sign Out

MyPortfolio | Sharing | Reporting | Recognition

### My Shared Properties (0)

### Sharing Notifications (0)

You have no new notifications.

Overview of Shared Properties [Learn more about Sharing Properties](#)

[www.energystar.gov/sites/default/files/tools/How%20to%20Share%20Properties%20with%20Other%20Users%20in%20Portfolio%20Manager\\_May%202019\\_Final\\_508.pdf](http://www.energystar.gov/sites/default/files/tools/How%20to%20Share%20Properties%20with%20Other%20Users%20in%20Portfolio%20Manager_May%202019_Final_508.pdf)



# Energy Efficiency for Municipal Facilities: Requirements

**Provide narrative of what has been accomplished:**

- Summarize audit approach
  - NOTE: Only ASHRAE Level 2 audit is acceptable for this action
- High-level conclusions (total energy saved)
- Number of points requested
- Higher level points
  - include EUI calculations in the narrative

**Upload the documentation specified for each tier**



@SJ\_Program • #DecadeofImpact

# Point Tiers for Energy Efficiency in Municipal Facilities Action

## **5 points:**

Upload ASHRAE Level 2 building audit on one building

- Local Government Energy Audit (LGEA) is a Level 2 audit

## **10 points:**

Level 2 audits for all buildings in your portfolio

## **15 points:**

Upgrades on at least one building

Documented 10% energy reduction



# Point Tiers for Action



## ***20 points***

Audit report for all buildings

Upgrades on one or more buildings

Documented 10% energy savings

## ***30, 40, or 50 points***

Document (EUI Spreadsheet) energy consumption for all buildings for two separate years, one before upgrades and one after

Points will be awarded based on the energy savings:

10% = 30 points,      20% = 40 points,      30%+ = 50 points

# Pitfalls

Upload building inventory or certifying statement for higher point tiers

A walkthrough audit is not a ASHRAE Level 2 audit

-- NJCEP offers free Level 2 audits (LGEA program)

**Reach out to New Jersey's Clean Energy Program (NJCEP) before starting any efficiency project**

<http://www.njcleanenergy.com/commercial-industrial/home/home>

Projected energy savings (ESIP or Direct Install) qualify for the higher point tiers, 5 years expiration



# Spotlight- Waterford's LGEA

Local Government Energy Audit (LGEA)  
 free ASHRAE Level 2 Audit  
 New Jersey's Clean Energy Program

<http://njcleanenergy.com/commercial-industrial/programs/local-government-energy-audit/local-government-energy-audit>

14 months energy bills required for application

Potential Post-Implementation Costs

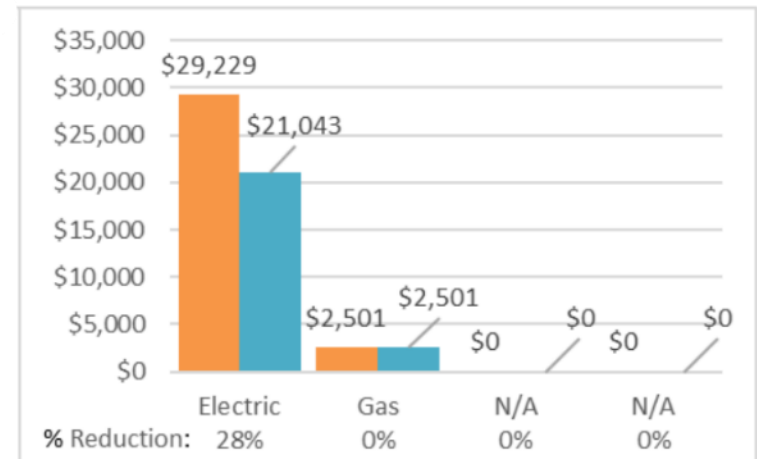


Figure 3 – Summary of Energy Reduction Opportunities

Energy Conservation Measure	Recommend?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>29,533</b>	<b>6.7</b>	<b>0.0</b>	<b>\$4,947.48</b>	<b>\$22,665.86</b>	<b>\$3,050.00</b>	<b>\$19,615.86</b>	<b>4.0</b>	<b>29,740</b>
ECM 1 Install LED Fixtures	Yes	9,572	1.5	0.0	\$1,603.54	\$10,156.03	\$1,000.00	\$9,156.03	5.7	9,639
ECM 2 Retrofit Fixtures with LED Lamps	Yes	19,961	5.2	0.0	\$3,343.93	\$12,509.82	\$2,050.00	\$10,459.82	3.1	20,101
<b>Lighting Control Measures</b>		<b>4,044</b>	<b>1.0</b>	<b>0.0</b>	<b>\$677.48</b>	<b>\$8,076.00</b>	<b>\$945.00</b>	<b>\$7,131.00</b>	<b>10.5</b>	<b>4,072</b>
ECM 3 Install Occupancy Sensor Lighting Controls	Yes	3,603	0.9	0.0	\$603.59	\$7,676.00	\$945.00	\$6,731.00	11.2	3,628
ECM 4 Install High/Low Lighting Controls	Yes	441	0.1	0.0	\$73.89	\$400.00	\$0.00	\$400.00	5.4	444
<b>Motor Upgrades</b>		<b>132</b>	<b>0.0</b>	<b>0.0</b>	<b>\$22.05</b>	<b>\$1,229.49</b>	<b>\$0.00</b>	<b>\$1,229.49</b>	<b>55.8</b>	<b>133</b>
ECM 5 Premium Efficiency Motors	Yes	132	0.0	0.0	\$22.05	\$1,229.49	\$0.00	\$1,229.49	55.8	133
<b>Variable Frequency Drive (VFD) Measures</b>		<b>15,157</b>	<b>1.3</b>	<b>0.0</b>	<b>\$2,539.11</b>	<b>\$9,827.55</b>	<b>\$0.00</b>	<b>\$9,827.55</b>	<b>3.9</b>	<b>15,263</b>
ECM 6 Install VFDs on Hot Water Pumps	Yes	10,180	1.3	0.0	\$1,705.45	\$6,551.70	\$0.00	\$6,551.70	3.8	10,252
ECM 7 Install VFDs on Cooling Tower Fans	Yes	4,976	0.0	0.0	\$833.67	\$3,275.85	\$0.00	\$3,275.85	3.9	5,011
<b>TOTALS</b>		<b>48,866</b>	<b>9.0</b>	<b>0.0</b>	<b>\$8,186.12</b>	<b>\$41,798.90</b>	<b>\$3,995.00</b>	<b>\$37,803.90</b>	<b>4.6</b>	<b>49,207</b>

\* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Spotlight: Cape May's ESIP

Building	Building area in square feet	Baseline Energy Usage Data from Energy Audit Date ----->		total kbtu per month	Baseline EUI	Potential Savings identified from Energy Audit		total kbtu per month after energy upgrades	EUI after Energy Upgrades	% Change EUI in Facility	Weighted
		Enter your grid purchased electricity (kWh) in this column	Enter your natural gas (therms) in this column			Enter potential electricity savings from ECMs (kWh) in this column	Enter potential natural gas savings from ECMs (therms) in this column				
City Hall	22,479	272,704	2,376	3171999.68	141.11	55,306	1,788	2391555.23	106.39	-0.25	-0.06
Franklin Street School	10,676	9,463	1,875	298288.27	27.94	4,249	1,165	130427.50	12.22	-0.56	-0.06
Welcome Center	2000	50,877	1,496	702319.65	205.36	17,709	1,237	382650.49	111.89	-0.46	-0.02
Water Works Building	3,420	1,624,600	2,544	17677665.77	8838.83	3,092	228	17620589.36	8810.29	0.00	0.00
Fire House	2,000	120,160	4,110	1719283.09	251.36	20,440	1,131	1381476.29	201.97	-0.20	-0.01
Public Works Complex	6,840	18,160	10,719	1320112.45	317.03	4,460	1,131	1153560.43	277.03	-0.13	-0.01
Library	4,164	58,591	1,931	830664.20	199.49	17,904	103	627975.26	150.81	-0.24	-0.01
Nature Center 1	1,296	5,291		56702.69	43.75	4,462	0	8884.24	6.86	-0.84	-0.01
Nature Center 2	1,876	5,286	1,065	168474.11	89.80	4,446	875	28952.13	15.43	-0.83	-0.02
Elementary School	43,560	220,600	17,300	4180630.49	95.97	121,070	878	2790955.09	64.07	-0.33	-0.15
Street Lights		62,530				35,910	0				
		2,448,262	43,416			289,048	8,536				<b>-33.68%</b>
Adapted from Solar Oregon's site EUI calculator for homes <a href="http://solaroregon.org/downloads/eui-calculator/view">http://solaroregon.org/downloads/eui-calculator/view</a>											

- Reduced energy use over 30%
- \$34K in incentives from the NJCEP through the Smart Start Program
- Adds \$18,387 to the town's operating budget


# Spotlight: Glen Rock's DI Project

Direct Install incentive  
ambulance building- \$7,527

46.9% less electrical usage  
17.3% less gas usage

Savings values are estimates. Actual savings will vary. Incentives and participation subject to program rules and Participation Agreement.

New Jersey Office of Clean Energy  
Direct Install Program  
Energy Assessment Tool (V2.0)



**General Project Information**

Participating Customer: Glen Rock Volunteer AMB Corp Inc  
 Contractor / Project #: LIMA 11933  
 Facility Name: Glen Rock Ambulance Corp Building  
 Street Address: 700 S Maple Ave  
 City / Zip Code: Glen Rock NJ 07433  
 Is this facility publicly owned?: N

Facility Type: Other  
 Total Facility Square Footage: 3,000  
 Avg Weekly Hrs of Operation: 40  
 # of Full-time Employees: 10  
 Year Constructed: 1980  
 Tax Exempt?: Y  
 Project Permitting Code: 0

**Electric Utility Information**

Electric Provider: PSE&G  
 Service Class: GLP  
 Account #: 66 705 904 01  
 Billing Period Start Date: 08/14/16  
 Billing Period End Date: 09/14/16  
 Billing Period kWh Consumption: 3,188  
 Billing Period Total Cost: \$389.94  
 Total Taxes + Fees on Bill: \$4.24

**Gas Utility Information**

Gas Provider: PSE&G  
 Service Class: G55 (40G)  
 Account #: 67 383 256 06  
 Billing Period Start Date: 11/17/16  
 Billing Period End Date: 12/14/16  
 Billing Period Therm Consumption: 237  
 Billing Period Total Cost: \$354.13  
 Total Taxes + Fees on Bill: \$7.16  
 Gas - Average Cost (\$/Therm): \$0.953


**Propane Information**

Annual Consumption (Gallons):  
 Annual Cost:  
 Annual Taxes + Fees on Bill:  
 Propane - Average Cost (\$/Gallon): \$0.000

**Summary**

Measure	Total Measure Cost	Estimated Incentive Amount	Total Cost to Customer	Simple Payback (Yrs)
Lighting Measures Total:	\$4,622.72	\$3,235.90	\$1,386.82	0.65
Motors & VFD Measures Total:	\$0.00	\$0.00	\$0.00	0.00
HVAC Electric Measures Total:	\$6,110.00	\$4,277.00	\$1,833.00	6.29
Refrigeration Measures Total:	\$0.00	\$0.00	\$0.00	0.00
<b>ELECTRIC MEASURES:</b>	<b>\$10,732.72</b>	<b>\$7,512.90</b>	<b>\$3,219.82</b>	<b>1.33</b>
<b>GAS MEASURES:</b>	<b>\$20.60</b>	<b>\$14.42</b>	<b>\$6.18</b>	<b>0.02</b>
<b>OIL MEASURES:</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>TOTAL PROPANE MEASURES:</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>CONVERSION MEASURES (OIL):</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>CONVERSION MEASURES GAS:</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>COMBINED PROJECT TOTALS:</b>	<b>\$10,753.32</b>	<b>\$7,527.32</b>	<b>\$3,226.00</b>	<b>1.20</b>

**Estimated Reduction in Total Energy Consumption**



7/20/17 Project Summary

Direct Install Energy Assessment Tool Ver. 2.0  
©2014 The Energy Services, a subsidiary of The  
Luminate Group, Inc. All rights reserved.

**Project Summary**

	Annual Energy Savings	Energy Units	Annual Cost Savings	Total Measure Cost	Estimated Incentive Amount	Total Cost to Customer	Simple Payback (Yrs)
Lighting Measures Total:	11,562	kWh	\$2,125.50	\$4,622.72	\$3,235.90	\$1,386.82	0.65
Motors & VFD Measures Total:	0	kWh	\$0.00	\$0.00	\$0.00	\$0.00	0.00
HVAC Electric Measures Total:	1,585	kWh	\$291.32	\$6,110.00	\$4,277.00	\$1,833.00	6.29
Refrigeration Measures Total:	0	kWh	\$0.00	\$0.00	\$0.00	\$0.00	0.00
<b>ELECTRIC MEASURES:</b>	<b>13,147</b>	<b>kWh</b>	<b>\$2,416.82</b>	<b>\$10,732.72</b>	<b>\$7,512.90</b>	<b>\$3,219.82</b>	<b>1.33</b>
<b>GAS MEASURES:</b>	<b>285</b>	<b>Therms</b>	<b>\$271.66</b>	<b>\$20.60</b>	<b>\$14.42</b>	<b>\$6.18</b>	<b>0.02</b>
<b>OIL MEASURES:</b>	<b>0</b>	<b>Gallons</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>TOTAL PROPANE MEASURES:</b>	<b>0</b>	<b>Gallons</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>CONVERSION MEASURES (OIL):</b>	<b>0</b>	<b>Gallons</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>CONVERSION MEASURES GAS:</b>	<b>0</b>	<b>Therms</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>0.00</b>
<b>COMBINED PROJECT TOTALS:</b>			<b>\$2,688.48</b>	<b>\$10,753.32</b>	<b>\$7,527.32</b>	<b>\$3,226.00</b>	<b>1.20</b>



# FLEET INVENTORY: Requirements

- 1) Complete fleet inventory using the spreadsheet in the action
- 2) Narrative report must be submitted by the municipality, including:
  - Summary current fleet composition
  - Maintenance and driver training practices
  - Evaluation of current fleet efficiency/strategies for improvement
  - At least one specific target





# FLEET INVENTORY- Ocean City

## Sheet 1- Fleet Inventory, Vehicle List

Vehicle Type (bus, truck, sedan, segway, scooter, etc)	Year	Make	Model	Fuel Type (Gasoline, Diesel, Propane, etc)	Odometer Reading at end of Baseline Year	Miles Traveled in Baseline Year	Annual Fuel Usage in Baseline Year	Fuel Units (Gallons, GGE, kWh)	Annual Fuel Cost in Baseline Year	Average Fuel Efficiency in Baseline Year (miles per fuel unit)	Is the vehicle owned or leased?	If leased, in which year will lease contract end?	If owned, in which year is this vehicle expected to be replaced?	Used by which municipal department?	Primary duty of vehicle
SUV	2009	TOYOTA	HIGHLANDER	GASOLINE	20,976	3,500	206	Gallons	\$ 459.12	17	Owned	N/A	2019	POLICE	POLICE ADMIN
SUV	2008	DODGE	DURANGO	GASOLINE	21,145	3,500	233	Gallons	\$ 520.33	15	Owned	N/A	2018	POLICE	POLICE ADMIN
SUV	2006	DODGE	DURANGO	GASOLINE	101,297	3,500	233	Gallons	\$ 520.33	15	Owned	N/A	2016	POLICE	POLICE POOL
SEDAN	2005	FORD	CROWN VIC	GASOLINE	67,388	6,700	394	Gallons	\$ 878.88	17	Owned	N/A	2015	POLICE	POLICE STAFF
SEDAN	2007	DODGE	CHARGER	GASOLINE	58,625	6,200	413	Gallons	\$ 921.73	15	Owned	N/A	2017	POLICE	POLICE DET.
SEDAN	2007	DODGE	CHARGER	GASOLINE	48,140	6,000	400	Gallons	\$ 892.00	15	Owned	N/A	2017	POLICE	POLICE DET.
SEDAN	2007	DODGE	CHARGER	GASOLINE	80,504	7,000	467	Gallons	\$ 1,040.67	15	Owned	N/A	2017	POLICE	POLICE DET.
SEDAN	2008	FORD	CROWN VIC	GASOLINE	99,780	14,250	838	Gallons	\$ 1,869.26	17	Owned	N/A	2018	POLICE	PATROL
SEDAN	2005	FORD	CROWN VIC	GASOLINE	99,640	14,250	838	Gallons	\$ 1,869.26	17	Owned	N/A	2015	POLICE	PARKING VIO
SEDAN	2009	FORD	CROWN VIC	GASOLINE	68,043	6,700	394	Gallons	\$ 878.88	17	Owned	N/A	2019	POLICE	PATROL
SEDAN	2009	FORD	CROWN VIC	GASOLINE	81,222	8,000	471	Gallons	\$ 1,049.41	17	Owned	N/A	2019	POLICE	PATROL
SEDAN	2008	FORD	CROWN VIC	GASOLINE	87,268	12,000	706	Gallons	\$ 1,574.12	17	Owned	N/A	2018	POLICE	POLICE POOL
SEDAN	2008	FORD	CROWN VIC	GASOLINE	94,397	13,450	791	Gallons	\$ 1,764.32	17	Owned	N/A	2018	POLICE	PATROL
SEDAN	2009	FORD	CROWN VIC	GASOLINE	110,760	16,500	971	Gallons	\$ 2,164.41	17	Owned	N/A	2019	POLICE	PATROL
SUV	2010	FORD	EXPLORER	GASOLINE	20,053	4,000	308	Gallons	\$ 686.15	13	Owned	N/A	2020	POLICE	POLICE COMM
PICK-UP	2010	FORD	F150	GASOLINE	15,543	2,200	169	Gallons	\$ 377.38	13	Owned	N/A	2020	POLICE	SPEC OPS
SEDAN	2008	FORD	CROWN VIC	GASOLINE	91,479	13,000	765	Gallons	\$ 1,705.29	17	Owned	N/A	2018	POLICE	PATROL
SEDAN	2010	FORD	CROWN VIC	GASOLINE	71,377	14,000	824	Gallons	\$ 1,836.47	17	Owned	N/A	2020	POLICE	PATROL
SEDAN	2010	FORD	CROWN VIC	GASOLINE	60,742	12,150	715	Gallons	\$ 1,593.79	17	Owned	N/A	2020	POLICE	PATROL
SEDAN	2011	FORD	CROWN VIC	GASOLINE	50,570	12,500	735	Gallons	\$ 1,639.71	17	Owned	N/A	2021	POLICE	PATROL
SEDAN	2011	FORD	CROWN VIC	GASOLINE	41,895	10,500	618	Gallons	\$ 1,377.35	17	Owned	N/A	2021	POLICE	PATROL
SEDAN	2011	FORD	CROWN VIC	GASOLINE	39,875	9,500	559	Gallons	\$ 1,246.18	17	Owned	N/A	2021	POLICE	PATROL

## Pitfalls-

1. Difficulty getting data- Key data points are:
  - Starting mileage, end of period mileage
  - Fuel usage- software and tracking equipment can help
2. Assessment and planning document/narrative statement

# FLEET INVENTORY Ocean City

## Sheet 2 Fleet Inventory Emissions Calculations

Emissions  
automatically  
calculate

<b>Municipality:</b>	City of Ocean City	<i>complete cells highlighted in yellow, grey cells contain formulas</i>						
<b>Baseline Year Selected:</b>	2015-2016							
<b>Enter baseline year mileage for each type of municipal vehicle.</b>								
<b>Methane and Nitrous Oxide Emissions Factors for Highway Vehicles</b>								
Vehicle Type/ Control Technology	Model Year	Total Mileage for Each Vehicle Type	N <sub>2</sub> O (g/mi)	CH <sub>4</sub> (g/mi)	N <sub>2</sub> O grams	CH <sub>4</sub> grams	N <sub>2</sub> O Metric Tons	CH <sub>4</sub> Metric Tons
<b>Gasoline Passenger Cars</b>								
EPA Tier 2	2004 and Later	6000	0.0036	0.0173	21.6	103.8	0.0000216	0.0001038
Low Emission Vehicles	2000-2003	500	0.015	0.0105	7.5	5.25	0.0000075	0.0000525
EPA Tier 1	1995-1999	500	0.0429	0.0271	21.45	13.55	0.00002145	0.00001355
EPA Tier 0	1981-1994	0	0.0647	0.0704	0	0	0	0
Oxidation Catalyst	1975-1980	0	0.0504	0.1355	0	0	0	0
Non-Catalyst	1973-1974	0	0.0197	0.1696	0	0	0	0
Uncontrolled	1972 and Earlier	0	0.0197	0.178	0	0	0	0
<b>Gasoline Light-Duty Trucks</b>								
EPA Tier 2	2005 and Later	3000	0.0066	0.0163	19.8	48.9	0.0000198	0.0000489
Low Emission Vehicles	2001-2004	0	0.0157	0.0148	0	0	0	0
EPA Tier 1	1995-2000	500	0.0871	0.0452	43.55	22.6	0.00004355	0.0000226
EPA Tier 0	1986-1994	0	0.1056	0.0776	0	0	0	0
Oxidation Catalyst	1975-1985	0	0.0639	0.1516	0	0	0	0
Non-Catalyst	1973-1974	0	0.0218	0.1908	0	0	0	0
Uncontrolled	1972 and Earlier	0	0.0220	0.2024	0	0	0	0
<b>Gasoline Heavy-Duty Vehicles</b>								
EPA Tier 2	2004 and Later	500	0.0134	0.0333	6.7	16.65	0.0000067	0.00001665
Low Emission Vehicles	1998-2003	0	0.032	0.0303	0	0	0	0
EPA Tier 1	1996-2003	0	0.175	0.0655	0	0	0	0
EPA Tier 0	1996 and Later	0	0.2135	0.263	0	0	0	0
Oxidation Catalyst	1996 and Later	0	0.1317	0.2356	0	0	0	0
Non-Catalyst Control	1985-1995	0	0.0473	0.4181	0	0	0	0
Uncontrolled	1984 and Earlier	0	0.0497	0.4604	0	0	0	0
<b>Diesel Passenger Cars</b>								
Advanced	1996 and Later	0	0.001	0.0005	0	0	0	0
Moderate	1983-1995	0	0.001	0.0005	0	0	0	0
Uncontrolled	1982 and Earlier	0	0.0012	0.0006	0	0	0	0
<b>Diesel Light-Duty Trucks</b>								
Advanced	1996 and Later	1000	0.0015	0.001	1.5		0.0000015	0
Moderate	1983-1995	200	0.0014	0.0009	0.28	0.18	0.0000028	0.0000018
Uncontrolled	1982 and Earlier	0	0.0017	0.0011	0	0	0	0
<b>Diesel Heavy-Duty Vehicles</b>								
Advanced	1996 and Later	1000	0.048	0.0051	48	5.1	0.000048	0.0000051
Moderate	1983-1995	0	0.048	0.0051	0	0	0	0
Uncontrolled	1982 and Earlier	0	0.048	0.0051	0	0	0	0
<b>Motorcycles</b>								
Non-Catalyst Control	1996 and Later	500	0.0069	0.0672	3.45	33.6	0.00000345	0.0000336
Uncontrolled	1995 and Earlier	0	0.0087	0.0899	0	0	0	0
Source: U.S. Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005, EPA 430-R-07-002, Annex 3.2, (April 2007), web site: <a href="http://www.epa.gov/climatechange/emissions/usinventoryreport.html">http://www.epa.gov/climatechange/emissions/usinventoryreport.html</a>							N <sub>2</sub> O Metric Tons	CH <sub>4</sub> Metric Tons
<b>TOTALS</b>		<b>13700</b>					<b>0.00017383</b>	<b>0.00024963</b>

enter these totals into worksheet 3

# FLEET INVENTORY- Ocean City

## Sheet 3- Fleet Summary Automatically calculates Fleet Carbon Footprint

<b>Municipality:</b>		City of Ocean City	<i>complete cells highlighted in yellow, grey cells contain formulas</i>					
<b>Fuel Consumption (and Scope 1 Emissions from Mobile Fuel Combustion)</b>								
<b>Municipal Operation - Vehicle Emissions</b>	<b>Total Fuel Units consumed by all municipal vehicles in baseline year</b>	<b>CO2 Emissions (lbs/fuel unit)</b>	<b>CO2 Emissions (lbs)</b>	<b>CO2 (Metric Tons CO2e)</b>				
<b>CO2 emissions by fuel usage</b>								
Motor Gasoline (gallons)	11500	19.54	224710	101.1195				
Diesel Fuel (gallons)	0	22.37	49214	22.1463				
Biodiesel B20 (gallons)	2200	22.37	0	0				
Natural Gas (gge)	0	15.25	0	0				
Propane (gallons)	0	12.67	0	0				
Other 1 specify fuel (units)			0	0				
Other 2 specify fuel (units)			0	0				
Other 3 specify fuel (units)			0	0				
Carbon dioxide emissions coefficients:		<a href="http://www.eia.doe.gov/oiaf/1605/excel/Fuel%20Emission%20Factors.xls">http://www.eia.doe.gov/oiaf/1605/excel/Fuel%20Emission%20Factors.xls</a>						
<b>Municipal Operation - Vehicle Emissions</b>		<b>Total Mileage</b>			<b>CH4 Emissions (Metric Tons)</b>	<b>CH4 (Metric Tons CO2e)</b>	<b>N2O Emissions (Metric Tons)</b>	<b>N2O (Metric Tons CO2e)</b>
<b>CH4 and N2O emissions by mileage</b>								
Totals from Worksheet 2, "Vehicle CH4 & N2O"		13700			0.00024963	0.0052422	0.0001738	0.0538873
	<b>Total Emissions (Metric Tons CO2e)</b>							
<b>FLEET CARBON FOOTPRINT</b>	123.3249295							
<b>Notes</b>								
<i>Be sure to use the units specified in the chart or adjust formulas accordingly</i>								
Abbreviations: CO2e=carbon dioxide equivalents CO2=carbon dioxide, CH4=methane, N2O=nitrous oxide								

# Ocean City Fleet Narrative:

The current fleet **composition** is made up of large and small vehicles including small passenger vehicles, large passenger vehicles, pickup trucks, public works vehicles, SUVs, trailers, dump trucks, vans, tractors, forklifts, backhoes, front end loaders, street sweeper, hook lift, and skid steers.

The **maintenance** for the fleet is administered by the Fleet Maintenance under the City's Public Works Department. Maintenance occurs on a regular basis during working hours Monday through Friday. On an annual basis the Police Department for the City provides training for all new city staff to review the **driver's training** practices for the City.

The current **fleet efficiency** within the last 12 months of June, 2016 includes the physical inventory of the City's fleet. The emissions of the municipal fleet for 2016, as calculated by the fleet spreadsheet, is 123.324 (Metric Tons CO2e)

The inventory was completed to determine where existing vehicles could be best utilized. This initiative looked at eliminating any older vehicles for future capital replacement with more efficient vehicles. Strategies for improvement include looking to add the vehicle inventory to the City's fleet software to create electronic preventative maintenance programs for the vehicles. The one **target** for the year will be to continually update the inventory to ensure the vehicle list is always accurate for future planning purposes.



# Municipal Carbon Footprint-Requirements

## Completed Municipal Carbon Footprint Calculator

- Electricity, Natural Gas & Heating Oil
  - energy used for lighting and heating in each municipal facility
- Fuel used in municipal vehicles
  - miles driven by municipal fleet
  - or
  - total fuel consumed for the fleet

## Resubmission:

- Updated Municipal Carbon Footprint Calculator
  - data from within 3.5 years of June submission deadline



# Municipal Carbon Footprint- - Pitfalls

## 1. Doing too little

- Do include
  - major buildings
  - municipal fleet
- Don't leave missing data

## 2. Doing too much

- Don't need to include every shed!

## 3. Not setting up a replicable and sustainable system



# Spotlight: Maplewood

- Good description
- Explains emissions generated and percentages

**Municipal Carbon Footprint** **10 Points** **Bronze Priority** **Silver Priority**

## Program Summary:

Maplewood's municipal carbon footprint for the calendar year 2015 came to 3,102 metric tons of carbon dioxide equivalent using the Sustainable Jersey calculation methodology. Of this total, electricity use accounted for the largest fraction, 1578 tons or about 51%. Transportation fuels accounted for about 32% of the total, just under 1000 tons. Natural gas use was responsible for the remaining 17%, about 525 tons. There were no other fuels used. Breaking the total figure down in a different way, buildings and facilities were responsible for almost 1570 tons of emissions about 47%. Street lighting and traffic signals accounted for 760 tons and 23%. Among motor fuels, gasoline was the largest source of emissions, about 17% of the total, while diesel and B-5 biodiesel were responsible for 9% and 3% of the total emissions, respectively.

# Spotlight: Woodbridge

- all required data
- monthly data for all major buildings

Municipality: Woodbridge Township complete applicable cells highlighted in yellow, grey cells contain formulas

STEP 1: Establish a Baseline Year  
Baseline Year Selected: 2015

STEP 2: Scope 1 Emissions from Stationary Fuel Consumption in Baseline Year

Municipal Operation - Natural Gas	Total Therm	converted to Million BTU	Emissions (lbs)	(Metric Tons)	Emissions (Metric Tons)	CH4 (Metric Tons CO2e)	Emissions (Metric Tons)	(Metric Tons)	Total Emissions (Metric Tons CO2e)
Building & Facilities	216697	21669.73806	2537092.932	1150.80683	0.10834869	2.275322496	0.002166974	0.6717619	1153.753917
Street Lights & Traffic Signals	0	0	0	0	0	0	0	0	0
Water & Wastewater Treatment Facilities	2183.4	218.34	25563.2472	11.5953023	0.0010917	0.0229257	0.000021834	0.0067685	11.62499656
Other	0	0	0	0	0	0	0	0	0
Natural Gas Total	218880.781	21888.07806	2562656.179	1162.4021	0.10944039	2.2982482	0.002188808	0.6785304	1165.378914

STEP 3: Scope 2 Emissions from Purchased or Acquired Electricity in Baseline Year

Municipal Operation - Electricity	Total Kwh	Total MWh	CO2 Emissions (lbs)	CO2 (Metric Tons)	CH4 Emissions (Metric Tons)	CH4 (Metric Tons CO2e)	N2O Emissions (Metric Tons)	N2O (Metric Tons)	Total Emissions (Metric Tons CO2e)
Building & Facilities	10887550	10887.55	11927637.65	5410.28937	0.13827837	2.903845762	0.083954724	26.025965	5439.219177
Street Lights & Traffic Signals	#####	12247.048	13417008.5	6085.85711	0.155544804	3.266440883	0.094437917	29.275754	6118.399304
Water & Wastewater Treatment Facilities	4270489	4270.489	4678448.814	2122.11023	0.054237754	1.13899283	0.032930085	10.20832	2133.457542
Other	0	0	0	0	0	0	0	0	0
Electricity Total	27405087	27405.087	30023094.96	13618.257	0.348060927	7.30927947	0.211322706	65.510039	13691.07602

STEP 4: Scope 1 Emissions from Mobile Fuel Combustion in Baseline Year

Municipal Operation - Vehicle Emissions	CO2 Emissions (kgs/gallon)	CO2 Emissions (kgs)	CO2 (Metric Tons)
CO2 emissions by fuel usage	Total Gallons		
Motor Gasoline	211907.493	8.81	1866905.013
Diesel Fuel	233012.421	10.15	2365078.073
Compressed Natural Gas			0
Bio-Diesel Fuel			0
Other 2 (specify fuel)			0
Other 3 (specify fuel)			0

Page 1

Municipality: Woodbridge Township

Facility Location: 600 Main Street, Woodbridge NJ 07095

Emissions (Metric Tons)	CH4 (Metric Tons CO2e)	Emissions (Metric Tons)	(Metric Tons)	Total Emissions (Metric Tons CO2e)
0.038157783	0.801313437	0.038000971	11.780301	4244.562701
6.42319811	0.038157783	0.80131344	0.038000971	11.780301
				<b>19101.01764</b>

Municipality: Woodbridge Township

Facility Location: 1081 Green St., Iselin NJ 08830 (Iselin L)

Annual Electricity Usage

Meter # or Account #: 17-51-759-293-05

Month of Usage	Per Bill Date Range of Usage	Per Bill Electricity usage (kWh)
January	1/1/15-1/31/15	6480
February	2/1/15-2/28/15	7200
March	3/1/15-3/31/15	6160
April	4/1/15-4/30/15	6720
May	5/1/15-5/31/15	6400
June	6/1/15-6/31/15	10640
July	7/1/15-7/31/15	n/a
August	8/1/15-8/31/15	28480
September	9/1/15-9/31/15	11040
October	10/1/15-10/31/15	5920
November	11/1/15-11/30/15	5280
December	12/1/15-12/31/15	6000
<b>Total KWHS:</b>		<b>100320</b>
<b>Total MWHS:</b>		<b>100.32</b>

Meter # or Account #: 04-51-149-963-12

Per Bill Electricity usage (kWh)

Month of Usage	Per Bill Date Range of Usage	Per Bill Electricity usage (kWh)
January	1/1/16-1/31/16	251048
February	2/1/15-2/28/15	241980
March	3/1/15-3/31/15	233579
April	4/1/15-4/30/15	177277
May	5/1/15-5/31/15	244727
June	6/1/15-6/31/15	266555
July	7/1/15-7/31/15	278630
August	8/1/15-8/31/15	251947
September	9/1/15-9/31/15	228585
October	10/1/15-10/31/15	218476
November	11/1/15-11/30/15	233579
December	12/1/15-12/31/15	240788
<b>Total KWHS:</b>		<b>2867171</b>
<b>Total MWHS:</b>		<b>2867.171</b>



# Spotlight: Woodbridge

- Fleet data

Enter baseline year mileage for each type of municipal vehicle.

## Methane and Nitrous Oxide Emissions Factors for Highway Vehicles

Vehicle Type/ Control Technology	Model Year	Total Mileage for Each Vehicle Type	N <sub>2</sub> O (g/mi)	CH <sub>4</sub> (g/mi)	N <sub>2</sub> O grams	CH <sub>4</sub> grams	N <sub>2</sub> O Metric Tons	CH <sub>4</sub> Metric Tons
<b>Gasoline Passenger Cars</b>								
EPA Tier 2	2004 and Later	1562474	0.0036	0.0173	5624.91	27030.8	0.005624906	0.0270308
Low Emission Vehicles	2000-2003	114492	0.015	0.0105	1717.38	1202.17	0.00171738	0.001202166
EPA Tier 1	1995-1999	6680	0.0429	0.0271	286.572	181.028	0.000286572	0.000181028
EPA Tier 0	1981-1994	0	0.0647	0.0704	0	0	0	0
Oxidation Catalyst	1975-1980	53	0.0504	0.1355	2.6712	7.1815	2.6712E-06	7.1815E-06
Non-Catalyst	1973-1974	0	0.0197	0.1696	0	0	0	0
Uncontrolled	1972 and Earlier	0	0.0197	0.178	0	0	0	0
<b>Gasoline Light-Duty Trucks</b>								
EPA Tier 2	2005 and Later	293386	0.0066	0.0163	1936.35	4782.19	0.001936348	0.004782192
Low Emission Vehicles	2001-2004	32972	0.0157	0.0148	517.66	487.986	0.00051766	0.000487986
EPA Tier 1	1995-2000	2200	0.0871	0.0452	191.62	99.44	0.00019162	0.00009944
EPA Tier 0	1986-1994	0	0.1056	0.0776	0	0	0	0
Oxidation Catalyst	1975-1985	0	0.0639	0.1516	0	0	0	0
Non-Catalyst	1973-1974	0	0.0218	0.1908	0	0	0	0
Uncontrolled	1972 and Earlier	0	0.0220	0.2024	0	0	0	0
<b>Gasoline Heavy-Duty Vehicles</b>								
EPA Tier 2	2004 and Later	0	0.0134	0.0333	0	0	0	0
Low Emission Vehicles	1998-2003	0	0.032	0.0303	0	0	0	0
EPA Tier 1	1996-2003	0	0.175	0.0655	0	0	0	0
EPA Tier 0	1996 and Later	0	0.2135	0.263	0	0	0	0
Oxidation Catalyst	1996 and Later	0	0.1317	0.2356	0	0	0	0
Non-Catalyst Control	1985-1995	0	0.0473	0.4181	0	0	0	0
Uncontrolled	1984 and Earlier	0	0.0497	0.4604	0	0	0	0
<b>Diesel Passenger Cars</b>								
Advanced	1996 and Later	0	0.001	0.0005	0	0	0	0
Moderate	1983-1995	0	0.001	0.0005	0	0	0	0
Uncontrolled	1982 and Earlier	0	0.0012	0.0006	0	0	0	0
<b>Diesel Light-Duty Trucks</b>								
Advanced	1996 and Later	228489	0.0015	0.001	342.734		0.000342734	0
Moderate	1983-1995	0	0.0014	0.0009	0	0	0	0
Uncontrolled	1982 and Earlier	0	0.0017	0.0011	0	0	0	0
<b>Diesel Heavy-Duty Vehicles</b>								
Advanced	1996 and Later	513868	0.048	0.0051	24665.7	2620.73	0.024665664	0.002620727
Moderate	1983-1995	6744	0.048	0.0051	323.712	34.3944	0.000323712	3.43944E-05
Uncontrolled	1982 and Earlier	0	0.048	0.0051	0	0	0	0
<b>Motorcycles</b>								
Non-Catalyst Control	1996 and Later	0	0.0069	0.0672	0	0	0	0
Uncontrolled	1995 and Earlier	0	0.0087	0.0899	0	0	0	0

Source: U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005, EPA 430-R-07-002, Annex 3.2, (April 2007), web site:

**TOTALS** 2,761,358

N<sub>2</sub>O Metric Tons 0.035609267  
CH<sub>4</sub> Metric Tons 0.036445914

enter these totals into worksheet 1

Note: 1 gram = 1.0 × 10<sup>-6</sup> metric tons

# SUSTAINABLE LAND USE PLEDGE - Requirements

1. Adopted Sustainable Land Use Pledge that includes: Regional Cooperation, Transportation, Natural, Mix of Land Uses, Housing Options, Green, Municipal Facilities
2. Documentation pledge distributed to Planning and Zoning Boards, Environmental Commission and other relevant boards.
3. (OPTIONAL): Press coverage of the discussion and/or adoption of the Sustainable Land Use Pledge.

## Resubmission Requirements

- The governing body must adopt a new Sustainable Land Use Pledge by resolution **from within 2.5 years of the June submission deadline** and it must be redistributed to all boards/commissions.



# SUSTAINABLE LAND USE PLEDGE – Pitfalls & Spotlight

1. No evidence pledge distributed to relevant boards/commissions.

## Wyckoff Township

- [2019 Sustainable Land Use Pledge Resolution](#)
- [Memo to Departments](#)



@SJ\_Program • #DecadeofImpact

Robert J. Shannon, Jr.  
Township Administrator

TO: Planning Board Members  
Board of Adjustment Members  
Environmental Commission Members  
Green Team Volunteers  
Design Review Advisory Committee Members

FROM: Robert J. Shannon, Jr. Township Administrator

CC: Maureen Mitchell, Secretary, Planning and BOA

DATE: March 21, 2019

RE: PERIODIC REMINDER OF THE TOWNSHIP OF WYCKOFF'S LAND USE PLEDGE

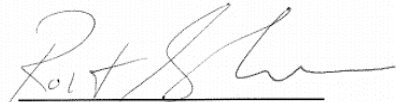
---

The Township of Wyckoff participates in the Sustainable Jersey Certification Program. As a component of that program, the Township Committee of the Township of Wyckoff re-adopted the attached resolution which reflects a land use pledge that defines the policy,

**“THAT MUNICIPAL LAND USE DECISIONS WILL BE PURSUED WITH THE INTENT OF MAKING THE TOWNSHIP OF WYCKOFF A TRULY ENVIRONMENTALLY SUSTAINABLE COMMUNITY.”**

The attached pledge is provided as a reminder of our municipal policy of pursuing environmental sustainability considerations and measures in our land use review and decision making.

Any questions, please feel free to contact me.

  
Robert J. Shannon, Jr.  
Township Administrator

# NATURAL RESOURCE INVENTORY - Requirements

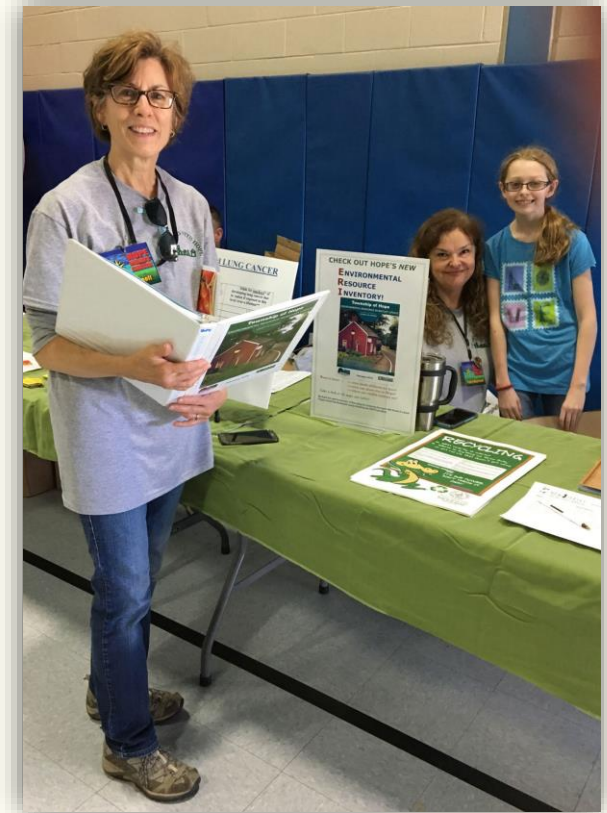
1. NRI with documentation to show that it was completed or updated **from within 10 years of the June submission deadline**. Includes info regarding:
  - Geology; Geography/Topography; Climate; Air; Hydrology; Soils; Wetlands; Vegetation; Wildlife (including Threatened and Endangered Species habitat); Existing Land Use and Transportation maps; and address regional relationships.
2. Documentation that the municipality has incorporated the NRI into its Master Plan.
3. Statement or documentation that the municipality has a policy for regularly updating the NRI.

**Resubmission Requirements:** Updated NRI, including maps, explanation of changes, incorporation of NRI into Master Plan, and policy for regular updates



# NATURAL RESOURCE INVENTORY – Pitfalls

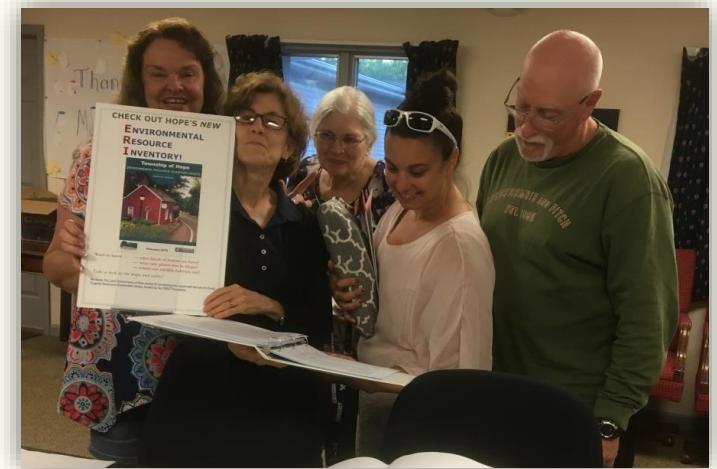
1. Misinterpretation of action requirements
2. No evidence NRI is incorporated into the Master Plan
3. No Statement or documentation that the municipality has a policy for regularly updating the NRI.



# NATURAL RESOURCE INVENTORY – Spotlight

## Hope Township

- [Environmental Resources Inventory](#)
- [Resolution Incorporating ERI into Master Plan](#)
- [Minutes showing incorporation into Master Plan](#)
- [Policy for updating ERI](#)
- [Public meeting presentation on updated ERI & Planning Board meeting minutes](#)



# CLIMATE ADAPTATION: FLOODING RISK - Requirements

1. Sign in sheets from interactive meetings hosted and/or printout of online collaboration team with completed Getting to Resilience: Community Planning Evaluation Tool (GTR)
2. Description of how GTR Tool used in town's analysis including output maps
3. Summary results of GTR Tool

**Resubmission Requirements:** Progress report discussing how GTR results have and continue to impact decision making.



# CLIMATE ADAPTATION: FLOODING RISK - Pitfalls

1. Needed to complete the GTR online survey.
2. Misinterpretation of action requirements – submitted stormwater management report, draft resolution of NJDEP resiliency grant program.
3. Need to share linkages report with planning board.
4. Progress report not submitted. Need to address questions from linkages report.



#DecadeofI

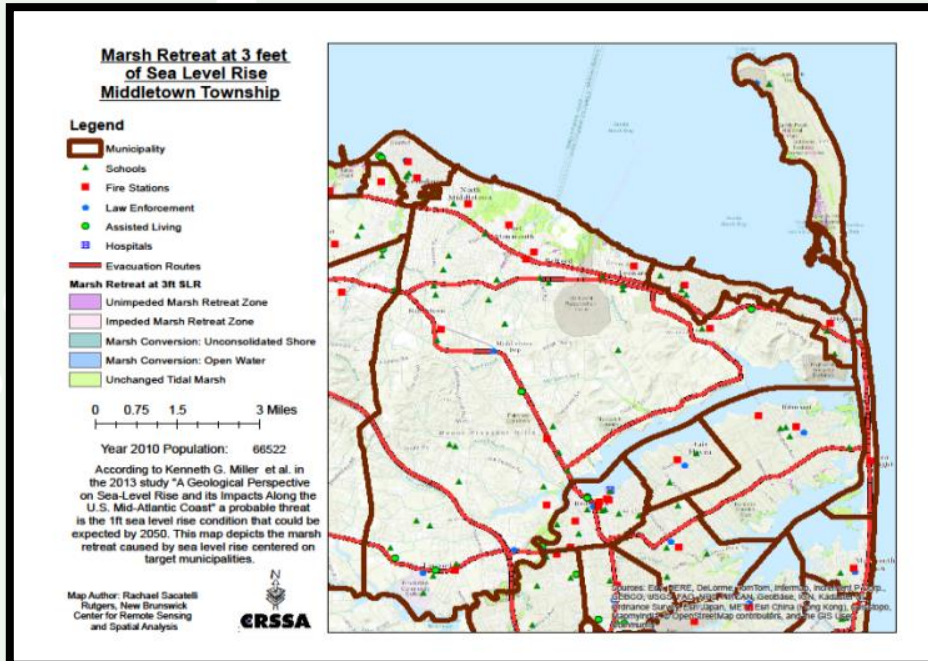




# CLIMATE ADAPTATION: FLOODING RISK - Spotlight

## Middletown Township

- [Recommendations Report](#)
- [Meeting Minutes](#)
- [Linkages Report](#)



### Linkages

Middletown GTR

Print Icon Legend Filter Suggestions by

#### LINKAGES RESULTS

**Section 1**  
Risk & Vulnerability Assessments

**Section 2**  
Public Engagement

**Section 3**  
Planning Integration

**Section 4**  
Disaster Preparedness and Recovery

**Section 5**  
Hazard Mitigation Implementation

**Survey**  
Return to Survey

**COLLABORATORS**  
Middletown

#### Risk & Vulnerability Assessments

1.1 Are previous coastal hazards and disasters identified and mapped through historical information, existing plans and reports, scientific knowledge, and local knowledge?

**You answered:**  
✔ Yes

🔗 **CRS Suggestions**

**Section 410: Floodplain Mapping:** To improve the quality of the mapping that is used to identify and regulate floodplain development.

- **New Study (NS):** Up to 290 points for new flood studies that produce base floor elevations or floodways.
- **Floodplain mapping of special flood-related hazards (MAPSH):** Up to 50 points if the community maps and regulates areas of special flood related hazards.

**CRS points : 340**

🔗 **Sustainable Jersey Suggestions**

**Climate Adaptation: Flooding Risk (20 points)**

This Sustainable Jersey action, under the category of "Climate Adaptation," is designed to help communities identify: 1) your community's vulnerability to flooding impacts (both coastal and inland) and 2) ways to improve your community's overall resiliency. This action focuses on the various causes of flooding that could impact a community, either now or in the future, including increased precipitation, increased frequency of heavy precipitation events, sea level rise and storm surge. Completion of this action item will count for a total of 20 points and will serve as a prerequisite for future companion Sustainable Jersey actions related to flooding and resiliency.

**SJ points : 20**

🔗 **Hazard Mitigation Suggestions**

*Communities that are part of a countywide Multi-Jurisdictional Hazard Mitigation Plan update should consider these elements as specified by the FEMA Local Mitigation Plan*

# GREEN BUSINESS RECOGNITION PROGRAM - Requirements

- **Option 1:** Municipality creates its own green business recognition program
  - Description of program criteria, marketing plan, sample promotional materials.
  - List of businesses participating, date qualified to be recognized, actions taken to meet program criteria.
- **Option 2:** Municipality incorporates New Jersey Sustainable Business Registry (NJSBR) criteria and requires participation in NJSBR
  - Marketing plan and sample promotional materials.
  - List of businesses participating, date qualified to be recognized, actions taken to meet program criteria.



# GREEN BUSINESS RECOGNITION PROGRAM – Resubmission Requirements

**Resubmission:** Provide updated information verifying that the municipality has continued to promote and grow its Green Business Recognition Program.

**Option 1:** Evidence the municipality has helped the existing two businesses maintain their registration and has helped two new businesses to join the town's recognition program and promotion materials.

**Option 2:** Evidence the municipality has helped the three existing businesses renew their membership on the New Jersey Sustainable Business Registry (membership is renewed biannually), and assisted **two** new businesses to join the program and promotion materials



@SJ\_Program • #DecadeofImpact

# GREEN BUSINESS RECOGNITION PROGRAM - Pitfalls

- Confusion that having businesses participate in the NJSBR qualifies them for points – towns need to at a minimum have their **own** recognition program.
- Information on member businesses is not provided – “planned” but not currently active recognition programs will not qualify.
- Documentation is outside the 2.5 year look back period for the action.



@SJ\_Program • #DecadeofImpact



# GREEN BUSINESS RECOGNITION PROGRAM – Spotlight for Option 1

## Galloway Township

- [General program information](#)
- [Recognition program criteria](#)
- [Promotional items](#)
- [Newspaper article](#)



**GALLOWAY TOWNSHIP GREEN BUSINESS ASSESSMENT**

NAME OF ESTABLISHMENT: \_\_\_\_\_

CONTACT PERSON/TITLE: \_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_ EMAIL \_\_\_\_\_

TYPE OF ESTABLISHMENT: Office \_\_\_\_\_ Medical Office \_\_\_\_\_ Bank \_\_\_\_\_ Hotel/Motel \_\_\_\_\_

Wholesale Store \_\_\_\_\_ Grocery/Convenience Store \_\_\_\_\_ Retail Store \_\_\_\_\_ Restaurant \_\_\_\_\_

Educational Facility \_\_\_\_\_ Other \_\_\_\_\_

**How Do You Rate?**  
*Your business may already be greener than you think.* Complete this checklist to determine where your business falls on the "sustainability spectrum." There are 70 green initiatives in this assessment. If you check off 35, you are eligible to be recognized as a GALLOWAY GREEN BUSINESS!

---

**Why Should I Go Green?**  
**Cost Savings.** Reduce energy bills up to 30% by choosing Energy Star upgrades. ([www.energystar.gov](http://www.energystar.gov))  
**Tax Reductions.** Receive tax credits and rebates for eco-minded choices. ([www.njcleanenergy.com](http://www.njcleanenergy.com))  
**Competitive Advantage.** Most consumers are willing to pay more for socially-responsible products/services.  
**Minimize Risk.** Healthier workplaces report less illness when indoor air quality, etc. are addressed.



GALLOWAY TOWNSHIP OFFICE OF SUSTAINABILITY  
 300 E. Jimmie Leeds Rd, Galloway NJ 08205  
[www.gdnj.org](http://www.gdnj.org)  
 (609)652-3700, ext 209



[www.gogreengalloway.org](http://www.gogreengalloway.org)  
<https://www.facebook.com/GoGreenGalloway/>

**GENERAL**

\_\_\_\_ Promote a company culture of sustainability and train employees on environmental practices from day one

\_\_\_\_ Participate in green events locally (i.e., promote your business at a green fair or farmers market, volunteer at community cleanup events, help plant trees, etc.).

\_\_\_\_ Set the example for other area businesses to Go Green

Other: \_\_\_\_\_

**RECYCLING**

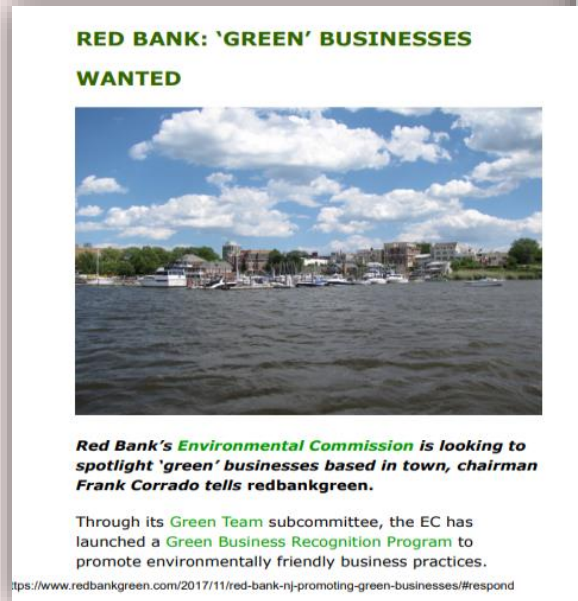
____ Recycle the following items:	____ Used Motor Oil
Cardboard	Brush/Tree Parts
Mixed Office Paper	Grass Clippings
Newspaper	Leaves
Other Paper/Magazines/Junk Mail	Stumps
Glass Containers	Consumer Electronics
Aluminum Containers	Concrete / Asphalt / Brick / Block
Steel Containers	Food Waste or Kitchen Grease/Oil
Plastic Containers	Batteries, Dry Cell or Rechargeable
Heavy Iron	Bulky Rigid Plastic
Non-Ferrous/Aluminum Scrap	Light Bulbs
White Goods & Light Iron	Ink or Toner Cartridges
Anti-Freeze	Textiles
Batteries, Auto	Other: _____
Tires	

Submitted by 2018 Recycled Programs Report to Citizens' Committee

# GREEN BUSINESS RECOGNITION PROGRAM – Spotlight for Option 2

## Red Bank Borough

- [Resolution establishing recognition program](#)
- [Recognition program summary & sample recognition letter](#)
- [Promotional materials](#)



Red Bank Borough  
Green Business Recognition Program

Established in 2017

# DIVERSITY ON BOARDS & COMMISSIONS - Requirements

1. A report that includes
  - Your community diversity profile
  - The results of the boards and commissions' assessment
  - The final recommendations to improve diversity of evaluated municipal boards to be presented to the City or Municipal Council.
2. Meeting minutes or agenda for the Municipal Council or Committee meeting in which the final recommendations were presented to the Mayor and governing body.



# DIVERSITY ON BOARDS & COMMISSIONS – Pitfalls & Spotlight

1. Official report not provided.
2. Recommendations not presented to municipal council/committee

## Woodbridge

- [Diversity & Equity submission](#)





# WATER CONSERVATION ORDINANCE - Requirements

1. Water conservation ordinance as approved by the local governing body, including the date of adoption. Includes:
  - Provisions limiting outdoor watering from automated systems to no more than two days a week during limited windows of time.
  - Provisions requiring Smart Controllers for all new installed irrigation systems.
  - Provisions that incentivize converting existing dumb systems to Smart Controllers.
2. Outreach materials used to inform the community of the ordinance and its intent. These could include newsletter articles, mailings, etc.
3. Documentation that the appropriate municipal staff (e.g. public works, police, etc.) were informed of the ordinance, its intent, and its responsibilities. This may include a memo to the department staff.



# WATER CONSERVATION ORDINANCE – Pitfalls & Spotlight

1. Ordinance requirements of watering 2 days a week, requiring smart controllers for new systems and incentivizing retrofits are not met.

## Ridgewood Village

- [Water conservation ordinance](#)
- [SMART Controller exemption permit](#)
- [Resident notification](#)
- [Promotion, education & outreach](#)



@SJ\_Program • #DecadeofImpact

**Village of Ridgewood E-Notice**  
**New Water Conservation Regulations**

May 26, 2017

Dear Jiffy Vermilyen,

As we enter the warmer weather, we all look forward to being outdoors more often and tending to our lawns and gardens. A postcard will be sent to all Ridgewood Water customers in Ridgewood, which will summarize the new permanent water regulations, for conservation purposes. I encourage you to use the postcard as a reminder of the new regulations, by putting it in a place where it can easily be referenced. The new regulations are summarized below:

- **Two-day per week irrigation is permanent year round, including private wells:**
  - Odd numbered addresses on Tuesday & Saturday
  - Even numbered addresses on Wednesday & Sunday
- **Restrict irrigation hours to limit water evaporation:**
  - No irrigation between the hours of 10:00 a.m. and 6:00 p.m.
  - Automatic system use permitted only between 3:00 a.m. & 7:00 a.m.
- **Watering exemptions are offered for the use of smart controllers (must seek approval from Ridgewood Water Administration in Village Hall).**
- **All automatic irrigation systems shall be equipped with an operational automatic rain sensor.**
- **Approved uses of water, at any time, include:**
  - pool filling
  - power washing
  - cleaning gutters
  - recreational use of sprinklers for children
  - hand-washing of vehicles

Please conserve water during these approved activities to the greatest extent possible.

- View the Conservation Ordinance, Water Saving Tips, and Frequently Asked Questions at <http://water.ridgewoodnj.net>.

- Questions - Customer Service at 201-670-5520 or

com/mail/u/0/?ui=2&ik=07f465e13&view=pt&msg=15c46af537b091c7&search=inbox&siml=15c46af537b091c7

# QUESTIONS?

Call or Email Today!

**Maureen Jones, Program Coordinator**

609-771-2938

[info@sustainablejersey.com](mailto:info@sustainablejersey.com)

**Nancy Quirk, Energy Program Manager**

609-771-2902

[quirkn@tcnj.edu](mailto:quirkn@tcnj.edu)



@SJ\_Program • #DecadeofImpact

# 10TH ANNIVERSARY EVENTS

## Sustainable Jersey Listening Sessions

Three listening sessions will be held this Fall for participants to share thoughts on what the next ten years might look like for New Jersey and the Sustainable Jersey program. Dates, times and locations are listed below. Click [here](#) to **REGISTER**.

- *September 10, 2019, 6pm-8:30pm, The Woodland, Maplewood NJ*
- *September 13, 2019, 9am-11:30am, TCNJ, Ewing NJ*
- *September 17, 2019, 6pm-8:30pm, NJM Insurance Group, Hammonton, NJ*

## A Decade of Impact: Green Team Video Contest

Gather your green team members to create a short video that highlights the positive impact the Sustainable Jersey movement has had within your community. Entry deadline is September 8<sup>th</sup>. Finalists' videos will be hosted on the Sustainable Jersey Website for public viewing and selected winners will be recognized at the 2019 Sustainable Jersey Luncheon on November 19<sup>th</sup> in Atlantic City. To learn more about the contest please click [here](#).



@SJ\_Program • #DecadeofImpact

# COMMUNITY REVITALIZATION THROUGH BROWNFIELDS WEBINAR

**OCTOBER 29, 2019 - 11:00 AM TO 12:00 PM**

**[REGISTER](#)**

This webinar will familiarize municipalities and green teams on the Sustainable Jersey brownfields actions and provide information on the beneficial reuse of blighted or abandoned properties that are potentially contaminated. These properties, also known as "brownfields" can be repurposed for community health and safety and economic revitalization. The newly released [Brownfields Assessment and Investigation](#) action will be discussed.



@SJ\_Program • #DecadeofImpact