



AGENDA

Ardsey Village Board of Trustees

8:00 PM - Monday, May 1, 2023

In Person & Zoom Platform

507 Ashford Avenue

The members of the Board of Trustees of the Village of Ardsley will meet in person on Monday, May 1, 2023 at 8:00 p.m. at Village Hall-Court Facility located at 507 Ashford Avenue, Ardsley, New York.

Members of the public may also join the meeting remotely by using the Zoom information below.

The meetings are conducted using hybrid format and interested parties are invited to observe a meeting either in-person or virtually through the videoconferencing service Zoom which can accessed:

Join Zoom Meeting

<https://us02web.zoom.us/j/85183049987?pwd=bHNqRlR4N0ZmZWtleHVWUHprYTJkUT09>

Meeting ID: 851 8304 9987

Passcode: 112826

Members of the public can listen to the meeting by dialing via phone+1 929 205 6099, Webinar ID: 851 8304 9987 Passcode: 112826

**Please note that by dialing in, your phone number will be visible to the host,

participants and attendees of the meeting**

BROADCAST LIVE ON VERIZON 32/35 & CABLEVISION 75

• VISITOR CALL IN NUMBER (914) 693-6202

Page

1. CALL TO ORDER-PLEDGE OF ALLEGIANCE-ROLL CALL

2. PUBLIC HEARING

In the Matter of Amending Chapter 18 Section 18-15 Entitled "Code of Ethics"

2.a

5

6 - 51

3. STORMWATER MANAGEMENT ANNUAL REPORT

3.a Presentation By Lorraine Kuhn 2021 Annual Stormwater Report

52 - 153

4. SPECIAL PRESENTATION-NYU WAGNER SCHOOL

4.a NYU Wagner School Capstone Project Presentation

154 - 180

5. APPROVAL OF MINUTES:

5.a April 17, 2023 Board of Trustees Regular Meeting Minutes

6. DEPARTMENT REPORTS

6.1. LEGAL

6.1.a Village Attorney, Robert Ponzini

6.2. MANAGER

6.2.a Village Manager, Joseph L. Cerretani

181 - 184

6.3. ABSTRACT

6.3.a May 1, 2023 Abstract Report

7. MAYOR'S ANNOUNCEMENTS

8. COMMITTEE & BOARD REPORTS

185

9. OLD BUSINESS:

9.a Consider a Resolution to Amend Chapter 18 Section 18-5 Entitled "Code of Ethics"

186

10. NEW BUSINESS:

10.a Consider a Resolution to Include Unpaid Water Rents and Penalties in the 2023-2024 Annual Tax Levy

187

10.b Consider a Resolution Modifying the 2022/2023 Budget By Enabling the Village Treasurer to Make Necessary Transfers Within the General Fund

188

- | | |
|-----------|---|
| 189 - 190 | 10.c Consider a Resolution Authorizing the Village Board of Trustees to Approve a Salary Adjustment for the 2022/2023 Budget For the Intermediate Account Clerk |
| 191 - 193 | 10.d Consider a Resolution to Temporarily Close Colonial Court for Harmonies for Humanity |
| 194 - 200 | 10.e Consider a Resolution Authorizing the Village Manager to Execute an Agreement Between the Village of Ardsley and the Cable Access Director |
| 201 - 310 | 10.f Consider a Resolution to Approve Work Change Order Number 2 for Retaining Wall Extension for the New Highway Garage |
| | 10.g Consider a Resolution to Adopt the 2022 Annual MS4 Stormwater Report |

11. CORRESPONDENCE

12. VISITORS

13. CALL FOR EXECUTIVE SESSION

14. ADJOURNMENT OF MEETING

15. UPCOMING MEETINGS & EVENTS

- May 2, 2023 Board of Architectural Review Meeting 8:00 pm
- May 3, 2023 Homework Helpers 3:00 pm
- May 4, 2023 Senior Strength Training at the Library 10:00 am
- May 5, 2023 ALL VILLAGE OFFICES CLOSED FOR RECORDS RETENTION DAY
- May 5, 2023 Middle School Hangout 3:00 pm
- May 7, 2023 ARDSLEY 5K RACE 9:00 am
- May 7, 2023 Ardsley Pollinator Pathway Event 12:00 pm
- May 7, 2023 Ardsley Historical Society 2pm "The History Making Partnership of Jackie Robinson and Branch Rickey, the Men Who Broke Baseball's Color Barrier"
- May 8, 2023 MDI Committee Meeting 7:00 pm
- May 8, 2023 Planning Board Meeting 8:00 pm
- May 9, 2023 Recreation Commission Meeting 8:00 pm
- May 10, 2023 Homework Helpers 3:00 pm

- May 10, 2023 Board of Trustees Work Session
- May 11, 2023 Senior Strength Training at the Library 10:00 am
- May 12, 2023 Middle School Hangout 3:00 pm
- May 12, 2023 FOOD TRUCK FRIDAY & SLIME MACHINE PARTY BUS! 5:00 PM
- May 13, 2023 ARDSLEY SPRING GARDEN SALE! 10:00 am
- MAY 29, 2023 MEMORIAL DAY -ALL VILLAGE OFFICES CLOSED

16. NEXT BOARD MEETING:

- May 10, 2023 Board of Trustees Work Session 7:30 pm
- May 15, 2023 Board of Trustees Regular Meeting 8:00 pm

NOTICE OF PUBLIC HEARING
AMENDING CHAPTER 18 SECTION 18-15 OF THE ARDSLEY VILLAGE CODE
ENTITLED “CODE OF ETHICS”

PLEASE TAKE NOTICE, that the Board of Trustees of the Village of Ardsley will hold a public hearing on Monday, May 1, 2023 at 8:00 p.m. or soon thereafter at Village Hall-Court Facility, 507 Ashford Avenue, Ardsley, NY 10502 to discuss amending chapter 18 section 18-15 of the Ardsley Village Code entitled “Code of Ethics”.

Please check the calendar on the village website for meeting details at: www.ardsleyvillage.com

Further details on this amendment is available at the Clerk’s office, 507 Ashford Avenue, Ardsley, NY during normal office hours Monday through Friday 9:00 am-4:00 pm.

Written comments may be sent to the Village Clerk at arocco@ardsleyvillage.com or sent via regular mail to 507 Ashford Ave, Ardsley, NY 10502. All comments will be shared with the Board of Trustees and questions will be answered as quickly as possible.

All residents and taxpayers are invited to attend.

BY ORDER OF THE BOARD OF TRUSTEES OF THE
VILLAGE OF ARDSLEY, NEW YORK

Ann Marie Rocco
Village Clerk
Dated: April 21, 2023



**WHEN IT RAINS
IT DRAINS**

What is Stormwater ?

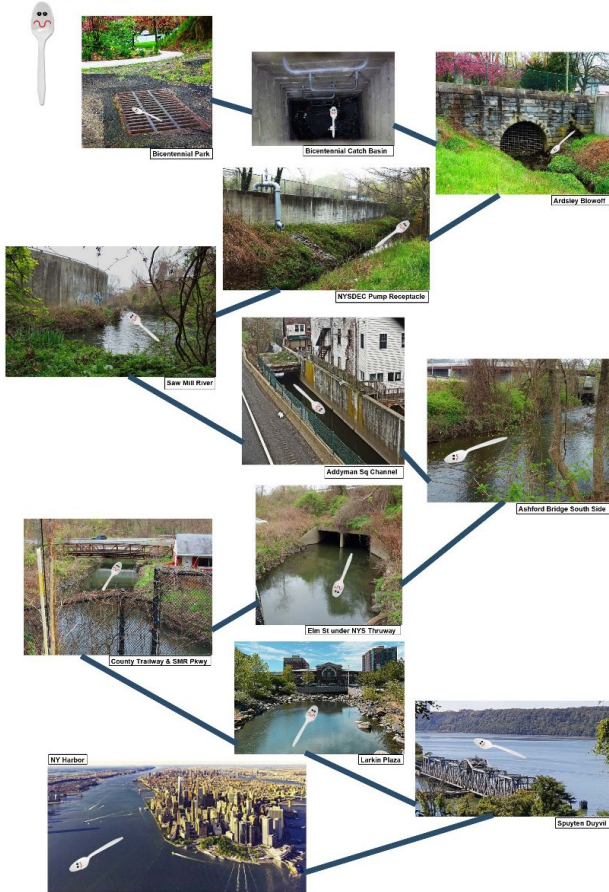
rain or melting snow that doesn't soak into the ground but runs off into waterways

Why is it a problem ?

as it flows, runoff collects pollutants
which degrade lakes, rivers and
wetlands

Last year, it was all about plastic.

Plastic Odyssey



... "ocean" plastic began in our Village!



This year... Garbage!

This year... Garbage!

I thought this was a
Water Report.
Why are we talking
about Garbage?
not that I mind talking
about Garbage...



FOOD WASTE

→ 40% uneaten

→ 20% of municipal waste

→ 60% goes to landfills

→ 20% of landfill by volume

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Effective January 1, 2022:

**NYS Food Donation
and Food Scraps Recycling law**

FOOD WASTE

→ 40% uneaten

→ 20% of municipal waste

→ 60% goes to landfills

→ 20% of landfill by volume

Effective January 1, 2022:

NYS Food Donation and Food Scraps Recycling law

- Businesses, > 2 tons wasted food per week
- Donate edible food
- Bring scraps to recycler within 25 miles

FOOD SCRAPS

Recycled by COMPOSTING

How does composting work?



CompostED
Compost Education Facility
Dept of Environmental Facilities
Westchester County
Valhalla, New York





Browns

(carbon-rich items)



Example of Carbon-Rich Items:

- Paper bags
- Shredded paper
- Dead leaves
- Straw
- Sawdust
- Woodchips

Greens

(nitrogen-rich items)



Example of Nitrogen-Rich Items:

- Vegetable trimmings
- Tea bags
- Coffee grounds
- Coffee filters
- Fruit
- Houseplants
- Old flower bouquets

C:N = 25:1 (v/v)



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Aerobic Process:

- turn the pile to aerate
- add O₂ (as air)
- no bad odors



Breakdown by
microorganisms
produces heat

Keep temp
140° to 160° F

- Kills human pathogens
(E. coli, Salmonella)
- Kills weed seeds

Don't want temp
too high

Cool with air if
necessary

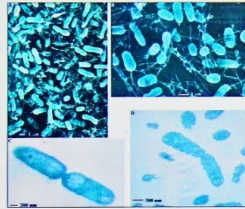
90% of the breakdown is by bacteria (“green”)

10% of the breakdown is by actinomycetes & fungi (“brown”)
Break down lignin in wood

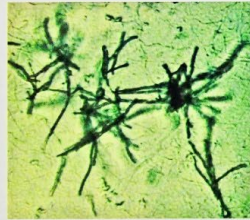
Decomposition also helped by worms & insects

Life in a Compost Pile

First Level Decomposer



Bacteria



Actinomycetes



Fungi

Second Level Decomposer



Nematodes



Protozoa



Springtails

Third Level Decomposer



Ground Beetles



Centipedes



Ants



After 3 weeks, temp drops & O₂ demands goes down
Pile is left to cure for 7 weeks & is turned 3 times
Too much turning produces microplastics from remaining plastic contamination



Screening Machine



FINAL Product



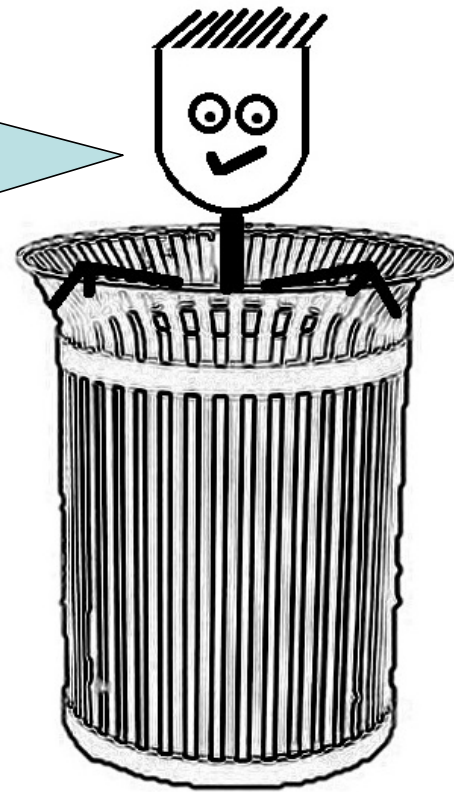
LEFTOVER

to be reused as "brown"

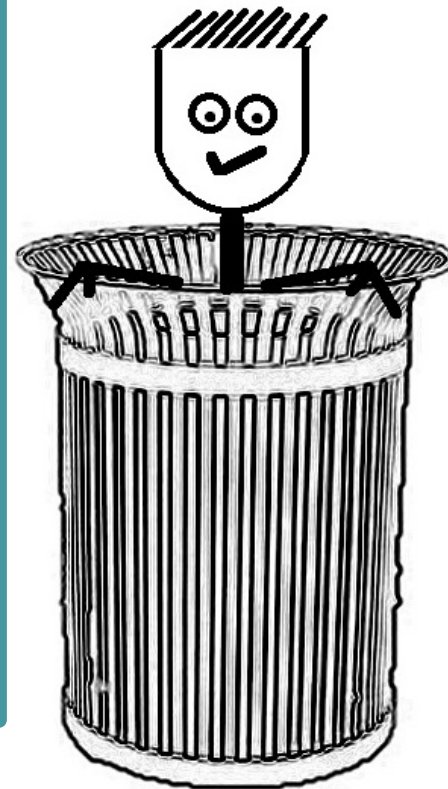


Bring your food scraps to a Drop Off near you!
Anthony F Veteran Park
11 Olympic Lane – Hartsdale NY
Down the road from our new DPW!

But how does
compost help
Stormwater?

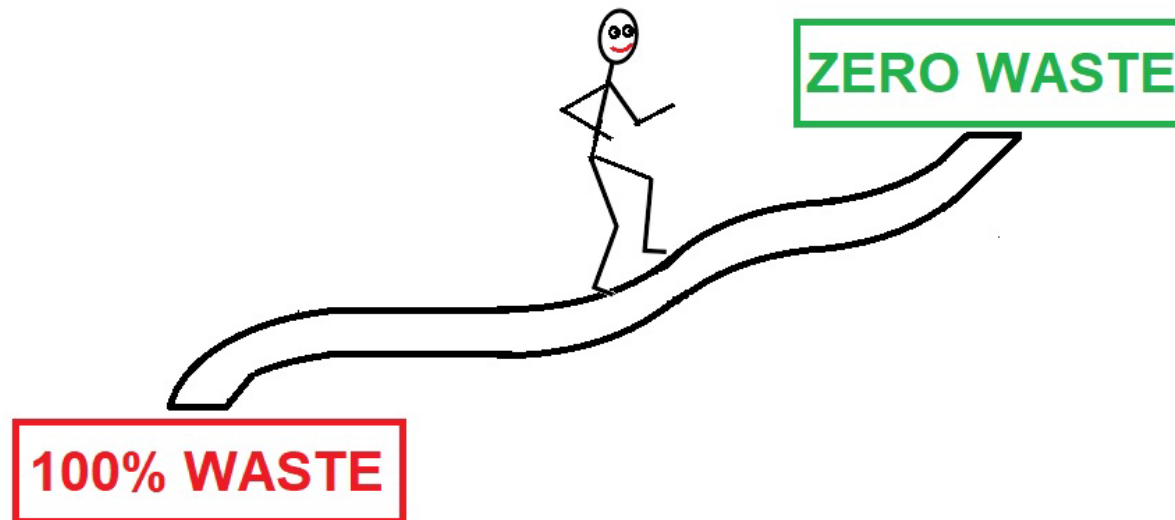


- Less runoff from organic waste in landfills
- Use compost instead of chemical fertilizer
- Helps soil to hold nutrients instead of washing into runoff
- Use compost for weed suppression instead of herbicide
- Reduce erosion & sediment runoff by improving soil structure
- At construction sites, “sleeves” filled with compost control runoff better than hay bale/silt fences
- Increases water-holding capacity of soil so less water is used for watering plant
Less watering -> less runoff -> less pollution



*a few more words about
stormwater pollution...*

“Meet me halfway”



“Meet me halfway”



slider

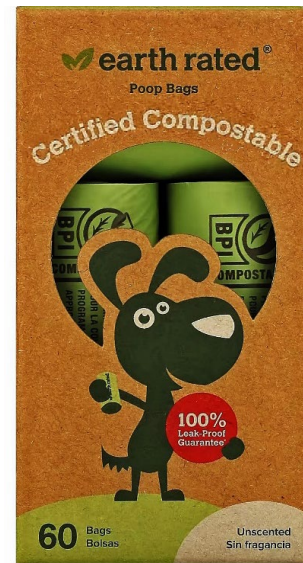


plain

“Meet me halfway”



regular



starch-based

“Meet me halfway”

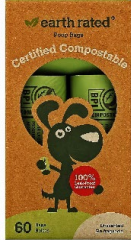


zero phosphate



grass seed only

“Meet me halfway”



recycle



reuse



Stormwater Management Plan Annual Report 2022



Minimum Measure 1: Public Education and Outreach



stormwater@ardsleyvillage.com

Webpage

The screenshot shows the Village of Ardsley website with the following sections:

- Navigation:** Home, Departments, Stormwater Project, News & Announcements.
- Stormwater Project Page:**
 - Welcome to SW Management:** Stormwater (SW) is rain or melting snow that washes over everything, carrying pollutants into our lakes, rivers and all local waterbodies.
 - Phase II SW Management:** a federal EPA program, administered by NYS DEC, aimed at cleaning up all the waterbodies of the US, including Ardsley.
 - MM1 Public Outreach & Education:** visits to schools, Scouts, Village events, TV website.
 - MM2 Public Participation:** cleanups, planting events, SW demos.
 - MM3 Illicit Discharge Detection & Elimination:** track illicit dumping in local water.
 - MM4 Pre-Construction SW Control:** control construction site runoff.
 - MM5 Post-Construction SW Control:** permanent runoff capture.
 - MM6 Municipal Good Housekeeping:** street sweeping, recycling, minimum road salt.
- Contact Info:**
 - Hours of Operation:** Monday - Friday: 9:00 am to 4:00 pm
 - Phone:** (914) 683-3706
 - Fax:** (914) 683-3706
 - Address:** 507 Ashford Avenue, Ardsley, NY 10502, United States.
- Frequently Asked Questions:** What is Stormwater? Why is it a problem?
- Staff Contacts:**

Name	Title	Phone
Johnnie Smith	SW Management Coordinator	(914) 683-3322
Larry J. Tomasso	SW Management Officer	(914) 683-3963

This year

- VofA youtube channel
 - Comp Plan website: DARIS, DPW Garage, Pks Plan & Sewer Map, New Comm Brand, CATV upgrade
 - “Ardsley Connect” weekly newsletter! Listserv up to 1713
- Please join the list!*

Next year

- maintain Village SW webpages
- more Village project pages & news items

Minimum Measure 1:

Public Education and Outreach



Printed Matter & SW Items



This year

- Available at Village Hall, Library & Comm. Center
- SW brochures, Biobaggies

Next year

- more Biobaggies & SW literature

Minimum Measure 1:

Public Education and Outreach



Media



This year

- "SW BMPs, SW Business, Pet Waste, Lawn Care, Grease Disposal, Litter, GI, SW Education"
- VB mtgs: Live & ZOOM

**THANK YOU
GEORGE MALONE!**

Next year

- New video Winter 2023

Minimum Measure 1:

Public Education and Outreach

Product **Recycling** Goals = **25% by 2025**

Recover Plastics

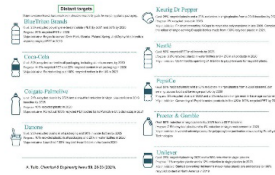
Dissolve polypropylene in butane, precipitate with temp & pressure

Dissolve polystyrene in p-cymene, precipitate with heptane

Brand new! Cut polyethylene into 3-Carbon propenes using Pd & Ru catalysts for ethenolysis

\$\$\$ EXPENSIVE \$\$\$

Good idea to just simplify packaging, less multilayers & metallized layers



Material	Goal
Plastics	25% by 2025
Metals	25% by 2025
Paper	25% by 2025
Other	25% by 2025

Outreach Programs



This year

- AMS SW Program for Earth Science students
- “Welcome Back Ardsley” SW Outreach Table

Next year

- “Enviroscape” Program for 3rd Grade
- AMS SW Program for Earth Science students
- Food Scrap Facility SW Outreach events

Minimum Measure 1: Public Education and Outreach



Leaves & Grass: Save Time & Money by Mulching-in-Place

How: It's as simple as shredding fall leaves into small pieces using a mulching mower or shredder/shredder, or a vacuum shredder. Shredded leaf mulch is only 1/2" to 1" thick. Leaves from trees and shrubs are not mulched but may require several passes, or will not leaves. On driveway or parking area or those very steep, they should be applied on landscape beds 2" or thick like any mulch. Leaves to avoid: avoid leaves from above to decompose naturally. Trees have evolved to recycle their leaves, thereby breaking and recycling the lignin of their leaf canopy.

Do: For mulching: shred mulching green grass, which can be carefully blown off the lawn, then shred & re-apply as much. Grasses better can be used to compost pile, serving as a "brown" layer in the compost recipe. Always use shredded leaves in the pile for mulched and decomposed in the summer, and grass clippings as well.

Benefits of leaf mulching in place for lawns & gardens:

- Increases water holding capacity of soil, improves absorption of whatever is used.
- Lightens clay soils and gives oxygen to sandy soils.
- Cools soil in summer and provides additional temperature protection in winter.
- Increases nutrient and oxygen in the soil.
- Increases biological activity of earthworms, microbes & other beneficial soil organisms.
- It's a free "fertilizer" for landscape plants, trees, vegetable garden and lawn.
- Eliminates or reduces need waste from entering municipal "solid waste" landfills every day.

Grass-cycling: Mulching of clippings provides the same benefits for lawns and can be done all three seasons.

For more information and resources: www.EDERR.org
Now for your local Extension County Contact us info@ederr.org

Las Hojas Y Recortes de Grama: Ahorre Tiempo y Dinero

Cómo: Es tan simple como triturar las hojas en pedacitos pequeños usando una cortadora, o un shredder vacuado. Los trocitos de hojas trituradas son solo de 1/2" a 1" de grueso. Las hojas de árboles y arbustos no se triturarán pero pueden necesitar varias pasadas, o no se triturarán. En el camino o estacionamiento o en esas áreas muy empinadas, se aplican en las camas de paisaje de 2" o más gruesas como cualquier otro tipo de mantillo. Evitar las hojas de árboles que se descomponen naturalmente. Los árboles han evolucionado para reciclar sus hojas, desmenuzando y reciclando el ligno de su dosel foliar.

De: Para el mantillo: triturar el césped verde, que puede ser cuidadosamente sopado del césped, luego triturarlo y volver a aplicarlo como mantillo. Las gramíneas que se descomponen naturalmente pueden usarse como una "capa marrón" en la receta de compost. Siempre use trocitos de hojas en la pila para el mantillo y descomposición en el verano, y los recortes de césped como mantillo.

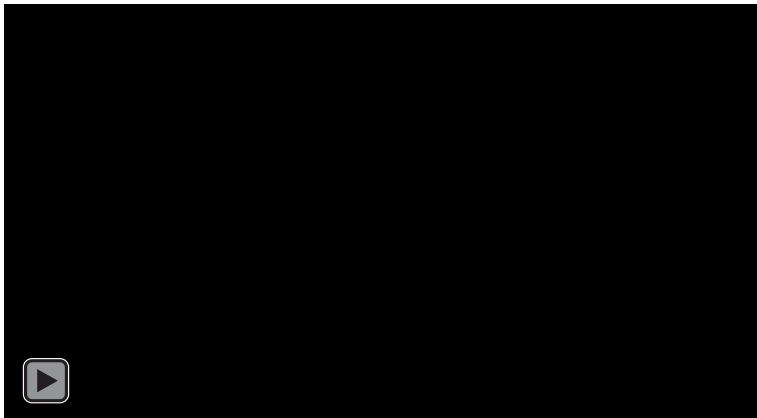
Beneficios de la trituración y recortes de gramíneas en su jardín y jardín de césped:

- Aumenta la capacidad de retención de agua en la tierra y mejora la absorción de agua.
- Aligera los suelos arcillosos y da oxígeno a los suelos arenosos.
- Mantiene el suelo fresco en verano y proporciona protección adicional en invierno.
- Aumenta el contenido de nutrientes y oxígeno en el suelo.
- Aumenta la actividad biológica de los gusanos de tierra, microbios y otros organismos beneficiosos del suelo.
- Es un "fertilizante" gratuito para las plantas de paisaje, los árboles, el jardín y el césped.
- Elimina o reduce la necesidad de desechos que ingresan a los vertederos municipales de "residuos sólidos" cada día.

El reciclaje de los recortes de césped proporciona los mismos beneficios para el césped y puede hacerse en las tres temporadas.

Para más información y recursos: www.EDERR.org
¡Ahora para su condado de extensión! Contáctanos en info@ederr.org

Business Outreach



This year

- Direct distribution of “Love ‘Em and Leave ‘Em” leaf and grass clipping mulch-in-place information to landscape contractors at job sites

Next year

- Continue information distribution program

Minimum Measure 2:

Public Involvement / Participation



Public programs



This year

- Village-wide Clean-up Events
THANK YOU SCOUTS & ARDSLEY CARES!
- Great SMR Clean-up
THANK YOU GROUNDWORK HV!
- Invasive Vine Removal
THANK YOU POLLINATOR PATHWAY!

Next year

- Scout & Ardsley Cares Clean-up Events
- Great SMR Clean-up

Minimum Measure 2:

Public Involvement / Participation

Bronx River Cleanup: 1999

Bronx River cleanup set

Parks chief unveils \$60M plan for waterway

By RALPH R. ORTEGA
DAILY NEWS STAFF WRITER

There was a time when no one seemed to care about cleaning up the Bronx River.

Until the 1970s, the river became an illegal dumping site for almost anything.

"Tires, cars, refrigerators and washing machines," said Nancy Wallace, executive director of the Bronx River Restoration, a local group working to clean the waterway. "Once, we even found an old wine press in there."

But when it comes to cleaning and preserving the river these days, everyone now seems to want to get wet.

City Parks Commissioner Henry Stern has become one of the river's leading advocates, planning more than \$60 million in capital projects proposed for the waterway during the next two years.

The projects, falling under Stern's Bronx River Action Plan, concentrate on improving access, land acquisition, park development and ecological restoration.

"For years, the Bronx River has been little more than a gully," Stern said. "It hasn't enhanced value or given pleasure to anyone. That's what we're trying to turn around."

Some highlights from Stern's action plan are:

- Doubling the size of Starlight Park in the Bronx's West Farms section, as well as constructing new ball fields, a nature center, boathouse and comfort station there.
- Turning recently acquired land in West Farms into a new river-walk park.
- Constructing a waterfront esplanade, recreation and nature center, and restoring a vital wildlife habitat in Soundview Park.
- Creating new park land on the Soundview Lagoons, as well as restoring natural areas there.

Building a new park on the river at Lafayette Ave. and developing a 4-acre waterfront park with spectacular views of Man-



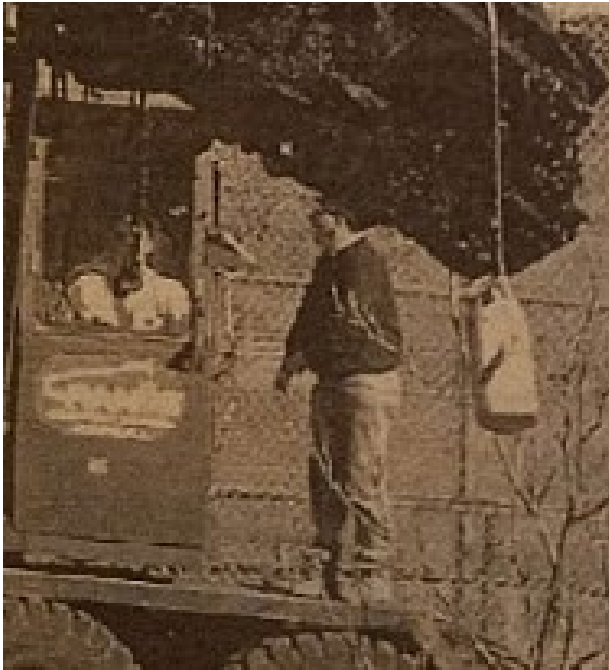
TAKE IT AWAY A crane lifts discarded vehicle from the Bronx River last week. Parks commissioner has pledged \$60 million in capital projects for the waterway, which for years was the site for illegal dumping. Many Bronxites are encouraged by the cleanup efforts.

BUDD WILLIAMS DAILY NEWS

Minimum Measure 2:

Public Involvement / Participation

Bronx River Cleanup: 1999



Trustee DiJusto!

Bronx River cleanup set

Parks chief unveils \$60M plan for waterway

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TAKE IT AWAY A crane lifts discarded vehicle from the Bronx River last week. Parks commissioner has pledged \$60 million in capital projects for the waterway, which for years was the site for illegal dumping. Many Bronxites are encouraged by the cleanup efforts.

BUDD WILLIAMS DAILY NEWS

Minimum Measure 2:

Public Involvement / Participation



Public programs



This year

- AHS ETF Bicentennial Park
THANK YOU AHS ETF!
- Library Pollinator Garden
THANK YOU SCOUTS & GARDEN CLUB!
- Arbor Day Pascone Park
THANK YOU SCOUTS & DPW!
- Community Center Garden Beds
THANK YOU HHs & YA!
- Daffodils Pascone Park
THANK YOU ARDSLEY CARES!

Next year

- AHS Env Task Force
Library Rain Barrel
- Arbor Day Planting

Minimum Measure 3:

Illicit Discharge Detection and Elimination

Inspection & prevention



This year

- 51% Outfalls tested this year
- THANK YOU HAILEY FINKELSTEIN,
STORMWATER INTERN!**

Next year

- Continue outfall inspection program
- New SW Intern

Minimum Measure 4:

Construction Site Stormwater Runoff Control

Erosion and Sedimentation Control



This year

- DPW Garage SWPPP
- 3 notices issued this year, matters completely resolved

Next year

- Continue policy
- Applies to all new construction and tear-downs

Minimum Measure 5:

Post-Construction Stormwater Management

Inspection and maintenance



This year

- Repair Addyman flap gate
- NYSDEC & USACE inspection 8/30/2022
- Sewer inspection contract
- Jet Cleaner IMA

Next year

- Village Green Det area #2 vegetation clearance
Fall 2023

Minimum Measure 6:

Pollution Prevention / Good Housekeeping

Municipal Operations



This year

- McDowell Park entry upgrade & new southwest area
- Pascone Park Softball Field Det Basin upgrade

Next year

- Continue stream bank maintenance and planting
- Heatherdell Road upgrades

Minimum Measure 6:

Pollution Prevention / Good Housekeeping

Catch basins and storm drains



This year

- 33 CB's cleaned this year & 1040 miles streets swept!

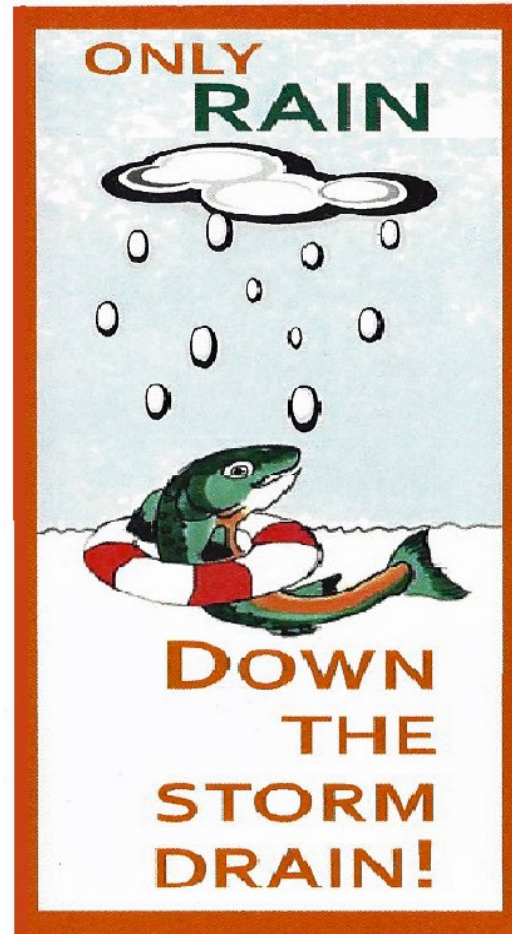
>TERRIFIC JOB DPW!!!<

- e-waste pick up appts

Next year

- NEW DPW
Garage
Spring 2024
Hooray!!!

Please remember...





**WHEN IT RAINS
IT DRAINS**

The Village of Ardsley, NY: Creating an Actionable Plan to Lower Municipal Emissions

Paulina Dawidowska, Lia Hansen, Pieter Fildes, Manya
Johnston-Ramirez

**NYU Robert F. Wagner Graduate School of Public
Service**

May 2023



ACKNOWLEDGEMENTS

We would like to thank Professor Erin Connell for her guidance and advice throughout this project. We would also like to thank Asha Bencosme, Joseph Cerretani, and Charles Hessler for their invaluable contributions to our work. We also would like to make the following acknowledgements:

Village of Ardsley

- Hon. Nancy Kaboolian, *Mayor*
- Leslie Tillotson, *Village Treasurer*
- David DiGregorio, *General Foreman*
- Anthony Piccolino, *Police Chief*

Village of Hastings-on-Hudson

- Mary Beth Murphy, *Village Manager*
- David Dossin, *Chief of Police*

City of White Plains

- Hon. Tom Roach, *Mayor*

Village of Irvington

- Larry Schopfer, *Village Administrator*

New York University

- Roberta Muñoz, *Adjunct Liaison Librarian*

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I. EXECUTIVE SUMMARY

There is a favorable political climate for environmentally-conscious policymaking, especially in the transportation sector. Within the Village of Ardsley and surrounding communities, there is an interest in reducing emissions. The Village of Ardsley seeks to reduce municipal vehicle emissions due to health and environmental concerns while maintaining the quality and reliability of its municipal services. Our team's project aims to review the most appropriate technology for Ardsley's needs, examine the feasibility of potential vehicle transitions, and advise on emission reduction technologies and other emission-reduction policies. The project's methodology primarily consisted of a literature review, external and internal interviews, information gathering from the current vehicle inventory and other documentation, and research on available policy and technology.

Our team conducted internal interviews with five employees of the Village of Ardsley. From our internal interviews, our team found that Ardsley employees had similar concerns about the transition to electric vehicles, which include: lack of EV infrastructure, the high cost of EV's, EV operability for emergency vehicles, EV operability during power outages, EV reliability in cold weather, and lack of mechanic training for EV vehicles. We also found that Ardsley has already begun some initiatives to reduce emissions, such as: membership in the NY Climate Smart Communities Program, purchasing an electric bike for the police department, having an unofficial anti-idling policy, and upgrading Village Hall's lighting to be LEDs. We conducted four external interviews with employees of the Village of Hastings, the Village of Irvington, and White Plains, all neighboring municipalities. Through our external interviews, we learned about different Electric Vehicle purchasing policies from the three different municipalities. Our team found that all three municipalities are generally satisfied with the transitions they have made. Each municipality has a unique vehicle purchase policy: Hastings's policy is that all admin and police vehicles must be EVs, Irvington's policy is that when a vehicle needs to be purchased, they evaluate EV alternatives and have a set criterion that they need to meet before purchasing the EV. Lastly, White Plains' policy is that any vehicle that is purchased needs to be electric unless there is some reason it should not be, and all Sedans must be electric. Our team also found that there is a backlog when purchasing EVs, EVs require generally less maintenance, it is essential to have department head buy-in when purchasing EVs, there has been no electric grid impacts by EVs, and Electric Vehicles can be purchased through tax credits and grants. Through our review of Ardsley's inventory and emissions report, our team found that 55% of Ardsley's fleet runs on diesel, and that DPW emits the most total emissions, at 62.5%, yet the Police Department emits the most emissions per vehicle. Through our literature review, our team found that lowering emissions decreases negative health outcomes, reduced motorization is the most effective way to reduce emissions, driving ranges of EV's are expected to increase in the next few years, low temperatures affect the EV batteries, the overall cost

of ownership of an EV vehicle is lower than a conventional vehicle, and that the electric vehicle market is expected to be fully mature by 2025.

Our team produced a vehicle purchase checklist through a decision tree model, to be utilized by department heads when making vehicle purchasing decisions. Our team identified electric vehicle and hybrid vehicle replacements to the vehicles identified in the capital plan, and created a replacement schedule. We identified additional vehicles that have suitable EV or hybrid replacements on the market today. Our team crafted a two-phase infrastructure plan to install electric vehicle chargers in the Village of Ardsley. Lastly, our team identified policy recommendations that could reduce emissions beyond the vehicle sector: increasing biking and walking infrastructure, improving municipal buildings' energy efficiency, and changing lights to be LED.

II. INTRODUCTION

The Village of Ardsley seeks to reduce its emission by transitioning their municipal vehicle fleet into more sustainable alternatives. Environmental and health concerns are the driving forces behind Ardsley's interest in making the transition. As a member of New York State's Climate Smart Communities, Ardsley seeks to set emission reduction goals. The Village of Ardsley's 2019 Inventory of Government Operations Greenhouse Gas Emissions Report found that the Village's yearly emissions totaled 535 metric tons (MT) CO₂e. The Village's fleet was found to be the main contributor of those emissions, at 49% of total emissions, followed by the Village's buildings, at 43% of emissions. Street lights and traffic signals contributed to 8% of emissions (Appendix I).

Given Ardsley's goal of reducing municipal emissions, the main objectives of our capstone project include:

- Reviewing the current low-emission vehicle technologies and emission-reduction policies
- Identifying low-emission vehicles that can be utilized in Ardsley's municipal fleet
- Crafting a fiscally responsible transition plan, including infrastructure needs

III. METHODS

Our team’s research methods have consisted of regular check-ins with the Village of Ardsley and information gathering through desk research, client meetings, and interviews with employees of Ardsley and neighboring villages. This strategy has allowed us to compile our findings that inform our recommendations. Weekly team meetings have also been utilized to collaborate on deliverables.

Our team conducted the literature review research from November 7th until December 20th, 2022. The research was conducted on multiple platforms, including Google Scholar, Engineering Village, and Ebsco. We also consulted the U.S. Department of Energy (DOE) and U.S. Department of Transportation (DOT), World Health Organization (WHO), and U.S. Environmental Protection Agency (EPA). Lastly, our team reviewed relevant industry articles to review the current market offerings. The terms searched on different platforms included “electric vehicles,” “medium- and heavy-duty electric vehicles,” “low emission vehicles,” and “electric vehicle infrastructure.” Our team reviewed over 97 articles and sources, as referenced in our works cited section. In addition to our literature review, our team conducted desk research throughout the year to identify appropriate vehicle and equipment replacements, vehicle retrofitting alternatives, and low-emission policies.

Our team conducted internal interviews from January 3rd, 2023 until January 18th, 2023, with five employees of the Village of Ardsley. All interviews were conducted over Zoom. Our team attempted to interview the Village’s fire chief, but was unable to do so. The questions posed to each employee were uniform, with slight variations depending on their job duties. Our team conducted external interviews from January 30th, 2023 until March 23rd, 2023. All interviews were conducted over Zoom. We conducted interviews with representatives of the Village of Hastings, the Village of Irvington, and the City of White Plains- all geographical comparable municipalities to the Village of Ardsley. The questions posed were uniform for all three municipalities.

The Village of Ardsley provided the team with a March 2022 auto schedule with information for each of the vehicles owned by the municipality. This consisted of make, model, model year, vehicle identification numbers (VINs), auto class, cost when purchased new, and collision and comprehensive deductibles. We were additionally provided with fuel expenses and fuel purchased broken down by month for FY 21-22. The inventory table devised for the Village’s municipal fleet contains the following vehicle information: make and model, year purchased, municipal department, style, vehicle type, fuel type, cost when purchased, and the VIN. Ardsley has 51 municipal vehicles we examined in our report. We removed 4 vehicles given their usage and classifications: 1 vehicle was an antique fire truck used for parades and 3 were trailers.

IV. FINDINGS

A. Internal Interviews

The Village of Ardsley assisted the Team in arranging interviews with five internal stakeholders who serve as department heads in the municipality. The team conducted five interviews with the Police Chief, Village Manager, Mayor, Village Treasurer, and DPW Foreman. The team attempted to conduct an interview with the Fire Chief. The interviews have provided insight into perceptions and potential impacts of a vehicle transition, along with information on the day-to-day operations of various departments. Below is a summary of the insights gleaned from the interviews.

Through our team's interviews with Village employees, we found that all our interviewees shared similar concerns about a potential transition to electric vehicles.

The top concern expressed during our internal interviews is the lack of appropriate infrastructure for the transition to EVs, with some expressing a desire for the infrastructure to be built first before purchasing any electric vehicles. Another expressed concern was the current high cost of electric vehicles, as the Village's debt is currently maxed out. Additionally, there was a concern that Village mechanics are not properly trained to fix electric vehicles. There was also hesitation about the Village's mostly emergency vehicle fleet, and the potential ability to charge electric vehicles throughout the day. Additionally, since the Village lost power during Hurricane Sandy, they want to ensure that the vehicles would be able to run when power is lost. Lastly, there is a worry that electric vehicles would not perform well during the colder months.

In its commitment to caring for the environment, the Village has already begun efforts to reduce greenhouse gas emissions.

Ardsley's Police Department has purchased an electric bicycle, which is used for patrol when possible. The Police Chief has stated that the officers have been satisfied with this equipment. All departments have an anti-idling policy that applies to all vehicles except for emergency vehicles. The Police Department also has an unofficial policy of shutting off vehicles when they are not in use. Lastly, the Village has begun LED lights upgrades in the Village Hall.

B. External Interviews

The Village of Ardsley provided the Team with contacts to 4 external stakeholders in the region, who have implemented vehicle transition in their municipalities. We conducted interviews with the Police Chief and the Village Manager from Hastings, the Village Manager of Irvington, and the Mayor of White Plains. The interviews yielded insights on the procurement process, challenges and

opportunities associated with the transition, and attitudes towards the change. Our team found that all three municipalities are generally satisfied with the transitions they have made. Each municipality has a unique vehicle purchase policy: Hastings's policy is that all admin and police vehicles must be EV, Irvington's policy is that when a vehicle needs to be purchased, they evaluate EV alternatives and have a set criterion that they need to meet before purchasing the EV. Lastly, White Plains' policy is that any vehicle that is purchased needs to be electric unless there is some reason it should not be, and all Sedans must be electric.

All municipalities are transitioning their vehicles to electric in phases, but have different policies when considering the purchase of electric vehicles.

The Village of Hastings has purchased all electric vehicles for their administrative and police cars. Their policy is that all police and administrative vehicles have to be electric, and all new vehicles need to be evaluated for EV replacement. The Village of Irvington's policy is to always consider the use of alternative vehicles when making a vehicle purchase. They will only purchase an alternative vehicle if it is: commercially available, sold by a national dealer locally, contains no aftermarket modifications, has fuel readily available, and meets operational and safety standards. White Plains' electric vehicle purchase policy is that if a department chooses to buy a non-electric vehicle, they must have an explanation as to why it is not electric. In addition, all Sedans need to be electric.

Electric vehicles purchased have taken a long time to arrive, as there is a national backlog for EVs.

The Village of Hastings has purchased an electric mustang, and it is taking about a year to arrive. The Village of Irvington also stated that there is a backlog, as they had not received some vehicles that were ordered over a year ago. White Plains has also stated that it is difficult to get the vehicles. Even as a member of the Climate Mayor's buying program, the Mayor believes that there is little vehicle availability, and sees supply as the main issue in making the transition to Electric Vehicles.

In making the shift to electric vehicles, it is important to have Village departments' buy-in.

Our interviews highlighted the importance of involving department heads in the vehicle purchasing decision making. The police chief in Hastings stated that the police department had no choice in making the shift to Electric Vehicles, and that the village did not solicit input from the department. The village has a no-compromise policy, where only electric vehicles can be purchased for the police department, which can create friction with department heads. In the Village of Irvington, each department head is involved in making the purchasing decision for vehicles. White Plains' department heads are also involved in choosing the vehicles purchased.

Electric vehicles have less driving range in the winter, but it has not affected their daily operations.

The vehicles in Hastings get an average of 250 miles a charge, and it goes down to 210 miles a charge in the winter, but they have not found that to be an issue. The Village of Irvington does not

currently use electric vehicles when it is cold, but the Village Manager has heard no complaints from the departments.

All municipalities have installed Level 2 charging stations for the municipality's vehicles.

The Village of Hastings currently has one Level 2 charger for vehicle staff, and one charger hanging from the second floor of the Village Hall. They have plans to install six additional chargers, and have hired an electrical engineer to draw up plans for this. The Village of Irvington has two charging units for village vehicles. White Plains has Level 2 chargers, and mentioned that once they purchase electric vehicles for the police department, they will need Level 3 chargers as well.

The municipalities have found that electric vehicles require less maintenance, and White Plains emphasized the importance of mechanic training and buy-in.

The municipalities have mentioned that one benefit of Electric Vehicles is that they require less maintenance. The Mayor of White Plains has also stated the importance of mechanic buy-in. He stated that their mechanics are experienced with Ford vehicles, and other American manufacturers, so they were more receptive to Electric Vehicles coming from these manufacturers.

Outfitting electric vehicles for the Police Department's use is expensive, so two municipalities chose hybrid vehicles instead.

The Village of Hastings has an electric Mustang for the police department, and has noted that the custom outfitting has been expensive, costing the Village \$105,000. Moving forward, they stated that they will wait until the Ford F150 comes out to avoid those high outfitting costs. Both the Village of Irvington and White Plains police vehicles are hybrid vehicles.

None of the municipalities have seen an impact on the electrical grid after their transition.

The Village of Hastings states that they had not seen electrical grid impacts. They have done a lot to reduce electricity use, such as putting in place sensors, LED lights, and providing rewards for less electricity use. These measures have reduced electricity use in the Village. Irvington has not seen an impact on the electricity grid yet, but the village manager has stated that they are not pushing the limits yet. White Plains has seen no issues as well.

All municipalities have taken advantage of tax credits or grants for their EV vehicle purchasing, in addition to competitive bids from other municipalities.

The municipalities have taken advantage of different grants, such as the Con-Edison Power Ready Program, the Zero Emission Grant Program, and NYSERDA grants. The village of Hastings was able to receive rebates and leased-by opportunities when purchasing vehicles, in addition to tax credits. The Village of Irvington purchases its cars through competitive bids or through another government contract. In addition to this, they are expecting a reimbursement of \$7,000 per electric vehicle purchased, given by the Zero Emission Grant Program. The Village of Irvington has also taken advantage of the ConEdison Power Ready Program, which gives reimbursements for electric

vehicle infrastructure installation. White Plains was also able to take tax credits for their electric vehicle purchase. White Plains has utilized grant money for necessary infrastructure upgrades, and will be installing 90 Level 2 chargers. There are NYSERDA grants available based on points for municipal climate actions. White Plains additionally is part of the ConEdison program that pays a municipality if it limits its charging hours from 12am-6am.

C. Inventory

1. Full Municipal Fleet

Based on an Emissions Inventory of the Village of Ardsley, the municipal vehicle fleet accounted for 48% of the CO₂ emissions from government operations in 2019 (Appendix 1). We analyzed the information on the vehicles in order to understand the current makeup of the fleet and understand current municipal trends.

Not including the antique fire truck and three trailers, there are a total of 51 regularly-used vehicles in Ardsley's municipal fleet. One vehicle belongs to the Building and Code Enforcement Department while the rest belong to the Police Department (12 vehicles), DPW (30 vehicles), and the Fire Department (8 vehicles). Our full inventory chart can be found in Appendix IV.

Ardsley's vehicles are all from American car manufacturers.

Ardsley's vehicles are all from American-based vehicle companies and manufacturers. These include Chevrolet, Dodge, Ford, John Deere, and Mack (Appendix V Fig. 1). It is unclear to us if there was a reason for this, but there is a history of U.S. government entities being required or receiving tax incentives to purchase American-made products.¹

Many of the lightweight vehicles used by Ardsley's departments are widely-available vehicles that have been modified for municipal use, especially within the police department. This allows for more affordable and more accessible vehicle maintenance options, which the municipality noted as being a priority. Future vehicle purchases could consider vehicle manufacturers.

DPW vehicles primarily rely on diesel fuel.

Out of the 30 vehicles operated by DPW, 25 of them rely on diesel fuel (Appendix V Fig. 3). This is about 83% of the department's vehicles. These diesel vehicles include garbage trucks, mobile equipment such as tractors, dump trucks, and medium-weight trucks. DPW also has the greatest department variety when it comes to vehicle makes and models which is consistent with the department's myriad of responsibilities.

The other department that uses diesel fuel is the fire department (Appendix V Fig. 4). The three fire trucks they operate run on diesel fuel and account for about 37.5% of the department's vehicles: significantly lower number than the percentage of DPW's diesel vehicles.

Ardsley spent about \$3.42/gallon on regular, unleaded fuel and about \$4.06/gallon on diesel fuel.

The Village of Ardsley spent \$116,461.31 on fuel and purchased about 31,008.29 gallons of fuel (Appendix V Fig. 5-6). For FY 21-22, DPW reported as having spent a total of \$76,411.25 on fuel: \$11,591.76 on the five regular fuel vehicles and \$64,819.49 on the twenty-five diesel fuel vehicles. DPW purchased a total of 3,497.30 gallons of regular fuel and 15,900.82 gallons of diesel fuel. Regular fuel for DPW cost approximately \$3.31 per gallon and \$4.08 per gallon.

The police department reported a total regular fuel spending of \$24,857.33 for their twelve department vehicles. The police department also purchased a total of 7,234.63 gallons of regular fuel. Regular fuel for the police department cost approximately \$3.44 per gallon.

The fire department reported spending \$15,192.73 on fuel for the same period of time: \$10,830.15 on regular fuel and \$4,362.58 on diesel fuel. The fire department purchased a total of 3,120.36 gallons of regular fuel and 1,255.18 gallons of diesel fuel. Regular fuel for the fire department cost approximately \$3.47 per gallon and diesel fuel cost about \$3.48 per gallon.

DPW vehicles, on average, had the highest fuel costs and fuel use for both diesel and regular fuel.

Given the details on the fuel expenses of each department in addition to the department's vehicle makeup, we were able to estimate how much the Village of Ardsley spent in FY 21-22 on fuel for the average vehicle as well as how much fuel was used (Appendix V Fig. 7-8).

We estimate that each DPW regular fuel vehicle cost about \$2,318.35 and used an average of 699.46 gallons of fuel. Each DPW diesel fuel vehicle cost about \$2,592.78 and used an average of 636.03 gallons of diesel fuel. The police department spent about \$2,071.44 on fuel for each of their vehicles and each vehicle used an average of 602.89 gallons of fuel. Fuel for each regular fuel vehicle in the fire department cost about \$2,166.03 and used an average of 624.07 gallons of fuel. Each diesel fuel vehicle in the fire department cost about \$1,454.19 in fuel expenses and used an average of 418.39 gallons of diesel fuel.

DPW accounted for the majority of vehicle emissions as a department; but, each police vehicle contributed more emissions on average.

The 2019 emissions study broke down the municipal fleet vehicle emissions by department and showed DPW vehicles contributed 162 CO₂e, police vehicles contributed 68 CO₂e, and fire

department vehicles contributed 29 CO₂e. 63% of vehicle emissions in Ardsley came from DPW vehicles (Appendix V Fig. 9).

Given the fleet changes since the study, we analyzed the emissions by department by removing vehicles that were purchased between 2020 and the present. This changed the fleet makeup to have 39 vehicles: 1 Building and Code Enforcement Department vehicle, 9 Police Department vehicles, 23 DPW vehicles, and 6 Fire Department vehicles.

We estimated that, on average, police department vehicles emitted 7.556 CO₂e, DPW vehicles emitted 7.043 CO₂e, and fire department vehicles emitted 4.833 CO₂e (Appendix V Fig. 10). While the department vehicles accounted for 26% of the municipal vehicle emissions, the average police vehicle emitted the most CO₂e than the average DPW or fire department vehicle (Appendix V Fig. 11).

As mentioned previously, the police department vehicles see the most use when compared to the rest of the municipal fleet, which could account for the higher emission levels.

2. Vehicle Fuel Use and Efficiency

With the information provided, we were unable to do a more definitive analysis of the fuel efficiency of Ardsley's municipal fleet. The Village does not collect information regarding the fuel use and efficiency for each of its municipal vehicles. In our recommendation section, we provide additional insight into how Ardsley might be able to do this. Collecting this information could prove useful in identifying which vehicles are performing better and, as a result, provide insight into which vehicles should be updated for a more efficient and lower-emission model.

Given our findings, it is important to note that each departments' vehicles are used for very different purposes. For example, the fire trucks of the fire department do not see the same amount of use as the police department's patrol vehicles and, as such, will see vastly different fuel costs and consumption. DPW has many different kinds of heavy vehicles that consume a great deal of fuel and have different frequencies of use. Cross-department comparisons of vehicles should account for additional factors beyond cost of fuel and fuel consumption.

D. Literature Review

Below is an abridged version of our literature review, highlighting key points in our research. Our team's full literature review is located in Appendix II. Our research is based on several key focus areas, including health impacts, benefits of transitioning to EVs, technical limitations of EVs, fuel efficiency, infrastructure needed to make the transition, and comparable use cases. The literature

review aims to cover the current state of research on zero emissions vehicles, their implementation or viability in practice, examples of EV transition programs, as well as review the availability of comparable vehicles coming to market, in order to support our recommendations.

The team's research showed a variety of findings or trends concerning the transition to electric or low emission vehicles. Common themes were discovered, including health benefits, fuel efficiency, overall costs, and lower carbon footprint. Vehicle range, battery life, and reliance on the electrical power grid were also commonalities throughout our research. A detailed overview of the evaluations, articles, case studies, and vehicle comparisons have been included in this report.

Lowering emissions decrease air-pollution related health issues and death.

While many studies struggle to specifically link transportation-caused air pollution to health issues, air pollution contributes to increased rates of asthma, COPD, and respiratory issues.² People who live in urban and suburban areas with greater vehicle emissions are at a higher risk of these diseases, especially if they work outdoors or with heavy vehicles.³ Lee et al. examined how municipal waste workers who drove the waste trucks were exposed to less carbon pollution than those who were collecting the waste outside the truck.⁴ A series of studies proved that truck drivers, street cleaners, highway toll workers, and bus drivers, who are exposed to greater levels of vehicle exhaust, were at a higher risk for lung cancer, heart attack, and heart diseases.^{5 6 7 8} Larger-scale transition to low-emissions vehicles, especially heavy-duty vehicles, could decrease emissions-related deaths globally by 3 million.⁹ Additionally, 100% EV sales and 100% clean electricity is estimated to generate \$1.2 trillion in health benefits, and will save 110,000 lives and 2.7 million asthma attacks in the U.S. by 2050.¹⁰

Reducing motorization is most effective to reduce emissions, low temperatures affect electric vehicle battery life, and total cost of ownership of electric vehicles are lower than conventional vehicles, and driving ranges are expected to increase in the next few years.

Conlon, Waite, Wu, and Modi suggest that to achieve overall energy emissions reductions it is important to prioritize vehicle electrification ahead of complete grid decarbonization.¹¹ A study in Europe showed that electric SUVs did not contribute to reducing emissions, since CO2 emissions of new cars are reduced when there is lower motorization. The authors suggest reducing the reliance on technology fixes, downsizing, and reducing motorization to reduce emissions.¹² Temperatures of 0 °C and -15 °C reduce the battery capacity of Battery Electric Vehicles of 150 km by 53% and 40%, respectively.¹³ Even without government subsidies, the Total Cost of Ownership (TCO) of EV vehicles is less than conventional vehicles.¹⁴ Another point concerning EVs sold in the United States is that their fully charged driving range can vary from 62 to 270 miles per charge (with a median of 93 miles), depending on the brand or model.¹⁵ EV ranges are expected to reach 500 miles per charge in the next few years, bringing them closer to the majority of fossil fuel-powered vehicles.¹⁶

The vehicle market is rapidly shifting towards electric vehicles and is predicted to be fully mature by 2025, and EV vehicles can save between \$6,000 and \$10,000 per year.

When determining the price and drive range of an electric vehicle, the size and capacity of the battery is the most important component.¹⁷ Aryandi, Gunawana, and Monaghan found that Plug-in hybrid electric trucks operate with the lowest fuel costs of \$0.16/kWh.^{18 19} It is predicted that by 2030, the battery price will be close to half of the current price.²⁰ In the first quarter of 2022, 2 million EVs were sold globally, a 75% increase from the first quarter of 2021.²¹ New electric vehicles sales are predominantly battery electric vehicles, accounting for 75% of electric sales.²² A 2022 U.S. Department of Energy Report maintains that there are several medium and heavy electric vehicles currently available in the U.S. Market, including transit buses, delivery trucks, forklifts, mowers, tractors, and ground support equipment.²³ Zero emission trucks and buses availability has increased by 26% from 2020 to 2023, and there are 544 models currently available.²⁴ These markets are projected to be fully mature by 2025.²⁵ The U.S. Department of Energy's study shows that nearly half of medium and heavy duty trucks will be cheaper to buy, operate, and maintain as zero emissions vehicles than traditional vehicles by 2030.²⁶ The International Council on Clean Transportation (ICCT) estimates that 45% heavy duty vehicles sales in 2030 will be zero-emission, and 100% in 2040.²⁷ The Customer Report reports that the electric vehicles have higher upfront cost compared to internal combustion engine vehicles, there is much evidence available indicating the electric vehicles are cheaper to maintain. NRDC estimates the annual savings at the levels between \$6,000 and \$10,000.²⁸

Level 2 chargers are the most suitable for Ardsley's needs.

The generally approved classification of charging stations is set on a scale 1 to 5, with Level 1 having the lowest power capacity and Level 5 the highest. Level 1 equipment is recommended for personal use of light duty vehicles at owners' houses. Level 2 equipment also uses alternative current and can draw energy from local distributional systems. It operates on upgraded, 220-volt outlets, with power ranging from 6.6 kWh to 19.2 kWh. Level 3 to Level 5 equipment uses direct current, charging the battery directly and delivering much more power, without the necessity of purchasing the inverter. Level 1 is a convenient form of charging EVs and accounts for approximately 50% of in-house charging stations for EV owners as of June 2022.²⁹ The U.S. Department of Energy reports that the Level 2 charging equipment can meet the needs of MD/HD vehicles with low utilization and long dwell periods.³⁰ There might be a need for different types of equipment for MD/HD vehicles, such as inductive or overhead equipment which allows vehicles to charge while parked. Charger tower prices range from \$1,000 to \$4,000 in the Lee and Clark estimates, while others use a range from \$469 to \$9,985 per tower.³¹ The big price range is dependent on the qualities of the equipment – complexity of interface, on-site payment system, or network connection. Level 2 stations, moreover, have better durability and more features than Level 1 and are recommended for workplace stations where multiple vehicles are charged. The Department of Transportation, Forbes, and many other sources indicate that Level 2 is sufficient for needs of small- to medium- sized commercial charging

stations.^{32,33,34} Additionally, Level 2 has higher power than Level 1 stations. One hour of charging at a Level 2 station allows driving a range of 10 to 20 miles, compared to only 3 to 5 miles for vehicles charged at Level 1.³⁵ Costs can be optimized by controlling the following factors: location, features, and charging form. The Energy Efficiency and Renewable Office at the Department of Energy reported that the Level 2 wall mounted charging station is 37% cheaper than the average installation cost of a pedestal unit, with an average cost of \$2,035 for the mounted wall unit and \$3,209 for a pedestal mount. Level 2 chargers typically require an installation of 240-volt circuit, circuit needed for household clothes dryers.³⁶

New York State is investing in municipalities to make the switch to electric vehicles and infrastructure, in addition to utility company incentives.

In September 2022, Governor Hochul directed the State Department of Environmental Conservation to require all new passenger cars, SUVs and pickup trucks sold in the State of New York to be zero-emission by 2035.³⁷ New York state is also allocating \$5.75 million for the purchase of zero-emission vehicles and installation of supporting infrastructure to municipalities.³⁸ The National Electric Vehicle Formula Program will provide funds to states to deploy EV charging infrastructure.³⁹ Of this, New York State will receive \$175 million over the next 5 years to create an electric vehicle charging network.⁴⁰ Utility companies, such as PSE&G, offer incentives for the installation of EV chargers.⁴¹ The Climate Mayors Electric Vehicle Purchasing Collaborative is open to all U.S. cities and provides competitive bid contracts, resources, and support for vehicle transitions.⁴² The political environment is particularly supportive of investments and expansion of alternative vehicles. First, there is the EV Make Ready program. The program supports development of infrastructure for non-residential needs. The entities might be eligible to receive up to 100% of costs associated with development of Level 2 and Level 3-5 charging stations.⁴³ Evolve NY is a program promising \$250 million funding by 2025. The goal is to build a fast and reliable charging facility close to 5 cities in NY State, including Yonkers.⁴⁴ Lastly, there is Climate Smart Communities, a program supporting local governments to reduce their GHG emissions. There are 3 possible grants that one can apply for. The grants support purchase of vehicles and charging stations.⁴⁵

E. Emission Reduction Technology and Policies

Since purchasing low emission vehicles will be expensive, our team conducted further research into low-cost alternative technology and policies that can reduce emissions. These include: vehicle exhaust retrofits (such as IdleRight technology), renewable diesel, policies that encourage walking and cycling, building retrofits to reduce building emissions, and switching lights to LED. The retrofitting of vehicles can be implemented on Ardsley vehicles that are not old enough to be retired and cannot be suitably replaced with electric or hybrid counterparts.

1. Vehicle Exhaust Retrofits

The Diesel Emissions Reduction Act (DERA) requires any heavy-duty vehicles owned by the state or those performing work for the state to be retrofitted with Diesel Exhaust Fluid systems and utilize low-sulfur fuel or be phased out.⁴⁶ Most diesel vehicles produced for the United States market after 2008 have DEF systems, but it would be recommended to verify this for any older vehicles in the municipal fleet. Carbon-capture add-ons have also been in development for fossil fuel vehicles. The startup Remora has developed a method which filters exhaust emissions by converting CO₂ into liquid.⁴⁷ The retrofit module costs approximately \$15,000 and the captured CO₂ has the potential to either be recycled or monetized.⁴⁸ This system would be best suited for heavy vehicles and those relying on diesel fuel that may present a challenge when transitioning to electric powered vehicles. The Village of Ardsley may want to focus on utilizing this option for garbage collection trucks, fire trucks, and heavy-duty construction vehicles. They may also be limited by what options are available from companies offering the technology and what vehicles can ultimately be outfitted, but there are a number of options available on the market.

2. IdleRight Technology

The City of Burlington, Vermont participated in a pilot program with the Vermont Clean Cities Coalition (VTCCC) to reduce emissions from police vehicles. They adopted a fuel management system in one of their vehicles called “IdleRight” which monitors the battery level of the emergency lights and only allows idling when absolutely necessary. Similar technology has been used by other police departments in other parts of the country. This technology being installed in one car resulted in the vehicle significantly reducing tailpipe emissions, cut vehicle maintenance and operating costs by about \$800 a year, and saved 345 gallons of fuel.⁴⁹ An unintended positive outcome of the pilot included residents decreasing their complaints towards police vehicle idling and decreased wear on the vehicle.

An alternative to IdleRight is the GRIP Idle Management System. While IdleRight is vehicle specific, GRIP provides a platform with monitoring and metrics for an entire fleet of vehicles once installed.⁵⁰ Though the two options provide very similar base services, they come at different price points, with IdleRight costing approximately \$165 per vehicle installation and acting as a standalone product, while GRIP provides the benefit of a dashboard and can be used fleetwide, at a cost of \$3,000 per vehicle.⁵¹ For example, projected savings for a police cruiser are \$3,500 per year on the GRIP platform, despite being a pricier option, while IdleRight cuts operating costs by approximately a third.

3. Renewable Diesel

Renewable hydrocarbon biofuels are produced from biomass using a variety of chemical processes. This fuel is suitable for diesel vehicles. Additionally, it is produced in the United States. As noted by the US Department of Energy, renewable diesel has many advantages, including compatibility with

diesel engines and lower emissions levels. Renewable diesel meets the ASTM D975 standard for petroleum in the United States, a set of tests and acceptable limits for diesel fuels available on the US market.⁵² Renewable diesel (RD) also reduces greenhouse gas emissions by up to 80% because it is produced from 100% livestock.⁵³

In addition to the benefits, it is also a financially feasible alternative. In 2022, a survey of 46 retailers indicated that the renewable diesel cost was approximately \$6.15/gallon while the average diesel price was \$6.24/gallon.⁵⁴ According to the US Energy Information Administration, the usage of renewable diesel in the US is predicted to double by 2025. The decision to use renewable diesel is dependent on appropriate investments in fuel storage. RD is widely used in both California and New York City, among others. New York City has conducted a pilot program in recent years, and many companies such as Google have committed to use renewable diesel.

Despite this progress, production capabilities of renewable diesel are significantly limited. Projections of production for the year 2025 will not be achieved due to limited availability of feedstock.⁵⁵ Additionally it is not guaranteed that renewable diesel is a zero-emission and sustainable technology. The EPA noted that the mass production of renewable diesel would limit production of biofuels as they are manufactured using the same resources. Moreover, high demand for livestock will have unpredictable, but most likely negative, impacts on the market and the environment.⁵⁶ The demand for animal fat is expected to grow faster than production, so the availability of biofuels is expected to remain at similar levels.

Although renewable diesel technology is promising and affordable, the scarcity of the product and precarious supply chain makes it difficult and not reliable. We refrain from incorporating renewable diesel as a part of our recommendations due to low plausibility of mainstream implementation in Ardsley.

4. Encourage Walking and Cycling

To reduce emissions, municipalities can implement policies that increase pedestrian safety and bicycle infrastructure. Municipalities can replace multilane streets with bike lanes and walkways. Appendix VIII shows how walking and biking are the most carbon efficient modes of transportation. Over half of car trips in the U.S. are under 3 miles, a 20-minute bike ride for most riders.⁵⁷ Converting more car trips into bike trips greatly reduces carbon emissions. Improving a city's walkability will not only reduce emissions, but can improve the quality of life of its residents.⁵⁸ Policy changes that reduce the amount of driving can be more efficient in reducing emissions.⁵⁹ An important aspect when encouraging increased walking and cycling rates is ensuring safety.⁶⁰

To increase biking rates, municipalities can add more protected bike lanes. They can convert 12- to 14-foot wide driving lanes into 10-foot wide lanes, to introduce a protected bike lane. This measure has been proven to reduce car speeds, and better protect both cyclists and pedestrians from traffic.⁶¹ To achieve maximum impact, the bike lanes should be placed to connect common destinations, not just as trails for recreational purposes.⁶² This initiative was implemented in Philadelphia, and the added bike lanes led to a 70% increase in biking to work from 2010 to 2017.⁶³ In addition to adding bike lanes, a good way to increase cycling rates is by subsidizing or partnering with bike sharing services. Many small municipalities are successfully using bike sharing in their communities.⁶⁴

5. Lower Building Emissions

An effective way to lower emissions is to make buildings more energy efficient. Building energy use is a major source of greenhouse gas emissions and air pollution. In Ardsley's 2019 emissions report, they indicate that the total building emissions are 236 MT of CO₂e., accounting for 43% of Ardsley's total emissions. To reduce statewide emissions by 40% by 2030, addressing building emissions is essential.⁶⁵ An example government policy that aims to reduce emissions from buildings is NYC's Local Law 97, which puts carbon caps on buildings larger than 25,000 square feet.⁶⁶ Ardsley has identified five buildings that have the highest emissions: the firehouse, Village Hall, the highway garage, public library, and the community center. All of these large buildings could be made more energy efficient through retrofitting efforts. One energy source in buildings is the HVAC equipment, which represents 30-40% of energy use in buildings, and includes things such as boilers, fans, heat pumps, and chillers.⁶⁷ Retrofitting buildings could potentially 40% of a city's natural gas usage.⁶⁸ Energy Star, a program through the EPA, helps local governments design and implement emission-reduction policies to municipal buildings.⁶⁹

6. Changing Street Lights

Another effective measure that can decrease the carbon emissions is investing in LED lights on Ardsley's streets. LED lights provide cost savings and lower carbon footprint. This investment is vital for any municipality. High upfront costs discourage many municipalities from switching to LED lights, however there is a possibility of decreasing the upfront cost. New York State offers Smart Street Lighting Program, overseen by the New York Power Authority. Under the program, the New York State aims to replace at least 500,000 lights statewide by 2025, which is estimated to decrease energy consumption by 3%.⁷⁰ As of right now, approximately 100 municipalities in the State converted their street lights under the program, including the City of White Plains in Westchester County.

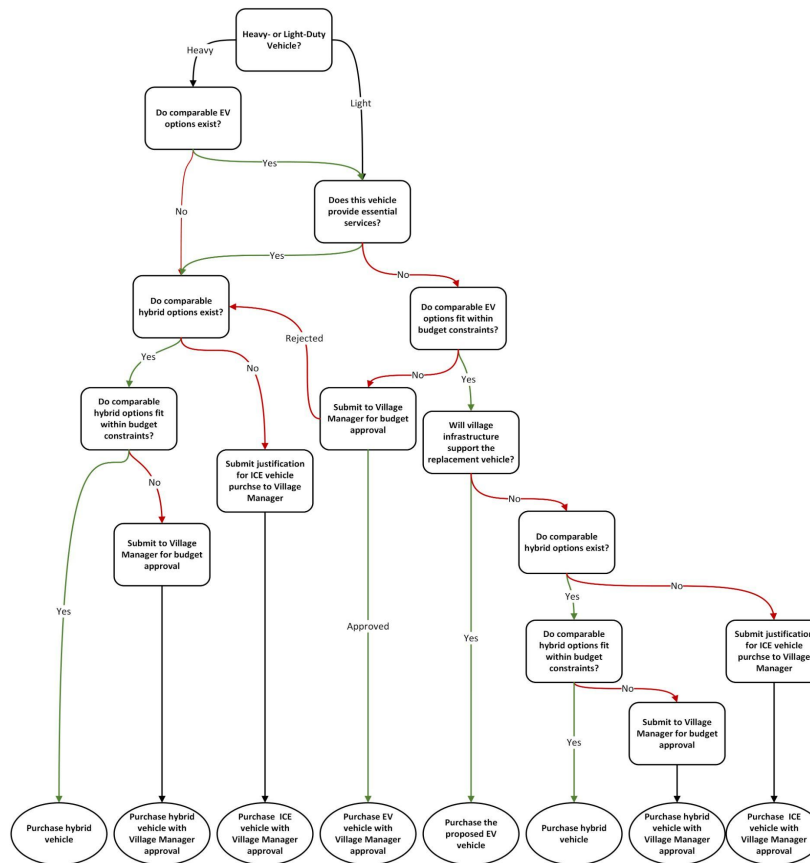
It is estimated that the LED lights are 50 to 65% more efficient.⁷¹ NYSERDA estimates that LED lights can cut costs by \$20 per month per light. Although a great cost-saving and environmentally friendly solution, LED street lights have some drawbacks. Most importantly, the new, white, LED lights have detrimental effects on human health and wildlife. Because of this, the American Medical

Association recommends that municipalities install LED street lights with power of 3000K or lower to avoid hurt patterns of migration among wild animals or health consequences among humans.⁷²

V. RECOMMENDATIONS

A. Vehicle Purchase Decision Tree

To aid department heads and village administrators in making choices when municipal vehicles need replacement, we created a decision tree to guide them on purchasing lower emission options. As shown in Appendix VII, it takes them through several steps, determining the best choice for comparable options, while also considering the needs of the village, such as infrastructure, essential services, budget constraints, and vehicle availability.



B. Capital Plan Vehicle Replacements

Out of the vehicles in the inventory, many had the potential for future replacement and are identified in the following sections. Given that most of Ardsley’s municipal vehicles are considered emergency vehicles, fully transitioning them to EVs will require changes to Ardsley’s pre-existing emergency systems. As such, we have identified lower emission replacements rather than fully electric options.

Many of these vehicles are already being phased out and replaced as part of Ardsley’s Capital Plan. The table below shows mobile equipment and lightweight vehicles that have already been identified for replacement in the plan and are scheduled to occur between the fiscal years of 2022 and 2031. We include potential lower-emission vehicles that Ardsley may consider replacing these vehicles with given their budget allocations, timeframes, and available technologies.

To replace these vehicles, the Village of Ardsley can utilize the New York State Clean Transportation program funding opportunities. Opportunities include the Drive Clean Rebate for Electric Cars, which provides rebates of \$2,000 for electric vehicle purchases, that can be combined with the Federal Tax Credit of \$7,500.⁷³ Additionally, the New York Clean Transportation Prices offer funding for projects that electrify transportation, reduce air pollution, and increase clean mobility.⁷⁴ Lastly, the New York Truck Voucher Incentive Program provides vouchers and discounts to purchase or lease electric trucks and buses.⁷⁵

VEHICLE	REPLACEMENT PLAN	SUGGESTED REPLACEMENT
CHEVROLET Tahoe - DPW	FY 2023 - 2024 \$65,000.00	Chevrolet Silverado (Hybrid) \$53,000 est.
JOHN DEERE Loader 624J - DPW	FY 2023 - 2024 \$325,000.00	Volvo L25 Electric \$151,575 est.
CHEVROLET Tahoe - Fire	FY 2025 - 2026 \$80,400.00	Chevrolet Silverado (Hybrid) \$53,000 est.
JOHN DEERE Tractor 4720 - DPW	FY 2026 - 2027 \$135,000.00	Kubota LXe-261 \$29,339 min.

CHEVROLET Tahoe - Fire	FY 2028 - 2029 \$93,073.00	Chevrolet Silverado (Hybrid) \$53,000 est.
CHEVROLET Tahoe - DPW	FY 2030 - 2031 \$80,000.00	Chevrolet Blazer \$35,100 min. Chevrolet Equinox \$34,000 est. Chevrolet Bolt EUV \$28,795 min.

C. Additional Vehicle Replacements

In addition to those vehicles the municipality has plans to replace, we have identified some other lightweight vehicles that Ardsley could consider for replacement below. We have separated the suggestions into those that could be implemented in the short term and those that could be implemented later on as EV infrastructure and technologies continue to develop.

VEHICLE	SHORT TERM	LONG TERM
MERCURY Mariner - Building	Chevrolet Silverado (Hybrid) \$53,000 est.	Chevrolet Blazer \$35,100 min. Chevrolet Equinox \$34,000 est. Chevrolet Bolt EUV \$28,795 min.
DODGE Charger - Police	Chevrolet Malibu (Hybrid) Ford Fusion (Hybrid)	Chevrolet Bolt EUV \$28,795 min.
CHEVROLET Tahoe - Police, DPW, and Fire	Chevrolet Silverado (Hybrid) \$53,000 est.	Chevrolet Blazer \$35,100 min. Chevrolet Equinox \$34,000 est. Chevrolet Bolt EUV \$28,795 min.

CHEVROLET Suburban - Police	Dodge Hornet PHEV \$31,590 min.	Chevrolet Blazer \$35,100 min. Chevrolet Equinox \$34,000 est. Chevrolet Bolt EUV \$28,795 min.
FORD Explorer - Police	Ford Explorer (Hybrid) \$47,070 min.	Ford Mustang Mach-E \$45,995 min.
JOHN DEERE Tractors - DPW	No short-term options.	Kubota LXe-261 \$29,339 min.

D. Cost-Benefit Analysis

The high cost of EVs and charging infrastructure is one of the main concerns regarding the transition. This report includes a cost-benefit analysis (CBA) of replacement suggested in the Capital Plan Vehicle Replacement of this paper. The full CBA can be found in Appendix VI. The CBA is focused on the four Chevrolet Tahoe replacement suggestions as there is not enough information available about other suggested replacements. The analysis is based on a variety of assumptions and takes place over 10 years – the average lifetime of a vehicle.

The calculations were based on following costs and benefits:

- Benefits:
 - Avoid investment in conventional diesel vehicles.
 - Save fuel diesel expenses resulting from operating all-electric vehicles.
 - Avoid maintenance costs.
 - Health benefits resulting from reduction in emissions of PM2.5.
- Costs:
 - Cost of purchasing 4 recommended electric vehicles.
 - Cost of construction of charging stations.
 - Costs of annual maintenance.
 - Costs of charging electric vehicles.

The sum of benefits is estimated at \$455,473 and includes \$319,760 of avoided investment in conventional diesel vehicles, \$81,442 saved diesel fuel expenses, \$31,471 in avoided diesel maintenance costs, \$8,772 in societal benefits from GHG reductions, and \$8,067 in health benefits from reduction of PM 2.5 in the air. The sum of costs in this CBA is \$318,291 and it comprises

\$260,000 in upfront costs, \$14,400 in infrastructure costs, \$31,855 in maintenance costs, and \$12,036 in charging expenses.

Diesel fuel expenses are calculated using the vehicle inventory. The maintenance costs of diesel vehicles are based on the American Automotive Association's estimates, which for diesel and electric vehicles are approximately \$0.09933 and \$0.0794.⁷⁶ The reduction of emissions and associated benefits are based on two software programs: the Environmental Protection Agency's Diesel Emissions Qualifier (DEQ) and AFLEET developed by the Argonne National Laboratory. The Social Cost of Carbon (SCC) is an approximate rate that helps estimate the economic damages associated with emitting every additional ton of greenhouse gas. The SCC is determined by the Presidential Administration – under President Biden's administration, the Social Cost of Carbon is currently \$51 per ton.

The net present value of the replacement of 4 suggested vehicles is 1.43. According to the standards of cost-benefit analysis for policy-making, if the ratio of benefits to costs is larger than 1, the program is a fiscally feasible option. This is an ex-ante CBA, conducted before implementation of the program. The actual costs and benefits might differ from the estimates depending on various factors. It compromises the accuracy of the analysis. Sensitivity analysis helps determine how the net benefits would change in case specific parameters fall out of estimated range. In this CBA, the varying parameters are costs of new EVs, infrastructure development, and electricity associated with charging. Under the best-case scenario, assuming the Village would receive a number of grants, the net present value of the replacements is 1.54. In comparison, if the Village would decide to not take advantage of the available incentives and discounts, the net present value of the benefits would decline to 1.25. The exact calculations are shown in Appendix VI. Based on the analysis, the benefits of transitioning to electric vehicles outweigh the costs.

E. Retrofitting Traditional Fuel Vehicles

Additionally, we have identified vehicles that we believe could be retrofitted in some capacity to decrease their emissions. These vehicles are those that may have an EV equivalent that is neither affordable given the village's budget, nor feasible with their infrastructure. Many of these vehicles are medium- to heavy-weight and use diesel fuel. We recommend installing IdleRight technology as an affordable way to decrease emissions that considers the circumstances surrounding vehicle use and market-availability.

As IdleRight can be installed on most vehicles through their computer and ignition system, it would be the best choice for reducing emissions and fuel consumption in cases where a vehicle could not be made fully electric.⁷⁷ As mentioned before, IdleRight is also a cost-effective solution, priced at

approximately \$165 per unit which should be well within the village's budget for vehicles that are not ready to be phased out of service.

In cases where IdleRight may not be compatible with certain vehicles, such as heavy equipment and older vehicles, retrofitting with carbon capture may be a more appropriate option when attempting to curb pollution. There are also a number of funding options available for diesel vehicle retrofits, including the Congestion Mitigation and Air Quality Program (CMAQ) which can help the village move closer to its goal of reducing emissions.⁷⁸

F. Tracking Fuel Efficiency

As of this project, Ardsley does not track fuel efficiency by vehicle but rather, has data on department monthly totals. This information could prove valuable in determining which vehicles are performing inefficiently and could potentially be replaced with an EV or a lower-emission vehicle. Knowing this could help Ardsley decrease vehicle emissions in the long-term by identifying vehicles that are economically and environmentally inefficient and phasing them out of use.

Given the use-patterns of some of the municipal vehicles, we suggest that the municipal departments should develop internal measures of determining if a vehicle is using fuel inefficiently or not. Garbage trucks, for example, have an average fuel efficiency of 2-3 miles per gallon while a highway patrol vehicle might have an average of over 20 miles per gallon.⁷⁹ A similar process already exists within DPW regarding the retirement of mobile equipment, given that age and fuel consumption for these are not a consistent indicator of use.

G. Infrastructure Plan

Successful transition to hybrid plug-in and electric vehicles is conditional on the development of charging infrastructure in the Village. Investment in charging infrastructure is a significant financial commitment and, therefore, is divided in two steps. Phase 1 shall be considered for immediate implementation, while Phase 2 requires a greater level of detail and long-term investment in Ardsley's decarbonized and independent fleet system. It is important to note that the infrastructure plan should be implemented before purchase of EVs.

1. Phase 1

The goal of Phase 1 is to provide reliable charging solutions to municipal employees, effective immediately. Each new EV should be equipped with portable charging equipment. Portable 208/240-volt circuits, normally used for dryers or air conditioning, are essential to provide security and independent access to charging facilities in-house. This power of units is classified as Level 2 chargers, the most popular type of chargers across the country.⁸⁰ With approximately 25 miles range

per hour of charging, this is an appropriate choice for light-duty administrative vehicles. The purchase of portable chargers for each municipal building allows employees to charge their EVs while performing their duties at work, traveling, or while parked.⁸¹

- The J+ BOOSTER 2 Portable EV J1772 connector is a highly rated portable charger that can be considered for use by Ardsley. This portable charger provides safety and security for individuals operating EVs, in particular during road trips outside of the Village.

Apart from purchasing portable chargers, it is of utmost importance that the Village cooperates with the local electricity provider to ensure the Village is well-prepared for the development of charging infrastructure.

- The EV Charge capacity within the Village streets varies from 0 MV to 3.95 MV, with the lowest capacity along Ashford Avenue.⁸² ConEdison provides financial incentives to install Utility Transformer and Utility Service.⁸³
- In preparation for a mass transition to EVs, the Village must contact the local utility to choose and negotiate appropriate electric plans to ensure preferential billing.⁸⁴ ConEdison's SmartCharge allows plug-in hybrid and EV owners to save and earn money on charging vehicles. The incentives include: 10 cents per kWh when charging in off-peak hours or \$35 per month per vehicle when avoiding summer peak hours.⁸⁵

Lastly, it is important to start engaging in the initiatives undertaken by New York State that promote and encourage municipalities to transition their fleets away from fossil fuels. Ardsley should act as soon as possible to build relationships with other municipalities and apply for all applicable programs and grants.

Ardsley should immediately apply for programs, such as the following:

- The Municipal Zero-Emission Vehicle Program (ZEV) administered by the Department of Environmental Conservation supports counties, cities, towns, and villages in acquisition of ZEVs and development of charging infrastructure. Round 7 of funding for 2023 is expected to open in the second part of 2022.⁸⁶
- Under the New York State Tax Credit for Public and Workplace Charging, employers can receive up to \$5,000 income tax credit for developing charging infrastructure at a workplace.⁸⁷
- Charge Ready NY administered by NYSERDA provides aid for the development of public or workplace charging infrastructure, offering savings of 35-80% on the installation costs.⁸⁸

Financial investments required to build infrastructure essential to transition to EV are very high. Apart from state- and federal-level incentives, the Village could lease rooftop space to private sector solar panel companies interested in the development of community solar projects. In such a

partnership, the Village would lease its roof space to house solar panels. In exchange, Ardsley would receive consistent, monthly payments.

- If Ardsley were to express an interest in accumulated upfront payment for the purpose of investment, solar panel companies such as Ecofy Energy pledge to accommodate that request. This is of crucial importance as it would allow Ardsley to reinvest the money into development of charging infrastructure.
- Additionally, many solar panel companies offer an opportunity to subscribe to the grid and get a 10% discount on electricity prices for the client and their community.⁸⁹
- There is criticism of this model. Opponents highlight the contracts are long-lasting obligations, often signed for 20 to 25 years, and they prohibit the owners of rooftop spaces from directly benefiting from solar installations. Despite the criticism, it could be a good source of funding for investments necessary to jumpstart transition to EV.

2. Phase 2

During Phase 2, the Village can install charging stations at the new DPW Parking Building to lay the foundation for a safe and successful transition to an electric fleet. It is recommended that:

- Two Level 2 chargers should be installed at the front of the building. Notably, wall-mounted charging stations are recommended as they have considerably lower costs than floor pedals. It is estimated that the average cost of a wall mounted unit is \$2,035 and \$3,209 for a pedestal mount.
- As the Village's fleet transitions to electric vehicles, the Village must create a plan to install at least one Level 3, Direct Current Fast Charger (DCFC). As informed by the Village Manager, the electric capacity at the DPW is limited. The Village should consider purchasing a small transformer that would allow for the installation of additional chargers. This is an important step to ensure medium- and heavy- duty vehicles can be charged in a timely manner. DCFC are an extremely efficient and reliable source of energy, as they are able to charge anywhere from 100 miles to 200 miles within 30 minutes. Although DCFC are preferential, Extreme Fast Chargers (XFC) chargers can be also considered. These fast chargers' popularity is growing across the country, under recommendation of the U.S. Department of Energy's Vehicle Technologies Office.⁹⁰

H. Policy Recommendations

Our team sought to find other ways Ardsley could reduce its municipal emissions beyond its municipal fleet. We recommend that Ardsley establish policies that promote walking and cycling, establish energy-efficiency technologies in high-emission buildings, and upgrade lights to LED. These changes could lead to a significant reduction in emissions. In order to reduce emissions beyond switching the municipal fleet, we recommend that Ardsley engage in the following activities:

1. Establish policies that promote walking and cycling, such as expanding sidewalks and bike lanes, and developing a bike sharing program.

To further reduce greenhouse gas emissions, our team recommends that Ardsley implement policies that encourage walking and cycling in the village. The Village of Ardsley has already begun expanding its network of sidewalks, so we recommend continuing this expansion, especially to connect the most populous areas of the Village.⁹¹ Guided by the Climate Smart Communities actions, which provide guidance and grants, our team recommends that Ardsley install more sidewalks, bike paths, and develop a bike sharing program.

In order to encourage more cycling and walking in the Village, we recommend:

- Installing more sidewalks
- Installing additional bike paths
- Developing a bike share program

There are a variety of grants and sponsorships available for expanding bike paths, expanding sidewalks, and promoting bike-sharing programs, such as the:

- Rebuilding America's Infrastructure with Sustainability and Equity⁹²
- Carbon Reduction Program⁹³
- Congestion Mitigation and Air Quality Program⁹⁴
- Safe Streets for All Program⁹⁵
- Transportation Alternatives Program^{96 97}

2. Install technologies in high-emission buildings that improve energy efficiency and lower emissions.

Guided by the Climate Smart Communities recommendations, to further reduce emissions, and improve energy efficiency in municipal buildings, we recommend that Ardsley:⁹⁸

- Partner with Sustainable Westchester (a NYSERDA-selected company) to access a free assessment of heating and cooling solutions
- Upgrade HVAC systems in municipal buildings, utilizing rebates, financing, and incentives provided by:
 - NYSERDA, and
 - New York Power Authority (NYPA).

3. Upgrade the Village's lighting to LED

In order to further reduce emissions, we recommend that Ardsley update its street lighting to LED lights. To do so, Ardsley can apply to a program administered by the NYPA. Under the program, upfront costs of installation of LED street lights are covered. The money saved can be used to repay the agency. It is best to apply at the earliest convenience as there is a limited amount of funds available for the program.

- To begin, Ardsley should conduct an inventory of the outdoor lighting. Municipalities are expected to have information about the number of lights, ownership of the lights, street name or address, and information about effectiveness of each light.
- Ardsley should then narrow down the scope of its proposal. Ardsley can quantify the amount of lights they plan to replace as well as any other changes to patterns of usage and placement.
- Lastly, Ardsley can contact NYSA to enroll in low-rate financing and assistance in the conversion of lights. Other recommended financing options include:
 - A request for proposal (RFP) to receive an energy performance contract which is a financing option for local governments seeking to increase energy efficiency, and
 - Piggybacking on contracts signed by neighboring municipalities.⁹⁹

VI. LIMITATIONS

While we were able to provide significant guidance to the Village of Ardsley in developing a plan for decreasing their emissions, there are several limitations to our findings. We have identified these limitations below:

- Our team attempted to schedule an interview with the Village of Ardsley's Fire Chief, but were unsuccessful in doing so. Because of this, our findings and recommendations do not include direct data from an interview with the head of Ardsley's fire department.
- The differences in department vehicle makeup between 2019 and this report are fairly large and, as such, we do not expect the emissions estimates to be a sufficiently accurate indicator for the current fleet's vehicle emissions.
- The Village of Ardsley tracks fuel spending by department and not by individual vehicle. Using the annual department spending, the number of vehicles in each department, and the kind of fuel each vehicle used, we were able to calculate the average fuel cost for each department vehicle. As a result, the cost benefit analysis presented in this report is based on these averages and is not tailored to performance of specific vehicles.
- The Village does not track or keep any record of the annual mileage each vehicle in the municipal fleet has. This limited any analyses that could be conducted on the fuel efficiency of the specific vehicles in the fleet and we had to rely on make and model estimates. We were also only able to obtain these estimates from commercially-available vehicles and not for the municipality's specialized vehicles.
- As noted in our Literature Review, the electric vehicle industry is fast-moving. Because of this, the vehicles recommended come from our research in 2022 and 2023. Better technologies and pricing may become available after the conclusion of our research.
- Given our research and the available data, we were unable to make an in-depth comparison of total lifecycle carbon emissions between electric vehicles, hybrids, and internal combustion engine vehicles. This included the carbon footprint generated during vehicle production, fuel generation, and associated processes.
- The Building Department vehicle was not separated in the fuel data provided to us from the municipality. This may have impacted the fuel and inventory analyses to a small degree as an additional vehicle may or may not be a part of the data.

VII. APPENDICES

Appendix I. Ardsley Emissions Report



Village of Ardsley 2019 Inventory of Government Operations Greenhouse Gas Emissions June 2021



Produced by the Village of Ardsley's Climate Smart Communities Task Force
With Assistance from ICLEI – Local Governments for Sustainability USA

Credits and Acknowledgements

Village of Ardsley

This report was prepared by Asha Bencosme, Ardsley's Climate Smart Communities Coordinator. The author would like to thank the Village of Ardsley Staff, specifically, Charles Hessler and Theresa Del Grosso for providing the local information necessary for the completion of this report, and would like to make the following additional acknowledgements:

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ICLEI-Local Governments for Sustainability USA

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Executive Summary

The Village of Ardsley recognizes that greenhouse gas (GHG) emissions from human activity are catalyzing profound climate change, the consequences of which pose substantial risks to the future health, wellbeing, and prosperity of our community. Furthermore, the Village of Ardsley has multiple opportunities to benefit by acting quickly to reduce community GHG emissions. These benefits include reducing energy and transportation costs for residents and businesses, improving the health of residents and making our community a more attractive place to live and do business.

To demonstrate its commitment to addressing the growing threat of climate change, in February of 2010 the Village of Ardsley became a registered Climate Smart Community by formally adopting the New York State Climate Smart Communities (CSC) pledge comprised of the following ten elements:

1. Build a climate-smart community;
2. Inventory emissions, set goals, and plan for climate action;
3. Decrease energy use;
4. Shift to clean, renewable energy;
5. Use climate-smart materials management;
6. Implement climate-smart land use;
7. Enhance community resilience to climate change;
8. Support a green innovation economy;
9. Inform and inspire the public;
10. Engage in an evolving process of climate action;

The CSC program, administered by the New York State Department of Environmental Conservation (DEC), is a certification program that provides a robust framework to guide the actions local governments can take to reduce GHG emissions and adapt to the effects of climate change. The first step in this process is to perform a GHG inventory for all buildings, vehicles, and operations controlled by the local government. Using data from 2019, this GHG inventory provides a baseline from which the Village can set emissions reduction goals, determine ways in which those goals can be reached, and track progress.

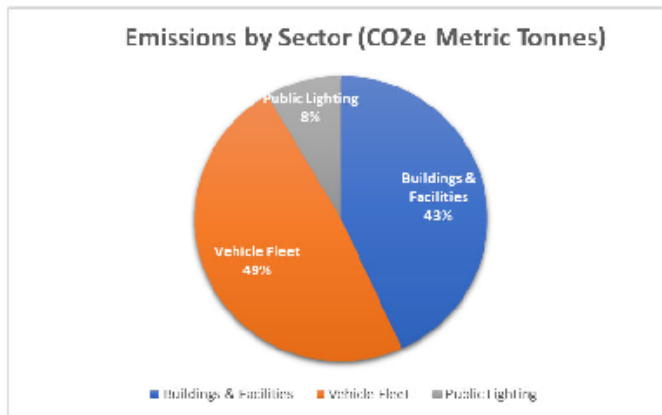
This report provides estimates of greenhouse gas emissions specifically from Ardsley's 2019 government operations. To create this inventory, data for the Village's fuel and electricity use was collected and reviewed. The data was generated from electric and natural gas bills for all Village-owned buildings and operations, as well as fuel records for the Village's vehicle fleet. The GHG emissions for all local government operations are measured in metric tons of CO₂ equivalents (CO₂e) and were calculated using emission factors published by the U.S. Environmental Protection Agency (EPA) and ICLEI's ClearPath software platform.

Key Findings

In 2019, GHG emissions from Ardsley’s government operations totaled 535 metric tonnes (MT) CO₂e. Figure 1 shows the emissions for government operations broken down by sector. The Village’s vehicle fleet sector accounted for the largest percentage of GHG emissions at 49%. The second largest contributor is the Village’s buildings and facilities with 43% of emissions. It is recommended that actions to reduce emissions in both of these areas should be a key part of the Village’s climate action plan. Streetlights and traffic signals were responsible for the remainder of local government operation emissions at 8% of emissions.

The Inventory Results section of this report provides a detailed profile of emissions sources within the Village of Ardsley. This information will be key to guiding local reduction efforts. This data will also provide a baseline from which the Village will be able to compare future performance and demonstrate progress in reducing emissions.

Figure 1: Village of Ardsley’s Government Operations Emissions by Sector (MT CO₂e)



Climate Change Background

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Overwhelming evidence shows that human activities are increasing the concentration of greenhouse gases and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation and other purposes, which introduces large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise.

The Village of Ardsley could be impacted by increased frequency of extreme weather events including heat waves, droughts, powerful storms and flooding from the Saw Mill River in the future. Other expected impacts in New York include frequent and damaging storms accompanied by flooding and landslides, summer water shortages as a result of reduced snowpack, increased wildfires, and the disruption of ecosystems, habitats, and agricultural activities.

Reducing fossil fuel use in the community can have many benefits in addition to reducing greenhouse gas emissions. More efficient use of energy decreases utility and transportation costs for residents and businesses. Retrofitting homes and businesses to be more efficient creates local jobs. In addition, money not spent on energy is more likely to be spent at local businesses and add to the local economy. Reducing fossil fuel use improves air quality and increases opportunities for walking and bicycling improves residents' health.

Evidence of Human-Caused Climate Change

There is overwhelming scientific consensus that the global climate is changing, and that human actions, primarily the burning of fossil fuels, are the main cause of those changes. The Intergovernmental Panel on Climate Change (IPCC) is the scientific body charged with bringing together the work of thousands of climate scientists. The IPCC's Fourth Assessment Report states that "warming of the climate system is unequivocal."¹ Furthermore, the report finds that "most of the observed increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic GHG concentrations."

2020 was the hottest year on record for the continental United States. The steady uptick in average temperatures is significant and expected to continue if action is not taken to greatly reduce greenhouse gas emissions.

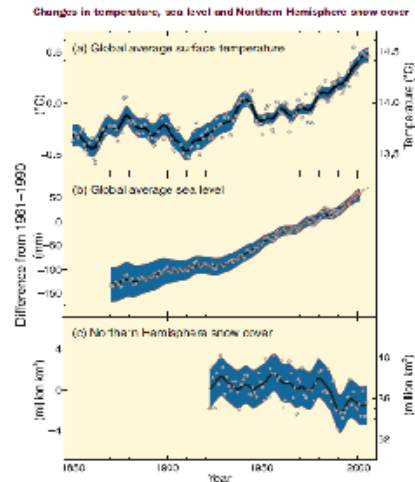


Figure 2: Observed changes in global temperature, sea level and snow cover

ICLEI Climate Mitigation Program

In response to the problem of climate change, many communities in the United States are taking responsibility for addressing emissions at the local level. Since many of the major sources of greenhouse gas emissions are directly or indirectly controlled through local policies, local governments have a strong role to play in reducing greenhouse gas emissions within their boundaries. Through proactive measures around land use patterns, transportation demand management, energy efficiency, green building, waste diversion, and more, local governments can dramatically reduce emissions in their communities. In addition, local governments are primarily responsible for the provision of emergency services and the mitigation of natural disaster impacts.

¹ IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.

ICLEI provides a framework and methodology for local governments to identify and reduce greenhouse gas emissions, organized along Five Milestones:

1. Conduct an inventory and forecast of local greenhouse gas emissions;
2. Establish a greenhouse gas emissions reduction target;
3. Develop a climate action plan for achieving the emissions reduction target;
4. Implement the climate action plan; and,
5. Monitor and report on progress.



Figure 3: ICLEI Climate Mitigation Milestones

This report represents the completion of ICLEI’s Climate Mitigation Milestone One for government operations and provides a foundation for future work to reduce greenhouse gas emissions in the Village of Ardsley.

Sustainability & Climate Change Mitigation Activities in the Village of Ardsley

The Village of Ardsley has already implemented programs that have or will lead to ancillary benefits in the form of energy conservation and greenhouse gas mitigation.

Local initiatives by the Village government include:

- Converted all streetlights to LED lights by November 2018
- Joined Community Choice Aggregation from 2019, with an opt-in to 100% renewable energy
- Installed solar panels with annual generation capacity of 25kW on the Ardsley Fire House
- Committed to educating residents on how to reduce emissions by 50% by 2030

Inventory Methodology

Understanding a Greenhouse Gas Emissions Inventory

The first step toward achieving tangible greenhouse gas emission reductions requires identifying baseline emissions levels and sources and activities generating emissions in the community. This report presents emissions from operations of the Village of Ardsley government. The Village of Ardsley is focusing first on government operations emissions in order to lead by example and may inventory community-wide emissions in a future report. The government operations inventory is mostly a subset of the community inventory, as shown in figure 4. For example, data on commercial energy use by the community includes energy consumed by municipal buildings, and community vehicle-miles-traveled estimates include miles driven by municipal fleet vehicles.

As local governments have continued to join the climate protection movement, the need for a standardized approach to quantify GHG emissions has proven essential. This inventory uses the approach and methods provided by the Local Government Operations Protocol (LGO Protocol), which is described below.

Approach

This inventory was developed using the approach and methods provided by the Local Government Operations Protocol (LGO Protocol) developed by ICLEI, the California Air Resources Board (CARB), the California Climate Action Registry, and The Climate Registry. The LGO Protocol serves as the national standard for measuring and reporting GHG emissions associated with local government operations. It provides the principles, approach, methodology, and procedures necessary to develop a complete, transparent, and accurate reporting of a local government's GHG emissions.

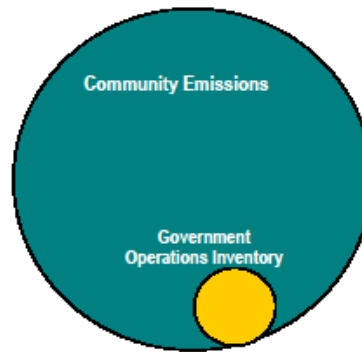


Figure 4: Relationship of Community and Government Operations Inventories

Emissions Scopes

For the government operations inventory, emissions are categorized by scope. Using the scopes framework helps prevent double counting. There are three emissions scopes for government operations emissions:

- **Scope 1:** All direct emissions from a facility or piece of equipment operated by the local government. Examples include tailpipe emissions from local government, and emissions from a furnace in a local government building.
- **Scope 2:** Indirect emissions associated with the consumption of purchased or acquired electricity, steam, heating, and cooling.
- **Scope 3:** All other indirect or embodied emissions not covered in Scope 2. Examples include contracted services, embodied emissions in good purchased by the local government, and emissions associated with disposal of government generated waste.

Scope 1 and Scope 2 emissions are the most essential components of a government operations greenhouse gas analysis as they are the most easily affected by local policy making. Under the DEC's CSC program, tracking Scope 3 emissions is encouraged, but optional. Scope 3 emissions data was not available for this inventory, however, the Village hopes to ensure that the necessary data is available for government operations GHG inventories moving forward. Some examples of Scope 3 data that the Village could track include solid waste generated by the Village, as well as accounting for the number of miles travelled by Village employees as part of their daily commute.

Base Year

The inventory process requires the selection of a base year with which to compare current emissions. The Village of Ardsley's community greenhouse gas emissions inventory utilizes 2019 as its base year. The Village felt that this was the most recent year under which the Village was operating under more typical circumstances. During 2020, the world was affected by the coronavirus pandemic which affected all government operations, with limited staff in the office for a number of months resulting in lower electricity and gas use as well as vehicle miles traveled. This was highly unusual and using 2020 as a base year would not include emissions produced during the normal course of operations.

Quantification Methods

Greenhouse gas emissions can be quantified in two ways:

- Measurement-based methodologies refer to the direct measurement of greenhouse gas emissions (from a monitoring system) emitted from a flue of a power plant, wastewater treatment plant, landfill, or industrial facility.
- Calculation-based methodologies calculate emissions using activity data and emission factors. To calculate emissions accordingly, the basic equation below is used: $Activity\ Data \times Emission\ Factor = Emissions$

All emissions sources in this inventory are quantified using calculation-based methodologies. Activity data refer to the relevant measurement of energy use or other greenhouse gas-generating processes such as fuel consumption by fuel type, metered annual electricity consumption, and annual vehicle miles traveled. To obtain this data, the Village gathered and reviewed all electricity and natural gas bills for the Village's Con Edison and Power Authority of the State of New York (PASNY) accounts, as well as fuel records for gasoline and diesel used to power the Village's vehicle fleet.

Calculations for this inventory were made using ICLEI's ClearPath software platform. Data was first measured in kWh for grid electricity, therms for natural gas, and gallons for gasoline and diesel used for vehicles. Using the ClearPath tool, this data was multiplied by emission factors published by the EPA in order to convert the energy usage, or other activity data, into quantified emissions. Different emission factors were used based on the fuel type, vehicle class, and eGRID subregion, which in this case is the NYCW (NPCC NYC/Westchester) subregion.

The GHG emissions in this inventory are measured in metric tons of CO₂ equivalents (CO₂e). In order to measure all greenhouse gases, especially non-CO₂ gases, in a common term that indicates their relative strength of the greenhouse effect they have in the atmosphere, the ClearPath tool applies multipliers, referred to as Global Warming Potentials (GWP), to all greenhouse gases emitted. This ensures results are presented in consistent and uniform terms. The GWP values used in this inventory are those published in the IPCC's 5th Assessment Report.

Government Operations Emissions Inventory Results

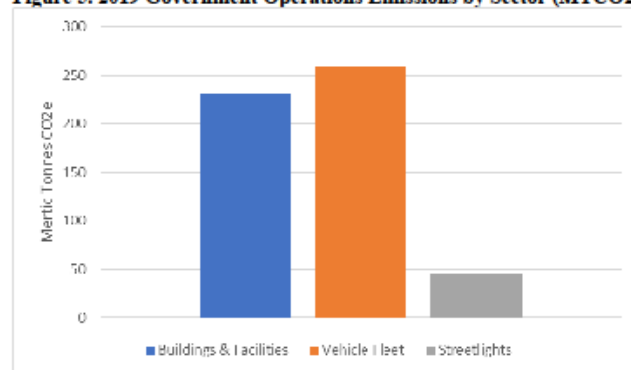
Emissions by Sector

For developing emissions reduction policies, it is often most useful to look at emissions broken down by sector, as each sector will have a particular set of strategies to reduce emissions. Table 1 and Figure 5 show the Village of Ardsley’s government operations emissions broken down by sector, while the remainder of this section breaks down these emissions in further detail within each sectors.

Table 1: Government Operations Emissions by Sector

Sector	metric tons CO2e
Buildings and Facilities	231
Vehicle Fleet	259
Public Lighting	45
Totals	535

Figure 5. 2019 Government Operations Emissions by Sector (MTCO2e)



Vehicle Fleet

Vehicles were the largest source of government operations emissions, with a total of 259 Metric Tonnes of CO₂e. In 2019, the Village of Ardsley operated a vehicle fleet with 35 vehicles. Table 2 shows vehicle emissions and fuel cost by fuel type.

The Village of Ardsley spent \$92,304 on vehicle fuel in 2019. There may be opportunities to reduce costs through fuel efficiency and trip reduction measures.

Table 2: Local Government Vehicle Fleet Emissions by Fuel Type

Source	metric tons CO ₂ e	Consumption (gal)	Cost (\$)
Gasoline	109	12,434	40,642
Diesel	150	14,663	51,662
Totals	259	27,097	\$92,304

Table 3 shows vehicle emissions and fuel cost by department. This information will be helpful in engaging department directors to identify strategies to reduce vehicle fuel use.

Table 3: Vehicle Emissions and Fuel Cost by Department

Department	metric tons CO ₂ e	Fuel Cost
Public Works	162	\$25,253
Fire	29	\$10,750
Police	68	\$56,301
Total	259	\$92,304

Buildings & Facilities

After Vehicles, Buildings and facilities were the next largest sector of government operations emissions. Table 4 shows building emissions by Village department building. Table 4 does not include an additional 5 metric tonnes of CO2e from grid transmission and distribution losses. With these emissions included, the total buildings related emissions totaled to 236 MT of CO2e.

Table 4 shows building emissions by department. This information will be helpful in engaging department leaders to identify strategies to reduce energy use. Table 4 also shows building energy cost by department. The Village of Ardsley spent \$89,235 on building energy use in 2019. There may be opportunities to reduce costs through building energy conservation measures.

Table 4: Building Emissions and Energy Cost by Building

Department	metric tons CO2e	Energy Cost
Village Hall	46	\$19,752
Highway Garage	40	\$12,448
Firehouse	86	\$30,978
Public Library	34	\$15,881
Community Center	25	\$10,176
Totals	231	\$89,235

Table 5 shows buildings sector emissions by source. Electricity use is the largest source of buildings emissions, followed by natural gas use.

Table 5: Buildings Emissions by Source

Source	metric tons CO2e
Electricity	107
Natural Gas	124
Totals	231

Table 6 shows the five individual buildings with the highest emissions. These buildings may present particularly cost-effective energy reduction opportunities.

Table 6: Five Largest Contributors to Emissions from Buildings Sector

Facility	Metric Tons CO2e	% of Building Sector Emissions	Energy Cost
Fire house	86	37%	\$30,978
Village Hall	46	20%	\$19,752
Highway Garage	40	17%	\$12,448
Public Library	34	15%	\$15,881
Community Center	25	11%	\$10,176
Totals	231	100%	\$89,235

Public Lighting

Like most local governments, Ardsley operates a range of public lighting including street lighting, parking lot lighting, and holiday lighting. The Village tracks lighting owned by the Village, as opposed to those owned by the County. In order to improve accuracy and provide a better representation of CO2 in future inventories, the Village should isolate data for each type of lighting to better account for the consumption of each specific type of use. Table 7 shows emissions from Ardsley’s public lighting totaled 43 MT CO2e. Table 7 does not include an additional 2 metric tons of CO2e from grid transmission and distribution losses. With these emissions included, the total lighting related emissions are 45 MT CO2e. Streetlights were the largest contributor to public lighting emissions, although, as of 2019, the Village has converted all of Ardsley’s streetlights to Light Emitting Diodes or LEDs. As a result, the current GHG inventory is reflecting a significant reduction in energy use and emissions from the public lighting sector than there would have been had this conversion not taken place.

Table 7 shows public lighting emissions and energy cost by location. Street lighting was the largest contributor to lighting sector emissions. New technologies, in particular Light Emitting Diodes or LEDs were installed on all streetlights and have provided a very good payback on investment.

Table 7: 2019 Public Lighting Emissions by Location (MT CO2e)

Street Lighting Location	Metric Tons CO2e	% of Sector Emissions	Cost (\$)
2019 NYPA Streetlights Meter ***056*****	28	68%	\$29,241
19 American Legion Drive	5	11%	\$4,610
2019 Bridge Street Lights	3	7%	\$4,476
1 Heatherdell Road	3	6%	\$2,609
2019 NYPA Street Lights Meter ***156*****	2	4%	\$1,761
Ashford Ave & Park	1	3%	\$1,660
2019 Festive Lights	1	1%	\$898
Totals	43	100%	\$45,255

Conclusion

This inventory marks completion of Milestone One for government operations (i.e. “Conduct an inventory and forecast of local greenhouse gas emissions”) of the Five Milestones for Climate Mitigation that are part of the ICLEI Framework. The next steps are to set an emissions reduction target, and to develop a climate action plan that identifies specific quantified strategies that can cumulatively meet that target. In the meantime, the Village of Ardsley will continue to track key energy use and emissions indicators on an on-going basis. ICLEI recommends conducting a new inventory at least every five years to measure emissions reduction progress.

Future, emissions reduction strategies for the Village of Ardsley to consider for its climate action plan include increasing energy efficiency and renewable energy investments and infrastructure, as well as vehicle fuel efficiency. Other key data points to collect and track might include: waste and wastewater emissions, water delivery rates, government employee vehicle trips and employee commuter miles, as well as solid waste collection rates. This will capture both direct and indirect emissions related to operations. Many local government operations generate solid waste, much of which is eventually sent to a landfill. Typical sources of waste in local government operations include paper and food waste from offices and facilities, construction waste from public works, and plant debris from parks departments.

This inventory shows that it will be particularly important to focus on energy efficiency in Village facilities and buildings and fuel use. The Village should also incorporate the suggestions mentioned throughout this report for tracking additional information into departmental protocols to ensure future GHG inventories are as complete and accurate as possible. Both ICLEI and the Ardsley Climate Smart Communities Task Force recommend conducting a new inventory at least every five years to measure emissions reduction progress. Through these efforts and others, the Village of Ardsley can achieve additional benefits beyond reducing emissions, including saving money and improving the economic vitality and quality of life in the Village.

Appendix II. Literature Review

Abstract

Our Capstone team seeks to develop policy recommendations and a plan that would allow the Village of Ardsley to effectively transition their vehicle fleet away from fossil fuels and reduce the emissions generated while performing municipal services. Our research is based on several key focus areas, including health impacts, benefits of transitioning to EVs, technical limitations of EVs, fuel efficiency, infrastructure needed to make the transition, and comparable use cases. This literature review aims to cover the current state of research on zero emissions vehicles, their implementation or viability in practice, examples of EV transition programs, as well as review the availability of comparable vehicles coming to market, to support our recommendations.

The following report highlights key findings and points of interest across studies or articles that cover the emerging field of electric and low emission vehicles. These findings focused primarily on the impacts of transitioning to EVs, market availability for different sized vehicles, infrastructure needs and considerations when transitioning to low emission vehicles.

The team's research showed a variety of findings or trends concerning the transition to electric or low emission vehicles. Common themes were discovered, including health benefits, fuel efficiency, overall costs, and lower carbon footprint. Vehicle range, battery life, and reliance on the electrical power grid were also commonalities throughout our research. A detailed overview of the evaluations, articles, case studies, and vehicle comparisons have been included in this report.

Introduction

	Overarching Goals of the Literature Review	Guiding Research Questions
1	Investigate the Impacts and Considerations for Transitioning to Electric Vehicles	<i>- How do vehicle emissions affect human health? -How do vehicle emissions affect the environment? - What are the benefits and limitations to electric vehicle transition?</i>
2	Understand the Current and Future Market for Electric Vehicles	<i>- How does the fuel/efficiency of fossil fuel vehicles compare to electric? -What does the electric vehicle market look like now and what will it look like in the future?</i>

3	Survey the Infrastructure Needs of Electric Vehicles	<p>- <i>What is the infrastructure needed for operating electric vehicles?</i></p> <p>- <i>What are the costs associated with operating electric vehicles?</i></p>
4	Examine the Political Landscape and Implementation Practices	<p>-<i>What is the political landscape for electric vehicle transitions?</i></p> <p>-<i>How are similar communities to Ardsley lowering vehicle emissions?</i></p>

Methodology

Our team conducted the literature review research from November 7th until December 20th, 2022. The research was conducted on multiple platforms, including Google Scholar, Engineering Village, and Ebsco. We also consulted the U.S. Department of Energy (DOE) and U.S. Department of Transportation (DOT), World Health Organization (WHO), and U.S. Environmental Protection Agency (EPA). Lastly, our team reviewed relevant industry articles to review the current market offerings. The terms searched on different platforms included “electric vehicles”, “medium and heavy-duty electric vehicles”, “low emission vehicles”, and “electric vehicle infrastructure”. Our team reviewed over 97 articles and sources included in this literature review, as referenced in our works cited section.

Definitions

Throughout the document, we refer to several concepts that are commonly used in literature on energy transition. For clarity and transparency purposes, this section defines key concepts used in this paper.

Carbon-neutrality is a ratio between the releasing carbon through various activities and absorbing carbon via carbon sinks – storing removed carbon dioxide, referred to as carbon sequestration. **Net zero emissions** is a scenario where all greenhouse gasses emissions are balanced out by an adequate amount of carbon sequestration. Carbon sinks are natural or superficial systems that absorb more carbon dioxide than they emit, including soil and forests.¹

Decarbonization, according to Deloitte, is a more general concept that refers to reduction and/or removal of carbon dioxide, released as a byproduct of human activity, from the atmosphere. Decarbonization can be achieved by transitioning to low carbon energy sources (such as biofuels, renewable energy, or hydrogen) and the ultimate goal of decarbonization is to eliminate carbon dioxide completely.²

Low emissions are repeatedly referred to in this document. Emissions under consideration are: black carbon (BC), sulfur oxides (SO₂), nitrogen oxides (NO_X) (including nitrogen monoxide and nitrogen dioxide, NO₂), ammonia (NH₃), carbon monoxide (CO), methane (CH₄), non-methane volatile organic compounds (NMVOCs), including benzene, and certain metals and

polycyclic aromatic hydrocarbons, including benzo[a]pyrene (BaP). There is also a group of secondary emissions: PM, ozone (O₃), NO₂ and several oxidized volatile organic compounds (VOCs).³ Low emission levels do not produce much pollution.⁴ Lowering emissions is important because it results in air pollution and related negative health repercussions. Low emission standards serve as a baseline for new technologies and programs, such as low emission vehicles or Low Emission Zones in many European cities where only low emission vehicles can enter certain neighborhoods free of charge.⁵

Findings

Health Impacts of Decreasing Emissions

There is currently a wide array of studies conducted on the adverse health effects of transportation-associated air pollution. The emissions that pose the most serious health risks come from nitrogen dioxide (NO₂), carbon monoxide (CO), metals, particulate matter, black smoke, benzene, and polycyclic aromatic hydrocarbons (PAHs).⁶ Each of these pollutants has been studied for the specific exposure risks they pose for human health but it is widely understood that exposure to any increases chances of respiratory, neurological, immunological, and cardiovascular diseases.⁷ It should be noted that vehicle pollutants are not exclusively attributed to the fuel emission but also, in small part, may come from tire particles and break wear.⁸

Given the toxicity associated with vehicle emissions, prolonged and consistent exposure can increase both the risk and the severity of health issues. While many studies struggle to specifically link transportation-caused air pollution to health issues, air pollution contributes to increased rates of asthma, COPD, and respiratory issues.⁹ People who live in urban and suburban areas with greater vehicle emissions are at a higher risk of these diseases, especially if they work outdoors or with heavy vehicles.¹⁰ Many of these studies were conducted decades ago and continue to be replicated

Studies have examined how job positions within the same industry can vary health and exposure. Lee et al. examined how municipal waste workers who drove the waste trucks were exposed to less carbon pollution than those who were collecting the waste outside the truck.¹¹ A series of studies proved that truck drivers, street cleaners, highway toll workers, and bus drivers, who are exposed to greater levels of vehicle exhaust, were at a higher risk for lung cancer, heart attack, and heart diseases.^{12 13 14 15}

There have been several legislative actions taken to help mitigate the risks of vehicle emissions. Given advancements in fuel technology and efficiency, emissions causing health issues have been decreasing in many areas. Recent legal and legislative actions taken by the United States to limit vehicle emissions have reduced air pollution-related deaths from 27,700 in 2008 to 19,800 in 2017 and yielded about \$270 billion in social benefits.¹⁶ Although the change was not as significant as expected, maintaining previous emissions levels would have caused 48,000 deaths as opposed to the 19,800.¹⁷ Additionally, larger-scale transition to low-emissions vehicles, especially heavy-duty vehicles, could decrease emissions-related deaths globally by 3 million.¹⁸

The Benefits of Transitioning to Electric Vehicles

The overall environmental and health benefits to the transition to electric vehicles are well established. Xie, Dallmann and Muncrief maintain that transitioning to zero emission vehicles globally could result in a reduction of road transport CO₂ emissions of 73% by 2050 compared to 2020 levels.¹⁹ Transitioning to low and zero emission vehicles could prevent 3 million premature deaths by 2050.²⁰ Additionally, 100% EV sales and 100% clean electricity is estimated to generate \$1.2 trillion in health benefits, and will save 110,000 lives and 2.7 million asthma attacks in the U.S. by 2050.²¹ Medium and heavy duty vehicles contribute 24% of all transportation greenhouse gas emissions, despite being only 4% of vehicles on the road.²² Additionally, electrifying medium and heavy duty vehicles can result in cost reductions in maintenance and fuel.²³ About 43 million MT CO₂ emissions could be reduced annually in the U.S. and Canada, equivalent to 5 billion gallons of gas, when shifting to electric medium and heavy duty vehicles.²⁴

Considerations For Transitioning to Electric Vehicles

A study by Driivz, a Smart EV Charging and Energy Management Software, suggests four pillars to consider when electrifying a fleet. They suggest a seamless integration of charging capabilities, operational excellence and stability in charging, energy management optimizations, and optimizing fleet utilization and operations.²⁵ The National Renewable Energy Laboratory (NREL) additionally recommends understanding a vehicle's energy needs and charging window, and understanding that locations where many vehicles are charging could increase the utility bill.²⁶

Emissions

Some studies have found limitations in the electrification of vehicles. An NREL 2022 Study found that studying six university fleets, electric vehicles were a good fit to replace 10%–50% of those fleet's light-duty vehicles.²⁷ Timmers and Achten (2016) maintain that electric vehicles are 24% heavier than conventional vehicles, and their particulate matter (PM) emissions are comparable to those of conventional vehicles. These authors recommend that future policy should concentrate on reducing vehicle weight.²⁸ Conversely, the European Public Health Alliance maintains that EV cars produce less PM_{2.5} and PM₁₀ than diesel or petrol cars.²⁹ Conlon, Waite, Wu, and Modi suggest that to achieve overall energy emissions reductions it is important to prioritize vehicle electrification ahead of complete grid decarbonization.³⁰ A study in Europe showed that electric SUVs did not contribute to reducing emissions, since CO₂ emissions of new cars are reduced when there is lower motorisation. The authors suggest reducing the reliance on technology fixes, downsizing, and reducing motorisation to reduce emissions.³¹

Temperature

Temperature is a factor to consider when electrifying vehicles. Temperatures of 0 °C and –15 °C reduce the battery capacity of Battery Electric Vehicles of 150 km by 53% and 40%, respectively.³² This study suggests that Battery Electric Vehicles can replace waste management small engine vehicles, since they have a lower vehicle workload than light duty vehicles.³³ The study additionally found that Battery Electric Vehicles are cheaper than internal combustion engine vehicles. Even without government subsidies, the Total Cost of Ownership (TCO) of EV vehicles is less.³⁴

Natural Disasters

Natural disasters and the potential for prolonged power outages are one of the major concerns for an all-electric vehicle fleet. As mentioned by Hines & Adderly, the number of blackout events has not declined over time, and has in fact increased the need for contingencies.^{35,36} This can be tied to infrastructure (such as frequency of charging stations, battery banks, and alternative power sources), since electricity cannot be stored or transferred as easily as liquid fossil fuels.³⁷ This is especially of concern for EVs with limited driving ranges when evacuations or longer drives are needed, as demonstrated in the Florida Keys case study (Appendices V & XIII).³⁸ As shown in the table, there is only a single fast charging station available on Marathon Key throughout the 126 mile stretch between Key West and the Florida mainland, compared to the recommended number that should be located along the highway and island chain.³⁹

Another example, as shown in Energy Policy 112 (Appendix VI), is that the most common occurrence for electrical disturbance events between 2003 and 2015 was storms.⁴⁰ The average duration of these outages was 64 hours or almost three days.

Vehicle Range

Another point concerning EVs sold in the United States is that their fully charged driving range can vary from 62 to 270 miles per charge (with a median of 93 miles), depending on the brand or model.⁴¹ Even for high-end EVs, this amount pales in comparison to fossil fuel powered vehicles, which have a median range of 403 miles, with some reaching a maximum of 765 miles, in between refilling the tank.⁴² As this problem is not easily solved without improvements to the technology itself, EV ranges are expected to reach 500 miles per charge in the next few years, bringing them closer to the majority of fossil fuel-powered vehicles.⁴³

Micro-grids & Off-grid Charging Options

In order to act as a preventative measure against natural disasters and power failures, some municipalities are implementing micro-grid or off-grid charging options as they transition to electric vehicles. As part of New York City's initiative to become carbon neutral by 2050, it is aiming for all municipal vehicles to be converted to electric by 2035.⁴⁴ This has also included purchases by the NYPD and use of solar-powered charging stations at precincts.⁴⁵ These examples of using off-grid power are a good use of contingency planning for continuity of emergency services during natural disasters or blackout periods. The use of decentralized or independent power generation in Puerto Rico has also tested the resilience of this technology in areas without reliable electricity or other utilities.⁴⁶

Another instance of micro-grid implementation is in cases where solar or alternative energy is available, but that source is used to offset usage from the primary grid or to assist in lessening the burden that recharging a number of EVs would put on it. This can be seen in Maryland where a transit station housing 70 electric buses has been integrated with solar panels and battery storage units in order to utilize less power from the primary grid and ensure continuity of transit services, even when electric power becomes interrupted.⁴⁷

Electric and Low-Emission Vehicle Efficiency – MPGe

In order to make a comparison between electric or low-emission vehicles and those that primarily utilize fossil fuels, the United States Environmental Protection Agency (EPA) established the *miles per gallon of gasoline-equivalent (MPGe)* standard to act as a benchmark for consumers, as well as the industry.⁴⁸ Though the unit deems 33.7 kWh of electricity to be equivalent to the energy derived from a gallon of gasoline by the average vehicle, it is not a straightforward comparison. As the unit was later adopted by the United States Department of Transportation (DOT) and United States Department of Energy (DOE), fuel economy labels were implemented on new electric or hybrid vehicles.

While the mileage of zero- or low-emission vehicles was always considered an improvement over more traditional vehicles, this assumption is supported by a 2022 analysis published in *Future Internet*.⁴⁹ While the study showed that hybrid EVs and plug-in hybrid EVs performed at similar rates, typically within 3-5 MPGe of their counterpart models and halving CO₂ emissions, the comparison between internal combustion engine vehicles and full EVs was much more drastic. Their fuel efficiency increased three- or four-fold, while of course their emissions were reduced to zero for each comparative set of models.

The Market for Light, Medium, and Heavy Electric Vehicles

Our team has chosen to focus on solely battery electric and plug-in hybrid electric vehicles, rather than fuel hybrid vehicles. One study from 2019 has shown that hybrid electric vehicles have shown no reduction in hydrocarbon emissions and consistently higher carbon monoxide (CO) emissions compared to the conventional Internal Combustion Engine (ICE) vehicles. This was caused by the frequent stops and restarts of the HEV engines, as well as the lowered exhaust gas temperature and reduced effectiveness of the oxidation catalyst.⁵⁰ Another report from the International Council on Clean Transportation (ICCT) found that electric vehicles produce less emissions over its entire lifecycle compared to hybrid vehicles.⁵¹ See Appendix IV for the comparison of CO₂ emissions from conventional, electric, and plug-in hybrid vehicles.⁵² Another study found that plug-in hybrid electric vehicles are found to be more efficient and produce less CO₂ than hybrid electric vehicles.⁵³ A 2020 ICCT study further maintains that hybrid vehicles CO₂ emissions are two to four times higher than type-approval values.⁵⁴

When determining the price and drive range of an electric vehicle, the size and capacity of the battery is the most important component.⁵⁵ Aryandi, Gunawana, and Monaghan found that Plug-in hybrid electric trucks operate with the lowest fuel costs of \$0.16/kWh.^{56 57} Batteries that are currently available in the market cannot currently meet all energy requirements of all electric vehicles, but there is a plethora of research being conducted on Lithium-ion batteries, Acid batteries, Nickel–Cadmium batteries, Nickel-metal hydride batteries, and Nickel-iron batteries. There is also emerging research on new technologies of Aluminium-air, Vanadium redox, and iron-air batteries.⁵⁸ It is predicted that by 2030, the battery price will be close to half of the current price.⁵⁹ See appendix VII for actual and projected battery costs.

According to the International Energy Agency (IEA), the electric vehicle market has expanded dramatically in the past four years. Eclectic vehicle sales accounted for 9% of car sales in 2021, 4 times their share in 2019.⁶⁰ In the first quarter of 2022, 2 million EVs were sold globally, a 75% increase from the first quarter of 2021.⁶¹

New electric vehicles sales are predominantly battery electric vehicles, accounting for 75% of electric sales.⁶² LaMonaca and Ryan emphasize the need for more accessible data to analyze the usage of the existing EV network.⁶³ Even when the market is still in early stages, there are many options for zero-emission medium and heavy-duty vehicles, inventory. Drive to Zero holds an inventory of medium and heavy-duty vehicles, both electric and fuel cell, filtered by current availability and availability in the coming years.⁶⁴

A 2022 U.S. Department of Energy Report maintains that there are several medium and heavy electric vehicles currently available in the U.S. Market, including transit buses, delivery trucks, forklifts, mowers, tractors, and ground support equipment.⁶⁵ Zero emission trucks and buses availability has increased by 26% from 2020 to 2023, and there are 544 models currently available.⁶⁶ The North American Council for Freight Efficiency estimates that half of current M/HD vehicles and vans are currently electrifiable. As of March 2022, there were 136 medium and heavy duty zero emission vehicles for purchase, and there will be 166,000 zero-emission truck and bus deployments by the end of 2022.⁶⁷

EV commercial vehicle markets that are considered fully mature in 2022 are transit and school buses.⁶⁸ See appendix XI for EV usability by vehicle type. Zero emission truck volume is low. In 2021, 3,000 ZEV trucks were produced, 6% of total trucks.⁶⁹ An EDF report maintains that even though there are few current EV medium and heavy-duty vehicles in the market, the market is rapidly growing. These markets are projected to be fully mature by 2025.⁷⁰ In 2022, less than 1% of medium and heavy-duty vehicles are hybrid-electric or battery-electric vehicles.⁷¹ In 2019, there were 20 medium and heavy duty vehicles, and in 2022 there are more than 136 models on the market.⁷² See appendix IX for available medium and heavy duty vehicles by year.

Some models of electric vehicles include Solectrac, which believes that the weight of electric vehicles can be used for traction and stability in tractors, and they have 100% solar powered tractors in the market.⁷³ New electric batteries are emerging in the market, such as the ePowertrain, with battery sizes ranging from 210-475 kWh. Cummins also offers transit buses and transport tractors.⁷⁴

Market Future

Scholars predict that the future of the electric vehicle market looks bright. The combination of government policy, demand and preferences, technological developments, and concern for the environment is driving the expansion of the electric vehicle market.⁷⁵ The U.S. Department of Energy's study shows that nearly half of medium and heavy duty trucks will be cheaper to buy, operate, and maintain as zero emissions vehicles than traditional vehicles by 2030.⁷⁶ The International Council on Clean Transportation (ICCT) estimates that 45% heavy duty vehicles sales in 2030 will be zero-emission, and 100% in 2040.⁷⁷ Many companies have plans for light-duty pickups and vans, including Ford.⁷⁸ Many major manufactures have announced transitioning to being fully electric, with 40% of retailers committed to reducing emissions.⁷⁹ For example, Toyota will roll out 30 battery electric vehicles by 2030, while Lexus plans to have 100% electric vehicles by 2035. Ford projects 1/3 of electric sales by 2026, and 50% by 2030, while Volvo aims to become fully electric by 2030.⁸⁰ Appendix X shows the timeline of electric vehicle sales for all major vehicle manufacturers.

The National Academies of Sciences, Engineering, and Medicine found that “the period from 2025-2035 could bring the most fundamental transformation in the 100-plus year history of the automobile”, since EVs will reach parity with conventional vehicles. Experts predict that parity will occur when battery prices reach below \$100/ kWh, in about 2025. Medium and heavy-duty vehicles will reach parity by 2027.⁸¹ They estimate that EVs will be the dominant type of vehicles by 2025. Battery prices have already fallen from \$1,000/kWh in 2010 to \$132/kWh in 2021, and will fall to \$100/ kWh by 2025, and to \$61-72/1Wh by 2030.⁸² It is estimated that in 2025, there will be 187 battery electric and plug-in hybrid light vehicles in the U.S.⁸³ See appendix XII for EV parity vehicle schedule by vehicle type.

Hydrogen Fuel

Hydrogen is a promising technology application for low emission vehicles. The range of fuel cell trucks is 600 miles, compared to the 300 miles of electric batteries.⁸⁴ The upfront cost is estimated to be lower as well, since a tractor with fuel cell is \$156k, while electric tractors average \$227K. The total cost of ownership, however, is higher than diesel trucks. The cost of hydrogen needs to be below \$5/kg for these vehicles to be marketable.⁸⁵

The Cost of Electric Vehicles

According to the Kelley Blue Book, new-vehicle prices are continuously rising.⁸⁶ For electric vehicles, the yearly increase in price between November 2020 and November 2021 was 6.2%. NRDC shared in 2021 that the average price of an electric vehicle was \$10,000 higher than the average price for the industry. The Customer Report reports that the electric vehicles have higher upfront cost compared to internal combustion engine vehicles, there is much evidence available indicating the electric vehicles are cheaper to maintain. Harto’s 2020 report on EV costliness maintains that EVs are expensive at the time of purchase but argues the maintenance of EVs is half of the cost of ICEs.⁸⁷ The estimate is based on both predicted values and recorded surveys from customers. NRDC provides similar insights, estimating the annual savings at the levels between \$6,000 and \$10,000.⁸⁸

Zero emission trucks can add 30% to the sticker price. However, 9 different types of zero emission trucks have a lower total cost of ownership than conventional trucks, see appendix VIII for the total cost of ownership for medium and heavy-duty vehicles.⁸⁹ Medium and heavy vehicles are estimated to drop up to 30% by 2024, and 44% by 2027. Purchase price for vehicles such as refuse trucks, shuttle buses, and delivery trucks can reach price parity to diesel version by 2023.⁹⁰ The total cost of ownership is estimated to go down. Light duty vehicles could save over \$5,000 in fuel costs, and medium box trucks could save \$6,269 in fuel costs over its lifetime. Other studies concluded EVs can save up to \$14,500 in fuel costs for light duty vehicles over 15 years.⁹¹

Charging Station Infrastructure

PricewaterhouseCoopers (PwC), McKinsey, and Edison Electric Institute, among many others, indicate the necessity for development of charging infrastructure to support the increasing number of electric vehicles.^{92 93 94} The same literature indicates the possibility of high upfront costs for development of charging infrastructure, however as noted in a market analysis conducted by the US Department of Energy, there is a general trend of decline in costs.⁹⁵ McKinsey’s report on the future of EV emphasizes the importance of federal and state

governments, which have the ability to provide financial incentives to aid development of charging infrastructure. The transition to electric vehicles is expected to increase the number of charging points across the country – PwC estimates an increase from 4 million in 2021 to 35 million in 2030.⁹⁶ This section is a review of different types of EV infrastructure, costs associated with such investment, and the challenges of said investments.

Available Charging Stations

The generally approved classification of charging stations is set on a scale 1 to 5, with Level 1 having the lowest power capacity and Level 5 the highest. Henry Lee of Harvard Kennedy School of Government and Alex Clark of Climate Policy Initiative published a review of charging technology, consistent with other available sources.⁹⁷ Level 1 equipment operates using alternating current and can draw electricity directly from the local distribution system. The equipment can be operated in most buildings, including individual households, and there is no need to alter existing circuitry. It is necessary to purchase an adapter and use a conventional wall socket with a power of 1.4 kWh. Level 1 equipment is recommended for personal use of light-duty vehicles at owners' houses. Level 2 equipment also uses alternating current and can draw energy from local distributional systems. It operates on upgraded, 220-volt outlets, with power ranging from 6.6 kWh to 19.2 kWh. In Level 2 charging stations, the adaptation needs, and investment range will vary based on targeted electrical capacity. Level 3 to Level 5 equipment uses direct current, charging the battery directly and delivering much more power, without the necessity of purchasing the inverter. The power of Level 3 and 5 is estimated to range from 10 kWh to 350 kWh. According to an analysis conducted by ICF, while a light-duty charging network may be sufficient for small to medium-duty vehicles, it might not be feasible for long-haul trucks, which will need significant improvements to high-powered charging ports (See Appendix XIV).⁹⁸

Level 1 is a convenient form of charging EVs and accounts for approximately 50% of in-house charging stations for EV owners as of June 2022.⁹⁹ It is uniform across several studies that the most significant advantages of Level 1 charging are easy availability and marginal costs – small adapters are often the only expense. Level 2 chargers are applicable for personal use and small to medium commercial needs. The National Renewable Energy Laboratory published data on the number and types of charging infrastructure, indicating that a vast majority of public charging infrastructure is at Level 2 (as seen in figure X).¹⁰⁰ The U.S Department of Energy reports that the Level 2 charging equipment can meet the needs of MD/HD vehicles with low utilization and long dwell periods.¹⁰¹ There might be a need for different types of equipment for MD/HD vehicles, such as inductive or overhead equipment which allows vehicles to charge while parked. Another notable benefit of Level 2 equipment is that it has a common plug that all electric vehicles can use, while Level 3-5 fast chargers are not compatible with all vehicles, as noted by the New York State Energy Research and Development Authority (NYSERDA).¹⁰²

Costs of Charging Stations

According to a comprehensive review study by the Idaho National Laboratory, the installation cost ranged from \$600 to \$12,700.¹⁰³ The International Council on Clean Transportation in 2013 study estimated the minimum commercial costs at \$3,000 for the Level 2.¹⁰⁴ The costs often depend on the type of equipment installed. Charger tower prices range from \$1,000 to \$4,000 in the Lee and Clark estimates, while others use a range from \$469 to \$9,985 per tower.¹⁰⁵ The big

price range is dependent on the qualities of the equipment – complexity of interface, on-site payment system, or network connection. Levels 3-5 can cost \$30,000 - \$40,000 for a single port charger and \$50,000 - \$60,000 for a dual-port charger. Wide range in the estimates is caused by large variations caused by a variety of factors that can be controlled for during the planning stage of the investment.

Both Level 1 and Level 2 equipment are affordable in-house alternatives. Level 1 stations have lower energy capacity. The Appendix II¹⁰⁶ breakdown shows the average power of each level of charging and the time to replenish daily usage. Level 2 stations, moreover, have better durability and more features than Level 1 and are recommended for workplace stations where multiple vehicles are charged. The Department of Transportation, Forbes, and many other sources indicate that Level 2 is sufficient for needs of small- to medium- sized commercial charging stations.^{107 108 109} Additionally, Level 2 has higher power than Level 1 stations. One hour of charging at a Level 2 station allows driving a range of 10 to 20 miles, compared to only 3 to 5 miles for vehicles charged at Level 1.¹¹⁰ Level 3 to 5 have great capacity and outperform in terms of speed of charging, however require significantly higher financial investment that often does not yield returns. Moreover, these high-capacity charging stations are said to deplete the battery capacity, as shown by data gathered by the Idaho National Laboratory.¹¹¹

Costs can be optimized by controlling the following factors: location, features, and charging form. The Energy Efficiency and Renewable Office at the Department of Energy reported that the Level 2 wall mounted charging station is 37% cheaper than the average installation cost of a pedestal unit, with an average cost of \$2,035 for the mounted wall unit and \$3,209 for a pedestal mount. The difference in price is attributed to less concrete and other materials associated with the installation process. Trenching is one of the reasons for higher costs of the pedestal unit. Trenching is understood as digging holes in roads, pavements, more generally concrete, to lay conduit. According to the Department of Energy, trenching of 50 feet might cost up to \$5,000.¹¹² Additionally, limiting the number of features to necessary ones also limits the cost. Notably, a choice between a mounted wall unit and pedestal unit is very important. In terms of cost allocation, labor accounts for 55 to 60% of total costs, materials cost 30 to 35%, and permits and tax account for 5% of total costs each. Interestingly, 9% of Level 2 commercial charging stations included aesthetic components that more than doubled the average installation cost from \$3,552 to \$8,005.

Maintenance Costs

There are maintenance and operating costs associated with charging stations.¹¹³ Additionally, all equipment is sold with 1 to 3 years warranty for defects. Apart from the equipment maintenance, there are operational costs associated with network connection, insurance, and any rent/costs associated with location of the station. These costs are determined on a case-by-case basis.

Hamilton, writing for the Bureau of Labor Statistics, maintains that many basic repairs and maintenance procedures are the same for EVs and traditional vehicles.¹¹⁴ According to the Alternative Fuels Data Center, the emergency response for EVs is very similar and there are no significant differences from that of ICVs.¹¹⁵ In the same report, however, it is indicated that technicians and mechanics must obtain certification to work on complex EV problems. National

Alternative Fuels Training Consortium (NAFTC) provides curriculum, training, and certification for workers in the automotive industry.

Power Grids and Electricity

Level 2 chargers typically require an installation of 240-volt circuit, circuit needed for household clothes dryers.¹¹⁶ As noted by the J.D. Power, a customer insights and data analysis firm focusing on the automotive industry, a new circuit and outlet can be installed by any electrician (with no special qualifications needed).¹¹⁷ NYSERDA's guide for charging infrastructure estimates a need for a 20-60/ 20-80 amp circuit.¹¹⁸ Such parameters allow for full-range charge in 3 to 6 hours or 20 miles per hour, with the estimates being uniform across the Department of Energy, Transportation, and NYSERDA.¹¹⁹

Political Landscape of Low Emission Vehicles

New York State Policies

The literature maintains that the political landscape has become very favorable toward the electrification of vehicles in recent years. In September 2022, Governor Hochul directed the State Department of Environmental Conservation to require all new passenger cars, SUVs and pickup trucks sold in the State of New York to be zero-emission by 2035.¹²⁰ New York state is also allocating \$5.75 million for the purchase of zero-emission vehicles and installation of supporting infrastructure to municipalities.¹²¹

Federal Policies

At a federal level, the Bipartisan infrastructure bill will provide \$7.5 billion for the purchasing of medium and heavy duty electric vehicles, and \$7.5 billion for a national network of electric vehicle charging stations.¹²² The National Electric Vehicle Formula Program will provide funds to states to deploy EV charging infrastructure.¹²³ Of this, New York State will receive \$175 million over the next 5 years to create an electric vehicle charging network.¹²⁴ A bill was also introduced in the Senate in 2021 that would establish a rebate program to purchase medium and heavy duty electric vehicles and charging infrastructure.¹²⁵ In June of 2022, the Department of Energy began accelerating the production of five energy technologies to lower overall energy costs.¹²⁶ In July of 2020 Washington DC signed a memorandum of understanding with 15 states, including New York, to transition medium to heavy duty trucks and buses to 30% zero emission sales by 2030, and 100% by 2050.¹²⁷

Utility companies, such as PSE&G, offer incentives for the installation of EV chargers.¹²⁸ The Climate Mayors Electric Vehicle Purchasing Collaborative is open to all U.S. cities and provides competitive bid contracts, resources, and support for vehicle transitions.¹²⁹ There are many policies that cities must keep in mind to reduce emissions.

The American Cities Climate Challenge presented a summary of key policies to pursue at a city level to transition to electric vehicles.¹³⁰ The table in Appendix I outlines the benefits and impacts of charging infrastructure, multi-sector policies, shifts in freight, fleets, and consumer vehicles. They measure each policy according to its benefit and impact and difficulty and cost. Based on these measures, light-duty city fleet requirements, zero emissions freight/delivery zones/curb access, and EV ready buildings and businesses ranked highest as having relatively high benefits and impact, and relatively low difficulty and cost (Appendix I).¹³¹

Grants & Funding

The political environment is particularly supportive of investments and expansion of alternative vehicles. On the state level, there are several programs that provide partial or full support for purchase of vehicles, training of employees, and development of infrastructure. There is a preference for citizens, as most incentives are based on personal income tax that is not any benefit for municipalities. For that reason, below you can find a short list of the most beneficial programs applicable for Ardsley.

First, there is the EV Make Ready program. The objective of the program is to ensure development of infrastructure necessary to accommodate for growing number of EVs across NY State. The program supports development of infrastructure for non-residential needs. The entities might be eligible to receive up to 100% of costs associated with development of Level 2 and Level 3-5 charging stations.¹³²

Evolve NY is a program promising \$250 million funding by 2025. The goal is to build a fast and reliant charging facility close to 5 cities in NY State, including Yonkers. To receive more details on the program, there is a form on the website to contact the administrators.¹³³

Lastly, there is Climate Smart Communities, a program supporting local governments to reduce their GHG emissions. CSC provides certifications for communities that show outstanding interest in climate change mitigation. There are 369 communities currently registered in the program. Once registered, there are 3 possible grants that one can apply for. The grants support purchase of vehicles and charging stations.¹³⁴

Comparable Communities to The Village of Ardsley

Based on recent data collection, public charging ports within New York state experience an average of 6.6 kWh charge in 2017.¹³⁵ The national average electric energy rate for July 2022 for consumers is \$0.16/kWh.¹³⁶ There is very limited literature available for communities similar to the Village of Ardsley, New York; although, there is literature from places with some geographical, budgetary, and structural similarities who have developed low emissions plans and EV infrastructure in their communities. As a reference, 2020 Census data indicates that Ardsley has a population density of 3,844.8 per square mile and encompasses 1.32 square miles.¹³⁷

Tompkins County, NY

Tompkins County in upstate New York conducted an analysis of its electric vehicle charging stations. While both municipalities are in upstate New York, Tompkins County is geographically larger at 474.64 square miles and has a population density of 222.8 per square mile.¹³⁸ The costs for the charging station varied significantly depending on whether the building was old or new, whether it was a wall-mount or pedestal station, and whether the port was single or dual. In the conclusions of their study, installation costs of Level 2 networked stations ranged from \$11,000 to \$23,000.¹³⁹ Tompkins County also found that having networked charging stations increased the cost by an average of 60% per station due to the extra set-up, technology, and the ongoing operating costs. Appendix III shows the cost breakdown for each kind of EV charging station in the Tompkins County study.

Tompkins County’s study also stated that damages for the charging stations came primarily from vehicles hitting them or charging cords being caught by snowplows. Tire stops, signage, monthly cleaning and inspections, and retractable cord systems were; however, effective solutions to these issues. Although these protections would increase costs, they serve an essential role in the longevity of the charging stations. It should be noted that some charging stations are designed for indoor use and should not be installed outdoors, as this may cause them to fail during extreme weather conditions and need replacement under warranty. Installing charging stations in new buildings and or using pre-existing power lines helped decrease costs a great deal.

Arroyo Grande, CA

The City of Arroyo Grande in San Luis Obispo, California conducted an audit of its municipal greenhouse gas emissions to develop reduction strategies.¹⁴⁰ Arroyo Grande is larger than Ardsley at 5.94 square miles and with a population density of 3,105.1 per square mile.¹⁴¹ This study provides very simple and cost-effective measures for reducing emissions across various sectors of the city. Rather than opt for a great change in municipal habits, this study proposed tactics like driver efficiency training and changing vehicle routes to be more efficient or require lower miles traveled.

In terms of reducing municipal transportation emissions, a major proposed solution included changes to city work schedules, similar to one implemented by the City of Santa Barbara in 2007. Municipal buildings were open for longer hours Mondays through Thursdays and only open every other Friday. Employees were then able to opt for different schedules that were no longer restricted to their traditional 8am-5pm. This significantly lower-budget strategy was aimed to reduce the quantity of emissions at traditional commuting times, given that concentrated spikes in vehicle emissions cause more harm on human health. This modification could have human impacts outside of vehicle emissions, but has seen some successes after communication struggles at initial implementation.

Burlington, VT

Burlington is larger than Ardsley at 10.31 square miles and with a population density of 4,339.3 per square mile.¹⁴² The City of Burlington, Vermont participated in a pilot program with the Vermont Clean Cities Coalition (VTCCC) to reduce emissions from police vehicles. They adopted a fuel management system in one of their vehicles called “IdleRight” which monitors the battery level of the emergency lights and only allows idling when absolutely necessary. Similar technology has been used by other police departments in other parts of the country. This technology being installed in one car resulted in the vehicle significantly reducing tailpipe emissions, cut vehicle maintenance and operating costs by about \$800 a year, and saved 345 gallons of fuel.¹⁴³ An unintended positive outcome of the pilot included residents decreasing their complaints towards police vehicle idling and decreased wear on the vehicle.

Appendices

Appendix I: Key Policies to Pursue at a Local Level ¹⁴⁴

Summary of key city policies		Benefits & Impact					Difficulty to pass	Current cost to implement
		Direct GHG reduction	Health	Equity benefits	Jobs	Market impact		
Charging infrastructure	1. Infrastructure deployment	●	●	●	●	●	●	●
	2. EV-ready buildings & businesses	●	●	●	●	●	●	●
	3. Equitable charging	●	●	●	●	●	●	●
	4. Streamlined charging approval (permits)	●	●	●	●	●	●	●
Multi-sector	5. Zero emission (ZE) areas, diesel bans, or similar	●	●	●	●	●	●	●
	6. Road tolls and CO ₂ -focused congestion pricing	●	●	●	●	●	●	●
	7. Funding for electric vehicles and charging	●	●	●	●	●	●	●
Freight	8. Zero emission freight/delivery zones/curb access	●	●	●	●	●	●	●
	9. Zero emission ports and inland hubs/warehouse districts	●	●	●	●	●	●	●
Fleets (buses, light-duty)	10. Zero emission bus requirements & rollout	●	●	●	●	●	●	●
	11. Fleet EV funding and business models	●	●	●	●	●	●	●
	12. Light-duty city fleet requirements	●	●	●	●	●	●	●
	13. EV procurement and use policies (all classes)	●	●	●	●	●	●	●
Consumer	14. ZE mobility service provider/taxi deployment	●	●	●	●	●	●	●
	15. City programs for faster uptake (bulk purchase agreements & dealer & education campaigns) (action)	●	●	●	●	●	●	●

Appendix II: Charging Characteristics ¹⁴⁵

Charger Type	Current Type	Average Power Delivered (kW)	Time taken to replenish daily usage (13.65 kW)	Time taken to charge 100 miles (37 kWh)	Range added per minute (miles)
Level 1	AC	1.4	9h 45m	26h 26m	0.06
Level 2 [standard]	AC	6.6	2h 4m	5h 36m	0.30
Level 2 [maximum]	AC	19.2	43m	1h 55m	0.86
Level 3	DC	50.0	16m	44m	2.25
Level 4	DC	150.0	5m	15m	6.76
Level 5	DC	350.0	2m	6m	15.77

Appendix III: Tompkins County Charging Station Breakdown 146

Station Description	Installation Description	Dual Port Station Cost	Installation Cost	Tire stop or bollard Cost	Signage Cost	Activation Cost	Net-work Cost (1 year)	Average Electricity Cost (1 year)	Total Cost (first year)
Level 1 (120V), wall mount, not networked	Installed with new building, 30' wire run, 1 tire stop	\$2,500	\$2,000	\$350				\$300	\$5,150
Level 2 (240V), wall mount, networked	Installed with new building, 30' wire run, 1 tire stop	\$6,500	\$2,000	\$350	\$500	\$1,000	\$600	\$300	\$11,250
Level 2 (240V), wall mount, networked	Installed on an old building, 30' wire run, 1 tire stop	\$6,500	\$4,500	\$350	\$500	\$1,000	\$600	\$300	\$13,750
Level 2 (240V), wall mount, networked	50' wire run 1 tire stop	\$7,500	\$5,000	\$350	\$500	\$1,000	\$600	\$300	\$15,250
Level 2 (240V), pedestal mount, networked	New sidewalk square, 50' wire run, 1 bollard	\$7,500	\$8,000	\$1,000	\$500	\$1,000	\$600	\$300	\$18,900
Level 2 (240V), pedestal mount, networked	Installed with new parking lot, 1 bollard, 100' wire run (15' conduit)	\$7,500	\$3,000	\$1,000	\$500	\$1,000	\$600	\$300	\$13,900
Level 2 (240V), pedestal mount, networked	Sidewalk cut and repair in old lot, 1 bollard, 100' wire run (15' conduit)	\$7,500	\$7,000	\$1,000	\$500	\$1,000	\$600	\$300	\$17,900
Level 2 (240V), wall mount, networked	120' wire run with high ceiling work, mounted on the building wall	\$6,500	\$5,500		\$500	\$1,000	\$600	\$300	\$14,400
Level 2 (240V), pedestal mount, networked	New sidewalk square, 1 bollard, 120' wire run (along high ceilings)	\$7,500	\$8,500	\$1,000	\$500	\$1,000	\$600	\$300	\$19,400
Level 2 (240V), pedestal mount, networked	Underground boring to island, 1 bollard, 50' wire run, mounting pier	\$7,500	\$12,500	\$1,000	\$500	\$1,000	\$600	\$300	\$23,400
Level 2 (240V), wall mount, networked	60' electrical run 2 bollards	\$6,500	\$4,500	\$1,500	\$500	\$1,000	\$600	\$300	\$14,900
Level 2 (240V), pedestal mount, networked	New panel from transformer, Mounting pier, 1 bollard	\$7,500	\$11,000	\$1,000	\$500	\$1,000	\$600	\$300	\$21,900

Appendix IV: Comparison of life-cycle greenhouse emissions ¹⁴⁷

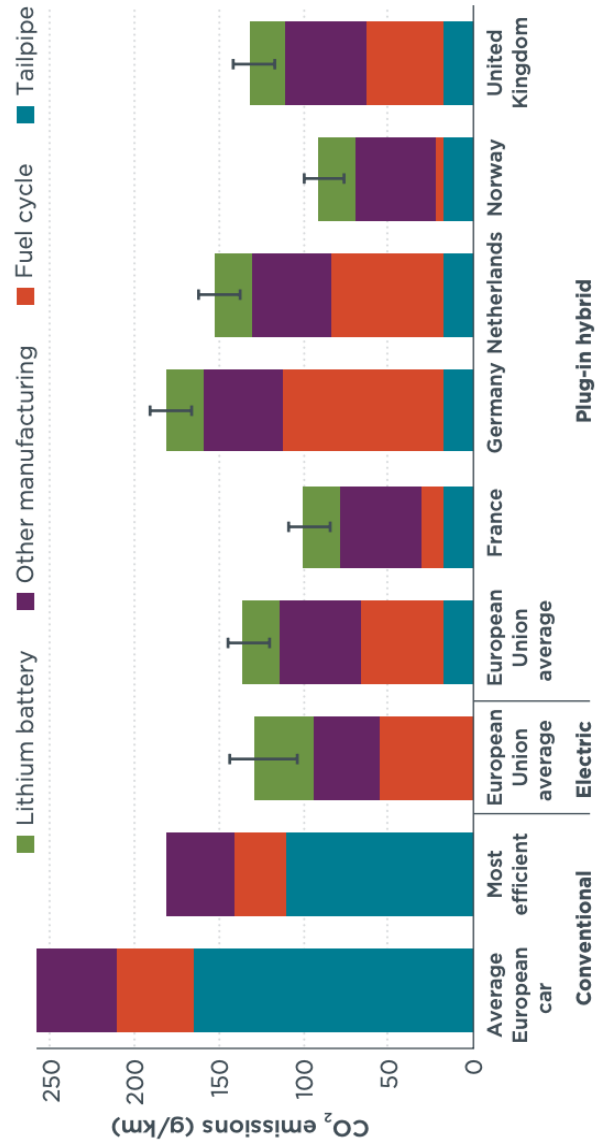
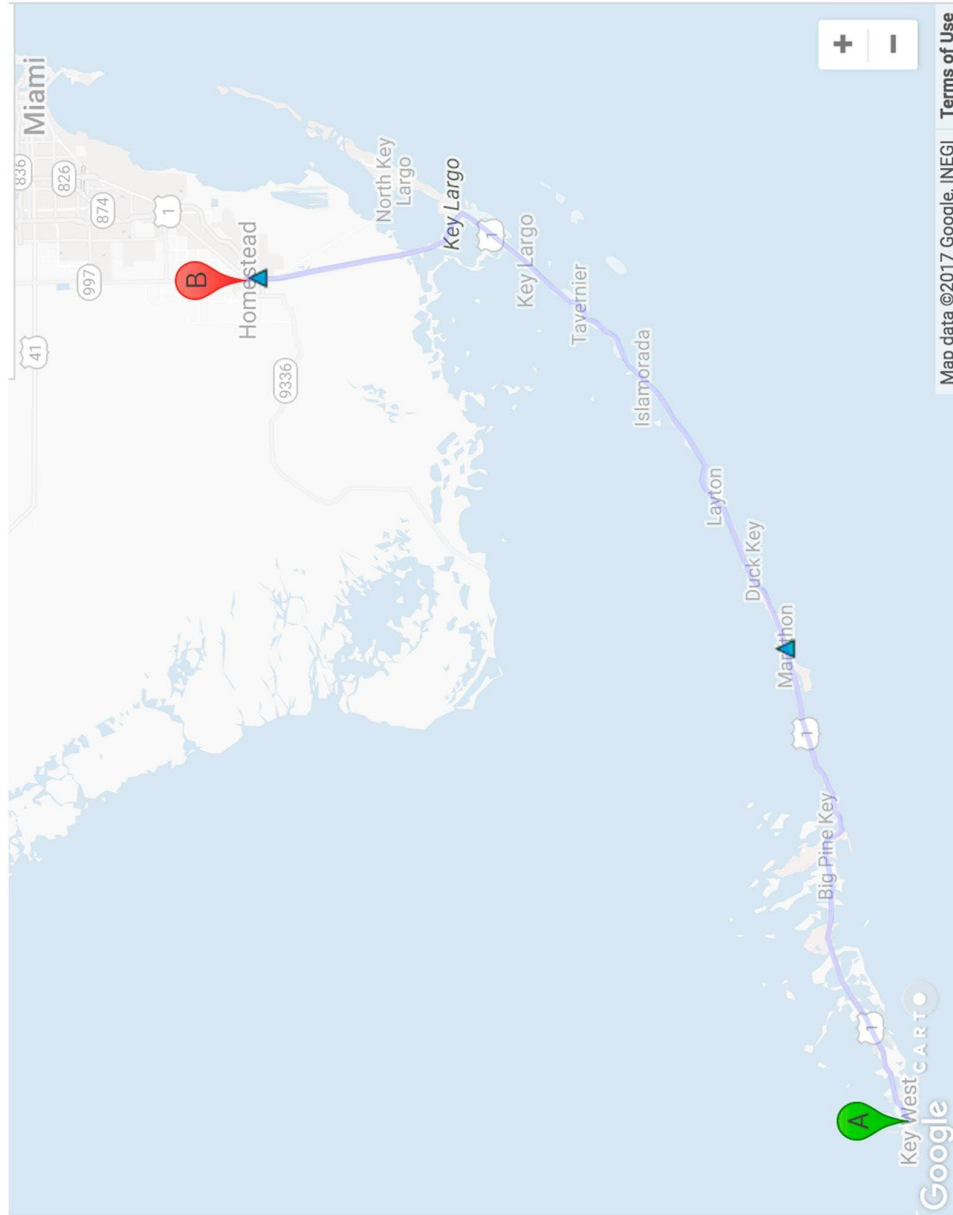


Figure 2. Comparison of life-cycle greenhouse gas emissions in conventional, electric, and plug-in hybrid vehicles in various European markets.

Appendix V: Map of the Florida Keys with DC Fast Charger Locations ¹⁴⁸

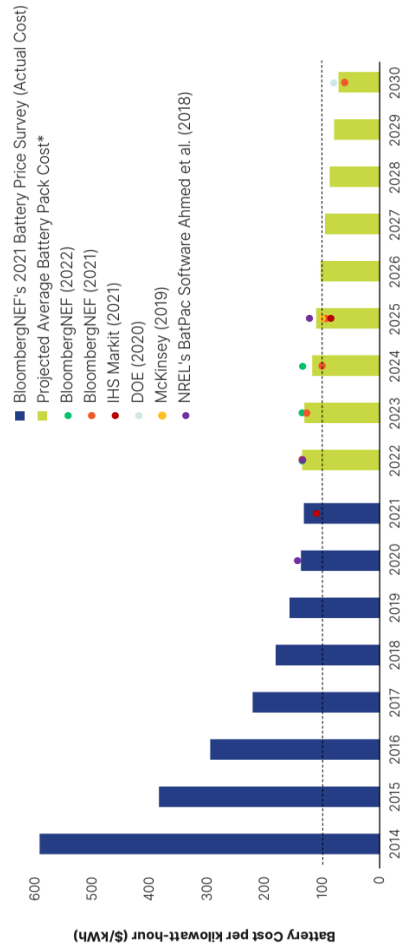


Appendix VI: Electric Disturbance Events from 2003 to 2015 ¹⁴⁹

Table 3
Selected data for electrical disturbance events from 2003 to 2015.

Cause of outage	Count	Mean size [MW]	Mean size in customers	Mean duration [h]
Cold	109	504	166,768	80
Cyber attack	16	NA	NA	NA
Earthquake	5	398	132,659	17
Equipment Failure	154	838	131,636	15
Fire	17	307	119,250	130
Fuel Supply	216	730	141,511	51
Hurricane	113	1214	392,545	123
Lightening	14	359	181,842	14
Other	28	8131	646,513	22
Storm	659	476	165,962	64
Vandalism	391	86	2364	7
Voluntary Reduction	89	3116	207,000	21

Figure 4. Actual and Projected Battery Pack Costs



Aggregated median battery pack cost based on projected battery price costs of literature review presented sources.

Appendix VIII: Total Cost of Ownership for Medium and Heavy-Duty Vehicles ¹⁵¹

**Figure 5. Total Cost of Ownership per Mile for M/HD Vehicles
(Vehicles Purchased in 2027)¹⁰¹**



Appendix IX: Medium and Heavy Duty Vehicles Available by Year ¹⁵²

Figure 7. Total Medium- and Heavy-Duty Vehicle U.S. Models Available by Year¹⁶⁹

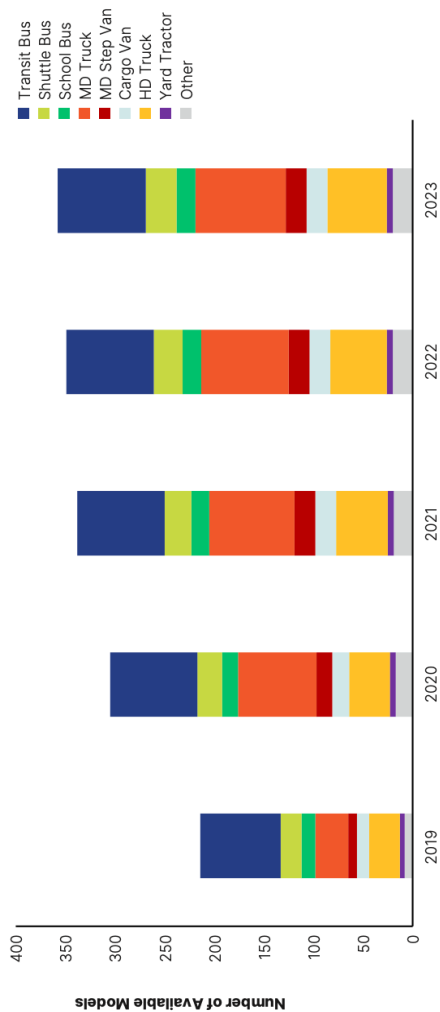
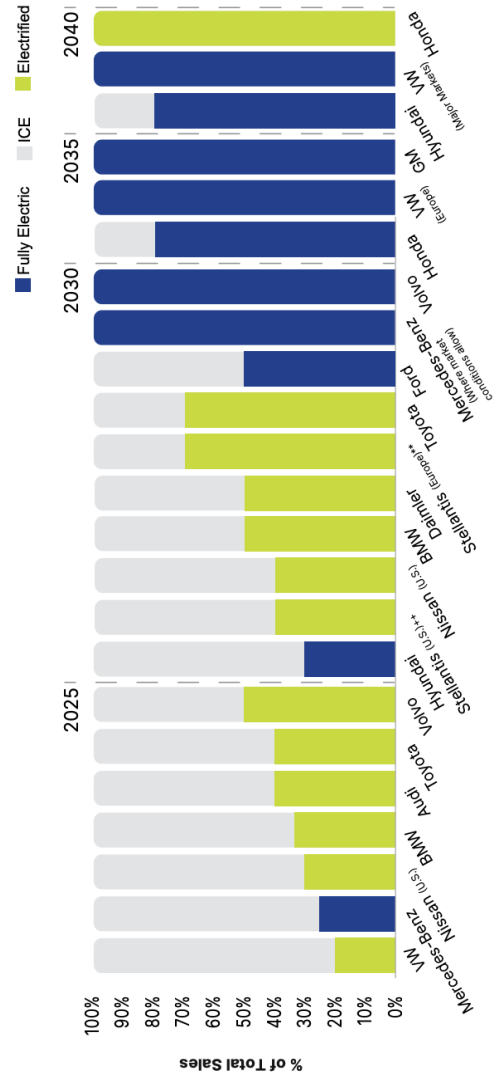


Figure 8. Global Sales Goals by Manufacturer



Appendix XI: EV Usability by Vehicle Type ¹⁵⁴

Figure 9 EV Usability by Market Segment

Range > Average Daily Mileage	60% < Range < 100% of Average Daily Mileage	Range < 60% of Average Daily Mileage
<ul style="list-style-type: none"> • Heavy-duty Pickup and Van • Transit Bus • School Bus • Delivery Van • Service Van • Service Truck • Refuse Hauler • Box Truck (Class 3 - 5) • Box Truck (Class 6 - 7) • Stake Truck (Class 3-5) • Stake Truck (Class 6 - 7) 	<ul style="list-style-type: none"> • Regional Haul Tractor • Delivery Truck (Class 6 - 7) • Dump Truck 	<ul style="list-style-type: none"> • Long Haul Tractor • Shuttle Bus • Box Truck (Class 8)

Appendix XII: Projected EV Cost Parity ¹⁵⁵

Figure 11 Projected EV -ICE Cost Parity by Market Segment

Projected EV Life-Cycle Cost Parity with Diesel & Gasoline Vehicles		
By 2025	By 2030	After 2030
<ul style="list-style-type: none"> • Heavy-duty Pickup and Van • Regional Haul Tractor • Long Haul Tractor • Delivery Van • Delivery Truck • Service Van • Refuse Hauler • Box Truck (Class 8) • Dump Truck 	<ul style="list-style-type: none"> • Shuttle Bus • Service Truck 	<ul style="list-style-type: none"> • Box Truck (Class 3 - 7) • Stake Truck (Class 3-7)

Appendix XIII: Currently available charging stations in the Florida Keys compared to the recommended number of fast-charging stations ¹⁵⁶

Table 9
Currently available BEV charging stations in the Florida Keys and example of potentially required number of fast charging stations.

City	Population	Distance from mainland	Fast DC charging available	Required [10%]
Key West	25,704	126	0	111
Big Pine Key	5032	97	0	21
Marathon	8708	75.7	1	37
Duck Key	443	67.4	0	1.9
Layton	190	59.5	0	1
Islamorada	6523	45.3	0	28
Tavernier	2173	36.5	0	9.3
Key Largo	10,433	28.8	0	45
North Key Largo	1244	19.5	0	6

Appendix XIV: Charging Needs by Market Segment ¹⁵⁷

Figure 8 Charging Needs by Market Segment

Home Base, Level 2	Home Base, Level 3	Public
<ul style="list-style-type: none"> • Heavy-duty Pickup & Van • School Bus • Delivery Van • Service Van • Service Truck • Box Truck (Class 3 – 5) • Stake Truck (Class 3 – 5) • Stake Truck (Class 6 – 7) 	<ul style="list-style-type: none"> • Heavy-duty Pickup • <i>Regional Haul Tractor</i> • Transit Bus • Shuttle Bus • Delivery Truck • Refuse Hauler • <i>Box Truck (Class 6 – 7)</i> • <i>Box Truck (Class 8)</i> • Dump Truck 	<ul style="list-style-type: none"> • Long Haul Tractor • <i>Regional Haul Tractor</i> • <i>Box Truck (Class 6 – 7)</i> • <i>Box Truck (Class 8)</i>

Appendix III. Ardsley Capital Plan

	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032
CAPITAL PLAN 2022 - 2032										
PUBLIC BUILDINGS/FACILITIES										
Village Hall HVAC Replacement			150,000							
HIGHWAY										
DW Building	6,000,000									
HIGHWAY EQUIPMENT										
Purchase of Mowhawk Eger Beaver Chipper										
Replacement of John Deere Tractor w snow blower										
Landscaping Trailer	56,000									
Replacement of Ford F-350 dump w plow & sander	\$110,000									
Replacement of 15 yd dump w plow & sander	\$220,000									
Replacement of John Deere loader		\$325,000								
Replacement of 2009 International Dump w/P&S Highway Car #1		\$65,000	\$250,000							
Replacement of 2007 Ford F450 Pick Up w/P&S				\$80,000						
Replacement of Mack/Leach garbage truck				\$325,000						
Replacement of 2014 Freightliner w/P&S					\$215,000					
Replacement of 2006 John Deere Tractor 4720 w attach					\$135,000					
Replacement of pickup truck w/p/s					\$80,000					
Replacement of Ford F-450 w/P&S #6						\$130,000				
Replacement of Ford F-450						\$110,000				
Replacement of 2013 Freightliner						\$215,000				
Replacement of Ford F-450 w/P&S #6							\$130,000			
Replacement of pickup truck w/p/s							\$75,000			
Replacement of Ford F450							\$125,000			
Highway Car #2								\$80,000		
SIDEWALKS										
Revolutionary Road	\$390,647									
Heatherdell Road (Concord Rd to Chimney Post)		\$226,664								
Heatherdell Road (Chimney Post to Revolutionary Rd)			\$266,748							
American Legion				\$310,478						
ROAD RESURFACING										
Felix Ave	\$45,726									
Lincoln Ave - A	\$39,212									
Windsong Rd	\$102,156									
Laurelview Ave	\$58,644									

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CAPITAL PLAN 2022 - 2032										
	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032
Sweetbriar Rd	\$44,218									
Revolutionary Rd	\$20,672	\$134,010								
Chimney Pot Lane		\$312,954								
Eudlid Ave			\$91,420							
Oakhill Rd			\$75,080							
Bridge St			\$9,230							
Highland Dr			\$40,362							
Captain Honeywell East			\$110,570							
Morningside Rd				\$617,528						
Heathdell Rd						\$495,604				
Beacon Hill Rd						\$162,379				
Farm Rd						\$129,651				
Glen Rd						\$31,416				
Huntley Dr (N)						\$102,088				
Wildwood Lane							\$51,544			
Franklin Ct							\$284,651			
Kensington Rd							\$41,465			
Colonial Ct							\$170,008			
Huntley Dr (S)								\$257,796		
Hilltop Road								\$479,478		
Victoria Road								\$119,684		
Columbia Road									\$182,879	
McKinley Pl									\$343,412	\$354,632
Lincoln Ave										
Delwood, Crestview, Jordan, Flintlock										
FIRE										
Replacement of Chief Vehicles	\$69,458			\$80,400						
Tools and Mounts for New Pumper Truck	\$30,000									
Ladder Replacement (2010 Smeal #50)								\$1,200,000		
DRAINAGE										
Village Green Detention Basin Maintenance	\$50,000			\$55,000			\$60,000			
ADMINISTRATION										
Administration Office Server Replacement							\$25,000			
Municipality	\$35,000									
Email Server Replacement							\$21,600			
PD Server Replacement	\$20,000								\$20,000	
Financial System Server Replacement					\$21,100					
PARKS/RECREATION										

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CAPITAL PLAN 2022 - 2032	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032
Resurfacing skate park		\$30,000								
Pascone Park Walking Path		\$150,000								
Replacement of Community Center HVAC Unit		\$20,000								
Replacement of Playground Equipment @ Pascone		\$250,000		\$250,000						
Pascone Park Spray Bay										
POLICE										
Police operations software system	\$250,000									
Replacement of 9 portable radios and car radios and base station	\$950,000									
Upgrade dispatch center		\$100,000								
LIBRARY										
TOTAL ANNUAL PROJECT AMOUNTS	\$8,041,738	\$1,613,628	\$993,410	\$1,718,406	\$1,068,628	\$1,376,138	\$952,331	\$2,201,968	\$606,291	\$354,652
SEWER FUND										
System Engineering & Investigation										
Capital Improvements										

Appendix IV. Full Municipal Fleet Inventory

NO.	MAKE and MODEL	YEAR Purchased	DEPARTMENT	STYLE	VEHICLE TYPE	FUEL TYPE	COST New	VIN
1	MERCURY Mariner	2010	Building	SUV	Light	Unleaded	\$24,785.00	4M2CN9B75AKJ26822
2	FORD F-550 Bucket Truck	2014	DPW	Light Truck	Medium	Diesel	\$98,000.00	1FDUF5GT6EEB28844
3	MACK Garbage Truck	2003	DPW	Garbage Truck	Heavy	Diesel	\$167,250.00	1M2AG12C83M005260
4	MACK Garbage Truck	2005	DPW	Garbage Truck	Heavy	Diesel	\$163,720.00	1M2AG1C854M025741
5	INTERNATIONAL 7400 Dump Truck	2008	DPW	Heavy Truck	Heavy	Diesel	\$134,275.00	1HTWEAAR78J646966
6	MACK Garbage Truck	2011	DPW	Garbage Truck	Heavy	Diesel	\$130,000.00	1M2AX13C4BM013787
7	FORD F-350 Super Duty Truck	2014	DPW	Heavy Truck	Medium	Unleaded	\$36,445.00	1FT8W3B64EEA61155
8	FORD F-350 Small Dump Truck	2014	DPW	Light Truck	Medium	Diesel	\$80,124.00	1FDRF3HT0FEB36500
9	FORD F-550 Small Dump Truck	2015	DPW	Light Truck	Medium	Diesel	\$80,124.00	1FDRF3HT2FEB36501
10	INTERNATIONAL 4300 Dump Truck	2009	DPW	Heavy Truck	Heavy	Diesel	\$85,000.00	1HTMZXMGJ141891
11	FREIGHTLINER Dump Truck/SD	2014	DPW	Heavy Truck	Heavy	Diesel	\$190,000.00	1FVDG5CY9EHFW4158
12	FREIGHTLINER Dump Truck	2015	DPW	Heavy Truck	Heavy	Diesel	\$174,561.00	1FVDG5CYXFHGN4825
13	CHEVROLET Tahoe	2015	DPW	SUV	Light	Unleaded	\$47,000.00	1GNSKAKC4DR285751
14	DODGE Charger	2013	Police	Sedan	Light	Unleaded	\$33,000.00	2C3CDXATXDH548306
15	CHEVROLET Tahoe	2012	Police	SUV	Light	Unleaded	\$42,000.00	1GNSK2E0XCR249677
16	SPARTAN Fire Truck	1999	Fire	Fire Truck	Heavy	Diesel	\$386,000.00	4X57AU4192XC028449
17	CHEVROLET Suburban 2011	2008	Fire	SUV	Light	Unleaded	\$41,500.00	3GNGK26K88G160980
18	SMEAL Ladder Truck	2011	Fire	Fire Truck	Heavy	Diesel	\$828,760.00	457AX2P94AC072320
19	CHEVROLET Tahoe	2012	DPW	SUV	Light	Unleaded	\$40,500.00	1GNSK2E02CR292054
20	JOHN DEERE Loader 624J	2005	DPW	Mobile Equipment	Other	Diesel		DW624JZ601094
21	FORD Explorer	2016	Police	SUV	Light	Unleaded	\$45,000.00	1FM5K8AR2GGA71872
22	CHEVROLET Tahoe	2016	Fire	SUV	Light	Unleaded	\$48,000.00	1GNSKFKC2GR256506
23	FREIGHTLINER Sweeper/VAC	2015	DPW	Heavy Truck	Heavy	Diesel	\$308,416.00	1FVACYDT0GHHF7915
24	SPARTAN Fire Truck	2016	Fire	Fire Truck	Heavy	Diesel	\$710,000.00	457AU2E92FC079950
25	FORD Explorer	2017	Police	SUV	Light	Unleaded	\$50,000.00	1FM5K8AR9HGB15397
26	CHEVROLET Tahoe	2017	Fire	SUV	Light	Unleaded	\$53,000.00	1GNSKFC3HR302115
27	DODGE Charger	2017	Police	Sedan	Light	Unleaded	\$60,000.00	2C3CDXKT3HH661015
28	DODGE Charger	2017	Police	Sedan	Light	Unleaded	\$60,000.00	2C3CDXKT3HH661017
29	FORD F-550 Lift Gate	2018	DPW	Light Truck	Medium	Diesel	\$50,512.00	1FDUF5HT9HEFA0985
30	FORD F-550 Small Dump Truck	2018	DPW	Light Truck	Medium	Diesel	\$95,000.00	1FDUF5HT0JEB13799
31	MACK Garbage Truck	2019	DPW	Garbage Truck	Heavy	Diesel	\$220,000.00	1M2GR2GC3KM002901
32	FORD F-550 Small Dump Truck	2019	DPW	Light Truck	Medium	Diesel	\$95,000.00	1FDUF5HT6KDA03147
33	DODGE Charger	2019	Police	Sedan	Light	Unleaded	\$60,000.00	2C3CDXJG4KH690571
34	CHEVROLET Tahoe	2019	DPW	SUV	Light	Unleaded	\$44,649.00	1GNSKFC6KR202436
35	DODGE Charger	2019	Police	Sedan	Light	Unleaded	\$50,000.00	2C3CDXKT8KH622690
36	JOHN DEERE Tractor 2032R	2013	DPW	Mobile Equipment	Other	Diesel		2032RKEH1123
37	JOHN DEERE Tractor 732	2001	DPW	Mobile Equipment	Other	Diesel		LV2032RKEH112837
38	JOHN DEERE Tractor 4720	2006	DPW	Mobile Equipment	Other	Diesel		LV4720H470630
39	CHEVROLET Tahoe	2020	Police	SUV	Light	Unleaded	\$70,308.00	1GNSKDEC8LR229160
40	CHEVROLET Tahoe	2020	Fire	SUV	Light	Unleaded	\$63,821.00	1GNSKFCXLR205082
41	MACK Packer	2021	DPW	Heavy Truck	Heavy	Diesel	\$219,529.00	1FVHG3DV9MHMP4350
42	CHEVROLET Tahoe	2021	Police	SUV	Light	Unleaded	\$72,889.00	1GNSKLED9MR340448
43	CHEVROLET Tahoe	2022	Fire	SUV	Light	Unleaded		1GNSKLED3NR235924
44	CHEVROLET Tahoe	2022	Police	SUV	Light	Unleaded		1GNSKLED4NR317659
45	CHEVROLET Malibu	2018	Police	Sedan	Light	Unleaded		1G1ZC5ST0JF222239
46	FREIGHTLINER Garbage Truck	2021	DPW	Garbage Truck	Heavy	Diesel	\$235,000.00	1FVHG3DV9MHMP4353
47	JOHN DEERE Tractor 210 w/ Backhoe	2021	DPW	Mobile Equipment	Other	Diesel		1T03105IINF417913
48	JOHN DEERE Tractor 2032 w/ Blower	2013	DPW	Mobile Equipment	Other	Diesel		LV2032RDCFFHM1470
49	JOHN DEERE Tractor 4720 w/ Backhoe	2013	DPW	Mobile Equipment	Other	Diesel		LV4720H470636
50	MOREBARK Chipper	2022	DPW	Mobile Equipment	Other	Unleaded		458SZ1616NWO73196
51	JOHN DEERE Tractor 2025R w/ Backhoe	2021	DPW	Mobile Equipment	Other	Diesel		LV2025RVMM401295

Appendix V. Municipal Fleet Inventory Charts and Graphs

Fig. 1 Breakdown of Municipal Fleet Manufacturers

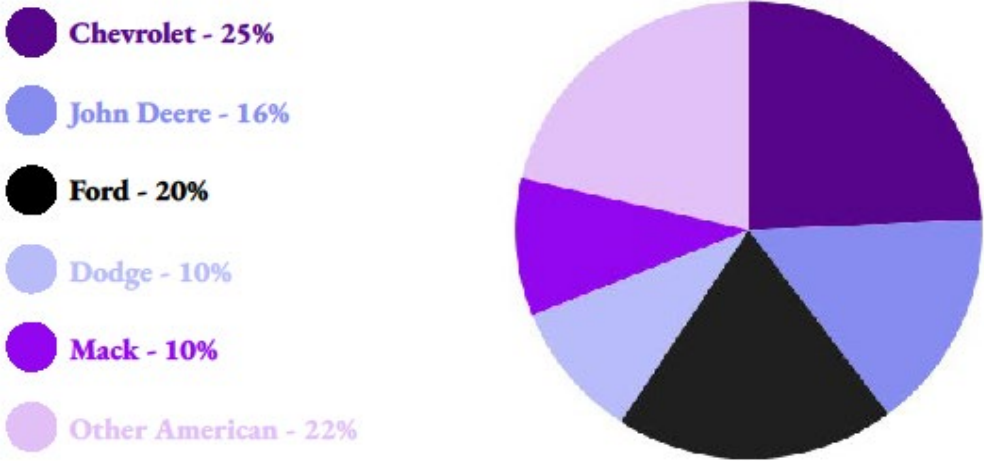


Fig. 2 Breakdown of Municipal Fleet Fuel Types



Fig. 3 Breakdown of DPW Vehicle Fuel Types

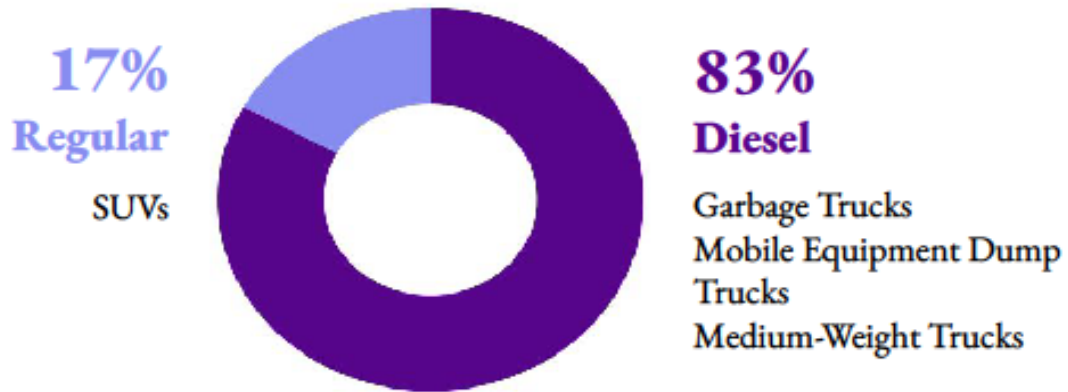


Fig. 4 Breakdown of Fire Department Vehicle Fuel Types

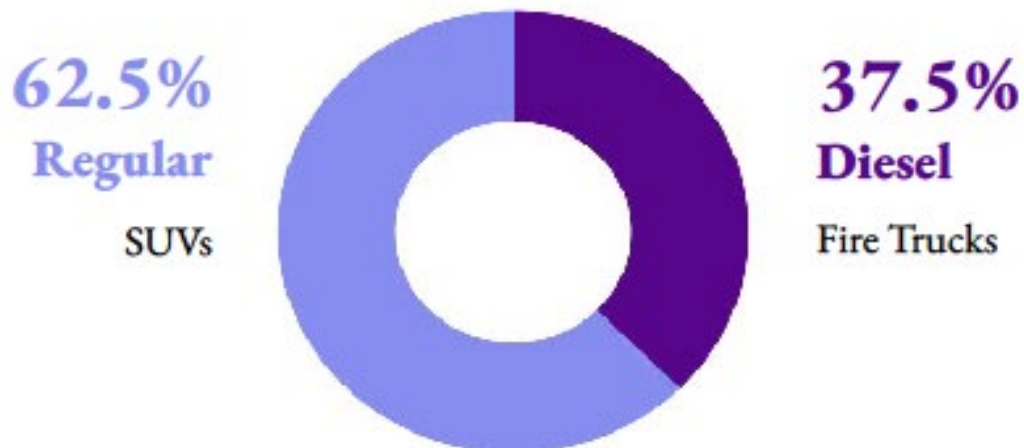


Fig. 5 Municipal Fleet Fuel Costs by Department

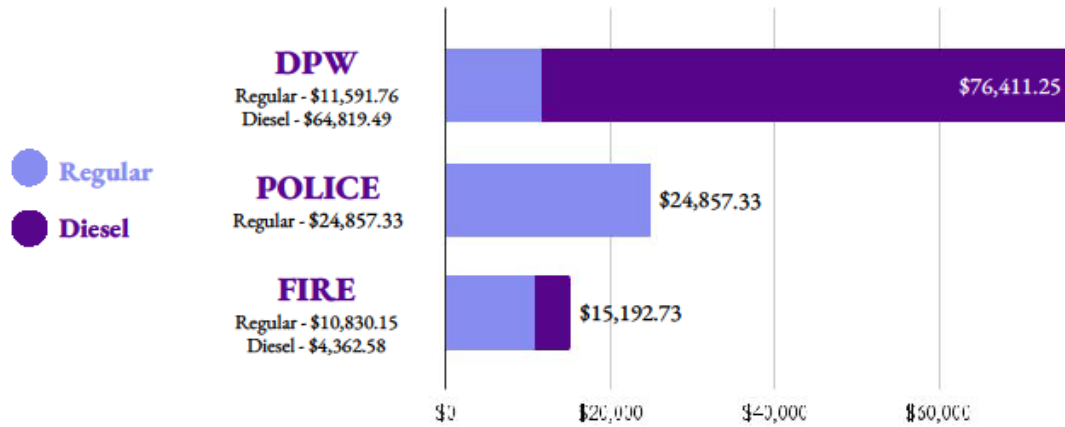


Fig. 6 Average Municipal Vehicle Fuel Cost by Department



Fig. 7 Municipal Fleet Fuel Used by Department

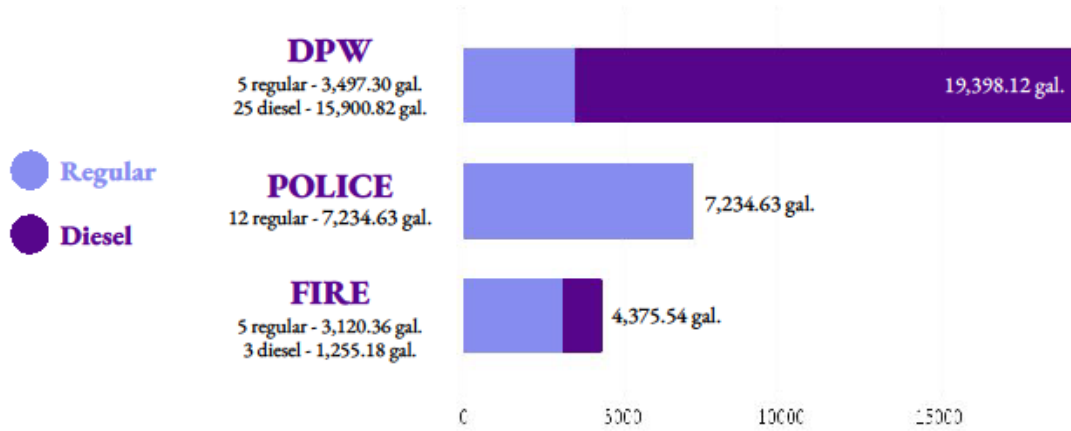


Fig. 8 Average Municipal Vehicle Fuel Use by Department

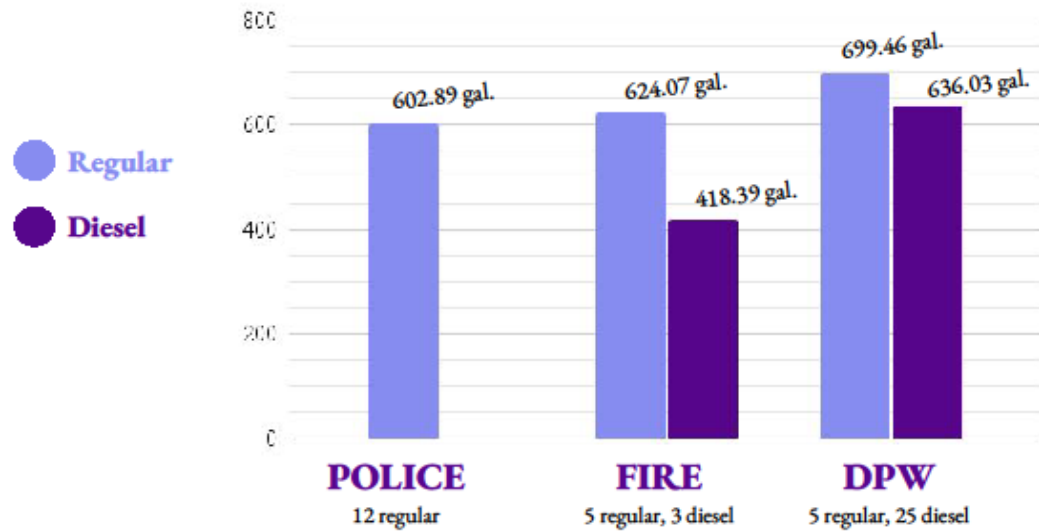


Fig. 9 Breakdown of Village Municipal Emissions

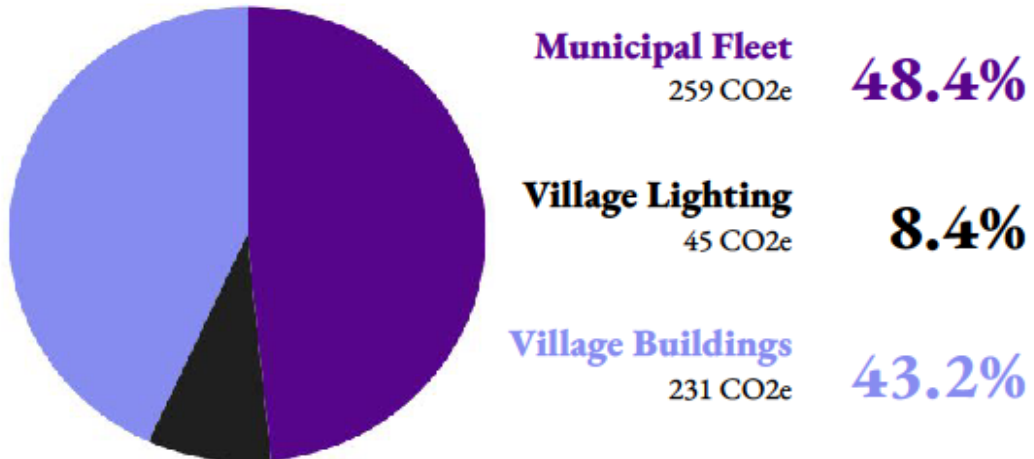


Fig. 10 Municipal Fleet Emissions by Department

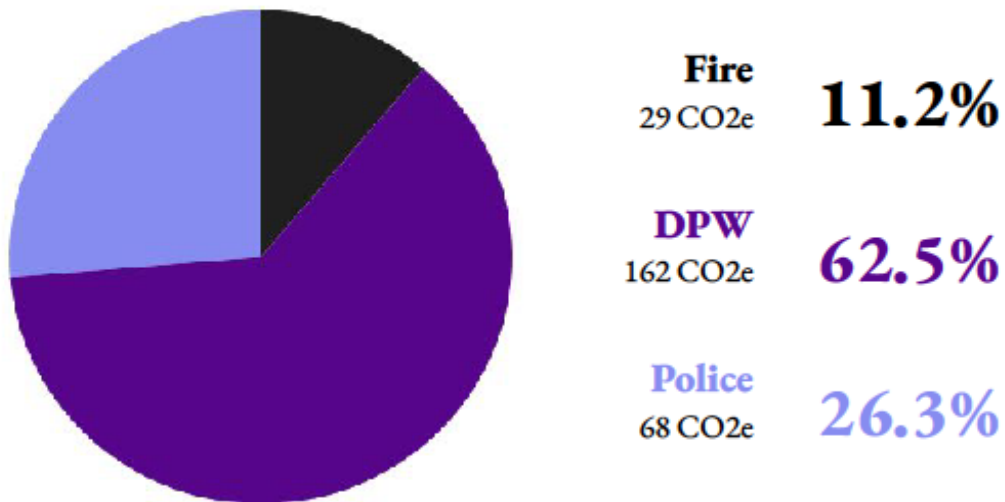
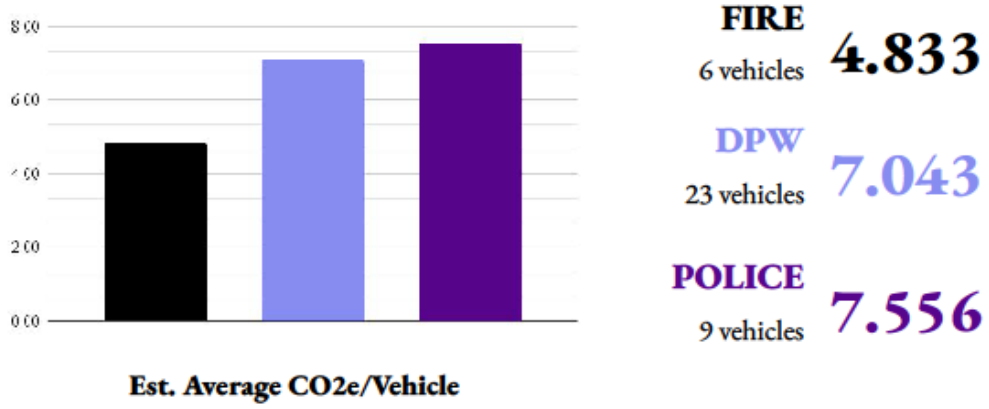


Fig. 11 Average Municipal Vehicle Emissions by Department



Appendix VI. Cost Benefit Analysis

CBA Calculations for Replacement of 4 vehicles

	Present Value with 3,5% discount rate	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Benefits												
Benefit #1 - Avoided investment in traditional vehicles	\$319,760	\$319,760										
Benefit #2 - Fuel savings	\$81,442		\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793
Benefit #3 - Maintenance costs avoided	\$37,431		\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501
Benefit #4 - Social Cost of Carbon	\$8,772		\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877
Benefit #5 - Health benefits from emission reduction of PM2,5	\$8,067		\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970
Total Benefits	\$455,473	\$319,760	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348
Costs												
Cost #1 - Upfront costs	\$260,000	\$260,000	\$ -									
Cost #2 - Construction Costs	\$14,400	\$14,400										
Cost #3 - Maintenance Costs	\$31,855		\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830
Cost #4 - Charging costs	\$12,036		\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447
Total Costs	\$318,291	\$274,400	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277

Benefit/Cost Ratio	1.43
Net Present Value	\$137,182

Sensitivity Analysis: Best and worst case scenario

PART B: WORST CASE

	Present Value with 3,5% discount rate	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Benefits												
Benefit #1 - Avoided investment in traditional vehicles	\$319,760	\$319,760										
Benefit #2 - Fuel savings	\$81,442		\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793
Benefit #3 - Maintenance costs avoided	\$37,431		\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501
Benefit #4 - Social Cost of Carbon	\$8,772		\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877
Benefit #5 - Health benefits from emission reduction of PM2,5	\$8,067		\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970
Total Benefits	\$455,473	\$319,760	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348
Costs												
Cost #1 - Upfront costs	\$260,000	\$260,000	\$ -									
Cost #2 - Construction Costs	\$20,400	\$20,400										
Cost #3 - Maintenance Costs	\$31,855		\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830
Cost #4 - Charging costs	\$92,155		\$6,271	\$6,271	\$6,271	\$6,271	\$6,271	\$6,271	\$6,271	\$6,271	\$6,271	\$6,271
Total Costs	\$364,410	\$280,400	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101	\$10,101

Benefit/Cost Ratio	1.25
Net Present Value	\$91,063

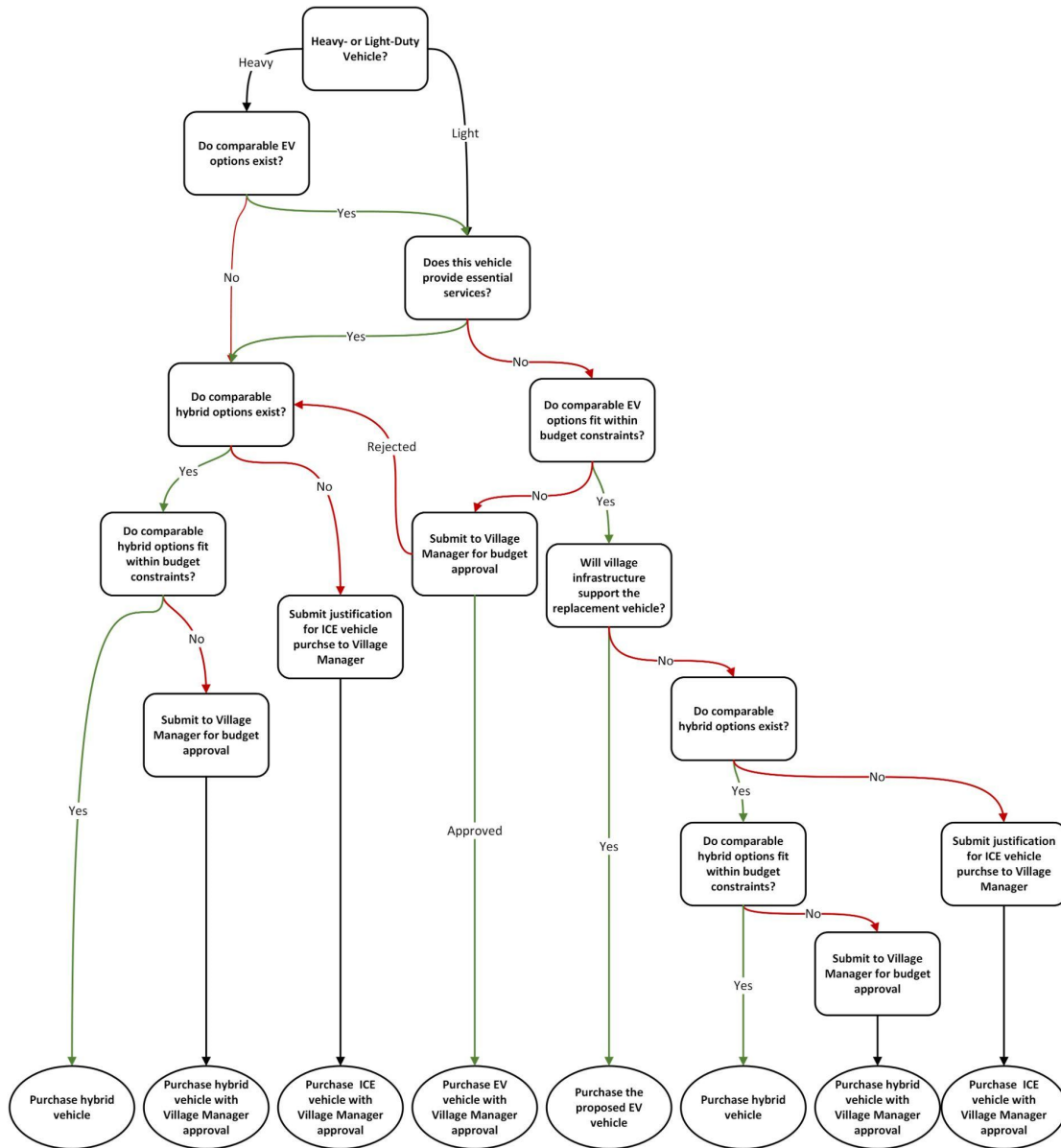
PART C: BEST CASE

Extreme case Sensitivity analysis: BEST CASE

	Present Value with 3,5% discount rate	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Benefits												
Benefit #1 - Avoided investment in traditional vehicles	\$319,760	\$319,760										
Benefit #2 - Fuel savings	\$81,442		\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793	\$ 9,793
Benefit #3 - Maintenance costs avoided	\$37,431		\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501	\$ 4,501
Benefit #4 - Social Cost of Carbon	\$8,772		\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877	\$ 877
Benefit #5 - Health benefits from emission reduction of PM2,5	\$8,067		\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970	\$ 970
Total Benefits	\$455,473	\$319,760	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348	\$ 6,348
Costs												
Cost #1 - Upfront costs	\$240,000	\$240,000	\$ -									
Cost #2 - Construction Costs	\$11,520	\$11,520										
Cost #3 - Maintenance Costs	\$31,855		\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830	\$3,830
Cost #4 - Charging costs	\$12,036		\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447	\$1,447
Total Costs	\$295,411	\$251,520	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277	\$5,277

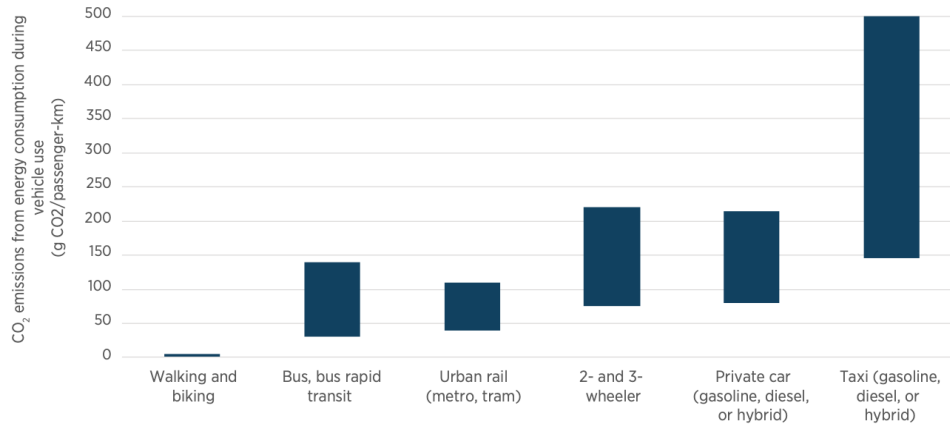
Benefit/Cost Ratio	1.54
Net Present Value	\$160,062

Appendix VII. Vehicle Purchase Decision Tree



Appendix VIII. Carbon Efficiency of Modes of Transportation¹⁰⁰

Figure 1. Relative carbon efficiency of urban passenger transport modes



Source: Adapted from Figure 8.6 (Sims et al., 2014).

Note: Ranges provide indication of CO₂ emissions from fuel combustion (and electricity in the case of urban rail). They exclude emissions arising from vehicle manufacture, infrastructure, and other sources of emissions included in lifecycle analyses.

Appendix IX. Funding Opportunities

ENTITY	PROGRAM
Climate Mayors Collaborative	Electric Vehicle Purchasing Collaborative
Con Edison	POWERREADY Electric Vehicle Program
Con Edison	SmartCharge
Con Edison	Power Ready Program
New York Power Authority	Evolve NY
NY Department of Environmental and Conservation	Climate Smart Communities
NY Department of Environmental Conservation	Municipal Zero-Emission Vehicle Program
NY Department of Taxation and Finance	Public and Workplace Charging Tax Credit
NY Department of Transportation	Congestion Mitigation and Air Quality Program
NY Power Authority	Smart Street Lighting Program
NY Power Authority	HVAC
NY Energy Research and Development Authority	Charge Ready NY
NY Energy Research and Development Authority	Drive Clean Rebate for Electric Cars
NY Energy Research and Development Authority	Clean Transportation Program
NY Energy Research and Development Authority	Truck Voucher Incentive Program
Sustainable Westchester	Commercial Clean Heating & Cooling Program
The Joint Utilities of New York	EV Make Ready Program
UGE International	Community Solar Project
US Department of Transportation	Zero Emission Grant Program
US Department of Transportation	Electric Vehicle Formula Program
US Department of Transportation	Rebuilding America's Infrastructure with Sustainability and Equity
US Department of Transportation	Carbon Reduction Program
US Department of Transportation	Congestion Mitigation and Air Quality Program
US Department of Transportation	Safe Streets for All Program
US Department of Transportation	Transportation Alternatives Program
US Environmental Protection Agency	Energy Star Program

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MINUTES

Ardsey Village Board of Trustees

8:00 PM - Monday, April 17, 2023

Meeting Held In-Person & Zoom Platform

Present: Mayor	Nancy Kaboolian
Deputy Mayor/Trustee	Andy Di Justo
Trustee	Asha Bencosme
Trustee	Craig Weitz
Village Manager	Joseph L. Cerretani
Village Clerk	Ann Marie Rocco
Village Attorney	Robert J. Ponzini
Absent: Trustee	Steve Edelstein

1. CALL TO ORDER-PLEDGE OF ALLEGIANCE-ROLL CALL

- 1.1 The Regular Meeting of the Village of Ardsley Board of Trustees was held on April 17, 2023 at Village Hall, Court Facility, 507 Ashford Avenue, Ardsley, NY 10502. Mayor Kaboolian called to order the Regular Meeting at 8:00 p.m.

Members Present:

Mayor Nancy Kaboolian

Deputy Mayor/Trustee Andy Di Justo

Trustee Asha Bencosme

Trustee Craig Weitz arrived at 8:15 p.m. and Steve Edelstein was absent

Also present were: Village Manager, Joseph Cerretani, Village Attorney, Robert J. Ponzini and Village Clerk, Ann Marie Rocco

2. CONTINUATION OF PUBLIC HEARING In the Matter of the Tentative Budget for the Village of Ardsley for the Fiscal Year Beginning June 1, 2023 through May 31, 2024

- 2.1 Mayor Kaboolian opened the Public Hearing at 8:01 p.m. in the matter of the Tentative Budget for the Village of Ardsley for Fiscal Year Beginning June 1, 2023 through May 31, 2024:

PLEASE TAKE NOTICE, that a Public Hearing will be held before the Village of Ardsley Board of Trustees in person at Village Hall-Court Room Facility, 507 Ashford Avenue, Ardsley, New York on Monday, April 3, 2023 at 8:00 p.m. or soon thereafter for the purpose of considering the Tentative Budget for the Village of Ardsley, New York for the fiscal year beginning June 1, 2023 through May 31, 2024.

The Tentative Budget is posted on the Village's website at www.ardsleyvillage.com and is available for review at the Office of the Village Clerk, 507 Ashford Avenue, Ardsley, NY during regular office hours Monday through Friday 9:00 am-4:00 pm.

Please check the calendar on the Village website for meeting details at www.ardsleyvillage.com or email the Village Clerk at arocco@ardsleyvillage.com. All residents and taxpayers are invited to attend and be heard. The meeting will be able to be seen live on Channel 75 (Cablevision) or Channel 32/35 (Verizon). Members of the public can also listen to the meeting via Zoom platform by dialing via phone +1 929 205 6099, Meeting ID: 838 7851 4568 Passcode: 178460.

By order of the Village Board of Trustees of the Village of Ardsley, New York.

Ann Marie Rocco
Village Clerk
Dated: March 24, 2023

Moved by Trustee Bencosme, Seconded by Trustee DiJusto and passed unanimously.

RESOLVED, that the Public Hearing be closed in the matter of the Tentative Budget for the Village of Ardsley for the Fiscal Year Beginning June 1, 2023 through May 31, 2023 at 9:11 p.m.

Carried by the following votes: 4-0-0
Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme
Nays: None
Abstained: None

3. SPECIAL PRESENTATION-CALGI CONSTRUCTION

3.1 Update of Highway Garage and Finances-Mr. Andrew Laidlaw, Calgi Construction

Mr. Laidlaw from Calgi Construction was present to provide the Board with an updated status report on the New Highway Garage:

- Total cumulative project is \$17,838,154.
- We are extending our retaining wall and parking lot.
- There are a list of potential change orders #1 though 6:
 - Water Main Changes-Rejected.
 - Water Main Insert Valve -Accepted.
 - Rock Removal- Rejected.
 - Footing Excavation/unsuitable soil -Pending.
 - Extending Retaining wall/asphalt -Pending
 - Drainpipe Vehicle Wash- Pending.
- Looking ahead: The plumbing contractor is expected to start the under-slab plumbing inside the building on April 17, 2023. The electrician is expected to start their under-slab conduit runs April 24, 2023. Once their systems are completed and inspected the mason will remobilize on site and start to prepare and pour the concrete floors. The mason is expected to be back on site the first week of May. The pre-manufactured building is expected to start arriving on May 17, 2023, and assembly of the steel frame is expected to start on May 31, 2023.

[Ardsley DPW Executive Report](#)
[PRIMES - CHANGE ORDER LOG - Copy](#)
[Village of Ardsley AFP #1 Summary Sheet](#)

4. EARTH DAY PROCLAMATION

4.1 Trustee Bencosme read the following Earth Day Proclamation:

EARTH DAY PROCLAMATION

WHEREAS, the global community faces extraordinary challenges such as environmental degradation, climate change, food and water shortages, and global health issues; and

WHEREAS, all people, regardless of race, gender, income, or geography, have a moral right to a healthy, sustainable environment; and

WHEREAS, it is understood that the citizens of the global community must step forward and take action to create positive environmental change to combat the aforementioned global challenges; and

WHEREAS, a sustainable environment can be achieved on the individual level through educational efforts, public policy, and consumer activism campaigns; and

WHEREAS, it is necessary to broaden and diversify the environmental movement to achieve maximum success; now therefore be it

RESOLVED: that Mayor Nancy Kaboolian does hereby proclaim Saturday, April 22, 2023, as Earth Day in the Village of Ardsley and urges all citizens to support environmental initiatives in the village, regionally and nationally, and to encourage others to undertake similar actions.

5. ARBOR DAY PROCLAMATION

5.1 Trustee Bencosme read the following Arbor Day Proclamation:

ARBOR DAY PROCLAMATION

WHEREAS, on January 4, 1872, J. Sterling Morton proposed to the Nebraska Board of Agriculture that a special day be set aside for the planting of trees, and

WHEREAS, this holiday, called Arbor Day, was observed with the planting of more than a million trees in Nebraska on April 8, 1874, and in 1875 became a legal holiday in Nebraska, and

WHEREAS, Arbor Day is now observed throughout the nation and the world, and

WHEREAS, trees reduce the erosion of our precious topsoil by wind and water, cut heating and cooling costs, store carbon and thus mitigate climate change, moderate the temperature, clean the air, produce oxygen and provide habitat for wildlife, and

WHEREAS, trees in our Village increase property values, enhance the economic vitality of business areas, and beautify our community;

NOW THEREFORE BE IT RESOLVED, that Mayor Nancy Kaboolian does hereby proclaim Friday, April 28, 2023 as Arbor Day in the Village of Ardsley and urges all citizens to support efforts to care for our trees.

6. APPROVAL OF MINUTES:

6.1 April 3, 2023 Board of Trustees Regular Meeting Minutes

Moved by Trustee DiJusto, Seconded by Trustee Weitz and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby approves the minutes of the Regular Meeting of Monday, April 3, 2023 as submitted.

Carried by the following votes: 4-0-0

Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme

Nays: None

Abstained: None

7. DEPARTMENT REPORTS

1. LEGAL

- 1.a Village Attorney Ponzini stated there is nothing to report other than various items he is working on with staff.

2. MANAGER

- 2.a Village Manager, Joseph Cerretani read the following report:

1. 2023-2024 VILLAGE BUDGET

- The Village Budget's adoption is up for consideration this evening. I would like to thank again all department heads and staff for their hard work on the budget, with special thanks to Leslie Tillotson and Charles Hessler.

2. MS4 ANNUAL REPORT

- The SW Annual Report Presentation will be given at the next VB meeting on May 1. Special thanks to Lorraine Kuhn for her hard work in the Stormwater program.

3. RECORD'S RETENTION DAY

- Friday, May 5 is Record's Retention Day in the Village. All administrative offices will be closed to the public, including the Public Library and Justice Court.

4. REQUEST FOR EXECUTIVE SESSION

- I am requesting a brief Executive Session this evening immediately following the Regular Meeting to discuss matters of personnel.

3. ABSTRACT/WARRANT

- 3.a Warrant to Village Treasurer to Collect and Receive Taxes
Mayor Kaboolian read the Warrant to Village Treasurer to Collect and Receive Taxes and was accepted under submission.

WARRANT TO VILLAGE TREASURER TO COLLECT AND RECEIVE TAXES

TO: TREASURER OF THE VILLAGE OF ARDSLEY IN THE COUNTY OF WESTCHESTER, STATE OF NEW YORK

YOU ARE HEREBY AUTHORIZED AND DIRECTED to receive and collect from each of the several persons, group of persons and corporations named in the annexed Tax Roll and the owners of real property described therein, the several sums of money set forth in the column headed "Total Tax" of said Tax Roll opposite the name of each person, groups and persons, corporations or owners of real property therein described, in the total sum and for the purposes appearing in the summary statement of the purposes for which the same have been levied as follows:

General Government	\$2,858,320
Public Safety	\$4,180,778
Health	\$20,646
Transportation	\$1,349,713
Economic Development	\$10,600
Culture & Recreation	\$610,243
Home & Community	\$747,905
Employee Benefits	\$4,662,378
Other Funds	\$386,857
Debt Service	\$2,693,917
Total Expenditures	\$17,521,357
Other Sources of Income	\$3,433,655
Appropriated Debt Service	\$275,000
Balance to Be Raised by Taxation	\$13,812,702

YOU ARE HEREBY FURTHER AUTHORIZED AND DIRECTED TO COLLECT and receive so much of the above described monies, as by each of said persons, groups of persons, corporations and owners of the real property described in said Tax Roll, as may be voluntarily paid to you, provided, however, that such sum of money required to be paid as aforesaid may be paid to and received by you in two equal installments: the first of which installment may be paid to and received by you during the period of June 1, 2023 to June 30, 2023, both dates inclusive, without penalty or additional charges; and the second equal installment of which may be paid to and received by you without penalty or additional charge at any time prior to or during the period of December 1, 2023 to January 2, 2024, both dates inclusive, provided further that as to each such installment or any fractional part thereof as shall be unpaid at the expiration of the period during which it may be paid without penalty or additional charge as above provided you shall charge and receive on the payment and collection thereof the additional sum of 5 percent (5.00%) of such installment paid or received during the calendar month next succeeding the close of the period, said sum might, as above provided be paid without penalty or additional charge and an additional charge thereafter at the rate of interest determined by the Commissioner of Taxation & Finance., State of N.Y., pursuant to Section 924-a of the Real Property Tax Law of such sum for each month or fraction thereof thereafter

and you are directed to make a return of this warrant and the annexed Tax Roll on or before the third day of February 2024, unless sooner directed by the Board of Trustees of this Village, and if any tax or real property or any interest thereof placed upon the said Tax Roll shall be unpaid at the time that you are required to return this Warrant and Tax Roll, you are directed to deliver to the Board of Trustees, and account of the taxes remaining due, containing a description of the lands, and owners of lands, upon which such taxes are unpaid as the same were placed on the said Tax Roll, together with the amount of the tax so assessed and the penalty and charge thereon.

IN WITNESS WHEREOF, The Mayor of said Village of Ardsley by order of the Board of Trustees has hereunto set his hand and caused to be affixed the corporate seal of said Village this 17th day of April 2023.

--
NANCY KABOOLIAN - Mayor ANN MARIE ROCCO - Village Clerk

3.b April 17, 2023 Abstract Report

Village Manager, Joseph Cerretani read the April 17, 2023 Abstract Report as follows:

From the General Fund: \$269,861.62 from the Trust & Agency Fund: \$315.62 and from the Capital Fund: \$620,168.78 Sewer Fund: \$10,232.12.

Moved by Trustee Weitz, Seconded by Trustee DiJusto and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Treasurer to make the following payments: From the General Fund: \$269,861.62 from the Trust & Agency Fund: \$315.62 from the Capital Fund: \$620,168.78 and Sewer Fund: \$10,232.12

Carried by the following votes: 4-0-0

Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme

Nays: None

Abstained: None

4. POLICE

4.a March 2023 Police Department Report -Lieutenant Daniel Watson read the following report:

Department Report:

Property lost or stolen -\$14.99

Property Recovered---- \$0.00
Court fines and fees --- \$73,137.00
Alarm fines and fees--- \$120.00
Meter collection-----\$2,530.00
Traffic Accidents-----9
Arrests----- 7
Calls for service-----285
Investigations-----13
Impounded vehicles----- 5
UTT summonses issued---- 49
Parking summonses issued- 23
Appearance tickets issued---6
Total summonses issued----- 78

For monthly statistics, please see attached.

March Events 2023

Total Training for the month of March was 88 hours Which consisted of training in:

Computer RMS

Use of force

first Aid

Narcan

AED

CPR

Pursuit mitigation

Preliminary Investigations

Legal Updates

Community Policing (CPO)

CPO assisted by instructing a child passenger safety technician class. Certifying 15 new technicians and conducted a car seat check event. In addition, the department had 6 car seat installations by appointment.

CPO participated in a zoom meeting for the Westchester County Coalitions group.

CPO assisted with two lock down drills on separate dates at the Ardsley High School.

CPO assisted with a lockdown drill at the Concord Road Elementary School.

CPO attended the NYS accreditation certification ceremony.

CPO attended the Garden Club pollinator event.

CPO participated at the Ardsley High School Wellness Event.

CPO attended in persons (PACS) Police & Communities.

CPO participated in a meeting with recreation on upcoming events in May for 2023 5K Race and Food Truck Friday.

CPO assisted in a lock down drill at the Ardsley Middle School.

CPO attended an in-person meeting with the NYS Governor's Traffic Safety Committee on grants for child passenger safety, seat belt and step up enforcement.

CPO assisted by instructing a basic juvenile class at the Westchester County Police academy. Certifying 46 new officers on the topic of juvenile justice.

CPO performed two read to me sessions at the Concord Road Elementary School for a 3rd grade class.

CPO attended the Pioneer Game for life skilled students at the Ardsley High School and donated snacks to the students participating from both Ardsley and Portchester High Schools.

Community Information

Residents are encouraged to visit the village website under the police banner; we have several known scams listed. Educating yourself on these scams can prevent you from becoming a victim.

Click [HERE](#) for March 2023 Monthly Statistics Report, Blotter Report & Press Report.

5. BUILDING

5.a March 2023 Building Department Report.

Building Inspector Larry Tomasso provided the board with the following financial report:

- 12 Building permits
- 16 Application fees
- 8 Certificates of Occupancy
- 6 Plumbing permits
- 11 Electrical permits
- 6 Title Searches
- 0 Miscellaneous

Total received - **\$8,256.25**

Other activities:

87 Building inspections

28 Zoning inspections

3 Fire Inspections

12 Violations

2 Warnings

0 Appearance Tickets

Mr. Tomasso noted that the department is approximately \$43,000 over budget for the fiscal year to date.

Mr. Tomasso updated the Board on the following projects in the Village:

- Getty Gas Station- We are waiting for them to go in front of the Board of Architectural Review.
- 3 American Legion has been moving very slow and they are working on the addition in the rear of the building.
- 701 Saw Mill River Rd. the owners are looking to demolish the building and build a 4 story building with commercial on the first floor. There will be approximately 20 apartments.
- 800 Saw Mill River Rd. Day Day Spa, Thai Restaurant and Dry Cleaner are all open. The Ramen Noodle Restaurant is still pending.
- 774 Saw Mill River Rd. Architect is revising the facade of the building and will report back to the Planning Board. This building will have 9 apartments, 4 story building.
- Chase building- The plan is to renovate the existing building into medical offices.
- 13 Lot subdivision-Cross Road is still stalled.
- Subdivision on Ridge Road-There were issues with the sewer so they will have to report back to the Planning Board next month.
- Fairmont-We are still waiting for the developer to finish the road work this summer.
- 2 new houses are almost complete on 33 Judson and 13 Dellwood.
- Planning Board recently approved 182 Heatherdell and we should see plans for this location soon.
- 3 lot subdivision was approved on 26 Lincoln. We should see some applications coming in soon for this location.
- 7 Dellwood-Received an application for a tear down.
- Spring enforcement in the commercial district will be focused on building facades, planting areas, and signage in the downtown district.

6. HIGHWAY DEPARTMENT

6.a Highway Foreman, David DiGregorio reported on the following:

- Curb contractor is working on Euclid Ave. and they replaced 6 catch basins.
- There will be some restoration on Lincoln Ave.
- Doing work at Pascone Park.
- Did work on Heatherdell Rd. and would like to plant 3 or 4 trees on the right side of the road.
- Did work at McDowell Park, cleaned up the parking lot and back area. Looking for recommendation on what we can do in the back parking lot.
- Will be doing some drainage work at Pascone Park.
- Planting will be starting soon throughout the Village.

8. MAYOR'S ANNOUNCEMENTS

8.1 Mayor Kaboolian announced the following:

- Attended the Fireman's Installation Dinner.
- Attended the Little League Parade on Saturday
- Stopped by the Stormwater compost project.
- Our Holi event will take place on Sunday, April 23rd at Pascone Park from 10am - 2 pm.

9. COMMITTEE & BOARD REPORTS

9.1 Trustee DiJusto announce the following:

- Attended the Little League Parade.
- Saturday, April 22nd is Saw Mill River Cleanup at 10 am

Trustee Weitz did not have anything to report.

Trustee Bencosme announced the following:

- Saturday, April 22nd is Earth day
- Westchester County is offering tours of CompostEd beginning at 10am on Sunday, April 23rd. Participants can expect to learn about the benefits of organics recycling, the science behind composting, and how residents can participate in organics diversion programs in Westchester County and compost at home! Tours offer a hands-on immersive experience that is fun, educational and sure to leave participants thinking more about composting.

10. VISITORS

11. OLD BUSINESS:

11.1 Consider a Resolution to Adopt the 2023-2024 Village Budget

Moved by Trustee Bencosme Seconded by Trustee Weitz and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby adopts the 2023-2024 Village Budget, effective June 1, 2023 through May 31, 2024 which includes various adjustments from the 2023-2024 Tentative Budget as directed by the Board of Trustees in accordance with the Budget Work Sessions held on March 22, 2023 and March 27, 2023.

Carried by the following votes: 4-0-0

Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme

Nays: None

Abstained: None

12. NEW BUSINESS:

- 12.1 Consider a Resolution to Schedule a Public Hearing Amending Chapter 18 Section 18-15 Entitled "Code of Ethics" of the Ardsley Village Code

Moved by Trustee Weitz, Seconded by Trustee Bencosme and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby schedules a public hearing on Monday, May 1, 2023 at 8:00 p.m. or soon thereafter to discuss amending Chapter 18 Section 18-15 entitled "Code of Ethics" of the Ardsley Village code as follows:

New text is in **bold underline** and deleted text is in **highlighted strikethrough**

§ 18-15 Political solicitations.

A. No municipal officer or employee shall directly or indirectly compel or induce a subordinate municipal officer or employee to make, or promise to make, any political contribution, whether by gift of money, service or other thing of value.

B. No municipal officer or employee may act or decline to act in relation to appointing, hiring or promoting, discharging, disciplining, or in any manner changing the official rank, status or compensation of any municipal officer or employee, or an applicant for a position as a municipal officer or employee, on the basis of the giving or withholding or neglecting to make any contribution of money or service or any other valuable thing for any political purpose.

C. Notwithstanding any other provision of this chapter, members of the Village Board of Trustees and all paid Village employees, including the Village Attorney, are prohibited from serving as a chairperson, district leader or officer for any partisan political party which engages in political campaigning or electioneering within the Village.

Carried by the following votes: 3-0-1
Ayes: Mayor Kaboolian, Trustee Weitz, Trustee Bencosme
Nays: None
Abstained: Trustee DiJusto

12.2 Consider a Resolution Authorizing the Village Treasurer to Close Out Various Completed Capital Fund Projects

Moved by Trustee Bencosme, Seconded by Trustee DiJusto and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Treasurer to close various completed project accounts in the Capital Fund in the amount of \$56,582 and transfer to the debt service reserve:

Pickup Truck 2017/2018	\$13,347
Dump Truck 2017/2018	\$2,313
Tennis Court-Pascone Park	\$30,239
Highway Mack/Leach Packer #14	\$5,871
Flood Control	\$2,450
Livescan	\$1,901
John Deere Tractor	\$461

Carried by the following votes: 4-0-0
Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme
Nays: None
Abstained: None

12.3 Consider a Resolution Authorizing the Village Treasurer to Make a Necessary Transfer Between Capital Fund Projects

Moved by Trustee DiJusto, Seconded by Trustee Weitz and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Treasurer to transfer \$3,475 from the Drum Roller Project to the Landscape Trailer Project to cover additional costs.

Carried by the following votes: 4-0-0
Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme
Nays: None
Abstained: None

12.4 Consider a Resolution to Modify the 2022-2023 Village Budget

Moved by Trustee Weitz, Seconded by Trustee DiJusto and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Treasurer to modify the 2022-2023 Village Budget by increasing appropriation budget line A9512-0901 Transfer out- Trust & Agency, \$10,000 and increasing appropriated fund balance A599 \$10,000 to allow for the transfer of grant funds.

Carried by the following votes: 4-0-0

Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme

Nays: None

Abstained: None

13. CORRESPONDENCE

14. CALL FOR EXECUTIVE SESSION-PERSONNEL MATTERS

15. ADJOURNMENT OF MEETING

15.1 Adjournment

Moved by Trustee DiJusto, Seconded by Trustee Weitz and passed unanimously.

RESOLVED, that the Village Board of the Village of Ardsley Hereby adjourns the regular meeting of Monday, April 17, 2023 at 9:12 p.m.

Carried by the following votes: 4-0-0

Ayes: Mayor Kaboolian, Trustee DiJusto, Trustee Weitz, Trustee Bencosme

Nays: None

Abstained: None

16. UPCOMING MEETINGS & EVENTS

- 4/18/23 Board of Architectural Review Meeting 8:00 pm
- 4/19/23 Homework Helpers 3:00 pm
- 4/19/23 Senior Citizen Movie Matinee 3:00 pm
- 4/20/23 Senior Strength Training 10:00 am
- 4/21/23 Middle School Hangout 3:00 pm
- 4/22/23 Earth Day!
- 4/22/23 DEA Prescription Drug Take Back Day 10:00 am
- 4/22/23 Great Saw Mill River Cleanup! 10:00 am
- 4/23/23 MDI Holi Event! 10:00am-2:00pm
- 4/26/23 Homework Helpers 3:00 pm
- 4/26/23 Senior Citizen Flower Making 12:00 pm

- 4/26/23 Zoning Board Meeting 8:00 pm
- 4/27/23 Senior Strength Training 10:00 am
- 4/27/23 Library Board Meeting 7:30 pm
- 4/28/23 Middle School Hangout 3:00 pm
- 4/29/23 MidCentury Melodies 6:00 pm

17. NEXT BOARD MEETING:

- May 1st Board of Trustees Regular Meeting
- May 10th Board of Trustees Work Session

Village Clerk, Ann Marie Rocco

Date:



Village of Ardsley

New Department of Public Works Building

EXECUTIVE SUMMARY

APRIL 17, 2023



PROJECT OVERVIEW

Village of Ardsley Financial Status at a Glance:

Original Contract:

Contract	Contractor	Contract Value
General Construction	APS Contracting, Inc.	\$14,637,000
Electrical Contractor	RLJ Electric Corporation	\$1,359,000
HVAC Contractor	Carey and Walsh, Inc.	\$853,654
Plumbing Contractor	L. J. Coppola Inc.	\$758,500
Fire protection Contractor	SRI Fire sprinkler LLC.	\$230,000
Total Original Contract values		\$17,838,154

Approved Change Order Log:

APS Contracting, Inc.

CO #1	Water Main Insert Valve	12/27/2023	\$48,683.90
CO #2	Extending Retaining wall & Asphalt (Pending)	3/10/2023	\$78,750.00

Potential Change Order Log:

APS Contracting, Inc.

COR #1	Water Main Changes	Rejected	11/22/2022	\$16,832.73
COR #2	Water Main Insert Valve	Accepted	12/27/2022	\$48,683.90
COR #3	Rock Removal	Rejected	12/30/2022	\$41,637.75
COR #4	Footing Excavation/Unsuitable Soil	Pending	1/30/2023	\$3,259.95
COR #5	Extending Retaining wall/Asphalt	Pending	3/10/2023	\$78,750.00
COR #6	Drainpipe Vehicle Wash	Pending	4/12/2023	\$10,159.46
Total				\$199,323.79

Amount Contractors are Paid to Date: 2/28/23.

Contractor	Contract Value	Paid to date	Remaining Contract Value
APS Contracting GC	\$14,637,000	\$3,937,049.37	\$10,699,950.63
LJ Coppola PC	\$758,000	\$190,000.00	\$568,000.00
SRI Sprinkler FSC	\$230,000	\$23,916.25	\$206,083.75
Carey & Walsh MC	\$853,654	\$43,201.25	\$810,452.75
RLJ Electric EC	\$1,359,000	\$211,137.00	\$1,147,863.00



PROJECT OVERVIEW

Summary of Work on Site:

Timeline	Start of work	Finish of work
Ground Breaking	7/26/22	
Installaion of SWPP	8/9/22	8/10/22
Remove trees and stumps/strip top soil	9/7/22	9/20/22
Install storm water detention system	9/28/22	10/11/22
Installation of conduit for Greenburgh services	9/27/22	2/27/23
Catch Basin/ storm water systems installation	10/3/22	12/28/22
8" water service from Greenburgh	10/28/22	4/10/23
Set electricians underground structures DB-9 Box	11/3/22	11/3/22
Footing excavation begins	12/27/22	2/28/23
Footing installation begins	12/28/22	3/23/23
First concrete pour for footings	1/3/23	3/23/23
Foundation installaion begins	2/1/23	4/10/23
Retaining wall section "1" installation	2/1/23	2/8/23
WCDH mandated valve insertion 8" water service	2/9/23	2/9/23
Exterior Sanitary Sewer installaion	2/27/23	4/12/23
Con – ed T-Tap Installation (electrician)	2/27/23	2/27/23
Section "3" of the retaining wall installed	3/3/23	3/6/23
Damp proof and foundation insulation	3/16/23	4/13/23

APS Contracting: General Contractor

APS contracting started work on site on August 9 2022. Tree removal, site grading, installation of the SWPP, 8" water service, and the storm water system including the storm water retention system has been completed.

APS Contracting started digging footings on December 27, 2022 and finished the last pour of the foundation walls on April 10, 2023. The foundation interior backfill was completed on April 13, 2023.

L.J Coppola: Plumbing Contractor

L.J Coppola has completed the submittal process and their part of the coordination of the plumbing systems in the building. Calgi Construction recommended payment to L.J Coppola for stored material which they have received and are storing in their warehouse. Interior fixtures, faucets, drains, trench drains, and the compressor have been received by LJ Coppola.

L.J Coppola is scheduled to start work on site on Monday April 17, 2023 and will start the installation of the underslab plumbing and drains.



PROJECT OVERVIEW

SRI Sprinkler; Fire Protection Contractor

SRI has completed the submittal process and their part of the coordination drawings. SRI are not expected to be on site until the building is erected.

Carey & Walsh: Mechanical Contractor.

Carey & Walsh have completed the submittal and shop drawing process and are currently working on the building coordination drawings. Carey & Walsh are not expected to be on site until the building is erected.

RLJ Electric: Electrical Contractor

RLJ has completed the submittal process and is in possession of the of the coordination drawings for the underslab utilities. They have completed 68% of the site utility conduit installation, including the underground service conduit to the Greenburgh site. RLJ has been coordinating with Con-ed and have received and installed the T-Tap box and the transformer.

RLJ has not been able to transfer the overhead utility services for Greenburgh to the new underground conduit. If they do not have the utility poles removed before May 31, 2023, there is a potential that the project could be delayed further.

Owners Consultants:

Special Testing Laboratories, INC.: STL has been on site to evaluate compaction of soils, witness & sample concrete pours, observe and report on the SWPPP. STL also observed and reported on proof rolling of the sub-base in the courtyard and driveways.

As of February 2023, the Village of Ardsley has paid STL \$20,854.33. We have a budget line item of \$80,000 for special material testing, leaving a balance of \$59,145.67.

Looking Ahead:

The plumbing contractor is expected to start the under-slab plumbing inside the building on April 17, 2023. The electrician is expected to start their under-slab conduit runs April 24, 2023. Once their systems are completed and inspected the mason will remobilize on site and start to prepare and pour the concrete floors. The mason is expected to be back on site the first week of May. The Premanufactured building is expected to start arriving on May 17, 2023, and assembly of the steel frame is expected to start May 31, 2023.



CONSTRUCTION MANAGEMENT
OWNER'S REPRESENTATIVE
CONSULTING
GENERAL CONTRACTING

CALGI CONSTRUCTION COMPANY, INC.
56 Lafayette Avenue, Suite 350
White Plains, NY 10603
TEL: 914-682-9423
FAX: 914-682-9420
E-MAIL: alaidlaw@calgiconstruction.com

CHANGE ORDER LOG SUMMARY

Village of Ardsley Department of Public works

Project: Village of Ardsley Department of Public works

Change Order Log Summary Revision Date: April 13 2023

Original Contract Sum All Prime Contractors - Total Base Bids and Alternates	\$17,838,154.00
Approved Change Orders All Prime Contractors	\$48,683.90
Total Base Bids and Alternates + Approved CO's All Prime Contractors	\$17,886,837.90
New CO's Pending Approval All Prime Contractors	\$78,750.00
New Contract Sum including New CO's Pending Approval All Prime Contractors	\$17,965,587.90
Pending COR's Amount All Prime Contractors	\$92,169.41
Total Contract Plus Pending CO's All Prime Contractors	\$18,057,757.31
Project Contingency	\$1,300,000.00
Remaining Project Contingency	\$1,172,566.10

1	2		3	4	5	6	7	8	9
			COLUMN 6 + 7 + 8						COLUMN (3 + 4) / 2
Contract	Contract Amount Base Bid	Contract Amount with CO's	Approved CO's to Date	New CO's Pending Approval	Pending COR's Amount	Approved CO's Generated by Owner	Approved CO's Generated by Field Condition	Approved CO's Generated by Design Consultant	% of Approved CO's against Original Contract Sum
GCC General Construction - APS	\$14,637,000.00	\$14,685,683.90	\$48,683.90	\$78,750.00	\$92,169.41	\$0.00	\$48,683.90	\$0.00	0.87%
PC Plumbing Contruction- LJ Cappola	\$758,500.00	\$758,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FSC Fire Protection Systems - SRI	\$230,000.00	\$230,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
MC - Mechanical Construction - Carey and Walsh	\$853,654.00	\$853,654.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
EC - Electrical Construction - RLJ	\$1,359,000.00	\$1,359,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
TOTALS	\$17,838,154.00	\$17,886,837.90	\$48,683.90	\$78,750.00	\$92,169.41	\$0.00	\$48,683.90	\$0.00	0.71%

NOTES:
CO = Change Order
COR = Change Order Request



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CHANGE ORDER LOG

Project: New Public Works and Parks Garage Facility
APS Contracting Inc - Contract No. 1 General Construction

Client: Village of Ardsley

Change Order Log Summary Revision Date: April 13 2023

Change Order Log Revision Date: April 13 2023

Original Contract Sum - Total Base Bids and Alternates	\$14,637,000.00
Previously Authorized Change Orders	\$48,683.90
Contract Sum to Date	\$14,685,683.90
New Change Orders	\$78,750.00
New Contract Sum including Change Orders to Date	\$14,764,433.90
Pending COR Amount	\$92,169.41
Total Contract Plus Pending	\$14,856,603.31
% of Approved CO's against Original Contract Sum	0.87%

Unimak CONSTRUCTION COMPANY, LLC - CONTRACT NO. 1 GENERAL CONSTRUCTION

PRIME COR#	DESCRIPTION	DATE COR RECEIVED	COR AMOUNT	COR STATUS	PENDING COR AMOUNT	APPROVED AMOUNT	SOURCE OF REQUEST			OWNER CHANGE ORDER #	AUTHORIZED CHANGE ORDERS		REMARKS
							OWNER	FIELD	DESIGN CONSULTANTS		PREVIOUS	NEW	
1	Water main changes	11/22/22	\$16,832.73	Rejected									Rejected
2	12" & 6" Water Main Valve Inserts	12/27/22	\$48,683.90	Approved		\$48,683.90		\$48,683.90		CO#1	\$48,683.90		Approved
3	Rock Removal	12/30/22	\$41,637.75	Rejected									Rejected
4	Footing Excavation	1/30/23	\$3,259.95	Revise	\$3,259.95								Under review
5	Extending Retaining Wall & Asphalt Pavement	3/10/23	\$78,750.00	Processed	\$78,750.00					CO#2		\$78,750.00	Processed
6	Drain Pipe Under Vehicle Maintenance Area	4/12/23	\$10,159.46	Review	\$10,159.46								Under review
TOTALS													
			\$182,491.06		\$92,169.41	\$48,683.90	\$0.00	\$48,683.90	\$0.00		\$48,683.90	\$78,750.00	

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CHANGE ORDER LOG

Project: Village of Ardsley Department of Public Works
L.J Cappola, Inc. - Contract No. 2 Plumbing

Client: Village of Ardsley

Change Order Log Summary Revision Date: April 13 2023

Change Order Log Revision Date: April 13 2023

Original Contract Sum - Total Base Bids and Alternates	\$758,500.00
Previously Authorized Change Orders	\$0.00
Contract Sum to Date	\$758,500.00
New Change Orders	\$0.00
New Contract Sum including Change Orders to Date	\$758,500.00
Pending COR Amount	\$0.00
Total Contract Plus Pending	\$758,500.00
% of Approved CO's against Original Contract Sum	0.00%

MENGLER MECHANICAL, INC. - CONTRACT NO. 2 PLUMBING

PRIME COR #	DESCRIPTION	DATE COR RECEIVED	COR AMOUNT	COR STATUS	PENDING COR AMOUNT	APPROVED AMOUNT	SOURCE OF REQUEST			OWNER CHANGE ORDER #	AUTHORIZED CHANGE ORDERS		REMARKS
							OWNER	FIELD	DESIGN CONSULTANTS		PREVIOUS	NEW	
	TOTALS		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	



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CHANGE ORDER LOG

Project: Village of Ardsley Department of Public Works
SRI Fire Sprinkler - Contract No. 5 Fire protection

Client: Village of Ardsley

Change Order Log Summary Revision Date: April 13 2023

Change Order Log Revision Date: April 13 2023

Original Contract Sum - Total Base Bids and Alternates	\$230,000.00
Previously Authorized Change Orders	\$0.00
Contract Sum to Date	\$230,000.00
New Change Orders	\$0.00
New Contract Sum including Change Orders to Date	\$230,000.00
Pending COR Amount	\$0.00
Total Contract Plus Pending	\$230,000.00
% of Approved CO's against Original Contract Sum	0.00%

FOREMOST ELECTRIC CORPORATION - CONTRACT NO. 4 ELECTRICAL

PRIME COR #	DESCRIPTION	DATE COR RECEIVED	COR AMOUNT	COR STATUS	PENDING COR AMOUNT	APPROVED AMOUNT	SOURCE OF REQUEST			OWNER CHANGE ORDER #	AUTHORIZED CHANGE ORDERS		REMARKS
							OWNER	FIELD	DESIGN CONSULTANTS		PREVIOUS	NEW	
	TOTALS		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	



CONSTRUCTION MANAGEMENT
OWNER'S REPRESENTATIVE
CONSULTING
GENERAL CONTRACTING

CALGI CONSTRUCTION COMPANY, INC.
56 Lafayette Avenue, Suite 350
White Plains, NY 10603
TEL: 914-682-9423
FAX: 914-682-9420
E-MAIL: alaidlaw@calgiconstruction.com
www.calgiconstruction.com

CHANGE ORDER LOG

Project: Village of Ardsley Department of Public Works
Carey and Walsh Inc. - Contract No. 4 Mechanical (HVAC)

Client: Village of Ardsley

Change Order Log Summary Revision Date: April 13 2023

Change Order Log Revision Date: April 13 2023

Original Contract Sum - Total Base Bids and Alternates	\$853,654.00
Previously Authorized Change Orders	\$0.00
Contract Sum to Date	\$853,654.00
New Change Orders	\$0.00
New Contract Sum including Change Orders to Date	\$853,654.00
Pending COR Amount	\$0.00
Total Contract Plus Pending	\$853,654.00
% of Approved CO's against Original Contract Sum	0.00%

VAMCO SHEET METAL, INC. - CONTRACT NO. 3 MECHANICAL (HVAC)

PRIME COR #	DESCRIPTION	DATE COR RECEIVED	COR AMOUNT	COR STATUS	PENDING COR AMOUNT	APPROVED AMOUNT	SOURCE OF REQUEST			OWNER CHANGE ORDER #	AUTHORIZED CHANGE ORDERS		REMARKS
							OWNER	FIELD	DESIGN CONSULTANTS		PREVIOUS	NEW	
	TOTALS		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	

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CONSTRUCTION MANAGEMENT
OWNER'S REPRESENTATIVE
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CHANGE ORDER LOG

Project: Village of Ardsley Department of Public Works
RLJ Electric Corporation - Contract No. 5 Electrical

Client: Village of Ardsley

Change Order Log Summary Revision Date: April 13 2023

Change Order Log Revision Date: April 13 2023

Original Contract Sum - Total Base Bids and Alternates	\$1,359,000.00
Previously Authorized Change Orders	\$0.00
Contract Sum to Date	\$1,359,000.00
New Change Orders	\$0.00
New Contract Sum including Change Orders to Date	\$1,359,000.00
Pending COR Amount	\$0.00
Total Contract Plus Pending	\$1,359,000.00
% of Approved CO's against Original Contract Sum	0.00%

FOREMOST ELECTRIC CORPORATION - CONTRACT NO. 4 ELECTRICAL

PRIME COR #	DESCRIPTION	DATE COR RECEIVED	COR AMOUNT	COR STATUS	PENDING COR AMOUNT	APPROVED AMOUNT	SOURCE OF REQUEST			OWNER CHANGE ORDER #	AUTHORIZED CHANGE ORDERS		REMARKS
							OWNER	FIELD	DESIGN CONSULTANTS		PREVIOUS	NEW	
	TOTALS		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	



CONSTRUCTION MANAGEMENT
 OWNER'S REPRESENTATIVE
 CONSULTING
 GENERAL CONTRACTING

Village of Ardsley Department of Public Works Facility

Prime Contractor Application for Payment Summary

Date 4/13/2023

APS Contracting GC Original Contract Sum: \$14,637,000

AFP #	Period To	C.O.'s This Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Application Payment	Total Earned Less Retainage	Percent Complete
1	8/31/2023	\$ -	\$ 14,637,000.00	\$ 545,000.00	\$ 27,250.00	\$ 517,750.00	\$ 517,750.00	3.72%
2	9/30/2023		\$ 14,637,000.00	\$ 1,307,250.00	\$ 65,362.50	\$ 724,137.50	\$ 1,241,887.50	9%
3	10/30/2023		\$ 14,637,000.00	\$ 1,490,750.00	\$ 74,537.50	\$ 174,325.00	\$ 1,416,212.50	10%
4	11/30/2023		\$ 14,637,000.00	\$ 1,915,150.00	\$ 95,757.50	\$ 403,180.00	\$ 1,819,392.50	13%
5	12/31/2023		\$ 14,637,000.00	\$ 2,692,050.00	\$ 134,602.50	\$ 738,055.00	\$ 2,557,447.50	18%
6	1/31/2023		\$ 14,637,000.00	\$ 3,706,825.00	\$ 185,341.25	\$ 964,036.25	\$ 3,521,483.75	25%
7	2/28/2023		\$ 14,637,000.00	\$ 4,144,262.50	\$ 207,213.13	\$ 415,565.62	\$ 3,937,049.37	28%

LJ Coppola PC Original Contract Sum: \$758,500

AFP #	Period To	C.O.'s This Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Application Payment	Total Earned Less Retainage	Percent Complete
1	8/31/2022	\$ -	\$ 758,500.00	\$ 29,000.00	\$ 1,450.00	\$ 27,550.00	\$ 27,550.00	4%
2	11/9/2022		\$ 758,500.00	\$ 36,000.00	\$ 1,800.00	\$ 6,650.00	\$ 34,200.00	5%
3	3/31/2023		\$ 758,500.00	\$ 200,000.00	\$ 10,000.00	\$ 155,800.00	\$ 190,000.00	26%

SRI Fire Sprinkler FSC Original Contract Sum: \$230,000

AFP #	Period To	C.O.'s This Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Application Payment	Total Earned Less Retainage	Percent Complete
1	8/31/2022	\$ -	\$ 230,000.00	\$ 6,700.00	\$ 335.00	\$6,365.00	\$6,365.00	2.91%
2	9/30/2022		\$ 230,000.00	\$ 24,300.00	\$ 1,215.00	\$16,720.00	\$23,085.00	11%
3	2/28/2023		\$ 23,000.00	\$ 25,175.00	\$ 1,258.00	\$831.25	\$23,916.25	11%



CONSTRUCTION MANAGEMENT
OWNER'S REPRESENTATIVE
CONSULTING
GENERAL CONTRACTING

Carey & Walsh MC Original Contract Sum: \$853,654

AFP #	Period To	C.O.'s This Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Application Payment	Total Earned Less Retainage	Percent Complete
1	2/2/2023	\$ -	\$ 853,654.00	\$ 9,500.00	\$ 475.00	\$ 9,025.00	\$ 9,025.00	1%
2	2/28/2023		\$ 853,654.00	\$ 45,475.00	\$ 2,273.75	\$ 34,761.25	\$ 43,201.25	5%
3	3/31/2023		\$ 853,654.00	\$ 54,075.00	\$ 2,703.75	\$ 8,170.00	\$ 53,171.25	6%

RLJ Electric EC Original Contract Sum: \$1,359,000

AFP #	Period To	C.O.'s this Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Application Payment	Total Earned Less Retainage	Percent Complete
1	1/27/2023	\$ -	\$ 1,359,000.00	\$ 222,250.00	\$ 11,113.00	\$ 211,137.00	\$ 211,137.00	16%
2	3/31/2023		\$ 1,359,000.00	\$ 321,850.00	\$ 16,093.00	\$ 94,620.00	\$ 305,757.00	24%

Combined Totals Original Total Contract Sum: \$17,838,154

AFP #	Period To	C.O.'s This Period	Contract Sum to Date	Total Completed & Stored	Total Retainage	Previous App. Payment	Total Earned Less Retainage	Percent Complete
1	3/31/2023	\$ -	\$ 17,838,154.00	\$ 4,745,362.50	\$ 237,267.88		\$ 4,509,893.87	25.28%

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ABSTRACT FOR VILLAGE BOARD MEETING OF MAY 1st, 2023

GENERAL FUND \$104,952.63

TRUST & AGENCY FUND \$0.00

CAPITAL FUND \$103,538.23

SEWER FUND \$0.00

Date	Vendor Name	Description	Amount
4/20/2023	VINCENT GIORDANO	Service for 4-3 to 4-14	\$618.00
4/20/2023	ALFREDO DIVITTO	Service for 4-3 to 4-14	<u>\$463.50</u>
		Building Dept. Subtotal	\$1,081.50
4/24/2023	Catherine Castillo	senior painting 4/12	\$540.00
4/24/2023	NICHOLAS MARANINO	senior supplies	\$30.56
4/24/2023	NICHOLAS MARANINO	Senior supplies	\$31.00
4/24/2023	SIGNARAMA	5K banners	\$560.00
4/24/2023	SIGNARAMA	Food Truck Banner	\$450.00
4/24/2023	FURQUAN TANWIR	winter beginner/novice chess	\$1,600.00
4/19/2023	Veolia Water NY Inc-VWW-RD1	Usage for 3-6 to 4-3	\$193.72
4/20/2023	CON EDISON	Usage for 3-13 to 4-11	\$468.68
4/24/2023	MATELLI BROS ELEC INC	comm center outlets	\$186.00
4/24/2023	MATELLI BROS ELEC INC	comm center outlets	\$184.00

4/24/2023	READERS HARDWARE INC	toilet parts comm center	\$63.16
4/24/2023	BRUNI & CAMPISI INC	Comm Center AC unit	\$1,106.25
4/24/2023	BRUNI & CAMPISI INC	Comm Center AC unit	\$320.00
4/21/2023	ALARM SPECIALISTS INC	Monitoring for 2-12 to 5-11	\$89.85
4/21/2023	Quench USA, Inc	Service for 2-1 to 4-30	<u>\$117.00</u>
		Community Center Subtotal	\$5,940.22
4/24/2023	ELECTRONIC SERVICE SOLUTIONS	ESS-RADIOS	\$150.00
4/24/2023	AAA EMERGENCY SUPPLY CO	AAA-GLOVES	\$79.95
4/24/2023	AAA EMERGENCY SUPPLY CO	AAA-SUPPLIES	\$460.19
4/24/2023	MES	MES-GEAR	\$9,812.46
4/24/2023	MES	MES-TOOLS	\$755.11
4/24/2023	MES	MES-TOOLS	\$57.37
4/24/2023	MES	MES-BOOTS	\$479.00
4/24/2023	AAA EMERGENCY SUPPLY CO	AAA-BADGES	\$787.80
4/24/2023	SCHUFIRE LLC	WATERWAY-PUMP TESTING	\$1,035.00
3/2/2023	DELL MARKETING L.P.	Fire Dept. Computer Upgrade	\$554.25
3/2/2023	DELL MARKETING L.P.	Fire Dept. Computer Upgrade	\$1,914.00
4/24/2023	A1 COMPUTER SERVICES INC.	A1CS-PCS	\$875.00
4/24/2023	TOLLS BY MAIL PAYMENT CENTER	TOLLS	\$10.08
4/20/2023	CON EDISON	Usage for 3-13 to 4-11	\$1,498.84
4/27/2023	VERIZON	Usage for 4-22 to 5-21	\$37.77
4/24/2023	CLEAN AIR CO INC	CLEAN AIR	\$281.11
4/24/2023	D.P. WOLFF INC	DP WOLFF-MAINTENANCE	\$700.36
4/24/2023	PARTNERS IN SAFETY INC	PARTNERS IN SAFETY-PHYSICALS	\$4,729.00
4/24/2023	AAA EMERGENCY SUPPLY CO	AAA-FIT TEST	\$51.00
4/24/2023	PARTNERS IN SAFETY INC	PARTNERS IN SAFETY-PHYSICAL	\$249.00
4/24/2023	PARTNERS IN SAFETY INC	PARTNERS IN SAFETY-PHYSICAL	\$287.00
4/24/2023	PARTNERS IN SAFETY INC	PARTNERS IN SAFETY-PHYSICALS	\$211.00
4/24/2023	TIMOTHY DUFFY	TIM DUFFY-TRAINING	<u>\$300.00</u>
		Fire Dept. Subtotal	\$25,315.29
4/24/2023	ARGENTO AND SONS INC	head/cover/plug/element	\$381.09
4/24/2023	NATIONAL GEAR & PISTON	oil/def fluid	\$1,294.30
4/24/2023	AIRGAS	propane fill	\$61.56
4/20/2023	CON EDISON	Usage for 3-13 to 4-11	\$1,213.40
4/21/2023	PARKWAY PEST SERVICES	April Pest Service	\$150.00
4/24/2023	WALLAUER	paint strainer	\$4.74
4/24/2023	WALLAUER	paint/roller/brush	\$278.52

4/24/2023	D.S. TOOL CO.	U.S flags	\$315.00
4/24/2023	CENTRAL TURF & IRRIGATION	pipe/coupler/clamp	\$17.60
4/24/2023	CASA BLDG MATERIALS	concrete	\$61.20
4/24/2023	CASA BLDG MATERIALS	sand/gravel/cement	\$182.60
4/24/2023	CASA BLDG MATERIALS	cement	\$13.15
4/24/2023	READERS HARDWARE INC	Door stop, Hing	\$121.68
4/24/2023	READERS HARDWARE INC	Tape, Liners	\$19.78
4/24/2023	RCA ASPHALT LLC	Asphalt	\$384.78
4/24/2023	RCA ASPHALT LLC	Asphalt	\$401.94
4/25/2023	PRO ASPHALT LLC	Winter Mix	\$380.40
4/25/2023	PRO ASPHALT LLC	Winter Mix	\$261.60
4/24/2023	MATELLI BROS ELEC INC	Street Light Repair	\$1,429.00
4/25/2023	WESTCHESTER COUNTY DEF	March Tipping Fee	\$5,266.26
4/24/2023	SAW MILL STONE & MASONRY SUPPLY	mulch hay	\$94.95
4/24/2023	SAW MILL STONE & MASONRY SUPPLY	fabric/staples	\$148.50
4/24/2023	SAW MILL STONE & MASONRY SUPPLY	sand	\$222.00
4/24/2023	PROSPERO NURSERY	topsoil/straw mulch	\$122.20
4/24/2023	PAUL BUNYAN TREE SERVICE	tree removal	<u>\$1,750.00</u>
		Highway Dept. Subtotal	\$14,576.25
4/18/2023	Cardmember Service	Food for Meeting	\$30.44
4/25/2023	OPTIMUM	Usage for 4-23 to 5-22	\$16.84
4/25/2023	VERIZON WIRELESS	Usage for 3-13 to 4-12	\$428.96
4/27/2023	VERIZON	Usage for 4-22 to 5-21	\$40.42
3/23/2023	City of New Rochelle	PO Pina transfer	\$14,874.24
4/24/2023	PMC Associates Wireless	Roof antenna car 94	\$268.52
4/21/2023	Quench USA, Inc	Service for 2-1 to 4-30	\$117.00
4/24/2023	Noble Cause Training	Training Sgt Pignatelli	\$195.00
4/27/2023	City of Newburgh	Training reimbursement	\$1,768.45
4/27/2023	Nicholas Guccione	Training reimbursement	<u>\$2,810.46</u>
		Police Dept. Subtotal	\$20,550.33
4/27/2023	WESTON & SAMPSON	Parking Deck Study	\$525.00
4/20/2023	STATE COMPTRROLLER	March Fines and Fees	\$26,807.00
4/24/2023	NYSCMA	NYSCMA for J. Cerretani	\$450.00
12/20/2022	ROBERT PONZINI	Legal Serv 1-1-23 to 5-31-23	\$6,128.75
4/20/2023	MURTAGH, COSSU, VENDITTI & CASTRO	Professional Service March	\$340.00
4/21/2023	Quench USA, Inc	Service for 2-1 to 4-30	\$117.00
4/20/2023	CON EDISON	Usage for 3-13 to 4-11	\$404.68

4/14/2023	OPTIMUM	Payment for 4-8 to 5-7	\$128.66
4/21/2023	Con Edison	Usage 3-15 to 4-13	\$65.63
4/20/2023	CON EDISON	Usage for 12-6 to 3-5	\$644.30
6/3/2022	GEORGE MALONE	Direct Public Govt. Access	\$831.52
4/25/2023	STANDARD INSURANCE COMPANY	April Premium	<u>\$1,046.50</u>
		Village Hall Subtotal	\$37,489.04
		General Fund Total	\$104,952.63
		Trust & Agency Total	\$0.00
4/20/2023	MURTAGH, COSSU, VENDITTI & CASTRO	Drainage Easements	\$140.00
4/20/2023	RLJ Electric Corporation	Electrical - New Hway Garage	\$94,620.00
4/20/2023	Carey & Walsh, Inc	New Highway Garage	\$8,170.00
4/21/2023	Con Edison	Usage 3-15 to 4-13	\$608.23
		New Highway Garage Project	\$103,538.23
		Capital Fund Total	\$103,538.23
		Sewer Fund Total	\$0.00

**RESOLUTION TO AMEND CHAPTER 18 SECTION 18-15
ENTITLED “CODE OF ETHICS” OF THE ARDSLEY VILLAGE CODE**

RESOLVED, that the Village Board of the Village of Ardsley hereby amends Chapter 18 Section 18-15 entitled “Code of Ethics” of the Ardsley Village Code as follows:

Chapter 18, Code of Ethics

New text is in **bold underline** and deleted text is in **highlighted strikethrough**

§ 18-15 Political solicitations.

- A. No municipal officer or employee shall directly or indirectly compel or induce a subordinate municipal officer or employee to make, or promise to make, any political contribution, whether by gift of money, service or other thing of value.
- B. No municipal officer or employee may act or decline to act in relation to appointing, hiring or promoting, discharging, disciplining, or in any manner changing the official rank, status or compensation of any municipal officer or employee, or an applicant for a position as a municipal officer or employee, on the basis of the giving or withholding or neglecting to make any contribution of money or service or any other valuable thing for any political purpose.
- C. Notwithstanding any other provision of this chapter, members of the Village Board of Trustees and all paid Village employees, including the Village Attorney, are prohibited from serving as a chairperson, district leader or officer for any partisan political party which engages in political campaigning or electioneering within the Village.**

**AUTHORIZING THE VILLAGE TREASURER TO INCLUDE CERTAIN
UNPAID WATER RENTS AND PENALTIES IN THE
2023-2024 ANNUAL TAX LEVY**

WHEREAS, certain sewer customer accounts currently have unpaid sewer rents and penalties, and

WHEREAS, Village Law §165-22 (f) provides for the inclusion of unpaid sewer rents and penalties in the annual tax levy;

NOW THEREFORE BE IT RESOLVED, the Village Board of the Village of Ardsley authorizes the Village Treasurer to include the following unpaid sewer rents and penalties on the 2023-2024 annual tax levy totaling \$ 44,321.50.

**RESOLUTION MODIFYING THE 2022/2023 BUDGET BY
ENABLING THE VILLAGE TREASURER TO MAKE NECESSARY
TRANSFERS WITHIN THE GENERAL FUND**

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Treasurer to modify the 2022/2023 Village Budget by transferring \$745.38 from the following.

FROM LINE ITEMS:

A-1230-0110-0000 Confidential Secretary \$745.38

TO LINE ITEMS:

A-1325-0137-0000 Accounts Payable Clerk \$745.38

**RESOLUTION AUTHORIZING THE VILLAGE BOARD OF
TRUSTEES TO APPROVE A SALARY ADJUSTMENT FOR THE
2022/2023 BUDGET FOR THE
INTERMEDIATE ACCOUNT CLERK**

WHEREAS, the Intermediate Account Clerk has assumed additional responsibilities since the resignation of the Confidential Secretary; and

WHEREAS, there are critical functions in the Manager's Office that must continue; and

NOW THEREFORE BE IT RESOLVED, that the Village Board of the Village Ardsley hereby authorizes a one-time salary adjustment for the Intermediate Account Clerk of \$876.92 for the remainder of the 2022/2023 fiscal year.

**RESOLUTION TO TEMPORARILY CLOSE COLONIAL COURT FOR
HARMONIES FOR HUMANITY**

RESOLVED, that the Village Board of the Village of Ardsley hereby approves the request to close Colonial Court (South) in the Village Green on Saturday, May 13, 2023 from 9:00 a.m. to 2:00 p.m. (rain date is May 20th at the same times) to enable the Ardsley High School Chapter of Amnesty International to hold its annual Harmonies for Humanity event.

Amnesty International
Ardsley High School Chapter
300 Farm Rd
Ardsley, NY 10502

April 21, 2023

Joseph L. Cerretani
Village Manager
Village of Ardsley
507 Ashford Avenue
Ardsley, NY 10502

Dear Mr. Cerretani:

It's been a few years, but once again, the Ardsley High School chapter of Amnesty International would like to hold our *Harmonies for Humanity* event in town. During this event, we display posters and petitions regarding various human rights violations around the world. We also have local musical groups perform to attract people to visit and read our information. In the past, the event has been a huge success, producing hundreds of signatures to stop human rights abuses.

We have scheduled this event for **Saturday, May 13, 2023 from 9:00 am to 2:00 pm (rain date is May 20th at the same times)**. I have attached the permission form of the landlord of the Village Green to use this space. We are now seeking the approval of the Ardsley Village Board of Trustees to close the area to traffic for the above date. We also ask for your assistance in contacting the Ardsley police department and other necessary parties to blockade the space and help direct traffic. In the past, we always had one police officer with us to assist with traffic and provide security for our event.

If you have any questions, I can be reached at 914-295-5902 or ekim@ardsleyschools.org.

Thank you very much for your support and help.

Sincerely,

Elizabeth Kim

Elizabeth M. Kim
Advisor of Ardsley High School's Chapter of Amnesty International
Teacher of Social Studies

**RESOLUTION AUTHORIZING THE VILLAGE MANAGER TO
EXECUTE AN AGREEMENT BETWEEN THE VILLAGE OF ARDSLEY
AND THE CABLE ACCESS DIRECTOR**

RESOLVED, that the Village Board of the Village of Ardsley hereby authorizes the Village Manager to execute an agreement between George A. Malone, Cable Access Director and the Village of Ardsley for cable access services for the period of June 1, 2023 through May 31, 2024.

CABLE ACCESS DIRECTOR AGREEMENT

This agreement made this 1st day of May, 2023 between the Village of Ardsley and George A. Malone, 10 Jefferson Place, White Plains, New York 10603-2908 hereinafter referred to as the Cable Access Director, and the Village of Ardsley.

CABLE ACCESS DIRECTOR SERVICES

1. Directs all public and government access cable programs, and is responsible for the operation of all phases of cable production including script, audio, lighting, cameras, sound, graphics and editing.
2. Oversees all phases of cable production for local access television.
3. Serves as Director, Producer, Editor and Camera Operator for on-air presentations and prepares tapes and broadcast.
4. Oversees Cable Access Editing and Broadcasts and is responsible for all equipment maintenance.
5. Develops and monitors budget and recommends cable equipment for purchase.
6. Works with Village to assist in the development of cable programs
7. Works with cable TV provider on technical problems related to access.
8. Works Monday evenings to cover Village Board of Trustees meetings and occasional other Village Meetings and/or events.

PAYMENT

In return for services provided by the Cable Access Director, the Village agrees to pay the Director a total amount not to exceed \$1,889.00 a month through May 31, 2024. This amount will be adjusted to increase on June 1, 2024 in the same annual percentage increase granted to all non-union managerial employees of the Village. The Village will remit payment within 30 days after the receipt of invoice.

TERM OF AGREEMENT

The terms of this agreement shall be from June 1, 2023 through May 31, 2024.

It is understood and agreed that this agreement constitutes the entire agreement between the parties, for the services described herein. It is understood by the parties that any changes of the foregoing provisions, must be in writing and signed by each of the parties hereto.

IN WITNESS WHEREOF, this agreement has been executed by the parties.

CABLE ACCESS DIRECTOR

VILLAGE OF ARDSLEY

By: _____
George A. Malone

By: _____
Joseph L. Cerretani

Date: _____

Date: _____

**RESOLUTION TO APPROVE WORK CHANGE ORDER NUMBER 2
FOR RETAINING WALL EXTENSION FOR
THE NEW HIGHWAY GARAGE**

WHEREAS, on June 6, 2022, the Village Board of the Village Ardsley unanimously approved a resolution to award a bid with alternates for the water installation for the new highway garage to APS Contracting Inc. located at 155-161 Pennsylvania Avenue, Paterson, NJ 07503 in the amount of \$14,637,000; and

WHEREAS, it has been determined that the revised site plan with the retaining wall extended would result in more usable space by increasing the paved footprint and thus providing invaluable special benefit to the Village; and

WHEREAS, the Engineer, Highway Foreman and Village Manager have reviewed and approved the work in the field;

NOW THEREFORE, BE IT RESOLVED, that the Village Board of the Village of Ardsley hereby approves work change order number 2 in the amount of \$78,750.00 related to the retaining wall extension installation.



Calgi Construction Company, Inc.
 56 Lafayette Ave Ste 350
 White Plains, New York 10603
 P: +19146829423

**Project: 1811-C Village of Ardsley Department of
 Public Works Facility**
 220 Heatherdell rd.
 Ardsley , New York 10502
 P: (914) 693-0117
 F: (914) 674-2588

Transmittal #12 - APS CO#2

To	David DiGregorio (Village of Ardsley) 507 Ashford Avenue Ardsley , New York 10502 Joseph Cerretani (Village of Ardsley) 507 Ashford Avenue Ardsley , New York 10502	From	Andrew Laidlaw (Calgi Construction Company, Inc.) 56 Lafayette Avenue, Suite 350 White Plains, New York
Date Created	Apr 18, 2023		
Copies To			
Transmit	Attached	Sent Via	Attached
Submitted For	Further Processing	Action As Noted	

Transmittal Items

Format	Description	Date	Copies
Document	1811 VOA APS CO#2 Retaining Wall Extension View	Apr 19, 2023	1

Comments

CHANGE ORDER
CONSTRUCTION MANAGER-ADVISOR EDITION
AIA DOCUMENT G701/CMa

OWNER
 CONSTRUCTION MANAGER
 ARCHITECT
 CONTRACTOR
 FIELD
 OTHER

(Instructions on reverse side)

PROJECT: New Department of Public Works facility
 (Name and address) Village Of Ardsley
 507 Ashford Avenue
 Ardsley, NY 10502

CHANGE ORDER NO.: APS 002
 INITIATION DATE: March 10, 2023
 PROJECT NOS.: 1811 - C
 CONTRACT FOR: CONTRACT NO. 001 GC
 CONTRACT DATE: Signed June 6, 2022

CONTRACTOR: APS Contracting, Inc.
 (Name and address) 155-161 Pennsylvania Avenue
 Patterson, NJ 07503

The contract is changed as follows:

Extending Retaining Wall Asphalt Pavement

Supply all materials and labor necessary to extend/install redi rock retaining wall and extend heavy duty asphalt pavement area as per attached drawings

\$78,750.00

TOTAL \$78,750.00

Not valid until signed by the Owner, Construction Manager, Architect and Contractor.

The original (Contract Sum) (Guaranteed-Maximum-Price) was.....	\$14,637,000.00
Net change by previously authorized Change Orders.....	\$-18,683.00
The (Contract Sum) (Guaranteed Maximum Price) prior to this Change Order was.....	\$14,685,683.00
The (Contract Sum) (Guaranteed-Maximum-Price) will be (increased) (decreased) (unchanged) by this Change Order.....	\$78,750.00
The new (Contract Sum) (Guaranteed-Maximum-Price) including this Change Order will be.....	\$14,764,433.00
The Contract Time will be (increased) (decreased) (unchanged) by.....	0 Day
The date of Substantial Completion as of the date of this Change Order therefore is.....	Unchanged

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

Calgi Construction Management
 CONSTRUCTION MANAGER
 56 Lafayette Avenue, White Plains, NY 10603
 ADDRESS
 BY Andrew Laidlaw, Project Manager DATE 4/12/2023

Weston & Sampson Engineers, Inc.
 ARCHITECT
 1 Winners Circle Albany N.Y. 12205
 ADDRESS
 BY Daniel Tenney III, Project Architect DATE 4/12/2023

APS Contracting, Inc.
 CONTRACTOR
 155-161 Pennsylvania Avenue Patterson, NJ 07503
 ADDRESS
 BY Dimitri Mitanov, Project Manager DATE 4/14/2023
 SVETOSLAR SAVRESKI, PRESIDENT

Village of Ardsley
 OWNER
 507 Ashford Avenue Ardsley, NY 10502
 ADDRESS
 BY David Digregorio, Superintendent DATE

AIA CAUTION: You should use an original AIA document which has this caution printed in red. An original assures that changes will not be obscured as may occur when documents are reproduced.



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G701/CMa-1992



PCO #005

APS Contracting, Inc.
155-161 Pennsylvania Avenue
Paterson, New Jersey 07503
Phone: +19737541980

Project: 135 - Village of Ardsley - New Public Works Facility
220 Heatherdell Road
Ardsley, New York 10502

Prime Contract Potential Change Order #005: Extending Retaining Wall Asphalt Pavement

TO:	Village of Ardsley 507 Ashford Avenue Ardsley, New York 10502	FROM:	APS Contracting, Inc 155-161 Pennsylvania Avenue Paterson, New Jersey 07503
PCO NUMBER/REVISION:	005 / 2	CONTRACT:	1 - GC Contract: Village of Ardsley Contract No. VOA-1811 New Public Works Facility
REQUEST RECEIVED FROM:		CREATED BY:	Stanka Stoilova (APS Contracting, Inc)
STATUS:	Pending - In Review	CREATED DATE:	3/10/2023
REFERENCE:		PRIME CONTRACT CHANGE ORDER:	None
FIELD CHANGE:	No		
LOCATION:		ACCOUNTING METHOD:	Amount Based
SCHEDULE IMPACT:		PAID IN FULL:	No
EXECUTED:	No	SIGNED CHANGE ORDER RECEIVED DATE:	
		TOTAL AMOUNT:	\$78,750.00

POTENTIAL CHANGE ORDER TITLE: Extending Retaining Wall Asphalt Pavement

CHANGE REASON: Client Request

POTENTIAL CHANGE ORDER DESCRIPTION: *(The Contract Is Changed As Follows)*

CE #014 - Extending Retaining Wall & Heavy Duty Asphalt Paving

The following proposal is to extend/install redi rock retaining wall and extend heavy duty asphalt pavement area as per attached drawings.

APS CONTRACTING, INC. RESERVES IT'S RIGHTS TO SEEK ADDITIONAL TIME FROM CUMULATIVE EFFECT OF MULTIPLE CHANGE OF PLANS.

ATTACHMENTS:

[CO#10 - Extend Retaining Wall & Heavy Duty Asphalt Pavement cover & backup.pdf](#)

#	Budget Code	Description	Amount
1	320-320000.000.Subcontract Exterior Improvements.Subcontract	Extending Retaining Wall & Heavy Duty Asphalt Paving	\$75,000.00
Subtotal:			\$75,000.00
Profit (5.00% Applies to Subcontract.):			\$3,750.00
Grand Total:			\$78,750.00

Jeffery Budrow (Weston & Sampson)
1 Winners CirY 12205
Albany, New York 12205

Village of Ardsley
507 Ashford Avenue
Ardsley, New York 10502

APS Contracting, Inc
155-161 Pennsylvania Avenue
Paterson, New Jersey 07503

SIGNATURE DATE SIGNATURE DATE SIGNATURE DATE

APS Contracting, Inc.

Page 1 of 1

Printed On: 3/29/2023 12:27 PM

Tony Casale Inc.

1185 Saw Mill River Rd.
Yonkers, NY 10710
Phone: (914) 375-2177
Fax: (914) 375-0620

Request for Change Order

To: APS CONTRACTING, INC.
155-161 PENNSYLVANIA AVE
PATERSON, NJ 07503
Project: ARDSLEY DPW

RFC No: 10 REV2
Date: 3/9/2023
Description: CO#10 - Extend Retaining Wall & Heavy Duty Asphalt Pavement

EXCAVATE/INTSALL REDI ROCK RETAINING WALL AND
EXTEND HEAVY DUTY ASPHALT PAVEMENT AREA AS PER
THE ATTACHED DRAWINGS

-800SF OF REDI-ROCK RETAINING WALL: 800SF @ \$85/SF

-35TONS OF BINDER/ASPHALT @ \$200/TON

EXCLUSIONS/QUALIFICATIONS:

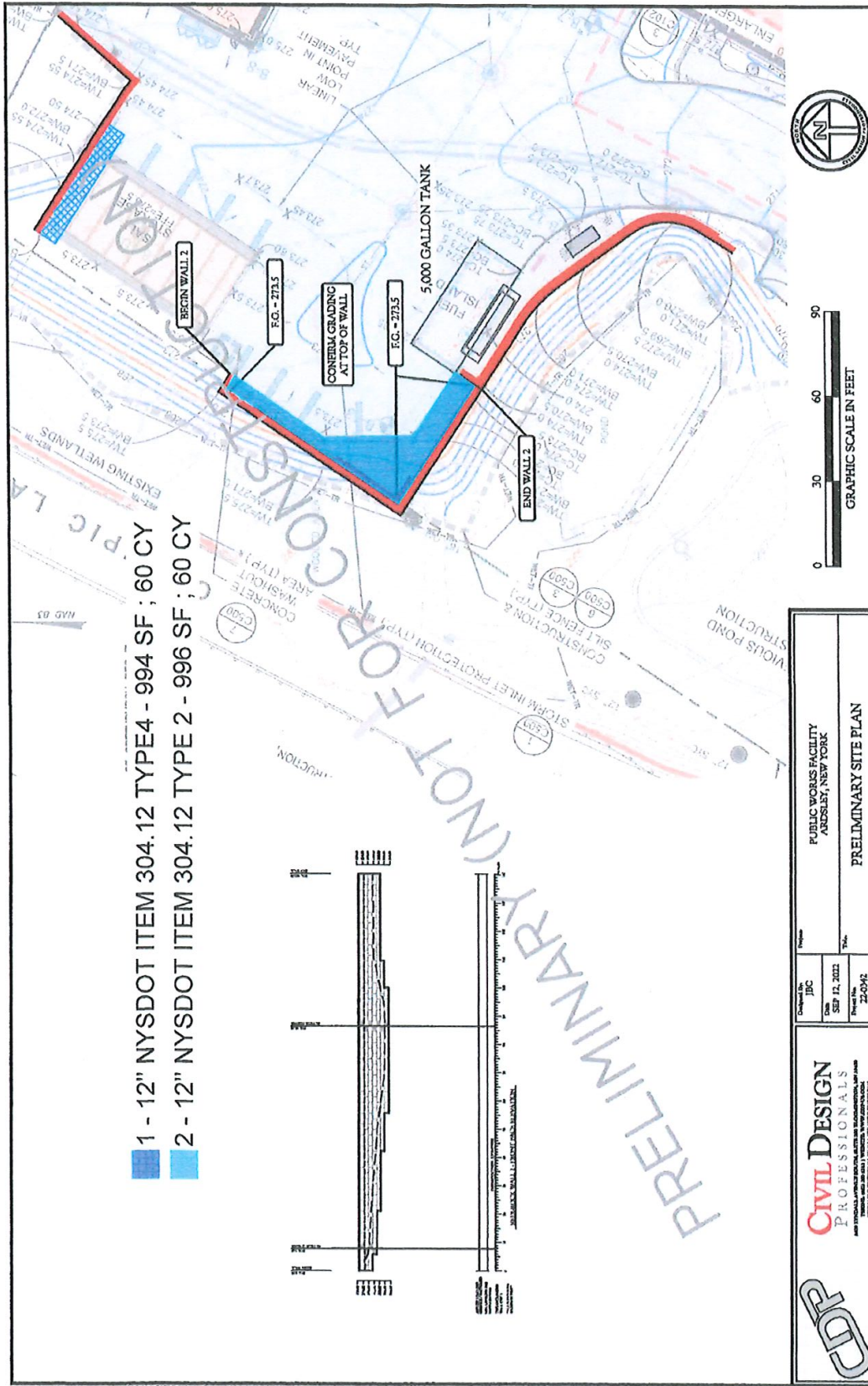
-CONTAMINATED SOIL
-ROCK REMOVAL

The above work is subject to the same conditions as specified in the original contract unless otherwise stipulated.

Upon approval the sum of \$75,000.00 will be added to the contract price.

Authorized Signature: _____ Date: _____
Tony Casale Inc.

Authorized Signature: _____ Date: _____
APS CONTRACTING, INC.



10/11/2023 12:23:33 PM COPYRIGHT © 2011 - 2022 BY CIVIL DESIGN PROFESSIONALS. THIS DRAWING IS BEING PRINTED FOR THIS PROJECT ONLY. ANY AND/OR REUSE WITHOUT THE CONSENT OF CIVIL DESIGN PROFESSIONALS IS PROHIBITED.

22-0342 Prelim 2023-02-22 nctf (64% of Scale) Takenoff in Active Area - All Areas: NEW Wall: OST Projects: 3/11/2023 02:25 PM

Mid Hudson Concrete Products, Inc.

3504 Route 9
Cold Spring, NY 10516

Estimate

Date	Estimate #
3/15/2023	8971

Name / Address
Public Works Building Ardley Additional blocks

Project

Description	Qty	Rate	Total
6" CAPS 2 SIDED with Rebar	15	110.00	1,650.00T
6" CAP 3 SIDED with rebar	2	110.00	220.00T
Cobblestone CORNER HOLLOW-CORE	4	125.00	500.00T
Cobblestone HOLLOWCORE	28	125.00	3,500.00T
Cobblestone MIDDLE CORNERS	7	130.00	910.00T
Cobblestone MIDDLE 28"	45	135.00	6,075.00T
Cobblestone 41" MIDDLE	28	140.00	3,920.00T
Cobblestone BOTTOMS 41"	18	140.00	2,520.00T
Cobblestone 1/2 BLOCK MIDDLE 41	1	115.00	115.00T
Cobblestone RETAINING BOTTOM 60"	9	260.00	2,340.00T
Cobblestone Short Middle	1	140.00	140.00T
Price is for Cobblestone or Limestone face styles. Ledgestone face is additional.		0.00	0.00T
Engineering Revision	1	550.00	550.00T
		Subtotal	\$22,440.00
		Sales Tax (0.0%)	\$0.00
		Total	\$22,440.00

**RESOLUTION ADOPTING THE 2022 ANNUAL MS4
STORMWATER REPORT**

RESOLVED, that the Village Board of the Village of Ardsley hereby adopts the 2022 Annual MS4 Stormwater Report.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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Appendix

<u>Page</u>	<u>Item</u>
1	Great SMR Cleanup Scout Village-wide Cleanup Ardsley Cares Cleanup
2	AHS Environmental Task Force Bicentennial Park Project Arbor Day Pascone Park Tree Planting Ardsley Cares Pascone Park Daffodil Bulbs
3	Pollinator Pathway/Westchester County Parks Foundation Invasive Vine Removal Welcome Back Ardsley
4 - 5	Literature and Item Distribution Log
6 - 15	Outfall Inspection Sheets 3/2021 - 3/2022
16 - 30	Department of Public Works Notices & Log Sheets 3/2021 - 3/2022
34 - 42	Local Newspaper Articles

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition: Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6



**Great
Saw
Mill
River
Cleanup
4/23/2022**



**Scout
Village-
wide
Cleanup
6/4/2022**



**Ardsley Cares
Cleanup
Ardsley
Middle School
10/29/2022**



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition: Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6



**AHS ETF
Bicentennial Park
5/14/2022**



**Arbor
Day
Pascone
Park
Oct
22
2022**



**Ardsley Cares Pascone Park
Daffodil Bulb Planting 10/29/2022**

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID



4/9/2022-Pollinator Pathway/Westchester County Parks Foundation Invasive Removal-12/7/2022



**Welcome
Back
Ardsley
Pascone
Park
9/17/2022**

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Literature and Item Distribution Log (3/9/2022 to 3/9/2023)										Total items distributed = 565
Item	Village Hall	Library	AHS ETF SW Event Bicent Pk	Welcome Back Ardsley	AMS Earth Science	Outfall Testing Team	Ardsley Cares SW Event	Great SMR Cleanup	Business Outreach Landscape	
"Soln to Poll" (EPA)			1							
Org Lawn Care (Grassroots)	1									
Aquatic Invasives (NYSDEC)		1								
"Backyd Compost" (County Planning)		4		2						
LELENY.org handout	3									18
"Step by Step" West County	1									
"Lawn Pesticides" (Cit Camp Env)		1								
Zero Phosphorus NYSDEC		1								
Watersense USEPA		3		2						
"Green Lawn Blue Water" (LWV)	1									
HAB Notice (NYSDEC)	1	2								
Pesticides Grassroots		4								
"Go Native" guide (County Parks)	7	5		5			5	4		
Pets & Pesticides Grassroots										
"Dogs & HABs" (NY Sea Grant Org)	2	1								
Greenburgh Composting Info		3		1						
NYS Foam Ban notice NYS DEC				2						
Recycled Plastic Product List VofA			1	9						
What on Earth USDA		1								

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID:

	Village	Library	AHS ETF	Welcome	AMS	Outfall	Ardsley	Great	Business
Item	Hall		SW Event	Back	Earth	Testing	Cares	SMR	Outreach
			Bicent Pk	Ardsley	Science	Team	SW Event	Cleanup	
Growing Concern	1	3						1	
Inv West County									
SW Regs Construc	3								
NYSDEC									
"Hud Riv Fish"	1								
(NYSDOH)									
"When It Rains"	2	4		8				4	
bookmarks (HRE)									
Clean Water				2					
EPA bookmarks									
Aquatic Restor	1							1	
bookmarks County									
Pet Biobaggies	56	24		20					
(VofA SW)									
SW Reference Cards			2	17	77		5	7	
(VofA SW)									
Outfall Testing						4			
Letter (VofA SW)									
Recycling Bins			3	20					
VofA SW									
SW magnets				4			5		
Westchester County									
H2OK buttons				9					
Westchester County									
USEPA WaterSense				20					
coloring books									
"Don't Dump" SMRC	6								
bumper stickers									
SW Posters				8					
Westchester County									
SW coloring books				2					
EPA									
SW sticker pages				25					
Westchester County									
SW color pencil pack				20					
VofA SW									
Ocean plastic				43					
toothbrushes VofA									
AHS ETF washable			3	36					
bags VofA SW									
Native seed packets							15		
VofA SW									
SW Notepads				11					
Westchester County									

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
 N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Saran Brook/Bea River Outfall ID: A240
 Today's date: 3/18/2023 Time: 3:40 PM
 Investigator: Jessie Kuhn Form completed by: Jessie Kuhn
 Temperature (°F): 51 Rainfall (in.): Last 24 hours: 0.1 Last 48 hours: 0.17
 Longitude: GPS Unit: Garmin gpx GPS ILMK: *
 Category: Sanitary Sewer Photos: no
 Land Use in Drainage Area (Check all that apply):
 Industrial Open Space
 Ultra-Urban Residential Institutional
 Suburban Residential Other: OLPH School
 Commercial Known Industries: None

Outfall Reconnaissance Sheet

Notes (e.g., origin of outfall, if known): Manhole storm drain

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN)	SUBMERGED
X Closed Pipe	X RCP CMP	X Circular	X Single	In Water: No
	PVC HDPE	Elliptical	Double	X Partially Fully
	Steel	Box	Triple	With Sediment: No
Other:	Other:	Other:	Other:	With Sediment: X Partially Fully
Open drainage	Concrete	Trapezoidal	Depth:	
	Earthen	Parabolic	Top Width:	
	rip-rap	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	Yes X	No	standstill water	IF No, Skip to Section 5
Flow Description (if present)	X Trickle	Moderate	Substantial	

Temp: 73 °F
 pH: 8.0
 Ammonia: 0.0 mg/L

Note: Sludge remaining wall up at Manhole Face collect current runoff is likely causing higher pH

FIELD DATA FOR FLOWING OUTFALLS

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	"		Tape measure
	Flow width	"		Tape measure
	Measured length	"		Tape measure
	Time of travel	Sec		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	No	Sewage Rancid sour Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Clear	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	Trace trash	Sewage (Toilet Paper, etc.) Sulfide	1 - Some origin clear 2 - Some indications of origin (e.g., obvious oil rags, or floating sanitary materials)
Does Not Include Trash!	Trace trash	Petroleum (oil sheen) Other:	1 - Few slight origin not obvious


Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spalling Cracking or Chipping Peeling Paint Corrosion	
Deposits/Slimes	No	Sludge Flow Line Paint Other	
Abnormal Vegetation	Moderate	Excessive Inhibited	
Poor pool quality	No	Odors Colors Floating Oil Sheen Other:	
Pipe bank growth	no	Brown Orange Green Other:	

Overall Outfall Characterization
 X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
 1. Sample for the lab? Yes X No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? Yes No If Yes, type: OBM Cank dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
 Collected: Wet
 Dry: Dry



Subwatershed: Saran Brook/Bea River Outfall ID: A240
 Today's date: 3/25/2022 Time: 3:30 PM
 Investigator: Jessie Kuhn Form completed by: Jessie Kuhn
 Temperature (°F): 54 Rainfall (in.): Last 24 hours: 0.07 Last 48 hours: 0.14
 Longitude: GPS Unit: Garmin gpx GPS ILMK: *
 Category: Sanitary Sewer Photos: no
 Land Use in Drainage Area (Check all that apply):
 Industrial Open Space
 Ultra-Urban Residential Institutional
 Suburban Residential Other: Known Industries: Macy Park, Dry Cleaners, Motel
 Commercial

Outfall Reconnaissance Sheet

Notes (e.g., origin of outfall, if known): See 9A

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN)	SUBMERGED
X Closed Pipe	X RCP CMP	X Circular	X Single	In Water: No
	PVC HDPE	Elliptical	Double	X Partially Fully
	Steel	Box	Triple	With Sediment: No
Other:	Other:	Other:	Other:	With Sediment: X Partially Fully
Open drainage	Concrete	Trapezoidal	Depth:	
	Earthen	Parabolic	Top Width:	
	rip-rap	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	Yes X	No	IF No, Skip to Section 5	
Flow Description (if present)	X Trickle	Moderate	Substantial	

Temp: 51 °F
 pH: 7.0
 Ammonia: 0.0 mg/L

FIELD DATA FOR FLOWING OUTFALLS

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	0' 1"		Tape measure
	Flow width	0' 4"	5.45 gal/min	Tape measure
	Measured length	1' 0"		Tape measure
	Time of travel	1.47, 1.06, 1.61, 1.78, 1.41		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	No	Sewage Rancid sour Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Trace yellow	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Trace cloudiness	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	Trace trash, slight oil sheen	Sewage (Toilet Paper, etc.) Sulfide	1 - Some origin clear 2 - Some indications of origin (e.g., obvious oil rags, or floating sanitary materials)
Does Not Include Trash!	Trace trash, slight oil sheen	Petroleum (oil sheen) Other:	1 - Few slight origin not obvious


Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spalling Cracking or Chipping Peeling Paint Corrosion	
Deposits/Slimes	No	Sludge Flow Line Paint Other	
Abnormal Vegetation	No	Excessive Inhibited	
Poor pool quality	No	Odors Colors Floating Oil Sheen Other:	
Pipe bank growth	no	Brown Orange Green Other:	

Overall Outfall Characterization
 X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
 1. Sample for the lab? Yes X No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 4:00 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
 Collected: Wet: NEG
 Dry: NEG, 3/31/2022



Subwatershed: Saran Brook/Bea River Outfall ID: A240
 Today's date: 4/1/2022 Time: 3:30 PM
 Investigator: Jessie Kuhn Form completed by: Jessie Kuhn
 Temperature (°F): 57 Rainfall (in.): Last 24 hours: 0.27 Last 48 hours: 0.27
 Longitude: GPS Unit: Garmin gpx GPS ILMK: *
 Category: Sanitary Sewer Photos: no
 Land Use in Drainage Area (Check all that apply):
 Industrial Open Space
 Ultra-Urban Residential Institutional
 Suburban Residential Other: Known Industries: Macy Station, Restaurants, Supermarket, Vail & Hair Salons
 Commercial

Outfall Reconnaissance Sheet

Notes (e.g., origin of outfall, if known): NYCRFP 0300047

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN)	SUBMERGED
X Closed Pipe	X RCP CMP	Circular	X Single	In Water: No
	PVC HDPE	X Elliptical	Double	X Partially Fully
	Steel	Box	Triple	With Sediment: No
Other:	Other:	Other:	Other:	With Sediment: X Partially Fully
Open drainage	Concrete	Trapezoidal	Depth:	
	Earthen	Parabolic	Top Width:	
	rip-rap	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	Yes	No	IF No, Skip to Section 5	
Flow Description (if present)	X Trickle	X Moderate	Substantial	

Temp: 53 °F
 pH: 6.8
 Ammonia: 0.0 mg/L

FIELD DATA FOR FLOWING OUTFALLS

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	3' 20"		Tape measure
	Flow width	0' 00"	118.7 gal/min	Tape measure
	Measured length	0' 00"		Tape measure
	Time of travel	3.92, 1.38, 10.09, 3.87, 6.62, 4.37, 3.16, 5.36		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	No	Sewage Rancid sour Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Clear	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	Slight trash, slight oil sheen	Sewage (Toilet Paper, etc.) Sulfide	1 - Some origin clear 2 - Some indications of origin (e.g., obvious oil rags, or floating sanitary materials)
Does Not Include Trash!	Slight trash, slight oil sheen	Petroleum (oil sheen) Other:	1 - Few slight origin not obvious


Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spalling Cracking or Chipping Peeling Paint Corrosion	
Deposits/Slimes	Moderate	Sludge Flow Line Paint Other	
Abnormal Vegetation	Moderate	Excessive Inhibited	
Poor pool quality	no	Odors Colors Floating Oil Sheen Other:	
Pipe bank growth	no	Brown Orange Green Other:	

Overall Outfall Characterization
 X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
 1. Sample for the lab? Yes X No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 4:03 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
 Collected: 4/3/2022, 11AM
 Wet: NEG
 Dry: NEG, 4/7/2022



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition **Village of Ardsley**

Subwatershed: Swan Brook 2b Rev.		Outfall ID: A232	
Today's date: 4/8/2022		Time: 1:30 PM	
Investigator: Genlye, Kolin		Form completed by: Genlye, Kolin	
Temperature (F): 73	Rainfall (in.): Last 24 hours: 0.24	Last 48 hours: 0.24	
Latitude: 41° 12' 30" N	Longitude: 73° 48' 00" W	GPS Unit: Garmin etrex	
GPS ILSK: w		GPS ILSK: w	
Camera: Smarting Galaxy		Photos: 0	
Land Use in Drainage Area (Check all that apply):		Open Space	
Industrial		Institutional	
Ultra-Urban Residential		X Institutional	
X Suburban Residential		Other: AHS	
Commercial		Known Industries:	

Notes (e.g., origin of outfall, if known): **Delinquent Fund**

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED		
Closed Pipe	RCP	CMP	Circular	Single	Diameter Dimension:	In Water:
	PVC	HDPE	Elliptical	Double		No
	Steel	Box	Triple	Triple		X Partially Fully
	Other:	Other:	Other:	Other:	With Sediment:	No
X Open drainages	Concrete	X Trapezoid	Depth: 5"			X Partially Fully
	Earthen	Parabolic	Top Width: 13"			
	X rip-rap	Other:	Bottom Width: 12"			
	In-Stream	(applicable when collector samples)				

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	0" 4"	Pt. In. 164.5 gal/min	Tape measure
	Flow width	2" 10"	Pt. In.	Tape measure
	Measured length	1' 6"	Pt. In.	Tape measure
	Time of travel	0.31, 1.34, 1.94, 1.60, 2.38, 1.53, 1.69	Sec	Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are physical indicators present in the flow? Yes No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	No	Sewage Rancid vomit Spillage Other	1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Color	Slight yellow	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle	2 - Clearly visible in sample bottle	3 - Clearly visible in outfall flow
Turbidity	Slight cloudy	See severity	X 1 - Slight cloudiness	2 - Cloudy	3 - Opaque
Floatables (Does Not include Trash!)	Slight trash	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other	1 - Few/light, origin not obvious	2 - Some, indications of origin (e.g. obvious oil rags, or floating sanitary materials)	3 - Some, origin clear (e.g. obvious oil rags, or floating sanitary materials)


Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spillage Cracking or Chipping Rusting Paint Corrosion	
Deposits/Strains	No	Obv. Flow Line Paint Other	
Abnormal Variations	No	Excessive Inhibited	
Poor pool quality	No	Odors Colors Floatables Oil Sheen	
Pipe health/growth	n/a	Rust Excessive Algae Green Other:	

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? Yes No X No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Culk dam 4:33 PM

Section 8: Any Non-Illicid Discharge Concerns (e.g., trash or needed infrastructure repairs)? no
Collected: 4/11/2022, 4PM
Wet: NEG
Dry: NEG, 4/28/2022



Subwatershed: Swan Brook 2b Rev.		Outfall ID: A232	
Today's date: 4/12/2022		Time: 1:30 PM	
Investigator: Genlye, Kolin		Form completed by: Genlye, Kolin	
Temperature (F): 73	Rainfall (in.): Last 24 hours: 0.24	Last 48 hours: 0.24	
Latitude: 41° 12' 30" N	Longitude: 73° 48' 00" W	GPS Unit: Garmin etrex	
GPS ILSK: w		GPS ILSK: w	
Camera: Smarting Galaxy		Photos: 0	
Land Use in Drainage Area (Check all that apply):		Open Space	
Industrial		Institutional	
Ultra-Urban Residential		X Institutional	
X Suburban Residential		Other: Office building, gas station, motel	
Commercial		Known Industries:	

Notes (e.g., origin of outfall, if known):

Gave 1 letter to Motel Maintenance personnel

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED		
X Closed Pipe	X RCP	CMP	X Circular	X Single	Diameter Dimension:	In Water:
	PVC	HDPE	Elliptical	Double		No
	Steel	Box	Triple	Triple		X Partially Fully
	Other:	Other:	Other:	Other:	With Sediment:	No
Open drainages	Concrete	Trapezoid	Depth:			X Partially Fully
	Earthen	Parabolic	Top Width:			
	X rip-rap	Other:	Bottom Width:			
	In-Stream	(applicable when collector samples)				

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	0" 5"	Pt. In. 187 gal/min	Tape measure
	Flow width	1' 8"	Pt. In.	Tape measure
	Measured length	1' 8"	Pt. In.	Tape measure
	Time of travel	2.97, 2.63, 3.22, 2.34, 1.66	Sec	Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are physical indicators present in the flow? Yes No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	No	Sewage Rancid vomit Spillage Other	1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Color	Clear	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle	2 - Clearly visible in sample bottle	3 - Clearly visible in outfall flow
Turbidity	Clear	See severity	1 - Slight cloudiness	2 - Cloudy	3 - Opaque
Floatables (Does Not include Trash!)	Slight trash	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other	1 - Few/light, origin not obvious	2 - Some, indications of origin (e.g. obvious oil rags, or floating sanitary materials)	3 - Some, origin clear (e.g. obvious oil rags, or floating sanitary materials)


Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damages	abnormal	Spillage Cracking or Chipping Rusting Paint Corrosion	note obscured by rocks
Deposits/Strains	abnormal	Obv. Flow Line Paint Other	
Abnormal Variations	No	Excessive Inhibited	
Poor pool quality	No	Odors Colors Floatables Oil Sheen	
Pipe health/growth	no	Rust Excessive Algae Green Other:	

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? Yes No X No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Culk dam 4:07 PM

Section 8: Any Non-Illicid Discharge Concerns (e.g., trash or needed infrastructure repairs)? slight rocks from pipe outlet
Collected: 5/16/2022, 11AM
Wet: NEG
Dry: NEG, 5/24/2022



Subwatershed: Swan Brook 2b Rev.		Outfall ID: A232	
Today's date: 4/23/2022		Time: 2:00 PM	
Investigator: Genlye, Kolin		Form completed by: Genlye, Kolin	
Temperature (F): 73	Rainfall (in.): Last 24 hours: 0.24	Last 48 hours: 0.64	
Latitude: 41° 12' 30" N	Longitude: 73° 48' 00" W	GPS Unit: Garmin etrex	
GPS ILSK: w		GPS ILSK: w	
Camera: Smarting Galaxy		Photos: 0	
Land Use in Drainage Area (Check all that apply):		Open Space	
Industrial		Institutional	
Ultra-Urban Residential		X Institutional	
X Suburban Residential		Other: Ardsley Public Library	
Commercial		Known Industries:	

Notes (e.g., origin of outfall, if known): **Park Avenue**

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED		
X Closed Pipe	X RCP	CMP	X Circular	X Single	Diameter Dimension:	In Water:
	PVC	HDPE	Elliptical	Double		No
	Steel	Box	Triple	Triple		X Partially Fully
	Other:	Other:	Other:	Other:	With Sediment:	No
Open drainages	Concrete	Trapezoid	Depth:			X Partially Fully
	Earthen	Parabolic	Top Width:			
	X rip-rap	Other:	Bottom Width:			
	In-Stream	(applicable when collector samples)				

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	0" 3"	Pt. In. 104.1 gal/min	Tape measure
	Flow width	1' 7"	Pt. In.	Tape measure
	Measured length	1' 4"	Pt. In.	Tape measure
	Time of travel	2.31, 2.38, 2.88, 2.25, 2.04	Sec	Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are physical indicators present in the flow? Yes No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	No	Sewage Rancid vomit Spillage Other	1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Color	Clear	Clear Brown Grey Yellow Green Orange Red Other	1 - Faint colors in sample bottle	2 - Clearly visible in sample bottle	3 - Clearly visible in outfall flow
Turbidity	Clear	See severity	1 - Slight cloudiness	2 - Cloudy	3 - Opaque
Floatables (Does Not include Trash!)	leaves	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other	1 - Few/light, origin not obvious	2 - Some, indications of origin (e.g. obvious oil rags, or floating sanitary materials)	3 - Some, origin clear (e.g. obvious oil rags, or floating sanitary materials)


Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spillage Cracking or Chipping Rusting Paint Corrosion	
Deposits/Strains	Flourish	Obv. Flow Line Paint Other	
Abnormal Variations	No	Excessive Inhibited	
Poor pool quality	No	Odors Colors Floatables Oil Sheen	
Pipe health/growth	No	Rust Excessive Algae Green Other:	

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? Yes No X No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Culk dam 3:38 PM

Section 8: Any Non-Illicid Discharge Concerns (e.g., trash or needed infrastructure repairs)? no
Collected: 6/6/2022, 9AM
Wet: NEG
Dry: NEG, 6/8/2022



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley


Subwatershed: Spring Brook Bk. Riv. Outfall ID: A272 Today's date: 6/10/2022 Time: 1:15 PM Investigator: Zevinda Kuhn Form completed by: Zevinda Kuhn		Outfall Reconnaissance Sheet			
Temperature (F): 56 Rainfall (in.): Last 24 hours: Last 48 hours: Last 72 hours: Latitude: Longitude: GPS Unit: Garmin eTrex GPS LMSK #: Photo #:					
Camps: Sampling Galvan: Photos: Open Space Land Use in Drainage Area (Check all that apply): Industrial: Ultra-Urban Residential: X Institutional X Suburban Residential: Other: AHS Commercial: Known Industries:					
Notes (e.g., origin of outfall, if known):					
LOCATION X Closed Pipe	MATERIAL PVC HDPE Steel Other:	SHAPE X Circular Elliptical Box Other:	DIMENSIONS (DI.) Diameter/Dimension: 12"	SUBMERGED In Water: No X Partially Fully With Sediment: No X Partially Fully	
Open drainage Concrete Earthen X rip-rap Other:		Trapezoidal Parabolic Other:	Depth: Top Width: Bottom Width:	Temp: 72 F pH: 6.7 Ammonia: 1.0 mg/L	
In-Stream (applicable when collecting samples): Flow Present? X Yes No Flow Description (if present): Trickle Moderate X Substantial		FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	250, 225, 205, 260, 280	Liter	Bottle	
	Time to fill	2:25, 2:37, 2:25, 3:06, 2:72	Sec	Stop watch	
Flow #2	Flow depth	0"	ft. in.	Tape measure	
	Flow width	0"	ft. in.	Tape measure	
	Measured length	0"	ft. in.	Tape measure	
	Time of travel	0"	Sec	Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Firm? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling, Cracks or Chipmunk	Corrosion
Density Strain	No	Sediment	Flow Line
Abnormal Vegetation	No	Excrescence	Inhibited
Poor pool quality	No	Odors	Colors
Pipe benthic growth	No	Brown	Orange

Section 7: Data Collection

1. Sample for the lab? Yes No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Caulk dam: 3:30 PM

Section 8: Any Non-Illud Discharge Concerns (e.g., truck or needed infrastructure repairs)? No
 Collected: 6/13/2022 4 PM
 Wet: NEG
 Dry: NEG 6/16/2022




Subwatershed: Spring Brook Bk. Riv. Outfall ID: A274 Today's date: 6/14/2022 Time: 1:15 PM Investigator: Zevinda Kuhn Form completed by: Zevinda Kuhn		Outfall Reconnaissance Sheet			
Temperature (F): 56 Rainfall (in.): Last 24 hours: Last 48 hours: Last 72 hours: Latitude: Longitude: GPS Unit: Garmin eTrex GPS LMSK #: Photo #:					
Camps: Sampling Galvan: Photos: Open Space Land Use in Drainage Area (Check all that apply): Industrial: Ultra-Urban Residential: X Institutional X Suburban Residential: Other: Known Industries: Macy Park, Wine Wheel Arts, Restaurants, Nail Salon Commercial: Known Industries:					
Notes (e.g., origin of outfall, if known):					
LOCATION Closed Pipe	MATERIAL PVC HDPE Steel Other:	SHAPE Circular Elliptical Box Other:	DIMENSIONS (DI.) Diameter/Dimension: 8"	SUBMERGED In Water: No X Partially Fully With Sediment: No X Partially Fully	
X Open drainage Concrete Earthen X rip-rap Other:		Trapezoidal Parabolic Other: Rectangle	Depth: 0' 10" Top Width: 4' 3" Bottom Width: 4' 3"	Temp: 88 F pH: 8.0 Ammonia: 0 mg/L	
In-Stream (applicable when collecting samples): Flow Present? X Yes No Flow Description (if present): Trickle X Moderate Substantial		FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	250, 225, 205, 260, 280	Liter	Bottle	
	Time to fill	2:25, 2:37, 2:25, 3:06, 2:72	Sec	Stop watch	
Flow #2	Flow depth	0"	ft. in.	Tape measure	
	Flow width	0"	ft. in.	Tape measure	
	Measured length	1' 9"	ft. in.	Tape measure	
	Time of travel	5.40, 5.22, 5.22, 5.69, 5.84	Sec	Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Firm? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling, Cracks or Chipmunk	Corrosion
Density Strain	No	Sediment	Flow Line
Abnormal Vegetation	No	Excrescence	Inhibited
Poor pool quality	No	Odors	Colors
Pipe benthic growth	No	Brown	Orange

Section 7: Data Collection

1. Sample for the lab? Yes No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Caulk dam: 3:46 PM

Section 8: Any Non-Illud Discharge Concerns (e.g., truck or needed infrastructure repairs)? No
 Collected: 6/27/2022 12PM
 Wet: NEG
 Dry: NEG 6/28/2022




Subwatershed: Spring Brook Bk. Riv. Outfall ID: A249 Today's date: 6/10/2022 Time: 4:50 PM Investigator: Zevinda Kuhn Form completed by: Zevinda Kuhn		Outfall Reconnaissance Sheet			
Temperature (F): 56 Rainfall (in.): Last 24 hours: Last 48 hours: Last 72 hours: Latitude: Longitude: GPS Unit: Garmin eTrex GPS LMSK #: Photo #:					
Camps: Sampling Galvan: Photos: Open Space Land Use in Drainage Area (Check all that apply): Industrial: Ultra-Urban Residential: X Institutional X Suburban Residential: Other: Concord Rd Elementary School Commercial: Known Industries:					
Notes (e.g., origin of outfall, if known): Concord Road					
LOCATION X Closed Pipe	MATERIAL X RCP CMP PVC HDPE Steel Other:	SHAPE X Circular Elliptical Box Other:	DIMENSIONS (DI.) Diameter/Dimension: 30"	SUBMERGED In Water: No X Partially Fully With Sediment: No X Partially Fully	
Open drainage Concrete Earthen rip-rap Other:		Trapezoidal Parabolic Other:	Depth: Top Width: Bottom Width:	Temp: 83 F pH: 7.5 Ammonia: 0 mg/L	
In-Stream (applicable when collecting samples): Flow Present? X Yes No Flow Description (if present): Trickle X Moderate Substantial		FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	250, 225, 205, 260, 280	Liter	Bottle	
	Time to fill	2:25, 2:37, 2:25, 3:06, 2:72	Sec	Stop watch	
Flow #2	Flow depth	0"	ft. in.	Tape measure	
	Flow width	0"	ft. in.	Tape measure	
	Measured length	0"	ft. in.	Tape measure	
	Time of travel	1:00, 1:33, 1:47, 1:22, 1:28	Sec	Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Firm? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling, Cracks or Chipmunk	Corrosion
Density Strain	No	Sediment	Flow Line
Abnormal Vegetation	No	Excrescence	Inhibited
Poor pool quality	No	Odors	Colors
Pipe benthic growth	No	Brown	Orange

Section 7: Data Collection

1. Sample for the lab? Yes No
 2. If yes, collected from: Flow Pool
 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Caulk dam: 5:03 PM

Section 8: Any Non-Illud Discharge Concerns (e.g., truck or needed infrastructure repairs)? No
 Collected: 7/2/2022 3PM
 Wet: NEG
 Dry: NEG 7/5/2022



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: <u>Spr Mill Run</u>		Outfall ID: <u>AZ21</u>	
Today's date: <u>3/9/2022</u>		Time: <u>3:10 PM</u>	
Investigator: <u>Kohm</u>		Form completed by: <u>[Signature]</u>	
Temperature (F): <u>51</u>	Rainfall (in.): <u>Last 24 hours: 0"</u>	Last 48 hours: <u>0"</u>	
Latitude: <u>41° 14' 10" N</u>	Longitude: <u>73° 47' 30" W</u>	GPS Unit: <u>Garmin etrex</u>	
Camera: <u>Samsung Galaxy</u>		Photo ID: <u>GPS 133K e</u>	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> X Open Space	<input type="checkbox"/> Institutional	
<input type="checkbox"/> Ultra-Urban Residential	<input type="checkbox"/> Suburban Residential	Other: <u>Restaurant, Nail Salon</u>	
<input type="checkbox"/> X Commercial	<input type="checkbox"/> Known Industries:		

Notes (e.g., origin of outfall, if known):

LOCATION	MATERIAL	SHAPE	DIMENSIONS (ft.)	SUBMERGED
X Closed Pipe	X RCP CMP	Circular	X Single	Diameter Dimension: In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
	PVC HDPE	Elliptical	Double	56" X 16" X 12"
	Steel	X Box	Triple	With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
Other:	Other:	Other:		
Open drainage	Concrete	Trapezoid	Depth:	
	Earthen	Parabolic	Top Width:	
	RP-PP	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	Yes	X No	If No, Skip to Section 5	
Flow Description (if present):	Trickle	Moderate	Substantial	

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.		Tape measure
	Measured length	ft. in.		Tape measure
Time of travel	Sec		Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (LS)
Odor	n/a	Sewage Rancid sour Sulfide Other	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Brown Gray Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	n/a	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables		Sewage (Total Paper, etc.) Solids Petroleum (oil sheen) Other	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g. possible rust or oil sheen) 3 - Some origin clear (e.g. obvious oil sheen, or floating sanitary material)
Does Not Include Trash?			

Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spillage Cracking or Chipping Paving Paint Corrosion	
Density/Strata	No	Oil Flow Line Paint Other	
Abnormal Vegetation	excessive	Excessive Inhibited	
Poor pool quality	n/a	Odors Colors Flammable Oil Sheen	
Pipe benthic growth	n/a	Solids Excessive Algae Other	

Overall Outfall Characterization

X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection


1. Sample for the lab? Yes X No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? Yes X No If Yes, type: GBM Cank dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no

Collected: Wet: Dry:



Subwatershed: <u>Strain Brook-Bye Run</u>		Outfall ID: <u>AZ21</u>	
Today's date: <u>3/9/2022</u>		Time: <u>2:00 PM</u>	
Investigator: <u>Kohm</u>		Form completed by: <u>[Signature]</u>	
Temperature (F): <u>58</u>	Rainfall (in.): <u>Last 24 hours: 3.4"</u>	Last 48 hours: <u>3.4"</u>	
Latitude: <u>41° 14' 10" N</u>	Longitude: <u>73° 47' 30" W</u>	GPS Unit: <u>Garmin etrex</u>	
Camera: <u>Samsung Galaxy</u>		Photo ID: <u>GPS 133K e</u>	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> X Open Space	<input type="checkbox"/> Institutional	
<input type="checkbox"/> Ultra-Urban Residential	<input type="checkbox"/> Suburban Residential	Other: <u>AHS</u>	
<input type="checkbox"/> Commercial	<input type="checkbox"/> Known Industries:		

Notes (e.g., origin of outfall, if known):

LOCATION	MATERIAL	SHAPE	DIMENSIONS (ft.)	SUBMERGED
X Closed Pipe	X RCP CMP	Circular	X Single	Diameter Dimension: In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
	PVC HDPE	Elliptical	X Double	24"
	Steel	Box	Triple	With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
Other:	Other:	Other:		
Open drainage	Concrete	Trapezoid	Depth:	
	Earthen	Parabolic	Top Width:	
	RP-PP	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	X Yes	No	If No, Skip to Section 5	
Flow Description (if present):	Trickle	X Moderate	Substantial	

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.		Tape measure
	Measured length	ft. in.		Tape measure
Time of travel	Sec		Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (LS)
Odor	No	Sewage Rancid sour Sulfide Other	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Brown Gray Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Clear	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables		Sewage (Total Paper, etc.) Solids Petroleum (oil sheen) Other	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g. possible rust or oil sheen) 3 - Some origin clear (e.g. obvious oil sheen, or floating sanitary material)
Does Not Include Trash?			

Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spillage Cracking or Chipping Paving Paint Corrosion	
Density/Strata	No	Oil Flow Line Paint Other	
Abnormal Vegetation	Inhibited	Excessive Inhibited	
Poor pool quality	no	Odors Colors Flammable Oil Sheen	
Pipe benthic growth	no	Solids Excessive Algae Other	

Overall Outfall Characterization

X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection


1. Sample for the lab? Yes X No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? X Yes No If Yes, type: X GBM Cank dam 2:30 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no

Collected: 1:20:2022 4PM Wet: NEG Dry: NEG, 3/21/2022



Subwatershed: <u>Spr Mill Run</u>		Outfall ID: <u>AZ21</u>	
Today's date: <u>3/22/2022</u>		Time: <u>10:15 AM</u>	
Investigator: <u>Falkenstein, Kohm</u>		Form completed by: <u>[Signature]</u>	
Temperature (F): <u>52</u>	Rainfall (in.): <u>Last 24 hours: 0"</u>	Last 48 hours: <u>0"</u>	
Latitude: <u>41° 14' 10" N</u>	Longitude: <u>73° 47' 30" W</u>	GPS Unit: <u>Garmin etrex</u>	
Camera: <u>Samsung Galaxy</u>		Photo ID: <u>GPS 133K e</u>	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> X Open Space	<input type="checkbox"/> Institutional	
<input type="checkbox"/> Ultra-Urban Residential	<input type="checkbox"/> Suburban Residential	Other: <u>Restaurant, Nail Salon, Macy Park</u>	
<input type="checkbox"/> X Commercial	<input type="checkbox"/> Known Industries:		

Notes (e.g., origin of outfall, if known): Recreational Road

LOCATION	MATERIAL	SHAPE	DIMENSIONS (ft.)	SUBMERGED
X Closed Pipe	RCP CMP	Circular	X Single	Diameter Dimension: In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
	PVC HDPE	Elliptical	Double	40" X 16"
	Steel	X Box	Triple	With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially Fully
Other:	Other:	Other:		
Open drainage	Concrete	Trapezoid	Depth:	
	Earthen	Parabolic	Top Width:	
	RP-PP	Other:	Bottom Width:	
In-Stream (applicable when collecting samples)				
Flow Present?	Yes	X No	If No, Skip to Section 5	
Flow Description (if present):	Trickle	Moderate	Substantial Standing Water	

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.		Tape measure
	Measured length	ft. in.		Tape measure
Time of travel	Sec		Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (LS)
Odor	No	Sewage Rancid sour Sulfide Other	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Brown Gray Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Traces	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables		Sewage (Total Paper, etc.) Solids Petroleum (oil sheen) Other	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g. possible rust or oil sheen) 3 - Some origin clear (e.g. obvious oil sheen, or floating sanitary material)
Does Not Include Trash?	Slight trash		

Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spillage Cracking or Chipping Paving Paint Corrosion	
Density/Strata	No	Oil Flow Line Paint Other	
Abnormal Vegetation	Moderate	Excessive Inhibited	
Poor pool quality	No	Odors Colors Flammable Oil Sheen	
Pipe benthic growth	no	Solids Excessive Algae Other	

Overall Outfall Characterization

X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection


1. Sample for the lab? Yes X No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? Yes X No If Yes, type: GBM Cank dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? some vegetation, little/no seen, live worms in water

Collected: Wet: Dry:



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Swamp Brook Storm Drain Outfall ID: A-543 Today's date: 4/29/2022 Time: 3:15 PM Investigator: Falkenstein, Kuhn Form completed by:		Outfall Reconnaissance Sheet																																																																																
Temperature: 71.5° F Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0" Longitude: 73° 55' 10" W GPS User: Common street GPS ILSK: w Camera Lensing Category: Photo: n																																																																																		
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OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the flow? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	No	Sewage Rancid/soil Petroleum gas Other: <input type="checkbox"/> Faint	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Clear Brown Gray Yellow Green Orange Red Other: <input type="checkbox"/>	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Clear	See severity: <input type="checkbox"/> None	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	no	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other: <input type="checkbox"/>	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g., possible soil or oil sheen) 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spillline Cracks or Chipmunk Peeling Paint Corrosion	
Debris/Strains	No	Other: <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	excessive	Inhibited	
Poor pool quality	No	Odors Colors Flammable Oil Sheen Other: <input type="checkbox"/>	
Pipe benthic growth	no	Slim Rust Rustic Brown Orange Green Other: <input type="checkbox"/>	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 3:49 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no Collected: 7/21/2022, JPM Wet: NEG Dry: NEG, 8/1/2022			

Subwatershed: Swamp Brook Storm Drain Outfall ID: A-278 Today's date: 4/29/2022 Time: 3:25 PM Investigator: Falkenstein, Kuhn Form completed by:		Outfall Reconnaissance Sheet																																																																																
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INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	n/a	Sewage Rancid/soil Petroleum gas Other: <input type="checkbox"/> Faint	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	n/a	Clear Brown Gray Yellow Green Orange Red Other: <input type="checkbox"/>	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	n/a	See severity: <input type="checkbox"/> None	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	no	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other: <input type="checkbox"/>	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g., possible soil or oil sheen) 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spillline Cracks or Chipmunk Peeling Paint Corrosion	
Debris/Strains	No	Other: <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	excessive	Inhibited	
Poor pool quality	n/a	Odors Colors Flammable Oil Sheen Other: <input type="checkbox"/>	
Pipe benthic growth	no	Slim Rust Rustic Brown Orange Green Other: <input type="checkbox"/>	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? Yes X No If Yes, type: OBM Cank dam			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no Collected: 7/21/2022, JPM Wet: NEG Dry: NEG			

Subwatershed: Swamp Brook Storm Drain Outfall ID: A-175 Today's date: 4/29/2022 Time: 3:35 PM Investigator: Falkenstein, Kuhn Form completed by:		Outfall Reconnaissance Sheet																																																																																
Temperature: 71.5° F Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0" Longitude: 73° 55' 10" W GPS User: Common street GPS ILSK: w Camera Lensing Category: Photo: n																																																																																		
Land Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> X Suburban Residential: <input checked="" type="checkbox"/> Other: <input type="checkbox"/> Commercial: <input type="checkbox"/> Known Industries: <input type="checkbox"/>		Water splatters/objects seen in water																																																																																
Notes (e.g., origin of outfall, if known): Esplanade Rd																																																																																		
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OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the flow? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	No	Sewage Rancid/soil Petroleum gas Other: <input type="checkbox"/> Faint	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Clear	Clear Brown Gray Yellow Green Orange Red Other: <input type="checkbox"/>	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Clear	See severity: <input type="checkbox"/> None	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	no	Sewage (Toilet Paper, etc.) Soda Petroleum (oil sheen) Other: <input type="checkbox"/>	1 - Few/light, origin not obvious 2 - Some indications of origin (e.g., possible soil or oil sheen) 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spillline Cracks or Chipmunk Peeling Paint Corrosion	
Debris/Strains	No	Other: <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	excessive	Inhibited	
Poor pool quality	No	Odors Colors Flammable Oil Sheen Other: <input type="checkbox"/>	
Pipe benthic growth	no	Slim Rust Rustic Brown Orange Green Other: <input type="checkbox"/>	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 4:00 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no Collected: 8/20/2022, JPM Wet: NEG Dry: NEG 8/24/2022			

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Saw Mill River Today's date: 4/26/2022 Investigator: Fabulous, Robin Temperature (F): 70 Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0" Latitude: Longitude: GPS Unit: Garmin strax GPS ILSK #:		Outfall ID: A272 Time: 1:15 PM Form completed by:		Outfall Reconnaissance Sheet
Camera: Samsung Galaxy Last Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: <input type="checkbox"/> Commercial: <input type="checkbox"/> Known Industries: Nail Salons, Restaurants		Notes (e.g., origin of outfall, if known): Route 9A		
LOCATION: X Closed Pipe MATERIAL: RCP CMP, PVC, HDPE, Steel, Other: SHAPE: X Circular, Elliptical, Double, Triple, Other: DIMENSIONS (IN): Diameter: 18" SUBMERGED: In Water: No, Partly Fully: No, With Sediment: No, X Partially Fully: No	Open drainage: Concrete, Earthen, rip-rap, Other: SHAPE: Trapezoid, Parabolic, Other: DIMENSIONS (IN): Depth: , Top Width: , Bottom Width:	Temp: 70 F pH: 6.5 units Ammonia: 1.0 mg/l		
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
	Flow depth	ft, in		Tape measure
	Flow width	ft, in		Tape measure
	Measured length	ft, in		Tape measure
	Time of travel	Sec		Stop watch

Outfall Reconnaissance Inventory Field Sheet Are Any Physical Indicators Present in the Flow? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	No	Sewage Rancid vomit Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	No	Clear Brown Gray Yellow Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	No	Sediment Suspended Solids Other:	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	No	Sewage (Toilet Paper, etc.) Subst Petroleum (oil sheen) Other:	1 - Few slight, origin not obvious (e.g. possible toilet or oil sheen) 2 - Some, indications of origin (e.g. obvious oil sheen, or floating sanitary materials) 3 - Some origin clear
Does Not Include Trash!	No		
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling Cracking or Chipping Peeling Paint Corrosion	outfall pipe outlet completely obscured by fallen rocks
Deposits/Stains	No	rust Oil: Flow Lines Paint Other: rust	
Abnormal Ventilation	No	X Exhausters Inhibited	
Poor pool quality	No	Odors Colors Fluctuating Oil Sheen	
Pipe bedline growth	No	Silt Scale Encrustations Algae Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? Yes No If Yes, type: OBM Calk dam			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? need to clear debris from pipe outlet Collected: Wet: Dry:			



Subwatershed: Saw Mill River Today's date: 4/26/2022 Investigator: Fabulous, Robin Temperature (F): 70 Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0" Latitude: Longitude: GPS Unit: Garmin strax GPS ILSK #:		Outfall ID: A272 Time: 2:43 PM Form completed by:		Outfall Reconnaissance Sheet
Camera: Samsung Galaxy Last Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: <input type="checkbox"/> Commercial: <input type="checkbox"/> Known Industries: Landscaper, Dry Cleaner, Veterinarian, Restaurants		Notes (e.g., origin of outfall, if known): Route 9A		
LOCATION: X Closed Pipe MATERIAL: RCP CMP, PVC, HDPE, Steel, Other: SHAPE: X Circular, Elliptical, Double, Triple, Other: DIMENSIONS (IN): Diameter: 30" SUBMERGED: In Water: No, Partly Fully: No, With Sediment: No, X Partially Fully: No	Open drainage: Concrete, Earthen, rip-rap, Other: SHAPE: Trapezoid, Parabolic, Other: DIMENSIONS (IN): Depth: , Top Width: , Bottom Width:	Temp: 70 F pH: 6.5 units Ammonia: 1.0 mg/l		
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
	Flow depth	ft, in		Tape measure
	Flow width	ft, in		Tape measure
	Measured length	ft, in		Tape measure
	Time of travel	Sec		Stop watch

Outfall Reconnaissance Inventory Field Sheet Are Any Physical Indicators Present in the Flow? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	No	Sewage Rancid vomit Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	No	Clear Brown Gray Yellow Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	No	Sediment Suspended Solids Other:	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	No	Sewage (Toilet Paper, etc.) Subst Petroleum (oil sheen) Other: solid light yellow floating deposit (possible food waste)	1 - Few slight, origin not obvious (e.g. possible toilet or oil sheen) 2 - Some, indications of origin (e.g. obvious oil sheen, or floating sanitary materials) 3 - Some origin clear
Does Not Include Trash!	No		
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling Cracking or Chipping Peeling Paint Corrosion	
Deposits/Stains	No	rust Oil: Flow Lines Paint Other: rust	
Abnormal Ventilation	No	X Exhausters Inhibited	
Poor pool quality	No	Odors Colors Fluctuating Oil Sheen	
Pipe bedline growth	No	Silt Scale Encrustations Algae Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Calk dam 4:55 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? need to remove trash from Det Basin Collected: 5/19/2022 4 PM Wet: NEG Dry: NEG 5/22/2022			



Subwatershed: Brown River/Barren Brook Today's date: 5/23/2022 Investigator: Fabulous, Robin Temperature (F): 58 Rainfall (in.): Last 24 hours: 0.1" Last 48 hours: 0.4" Latitude: Longitude: GPS Unit: Garmin strax GPS ILSK #:		Outfall ID: A274 Time: 1:15 PM Form completed by:		Outfall Reconnaissance Sheet
Camera: Samsung Galaxy Last Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: AHS Commercial: <input type="checkbox"/> Known Industries:		Notes (e.g., origin of outfall, if known): Alhambra stream		
LOCATION: X Closed Pipe MATERIAL: RCP CMP, PVC, HDPE, Steel, Other: SHAPE: X Circular, Elliptical, Double, Triple, Other: DIMENSIONS (IN): Diameter: 30" SUBMERGED: In Water: No, Partly Fully: No, With Sediment: No, X Partially Fully: No	Open drainage: Concrete, Earthen, rip-rap, Other: SHAPE: Trapezoid, Parabolic, Other: DIMENSIONS (IN): Depth: , Top Width: , Bottom Width:	Temp: 70 F pH: 6.5 units Ammonia: 1.0 mg/l		
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
	Flow depth	ft, in		Tape measure
	Flow width	ft, in		Tape measure
	Measured length	ft, in		Tape measure
	Time of travel	Sec		Stop watch

Outfall Reconnaissance Inventory Field Sheet Are Any Physical Indicators Present in the Flow? Yes No		RELATIVE SEVERITY INDEX (1-3)	
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Odor	No	Sewage Rancid vomit Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	No	Clear Brown Gray Yellow Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	No	Sediment Suspended Solids Other:	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	No	Sewage (Toilet Paper, etc.) Subst Petroleum (oil sheen) Other:	1 - Few slight, origin not obvious (e.g. possible toilet or oil sheen) 2 - Some, indications of origin (e.g. obvious oil sheen, or floating sanitary materials) 3 - Some origin clear
Does Not Include Trash!	No		
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	No	Spalling Cracking or Chipping Peeling Paint Corrosion	
Deposits/Stains	No	rust Oil: Flow Lines Paint Other: rust	
Abnormal Ventilation	No	X Exhausters Inhibited	
Poor pool quality	No	Odors Colors Fluctuating Oil Sheen	
Pipe bedline growth	No	Silt Scale Encrustations Algae Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: OBM Calk dam 1:04 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no Collected: 5/24/2022 4 PM Wet: NEG Dry: NEG 5/27/2022 1 PM			



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Airdley

Outfall Reconnaissance Sheet
Subwatershed: Brown Run/Savannah Brook
Today's date: 4/30/2022
Investigator: F. Kuhn
Temperature (F): 67
Rainfall (in.): Last 24 hours: 0.36" Last 48 hours: 0"
Latitude: 35.2782 Longitude: -84.5158
Census Tracting Category: Open Space
Land Use in Drainage Area (Check all that apply): Industrial, Ultra-Urban Residential, Suburban Residential, Commercial

Gave out 1 letter to resident 11 Cross Rd

Table with columns: LOCATION, MATERIAL, SHAPE, DIMENSIONS (DN), SUBMERGED, Temp, pH, Ammonia

Table with columns: PARAMETER, RESULT, UNIT, AVERAGE FLOW RATE (gal/min), EQUIPMENT

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are Any Physical Indicators Present in the Flow? Yes No
INDICATOR CHECK if Present DESCRIPTION RELATIVE SEVERITY INDEX (1-3)

Table with columns: INDICATOR, CHECK if Present, DESCRIPTION, COMMENTS

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? X Yes No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: OBM Cank dam 4:35 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
Collected: 10/9/2022 4 PM
Wet: NEG
Dry: NEG 10/9/2022



Outfall Reconnaissance Sheet
Subwatershed: Saw Mill Run
Today's date: 10/14/2022
Investigator: F. Kuhn
Temperature (F): 67
Rainfall (in.): Last 24 hours: 0.36" Last 48 hours: 0"
Latitude: 35.2782 Longitude: -84.5158
Census Tracting Category: Open Space
Land Use in Drainage Area (Check all that apply): Industrial, Ultra-Urban Residential, Suburban Residential, Commercial

Gave out 1 letter to resident 11 Cross Rd

Table with columns: LOCATION, MATERIAL, SHAPE, DIMENSIONS (DN), SUBMERGED, Temp, pH, Ammonia

Table with columns: PARAMETER, RESULT, UNIT, AVERAGE FLOW RATE (gal/min), EQUIPMENT

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are Any Physical Indicators Present in the Flow? Yes No
INDICATOR CHECK if Present DESCRIPTION RELATIVE SEVERITY INDEX (1-3)

Table with columns: INDICATOR, CHECK if Present, DESCRIPTION, COMMENTS

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? Yes No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 4:16 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
Collected: 10/9/2022 4 PM
Wet: NEG
Dry: NEG 10/12/2022



Outfall Reconnaissance Sheet
Subwatershed: Saw Mill Run
Today's date: 10/14/2022
Investigator: F. Kuhn
Temperature (F): 67
Rainfall (in.): Last 24 hours: 0.36" Last 48 hours: 0"
Latitude: 35.2782 Longitude: -84.5158
Census Tracting Category: Open Space
Land Use in Drainage Area (Check all that apply): Industrial, Ultra-Urban Residential, Suburban Residential, Commercial

Gave out 1 letter to resident 11 Cross Rd

Table with columns: LOCATION, MATERIAL, SHAPE, DIMENSIONS (DN), SUBMERGED, Temp, pH, Ammonia

Table with columns: PARAMETER, RESULT, UNIT, AVERAGE FLOW RATE (gal/min), EQUIPMENT

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET
Are Any Physical Indicators Present in the Flow? Yes No
INDICATOR CHECK if Present DESCRIPTION RELATIVE SEVERITY INDEX (1-3)

Table with columns: INDICATOR, CHECK if Present, DESCRIPTION, COMMENTS

Overall Outfall Characterization
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection
1. Sample for the lab? Yes No
2. If yes, collected from: Flow Pool
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Cank dam 4:10 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?
Sign dump back from pipe outlet
Collected: 10/16/2022 4 PM
Wet: NEG
Dry: NEG 11/17/2022



MS4 Annual Report Form

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SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Say Mill River Outlet ID: A255 Date: 11/19/2022 Time: 4:05 PM Investigator: Fakhroun, Kolin Form completed by: <i>(Signature)</i>		Outfall Reconnaissance Sheet Water main break on Ashford Ave east of uphill from A255 occurred 11/19/2022, resulting by Veolia, accounts for chlorine odor in runoff			
Temperature (F): 41 Rainfall (in.): Last 24 hours: 0" Longitude: Last 48 hours: 0" GPS Unit: Garmin strax GPS LMSK #:					
Camera: Samsung Galaxy Photo #:					
Land Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: NYS Thruway Commercial: <input type="checkbox"/> Known Industries: <input type="checkbox"/>					
Notes (e.g., origin of outfall, if known): Alameda					
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED	
X Closed Pipe	X RCP CMP	X Circular	X Single	Diameter: 12"	In Water: No
	PVC HDPE	Elliptical	Double		No
	Steel	Box	Triple		X Partially Fully
Other:	Other:	Other:	Other:	With Sediment: No	X No
Open drainage	Concrete	Trapezoid	Depth:		
	Earthen	Parabolic	Top Width:		
	rip-rap	Other:	Bottom Width:		
In Stream (applicable when collecting samples)	Other:				
Flow Present? X Yes	No				
Flow Description (if present):	Trickle	X Moderate	Substantial		
FIELD DATA FOR FLOWING OUTFALLS					
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	Liter		Route	
	Time to fill	Sec		Stop watch	
Flow #2	Flow depth	0" 2"	Pt. In	Tape measure	
	Flow width	0" 10"	Pt. In	Tape measure	
	Measured length	1' 2"	Pt. In	Tape measure	
	Time of travel	2.41, 3.89, 3.18, 2.47, 4.12, 3.31	Sec	Stop watch	

Subwatershed: Say Mill River Outlet ID: A256 Date: 11/19/2022 Time: 4:04 PM Investigator: Fakhroun, Kolin Form completed by: <i>(Signature)</i>		Outfall Reconnaissance Sheet			
Temperature (F): 42 Rainfall (in.): Last 24 hours: 0" Longitude: Last 48 hours: 0" GPS Unit: Garmin strax GPS LMSK #:					
Camera: Samsung Galaxy Photo #:					
Land Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: NYS Thruway Commercial: <input type="checkbox"/> Known Industries: <input type="checkbox"/>					
Notes (e.g., origin of outfall, if known): Alameda Ave					
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED	
X Closed Pipe	X RCP CMP	X Circular	X Single	Diameter: 12"	In Water: No
	PVC HDPE	Elliptical	Double		No
	Steel	Box	Triple		X Partially Fully
Other:	Other:	Other:	Other:	With Sediment: No	X No
Open drainage	Concrete	Trapezoid	Depth:		
	Earthen	Parabolic	Top Width:		
	rip-rap	Other:	Bottom Width:		
In Stream (applicable when collecting samples)	Other:				
Flow Present? X Yes	No				
Flow Description (if present):	Trickle	Moderate	X Substantial		
FIELD DATA FOR FLOWING OUTFALLS					
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	Liter		Route	
	Time to fill	Sec		Stop watch	
Flow #2	Flow depth	0" 3"	Pt. In	Tape measure	
	Flow width	1' 8"	Pt. In	Tape measure	
	Measured length	2' 6"	Pt. In	Tape measure	
	Time of travel	2.22, 1.19, 2.03, 1.56, 1.37, 1.75	Sec	Stop watch	

Subwatershed: Say Mill River Outlet ID: A211 Date: 11/19/2022 Time: 2:40 PM Investigator: Fakhroun, Kolin Form completed by: <i>(Signature)</i>		Outfall Reconnaissance Sheet			
Temperature (F): 42 Rainfall (in.): Last 24 hours: 0" Longitude: Last 48 hours: 0" GPS Unit: Garmin strax GPS LMSK #:					
Camera: Samsung Galaxy Photo #:					
Land Use in Drainage Area (Check all that apply): Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/> Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/> Suburban Residential: <input type="checkbox"/> Other: Known Industries, Dry Clean, Restaurant, Gas Station, Veterinary Hospital Commercial: <input type="checkbox"/>					
Notes (e.g., origin of outfall, if known): Route 9A					
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED	
X Closed Pipe	X RCP CMP	X Circular	X Single	Diameter: 36"	In Water: No
	PVC HDPE	Elliptical	Double		X Partially Fully
	Steel	Box	Triple		No
Other:	Other:	Other:	Other:	With Sediment: No	X No
Open drainage	Concrete	Trapezoid	Depth:		
	Earthen	Parabolic	Top Width:		
	rip-rap	Other:	Bottom Width:		
In Stream (applicable when collecting samples)	Other:				
Flow Present? X Yes	No				
Flow Description (if present):	Trickle	X Moderate	Substantial		
FIELD DATA FOR FLOWING OUTFALLS					
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT	
Flow #1	Volume	Liter		Route	
	Time to fill	Sec		Stop watch	
Flow #2	Flow depth	0" 3"	Pt. In	Tape measure	
	Flow width	2' 10"	Pt. In	Tape measure	
	Measured length	0' 6"	Pt. In	Tape measure	
	Time of travel	8.41, 15.03, 6.00, 9.87, 5.72, 7.00, 14.19, 14.4	Sec	Stop watch	

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	Slight Chlorine odor	Sewage Rancid sour Sulfide Other: Petroleum gas	X 1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	clear	Clear Brown Gray Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	clear	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	leaves	Sewage (Toilet Paper, etc.) Petroleum (oil sheen) Other:	1 - Few/light, origin not obvious 2 - Some, indications of origin (e.g. obvious oil slick, or floating sanitary materials) 3 - Some, origin clear (e.g. obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spalling Cracking or Chipping Flow Line Paint Corrosion	
Debris/Strain	No	Other: sediment	
Abnormal Vegetation	No	Eucalyptus Inhabited	
Poor pool quality	No	Odors Colors Sulfide Eucalyptus Algae Other:	Floatables Oil Sheen Other:
Pipe benthic growth	no	Brown Orange Green Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Calk dam 4:05 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? water main break Collected: 11/19/2022 4PM Wet: NEG Dry: NEG 11/28/2022			



OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	Faint chlorine	Sewage Rancid sour Sulfide Other: Petroleum gas	X 1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	clear	Clear Brown Gray Yellow Green Orange Red Other	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	Slight cloudy	See severity	X 1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	leaves	Sewage (Toilet Paper, etc.) Petroleum (oil sheen) Other:	1 - Few/light, origin not obvious 2 - Some, indications of origin (e.g. obvious oil slick, or floating sanitary materials) 3 - Some, origin clear (e.g. obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Spalling Cracking or Chipping Flow Line Paint Corrosion	
Debris/Strain	No	Other: sediment	
Abnormal Vegetation	No	Eucalyptus Inhabited	
Poor pool quality	no	Odors Colors Sulfide Eucalyptus Algae Other:	Floatables Oil Sheen Other:
Pipe benthic growth	no	Brown Orange Green Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Calk dam 4:10 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? check for water main break Collected: 12/4/2022 11 AM Wet: NEG Dry: NEG 12/6/2022			



OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET Are Any Physical Indicators Present in the Flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	Slight yellow	Sewage Rancid sour Sulfide Other: Petroleum gas	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Color	Slight yellow	Clear Brown Gray Yellow Green Orange Red Other	X 1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	clear	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables (Does Not Include Trash!)	no	Sewage (Toilet Paper, etc.) Petroleum (oil sheen) Other:	1 - Few/light, origin not obvious 2 - Some, indications of origin (e.g. obvious oil slick, or floating sanitary materials) 3 - Some, origin clear (e.g. obvious oil slick, or floating sanitary materials)
Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	no	Spalling Cracking or Chipping Flow Line Paint Corrosion	
Debris/Strain	no	Other: sediment	
Abnormal Vegetation	no	Eucalyptus Inhabited	
Poor pool quality	no	Odors Colors Sulfide Eucalyptus Algae Other:	Floatables Oil Sheen Other:
Pipe benthic growth	no	Brown Orange Green Other:	
Overall Outfall Characterization X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection 1. Sample for the lab? Yes X No 2. If yes, collected from: Flow Pool 3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Calk dam 4:07 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? Collected: 12/10/2022 4PM Wet: NEG Dry: NEG 12/20/2022			



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
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SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Saw Mill River		Outfall ID: A214		
Today's date: 1/20/2023		Time: 3:40 PM		
Investigator: J. Robinson, Kuba		Form completed by: <i>(signature)</i>		
Temperature (F): 45		Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0.26"		
Latitude: <i>(blank)</i>		GPS Unit: Garmin etrex		
Camera: Jamming Galaxy		Photos: <i>(blank)</i>		
Land Use in Drainage Area (Check all that apply):				
Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/>				
Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/>				
Suburban Residential: <input type="checkbox"/> Other: <input type="checkbox"/> <i>(Korean Industries, Dry Cleaners, Veterinarian, Restaurant, Laundromat)</i>				
Commercial: <input checked="" type="checkbox"/>				
Notes (e.g., origin of outfall, if known):				
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
X Closed Pipe	RCP CMP PVC HDPE Steel Other:	X Circular Elliptical Box Other:	X Single Double Triple Other:	In Water: No X Partly Fully No Sediment: No X Partly Fully
Open drainage	Concrete Earthen rip-rip Other:	Trapezoid Parabolic Other:	Depth: Top Width: Bottom Width:	
In-Stream	(applicable when collecting samples)			
Flow Present?	X Yes No			
Flow Description (if present)	Trickle X Moderate Substantial			
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.	114 gal/min	Tape measure
	Measured length	ft. in.		Tape measure
	Time of travel	Sec.		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET			
Are Any Physical Indicators Present in the flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Color	No	Sewage Rancid sour Sulfide Other:	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Odor	No	Clear Brown Gray Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	No	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	No	Sewage (Toilet Paper, etc.) Sticks Other:	1 - Some origin clear 2 - Some 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Does Not Include Trash?	No	Petroleum (oil sheen) Other:	1 - Few/light origin not obvious 2 - Some 3 - Heavy (e.g., possible slick or oil sheen)
Physical Indicators for Both Flowing and Non-Flowing Outfalls: Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Scuffing Cracking or Chipping Pestiles Paint Corrosion	
Discourts/Status	No	Obst. Flow Lines Paint Other:	none hauled filled with sediment
Abnormal Vegetation	No	Excessive X Inhabited	attractive vegetation overgrowth
Poor pool quality	No	Odors Stains Excessive Algae Other:	
Pipe benthic growth	No	Black Brown Orange Green Other:	
Overall Outfall Characterization			
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection			
1. Sample for the lab? Yes No			
2. If yes, collected from: Flow Pool			
3. Intermittent flow trap set? X Yes No If Yes, type: X OBM Calk dam 4 PM			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repair)? Collected: 1/20/2023 4PM Wet: NEG Dry: NEG 11/8/2023			



Subwatershed: Spring Brook Run		Outfall ID: A239		
Today's date: 1/20/2023		Time: 3:40 PM		
Investigator: J. Robinson, Kuba		Form completed by: <i>(signature)</i>		
Temperature (F): 45		Rainfall (in.): Last 24 hours: 0.96" Last 48 hours: 0.96"		
Latitude: <i>(blank)</i>		GPS Unit: Garmin etrex		
Camera: Jamming Galaxy		Photos: <i>(blank)</i>		
Land Use in Drainage Area (Check all that apply):				
Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/>				
Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/>				
Suburban Residential: <input type="checkbox"/> Other: <input type="checkbox"/> <i>(OLPH School, Korean Industries)</i>				
Commercial: <input checked="" type="checkbox"/>				
Notes (e.g., origin of outfall, if known):				
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
X Closed Pipe	RCP CMP PVC HDPE Steel Other:	X Circular Elliptical Box Other:	X Single Double Triple Other:	In Water: No X Partly Fully No Sediment: No X Partly Fully
Open drainage	Concrete Earthen rip-rip Other:	Trapezoid Parabolic Other:	Depth: Top Width: Bottom Width:	
In-Stream	(applicable when collecting samples)			
Flow Present?	X Yes No			
Flow Description (if present)	Trickle Moderate Substantial			
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.		Tape measure
	Measured length	ft. in.		Tape measure
	Time of travel	Sec.		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET			
Are Any Physical Indicators Present in the flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Color	n/a	Sewage Rancid sour Sulfide Other:	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Odor	n/a	Clear Brown Gray Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	n/a	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	n/a	Sewage (Toilet Paper, etc.) Sticks Other:	1 - Some origin clear 2 - Some 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Does Not Include Trash?	Some trash	Petroleum (oil sheen) Other:	1 - Few/light origin not obvious 2 - Some 3 - Heavy (e.g., possible slick or oil sheen)
Physical Indicators for Both Flowing and Non-Flowing Outfalls: Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Scuffing Cracking or Chipping Pestiles Paint Corrosion	
Discourts/Status	No	Obst. Flow Lines Paint Other:	none hauled filled with sediment
Abnormal Vegetation	Inhabited	Excessive X Inhabited	attractive vegetation overgrowth
Poor pool quality	n/a	Odors Stains Excessive Algae Other:	
Pipe benthic growth	No	Black Brown Orange Green Other:	
Overall Outfall Characterization			
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection			
1. Sample for the lab? Yes No			
2. If yes, collected from: Flow Pool			
3. Intermittent flow trap set? Yes No X No If Yes, type: OBM Calk dam			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repair)? Collected: Wet: Dry:			



Subwatershed: Saw Mill River		Outfall ID: A211		
Today's date: 1/20/2023		Time: 3:40 PM		
Investigator: J. Robinson, Kuba		Form completed by: <i>(signature)</i>		
Temperature (F): 52		Rainfall (in.): Last 24 hours: 0" Last 48 hours: 0"		
Latitude: <i>(blank)</i>		GPS Unit: L5K		
Camera: Jamming Galaxy		Photos: <i>(blank)</i>		
Land Use in Drainage Area (Check all that apply):				
Industrial: <input type="checkbox"/> Open Space: <input type="checkbox"/>				
Ultra-Urban Residential: <input type="checkbox"/> Institutional: <input type="checkbox"/>				
Suburban Residential: <input type="checkbox"/> Other: <input type="checkbox"/> <i>(Tire Store, Restaurant, Doctors' Office, Korean Industries)</i>				
Commercial: <input type="checkbox"/>				
Notes (e.g., origin of outfall, if known):				
LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
X Closed Pipe	RCP CMP PVC HDPE X Steel Other:	X Circular Elliptical Box Other:	X Single Double Triple Other:	In Water: No X Partly Fully No Sediment: No X Partly Fully
Open drainage	Concrete Earthen rip-rip Other:	Trapezoid Parabolic Other:	Depth: Top Width: Bottom Width:	
In-Stream	(applicable when collecting samples)			
Flow Present?	X Yes No			
Flow Description (if present)	Trickle Moderate Substantial			
FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (gal/min)	EQUIPMENT
Flow #1	Volume	Line		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	ft. in.		Tape measure
	Flow width	ft. in.		Tape measure
	Measured length	ft. in.		Tape measure
	Time of travel	Sec.		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET			
Are Any Physical Indicators Present in the flow? Yes No			
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Color	n/a	Sewage Rancid sour Sulfide Other:	1 - Faint 2 - Easily detected 3 - Noticeable from a distance
Odor	n/a	Clear Brown Gray Green Orange Red Other:	1 - Faint colors in sample bottle 2 - Clearly visible in sample bottle 3 - Clearly visible in outfall flow
Turbidity	n/a	See severity	1 - Slight cloudiness 2 - Cloudy 3 - Opaque
Floatables	n/a	Sewage (Toilet Paper, etc.) Sticks Other:	1 - Some origin clear 2 - Some 3 - Some origin clear (e.g., obvious oil slick, or floating sanitary materials)
Does Not Include Trash?	n/a	Petroleum (oil sheen) Other:	1 - Few/light origin not obvious 2 - Some 3 - Heavy (e.g., possible slick or oil sheen)
Physical Indicators for Both Flowing and Non-Flowing Outfalls: Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)			
INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	No	Scuffing Cracking or Chipping Pestiles Paint Corrosion	Small 6" pipe inserted into east end of pipe
Discourts/Status	No	Obst. Flow Lines Paint Other:	
Abnormal Vegetation	Inhabited	Excessive X Inhabited	
Poor pool quality	n/a	Odors Stains Excessive Algae Other:	
Pipe benthic growth	No	Black Brown Orange Green Other:	
Overall Outfall Characterization			
X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious			
Section 7: Data Collection			
1. Sample for the lab? Yes No			
2. If yes, collected from: Flow Pool			
3. Intermittent flow trap set? Yes No X No If Yes, type: OBM Calk dam			
Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repair)? Collected: Wet: Dry:			

east end of pipe

west end of pipe

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2 0 2 3
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SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

Subwatershed: Saw Mill River		Outfall ID: A274	
Today's date: 2/17/2023		Time: 3:30 PM	
Investigator: John		Form completed by: <i>(signature)</i>	
Temperature (F): 48	Rainfall (in.): Last 24 hours: 0.14	Last 48 hours: 0.14	
Latitude:	Longitude:	GPS Unit: Garmin etrex	
County: Livingston		Photo #:	
Land Use in Drainage Area (Check all that apply):			
Industrial		Open Space	
Ultra-Urban Residential		Institutional	
X Suburban Residential		Other:	
Commercial		Known Industries:	

Notes (e.g., origin of outfall, if known):

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
X Closed Pipe	PVC HDPE X Steel Other:	Elliptical Box Other:	X Single Double Triple Other:	In Water: No X Partially Fully With Sediment: No X Partially Fully
Open drainage	Concrete Earthen rip-rip Other:	Trapezoid Parabolic Other:	Depth: Top Width: Bottom Width:	

Temp	54	F
pH	6.8	units
Ammonia	0	mg/L

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (cfs)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	0' 3"		Tape measure
	Flow width	1' 10"	116.8 gal/min	Tape measure
	Measured length	1' 10"		Tape measure
	Time of travel	1.03, 2.91, 3.35, 3.39, 3.51		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	No	Sewage Rancid vomit Sulfide Other:	1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Color	Slight yellow	Clear Brown Gray Green Orange Red Other:	XI - Faint colors in sample bottle	2 - Clearly visible in sample bottle	3 - Clearly visible in outfall flow
Turbidity	clear	See severity	1 - Slight cloudiness	2 - Cloudy	3 - Opaque
Floatables - Does Not Include Trash!!	leaves	Sewage (Toilet Paper, etc.) Petroleum (oil sheen) Other:	1 - Few/light, origin not obvious	2 - Some indications of origin (e.g. possible milk or oil sheen)	3 - Some origin clear (e.g. obvious oil sheen or floating sanitary material)

Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	no	Scuffing Cracking or Chipping Paints Corrosion	
Deposits/Strains	no	Oil Flow Line Paint Other:	
Abnormal Vegetation	no	Encroachment Inhibited	
Poor pool quality	no	Odors Colors Flotables Oil Sheen Other:	
Pipe benthic growth	no	Brown Orange Green Other:	

Overall Outfall Characterization

X Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious


Section 7: Data Collection

1. Sample for the lab? Yes X No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? X Yes No If Yes, type: OBM Calk dam 4:00 PM

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? no
 Collected: 2:19:2023 1PM
 Wet: NEG
 Dry: NEG 2:20:2023



Subwatershed: Saw Mill River		Outfall ID: A273	
Today's date: 2/17/2023		Time: 3:30 PM	
Investigator: John		Form completed by: <i>(signature)</i>	
Temperature (F): 48	Rainfall (in.): Last 24 hours: 0.14	Last 48 hours: 0.14	
Latitude:	Longitude:	GPS Unit: Garmin etrex	
County: Livingston		Photo #:	
Land Use in Drainage Area (Check all that apply):			
Industrial		Open Space	
Ultra-Urban Residential		Institutional	
X Suburban Residential		Other:	
Commercial		Known Industries:	

Notes (e.g., origin of outfall, if known):

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
X Closed Pipe	RCP CMP PVC HDPE X Steel Other:	X Circular Elliptical Box Other:	X Single Double Triple Other:	In Water: No X Partially Fully With Sediment: No X Partially Fully
Open drainage	Concrete Earthen rip-rip Other:	Trapezoid Parabolic Other:	Depth: Top Width: Bottom Width:	

Temp	53	F
pH	6.5	units
Ammonia	0	mg/L

PARAMETER	RESULT	UNIT	AVERAGE FLOW RATE (cfs)	EQUIPMENT
Flow #1	Volume	Liter		Bottle
	Time to fill	Sec		Stop watch
Flow #2	Flow depth	1' 11"		Tape measure
	Flow width	1' 11"		Tape measure
	Measured length	1' 11"		Tape measure
	Time of travel	1' 11"		Stop watch

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Are Any Physical Indicators Present in the Flow? Yes No

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	no	Sewage Rancid vomit Sulfide Other:	1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Color	leaves	Clear Brown Gray Green Orange Red Other:	1 - Faint colors in sample bottle	2 - Clearly visible in sample bottle	3 - Clearly visible in outfall flow
Turbidity	cloudy	See severity	1 - Slight cloudiness	X2 - Cloudy	3 - Opaque
Floatables - Does Not Include Trash!!	Silk, leaves	Sewage (Toilet Paper, etc.) Petroleum (oil sheen) Other:	1 - Few/light, origin not obvious	2 - Some indications of origin (e.g. possible milk or oil sheen)	3 - Some origin clear (e.g. obvious oil sheen or floating sanitary material)

Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damages	no	Scuffing Cracking or Chipping Paints Corrosion	
Deposits/Strains	no	Oil Flow Line Paint Other:	
Abnormal Vegetation	no	Encroachment Inhibited	
Poor pool quality	Grey muds	Odors Colors Flotables Oil Sheen Other:	
Pipe benthic growth	no	Brown Orange Green Other:	

Overall Outfall Characterization

Unlikely X Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Could Pige: Double gas line installation in cut-de-vent - det excavation - installed into storm drain, seen at outfall pipe - problem resolving as work is completed


Section 7: Data Collection

1. Sample for the lab? Yes X No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? Yes X No If Yes, type: OBM Calk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? Collected:
 Wet:
 Dry:



MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition: SPDES ID:

Catch Basin Head Cleaning Routes: A = Ashford Ave H = Heatherdell Rd EV = Entire Village		Bulk Roadside Cleaning Route: Entire Village (litter and small brush)	Bulk Leaf Clean-up	
ROUTES	DATE	DATE	ROUTE	DATE
EV	3/24/22	3/11/22	EV	3/11/22
EV	4/8/22	3/15/22	EV	3/15/22
EV	4/19/22	3/22/22	EV	3/22/22
EV	5/2/22	3/25/22	EV	3/25/22
EV	5/19/22	4/1/22	EV	3/29/22
EV	6/3/22	4/18/22	EV	4/1/22
EV	6/16/22	4/22/22	EV	4/18/22
EV	7/19/22	4/29/22	EV	4/22/22
EV	8/22/22	5/6/22	EV	4/26/22
EV	9/6/22	5/10/22	EV	4/29/22
EV	9/22/22	5/13/22	EV	5/6/22
EV	10/25/22	5/17/22	EV	5/10/22
EV	10/27/22	5/20/22	EV	5/13/22
EV	12/6/22	5/23/22	EV	5/17/22
EV	12/14/22	5/27/22	EV	5/20/22
EV	12/21/22	5/31/22	EV	5/23/22
EV	12/28/22	6/3/22	EV	5/27/22
EV	2/21/23	6/7/22	EV	5/31/22
EV	3/7/23	6/10/22	EV	6/3/22
		6/20/22	EV	6/7/22
		6/24/22	EV	6/10/22
		7/8/22	EV	6/20/22
		7/11/22	EV	6/24/22
		7/26/22	EV	7/8/22
		7/29/22	EV	7/11/22
		8/2/22	EV	7/26/22
		8/5/22	EV	7/29/22
		8/15/22	EV	8/2/22
		8/19/22	EV	8/5/22
		8/22/22	EV	8/15/22
		9/2/22	EV	8/19/22
		9/16/22	EV	8/22/22
		9/30/22	EV	9/2/22
		10/7/22	EV	9/16/22
		10/11/22	EV	9/30/22
		10/24/22	EV	10/7/22

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition: Village of Ardsley

SPDES ID
NYR20A316

Catch Basin Head Cleaning Routes: A = Ashford Ave, H = Heatherdell Rd EV = Entire Village		Bulk Roadside Cleaning Route: Entire Village (litter and small brush)	Bulk Leaf Clean-up	
ROUTES	DATE	DATE	ROUTE	DATE
		10/28/22	EV	10/11/22
		10/31/22	EV	10/24/22
		11/4/22	EV	10/28/22
		11/8/22	EV	10/31/22
		11/14/22	EV	11/4/22
		11/28/22	EV	11/8/22
		12/2/22	EV	11/10/22
		12/5/22	EV	11/14/22
		12/9/22	EV	11/28/22
		12/13/22	EV	12/2/22
		12/16/22	EV	12/5/22
		12/20/22	EV	12/9/22
		12/23/22	EV	12/13/22
		12/28/22	EV	12/16/22
		1/17/23	EV	12/20/22
		1/30/23	EV	12/23/22
		2/3/23	EV	12/28/22
		2/6/23	EV	1/17/23
		2/10/23	EV	1/30/23
		2/14/23	EV	2/3/23
		2/17/23	EV	2/6/23
		2/24/23	EV	2/10/23
		2/27/23	EV	2/14/23
		3/7/23	EV	2/17/23
			EV	2/24/23
			EV	2/27/23
			EV	3/7/23

MS4 Annual Report Form

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Name of MS4/Coalition: Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6

Catch Basin Internal Clean-out

LOCATION	# of BASINS	DATE
Heatherdell Rd	6	7/18/22
Almena Carrier Felix	7	7/19/22
Huntley Dr	5	7/20/22
Markwood Rd	4	8/17/22
Euclid	5	1/31/23
Revloutionary Rd	2	2/16/23
Elm St	4	3/8/23

MS4 Annual Report Form

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Name of MS4/Coalition: Village of Ardsley

SPDES ID: NYR20A316

Incident Report

Location (st/cross st)	Description (water main, sewage)	Date incident	Repair (DPW or other)	Date repaired
McDowell Park	Water	3/29/22	T. Bucci	3/29/22
698 Saw Mill River Rd	Sewer	9/8/22	Greenburgh	9/8/22
27 Overlook Rd	Water	12/25/22	Suez	12/25/22
5 Agnes Circle	Water	1/28/23	Suez	1/28/23
27 Concord Rd	Water	2/5/23	Suez	2/5/23

MS4 Annual Report Form

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 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Road Repair

Location (St/cross St)	Material	Amount (tons)	Date of use
Heatherdell Rd	7F	6	4/8/22
Various	7F	3	4/11/22
Heatherdell Rd/ McDowell Park	7F	5	4/21/22
Various	7F	3	4/27/22
Curbs Beacon Hill Rd	Curb Mix	2	4/28/22
Various Curbs	Curb Mix	3	4/29/22
Various Curbs	Curb Mix	3	5/9/22
Various	7F	6	5/12/22
Euclid Ave	7F	3	5/24/22
Heatherdell Revloutionary	7F	3	6/2/22
Various	7F	4	7/27/22
Farm Rd	Curb Mix	3	8/8/22
Beacon Hill / Oakhill	Curb Mix	4	8/23/22
Various	7F	2	9/15/22
Elm St	7F	6	10/7/22
Heatherdell Rd	7F	3	11/29/22
Heatherdell Rd	7F	3	12/1/22
Euclid/ Heatherdell	7F	3	1/27/23
Heatherdell	7F	3	1/30/23
Euclid and Various	7F	3	2/8/23
Euclid	7F	2	2/10/23
Euclid	7F	3	2/16/23
Park /Orlando	7F	2	3/3/23

MS4 Annual Report Form

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Name of MS4/Coalition: Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6

Road Salt Application

Village (total) or Neighborhood (name)	Amount	Condition	Date applied
Village	10	Snow	3/9/22
Various	5	Snow	3/12/22
Village	10	Snow 2"	12/11/22
Village	10	Snow	12/24/22
Various	5	Ice Spots	12/27/22
Village	10	Snow	1/25/23
Village	10	Snow	1/31/23
Village	15	Snow 5"	2/27/23
Various	5	Ice Spots	3/4/23

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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Street Sweeping

Routes: HN = North of Heatherdell Rd
 HS = South of Heatherdell Rd
 AN = North of Ashford Ave
 AS = South of Ashford Ave
 BD = Business District, Route 9A/Center St

DATE	ROUTES
3/15/22	HN/HS/AS/AN/BD
3/22/22	HN/HS/AS/AN/BD
5/10/22	HN/HS/AN/AS/BD
5/17/22	AS/AN/BD
5/18/22	HN/HS/BD
5/24/22	AS/AN/BD
5/25/22	HN/HS/BD
5/31/22	AS/AN/BD
6/1/22	HN/HS/BD
6/7/22	AS/AN/BD
6/8/22	HN/HS/BD
6/14/22	AS/AN/BD
6/15/22	HN/HS/BD
7/13/22	HN/HS/BD
7/15/22	BD
7/19/22	HS/AN/BD
7/20/22	AS/AN/BD
7/26/22	BD
7/27/22	AS/AN/BD
8/2/22	HS/BD
8/3/22	HN/BD
8/9/22	AS/BD
8/10/22	AN/BD
8/30/22	HS/BD
8/31/22	HN/BD
9/1/22	BD

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
---	---	---	---	---	---	---	---	---

Street Sweeping

Routes: HN = North of Heatherdell Rd
 HS = South of Heatherdell Rd
 AN = North of Ashford Ave
 AS = South of Ashford Ave
 BD = Business District, Route 9A/Center St

DATE	ROUTES
9/7/22	AS/BD
9/13/22	HS/BD
9/14/22	HN/BD
9/20/22	AS/BD
9/21/22	AN/BD
9/27/22	HS/BD
9/28/22	HN/BD
10/4/22	AS/BD
10/5/22	AN/BD
10/11/22	AS/AN/HN/HS/BD
10/14/22	AS/AN/HS/HN/BD
10/24/22	AS/AN/HS/HN/BD
10/25/22	AS/AN/HN/HS/BD
10/26/22	HS/BD
10/28/22	AS/AN/HN/HS/BD
11/1/22	AS/AN/HS/HN/BD
11/2/22	AS/BD
11/8/22	AS/AN/HS/HN/BD
11/9/22	AS/AN/HS/HN/BD
11/14/22	AS/BD
11/15/22	HS/BD
11/16/22	AS/AN/HS/HN/BD
11/30/22	AS/AN/HS/HN/BD
12/5/22	AS/AN/HS/HN/BD
12/6/22	AS/AN/HS/HN/BD
12/7/22	AS/AN/HS/HN/BD

MS4 Annual Report Form

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Street Sweeping

Routes: HN = North of Heatherdell Rd
HS = South of Heatherdell Rd
AN = North of Ashford Ave
AS = South of Ashford Ave
BD = Business District, Route 9A/Center St

DATE	ROUTES
12/20/22	AS/AN/HS/HN/BD
12/21/22	AS/AN/HS/HN/BD
12/22/22	AS/AN/HS/HN/BD
12/29/22	AS/AN/HS/HN/BD
12/30/22	AS/AN/HS/HN/BD
1/17/23	AS/AN/HS/HN/BD
1/18/23	AS/AN/HS/HN/BD
1/24/23	AS/BD
1/26/23	AS/AN/HS/HN/BD
1/31/23	AS/AN/HS/HN/BD
2/6/23	AS/AN/HS/HN/BD
2/7/23	AS/AN/HS/HN/BD
2/9/23	AS/AN/HS/HN/BD
2/10/23	AS/AN/HS/HN/BD
2/14/23	AS/AN/HS/HN/BD
3/2/23	AS/AN/HS/HN/BD
3/6/23	AS/AN/HS/HN/BD
3/7/23	AS/AN/HS/HN/BD

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition: SPDES ID:

Vehicle Maintenance

Vehicle type	#	Wash or Maintenance (brief description)	Date serviced
PICKUP	2	PUT SPREADER BACK ON	3/9/22
SEDAN	94	BREAKS REGULAR SERVICE	3/14/22
SEDAN	98	REPLACED BATTERY	3/18/22
DUMP	3	REMOVED SPREADER STEAM	3/21/22
DUMP	6	REMOVED SPREADER STEAM	3/24/22
PACKER	12	RUN REGEN	3/25/22
TRACTOR	JD 1	REMOVED SNOWBLOWER	3/28/22
PACKER	16	ROUTINE SERVICE	3/30/22
SEDAN	96	ROUTINE SERVICE	3/31/22
PICKUP	7	REMOVE SPREADER STEAM	4/6/22
PICKUP	2	REMOVE SPREADER STEAM	4/7/22
PACKER	15	FIX FLAT TIRE	4/8/22
PICKUP	10	REMOVE SPREADER STEAM	4/11/22
SEDAN	98	ROUTINE SERVICE	4/15/22
SEADAN	92	JUMP STARTED CHARGED BATTERIES	4/19/22
PACKER	12	ROUTINE SERVICE	4/20/22
TRACTOR	HSQ	ROUTINE SERVICE	4/22/22
SWEEPER	SW	REPLACED BROOMS	4/25/22
SEDAN	HWY2	ROUTINE SERVICE	4/27/22
PACKER	15	JUMP START RECHARGE BATTERIES	4/28/22
PICKUP	9	REPLACE BRAKES	4/29/22
DUMP	5	STEAM CLEANED	5/2/22
PACKER	16	REPAIRED HYDRAULIC LEAK	5/4/22
PACKER	8	CHANGED 4 TIRES	5/6/22
SEDAN	HWY1	CHANGED WINDSHIELD	5/9/22
SEDAN	99	ROUTINE SERVICE	5/11/22
SWEEPER	SW	REPAIRED SWITCH	5/12/22
SEDAN	06	REPAIRED FLAT	5/13/22
DUMP	1	PREP SPREADER FOR SUMMER	5/16/22
TRACTOR	BW	REPAIRED BROKEN LINE	5/17/22
SEDAN	95	ROUTINE MAINTENANCE	5/18/22
PICKUP	6	NEW BRAKES	5/23/22
PAYLOADER	PL	SERVICED AND GREASED	5/25/22
SEDAN	97	ROUTINE SERVICE	5/27/22

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MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Vehicle Maintenance

Vehicle type	#	Wash or Maintenance (brief description)	Date serviced
PACKER	12	ADJUST BRAKES	5/31/22
PAYLOADER	PL	STEAM CLEANED	6/2/22
SEDAN	97	JUMP START CHANGE BATTERY	6/6/22
TRACTOR	JD	REPAIRED ELECTRIAL	6/7/22
SEDAN	90	OIL AND SERVICE	6/9/22
SWEEPER	SW	REPLACED BROOMS	6/10/22
PICKUP	2	OIL CHANGE SERVICE	6/13/22
SEDAN	98	OIL CHANGE SERVICE	6/14/22
DUMP	5	REMOVED PLATE SERVICED CHAIN	6/16/22
PACKER	8	ADJUST BRAKES	6/17/22
PICKUP	7	OIL CHANGE SERVICE	6/20/22
PACKER	16	CHANGED 4 TIRES	6/22/22
DUMP	1	WORKED ON BODY	6/24/22
SEDAN	HWY2	SERVICED OIL CHANGE	6/28/22
PICKUP	9	SERVICE CHANGE OIL	6/30/22
PICKUP	2	REPAIRED TARP	7/5/22
PACKER	12	CHECKED REGEN	7/8/22
PACKER	8	SERVICE GREASE	7/12/22
PICKUP	10	CHANGED TIRES	7/14/22
SWEEPER	SW	CHANGED OIL SERVICED	7/19/22
SEDAN	92	SERVICE OIL CHANGE	7/21/22
SEDAN	94	CHANGED FLAT TIRE	7/26/22
PACKER	16	HYDRAULIC LEAK	7/27/22
DUMP	3	SERVICE OIL CHANGE	8/1/22
PACKER	14	CHANGED 6 TIRES	8/3/22
PICKUP	10	SERVICE OIL CHANGE	8/4/22
PICKUP	9	CHANGED 4 TIRES	8/8/22
SWEEPER	SW	SWITCH ON DOOR	8/11/22
SEDAN	96	REPLACED BATTERIES	8/15/22
PACKER	15	BRAKES	8/17/22
SEDAN	BLDG	SERVICE AND OIL	8/22/22
SEDAN	95	DERVICE AND OIL CHANGE	8/24/22
PICKUP	4	REPLACED LIFT GATE	8/26/22
DUMP	1	PREPED FOR INSPECTION	8/29/22

Appendix page - 26

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Vehicle Maintenance

Vehicle type	#	Wash or Maintenance (brief description)	Date serviced
DUMP	5	PREPED FOR INSPECTION	9/2/22
DUMP	11	BULIT BOX FOR WOOD CHIPS	9/6/22
PACKER	15	PREPED FOR INSPECTION	9/8/22
PACKER	15	PREPED FOR INSPECTION	9/9/22
PICKUP	4	NYS INSPECTION	9/13/22
SEDAN	HWY 2	NYS INSPECTION	9/15/22
PICKUP	2	NYSINSPECTION	9/19/22
SEDAN	99	SERVICE INSPECTION	9/22/22
PICKUP	BUCKET	HYDRAULIC LEAK	9/23/22
DUMP	3	SERVICE SPREADER	9/27/22
DUMP	5	CHANGED 4 TIRES	9/30/22
SEDAN	96	NYS INSPECTION	10/3/22
DUMP	3	PUT SPREADER ON	10/6/22
TRACTOR	JD	SERVICE FOR WINTER	10/11/22
TRACTOR	HSQ	SERVICED FOR WINTER	10/13/22
TRACTOR	JD1	PUT SNOWBLOWER ON	10/14/22
TRACTOR	JD2	PUT SNOWBLOWER ON	10/14/22
DUMP	1	SERVICE SPREADER	10/20/22
SEDAN	94	NEW BATTERIES	10/21/22
PICKUP	6	SERVICED PUT SPREADER ON	10/26/22
PICKUP	10	SERVICED PUT SPREADER ON	10/27/22
PACKER	8	ADJUST BRAKES	10/31/22
PACKER	12	RUN REGEN	11/3/22
PACKER	16	SERVICE OIL CHANGE	11/9/22
DUMP	2	PUT SPREADER ON	11/14/22
DUMP	7	PUT SPREADER ON	11/17/22
PACKER	15	REPAIRED BROKEN HOSE	11/21/22
PICKUP	4	REPLACED CUTTING EDGE ON PLOW	11/28/22
PICKUP	7	REPLACED CUTTING EDGE ON PLOW	12/2/22
DUMP	5	REPLACED CUTTING EDGE ON PLOW	12/7/22
PICKUP	10	WASH-SNOW	12/12/22
PICKUP	6	WASH-SNOW	12/12/22
PICKUP	7	WASH-SNOW	12/12/22
PICKUP	2	WASH-SNOW	12/12/22

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MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID

Vehicle Maintenance

Vehicle type	#	Wash or Maintenance (brief description)	Date serviced
DUMP	3	WASH-SNOW	12/12/22
PACKER	16	REPLACE 2 TIRES	12/19/22
SEDAN	97	ROUTINE MAINTENANCE	12/22/22
SEDAN	90	REPAIRED HEADLIGHT	12/29/22
PICKUP	7	WASH-SALT	1/5/23
PICKUP	2	WASH-SALT	1/5/23
SEDAN	94	CHANGED BATTERIES	1/10/23
PACKER	16	REPLACED WINCH CABLE	1/12/23
PICKUP	9	REPLACED LIGHTS ON PLOW	1/20/23
PICKUP	2	WASH-SNOW	1/26/23
PICKUP	7	WASH-SNOW	1/26/23
PICKUP	6	WASH-SNOW	1/26/23
PICKUP	10	WASH-SNOW	1/26/23
DUMP	3	WASH-SNOW	1/26/23
DUMP	5	WASH-SNOW	1/26/23
SEDAN	HWY1	CHANGED 4 TIRES	1/31/23
SEDAN	92	JUMP STARTED	2/2/23
PICKUP	7	REPAIRED PLOW LIGHTS	2/3/23
PICKUP	10	PUT NEW CUTTING EDGE ON	2/27/23
TRACTOR	JD1	CLEANED	3/1/23
PICKUP	2	WASH-SNOW	3/1/23
PICKUP	7	WASH-SNOW	3/1/23
PICKUP	10	WASH-SNOW	3/1/23
DUMP	5	WASH-SNOW	3/1/23
DUMP	3	WASH-SNOW	3/1/23
PAYLOADER	PL	WASH-SNOW	3/1/23
PICKUP	2	REMOVED SPREADER	3/6/23

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

Village of Ardsley

SPDES ID:

N	Y	R	2	0	A	3	1	6
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Used Oil Storage Tank: (used oil pick up is documented in separate Highway Foreman file)										
Date:		5/4/2022								
Volume (gallons):		50 gal								
Condition:		good								
Motor Fluids:										
Date:		5/4/2022								
Volume (gallons):		50 gal	2 X 50 gal	50 gal	50 gal	50 gal	50 gal	50 gal	50 gal	
Type:		AW32	Exhaust	5W30	5W20	10W30	transmis	antifreeze		
(antifreeze, transmission, etc.)										
Condition:		good	good	good	good	good	good	good		
Solvents:										
Date:		5/4/2022								
Volume (gallons):		5 gal	5 gal	6 X 2 gal	2 X 2 gal	2 gal	1 cyinder	1 cylinder	1 cylinder	50 gall
Type:		sewer	salt away	diesel	windshield	hydraulic	air	oxygen	acetylene	truck wash
(alcohol, acetone, etc.)		solvent		cleanout	cleaner	fluid				
Condition:		good	good	good	good	good	good	good	good	good
Paint:										
Date:		5/4/2022								
Volume (gallons):		8 X 5 gal	2 X 1 gal							
Type:		traffic	latex							
(oil, latex, enamel, etc.)		paint								
Condition:		good	good							
Spill Kit:										
Date:		5/4/2022								
Condition:		good								
Fire Extinguishers: (there are five fire extinguishers in the Highway Garage facility)										
Date:		5/4/2022								
Condition:		good								
(Salt and Sand Storage and Use cataloged elsewhere)										

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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Used Oil Storage Tank:		(used oil pick up is documented in separate Highway Foreman file)				
Date:	12/5/2022					
Volume (gallons):	20 gal					
Condition:	updated improved containment system					
Motor Fluids:						
Date:	12/5/2022					
Volume (gallons):	12 X 1 gal	16 gal	50 gal	50 gal	50 gal	50 gal
Type:	trans fluid	80W90	15W40	5W30	5W20	10W30
(antifreeze, transmission, etc.)						
Condition:	good	good	good	good	good	good
Solvents:						
Date:	12/5/2022					
Volume (gallons):	50 gal	2 X 50 gal	50 gal			
Type:	antifreeze	diesel	good			
(alcohol, acetone, etc.)		exhaust fl	wash			
Condition:	good	good				
Paint:						
Date:	12/5/2022					
Volume (gallons):	6 X 5 gal	4 X 1 gal				
Type:	traffic	latex				
(oil, latex, enamel, etc.)	paint					
Condition:	good	good				
Spill Kit:						
Date:	12/5/2022					
Condition:	good					
Fire Extinguishers:		(there are five fire extinguishers in the Highway Garage facility)				
Date:	12/5/2022					
Condition:	good					
(Salt and Sand Storage and Use cataloged elsewhere)						

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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Appendix

<u>Page</u>	<u>Item</u>
1	Great SMR Cleanup Scout Village-wide Cleanup Ardsley Cares Cleanup
2	AHS Environmental Task Force Bicentennial Park Project Arbor Day Pascone Park Tree Planting Ardsley Cares Pascone Park Daffodil Bulbs
3	Pollinator Pathway/Westchester County Parks Foundation Invasive Vine Removal Welcome Back Ardsley
4 - 5	Literature and Item Distribution Log
6 - 15	Outfall Inspection Sheets 3/2021 - 3/2022
16 - 30	Department of Public Works Notices & Log Sheets 3/2021 - 3/2022
31 - 40	Local Newspaper Articles

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

FRIDAY, MARCH 18, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

Revitalization plan re-imagines downtown

By Kris Di Lorenzo

Tiffany Zerkala, deputy director of the Pace University Law and Urban Planning Center, and Manhattan-based land use and economic consultant Kevin Dworka spoke via Zoom to the Ardsley Village Board on March 7 about the consultants' Downtown Ardsley Revitalization Implementation Strategy (DARIS).

DARIS is an action plan for creating a village center at the heart of the town. It includes a list of projects and a plan to carry out the implementation phase of the Village's Comprehensive Plan approved in January 2021. Zerkala and Dworka were on the team, with Sco Solutions and Cleary Consulting, who in 2019 developed the plan.

DARIS includes an assessment of the downtown area, existing conditions, a list of property owners and vacant buildings and sites, renderings and descriptions of the projected downtown center.

Zerkala stated that "the current infrastructure doesn't create a walkable environment; there is a lack of housing, sidewalks, landscaping, parking, and urban design standards that DARIS provides a superior new urban development."

As part of an economic development strategy for the central business district, DARIS includes creating a Village Center Business Improvement District (BID) to encourage investment and provide the community with enhanced access to desired goods, services, and cultural activities.

The consultants urged the Village to take specific steps, first hiring a full or part-time junior urban planner, creating

a new zoning code for the Village Center, and conducting a feasibility study for converting the community center into a new Civic Center Building. They believe Center Street should be the focal point of the downtown district, "anchored" by the new civic center, a multi-use building with ground-floor retail space.

The consultants recommended hiring a land use consultant to help draft the new zoning code, press for mixed-use zoning for downtown, multi-family housing, and retail, commercial office, civic, and green space, with industrial uses south of Ashford Avenue.

DARIS wants the code to allow four-story buildings with ground-floor retail required for all multi-family buildings, require requirements for minimum lot area, yard, and side setbacks, and green infrastructure elements.

The Village is encouraged to hire a marketing and design consultant for help with branding, self-Village-owned properties, and to develop committees for the objectives of the new zoning code, and use site or lease proceeds to fund construction of the new center. The properties include the village hall site, Bridge Street parking lot, the new Mill Road/Arden West, and the new northeast and southwest corners of the village hall site.

DARIS also provides ideas for increasing walkability, installing more sidewalks, creating better access to the Saw Mill Parkway, and building a parking garage into a multi-family housing development, possibly on the village hall site.

Zerkala explained that DARIS "gives actions and guidance for the Village staff to move the next step forward, but also noted that it's a working document, subject to change, according to the economy and market conditions. However, she added, "We don't want this document to sit on a shelf. It's a guide, it has goals, and as you move forward in it and conditions change, you continue to look at it, refine it, and work with your staff on it."

Kaboolian assured Zerkala and Dworka that the Village government was "immediately working on zoning changes and will be addressing it in a month or two going forward."

Dworka and Kaboolian had another exchange, about the intersection of Ashford Avenue and Saw Mill River Road. Dworka said that since the Village-owned properties at the corners (Siliman Park and the parking lot) were "in play," mixed-use development might be a better use of those locations, he argued the Village to send out an RFP and invite developers to take advantage of different land use regulations and zoning changes to create "a welcoming, mixed-use development linking both sides of Ashford Avenue and inviting people to continue onward into the village."

Kaboolian affirmed that the Village is seeking a branding strategy. On March 16, he told the Enterprise, "We are actively looking to put out RFPs (requests for proposals) for a marketing or branding person to start creating the vision we want for the village how we want the village to be portrayed."

work, now limited mostly to single-family homes, by creating other housing for a diverse population, including people without families, recent graduates, and older people who want to age in place but can't afford homeownership or property taxes.

The junior urban planner who would be in charge of DARIS should have expertise in zoning, land use planning, and implementation, would liaise with merchants and the business community, and coordinate relationships with developers, among other functions. "It is not the staff for a board of trustees to get bogged down in," Dworka opined. Kaboolian said she liked the idea of an urban planner.

The "mix-up" vision for downtown is a picture of increased "street life" — more walking, less driving, and more parking for those who do drive; people dining out or taking workshop lunch at local establishments; strolling along sidewalks that lead to new shops, offices, businesses, recreational, or cultural activities; and creating new spaces to gather with friends — amenities during the Comprehensive Plan process.

Kaboolian expressed her own thoughts about the direction Ardsley may take. "Developers will come to the village and know what our vision is for this village," she said. "For these decisions, what do you want to see in 10 or 15 years?"

In any case, she concluded, the work would take 10 to 20 years. "I'm excited about it. It's not going to happen while I'm mayor, but at least I'll feel I had some part in getting the ball rolling."

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Ardsley Happenings

The next Ardsley Pollinator Parkway cleanup project, "Veggie Mania" is scheduled for Saturday, March 26, at the Public Works Facility. The cleanup will focus on removing invasive species and planting native plants.

The first cleanup will be at the Public Works Facility, followed by a cleanup at the Village Center. The cleanup will be held from 10 a.m. to 12 p.m.

The cleanup will be held from 10 a.m. to 12 p.m. on Saturday, March 26, at the Public Works Facility. The cleanup will focus on removing invasive species and planting native plants.

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'Veggie Mania' offers help for edible gardens

By Kris Di Lorenzo

"Veggie Mania" will offer a hands-on opportunity for residents to learn about growing their own food. The event will be held from 10 a.m. to 12 p.m. on Saturday, March 26, at the Public Works Facility.

The event will be held from 10 a.m. to 12 p.m. on Saturday, March 26, at the Public Works Facility. The event will focus on growing vegetables and herbs.

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FRIDAY, MARCH 18, 2022

Points of View FROM THE EDITOR

The arrival of spring on March 20 heralds the return of outdoor events, including two annual cleanups scheduled for the two rivers that define the Rivercoast.

On Saturday, April 23, will be the Great Saw Mill River Cleanup, organized by Groundwork Hudson Valley, a nonprofit based in Westbury that has spent decades leading efforts to remove trash along the Saw Mill River, and to replace invasive vegetation with native species.

Of the six cleanup locations, four will be in the Rivercoast — Fairport Avenue in Hastings, Lawrence Street at the border of Ardsley and Dobbs Ferry, Bridge Street Plaza in Ardsley, and the Great Hunger Memorial/Woodland Lake in Irvington. The remaining two will be in southwest Yorkers.

The ceiling fan (pictured above) and assorted construction debris were photographed on Feb. 19 on the dead end road off Lawrence Street, between the Saw Mill River Parkway and the South County Trailway. That dead end is a magnet for illegal dumping. In addition, users of the trail park there.

On Feb. 19, volunteers from Ardsley, Dobbs Ferry, and Hastings, as well as two residents of New York City, spent two hours logging invasive vegetation south of Lawrence Street. They also picked up trash.

Groundwork Hudson Valley has posted information about the Great Saw Mill River Cleanup on its website (groundwork.org), including links to register for each site. The cleanup will start at 10 a.m. and end at 1 p.m.

Next will be the Riverkeeper Sweep on Saturday, May 7. The deadline to organize a site is Monday, March 23. Registration for all of the sites will begin Friday, April 1. For more information, visit riverkeeper.org, check news and events, and then click events.

The sites usually include River Glen Cove in Hastings, Waterfront Park in Dobbs Ferry, and Seaside Hudson Park in Irvington. In 2021, there were 146 sites between New York City and upstate New York.

PAGE 8 — THE RIVERTOWNS ENTERPRISE
FRIDAY, APRIL 8, 2022

Ardsley Happenings

Volunteer for Westchester Parks Foundation's invasive plant cleanup at V.E. Macy Park on Saw Mill River Road (Route 9A) next Saturday, April 9, 10 a.m. - 1 p.m. Register by finding the event at ardsleyvillage.com/calendar. For questions, email volunteer@thepw.org.

Screening on Thursday, April 21, 6:30 p.m. via Zoom, of the short film "The Sacrifice Zone" followed by a countywide discussion about transitioning from trash incineration to sustainable, zero-waste alternatives. Visit ardsleycan.org/earth-day-2022 for the link.

Celebrate Earth Day by installing the new pollinator gardens at the Ardsley Public Library and preparing Siliman Park on Saturday, April 23, 10 a.m. - 12:30 p.m. or 1-3:30 p.m. Rain date: April 24. Visit ardsleycan.org/earth-day-2022 to register.

Ardsley Cares celebrates Earth Day with volunteer opportunities on Saturday, April 23, including gardening throughout the village from 10 a.m. - 3:30 p.m.; trash clean-up throughout the village from 11 a.m. - 2 p.m.; and rock painting at the high school from 11 a.m. - 2 p.m. Rain date: April 24. To sign up, visit https://bit.ly/3JwVnJ0.

PAGE 8 — THE RIVERTOWNS ENTERPRISE
FRIDAY, APRIL 8, 2022

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FRIDAY, APRIL 15, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

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Bamboo is gone. Ardsley Garden Club president Linda Koil uses bamboo during an invasive vegetation removal effort that the Westchester Parks Foundation held at V.E. Macy Park on Saturday, April 9.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

FRIDAY, APRIL 15, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

Revisions to zoning code seek to spur revitalization

By Kris Dillman

Ardsley residents will have a chance to weigh in on proposed amendments to the village code — specifically changes to the General Business (B1) and Residential Office (RO) zoning districts — at a public hearing this Monday, April 18.

The amendments will address permitted residential and commercial uses, building heights, and parking requirements in the downtown and transitional downtown/residential areas covered by those zones.

In a March 16 memo to Mayor Nancy Kabanoff and the village trustees, building inspector Larry Tomasso wrote, "...there are relatively minor amendments that I believe will help spur development in these districts by eliminating some development hurdles while bringing the code a step closer in line with the recently adopted comprehensive plan and the Downtown Ardsley Revitalization Implementation Strategy."

He also noted, "However, they are not meant to be exhaustive and are not a substitute for the major revisions to the code that will be necessary to move these plans forward."

According to the village code, "because existing single-family residential uses with frontage on arterial streets may be situated in a transitional location near commercial/development properties," the RO district was created "to both protect those existing residences from potentially objectionable commercial development while allowing limited types of compatible transitional business uses consistent with the residen-

tial character of the area."

Currently, in the B1 district, which includes Center Street and the municipal building, and has borders at American Legion Drive and the Saw Mill River, the code permits the operation of any type of retail store and shop in the general business district. The draft resolution to be discussed at the board meeting, if passed, would add the following permitted uses in the general business district: training or skill development not in a school or academic program, including but not limited to martial arts and dance studios, gyms, and exercise facilities, tutoring centers, and similar uses.

Building height limits in the B1 district would be increased from a maximum of 30 feet to a maximum of 40, and from a maximum of two stories above the grade plane to four. The maximum height of an accessory building would be increased from 15 to 20 feet.

Currently, when two or more different "uses" share the same parking facility or lots, if one or more of those establishments steps operating, the lot or one of parking spaces automatically ends. The proposed zoning change would have the joint use of parking spaces automatically end when a charge of use by one or more of the establishments occurs.

In the RO district, an east-based by Saw Mill River Road (Route 9A), V.I. May park, and the New Common Aqueduct, the proposed zoning changes would affect multifamily buildings, the major change being that in all such buildings, residential

uses would be permitted on the ground floor. Kabanoff explained to the Enterprise, "For the RO district... this makes the buildings economically feasible as well. If you can't get retail business in, the owners still want to rent the property."

Development requirements not presently specified in the code would be stated: maximum building height would be 40 feet, or four stories above the grade plane, and maximum building coverage can't exceed 40 percent of the lot area.

Other requirements state that in the RO district, all standards and requirements regarding permitted uses will be the same as those for the B1 and R3 (a large residential district stretching between multi-corridor Greenburgh to the junction of Heatherfield Road and American Legion Drive), except that no residential off-street parking in lots of parking.

These proposed amendments to the code evolved from local recommendations in the Downtown Ardsley Revitalization Implementation Strategy (DARIS) "working document" presented to the board on March 7 by consultants Kevin Dworkin and the Pace University Land Use Law Center. DARIS was developed in alignment with the comprehensive plan's goals and objectives of revitalizing Ardsley's underutilized and vacant properties, diversifying housing opportunities, and adopting more flexible zoning code standards.

Regarding DARIS, Village Manager Joe Cervino said, "It doesn't affect any existing uses. It does provide more flexibility and greater potential for the redevelopment of (landlord's) properties." Asked whether the zoning changes would affect traffic at the Ashford Avenue/9A intersection, he added, "The Village does not anticipate, at this point, any adverse impacts to traffic at that intersection."

Kabanoff offered another viewpoint on any changes in the traffic situation as the downtown area develops. "If you're going to create development that's going to potentially create housing, unless we have a much more robust transportation system, people are going to have cars. You have to think about this all the time... We are fortunate because we have two bus lines that go through the village... the #66, you catch right on Ashford Avenue, it takes you to the Dobbs Ferry train station. The #29 takes you to the Hartsdale station. I used to park at the McDowell Park parking lot to take that train. It's very doable, particularly if you work in New York City and have a regular work schedule."

The mayor is amenable about what the zoning changes, if approved, can mean for the village. "We excited to start the implementation of our comp plan by making some of these changes to our zoning code to make our development more robust and easier in our downtown area."

To view the comprehensive plan and DARIS, go to the new website: bit.ly/374f450

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, APRIL 15, 2022

Ardsley Happenings

Screening on Thursday, April 21, 6:30 p.m. via Zoom of the short film "The Scenic Zone," followed by a community discussion about transitioning from trash incineration to sustainable, zero-waste alternatives. Visit ardsley.org/corh-day-2022 for the link.

Celebrate Earth Day by installing the new pollinator gardens at the Ardsley Public Library and preparing Silliman Park on Saturday, April 23, 10 a.m.-12:30 p.m. or 1-3:30 p.m. Rain date: April 24. Visit ardsley.org/corh-day-2022 to register.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, APRIL 22, 2022

Ardsley Happenings

Celebrate Earth Day by installing the new pollinator gardens at the public library and preparing Silliman Park this Saturday, April 23, 10 a.m.-12:30 p.m. or 1-3:30 p.m. Rain date: April 24. Visit ardsley.org/corh-day-2022 to register.

Ardsley Cares celebrates Earth Day with volunteer opportunities on Saturday, April 23, including trash clean-up throughout the village from 11 a.m.-2 p.m. and rock painting at the high school from 11 a.m.-2 p.m. Rain date: April 24. To sign up, visit bits/bits/wvnl.

Groundwork Hudson Valley hosts the Great Saw Mill River Cleanup this Saturday, April 23, 10 a.m.-1 p.m. Visit groundwork.org to sign up to volunteer at a location in Ardsley, Dobbs Ferry, Hastings, or Irvington. Rain date: April 30.

The Ardsley GAYF Coalition and police department sponsor Drug Take-Back Day next Sunday, April 30, 10 a.m.-2 p.m. at Village Hall. Bring unwanted, unused and expired prescription or over-the-counter medication for disposal.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, APRIL 29, 2022

Ardsley Happenings

The Ardsley GAYF Coalition and police department sponsor Drug Take-Back Day this Saturday, April 30, 10 a.m.-2 p.m. at village hall. Bring unwanted, unused, and expired prescription or over-the-counter medication for disposal.

The garden club hosts a plant sale featuring annuals, herbs, and vegetable plants next Saturday, May 7, 9:30 a.m.-1 p.m. at the community center.

Join the Ardsley Pollinator Pathway program to install a pollinator demonstration garden at Anthony F. Vetran Park on Saturday, May 14. Register for a time slot, 10 a.m.-12:30 p.m. or 1-3:30 p.m. at ardsleypollinatorpathway.org. Rain date: May 15.

The next Veggie Mania Free Seedling Exchange hosted by the Ardsley Pollinator Pathway program is Sunday, May 15, 12:30 p.m. at the community center. Get free seeds and one-on-one vegetable gardening advice. Visit ardsleypollinatorpathway.org.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, APRIL 29, 2022



Carol Sommerfeld, Linda Aoki, Pierce Dillon, Noah Segal, and Melissa Chan work at the library.

Native plants take root at library and park

By Kris Dillman

Volunteers descended upon the Ardsley Public Library and Silliman Park at the southeast corner of Ashford Avenue and Saw Mill River Road (Route 9A), to plant native vegetation on Saturday, April 23, in honor of Earth Day.

The effort was spearheaded by the Ardsley Pollinator Pathway Project (PPP), which is part of Ardsley Cares by 2025, an initiative to reduce the village's carbon footprint.

The library project drew volunteers who ranged from age 6 to their 70s. It was led by Pollinator Pathway Committee chair, Carol Sommerfeld, and

club president Linda Keil, and Girl Scout troop leader Miriam Szabolcs, whose daughter Gabrea (Ardsley High School) Class of 2020 started the garden in 2019, and younger daughter seventh grader Calista, continued with her Scout troop.

Through the garden club, the Bronx River Scout Shore Audubon Society chapter awarded a \$3,300 grant to the PPP to create native gardens that support pollinators and birds.

Village Trustee Steve Edelstein led the Silliman Park effort, where Boy Scouts and their parents worked with other community members. Edelstein is the village board liaison to the town-

ship and the PPP. The Village funded the Silliman Park work.

Ardsley's Department of Public Works supplied the mulch, compost, wheelbarrows, shovels, water truck and other necessities for both projects, "and did much of the heavy lifting for us," Sommerfeld noted on April 25.

The point is to supply blooms, which means nectar and pollen, from April through late October to support our pollinators throughout the season. Sommerfeld explained, "Some of our best butterfly plants are purple-flowered, golden Alexander, heathloam, sedges, milkweed, black-eyed Susans, and coneflowers. We also planted some of the 10 best pollinator plants for bees

Gardens

and butterflies, such as mountain mint and anise hyssop. The diversity of the gardens will ensure our threatened specialized native bees are also supported."

The gardens will ultimately be full of perennial, though for the first few years they will incorporate pollinator-friendly yet deer-resistant annuals such as zinnias, cosmos, and salvia while the perennials become established.

Volunteers prepared garden beds at the library using what Sommerfeld calls the "lasagna" method.

"You place a inch of compost or leaf mulch on the planting area and water it, then place a thick layer of newspaper, 10 to 12 sheets, on the garden around the plants and water it thoroughly," she elaborated. "Place 3 inches of compost on top of the newspaper and water it again. Dig in the plants, place 3 inches of mulch on top of the garden and water it all again."

The upper garden to the left of the library entrance was a test of community effort.

"One of my favorite memories was at the end of the day when we had to mulch the large garden," Sommerfeld recalled. "We were all very tired, and spontaneously we formed three groups to create a mulch brigade. One group of Girl Scouts filled pots with mulch, a group of adults took the pots and brought them over to another Girl Scout group in the garden, who then spread the mulch through the garden. It was fast and such a great example of teamwork. We got the mulch done in no time and enjoyed teamwork at its best."

The volunteers at Silliman Park



Steve Edelstein works at Silliman Park.

expanded an effort that began in 2017, reuniting the overgrown area owned by Arthur Silliman, head of Ardsley's public schools from 1922-1958. The park comprises a wood-lined garden, a meadow, and Bramble Brook, where native trees and shrubs supplied by the New York State Department of Environmental Conservation's Trees for Initiatives program were planted.

"On Saturday we planted 144 perennials," Edelstein stated, listing black-eyed Susans, purple coneflowers, asters, and purple and yellow cosmos. "We estimated that we dug over 260 holes. We also planted some grasses, ground cover, and sedges. The major work was planting perennials right at the center, near the Ashford Avenue bus stop, so people can see it. When we filled in plantings at other spots,

we also planted additional shrubs — arborvitae, yew, juniper, inkberry, oak-leaf hydrangea — and moved some red twig dogwoods."

Edelstein also noted that the volunteers had to erect unwanted tenants. "We did take out thousands of dandelions — the invasion of the dandelion. We dug those out by hand to get down under them to try to get out the whole root."

"The ultimate goal," he said, "is to have something there that self-maintains. We'll attract colorful, fun places that people pay by every day, so they can have examples to look at and think about planting their own garden. That's really what the Pollinator Pathway is all about — to create patches of pollinator-friendly plantings all throughout the community."

MS4 Annual Report Form

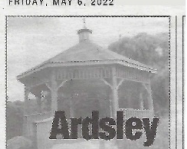
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SPDES ID
N Y R 2 0 A 3 1 6

Name of MS4/Coalition Village of Ardsley

PAGE 8 — THE RIVERTOWNS ENTERPRISE

FRIDAY, MAY 6, 2022



Happenings

The garden club hosts a plant sale featuring native and non-native annuals and perennials this Saturday, May 7, 9 a.m.-1 p.m. at the community center.

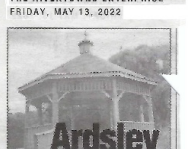
Join the Ardsley Pollinator Pathway program to install a pollinator demonstration garden at Anthony F. Vecerra Park next Saturday, May 14. Register for a time slot, 10 a.m.-12:30 p.m. or 1-3:30 p.m., at ardsleypollinatorpathway.org. Rain date May 15.

The next Veggie Mania Free Seedling Exchange hosted by the Ardsley Pollinator Pathway program is Sunday, May 15, 1:30-3 p.m. at the community center. Get free seeds and one-on-one vegetable gardening advice. Visit ardsleypollinatorpathway.org.

Join the Ardsley Pollinator Pathway program to install a monarch butterfly garden at Hart's Brook Park and Preserve next Saturday, May 21. Register for a time slot, 10 a.m.-12:30 p.m. or 1-3:30 p.m., at ardsleypollinatorpathway.org. Rain date May 22.

PAGE 8 — THE RIVERTOWNS ENTERPRISE

FRIDAY, MAY 13, 2022



Happenings

Join the Ardsley Pollinator Pathway program to install a pollinator demonstration garden at Anthony F. Vecerra Park next Saturday, May 14. Register for a time slot, 10 a.m.-12:30 p.m. or 1-3:30 p.m., at ardsleypollinatorpathway.org. Rain date May 15.

Ardsley Stormwater Management and Ardsley High School Environmental Club, in co-sponsor a "Stormwater-in-the-Park" information table on the theme "Keep Plastics Out of Our Waterways" this Saturday, May 14, 11 a.m.-1 p.m., at Bicentennial Park. Stop by rain or shine. Visit ardsley.village.com/stormwater-programs/news/stormwater-in-the-park.

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FRIDAY, MAY 20, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

Volunteers plant pollinator havens at parks

By Heidi Lupo

On a triangle of land near the food scrap recycling drop-off at Anthony F. Vecerra Park, volunteers planted a pollinator paradise on May 14. By mid-summer a rainbow of native plants will form a habitat for bees and butterflies.

The effort was led by Carol Sommerfeld of the Ardsley Pollinator Pathway Committee and Mal Marques of the RiverTown Environmental Advisory Council. Sommerfeld and Marques received permission from the Town of Greenburgh to install pollinator gardens at Veterans Park and at Hart's Brook Preserve on Ridge Road in Hartsdale. The planting at Hart's Brook will be May 21.

The Veterans Park garden will demonstrate how wildflowers can grow in full sun with poor soil. The Hart's Brook garden will be in a spot with no access to water and where fogging such as deer and ground squirrels. The garden will feature plants that are impervious to deer such as wood net and bee balm.

Greenburgh officials "were very enthusiastic about the idea," according to Sommerfeld. The Town agreed to back it up to \$1,000 to help pay for the gardens, which Sommerfeld and Marques designed.

The gardens also received a \$1,000 grant from the James Roosevelt State Chapter of Audubon, whose president, Stacy Morrissey, told the designers that Audubon would fund the gardens because "supporting pollinators means supporting bees." Audubon also funded pollinator gardens planted at the Ardsley Public Library in honor of Earth Day.

Part of the agreement with the Town of Greenburgh is that the volunteers will maintain the gardens. The Ardsley Pollinator Pathway Committee began recruiting volunteers this week, since both gardens are adjacent to the Village of Ardsley.



Mal Marques helps with the planting at Veterans Park on May 14.

Seven feet of systemic pesticides or "neonics" that can harm or kill pollinators. The scarcity of the plants drove some of the design decisions. Sommerfeld noted that not all garden plants are free of neonics. She recommends buying native plants only from retailers that state the plants are free of neonics.

The designs of the two gardens are different because the Veterans Park plot has a source of water while the Hart's Brook garden does not. For the food scrap drop-off site, a sign and line were installed for visitors to trim their food scrap pile.

In contrast, at Hart's Brook, "We're going to go with really tough natives that don't need much maintenance, and can withstand deer and groundhogs," Sommerfeld said. "It's probably more valuable to homeowners to see a garden where everything is totally impervious to plant pests."

In addition, they chose plants that will grow fast and take over the area where they're planted. The reason was, even if Hart's Brook is that there is a massive amount of invasive trees there," she said. "The new plants will grow in so densely they will prevent those invasive weeds from growing. And because we won't have water there, mums can't bug it out if you die."

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FRIDAY, MAY 27, 2022

Points of View

FROM THE EDITOR

Green thumbs up

Last weekend, despite temperatures in the 80s, volunteers turned out to pull invasive and plant native throughout the Ardsley area. On Saturday, May 21, projects included at Chautauque Park in Parkville, north of Ardsley; and at the Ardsley Public Library in Hartsdale, off Exit 12 of the Saw Mill River Parkway.

It's always nice to see the effort of the members of the Ardsley Conservation Advisory Board (CAB), co-chaired by David Lerner and Matthew Scott. Lerner, the CAB's president, was assisted by Sharon Korman, CAB chair. Scott, Lerner and Loretta of the Irvington Pollinator Pathway and the Green Irvington Land Trust.

The hard work was accomplished by volunteers, ranging from teens to adults, and by members of the Greenburgh Parks Valley Garden Tour, which consists of 100+ gardeners who are asked to write an article that supports the environment. Two of the team members are Julie Ortiz and Nadia Sator (pictured below).

The Chautauque Park project involved removing invasive and spreading weeds by the trail and at the entrance from the 100th Street apartment in Southfield. The trail passes native vegetation planted in 2021 and 2022.

In addition, 50 shrubs and trees were added to the 600 planted in 2021. The Town for this program of the New York State Department of Environmental Conservation supplied the plants as well as plastic tubes and wooden stakes to support them.

Last Saturday the Village of Ardsley had two volunteer events. One was at the Ardsley Public Library in Hartsdale, where the CAB members, including Julie Ortiz and Nadia Sator (pictured below), were planting native plants. The other was at the Ardsley Public Library in Hartsdale, where the CAB members, including Julie Ortiz and Nadia Sator (pictured below), were planting native plants.

Members were also held at Hart's Brook Park and Preserve in Hartsdale. The event was organized by Carol Sommerfeld, chair of the Ardsley Pollinator Pathway Committee, and Mal Marques of the RiverTown Environmental Advisory Council. The event featured a presentation on an after school program called Wildflowers with a Jaden. Carol Sommerfeld is at the bottom.

FRIDAY, MAY 27, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9



Carol Sommerfeld and Rio Mathews spread mulch at Hart's Brook Park and Preserve, on Ridge Road in Hartsdale, on Saturday, May 21. Sommerfeld, the chair of the Ardsley Pollinator Pathway Committee, and Mal Marques of the RiverTown Environmental Advisory Council led the volunteer effort to plant pollinator gardens at Anthony Vecerra Park on May 14 and at Hart's Brook Park on May 20-21. Native plants free of insecticides were used for both gardens. The Hart's Brook garden is surrounded by a mature weeping glorio tree as well as three mature dogwoods. The Town of Greenburgh operates the park, which it owns with New York State and Westchester County.



Carol Sommerfeld and Rio Mathews spread mulch at Hart's Brook Park and Preserve, on Ridge Road in Hartsdale, on Saturday, May 21. Sommerfeld, the chair of the Ardsley Pollinator Pathway Committee, and Mal Marques of the RiverTown Environmental Advisory Council led the volunteer effort to plant pollinator gardens at Anthony Vecerra Park on May 14 and at Hart's Brook Park on May 20-21. Native plants free of insecticides were used for both gardens. The Hart's Brook garden is surrounded by a mature weeping glorio tree as well as three mature dogwoods. The Town of Greenburgh operates the park, which it owns with New York State and Westchester County.

Time for mulch
Carol Sommerfeld and Rio Mathews spread mulch at Hart's Brook Park and Preserve, on Ridge Road in Hartsdale, on Saturday, May 21. Sommerfeld, the chair of the Ardsley Pollinator Pathway Committee, and Mal Marques of the RiverTown Environmental Advisory Council led the volunteer effort to plant pollinator gardens at Anthony Vecerra Park on May 14 and at Hart's Brook Park on May 20-21. Native plants free of insecticides were used for both gardens. The Hart's Brook garden is surrounded by a mature weeping glorio tree as well as three mature dogwoods. The Town of Greenburgh operates the park, which it owns with New York State and Westchester County.

PAGE 9 — THE RIVERTOWNS ENTERPRISE FRIDAY, MAY 27, 2022



The Ardsley Pollinator and Vegetable Garden Tour on Saturday, June 4, 10 a.m. - 1:30 p.m. at Hart's Brook Park and Preserve. The tour is free and open to the public. Visit ardsleypollinatorpathway.org.

Richard Adin is in charge at 22 Park Ave.

Tour welcomes public into native gardens

By Heidi Lupo

Seven private gardens will open to the public during a self-guided tour next weekend.

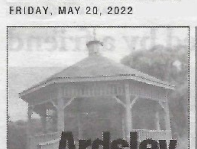
The Ardsley Pollinator and Vegetable Garden Tour on Saturday, June 4, 10 a.m.-1:30 p.m. at Hart's Brook Park and Preserve. The tour is free and open to the public. Visit ardsleypollinatorpathway.org.

Only two of the gardens are visible from the road. The other five are hidden behind trees and shrubs. The tour is a self-guided tour. The tour is a self-guided tour. The tour is a self-guided tour.

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PAGE 8 — THE RIVERTOWNS ENTERPRISE

FRIDAY, MAY 20, 2022



Happenings

The Ardsley Pollinator Pathway program will plant a monarch butterfly garden at Hart's Brook Park and Preserve this Saturday, May 21. Register for a time slot, 10 a.m.-12:30 p.m. or 1-3:30 p.m., at ardsleypollinatorpathway.org. Rain date May 22.

MS4 Annual Report Form

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Name of MS4/Coalition Village of Ardsley

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PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, SEPTEMBER 30, 2022



New England Aster grows in Rebecca Arkin's mailbox garden

Pollinator Pathway issues garden guides

By Kris DiLoreno

The Ardsley Pollinator Pathway Project has released three "Mailbox Gardens How-To Guides" — step-by-step instructions for creating pollinator gardens of different types and sizes.

"A mailbox garden" isn't strictly defined as a flowerbed surrounding a mailbox post. The guides, downloadable from ardsley-pollinator.org, provide the design, a list of necessary materials and their quantities, and a list of appropriate plants for a walkway, grass and soles, or pollinator garden — no mailbox required.

The smallest mailbox gardens start in containers, holding a recommended three to five plants, according to the chosen type of garden. A mini garden measures 5 feet in circumference, a small one is 8 feet, a large one, 12 feet. Each guide includes colorful layouts illustrated with suggestions for plants that attract pollinators. The walkway gardens' "Meet Your Plants" section comprises nearly four pages of selections, arranged in order of their blooming times.

Carol Sommerfeld, the driving force behind the Pollinator Pathway and a gardener since 1995, wrote the guides as a result of her experience providing free garden consultations. After each consultation, Sommerfeld prepared individual plans for the gardens. Dina Patterson, now a member of the Pollinator Pathway Steering Committee, and Sommerfeld had also requested garden consultations. Patterson was excited about getting started on her gardening but found the information overwhelming.

"She didn't know where to start," Sommerfeld wrote to the Enterprise, "so she had a great idea to create a simple 'recipe' that anyone could follow, step-by-step. I designed and wrote the guides and Dina provided the real-life feedback and tips on what people starting out would need to know." Patterson mentioned that many new families were moving to Ardsley, and though they wanted to help pollinators and the ecosystem, they needed the basics and a clear guide.

Rebecca Arkin made use of the guide for her walkway mailbox garden. Arkin moved to Ardsley about two years ago and expanded from indoor to outdoor gardening last year. After clearing invasive species from a section of her yard, she asked for a consultation about replacing them with native plants. After her meeting with Sommerfeld, Arkin said, "I got about a 60-page print-out

She sent me an extremely detailed explanation of a plan." Arkin, a former strategist for scientific technology, recognized that though she's an organized person, "You think you want to do it, and it's overwhelming."

She used the mailbox guide. "I did a proper mailbox garden — I have a real mailbox — a 6-foot circle." Arkin allowed pre-existing non-frame hedges to remain; its Moons have turned from white to pink. She installed purple, pink, and candy-striped pilonys yellow cosmos, purple New England asters, lilac perennials, echinacea, hummingbird mint, and black-eyed Susans that the wildlife thought was a delicious food source, so it didn't end up blowing.

Arkin also applied the plant suggestions to other parts of her property, and now has seven different gardens. Sommerfeld notes that mailbox gardens can also be square or oblong. "The guide is just that a guide on how to get started."

Sommerfeld and Patterson made sure to recommend native plants that can be found in local nurseries and even big-box stores, or bought as seedlings from online suppliers and shipped to one's home. Most of the plants Arkin bought were available at Rosedale Nurseries in Hawthorne. "The only way it could be easier," she said of using the guide, "is if there was an instant button. It's very straightforward."

The guides offer a choice between two ways of preparing a garden: digging or no digging. Digging requires organic compost, natural shredded pine bark mulch, and no guesstimate a guide tells how many bags of each will be needed for each size garden.

The "basic" method of planting calls for layering cardboard, newspapers, mulch, lawn clippings, compost or manure, locally sourced mulch, and the guide gives directions for creating each type.

The guides also include explanations of which species of pollinators use which types of plants as "hosts," tips for discovering what some people consider unwanted pollinators, such as wasps and hornets, and information on endangered pollinators.

"One of my personal goals with the gardens was to use not just native plants but also host plants, thereby supporting butterflies and moths in their adult and caterpillar stages," Sommerfeld stated. "I have found when performing free garden consultations that people really love to know specifically what they are supporting and how. That is why there is a section that describes how the plants specifically support pollinators."

Arkin has been seeing the fruits of her labor since planting her mailbox garden in May. "Every time I passed by this summer, there were at least a half-dozen bees, butterflies, and moths there," she affirmed. "I've seen a ton of bees (or wasps) switching to native plants this year. The adults are pollinating; they eat pollen and nectar."

Sommerfeld continued that the next mailbox guide will be for gardens to support monarch butterflies. On April 13, Ardsley Mayor Nancy Kabanoff signed the National Wildlife Federation Mayor's Monarch Pledge, which states, "in partnership with the Village is committed to and already taken many actions to help the monarch butterfly including increasing public awareness of the issue and encouraging residents to build gardens for monarchs... The Village is aware of the importance of saving monarchs and other pollinators, and that encouraging the expansion of native plantings will not only benefit monarchs but all native species, as well as providing natural and beautiful spaces for 'blue residents.'"

Arkin is pleased with her mailbox garden. "I just dug and mulched and hoped for the best," she volunteered. "We'll win any awards from any botanical society? Maybe not, but I'm getting two thumbs up from the birds and the bees."

FRIDAY, OCTOBER 7, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

Ardsley Cares Day resumes good-deed marathon format

By Kris DiLoreno

Ardsley Cares Day returns to full pre-pandemic fervor this month, with nearly two dozen activities to benefit more than 20 organizations, all taking place on Saturday, Oct. 29, between 8 a.m. and 1 p.m.

In 2021, to allow for social distancing, the all-volunteer event was spread out. Dubbed "Ardsley Cares All Year," each month was devoted to a specific activity. In 2020, the day devoted to good deeds was canceled.

Sponsored by the PTA since 2008, Ardsley Cares Day this year is reaching out to communities as disparate as the residents of senior living complexes, animal shelters, and the Andrus Children's Center.

Helmed by co-chairs Melissa Iannuzzo-Feldman, Linda Lipka, and Sarika Chawla, Ardsley Cares Day organizers have posted online guidance for which kinds of donations are suitable for which organizations. There are also online sign-up sheets for volunteers to choose shifts for clothing, food, and toy drives; cleanup programs and outdoor beautification projects; and direct donations.

Once again, children can volunteer to play sports and games with special needs children at the Andrus Field; the Youth Movement Against Alzheimer's (YMAA) can work on crafts with Ardsley seniors; and at the end of the final shift, those with driver's licenses will caravan to some of the organizations that are

recipients of the clothing, canned goods, books, sporting equipment, and other items collected during the day.

Animal shelters are in luck: At Ardsley Middle School, volunteers will bake dog biscuits for the Yonkers Animal Shelter, or make dog toys and catnip pillows for Paws Crossed in Elmford; others will bake dog biscuits at SPCA Westchester in Briarcliff Manor.

Several of the day's approximately 20 committees, each of which oversees an activity, are promoting environmental consciousness. "Go Green Thumb," sponsored by the Ardsley Garden Club, gives children of all ages the opportunity to spruce up and plant bulbs at the middle school's Pollinator Garden. The Greenburgh Nature Center in Scarsdale will hold separate children's and teen sessions to teach about sheet mulching, a way to combat invasive plants and help create a meadow. Pascoene Park will be the setting for an activity open to those 12 and over: a tour of the rain garden, an explanation of how to manage stormwater, pollution, and ecology — and daffodil planting in the process.

Lipka, Iannuzzo-Feldman, and Regina Dosso co-chaired the 2021 event. Iannuzzo-Feldman told the Enterprise on Oct. 3 that despite restrictions imposed by Covid-19, "We collected hundreds of toys from the community... at least 80 jackets, 50 pairs of boots. Hundreds of toiletry bags were made, hundreds of sandwich bags, at least 200 bags of sweat-pants, coats, gloves scarves, hundreds of sweatshirts. People set up Amazon wish lists and sent it to us at the [Ardsley-Secor Volunteer] Ambulance Corps, because we had so many donations."

"This year, from October 25 through October 29, each school will have a donation drop-off area," she continued. "A bus will be placed at the police station where you can drop off donations." The PTA will have need of more volunteers for sorting and packing career clothing and laptops for the Foster Teen Employment Network; gently used or new fall or winter clothing for infants to adults, for the Sharing Shelf; and kitchenware, bedding, towels, toiletries, and children's pajamas, for Hope's Door, a shelter for victims of domestic violence.

The Sharing Shelf is a Port Chester-based clothing bank founded to meet the basic material needs of low-income children and teens in Westchester County, and help them remain in school by providing them with personal hygiene items and appropriate clothing.

"We started planning months ago," Iannuzzo-Feldman noted. "This event has been in the works since last April." After volunteers sign up, she explained, in one or two weeks, they'll start receiving e-mails about what they need to do for their particular event. "We'll remind people to start collecting their items, and start reminding them about where to donate," she added.

The Ardsley Cares Day committee, especially its co-chairs, will be in constant motion well beyond October. Iannuzzo-Feldman stated, "We literally could not do it without each other." She and Lipka are chairing again this year because, she explained, "It's a great event; it's a great way for a family to come out and help families in need, to help others, which is why we're all doing it."

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Planting events at Chauncey Park and the park, Monday, Oct. 21, 2022

120 native plants added to Chauncey Park

One hundred and twenty native shrubs and trees were planted at Chauncey Park on Saturday, Oct. 15. The park is adjacent to the new Mill River Parkway, between the Alford Avenue Bridge to the north and River

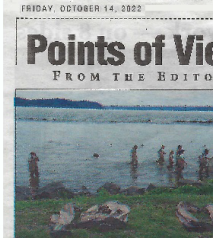
River Ferry Park to the south. The Erie County Conservation Department, which is charged with maintaining, even ecological restoration sites along the new Mill River between Vanora and Mount Pleasant, Groundwork Hudson Valley also hosts the annual Great New Mill River Cleanup.

The plants were supplied by Trees for Tots, a program of the New York State Department of Environmental Conservation, Hudson Valley Field Office. Beth Swisher, the regional leader coordinator for the Hudson

River Ferry Program, was on hand in addition. The DEC supplied plastic tubes to protect the plants, wooden stakes to hold up the tubes, and many support stakes.

The shrubs and trees were added to 65 planted in October 2020, 75 planted in May 2021, and 65 planted in October 2021. In addition, invasive regulation has been removed from the site, including knotweed, mugwort, multiflora rose, and porcelain berry.

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Public meeting at the Hudson River State Park on Oct. 14, 2022

Weight in on water

Tuesday, Oct. 18, is the 50th anniversary of the passage of the Clean Water Act, which was approved by Congress, signed by President Richard Nixon, and then approved again by Congress, which overrode the veto.

Tuesday, Oct. 23, is the deadline to submit input to the New York State Department of Environmental Conservation (DEC), which will use the info to decide whether to reclassify certain saline waters, including the Hudson River north of the Bear Mountain Bridge and tributaries such as the Saw Kill River.

The DEC classifies waters based, in part, on how people use them. Waters used for activities that involve recreation or transportation, such as swimming, must meet higher standards under the Clean Water Act. To meet such standards, investments in infrastructure and wastewater infrastructure could be necessary.

To collect data in time for the Oct. 23 deadline, DEC invites you to take the online survey at <https://dec.ny.gov/clean-water-act>. The survey will be open until Oct. 23. The public can click on a page and then fill out a survey about how they use the water in their location.

Last month, a small blue flag from DEC/CEQR included an estimate that Hudson River watershed communities need to spend \$3.1 billion to repair or upgrade wastewater infrastructure.

The watershed's surface water flows combined sewage overflow, which results from stormwater and wastewater using the same pipes, during dry weather, wastewater flows to treatment plants before being discharged into the Hudson. During heavy rain, stormwater and wastewater mix and then bypass the treatment plants to avoid overflowing them. Westchester County owns the closest treatment plant to the DEC watersheds located in Tarrytown.

Every month from May to October, DEC/CEQR, the Lianou, Debrah Barry Observatory, and Upper College test water collected between New York City and Westford for fecal contamination. DEC/CEQR posts the results to its website. The test will consider water being tested for fecal coliform, the most common, but not specific to the public to weigh in.

MS4 Annual Report Form

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Name of MS4/Coalition **Village of Ardsley**

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PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, OCTOBER 21, 2022



Red shakerberry in Linda Azzf's garden

Pollinator pros lay groundwork for winter

By Kim DiIorio
Ardsley's Pollinator Pathway cadre gave gardeners and would-be gardeners tips on how to prepare for winter — and see the results of their efforts in the spring — via a Zoom presentation on Oct. 12. PP, launched in March 2021, is a subcommittee of the Village's Climate Advisory Committee.

Members of PP and the Veggie Garden Xmas team provided guidance to follow in the coming months to protect pollinators, grow native plants, and produce vegetables. The first step in the process is contrary to what many homeowners do: maintaining a manicured lawn (which PP sites is the most irrigated open in America) by disposing of grass clippings, dead leaves and brush, tree stumps and logs, dead-heading plants, and cutting down stalks.

Instead, PP team member Linda Azzf urged her audience, "Leave your leaves." She recommended that rather than blowing or raking, use mulch leaves and other organic debris as mulch for cultivating plants and creating hospitable habitats for pollinators, first doing a final weeding and removing even the smallest invasive plants.

"Birds need leaf litter for shelter and to find insects during the winter," Azzf said. Also, some bees overwinter in stalks, under grasses and sedges, in animal burrows, and under logs.

For those who don't have the time or the will to engage in a labor-intensive process, PP highlighted the "Lazy Gardener" approach. For example, scraping the seeds out of a tomato or pepper rather than buying seeds at a nursery to save time and money.

To collect seeds from flowers, shrubs, and trees, Carol Sommerfeld, chair of the PP team, advised leaving an eye on plants after they've flowered — seeds are generally ready from four to eight weeks afterward. "I look for seed pods that are dry, brown, or bursting," she said. "On a dry day when seeds are ripe, they're easy to remove." Sommerfeld cautioned against using seeds that have fallen to the ground, because they're prone to mold and fungus.

Another "Don't" is collecting seed as plants from public lands or collecting from endangered species. The latter is a violation of the Environmental Conservation Law.

Winter is the time to plant native

seeds outdoors. "The easiest plants for seed collection," Sommerfeld noted, "are coneflowers, goldcrochols, asters, columbines, great blue lobelia, cardinal flower, phlox, black-eyed Susans, mistflower, penstemon, sunflowers, jewelweed, and grasses or sedges."

Regarding vegetables, she said, "... plant indoors before the last frost or directly in the ground after the first frost." Tomatoes, beans, peas, peppers, and lettuce seeds are easy to harvest and grow. To keep soil from losing nutrients in harsh winter weather, Linda Caldwell, of the Veggie Gardening Master, suggested planting cover crops such as red or sweet clover, rye, or oats in the fall, four weeks before the first frost.

PP team member Kathy Evers elaborated on the "Lazy Gardener" way of preparing or expanding a garden for spring through sheet composting, to plant without digging. After mowing grass as short as possible, one should leave the clippings, then "smother the grass" with at least six to eight sheets of newspaper, cardboard, or Ram board (made of 100 percent recycled paper) and a second layer of compost and/or wood chips, covering the area, and water thoroughly so the material is wet. She guaranteed that any gaps in the material would let grass grow through, requiring extra work in the spring to clean it up before planting.

Finally, the area should be covered with at least 6 inches of compost and/or small wood chips similar to mulch, then watered. A thick, compact layer of compost and/or mulch is necessary so "critters" have less ability to reach and shred the paper.

A backyard without a large yard can use small containers or planting boxes outdoors, using leaves to protect the soil, and screening or other type of barrier that allows light in and keeps rodents out. The pots must be kept out of direct sunlight, and soil kept moist in the spring; plants can be transplanted outside.

Sommerfeld pointed out reasons to collect and germinate one's own seeds: "To get a lot of plants easily, and it makes it easier for plants to adapt to changing climate conditions." The seeds will have no pesticide on them, either.

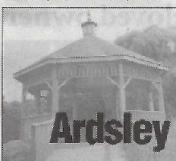
It's worth it. "We are making significant change, one yard at a time." They hold educational events, often virtual, and an annual PP Seed Swap.

"The Ardsley PP Seed Swap, our second annual, is a combination seed swap social event and celebration in December," Sommerfeld stated. "Our event is always in December — near the solstice. This allows us to collect the latest fall seeds and be ready to plant them in January — perfect timing. The free Seed Swap will be outdoors at Sommerfeld's house, 23 Orlando Avenue, on Dec. 10, 11 and 12, at the same time. There will be lots of seeds to be had," she added. "We can give advice and answer any questions about starting seeds or native gardening."

PP offers free on-site gardening consultations year-round. Sommerfeld has conducted 68 so far. Recordings of PP webinars and presentations, previous newsletters, "How To" guides, and other information is available on the PP website ardsley.pollinatorpathway.org/home.

In the next PP Zoom presentation, Nov. 9, 7:30-8:45 p.m., "Letting Go of the Lawn: Rewilding a Suburban Yard, Part 1," Kathy Evers will take viewers through the first phase of her journey to "rewild" her yard. Evers transformed her entire property in a year, spending the winter and early spring preparing for the "return to nature."

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, NOVEMBER 4, 2022



Ardsley Happenings

Ardsley Pollinator Pathway presents Kathy Evers to discuss "Letting Go of the Lawn: Rewilding a Suburban Yard, Part 1" on Wednesday, Nov. 9, 7:30-8:45 p.m. via Zoom. For details and to register, visit ardsleypollinatorpathway.org.

FRIDAY, NOVEMBER 4, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9

Volunteers show their heart during Ardsley Cares Day

By Tim Lamorte

Hundreds of volunteers turned out to serve their community and give during Ardsley Cares Day on Saturday, Oct. 29. The annual event returned to its single-day format after being canceled in 2020, and then turned into a series of efforts during the 2021-22 school year, both due to the pandemic. Ardsley Cares Day started in 2008.

For the hour, volunteers participated in community service activities in Ardsley as well as Breakell Manor, Double Ferry, Harland, and White Plains. The effort was led by co-chairs Melissa Lanzetta-Feldman, Linda Lipka, and Sergio Chaves, with the support of the Ardsley PTA.

In Ardsley, the hub was the middle school, where donated books, clothes, food, sports equipment, and sockets were sorted into bins. They were made for the Five Crosses Animal Shelter in Elmsted and dog biscuits were baked for the Volunteers Animal Shelter.

The goal was for Feeding Westchester, a nonprofit in Elmsford that supplies food pantries and soup kitchens. The tables set were for the Coachman Family Center, a homeless shelter in White Plains. The sporting goods were for Boys & Girls Clubs.

Fifteen-year-old Saraj Patel, a sophomore at Ardsley High School, led the package of the rollers, which consisted of items donated by her parents, who own the Ardsley Arms Wood, as well as two donors, and Ardsley School District teachers.

Most of the clothes were for The Sharing Shelf of Westchester, a nonprofit in Putt Chester that helps children and teens. In addition, professional clothing and laptop computers were collected for the Foster Teen Employment Network,

a nonprofit in Bee Brook that connects employers to teen's aging out of the foster care system.

Fifteen-year-old Isiah Alhazler, a sophomore at Ardsley High School, joined the effort to aid The Sharing Shelf during Ardsley Cares Day after starting her own collection for that nonprofit last month. She was assisted by her mother, Arlene.

Prior to Ardsley Cares Day, drop-off sites for donations were set up at Governor Wood Elementary School, Ardsley Middle School, Ardsley High School, and the Ardsley Police Department. Those drop-off sites included items for Herby's Door, a nonprofit that helps domestic violence victims.

Elsewhere in Ardsley, a village-wide cleanup was held and flower bulbs were planted at Pascone Park, the public library, and the corner of Saw Mill River Road and Revolutionary Road. There were also rock painting at the elementary school and a read-a-thon at the library.

Volunteers visited the Ardsley Child, dress Center in White Plains and three boxes for senior citizens — Anna Woodlands in Ardsley, Catharine Westchester in Double Ferry, and The Chelsea at Greenburgh. They also helped with sheet raking at the Greenburgh Nature Center and baked dog biscuits at SPCA Westchester in Breakell Manor.

Volunteers at the middle school were joined by Congressman Jamal Bowman, who helped prepare dog biscuits through State Senate Majority leader Andrew Stewart Cousins, Greenburgh Town Supervisor Paul Hertz, School Superintendent Ryan Schenfield, and Mayor Nancy Saboulon. During her campaign, Saboulon referred to Ardsley as "the little community with the biggest heart in the whole world."



Kyle and Arlene Alhazler (above) sort clothing for The Sharing Shelf. Arlene Martin (below) plants bulbs at the corner of Saw Mill River Road and Revolutionary Road with his wife, Lucia Ferr-Martín, and their children, 7-year-old Camila and 4-year-old Graham.



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Department of Public Works general foreman David DiGregorio and staff member Matt Meyers lower one of four new trees planted at Pascone Park on Oct. 22.

TIM LAMORTE/ENTERPRISE

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

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PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, NOVEMBER 4, 2022

Village solicits input on parks, recreation

By Kris DiLorenzo

Ardsley is asking residents to evaluate its parks and recreation services through an online survey (bit.ly/3D-4dQOE). The public is invited to critique present parks and recreation facilities and programs, and to share ideas about what they want to see in the future.

Feedback from the survey will be used to identify priorities and outline strategies for a Parks and Recreation Master Plan encompassing facilities, programs, and services. Weston & Sampson, a planning and design firm in Reading, Mass., and Perry Diana, a management consulting firm with several offices in the U.S., will help develop the master plan, which will guide decision-making and investment as part of the Comprehensive Plan.

According to the Comprehensive Plan, the Village can provide "safe, attractive, accessible, and well-maintained parks and recreational facilities to serve residents of all ages and physical abilities" by prioritizing funding for recreational assets, restoring and reconnecting Ardsley's public parks, creating new and renovating existing recreational spaces and facilities, reestablishing and improving public access to the Saw Mill River, and developing more recreational programming.

The 28-question survey is designed to identify the strengths and weaknesses of parks and recreation facilities and programs, and point out opportunities for improvement and expansion. As stated on the Village website, the mission of the Parks and Recreation Master Plan is "to promote the health and well-being of our community, environment, and economy by facilitating recreational opportunities and coordinating the enhancement of our parks, facilities, and natural resources now and into the future."

The master plan's goal is to "steward village resources in a sustainable, environmentally responsible, and prudent manner for the long term, and to resolve issues before they get worse or become too costly to repair."

YOUTH & COMMUNITY CENTER. The Village also has various pocket parks: Pocost Park, Silliman Park, Firefighter Park, Legion Park, Bicentennial Park, and Floyd Lichtenberg Park.

The survey asks respondents to rate the importance of courts (basketball, tennis, pickleball) and fields (baseball, softball, soccer), community gardens, community and neighborhood parks, open space and natural areas, playgrounds, picnic shelters, rental and event spaces, and trails and pathways. Respondents are also asked about the quality of those facilities.

Some questions are specific, such as facilities used and programs attended during the past 12 months. The survey also poses questions about the need for a new community center and what amenities would be desirable. Respondents can weigh in on what the Village should address in the next five to 10 years. They're also given lists of facilities and programs to rate from "not important" to "very important."

A multitude of programming ideas to be added or introduced is presented: bus excursions and overnight trips, environmental education and nature programs, a farmers' market, inter-generational programs, music and art in the park, programs for special needs individuals and for different age groups from preschool through senior citizens. Respondents can also tell the Village which activities and programs they want the community center to offer.

The Village wants to know what it can do to entice more people to use parks and recreation facilities, citing better maintenance, lighting, communication, customer service and staff knowledge, enforcement of ordinances, accessibility, pricing and user fees, safety and security measures, and even Wi-Fi connectivity.

Weston & Sampson gave the initial presentation of their proposal for a master plan to the village board on May 16. Their work will include natural resource management to protect,

set will incorporate findings from the Village's Natural Resources Inventory (NRI) analysis, which will identify areas of local importance such as water resources, bedrock geology and soils, scenic and cultural resources, climatological, vegetation, and wildlife.

The Weston and Sampson proposal notes village pollinator policies and procedures, recommending removal of invasive species, phasing out the use of non-native nursery species not appropriate for the region, and replacing them with native plantings.

Trustee Steve Edlitzner, who serves on the steering committee, summarized, "The purpose of the Parks and Rec. Master Plan is to move forward on implementing recommendations from our recently completed Village Comprehensive Plan. The Village wanted to ensure that we make the right investments so that we address the needs of our whole community and that we prioritize items of highest value or concern to our residents. In addition, the plan will inform our capital plan so that these improvements can be managed responsibly within our budget."

PAGE 12 — THE RIVERTOWNS ENTERPRISE FRIDAY, NOVEMBER 4, 2022

Points of View FROM THE EDITOR Back the bond act

On Election Day next Tuesday, Nov. 8, one side of the ballot will be filled with the names of candidates for Congress, Governor, State Senate, State Assembly, and the Ardsley, Dobbs Ferry, and Irvington boards of trustees. The village board elections are all uncontested.

On the other side of the ballot will be Proposition 1 to approve the New York State Clean Air, Clean Water, and Green Jobs Bond Act. In Hastings, there will also be a proposition to shift the election for the mayor and board of trustees from March to November. The \$1.2 billion bond act would provide \$1.5 billion for climate change mitigation, \$1.1 billion for restoration and flood risk reduction, \$650 million for open space land conservation and recreation, and \$650 million for water quality improvement and resilient infrastructure. The remaining \$300 million would be unallocated.

County, city, town, and village governments would be able to apply for funding from those categories. The bond act requires that 35 percent of the total funds be used in disadvantaged communities such as Yonkers, with a goal of 40 percent.

On the Hudson River, the bond act has the backing of Clearwater, Haverleeper, and Seneca Hudson, as well as Crowbrook Hudson Valley, the Hudson Highlands Land Trust, the Palisades Parks Conservancy, and many more organizations. For a full list, visit waterclearwaterandhudson.com.

In 2020, an earlier version of the bond act, for \$3 billion, was pulled from the ballot because of financial concerns caused by the pandemic. Gov. Kathy Hochul and the State Legislature then agreed to increase the funding, which must be approved by voters.

On Nov. 1, the Vote Yes for Clean Water & Jobs Coalition held a press conference in support of the bond act at Seneca Hudson Park at Peekskill Landing. Those supporters ranged from representatives of nonprofit to representatives of labor unions.

In a statement issued after the press conference, Pete Lopez, the executive director of policy, advocacy, and science for Seneca Hudson, pointed out that "The Hudson Valley and New York State have come so far, but there is still more to do to protect clean drinking water, modernize infrastructure, and conserve world-class wildlife habitat for all to enjoy."

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Points of View FROM THE EDITOR Too far from zero

Instead of "waste," Garlin Chang of Hastings preferred to use the word "discards" during an online panel discussion moderated on the evening of Nov. 15.

The discussion was titled "Moving Westchester County Toward Zero Waste" and was hosted by the Westchester Alliance for Sustainable Solutions (WASS), of which Chang is a member. WASS was founded by Courtney Williams of Peekskill.

WASS wants to eliminate the need for the Wheelabrator incinerators in Peekskill. Except for recyclables, most of the material picked up by municipal sanitation departments in Westchester ends up at Wheelabrator, which is on the Hudson River, adjacent to the former Indian Point Energy Center. Westchester County has a contract with Wheelabrator that ends in 2029.

The discussion featured five experts, most of whom talked about zero waste efforts in other states such as California and Vermont.

In Westchester, the zero waste movement has led to the establishment of food scrap drop-off sites in recent years, including Veteran Park in Ardsley, the Farmers market in Irvington, and the departments of public works in Dobbs Ferry and Hastings. Westchester food scraps end up trucked to the Ulster County Resource Recovery Agency.

WASS wants to expand such initiatives. On its website (wastepeekskill.org) is a food scraps composting pledge for individuals who want to participate in backyard composting, food scrap recycling, and other reuse, reuse, and recycle efforts.

WASS also wants Westchester County to hire a zero waste consultant and has drafted a letter for businesses and organizations to sign (wastepeekskill.org/w/zero) and a resolution for municipal boards to pass (wastepeekskill.org/pdf/ZeroWasteResolution.pdf).

On Nov. 16, the office of Westchester County Executive George Latimer issued a press release titled "Westchester County Leads the Way on Recycling Efforts!" The press release touted that the amount of residential trash collected had decreased from 495,659 tons in 2003 to 390,243 tons in 2021, and that the annual recycling rate has been at least 50 percent during that period.

Westchester County operates a Material Recovery Facility in Yonkers, which is for sanitation departments, and a Household Material Recovery Facility in Valhalla, which is for individuals. For more info about the latter, visit https://environment.westchester.gov.com/facilities/mrf/.

That 105,416-ton reduction in waste is admirable. So is the \$7,006,704-Save the County made from the sale of recyclables in 2021. That 390,243 tons, however, is too far from zero and too far from eliminating the need for incinerating waste.

THE RIVERTOWNS Ardsley The Hometown Newspaper of Hastings-on-Hudson, Dobbs Ferry, Ardsley and Irvington

VOLUME 47, NUMBER 37 • DECEMBER 9, 2022

Marketing pros to forge village's image

By Kris DiLorenzo

ARDSLEY — The Village of Ardsley has engaged Manhattan-based Crafted LLC to design a marketing plan that captures the community's personality and goals and promotes the benefits of living and working in the village. As expressed in the firm's agreement with the Village, the objective Oct. 17, that new brand identity "will stay true to the village's longtime values and character while simultaneously speaking to the future of the Village's intent and aspirations."

The project will cost up to \$75,000. Mayor Nancy Kaboollian explained to the Enterprise on Nov. 22, "This initiative is an implementation item in our Comprehensive Plan — to grow the visibility of the village through branding, marketing, outreach, and promotional efforts. We want to honor our history while paving the way for a new and modern image of the village. We want to create a village brand that helps attract more people to the village, investment, and development. We are excited to move this initiative from the camp plan forward."

The first step in the marketing is research into what Crafted terms the village's "ecosystem." Their research will include analyzing the branding or rebranding of other municipalities for comparison to the Village's vision and goals, delving into Ardsley's history, examining any available documentation, and conducting interviews with "key players" in the village to discuss business objectives, the current state of operations, and the gap between the present and the Village's ambitions for the future. Kaboollian noted that no interviews have taken place yet, and said, "We have not decided who will manage the project," she added. "We

will be soliciting input from the public."

The Crafted team — led by president Peter Mendler and creative director Greg Valvano — will provide guidance in developing Ardsley's "story" and clarifying its messaging. Part of that messaging will be a visual identity designed by a professional artist, including a village logo with various "taglines" to be used in print ads, public signage, street signage, banners, and all Village communications and social media, among other possibilities. Branding would encompass thematic signage, landscaping, monuments, lighting, electronic kiosks, public art, and other features to establish Central Hudson District (CHD) gateways.

Public improvements such as benches, tree plantings, monuments, brick pavers, and other upgrades would also contribute to the village's new image.

Crafted's strategy is in alignment with the Comprehensive Plan developed to support Ardsley's economic health; the plan was approved in January 2021, as stated in the plan, its vision for 2038 is "a focused marketing campaign with professional branding for the Central Business District effective use of village assets, and targeted support for local businesses and underutilized properties will drive new development, enterprises, and residents to Ardsley."

According to the Comprehensive Plan, a brand for the village "fosters a sense of community, celebrates the village's unique heritage, retains key market segments downtown, and makes the CBD an attractive place to do more visitation, investment, and development." Revitalization of the downtown is key, so the plan encourages the creation of a CHD merchants association to help market the village and promote its businesses as a means of increasing awareness of Ardsley's potential. Partnering with the River-Towns Chamber of Commerce is suggested as another way to promote Ardsley's businesses. The plan created a simple message: "Let's work together to bring more businesses and tenants into our downtown."

To address the traffic problem is posed to the downtown corridor is best led by the business community, with local government as a partner.

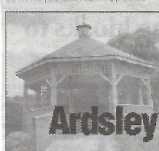
Other opportunities the plan recommends include publicizing redevelopment sites, using public venues for events, and promoting various areas in the village with events that temporarily relocate existing businesses' regular operations to other spots.

The Comprehensive Plan also urges positioning Ardsley as a "trail town," taking advantage of the South County Trailway by holding trail-related events. The plan acknowledges that the village has existing assets that can help build a brand to help attract new businesses and economic activity associated with sports, fitness, health, and recreation.

However, there are challenges to the branding/marketing campaign. The plan comments on "negative perceptions," highlighting resistance to residential development within the school district and the Village's reputation as a "challenging political environment in which to do development," stating that it will require effort to address the village's "image problem." Some solutions it offers are a business appreciation campaign, internal community education, and more digital media usage.

Crafted will set up a timeline and milestones for the branding process.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, DECEMBER 9, 2022

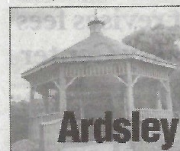


Happenings

The Ardsley Pollinator Pathway annual seed swap and social event this Sunday, Dec. 10, at 25 Orlando Ave., 11 a.m.-2 p.m. with hot chocolate, milled apple cider, baked goods and free native plant seeds. For details, visit ardsleypollinatorpathway.org. Rain/snow date: Dec. 11.

The Village partners with the Westchester Parks Foundation to remove invasive plants from trees at Macy Park this Saturday, Dec. 17, 10 a.m.-1 p.m. Tools and work gloves will be provided to volunteers. Register at ardsleypollinatorpathway.org to receive details about location.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, DECEMBER 16, 2022



Happenings

The Village of Ardsley partners with the Westchester Parks Foundation to remove invasive plants from trees at Macy Park this Saturday, Dec. 17, 10 a.m.-1 p.m. Tools and work gloves will be provided to volunteers. Register at ardsleypollinatorpathway.org to receive details about location.

MS4 Annual Report Form

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition Village of Ardsley

SPDES ID
NYR20A316

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Jana Egan watches as Carol Sommerfeld talks to Lindsay Moss about adopting a milkweed.

Pollinator Pathway beckons with free seeds

By Tim Lammert

The temperature lingered in the 30s as gardeners gathered to prepare for spring on Saturday, Dec. 10 — 11 days before the winter solstice.

The 3-hour get-together was the second annual seed swap hosted by Carol Sommerfeld, chair of the Ardsley Pollinator Pathway Committee, outside her home on Orlando Avenue. Hot apple cider, hot chocolate and assorted baked goods were also provided.

The Pollinator Pathway movement, which started in Connecticut in 2017, promotes pesticide-free native habitats that attract bees, butterflies, and birds. The movement also encourages reducing lawn and removing invasive vegetation. Pollinator Pathway programs exist in Hastings and Irvington as well.

The seeds at the swap, all of which were free, were supplied by Sommerfeld and Filippini. Hoagland of Bedford. Free plastic pots were also available. Hoagland is an administrator of the Westchester Pollinators group on Facebook and a co-founder of Healthy Parks, a nonprofit that co-hosted a seed swap at the Bedford Hills train station in October.

The Ardsley seed swap featured an

adopts-a-milkweed table, where four types of common, butterfly, daisy, and swamp — were available in pots of soil. Carl Soud, Lisa Cowan, a Bible teacher at Ardsley Middle School, staffed the table.

The other native perennial, milkweed seeds need to be outside during the winter, either in pots or in the ground, in order to germinate in the spring — a process known as stratification. Milk-

weed is the only plant on which monarch butterflies will lay their eggs.

Ardsley Mayor Nancy Kabbouian was the first to adopt a milkweed. Two days later, the Village of Ardsley learned that Kabbouian was added to the Mayor's Monarch Pledge Leadership Circle for 2022. The pledge is a program of the National Wildlife Federation. The Leadership Circle is for heads of government whose communities take eight or more actions to help monarchs. In Ardsley, there were 14 actions.

In July, the International Union for the Conservation of Nature (IUCN) listed migratory monarch butterflies as endangered and at risk for extinction due to habitat destruction and climate change. The monarchs winter in Mexico and California, and then migrate north to breed during the summer.

The Ardsley Pollinator Pathway Committee will host an invasive vine removal at Macy Park on Dec. 17, from 10 a.m. - 1 p.m.; a From Seed to Plant Workshop at the Ardsley Public Library on Dec. 28, from 11 a.m. - 12:30 p.m.; and the second part of an online presentation titled "Letting Go of the Lawn" on Jan. 18, from 7:30-8:45 p.m. To register for all programs, visit www.ardsleypollinatorpathway.org.

On Jan. 22, the Great Westchester Pollinators Meeting will be held at the Bedford Hills train station with a seed workshop from 2-4 p.m., followed by a meeting and presentation from 4-6 p.m.

FRIDAY, DECEMBER 23, 2022 THE RIVERTOWNS ENTERPRISE — PAGE 9



Hands-on

Mayor Nancy Kabbouian picks up trash along Saw Mill River Road (Route 9A) during a volunteer cleanup and invasive vine lop that the Westchester Parks Foundation held at V.E. Macy Park on Saturday, Dec. 17.

PAGE 8 — THE RIVERTOWNS ENTERPRISE FRIDAY, JANUARY 6, 2023



The existing site at 657 Saw Mill River Road

Court clears the way for gas station plan

By Kris DiLoreto

The Supreme Court of the State of New York Appellate Division, Second Judicial Department, handed down a court order on Nov. 22 in favor of the Village of Ardsley Zoning Board of Appeals (ZBA) and Thorwood Four Corners, LLC, granting Thorwood the right to pursue its application to build a gas station and convenience store at 657 Saw Mill River Road (Route 9A), south of the intersection of 9A and Ashford Avenue.

Thorwood leased the .53-acre property in March of 2016 from The Thorpe-Rickart Family Partnership and applied to the building department for a permit to construct two structures comprising eight new gas pumps with a canopy, 20 parking spaces, and an 1,800-square-foot convenience store. The application doesn't request any variances.

A service station is not a legal permitted use in the R-1 (Residence District), but a City station formerly operated on the site as a legal nonconforming use, and Thorwood wants to continue that use. However, the village code states: "Whenever a nonconforming use has been discontinued or ceases operation for a period of 6 months or more, or is changed to a conforming use, such nonconforming use shall not thereafter be reestablished."

Arnold, Rojajyan, who lives in 486 Ash-

ford Ave., abutting the site, had his petition to block Thorwood's plan dismissed. He had concluded that there was a lapse in operation — "Abandonment" — from February 2016 to April 2017, and therefore Thorwood couldn't build a gas station.

Thorwood maintained that the discovery of two previous oil spills contaminating the site, delays in construction equipment arriving, water problems arising during excavation, and interactions with the state Department of Environmental Conservation (DEC) regarding remediation of the soil and other issues delayed construction, but that the company had not abandoned the site, and had always intended to continue its use as a gas station.

Thorwood filed an application with the ZBA, seeking a determination as to whether the nonconforming use of the property as a gas station had been abandoned. The ZBA affirmed that the gas station had not been abandoned, and that the nonconforming use could continue.

Rojajyan filed a lawsuit in February of 2018 against the ZBA's decision, and on July 30 of that year the court dismissed his petition. He appealed the decision, the Village and ZBA cross-appealed, and the Nov. 22, 2022 order dismissed both the appeal and the cross-appeal. The court has also ordered that one, but of costs is awarded to the Village and ZBA, payable by the petitioner. Further, the order states: "In light of our determination, we need not reach the parties' remaining contentions."

"As a result of the court decision, they can proceed forward with the site plan approval process," Building Inspector Larry Lozano wrote in a Jan. 3 email to the Enterprise. "The proposal is basically the same as it has been with some modifications, but the plan is still subject to change based on RAK [board of architectural review] and village board comments."

FRIDAY, JANUARY 6, 2023 THE RIVERTOWNS ENTERPRISE — PAGE 9



Spreading seeds

Carol Sommerfeld, chair of the Ardsley Pollinator Pathway Committee, sprinkles water-cast seeds in a container for Hiba Hajar of Ducky Ferry and her 7-year-old son Ozan during a "From Seed to Plant" workshop at the Ardsley Public Library on Dec. 28. Participants also planted milkweed seeds and lima bean seedlings to bring home.

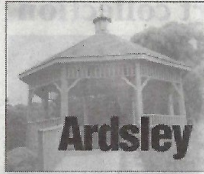
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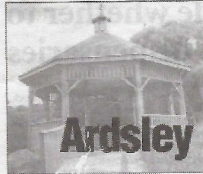
PAGE 8 — THE RIVERTOWNS ENTERPRISE
FRIDAY, FEBRUARY 3, 2023



Happenings

Ardsley Pollinator Pathway presents "Organic and Awesome Lawns" with national expert Paul Tukey discussing how to achieve a beautiful landscape without the use of chemicals and offering other how-to information on Thursday, Feb. 16, 7-8:30 p.m. via Zoom. For details and to register, visit ardsleypollinatorpathway.org.

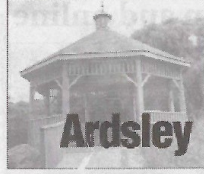
PAGE 8 — THE RIVERTOWNS ENTERPRISE
FRIDAY, FEBRUARY 24, 2023



Happenings

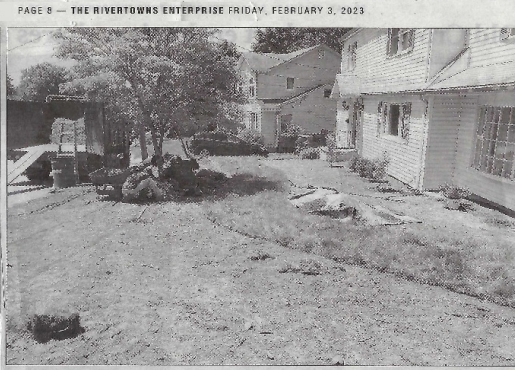
Volunteer to help Ardsley Pollinator Pathway, in partnership with the Saw Mill River Coalition, remove invasive vines from trees along the Ardsley section of the South County Trailway next Saturday, March 4, 10 a.m.-noon. Snow date March 5. For ages 12 and up. Register at ardsleypollinatorpathway.org.

PAGE 8 — THE RIVERTOWNS ENTERPRISE
FRIDAY, MARCH 3, 2023.



Happenings

Volunteer to help Ardsley Pollinator Pathway, in partnership with the Saw Mill River Coalition, remove invasive vines from trees along the Ardsley section of the South County Trailway this Saturday, March 4, 10 a.m.-noon. Snow date March 5. For ages 12 and up. Register at ardsleypollinatorpathway.org.



Sandra Chawla's front yard after much of the lawn was removed in June 2022.

Experts outline how less grass is greener

By Kris DiLorenzo
The Ardsley Pollinator Pathway recently conducted its second of a two-part Zoom presentation, "Letting Go of the Lawn: Reworking Your Suburban Yard," moderated by Carol Sommerfeld, chair of APP. The APP committee is a proponent of Ardsley CAN! by 2030, a campaign to reduce the village's carbon emissions.
"Letting Go of the Lawn" showed how to embrace sustainability through landscape practices. Part one took place last Nov. 8, part two on Jan. 18.
Committee member Kathy Evers shared her experience transforming her yard, mostly by hand, using native plants. She detailed the necessary steps to convert a conventional yard into an ecologically valuable garden: identifying and removing invasive plants and shrubs, planning the changes, observing how the sun moves around a property, and reducing the amount of grass by creating new beds for native plants and shrubs.
On Jan. 18, Evers continued her narrative and Sandra Chawla, a member of the Ardsley PTA executive board, discussed her own efforts as a newbie.
Evers' house sits on three-quarters of an acre. She outlined two methods of working the "lazy gardener" approach and DIY (do it yourself). The first requires subsoiling grass with alternating layers of soil and newspaper that turns into mulch, before anything can be planted. Her attempt wasn't entirely successful; plants took root, but weeds and grass grew through the layers, which weren't compact enough, and Evers was obliged to cut and weed before she could continue.
She decided that the DIY strategy was "pretty painful" but it was very effective if weeded extremely well.
The second strategy was to get help. "I consider myself someone who doesn't have a green thumb. I had no idea what I was getting myself into," Chawla said. "I had weeds growing everywhere, and I didn't know which were plants and which were weeds; they all looked fine to me." She referred to landscape designer and ecological landscape architect and environmental horticulturist and ecological landscape designer specializing in native plants. She is also the author of "The Pollinator Victory Garden."
In tearing up her "barren lawn," Chawla had to clear out nearly everything growing, leaving a bare stretch that didn't appeal to the neighbors.
However, she learned to appreciate the evolution of seasons. During winter, Eversman helped her plant "woolies" to prevent the area from looking "bare and dry and unpleasant," Chawla said. "So even in the dead of winter, there are some things of beauty there, and you can see what's happening."
Evers, though, Eversman evaluated the soil, determined that it was "highly compacted and water-phobic," and soil-level compost and other organic matter. "Otherwise," Chawla admitted, "it would have taken a couple of plants in and hoped for the best."
By the end of her project, Chawla had 70 different plants in her back and front yards, and was excited to watch their changes through the seasons.
Evers noted that it wasn't necessary to eschew all "ornamental" plants in these not-native-to-the-location, but invasives must be removed. When she bought her house, its backyard was covered with succulents, an invasive shrub, so the landscape professionals remove it. Regardless of the prevalent dictum, she left her hydrangeas and one rosewood bush alone. "The poleberries are good for animals, so in a meadow setting, it might be all right to have these here," Evers explained.
She was quick to dispel one popular misconception, "People hear 'native plants' and they automatically think 'mossy meadows.' But you can also have a more formal garden."
Evers noted that some plants, such as broad-leaved mountain plant, grow more quickly; her sedge plugs became a hedge. Evers also planted highbush blueberries and a fig tree. "Fig is not a native plant," she remarked. "But who doesn't love fresh figs?"
She grew some plants from seed, such as wildflowers and perennials, indoors under special lights, then transferred them outside. She had nearly a 100 percent success rate with plugs from local nurseries.
She discovered that ammonia tuberculi was easy to grow. "I also found white wood stork hidden beneath a big pile of weeds," she added, "which will

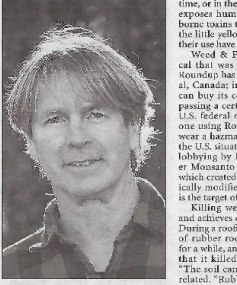
tolerate a range of conditions. It's a really nice plant to have in your garden."
"Gianters" were a problem, though. Rabbits and a groundhog consumed almost all her plants, except for Mexican gallardia (Starburst flower). "So I have a beautiful hillside of Mexican gallardia," Evers recounted. "That's not the worst thing. It was very pretty, and some of the plants were 3 feet tall by the end of the summer."
She cautioned against planting everything all at once, though. "This is a work-in-progress. We do what we can every year, and that's OK."
Sommerfeld defined the difference between native gardens and pollinator gardens. "Pollinators need flowers — as long as they're not invasive. In pollinator gardens, if there are non-natives, you have to take them out."
Confirming Evers' statement, she added, "Everything's an experiment we learn along the way. I also think there's so much joy in playing in the garden, whether it works or not."
Chawla said she learned a valuable lesson: "I was really scared of bees before this; they made me nervous and anxious, and all of a sudden, I was wanting these bees! Evers explained, "I had literally hundreds of bees buzzing all around. It was happy for them, and I was happy that they were having a good time, and I wasn't scared. They weren't coming after me, and my kids were OK with it, so I felt like there was some growth there!"
Sommerfeld offered some simple advice about planning: "Two-thirds for the birds. One-third for us. Try to stick to having the majority in your yard be native, because you're supporting the ecosystem. I think that's a very reasonable approach."
As for lawns, she declared, "Lawns are finer; there are just too many of them. Keep them to a minimum. Use them like an area rug, or an high-traffic area, and then have fun gardening in the rest of the space."
For design and plant information, all three women recommended visiting the New York Botanical Garden's native plants garden, joining Facebook groups such as Plants of the Northeast, or subscribing to Cathy Ludden's Greenburgh Nature Center blog, and mining the APP website for specific garden guides.

FRIDAY, MARCH 3, 2023 THE RIVERTOWNS ENTERPRISE PAGE 9

Organic lawn care expert shares insight into 'poop loop'

By Kris DiLorenzo
Paul Tukey, a national expert on organic lawn care, appeared in a Zoom session sponsored by Ardsley Pollinator Pathway on Feb. 16.

The New York Times has called Tukey "the godfather of the natural land care movement." He's also author of "The Organic Lawn Care Manual," publisher of four magazines, an HGTV show host, and was nominated for three Emmy Awards for his documentary "A Chemical Reaction."
Carol Sommerfeld, chair of the Ardsley Pollinator Pathway Committee, introduced Tukey, saying, "It looks at root-caused problems, which means we don't have to keep treating symptoms."
"A lot of people think going organic means you're giving up something," Tukey told his viewers. "Going organic is not going ugly; you can have the greenest lawn in the neighborhood if you know what you're doing." He urged his audience to "Learn to Think Like Mother Nature."
Tukey credits his grandmother, who ran a dairy farm in Maine with her husband, for instilling in him the concept of the "poop loop of life."
"The 'poop loop' was her shorthand for the cycle that begins with the soil and living plants. Dead plants and animal waste, including worm "castings," form soil from which new plants grow: even single-cell organisms eat, digest, and excrete. Animals consume the plants and excrete those excretions, used as manure, return to the soil, where they fertilize seeds, which grow



Paul Tukey

into plants, and the cycle continues.
"I'm trying to get rid of what I call the 'mooon approach,'" Tukey said of his mission. "The lawn care industry wants to sell more fertilizer, more watering devices. The reality is, if you put less on, the planet is going to be much more healthy."
That approach includes abandoning products such as the herbicides Roundup and Weed & Feed. "All of that product winds up in the ocean at some

time, or in the rivers," he explained, and exposes humans and animals to airborne toxins that don't disappear after the little yellow lawn signs warning of their use have been removed.
Weed & Feed contains a chemical that was used in Agent Orange, Roundup has been banned in Montreal, Canada; in Ontario, only farmers can buy its concentrated form, after passing a certification exam and test. U.S. federal regulations require anyone using Roundup professionally to wear a hazmat suit. Tukey doesn't see the U.S. situation changing, because of lobbying by Roundup's manufacturer Monsanto (now owned by Bayer), which created DDT and GMOs (genetically modified organisms). Roundup is the target of lawsuits.
Killing weeds organically is safer and achieves equal results, Tukey said. During a roofing project, he left a piece of rubber roof lining on the ground for a while, and accidentally discovered that it killed what was underneath.
"The soil can't breathe anymore," he related. "Rubber pond liner also kills plants quickly and efficiently. However, he noted, "You will have bare soil. Plant what you want to have: there's no right away."
Healthy lawns start with healthy soil, and Tukey urged his audience to have their soil tested for nitrogen content, the lawn's expected hours of sun, the amount of foot traffic, and ability to retain water. "You can't manage what you don't measure," he declared. "You're making a lawn, and you don't know what you're doing." To increase a lawn's sponge factor, he advised fertiliz-

ing with a compost layer that's not too thick, because it will smother the grass.
A lawn needs a deep root system, so grass and plants can "drink" there instead of water remaining on the surface where grubs will eat the grass, causing brown patches. He cautioned those who mow their lawns to keep the blades sharp. "A sharp blade cuts grass, a dull blade tears grass. Torn grass gets disease and insect infestations," he said.
Tukey revealed that clover is not a weed, but a "fertilizer factory," because when its roots break off, they feed other plants around it; clover is also good for bees. He told listeners that weeds are "mosesque"; dandelions or plantain weeds on a lawn means that's what the soil wants to grow. "If you're hoping the bare patch on your lawn is going to fill in, it's not. Weeds are going to fill it instead."
Other suggests of advice he dispensed: water lawns early in the morning; plant a buffer on sloping lawns to prevent any products leaching into any nearby water; use organic products made by Coast of Maine, Organic Mechanics, Purely Organic Lawn Food, and TruGreen; and combine the "poop loop of life."
For examples of organic horticulture, Tukey showed slides of Glenstone Museum in Potomac, Maryland, a "living classroom" on an all-organic 350-acre site that includes native meadows, a 3-acre organic lawn, restored streams and tributaries, forests, and more than 14,000 recently planted native trees. Tukey is Glenstone's director of environmental stewardship.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023
 If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition:

SPDES ID:

Friday, January 23, 2023

2023 WINTER NEWSLETTER



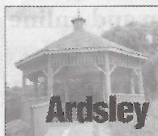
Village of Ardsley
 The Village of Ardsley is working on a **Parks and Recreation Master Plan** to promote recreational opportunities while enhancing the parks, facilities, and natural resources of the Village. Additionally, new opportunities for the community to connect with the Saw Mill River in V.E. Macy park have been created through new viewing and seating areas.

Saturday, March 12, 2022
SPRING 2022 NEWSLETTER



V.E. Macy Park
 The park, located between two major highways, is an amazing river front green space in Ardsley. In the wake of flooding events, it became clear to county engineers and planners that **V.E. Macy Park** needed improvements. The park currently is under construction with plans to improve green infrastructure elements by reducing impervious surfaces and planting more native trees and shrubs to help restore the floodplain. Their improvements are also working to strengthen access to the Saw Mill River, to create a better park for all residents.

PAGE 8 — THE RIVERCOWNS ENTHRAUSSE, FRIDAY, MARCH 3, 2023.



Happenings
 Ardsley Pollinator Pathway and the Ardsley Garden Club host a Spring Garden Festival next Sunday, March 12, noon-4:00 p.m. at the community center, 555 Ardsley Inn at the Parkway for the school of events.



Spring festival offers how-tos for gardeners

By **Kris DeLorenzo**
 Eight days before the start of spring, the Ardsley Pollinator Pathway Committee (APP) and the Ardsley Garden Club will offer help for gardeners preparing for the warmer weather.
 On Sunday, March 12, the two groups will host the village's first Spring Garden Festival, which will take place at the community center from noon to 4:00 p.m.
 The free festival is an all-volunteer occasion for the two organizations, which planted the public library's native vegetation garden last year.
 "We want to get people excited about gardening," APP Chair Carol Sommerfeld said. "For the garden club it is about the joy of plants — indoor plants and outdoor plants — and helping people to be better plant growers and stewards."
 The garden club, more than 60 years old, helps promote the flowering environment around the village. "Outdoor plants, impatiens, perennials, and other annuals have been added to trees in the downtown library planters, and Traffic Markers Club president Linda Kial asked, "We have given scholarships to graduating high school students, held many flower shows, and worked hard to improve the appearance of Ardsley."
 For APP Sommerfeld said, the festival is about "the opportunity to connect, to win hearts and minds to help our threatened pollinators and ecosystem, and to be a resource to the community. Both organizations want people to experience the joy of growing your own food, and so we'll have lots of information about that."
 Kial's aim is "to help get information out to area residents who are interested in planting both vegetable gardens and replacing lawns with native plants that will support habitat for bees, butterflies, birds, and all living creatures that are native to this area."
 During the festival, attendees can receive garden consultations, design ideas, and discover that urgent cases learn to identify and manage invasive plants, and order native plant plugs and annual plants for spring delivery. The garden club will hold a "plant ICU" where people can bring plants for diagnosis and treatment recommendations.
 Presentations are planned on five topics: rewilding your yard, propagating plants growing your own food, creating flower arrangements, and tomato farming (a workshop for children). Workshop attendees will leave with potted seeds. APP also will give away potted milkweed seeds.
 Kelly Evers, who rewilded her yard in a year and led two Zoom sessions about her experience, will lead the rewilding panel discussion on native and pollinator plants. Other panelists, tentatively scheduled include Sarah Chavkin, Tina Peterson, Jan Nordstrom, and Philippe de Haan (of Healthy Yard and Wicahocher Pollinator Pathway).
 "We will have a combination of people who went the DIY route, and others who hired professionals, to speak about their experiences," Sommerfeld noted.
 The public is invited to send pictures of their gardens in advance to ardsleypollinatorpathway@gmail.com, so they can receive a consultation on the spot.
 A demonstration on plant propagation will offer instruction on the process using division, air layering, and rooting methods, indoors or outdoors. Ruth Agreval and Linda Caldwell, who were instrumental in APP's "Biggest Market" event last March, along with Kial and Garden Club vice president Mary Kicman, will teach how to grow vegetables and herbs from seeds. Free seedlings will be distributed while supplies last, and workshop participants will leave with their own plants to start indoors. All ages are welcome to this workshop.
 Billy Akhavan, former owner of Lilac Haven in Ardsley, will teach flower arranging, using sustainable materials and common flowers easily available. Participants will create their own flower arrangements to take home.
 Ardsley Children's Librarian Marianne Ripin will read "Tomatoes for Neeta," by cookbook author Padma Lakshmi, to introduce children to growing tomato plants and manipla to starting the seedlings indoors, then planting them outdoors after the last frost. Children will take home packets of seeds. The workshop requires advance registration at bit.ly/2Z5b0E2.
 "It is important for us to show how useful repurposing containers can be," Sommerfeld emphasized. "We'll be using repurposed plastic containers and grow pots, which are made from recycled cow manure. I know it may not sound appealing, but kids love the concept." The pots, bowls, and feed just like real pots.
 The garden club will be taking pre-orders for their annual plant sale on May 13, featuring annuals, vegetables, and herbs from Carolee, Nancy and Debbie Ferry Road in White Plains, including French marigolds, petunias, begonias, geraniums, impatiens, coleus, and alyssa, as well as basil, purple thyme, and chives.
 APP will conduct a native plant plug pre-sale, featuring easy-care natives for both shade and sun, supplied by Zee's Native Plants in Dobbs Ferry. Plug-up dates will be announced to customers after the sale, between April and the beginning of June.
 "The Garden Club does so much for Ardsley and for beautification of the town, and their membership needs a boost," Sommerfeld added. "Hopefully people can come, see what is going on, and become interested in helping the community through participating in either or both organizations."
 Pollinators will benefit from the festival, too through a work of art, children at the event will highlight the death of monarch butterflies, whose population declined in recent years.
 The tabs will color mon-arch butterflies, caterpillars, eggs, and milkweed about Sommerfeld elaborated. "We'll then put all the creatures on a wall at the community center and take a picture at the end. It will be beautiful and will also raise awareness about the plight of the monarch butterflies at the same time. At the end we'll take a picture of the art before disassembling it and feature it on our Ardsley PE website."

MS4 Annual Report Cover Page

MCC form for period ending March 9,

**This cover page must be completed by the report preparer.
Joint reports require only one cover page.**

SPDES ID

Choose one:

This report is being submitted on behalf of an individual MS4.

Fill in SPDES ID in upper right hand corner.

Name of MS4

OR

This report is being submitted on behalf of a Single Entity

(Per Part II.E of GP-0-10-002)

Name of Single Entity

OR

This is a joint report being submitted on behalf of a coalition.

Provide SPDES ID of each permitted MS4 included in this report. Use page 2 if needed.

Name of Coalition

SPDES ID

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MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6

Section 2 - Contact Information

Important Instructions - Please Read

Contact information must be provided for **each** of the following positions as indicated below:

- 1. Principal Executive Officer, Chief Elected Official or other qualified individual (per GP-0-08-002 Part VI.J).
- 2. Duly Authorized Representative (Information for this contact must only be submitted if a Duly Authorized Representative is signing this form)
- 3. The Local Stormwater Public Contact (required per GP-0-08-002 Part VII.A.2.c & Part VIII.A.2.c).
- 4. The Stormwater Management Program (SWMP) Coordinator (Individual responsible for coordination/implementation of SWMP).
- 5. Report Preparer (Consultants may provide company name in the space provided).

A separate sheet must be submitted for each position listed above unless more than one position is filled by the same individual. If one individual fills multiple roles, provide the contact information once and check all positions that apply to that individual.

If a new Duly Authorized Representative is signing this report, their contact information must be provided and a signature authorization form, signed by the Principal Executive Officer or Chief Elected Official must be attached.

For each contact, select all that apply:

- Principal Executive Officer/Chief Elected Official
- Duly Authorized Representative
- Local Stormwater Public Contact
- Stormwater Management Program (SWMP) Coordinator
- Report Preparer

First Name MI Last Name
J o s e p h C e r r e t a n i

Title
V i l l a g e M a n a g e r

Address
5 0 7 A s h f o r d A v e n u e

City State Zip
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Phone County
(9 1 4) 6 9 3 - 1 5 5 0 W e s t c h e s t e r

MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

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- Duly Authorized Representative
- Local Stormwater Public Contact
- Stormwater Management Program (SWMP) Coordinator
- Report Preparer

First Name MI Last Name
A n n M a r i e R o c c o

Title
V i l l a g e C l e r k

Address
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Phone County
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MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

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- Duly Authorized Representative
- Local Stormwater Public Contact
- Stormwater Management Program (SWMP) Coordinator
- Report Preparer

First Name MI Last Name
L a r r y T o m a s s o

Title
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Phone County
(9 1 4) 6 9 3 - 1 5 5 0 W e s t c h e s t e r

MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

SPDES ID
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- Duly Authorized Representative
- Local Stormwater Public Contact
- Stormwater Management Program (SWMP) Coordinator
- Report Preparer

First Name: L o r r a i n e MI: Last Name: K u h n

Title: S t o r m w a t e r M a n a g e m e n t A s s i s t a n t

Address: 5 0 7 A s h f o r d A v e n u e

City: A r d s l e y State: N Y Zip: 1 0 5 0 2 -

eMail: s t o r m w a t e r @ a r d s l e y v i l l a g e . c o m

Phone: (9 1 4) 6 9 3 - 1 5 5 0 County: W e s t c h e s t e r

MS4 Municipal Compliance Certification (MCC) Form

MCC form for period ending March 9, 2023

Name of MS4

SPDES ID
N Y R 2 0 A 3 1 6

Section 3 - Partner Information

Did your MS4 work with partners/coalition to complete some or all permit requirements during this reporting period? Yes No

If Yes, complete information below.

Submit a separate sheet for each partner. Information provided in other formats will not be accepted. If your MS4 cooperated with a coalition, submit one sheet with the name of the coalition. It is not necessary to include a separate sheet for each MS4 in the coalition.

If No, proceed to Section 4 - Certification Statement.

Partner/Coalition Name

S l e e p y H o l l o w M a p p i n g C o n s o r t i u m

Partner/Coalition Name (cont.)

SPDES Partner ID - If applicable

N Y R 2 0

Address

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City

State

Zip

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Phone

(9 1 4) 3 6 6 - 5 1 0 0

Legally Binding Agreement in accordance with GP-0-08-002 Part IV.G.? Yes No

What tasks/responsibilities are shared with this partner (e.g. MM1 School Programs or Multiple Tasks)?

- MM1
- MM2
- MM3 I n f r a s t r u c t u r e m a p
- MM4
- MM5
- MM6

Additional tasks/responsibilities

- Watershed Improvement Strategy Best Management Practices required for MS4s in impaired watersheds included in GP-0-08-002 Part IX.

MS4 Municipal Compliance Certification (MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

SPDES ID

N Y R 2 0 A 3 1 6

Section 3 - Partner Information

Did your MS4 work with partners/coalition to complete some or all permit requirements during this reporting period? Yes No

If Yes, complete information below.

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If No, proceed to Section 4 - Certification Statement.

Partner/Coalition Name

S a w M i l l R i v e r W a t e r s h e d A d v i s o r y

Partner/Coalition Name (cont.)

SPDES Partner ID - If applicable

B o a r d N Y R 2 0

Address

1 4 8 M a r t i n e A v e n u e

City

State

Zip

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j p s c @ w e s t c h e s t e r g o v . c o m

Phone

(9 1 4) 9 9 5 - 2 8 3 2

Legally Binding Agreement in accordance

with GP-0-08-002 Part IV.G.? Yes No

What tasks/responsibilities are shared with this partner (e.g. MM1 School Programs or Multiple Tasks)?

MM1 s u p p l y i n g o u t r e a c h m a t e r i a l s

MM2

MM3

MM4 r e v i e w S W r e c o n n a i s s a n c e p l a n

MM5 i n v e n t o r y e x i s t i n g p r a c t i c e s

MM6 s t r e a m b a n k d e b r i s c l e a r a n c e

Additional tasks/responsibilities

Watershed Improvement Strategy Best Management Practices required for MS4s in impaired watersheds included in GP-0-08-002 Part IX.

MS4 Municipal Compliance Certification (MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

SPDES ID
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Did your MS4 work with partners/coalition to complete some or all permit requirements during this reporting period? C Yes C No

If Yes, complete information below.

Submit a separate sheet for each partner. Information provided in other formats will not be accepted. If your MS4 cooperated with a coalition, submit one sheet with the name of the coalition. It is not necessary to include a separate sheet for each MS4 in the coalition.

If No, proceed to Section 4 - Certification Statement.

Partner/CoalitionName

W e s t c h e s t e r C o u n t y O E M N Y H a z a r d

Partner/Coalition Name (con't.)

SPDES Partner ID - If applicable

M i t i g a t i o n P l a n N Y R 2 0

Address

2 0 0 B r a d h u r s t A v e n u e

City

State

Zip

H a w t h o r n e N Y 1 0 5 3 2 -

eMail

d r d 2 @ w e s t c h e s t e r g o v . c o m

Phone

(9 1 4) 8 6 4 - 5 4 5 3

Legally Binding Agreement in accordance

with GP-0-08-002 Part IV.G.? Yes No

What tasks/responsibilities are shared with this partner (e.g. MM1 School Programs or Multiple Tasks)?

MM1 O u t r e a c h t o v i l l a g e o f f i c i a l s

MM2

MM3

MM4

MM5 S w p l a n n i n g i n f o r m a t i o n

MM6

Additional tasks/responsibilities

Watershed Improvement Strategy Best Management Practices required for MS4s in impaired watersheds included in GP-0-08-002 Part IX.

MS4 Municipal Compliance Certification (MCC) Form

MCC form for period ending March 9, 2023

Name of MS4 Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6

Section 3 - Partner Information

Did your MS4 work with partners/coalition to complete some or all permit requirements during this reporting period? Yes No

If Yes, complete information below.

Submit a separate sheet for each partner. Information provided in other formats will not be accepted. If your MS4 cooperated with a coalition, submit one sheet with the name of the coalition. It is not necessary to include a separate sheet for each MS4 in the coalition.

If No, proceed to Section 4 - Certification Statement.

Partner/Coalition Name

B r o n x R i v e r W a t e r s h e d A d v i s o r y

Partner/Coalition Name (con't.)

SPDES Partner ID - If applicable

C o m m i t t e e N Y R 2 0

Address

1 4 8 M a r t i n e A v e n u e

City

State

Zip

W h i t e P l a i n s N Y 1 0 6 0 1 -

eMail

d s k 2 @ w e s t c h e s t e r g o v . c o m

Phone

(9 1 4) 9 9 5 - 2 0 8 9

Legally Binding Agreement in accordance with GP-0-08-002 Part IV.G.? Yes No

What tasks/responsibilities are shared with this partner (e.g. MM1 School Programs or Multiple Tasks)?

- MM1
- MM2
- MM3
- MM4 u p d a t e B x R i v W a t e r s h e d P l a n
- MM5
- MM6

Additional tasks/responsibilities

- Watershed Improvement Strategy Best Management Practices required for MS4s in impaired watersheds included in GP-0-08-002 Part IX.

[Empty text box for additional information]

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

Minimum Control Measure 1. Public Education and Outreach

The information in this section is being reported (check one):

- On behalf of an individual MS4
- On behalf of a coalition

How many MS4s contributed to this report?

1. Targeted Public Education and Outreach Best Management Practices

Check all topics that were included in Education and Outreach during this reporting period:

- Construction Sites
- General Stormwater Management Information
- Household Hazardous Waste Disposal
- Illicit Discharge Detection and Elimination
- Infrastructure Maintenance
- Smart Growth
- Storm Drain Marking
- Green Infrastructure/Better Site Design/Low Impact Development
- Other:
- Pesticide and Fertilizer Application
- Pet Waste Management
- Recycling
- Riparian Corridor Protection/Restoration
- Trash Management
- Vehicle Washing
- Water Conservation
- Wetland Protection
- None

Other

2. Specific audiences targeted during this reporting period:

- Public Employees
- Residential
- Businesses
- Restaurants
- Other:
- Contractors
- Developers
- General Public
- Industries
- Agricultural

Other

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

3. Web Page con't.: Provide specific web addresses - not home page.

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MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023

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Name of MS4/Coalition

SPDES ID

3. Web Page con't.: Provide specific web addresses - not home page.

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MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

3. Web Page con't.: Provide specific web addresses - not home page.

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MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

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4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

Ardsley Facebook/Twitter(@ardsleyvillage)/Instagram(@villageofardsley)/Constant Contact:
SW: FxLkWk,SMRClup,AnnRep,AHSETF,OceanPlastic,SusGrdn,SWEd,WdlnDam, InvPests,
WaterUse, MyCoast,SMRTrail,LELE,ArdsCares,BxRivmtg, WatersenseKids;
CAC:InvVines,Plastic,ZeroWaste,PollinatorPathway,CompostBin,GardenTour,
GardenClub:LbryPlnt,PlntSale,Demo;Village:DwtwnRevitalPln,PksPlnWelcomeBkArds,ArborDay

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

Fbk/Twt/Inst/CC-SW:3/10,4/12,4/22,5/14,5/18,6/17,6/28,7/28,8/2,8/5/,8/8,8/17,9/21,10/5,10/14,
11/23,1/12,1/30,2/16,2/22,2/28,3/8; GardenClub:3/29,4/27,5/5,12/30;
CAC:3/18,4/7,4/19,4/26,6/23,6/29,7/22,9/6,9/9,9/21,10/4,10/20,11/1, 12/6,12/7,12/16,
12/20,12/21,1/17,1/25,2/23,3/8; Village:RvPln3/14,PksPln5/16,10/7,10/21,
11/2,11/30,12/19,12/2,2/17,3/4,WlcmArds8/4,9/16,HurricaneNotice10/6,ArbrDy10/12,10/25

C. How many times was this observation measured or evaluated in this reporting period?

		6	4
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Continue posting simultaneously on Village Facebook, Twitter, Instagram & Constant Contact

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

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4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Ardsley Connect-SW:FixaLeak,WorldWtrDy,InvSpec,TreeSelection,SMRCInup,ZeroP,OceanPlas, Sprnk,SWEvnt, Mulch,PaintRecyc,DECInfoLoc,HAB,WAVE,NOAA, EPA WtrSnsLndscp,RnBrrls, IPM,FEMAmop,App,Pests,EPASummInfo,MyCoast,DECFish,IDDE,HRE,Dam,CmpstBn,Drought, Ltrnfly,DECArbrDy,LELE,BndAct,Pmpkn,Bllt,Mow,Trky,Salt,ArbrDy,Gfts,WrpRecy,Wtrfnt,NwY r,TrRecy,PFAS,FoamBn,WtrSnsKids,StdntResrch,Pruning,FlwrRecyc,BxRivmtg,BttryRecyc

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

Ardsley Connect online newsletter published every week, SW items in every issue
 Dates:3/14,3/21,3/28,4/4,4/11,4/18,4/25,5/2,5/9,5/16,5/23,5/30,6/6,6/13,6/20,6/27,7/4,7/11,7/18,7/25
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 12/5,12/12,12/19,12/26,1/2/23,1/9/23,1/16/23,1/23/23,1/30/23,2/6/23,2/13/23,2/20/23,2/27/23,3/6/23

C. How many times was this observation measured or evaluated in this reporting period?

		5	2
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Continue to post Stormwater News items & event notices in the weekly online Ardsley Connect newsletter.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

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4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

Hard copy distribution is minimal. DPW schedules are by request only. Legal notices are sent by USPS. The Rivertowns Enterprise newspaper features Village news & announcements. Saw Mill River Coalition (SMRC) publishes seasonal newsletters. LELE (Love 'Em and Leave 'Em) leaf mulch mowing handouts are distributed directly on site to landscape contractors working around the Village.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

Enterprise-Clnups:3/18,4/22;GrdnClb:3/18,4/29,3/3/23;InvVines:4/1,4/15, 12/16,12/23, ErthDay: 4/8,4/15;RevitPln:3/18,4/15,12/9;PrksPln:11/4;PollPath: 5/6,5/20,5/27,9/30,10/21,11/4, 12/9,12/16, 1/6/23,2/24/23,3/3/23;TreesforTrbs:5/27,10/21;Lwn:2/3/23,3/3/23 ArbDy:11/4;DrgTkbk:4/29;SW: 5/13;WtrTst:6/3;,10/14;Trlwy:6/10;Flood:8/4;Dam:8/12,Relevel:1/6/23;ArdsleyCrs: 10/7,11/4; BndAct:11/4;ZroWst11/18;SMRC-McyPk:3/12,PkPln:1/23/23;LELE-18 (3 mulch mowing)

C. How many times was this observation measured or evaluated in this reporting period?

		4	6
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

DPW and Village notices will be posted online with hard copies provided as needed. Local newspaper and organization newsletter coverage of SW topics is ongoing. LELE information distribution will be done in fall 2023.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

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4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

CableAccessTV (Optimum & Verizon) system upgraded. Village Board mtgs now live & via Zoom, and recorded broadcasts and new SW Video rerun several times daily. VB SW topics: Sewer Rents, Parks Plan, New DPW Garage , IMA High Pressure Sewer Cleaner, Sewer Inspection Contract, IMA OrgWaste, EnviBond Act, NYS Pesticide Prohibition, NYSDEC grant for Recycling App, SWMPAR Village youtube videos: 7 DPW, 1 Sewer Mapping, 1 Comp Plan, 1 Downtown Revitalization

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

CATV SW Video: "SWBMPs, SWBusiness, PetWaste, LawnCare, GreaseDisposal, Litter, GI, SWEduc" (began airing 2/6/2023); VB: SwrRnt3/21, 4/4, 4/18, 5/2, 5/16, 6/6; DPW6/6, 6/21, 7/5; Cleaner3/21; Inspection9/6; BondAct10/3; Pesticide10/3; RecyApp12/5; OrgWaste2/21/23; ParkPln5/16, 6/6; AR5/2 Youtube views: (10/2022-3/8/2023) DPW 635, (4/2022-3/8/2023) Sewer Mapping 23, Comp Plan 25, Downtown Revitalization 179

C. How many times was this observation measured or evaluated in this reporting period?

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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Village Board meetings will continue in live/Zoom hybrid format with rebroadcasts on CATV. A new SW Video will be prepared and begin airing in winter 2024. Village videos will be added to the Village youtube playlist as they become available.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9, 2023

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition Village of Ardsley

SPDES ID
N Y R 2 0 A 3 1 6

4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

SW Outreach meetings were in person or via Zoom. 3/21 AHS Env Task Force (Zoom); 10/11 Ardsley Middle School (AMS) Earth Science (in person); Climate Advisory Committee (CAC-Zoom):6/2, 10/5, 12/1, 2/2/23; 9/17 ."Welcome Back Ardsley" event was held in person at Pascone Park. There were Stormwater Management & CAC (including Pollinator Pathway) tables at the event.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

AHS Env Task Force: 10 students, 2 teachers; AMS Earth Science: 77 students, 2 teachers
CAC: 4 meetings, SW updates presented at meetings
"Welcome Back Ardsley": 500 people attended including Mayor Kaboolian, VM Cerretani, Trustees DiJusto, Bencosme & Edelstein, County Legislator Shimsky

C. How many times was this observation measured or evaluated in this reporting period?

5 9 1

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

3/13/2023 AHS Env Task Force
4/15/2023 "I COMPOST" SW Outreach table at Greenburgh Food Scraps Dropoff
6/2023 CAC meeting 10/2023 AMS Earth Science
11/2023 Concord Road Elementary School Third Grade Enviroscape Program
(All programs are planned to be held in person.)

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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4. Evaluating Progress Toward Measurable Goals MCM 1

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

Proper pet waste disposal is critical to control POC pathogen levels in local Village waterbodies. Starch-based compostable pet waste bags were distributed at the Library, Village Hall and at the "Welcome Back Ardsley" event. New pet waste sign was installed next to flood wall (between monoliths 48 & 49) at Village Green Flood Control Project (FCP) facility

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

56 pet waste bag dispensers, each containing 15 bags, were distributed at Village Hall, 24 were distributed at the Library and 20 were distributed at the "Welcome Back Ardsley" event. 8/2022 Pet waste sign installed at Village Green FCP facility

C. How many times was this observation measured or evaluated in this reporting period?

1	0	1
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this Measurable Goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

9/2023 Distribute pet waste bag dispensers at Ardsley Day event
11/2023 Resume pet waste bag dispenser distribution at Village Hall and Library

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

4.a. If this report was made available on the internet, what date was it posted?

Leave blank if this report was not posted on the internet.

 / /
4.b. For how many days was/will this report be posted?

If submitting a report for single MS4, answer 5.a.. If submitting a joint report, answer 5.b..

5.a. Was an Annual Report public meeting held in this reporting period?

Yes No

If Yes, what was the date of the meeting?

 / /

If No, is one planned?

Yes No

5.b. Was an Annual Report public meeting held for all MS4s contributing to this report during this reporting period?

Yes No

If No, is one planned for each?

Yes No

6. Were comments received during this reporting period?

Yes No

If Yes, attach comments, responses and changes made to SWMP in response to comments to this report.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

7. Evaluating Progress Toward Measurable Goals MCM 2

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

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7. Evaluating Progress Toward Measurable Goals MCM 2

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

Sustainable gardening improves runoff quality by limiting chemicals and water use. Garden Club and Scouts planted a Pollinator Garden at the Library. AHS ETF students planted a native perennial garden at Bicentennial Park. Youth Advocate & students planted annuals at the Community Center. DPW and Scouts planted trees for Arbor Day at Pascone Park. SW Management planted and Scouts planted daffodils at Pascone Park flagpole.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

4/23 Garden Club & Scouts plant 825 sq ft at the Library; 5/14 Six AHS ETF students and 2 teachers plant 110 sq ft at Bicentennial Pk; 5/20 Youth Advocate and 2 students plant 80 sq ft at the Comm Center; 10/22 DPW crew, Mayor Kaboolian, Tr Edelstein, CAC Sommerfield, 19 Scouts, 7 parents plant 3 trees Pascone Pk; 10/29 Ardsley Cares SW activity, 5 students, 477 sq ft at Pascone Pk, 180 daffodils.

C. How many times was this observation measured or evaluated in this reporting period?

			5
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

5/13/2023 AHS ETF Rain Barrel installation at Library for use in watering Pollinator Pathway garden.
5/17/2023 Additional Red Bud trees and Serviceberry shrubs will be supplied by NYSDEC HRE for Silliman Park Trees for Tribes site
Fall 2023 Ardsley Cares Daffodil Bulb planting at Pascone Park

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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Name of MS4/Coalition

Village of Ardsley

SPDES ID

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7. Evaluating Progress Toward Measurable Goals MCM 2

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Streambanks must be stabilized to prevent erosion which impairs runoff. Invasive vegetation destabilizes streambanks by destroying trees and beneficial native plants. Invasive Species Removal events were held at Macy Park, Silliman Park and South County Trailway, all improving Saw Mill River quality. SW Intern assists in inspection of Outfalls in local streams, which includes assessment of Outfall stability.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

4/9 Pollinator Pathway & Westchester County Parks Foundation: Macy Park Vine Removal, 20 people including Mayor & Tr Bencosme; 9/10 Village Volunteer Weeding Silliman Park with Tr Edelstein; 12/7 Poll Path & WC Parks Found: Macy Park, 26 people
3/5/2023 Poll Path & Saw Mill River Coalition: South County Trailway, 12 people
Outfall Inspections: 29 Outfalls, 51% of total (exceeds NYSDEC 20% minimum)

C. How many times was this observation measured or evaluated in this reporting period?

			5
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Fall 2023: Westchester County Parks Foundation and Saw Mill River Coalition Invasive Vine Removal events to be scheduled

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 2

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

Proper disposal of discarded medications is necessary to prevent contamination of local waterways. Ardsley SAYF Coalition (Supporting Ardsley's Youth and Families), Theresa DelGrosso, Director and Ardsley Police Department (APD) co-sponsor Drug Take Back Day events. APD also has a collection box at Police headquarters for year-round drop off of medications.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

Drug Take Back Day: 4/30/2022; 152 lbs total collected
Village Constant Contact/Facebook/Twitter/Instagram notices: 4/6, 4/27, 4/30
Ardsley Connect notices: 4/11, 4/18, 4/25

C. How many times was this observation measured or evaluated in this reporting period?

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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

4/22/2023 Drug Take Back Day
Continue collection of medication at APD year-round

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

12. Evaluating Progress Toward Measurable Goals MCM 3

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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12. Evaluating Progress Toward Measurable Goals MCM 3

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Ardsley Police Department (APD) receives reports of illegal dumping and spills, investigates and issues summons as necessary. Additional investigation and cleanup by Ardsley Fire Department (AFD), Westchester County Fire Department, Ardsley Department of Public Works, NYSDEC and NYCDEP are conducted as warranted by the incident.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

4/21 SMR Rd Garbage dumping on private property (identified by mail item), APD warning to perpetrator, perpetrator clean up; 7/26 Prospect Ave Garbage bags in ROW, APD warning, owner cleanup; 8/19 SMR Rd Illegal use of private dumpster, APD mediates conversation between owner & perpetrator, issue resolved; 10/2 SMR Rd Illegal dumping furniture at CVS parking lot, APD contacts DPW, DPW removes items

C. How many times was this observation measured or evaluated in this reporting period?

			4
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Village Code Chapter 170 Storm Sewers - Illicit Discharge Detection and Elimination Law will continue to be enforced by Ardsley Police Department, with assistance from Public Works, Fire Departments and other government agencies as needed.

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

Minimum Control Measures 4 and 5.
Construction Site and Post-Construction Control

The information in this section is being reported (check one):

- On behalf of an individual MS4
 On behalf of a coalition

How many MS4s contributed to this report?

1a. Has each MS4 contributing to this report adopted a law, ordinance or other regulatory mechanism that provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities? Yes No

1b. Has each Town, City and/or Village contributing to this report documented that the law is equivalent to a NYSDEC Sample Local Law for Stormwater Management and Erosion and Sediment Control through either an attorney certification or using the NYSDEC Gap Analysis Workbook? Yes No NT

If Yes, Towns, Cities and Villages provide date of equivalent NYS Sample Local Law.

09/2004 03/2006 NT

2. Does your MS4/Coalition have a SWPPP review procedure in place? Yes No

3. How many Construction Stormwater Pollution Prevention Plans (SWPPPs) have been reviewed in this reporting period?

4. Does your MS4/Coalition have a mechanism for receipt and consideration of public comments related to construction SWPPPs? Yes No NT

If Yes, how many public comments were received during this reporting period?

5. Does your MS4/Coalition provide education and training for contractors about the local SWPPP process? Yes No

6. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

- Notices of Violation #

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 No Authority
- Stop Work Orders #

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 No Authority
- Criminal Actions #

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 No Authority
- Termination of Contracts #

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 No Authority
- Administrative Fines #

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 No Authority
- Civil Penalties #

--	--	--	--	--	--

 No Authority
- Administrative Orders #

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 No Authority
- Enforcement Actions or Sanctions #

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- Other #

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 No Authority

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

 Minimum Control Measure 4. Construction Site Stormwater Runoff Control

The information in this section is being reported (check one):

- On behalf of an individual MS4
 On behalf of a coalition

How many MS4s contributed to this report?

1. How many construction projects have been authorized for disturbances of one acre or more during this reporting period?
 2. How many construction projects disturbing at least one acre were active in your jurisdiction during this reporting period?
 3. What percent of active construction sites were inspected during this reporting period? NT %
 4. What percent of active construction sites were inspected more than once? NT %
 5. Do all inspectors working on behalf of the MS4s contributing to this report use the NYS Construction Stormwater Inspection Manual? Yes No NT
 6. Does your MS4/Coalition provide public access to Stormwater Pollution Prevention Plans (SWPPPs) of construction projects that are subject to MS4 review and approval? Yes No NT
- If your MS4 is Non-Traditional, are SWPPPs of construction projects made available for public review? Yes No

If Yes, use the following page to identify location(s) where SWPPPs can be accessed.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

6. con't.:

Submit additional pages as needed.

MS4/Coalition Office

Department

Address

City Zip -

Phone
() -

Library

Address

City Zip -

Phone
() -

Other

Address

City Zip -

Phone
() -

Web Page URL(s): Please provide specific address where SWPPPs can be accessed - not home page.

URL

URL

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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Name of MS4/Coalition

SPDES ID

7. Evaluating Progress Toward Measurable Goals MCM 4

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 4

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

All Village projects include stormwater control measures. Information about projects, both public (Village Bd minutes, capital projects, RFPs) and private (Planning & Zoning Bd minutes) can be accessed via weblinks on the Village homepage. There is also a link to a Contact form for public comments. Village Facebook/Twitter/Instagram/Constant Contact provide meeting notices & project updates. Ardsley Connect Weekly Newsletter has a Meeting Calendar and Contact Form link.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

<https://www.ardsleyvillage.com/village-treasurer/pages/financial-statements-budget> (capital projects): 498 web "hits"
<https://www.ardsleyvillage.com/home/pages/bidsrfps> (RFPs-requests for proposals): 1119 web "hits"
<https://www.ardsleyvillage.com/minutes-and-agendas> (VB, PB, ZB): 1179 web "hits"
<https://www.ardsleyvillage.com/home.webforms/contact-us> (public comment form): 1269 web "hits"

C. How many times was this observation measured or evaluated in this reporting period?

			4
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Village website Contact form will continue to provide opportunity for submitting comments. Village Facebook/Twitter/Instagram/Constant Contact will provide meeting notices & project updates. Ardsley Connect will also continue to provide notices & Contact link.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 4

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Stormwater Management is an integral part of Natural Resource Inventories (NRI) and Master Parks Plans. Proper management of land drainage and runoff quality impacts both natural resources and parkland. An RFP for NRI proposals was issued by the Village for assistance with preparation. An intermunicipal grant application was submitted for NRI preparation. A consultant was hired for preparation of a Master Parks Plan.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

NRI: 9/16 receive bid for RFP; 11/30 submit intermunicipal grant application to NYSDEC HRE
Parks Plan: 3/1 receive bid for RFP, select Weston & Sampson; 9/2022 Focus Groups for Plan input; 10/2022 Parks Plan Survey; 11/3 Public Presentation for input to prepare Parks Plan

C. How many times was this observation measured or evaluated in this reporting period?

			6
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

NRI: 5/2023 apply for NYDEC HRE Stewardship grant to fund NRI preparation
Parks Plan: 3/16/2023 Public Presentation of Draft Parks Plan
5/2023 Village Board Presentation of Final Parks Plan

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

- 4a. Are the MS4s contributing to this report involved in a regional/watershed wide planning effort?
 Yes No
- 4b. Does the MS4 have a banking and credit system for stormwater management practices?
 Yes No
- 4c. Do the SWMP Plans for each MS4 contributing to this report include a protocol for evaluation and approval of banking and credit of alternative siting of a stormwater management practice?
 Yes No
- 4d. How many stormwater management practices have been implemented as part of this system in this reporting period?
- 5. What percent of municipal officials/MS4 staff responsible for program implementation attended training on Low Impace Development (LID), Better Site Design (BSD) and other Green Infrastructure principles in this reporting period?
 %

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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Name of MS4/Coalition

SPDES ID

6. Evaluating Progress Toward Measurable Goals MCM 5

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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6. Evaluating Progress Toward Measurable Goals MCM 5

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

GIS is extremely valuable for SW Management, used in outfall testing, SW practice maintenance and IDDE enforcement. The Village of Ardsley hired Delaware Engineering to map the entire storm and sanitary sewer systems in the Village. This work was completed and Westchester County GIS is hosting the completed map on their website.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

8/2022 Delaware Engineering Albany NY completes sanitary sewer and storm drain mapping
9/26/2022 Sanitary sewer and storm drain map uploaded to Westchester County GIS website

County GIS Day postponed this year.

C. How many times was this observation measured or evaluated in this reporting period?

			2
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

5/18/2023 Westchester County GIS Day returns to SUNY Purchase

2024 Add dropdowns to Sewer Map features, add photographs, details and inspection records

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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6. Evaluating Progress Toward Measurable Goals MCM 5

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

To facilitate communication regarding SW information, issues and updates, SW Management Assistant (SMA) attends SW conferences and sends detailed reports and meeting attachments to Village staff & officials via read/response email. SMA attends all meetings listed. Additional Village personnel attendees are indicated in parentheses.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

2/15 Sustainable Westchester Ann Mtg (Mayor, VM, Tr Bencosme, CAC Kapsis & Sommerfield); 3/29 NYSEFC Watershed Needs Survey; 4/19 Tree Fund Urban SW Design; 7/20, 1/12/23, 2/28/23 Bx Riv Watershed Advisory Committee; 10/24,10/25,10/26 Hudson River Watershed Alliance Annual Conference; 11/30 Groundwork Hud Valley/Center for Urban River at Beczak (CURB) Trees for Health & Sustainability; 12/2 Cornell Univ/Groundwork HV Reimagining SMR

C. How many times was this observation measured or evaluated in this reporting period?

			9
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

3/27/2023 Native Plant Center Spring Landscape Conference
4/17/2023 NYSDEC HRE Planning for Nature NRI Workshop

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

Minimum Control Measure 6. Stormwater Management for Municipal Operations

The information in this section is being reported (check one):

- On behalf of an individual MS4
- On behalf of a coalition

How many MS4s contributed to this report?

1. Choose/list each municipal operation/facility that contributes or may potentially contribute Pollutants of Concern to the MS4 system. For each operation/facility indicate whether the operation/facility has been addressed in the MS4's/Coalition's Stormwater Management Program(SWMP) Plan and whether a self-assessment has been performed during the reporting period. A self-assessment is performed to: 1) determine the sources of pollutants potentially generated by the permittee's operations and facilities; 2) evaluate the effectiveness of existing programs and 3) identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it's not done already.

<u>Operation/Activity/Facility</u>	<u>Addressed in SWMP?</u>		<u>Self-Assessment Operation/Activity/Facility performed within the past 3 years?</u>	
	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
Street Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bridge Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter Road Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Salt Storage.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solid Waste Management.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Municipal Construction and Land Disturbance..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right of Way Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marine Operations.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrologic Habitat Modification.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parks and Open Space.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Municipal Building.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stormwater System Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vehicle and Fleet Maintenance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

2. Provide the following information about municipal operations good housekeeping programs:

- Parking Lots Swept (Number of acres X Number of times swept) # Acres
- Streets Swept (Number of miles X Number of times swept) # Miles
- Catch Basins Inspected and Cleaned Where Necessary #
- Post Construction Control Stormwater Management Practices Inspected and Cleaned Where Necessary #
- Phosphorus Applied In Chemical Fertilizer # Lbs.
- Nitrogen Applied In Chemical Fertilizer # Lbs.
- Pesticide/Herbicide Applied (Number of acres to which pesticide/herbicide was applied X Number of times applied to the nearest tenth.) # Acres

3. How many stormwater management trainings have been provided to municipal employees during this reporting period?

4. What was the date of the last training? / /

5. How many municipal employees have been trained in this reporting period?

6. What percent of municipal employees in relevant positions and departments receive stormwater management training? %

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

7. Evaluating Progress Toward Measurable Goals MCM 6

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMP in this reporting period.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

C. How many times was this observation measured or evaluated in this reporting period?

(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 6

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Frequent Catch Basin Head Cleaning, Roadside Debris Pickup and Bulk Leaf Pickup throughout the entire Village reduced sediment & floatable pollution POCs. Road salt pre-application before predicted storms minimizes salt use. Landscape contractors are informed on work sites about the benefits of mulch mowing (LELE) and the need to reduce organic runoff pollution. Residents are strongly encouraged to separate food waste from their garbage & bring it to the compost facility.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

There 19 Catch Basin Head Cleanings (entire Village), 61 Roadside Debris Pickups (entire Village) & 64 Bulk Leaf Pickups (entire Village).
Village residents brought food scraps to the Greenburgh Collection facility.
Eighteen landscape crews received LELE notices at work sites.

C. How many times was this observation measured or evaluated in this reporting period?

			5
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

Organic waste and debris pickup will continue on a regular basis. Mulch mowing of leaves & grass will be promoted for residents and landscape professionals. Residents will be urged to compost food waste to remove it from trash collection.

4/15/2023 SMA Food Scrap Outreach activity at Greenburgh Collection facility

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 6

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

All Village municipal vehicles (Public Works, Police & Fire Department) are serviced indoors at the DPW Garage, preventing motor fluid leaks from entering runoff. Sweeper Vac vehicle is used extensively for both street sweeping and catch basin cleanout. The new DPW, with expanded space, will allow compliance with runoff protection measures to be even more efficient.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

130 vehicle maintenance procedures were performed this year. Any and all spills are cleaned up using absorbent and disposal is in spill waste receptacles. Vehicle wash water does not enter the storm drain at any time. Used oil and automotive fluids are disposed of in upgraded secondary containment units. Street sweeping is ongoing year-round. Street sweeper schedule appears in all Village online communications which facilitates proper access to the streets.

C. How many times was this observation measured or evaluated in this reporting period?

1	3	0
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?
 Yes No
E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?
 Yes No
F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

1/2024 New DPW Garage will be available; more space for stormwater regulation compliance
 DPW will continue regular maintenance of all municipal vehicles, catch basin cleanout and street sweeping.

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 6

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

DPW schedules on burbio.com. New RecycleRight (NYSDEC grant) and e-waste pickup reservation system posted on DPW website. Link to new DPW Facility videos posted on homepage. DPW notices on Village Facebook/Twitter/Instagram/Constant Contact: hydrants, recycling, street sweeper, leaf collection, sewer rent, water main breaks. Ardsley Connect notices: e-waste, street sweeper, recycling schedule, paving, sewer rent, snow shoveling, Xmas tree pickup, DPW video

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

Webpage: 8/31 RecycleRight; 4/18 e-waste; 7/26 Video link; Fbk/TWT/Inst/CC: hydrants 4/4, 4/11, 4/12, 4/22, 4/25; recyc 4/8, 4/9, 5/30, 6/30, 9/1, 10/6, 11/8, 11/18, 12/21, 12/29, 1/12/23, 1/3, 1/23, 2/8, 2/16; sweeper 3/16, 6/22, 9/22; leaves 9/12, 11/9; water main 11/18, 12/24, 2/10/23; rent 12/5, 12/7, 1/3/23, 1/11, 1/13; Ardsley Connect: e-wst weekly 4/18-3/6/23; pave weekly 9/26-12/26; recyc 10/10, 12/12, 12/19, 12/28, 1/2/23, 1/16, 2/6, 2/13, 2/20; trees 1/9/23, 1/23, 1/30; snow 11/21; vid 8/8; rent 12/5, 12/19, 12/28, 1/9/23

C. How many times was this observation measured or evaluated in this reporting period?

		5	7
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

April 2023: Post eight new DPW Facilities videos
Continue posting schedules on burbio.com & Village website
Continue DPW News notices on Facebook/Twitter/Instagram/Constant Contact and weekly DPW update section in Ardsley Connect Newsletter

MS4 Annual Report Form

This report is being submitted for the reporting period ending March 9,

2	0	2	3
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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

Village of Ardsley

SPDES ID

N	Y	R	2	0	A	3	1	6
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7. Evaluating Progress Toward Measurable Goals MCM 6

Use this page to report on your progress and project plans toward achieving measurable goals identified in your Stormwater Management Program Plan (SWMPP), including requirements in Part III.C.1. Submit additional pages as needed.

A. Briefly summarize the Measurable Goal identified in the SWMPP in this reporting period.

Village of Ardsley Department of Public Works (DPW) Garage is a municipal facility. The DPW and all of its operations are covered under the Village of Ardsley MS4 SPDES Permit. Sector AE is not applicable to the Village of Ardsley Department of Public Works.

B. Briefly summarize the observations that indicated the overall effectiveness of this Measurable Goal.

The DPW yard is less than 0.3 acres (it is 0.26 acres). Outfall monitoring is ongoing. Salt, sand and all loose material is stored in the Salt Shed. There are no underground tanks. All vehicle maintenance is done indoors, spills immediately cleaned up with absorbent, and oil and grease are below benchmark cut-off. There are no chemicals listed on Table VII-AE-I stored at the DPW facility. 5/4/2022 & 12/5/2022 Facility inspections: fluid storage, spill kits, fire extinguishers

C. How many times was this observation measured or evaluated in this reporting period?

			2
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(ex.: samples/participants/events)

D. Has your MS4 made progress toward this measurable goal during this reporting period?

Yes No

E. Is your MS4 on schedule to meet the deadline set forth in the SWMPP?

Yes No

F. Briefly summarize the stormwater activities planned to meet the goals of this MCM during the next reporting cycle (including an implementation schedule).

DPW facility and all operations will continue to be covered by the Village of Ardsley MS4 SPDES permit.
5/2023 & 12/2023 inspections

MS4 Annual Report Form

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Name of MS4/Coalition

SPDES ID

Additional Watershed Improvement Strategy Best Management Practices

The information in this section is being reported (check one):

- On behalf of an individual MS4
- On behalf of a coalition

How many MS4s contributed to this report?

MS4s must answer the questions or check NA as indicated in the table below.

MS4 Description	Answer	Check NA	(POC)
NYC EOH Watershed	-	-	-
Traditional Land Use	1,2,3,4,5,6,7a-d,8a,8b,9	10,11,12	Phosphorus
Traditional Non-Land Use	1,2,3,4,7a-d,8a,8b,9	5,10,11,12	Phosphorus
Non-Traditional	1,2,77a-d,8a,8b,9	3,4,5,10,11,12	Phosphorus
Onondaga Lake Watershed	-	-	-
Traditional Land Use	1,6,7a-d,8a,9	2,3,4,5,8b,10,11,12	Phosphorus
Traditional Non-Land Use	1,6,7a-d,8a,9	2,3,4,5,8b,10,11,12	Phosphorus
Non-Traditional	1,6,7a-d,8a,9	2,3,4,5,8b,10,11,12	Phosphorus
Greenwood Lake Watershed	-	-	-
Traditional Land Use	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
Traditional Non-Land Use	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
Non-Traditional	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
Oyster Bay	-	-	-
Traditional Land Use	1,4,7a-d,9,10,11,12	2,3,5,6,8a,8b	Pathogens
Traditional Non-Land Use	1,4,7a-d,9,10,11,12	2,3,5,6,8a,8b	Pathogens
Non-Traditional	1,4,7a-d,9	2,3,4,5,8a,8b,10,11,12	Pathogens
Peconic Estuary	-	-	-
Traditional Land Use	1,4,7a-d,8a,9,10,11,12	2,3,5,6,8b	Pathogens and Nitrogen
Traditional Non-Land Use	1,4,7a-d,8a,9,10,11,12	2,3,5,6,8b	Pathogens and Nitrogen
Non-Traditional	1,4,7a-d,8a,9	2,3,4,5,8b,10,11,12	Pathogens and Nitrogen
Oscawana Lake Watershed	-	-	-
Traditional Land Use	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
Traditional Non-Land Use	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
Non-Traditional	1,4,6,7a-d,8a,9	2,3,5,8b,10,11,12	Phosphorus
LI 27 Embayments	-	-	-
Traditional Land Use	1,2,3,4,7a-d,9,10,11,12	5,6,8a,8b	Pathogens
Traditional Non-Land Use	1,2,3,4,7a-d,9,10,11,12	5,6,8a,8b	Pathogens
Non-Traditional	1,2,3,4,7a-d,9	5,6,8a,8b,10,11,12	Pathogens

1. Does your MS4/Coalition have an education program addressing impacts of phosphorus/nitrogen/pathogens on waterbodies? Yes No N/A

2. Has 100% of the MS4/Coalition conveyance system been mapped in GIS? Yes No N/A

If N/A, go to question 3.

If No, estimate what percentage of the conveyance system has been mapped so far. %

Estimate what percentage was mapped in this reporting period. %

MS4 Annual Report Form

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If submitting this form as part of a joint report on behalf of a coalition leave SPDES ID blank.

Name of MS4/Coalition

SPDES ID

- 3. Does your MS4/Coalition have a Stormwater Conveyance System (infrastructure) Inspection and Maintenance Plan Program?** Yes No N/A
- 4. Estimate the percentage of on-site wastewater treatment systems that have been inspected and maintained or rehabilitated as necessary in this reporting period?** %
- 5. Has your MS4/Coalition developed a program that provides protection equivalent to the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-08-001) to reduce pollutants in stormwater runoff from construction activities that disturb five thousand square feet or more?** Yes No N/A
- 6. Has your MS4/Coalition developed a program to address post-construction stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre that provides equivalent protection to the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-08-001), including the New York State Stormwater Design Manual Enhanced Phosphorus Removal Standards?** Yes No N/A
- 7a. Does your MS4/Coalition have a retrofitting program to reduce erosion or phosphorus/nitrogen/pathogen loading?** Yes No N/A
- 7b. How many projects have been sited in this reporting period?**
- 7c. What percent of the projects included in 7b have been completed in this reporting period?** %
- 7d. What percent of projects planned in previous years have been completed?** %
- No Projects Planned
- 8a. Has your MS4/Coalition developed and implemented a turf management practices and procedures policy that addresses proper fertilizer application on municipally owned lands?** Yes No N/A
- 8b. Has your MS4/Coalition developed and implemented a turf management practices and procedures policy that addresses proper disposal of grass clippings and leaves from municipally owned lands?** Yes No N/A

