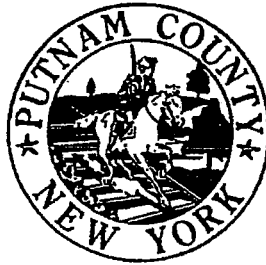


# THE PUTNAM COUNTY LEGISLATURE

40 Gleneida Avenue  
Carmel, New York 10512  
(845) 808-1020 Fax (845) 808-1933

Amy E. Sayegh *Chairwoman*  
Greg E. Ellner *Deputy Chair*  
Diane Trabulsy *Clerk*



Nancy Montgomery	Dist. 1
William Gouldman	Dist. 2
Toni E. Addonizio	Dist. 3
Laura E. Russo	Dist. 4
Greg E. Ellner	Dist. 5
Paul E. Jonke	Dist. 6
Daniel G. Birmingham	Dist. 7
Amy E. Sayegh	Dist. 8
Erin L. Crowley	Dist. 9

## AGENDA YEAR END MEETING OF THE PUTNAM COUNTY LEGISLATURE TO BE HELD IN ROOM 318 PUTNAM COUNTY OFFICE BUILDING CARMEL, NEW YORK 10512

**Thursday**

**December 18, 2025**

**(Immediately following the Audit Mtg., and Rules Mtg starting @ 6:00 P.M.)**

- 1.Pledge of Allegiance**
- 2.Legislative Prayer**
- 3.Roll Call**
- 4.Pre-filed resolutions:**

### **PERSONNEL COMMITTEE**

**(Chairman Jonke, Legislators Addonizio & Gouldman)**

- 4a.Approval – 2026 Salaries for Officers and Employees Paid from County Funds**
- 4b.Approval – Fund Transfer (25T472) – Putnam County Sheriff's Office – Cover Overtime through to the end of the year**
- 4c.Approval – Fund Transfer (25T492) – Putnam County Sheriff's Office – Correctional Facility – Cover Overtime from the month of August**
- 4d.Approval – Fund Transfer (25T493) – Putnam County Sheriff's Office – Correctional Facility – Cover Overtime from the month of September**
- 4e.Approval – Fund Transfer (25T494)– Putnam County Sheriff's Office – Correctional Facility – Cover Overtime from the month of October**

**PROTECTIVE SERVICES COMMITTEE**  
(Chairman Jonke, Legislators Addonizio & Birmingham)

**4f. Approval – Budgetary Amendment (25A117) – Putnam County Sheriff’s Office – Inmate Commissary Funds to Purchase a Classification Printer and Additional Accessories**

**PHYSICAL SERVICES COMMITTEE**  
(Chairman Ellner, Legislators Crowley & Jonke)

**4g. Approval – Budgetary Amendment (25A120) – Department of Planning, Development and Public Transportation – Recently Executed Two (2) Federal Transit Administration (FTA) Grants– NY–2025–061 and NY–2025–043**

**4h. Approval – Budgetary Amendment (25A122) – Commissioner of Finance – Planning Department – Unified Planning Work Program (UPWP) Reflect Actual Allocations**

**4i. Approval – Fund Transfer (25T454) – Department of Public Works (DPW) – Funds to Replace Trusses on Animal Shelter Building at Tilly Foster Farm**

**4j. Approval – Authorizing Lease Agreement– Special Victim’s Unit Facility**

**4k. Approval – Agricultural District Inclusion Criteria – Agricultural and Farmland Protection Board**

**AUDIT & ADMINISTRATION COMMITTEE**  
(Chairwoman Sayegh, Legislators Birmingham & Crowley)

**4l. Approval– Renew Contract– Outside Auditors**

**4m. Approval – Budgetary Amendment (25A059) – Commissioners of Board of Elections – Recognize Grant from New York State for Electronic Poll Books**

**4n. Approval – Fund Transfer (25T496) – Mental Health, Social Services and Youth Bureau – Funds for the Child Advocacy Center Partnership with the Women’s Resource Center**

**4o. Approval – Budgetary Amendment (24A123) – Finance – Year End Journal Entry #1**

**4p. Approval – Budgetary Amendment (25A124) – Mental Health, Social Services and Youth Bureau – Adjust Mental Health State Aid Levels**



**RULES, ENACTMENTS & INTERGOVERNMENTAL RELATIONS COMMITTEE**  
**(Chairman Birmingham, Legislators Ellner & Gouldman)**

**4q. Approval – Appointments and Re–Appointments Putnam County Board of Electrical Examiners**

**4r. Approval – Local Law to Amend Chapter 25, Article VI, Entitled “Transportation Advisory Council”**

**4s. Approval– Sheriff’s Office– Intermunicipal Agreement (IMA) Between Putnam County Sheriff’s Office and Westchester County**

**4t. Approval – Local Law for a Counsel to the Majority of the County Legislature and a Counsel to the Minority of the County Legislature**

**5. Other Business**

**5a. Approval – Tax Collector Warrants – Enter into the 2025 Book of Proceedings**

**5b. Approval – Date, Time & Place of Organizational Meeting – 2026**

**5c. Appointment – Legislative Clerk**

**6. Recognition of Public on Agenda Items**

**7. Recognition of Legislators**

**8. Adjournment**

#4a.

Committee Mtg **Personnel** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ 2026 SALARIES FOR OFFICERS AND EMPLOYEES PAID FROM COUNTY FUNDS**

WHEREAS, Pursuant to Section 2.04 of the Putnam County Charter and Section 201 of the NYS County Law, the Putnam County Legislature must fix by resolution the compensation of all officers and employees paid from County funds; now therefore be it

RESOLVED, that the salaries for fiscal year 2026 for all officers and employees, or their successors, who are not members of bargaining units or whose salaries are not required to be set by Local Law are hereby set at the amounts listed attached; and be it further

RESOLVED, that these employees will also be paid any benefits and/or receive incentive payments resulting from the Putnam County Flex Plan; and be it further

RESOLVED, that the Commissioner of Finance is authorized to determine the method of pay out of monies as herein described.

<u>Pay Position</u>	<u>Pay Position Description</u>	<u>2026 Adopted</u>
101010101	LEGISLATOR	48,173.00
101010102	LEGISLATOR	48,173.00
101010103	LEGISLATOR	48,173.00
101010104	LEGISLATOR	48,173.00
101010105	LEGISLATOR	48,173.00
101010106	LEGISLATOR	48,173.00
101010107	LEGISLATOR	48,173.00
101010108	LEGISLATOR	48,173.00
101010109	LEGISLATOR	48,173.00
101010110	CLERK TO LEGIS	123,572.00
101010111	DEP CLERK TO LEGIS	100,922.00
101010113	ADMIN ASST (LEGIS)	71,970.00
10101011N	DEP CLERK TO LEGIS	87,000.00
10101011N	LEGISLATIVE COUNSEL (PT)	96,000.00
10101011N	MINORITY LEGISLATIVE COUNSEL (PT)	50,000.00
101010190	LEGISLATIVE STIPEND	12,044.00

Legislator Addonizio

Legislator Birmingham

Legislator Crowley

Legislator Ellner

Legislator Gouldman

Legislator Jonke

Legislator Montgomery

Legislator Russo

Chairwoman Sayegh

116510101	DISTRICT ATTORNEY	223,700.00
116510103	CHIEF ASST DA	180,862.00
116510104	ASST DA	109,648.00
116510108	ASST DA	105,468.00
116510110	CRIM INVES (DA)	94,714.00
116510111	ASST DA	77,270.00
116510122	SPECIAL VICTIMS INVES (DA)	92,533.00
116510125	ASST DA	110,404.00
116510126	ASST DA	99,372.00
116510129	CHIEF OF STAFF (DIST ATTORNEY)	87,046.00
116510130	FIRST ASST DA	156,126.00
116510133	ASST DA APPEALS	133,900.00
116510134	ASST DA BUREAU CHIEF	137,582.00
1165101N	ASST DA FINANCIAL CRIMES & INVESTIGATIONS	105,000.00
118510101	CORONER	48,173.00
118510102	CORONER	48,173.00
118510103	CORONER	48,173.00
118510104	CONF SEC TO COUNTY CORONER	63,000.00
118510194	COORD OF CORONERS (MD)	12,000.00
123010101	COUNTY EXECUTIVE	181,303.00
123010102	DEP CNTY EXEC	167,464.00
123010103	CHIEF OF STAFF (COUNTY EXEC)	93,635.00
123010106	CONF SEC TO COUNTY EXEC	81,755.00
123010107	DIRECTOR OF COMMUNICATIONS	90,257.00
123010108	DIR COMP INTERGOV RELATIONS	73,388.00
131010101	COMM OF FINANCE	175,782.00
131010110	DEP COMM FINANCE	116,000.00
131010116	PAYROLL MANAGER	102,900.00
131010120	FIRST DEP COMM FINANCE	130,809.00
132010101	COUNTY AUDITOR	150,000.00
132010102	AUDIT MANAGER	87,000.00
132010103	DEP CNTY AUDITOR	127,000.00
134510101	DIR PURCH & CTRL SVCS	156,437.00
134510109	CAPITAL ASSET & PROCURE MANAGER	62,100.00
135510101	DIR REAL PRP TAX SVC	113,093.00
141010101	COUNTY CLERK	156,963.00
141010102	FIRST DEP CNTY CLERK	137,845.00
141010104	CONF SEC TO COUNTY CLK	73,912.00
141110101	DEP CNTY CLERK	70,476.00
141110103	DEP CNTY CLERK	99,841.00
146010101	ASST RCDS MGMT OFCR	75,495.00

146010193	COUNTY CLERK	7,500.00
142010101	COUNTY ATTORNEY	175,782.00
142010102	CONF SEC TO COUNTY ATTY	69,134.00
142010103	DEP CNTY ATTORNEY	102,107.00
142010104	FIRST DEP CNTY ATTY	156,483.00
142010105	SR DEP CNTY ATTY	142,558.00
142010110	RISK MANAGER	105,451.00
142010112	SR DEP CNTY ATTY	128,099.00
142010118	DEP COUNTY ATTY	118,450.00
142010119	SR DEP CNTY ATTY	71,650.00
142010120	DEP CNTY ATTORNEY	132,189.00
143010101	PERSONNEL OFFICER	163,358.00
143010111	DEPUTY PERSONNEL OFFICER	124,481.00
143010N	OFFICE MANAGER	80,751.00
143010N	OFFICE MANAGER	4,250.00
144010101	SUPV PLAN & DESIGN	142,091.00
144010110	COORD ENGINEERING PROJECTS	119,617.00
149010134	COMMISSIONER DEPT PUB WORKS	163,647.00
149010135	DEP COMM DEPT PUB WORKS	129,431.00
149010136	CONF SECRETARY TO COMM DPW	64,507.00
711010102	PARK SUPERINTENDENT	100,943.00
145010101	COMM OF ELECTIONS	112,710.00
145010102	COMM OF ELECTIONS	112,710.00
145010103	DEP COMM BD OF ELECT	99,885.00
145010104	ELECTION SPECIALIST	66,091.00
145010105	ELECTION SPECIALIST	66,091.00
145010106	DEP COMM BD OF ELECT	99,885.00
145010109	ELECTION SPECIALIST	72,629.00
145010110	ELECTION SPECIALIST	72,629.00
145010111	VOTING MCH TECH (PT)	34,661.00
145010112	VOTING MCH TECH (PT)	34,661.00
145010113	ELECTION SPECIALIST	35,721.00
145010113	ELECTION SPECIALIST	33,046.00
145010114	ELECTION SPECIALIST	66,091.00
168010109	DEPUTY DIRECTOR OF IT/GIS	93,000.00
168010120	DIR OF IT/GIS	154,892.00
311010101	SHERIFF	180,313.00
311010102	UNDERSHERIFF	166,560.00
311010103	ROAD PATROL CAPTAIN	158,629.00
311010110	CONF SECRETARY	68,135.00
311010114	CRIMINAL INVESTIGATIONS CAPT	158,629.00

311010125	CHIEF OF STAFF (SHERIFF)	82,400.00
311010127	OPERATIONS CAPT	158,629.00
311010128	CIVIL BUREAU CAPT	158,629.00
315010101	CORRECTION CAPTAIN	158,629.00
315010106	CORRECTION LIEUT	146,732.00
315010109	CORRECTION LIEUT	146,732.00
314110101	STOP DWI PRGM ADMIN	14,421.00
314010122	PROBATION DIRECTOR GROUP A	139,938.00
398910101	COMM OF EMERG SVCES	64,746.00
398910115	DIR OF EMERG MGMT	97,366.00
398913103	DEP COMM EMERG SVCES	105,833.00
398910101	COMM OF EMERG SVCES	64,746.00
398910102	EMERG SVC COORD (PT)	5,150.00
398910104	EMERG SVC COORD (PT)	5,150.00
398910105	EMERG SVC COORD (PT)	5,150.00
398910106	EMERG SVC COORD (PT)	5,150.00
398910107	EMERG SVC COORD (PT)	5,150.00
398910109	CONF SECRETARY	69,389.00
398910112	DIR OF EMERG MED SERV	92,075.00
398910113	EMERG SVC COORD (PT)	5,150.00
398910114	EMERG SVC COORD (PT)	5,150.00
398914101	EMS EDUCATION COORDINATOR	72,883.00
401010119	PUB HLTH DIRECTOR	159,650.00
401010120	MEDICAL CONSULTANT	113,300.00
816010101	SOLID WASTE MANAGER	82,400.00
401066109	QUALITY IMPRV/PRGRM EVAL MNGR	83,640.00
401077101	PUB HEALTH DATA & INFO SPEC	83,640.00
198910102	COORD OFFICE INDIV DISABILITIE	41,896.00
198910102	COORD OFFICE INDIV DISABILITIE	62,844.00
431010101	DIR OF MENTAL HEALTH	72,000.00
731010108	COMM OF SOC SVCES & MH	34,086.00
431010101	DIR OF MENTAL HEALTH	48,000.00
431010103	DUAL RECOVERY COORD	97,338.00
731010104	YOUTH DIRECTOR	11,786.00
431010102	CRISIS INTERV SPEC (LAW ENF)	97,338.00
601002101	DIR OF CHILD/FAM SVCES	133,779.00
731010104	YOUTH DIRECTOR	21,381.00
601020125	DEP COMM SOC SVCES & YB	124,470.00
731010108	COMM OF SOC SVCES & MH	127,821.00
641010101	DIRECTOR OF TOURISM	92,603.00
651010101	COUNTY VETERANS DIR	92,164.00

651010106	VETERANS ASST (PT)	4,553.00
651010108	DEP CNTY VETERANS DIR	68,458.00
651010N11	VETERANS SERVICE OFFICER- P/T 30HPW	50,000.00
661010101	DIR OF CONS AFFAIRS/WTS&MSRS	52,492.00
661010111	CONF SECRETARY	26,028.00
677210101	DIR, OFFICE SENIOR RESOURCES	116,631.00
677210103	CONF SECRETARY	68,250.00
677210145	DEPUTY DIR, OSR	92,700.00
601020125	DEP COMM SOC SVCES & YB	13,830.00
731010104	YOUTH DIRECTOR	85,284.00
731010108	COMM OF SOC SVCES & MH	8,521.00
731010112	DEP YOUTH DIRECTOR	97,200.00
751110101	COUNTY HISTORIAN	80,000.00
802010101	COMM OF PLAN DEV & PUB TRANS	139,297.00
802010123	DEPUTY COMM OF PLAN DEV & PUB TRANS	103,000.00
802110107	SOIL WATER CONS DISTRICT MANAG	108,150.00
511010127	SUPV CONSTR & MAINT	116,161.00

#46

Committee Mtg –Personnel Resolution # \_\_\_\_\_  
 Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
 Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ FUND TRANSFER (25T472)- PUTNAM COUNTY SHERIFF'S - COVER OVERTIME THROUGH TO END OF YEAR**

**WHEREAS, Putnam County Sheriff requested Fund Transfer (25T472) to fund the Overtime through to the end of the year; and**

**WHEREAS, the Personnel Committee and the Audit & Administration Committee have reviewed and approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Decrease:**

17002000 51093	Sheriff Weight Enforcement: Overtime	3,7000
17311000 51093	Sheriff Patrol: Overtime	60,000
17002000 58002	Sheriff Weight Enforcement: FICA	283.05
17311000 58002	Traffic Patrol: FICA	4,590
	<b>Total:</b>	<b>68,573.05</b>

**Increase:**

13311000 51093	Sheriff Communications: Overtime	3,7000
17311000 51093 10102	Sheriff Patrol: Overtime: SRT	60,000
13311000 58002	Sheriff Communications: FICA	283.05
17311000 58002 10102	Sheriff Patrol: Overtime: SRT: FICA	4,590
	<b>Total:</b>	<b>68,573.05</b>

**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

**COUNTY OF PUTNAM  
FUND TRANSFER REQUEST**

- Pers 12-9

- Audit 12-18

- YR END 12-18

RCSO

cc: t11

**TO: Commissioner of Finance**

**FROM: Undersheriff Menton**

**DEPT: Sheriff**

**DATE: November 26, 2025**

**I hereby request approval for the following transfer of funds:**

FROM ACCOUNT#/NAME	TO ACCOUNT #/NAME	AMOUNT	PURPOSE
17002000.51093 (Sheriff Weight Enforcement: OT)	13311000.51093 (Sheriff Communications: OT)	\$3,700.00	cover coverage and remaining projection For 2025
17311000.51093 (Sheriff Patrol: OT)	17311000.51093.10102 (Sheriff Patrol: OT: SRT)	\$60,000.00	cover coverage and remaining projection For 2025
17002000.58002 (Sheriff Weight Enforcement:FICA)	13311000.58002 (Sheriff Communications: FICA)	\$ 283.05	cover related FICA
17311000.58002 (Traffic Patrol: FICA)	17311000.58002.10102 (Sheriff Patrol:OT:SRT: FICA)	\$4,590.00	cover related FICA

**Total**

**\$68,573.05**

**SIGNATURES NOT NEEDED – THEY WILL BE AUTHORIZED VIA COMPUTER SYSTEM**

2025 Fiscal Impact \$\_\_0\_\_

2026 Fiscal Impact \$\_\_0\_\_

Department Head Signature/Designee

Date

**AUTHORIZATION:**

Date

Commissioner of Finance/Designee: Initiation and \$0 - \$5,000.00

Date

County Executive/Designee: Authorized for Legislative Consideration: \$5,000.01 - \$10,000.00

Date

Chairperson Audit /Designee: \$0 - \$10,000.00

Date

Audit & Administration Committee: \$10,000.01 - \$25,000.00

2025 DEC -3 PM 12:52  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

25T472



#4c

Committee Mtg –Personnel Resolution # \_\_\_\_\_  
 Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
 Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ FUND TRANSFER (25T492)- PUTNAM COUNTY SHERIFF'S –  
 CORRECTIONAL FACILITY - COVER OVERTIME FROM THE MONTH OF AUGUST**

**WHEREAS, Putnam County Sheriff requested Fund Transfer (25T492) to fund  
 the Overtime from the month of August in the Correctional Facility; and**

**WHEREAS, the Personnel Committee and the Audit & Administration  
 Committee have reviewed and approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Decrease:**

10315000 51000 101015	Jail General: Pers. Correction Officer	7,196
10315000 51000 10114	Jail General: Pers. Correction Officer	5,032
10315000 51000 10115	Jail General: Pers. Correction Officer	7,316
10315000 51000 10154	Jail General: Pers. Correction Officer	5,667
10315000 51000 10160	Jail General: Pers. Correction Officer	5,545
10315000 58002	Jail General: FICA	2,354
	<b>Total</b>	<b>33,110</b>

**Increase:**

10008000 51093	Jail Medical: Overtime	19,756
10012000 51093	Jail Staff Training: Overtime	6,000
10010000 51093	Jail Food Services: Overtime	5,000
10012000 58002	Jail Staff Training: FICA	459
10010000 58002	Jail Food Services: FICA	383
10008000 58002	Jail Medical: FICA	1,512
	<b>Total:</b>	<b>33,110</b>

**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
 Legislator Addonizio  
 \_\_\_\_\_  
 Legislator Birmingham  
 \_\_\_\_\_  
 Legislator Crowley  
 \_\_\_\_\_  
 Legislator Ellner  
 \_\_\_\_\_  
 Legislator Gouldman  
 \_\_\_\_\_  
 Legislator Jonke  
 \_\_\_\_\_  
 Legislator Montgomery  
 \_\_\_\_\_  
 Legislator Russo  
 \_\_\_\_\_  
 Chairwoman Sayegh

Reso  
cc: #11 J-326

**COUNTY OF PUTNAM  
FUND TRANSFER REQUEST**

**TO:** Commissioner of Finance

**FROM:** Undersheriff James Menton

**DEPT:** Sheriff/Corrections

**DATE:** December 5, 2025

I hereby request approval for the following transfer of funds:

FROM ACCOUNT#/NAME	TO ACCOUNT #/NAME	AMOUNT	PURPOSE
10315000.51000.10105 (Jail General: Personnel) <i>Correction Officer</i>	10008000.51093 (Jail Medical: Overtime)	\$7,196.00	cover OT cost for Month of August
10315000.51000.10114 (Jail General: Personnel) <i>Correction Officer</i>	10012000.51093 (Jail Staff Training: Overtime)	\$5,032.00	cover OT cost for Month of August
10315000.51000.10115 (Jail General: Personnel) <i>Correction Officer</i>	10012000.51093 (Jail Staff Training: Overtime)	\$ 968.00	cover OT cost for Month of August
10315000.51000.10115 (Jail General: Personnel) <i>Correction Officer</i>	10008000.51093 (Jail Medical: Overtime)	\$6,348.00	cover OT cost for Month of August
10315000.51000.10154 (Jail General: Personnel) <i>Correction Officer</i>	10008000.51093 (Jail Medical: Overtime)	\$5,667.00	cover OT cost for Month of August
10315000.51000.10160 (Jail General: Personnel) <i>Correction Officer</i>	<del>10010000.51093</del> 1001000.51093 (Jail Food Services: Overtime)	\$5,000.00	cover OT cost for Month of August
10315000.51000.10160 (Jail General: Personnel) <i>Correction Officer</i>	10008000.51093 (Jail Medical: Overtime)	\$ 545.00	cover OT cost for Month of August
10315000.58002 (Jail General: FICA)	10012000.58002 (Jail Staff Training: FICA)	\$ 459.00	cover related FICA Month of August
10315000.58002 (Jail General: FICA)	<del>10010000.58002</del> 1001000.58002 (Jail Food Services: FICA)	\$ 383.00	cover related FICA Month of August
10315000.58002 (Jail General: FICA)	10008000.58002 (Jail Medical: FICA)	\$1,512.00	cover related FICA Month of August
<b>Total</b>		<b>\$33,110.00</b>	

**SIGNATURES NOT NEEDED - THEY WILL BE AUTHORIZED VIA COMPUTER SYSTEM**

2025 Fiscal Impact \$ 0

2026 Fiscal Impact \$ 0

Department Head Signature/Designee

Date

**AUTHORIZATION:**

Date

Commissioner of Finance/Designee: Initiation and \$0 - \$5,000.00

Date

County Executive/Designee: Authorized for Legislative Consideration: \$5,000.01 - \$10,000.00

Date

Chairperson Audit /Designee: \$0 - \$10,000.00

Date

Audit & Administration Committee: \$10,000.01 - \$25,000.00

LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

2025 DEC - 9 AM 10:11

25T492

Putnam County Sheriff's Department

Inter - Office Memorandum

Date: December 3, 2025

To: Sheriff Brian Hess  
Undersheriff James Menton

From: Captain James Greenough

Subject: FUNDS TRANSFER  
OVERTIME JAIL

Request the funds transfers below be approved to cover overtime costs that were incurred in the month of August 2025 due to running with the following staff shortages: five Correction Officer vacancies, one Officer on extended 207C, and one officer on extended Range training for the Optic Conversion. During the month of August there was multiple constant watches requiring Overtime to cover. Approving the listed below lines will cover projected overtime costs.

Reduce 10315000.10105 Open Personnel Line Funds by \$7,196.00. ✓

Reduce 10315000.10114 Open Personnel Line Funds by \$5,032.00. ✓

Reduce 10315000.10115 Open Personnel Line Funds by \$7,316.00. ✓

Reduce 10315000.10154 Open Personnel Line Funds by \$5,667.00. ✓

Reduce 10315000.10160 Open Personnel Line Funds by \$5,545.00. ✓

and

Increase 10012000.51093 Jail Staff Training Overtime by \$6,000.00. ✓

Increase 10010000.51093 Jail Food Services Overtime by \$5,000.00. ✓

Increase 10008000.51093 Jail Medical Overtime by \$19,756.00.

Reduce 10315000.58002 Jail General FICA by \$2,354.00 and

Increase 10012000.58002 Jail Staff Training FICA by \$459.00.

Increase 10008000.58002 Jail Food Services FICA by ~~\$383.00~~ OK

Increase 10008000.58002 Jail Medical FICA by \$1,512.00.

RECEIVED AND FORWARDED FOR ACTION

SGT \_\_\_\_\_  
LT \_\_\_\_\_  
LT \_\_\_\_\_  
CAPT \_\_\_\_\_  
US OK \_\_\_\_\_  
SHERIFF \_\_\_\_\_

25T492





**BRIAN M. HESS**  
SHERIFF (ACTING)

**PUTNAM COUNTY  
OFFICE OF THE SHERIFF  
AND  
CORRECTIONAL FACILITY  
THREE COUNTY CENTER  
CARMEL, NEW YORK 10512  
845-225-4300**



**JAMES T. MENTON**  
UNDERSHERIFF

cc: All  
-Pers  
-Audit  
-YR end

DATE: December 8, 2025  
TO: Amy E. Sayegh, Chairwoman  
FROM: A/Sheriff Brian M. Hess

2025 DEC -9 AM 10:11  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

SUBJECT: Letter of Necessity, Transfer of Funds to Cover Overtime Costs

This letter is being sent as a request, to place on the December 9th, 2025 Personnel meeting agenda, to amend the Putnam County Sheriff's Correctional Facility 2025 budget. The request is for fund transfers to cover overtime costs that were incurred in the months of August, September and October due to staff shortages.

We look forward to a favorable response.

Sincerely,  
  
Brian M. Hess  
A/Sheriff

Cc: Diane Trabulsy, Legislative Clerk  
Michele Sharkey, Auditor

#4d

Committee Mtg –**Personnel** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ FUND TRANSFER (25T493)- PUTNAM COUNTY SHERIFF'S –  
CORRECTIONAL FACILITY - COVER OVERTIME FROM THE MONTH OF  
SEPTEMBER**

**WHEREAS, Putnam County Sheriff requested Fund Transfer (25T493) to fund  
the Overtime from the month of September in the Correctional Facility; and**

**WHEREAS, the Personnel Committee and the Audit & Administration  
Committee have reviewed and approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Decrease:**

<b>10315000 51000 101015</b>	<b>Jail General: Pers. Correction Officer</b>	<b>7,196</b>
<b>10315000 51000 10114</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,032</b>
<b>10315000 51000 10115</b>	<b>Jail General: Pers. Correction Officer</b>	<b>7,316</b>
<b>10315000 51000 10154</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,667</b>
<b>10315000 51000 10160</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,545</b>
	<b>Total</b>	<b>30,756</b>

**Increase:**

<b>10315000 51093</b>	<b>Jail General: Overtime</b>	<b>30,756</b>
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**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

cc: All  
- PERS.  
- Audit  
- year end

RCSO  
J-327

**COUNTY OF PUTNAM  
FUND TRANSFER REQUEST**

**TO:** Commissioner of Finance

**FROM:** Undersheriff James Menton

**DEPT:** Sheriff/Corrections

**DATE:** December 5, 2025

I hereby request approval for the following transfer of funds:

FROM ACCOUNT#/NAME	TO ACCOUNT #/NAME	AMOUNT	PURPOSE
10315000.51000.10105 (Jail General: Personnel) <i>Correction officer</i>	10315000.51093 (Jail General: Overtime)	\$7,196.00	cover OT cost for Month of September
10315000.51000.10114 (Jail General: Personnel) <i>Correction officer</i>	10315000.51093 (Jail General: Overtime)	\$5,032.00	cover OT cost for Month of September
10315000.51000.10115 (Jail General: Personnel) <i>Correction officer</i>	10315000.51093 (Jail General: Overtime)	\$7,316.00	cover OT cost for Month of September
10315000.51000.10154 (Jail General: Personnel) <i>Correction officer</i>	10315000.51093 (Jail General: Overtime)	\$5,667.00	cover OT cost for Month of September
10315000.51000.10160 (Jail General: Personnel) <i>Correction officer</i>	10315000.51093 (Jail General: Overtime)	\$5,545.00	cover OT cost for Month of September
<b>Total</b>		<b>\$30,756.00</b>	

**SIGNATURES NOT NEEDED – THEY WILL BE AUTHORIZED VIA COMPUTER SYSTEM**

2025 Fiscal Impact \$ 0

2026 Fiscal Impact \$ 0

Department Head Signature/Designee

Date

**AUTHORIZATION:**

Date	Commissioner of Finance/Designee: Initiation and \$0 - \$5,000.00
Date	County Executive/Designee: Authorized for Legislative Consideration: \$5,000.01 - \$10,000.00
Date	Chairperson Audit /Designee: \$0 - \$10,000.00
Date	Audit & Administration Committee: \$10,000.01 - \$25,000.00

25T493

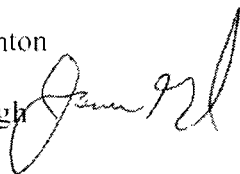
Putnam County Sheriff's Department

Inter - Office Memorandum

Date: December 3, 2025

To: Sheriff Brian Hess  
Undersheriff James Menton

From: Captain James Greenough



Subject: FUNDS TRANSFER  
OVERTIME JAIL

Request the transfers below be approved to cover overtime costs that were incurred in the month of September 2025 due to the running with the following staff shortages: five Correction Officer vacancies, one Officer on extended 207C, four Correction Officers that were in the Basic Corrections Academy during the month, one Correction Officer who was out sick due to a Motor Vehicle Accident while off duty, and one Officer on extended Range training for the Optic Conversion. Approving the listed below lines will cover projected overtime costs.

Reduce 10315000.10105 Open Personnel Line Funds by \$7,196.00.

Reduce 10315000.10114 Open Personnel Line Funds by \$5,032.00.

Reduce 10315000.10115 Open Personnel Line Funds by \$7,316.00.

Reduce 10315000.10154 Open Personnel Line Funds by \$5,667.00.

Reduce 10315000.10160 Open Personnel Line Funds by \$5,545.00.

and

Increase 10315000.51093 Jail General Overtime by \$30,756.00.

RECEIVED AND FORWARDED FOR ACTION

SGT	_____
LT	_____
LT	_____
CAPT	_____
US	_____
SHERIFF	_____

25T493



**BRIAN M. HESS**  
SHERIFF (ACTING)

**PUTNAM COUNTY  
OFFICE OF THE SHERIFF  
AND  
CORRECTIONAL FACILITY  
THREE COUNTY CENTER  
CARMEL, NEW YORK 10512  
845-225-4300**



**JAMES T. MENTON**  
UNDERSHERIFF

DATE: December 8, 2025  
TO: Amy E. Sayegh, Chairwoman  
FROM: A/Sheriff Brian M. Hess

LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

2025 DEC -9 AM 10:11

SUBJECT: Letter of Necessity, Transfer of Funds to Cover Overtime Costs

This letter is being sent as a request, to place on the December 9th, 2025 Personnel meeting agenda, to amend the Putnam County Sheriff's Correctional Facility 2025 budget. The request is for fund transfers to cover overtime costs that were incurred in the months of August, September and October due to staff shortages.

We look forward to a favorable response.

Sincerely,  
  
Brian M. Hess  
A/Sheriff

Cc: Diane Trabulsy, Legislative Clerk  
Michele Sharkey, Auditor



#4e.

Committee Mtg –**Personnel** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ FUND TRANSFER (25T494)- PUTNAM COUNTY SHERIFF'S –  
CORRECTIONAL FACILITY - COVER OVERTIME FROM THE MONTH OF  
OCTOBER**

**WHEREAS, Putnam County Sheriff requested Fund Transfer (25T494) to fund  
the Overtime from the month of October in the Correctional Facility; and**

**WHEREAS, the Personnel Committee and the Audit & Administration  
Committee have reviewed and approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Decrease:**

<b>10315000 51000 101015</b>	<b>Jail General: Pers. Correction Officer</b>	<b>7,538</b>
<b>10315000 51000 10114</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,272</b>
<b>10315000 51000 10115</b>	<b>Jail General: Pers. Correction Officer</b>	<b>7,665</b>
<b>10315000 51000 10154</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,937</b>
<b>10315000 51000 10160</b>	<b>Jail General: Pers. Correction Officer</b>	<b>5,809</b>
	<b>Total</b>	<b>32,221</b>

**Increase:**

<b>10315000 51093</b>	<b>Jail General: Overtime</b>	<b>32,221</b>
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**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

COUNTY OF PUTNAM  
FUND TRANSFER REQUEST

cc: All  
- Pers.  
- Audit  
- Year End

Reso  
J-328

TO: Commissioner of Finance

FROM: Undersheriff James Menton

DEPT: Sheriff/Corrections

DATE: December 5, 2025

I hereby request approval for the following transfer of funds:

FROM ACCOUNT#/NAME	TO ACCOUNT #/NAME	AMOUNT	PURPOSE
10315000.51000.10105 (Jail General: Personnel) <i>Correction Officer</i>	10315000.51093 (Jail General: Overtime)	\$7,538.00	cover OT cost for Month of October
10315000.51000.10114 (Jail General: Personnel) <i>Correction Officer</i>	10315000.51093 (Jail General: Overtime)	\$5,272.00	cover OT cost for Month of October
10315000.51000.10115 (Jail General: Personnel) <i>Correction Officer</i>	10315000.51093 (Jail General: Overtime)	\$7,665.00	cover OT cost for Month of October
10315000.51000.10154 (Jail General: Personnel) <i>Correction Officer</i>	10315000.51093 (Jail General: Overtime)	\$5,937.00	cover OT cost for Month of October
10315000.51000.10160 (Jail General: Personnel) <i>Correction Officer</i>	10315000.51093 (Jail General: Overtime)	\$5,809.00	cover OT cost for Month of October
Total		\$32,221.00	

SIGNATURES NOT NEEDED – THEY WILL BE AUTHORIZED VIA COMPUTER SYSTEM

2025 Fiscal Impact \$\_\_\_0\_\_

2026 Fiscal Impact \$\_\_\_0\_\_

Department Head Signature/Designee

Date

AUTHORIZATION:

Date	Commissioner of Finance/Designee: Initiation and \$0 - \$5,000.00
Date	County Executive/Designee: Authorized for Legislative Consideration: \$5,000.01 - \$10,000.00
Date	Chairperson Audit /Designee: \$0 - \$10,000.00
Date	Audit & Administration Committee: \$10,000.01 - \$25,000.00

LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

2025 DEC - 9 AM 10:11

25T494

P-1

Putnam County Sheriff's Department

Inter - Office Memorandum

Date: December 3, 2025

To: Sheriff Brian Hess  
Undersheriff James Menton

From: Captain James Greenough

Subject: FUNDS TRANSFER  
OVERTIME JAIL

Request the funds transfers below be approved to cover overtime costs that were incurred in the month of October 2025 due to running with the following staff shortages: six Correction Officer vacancies, three Officers on (12 Week) FMLA, one Officer on extended 207C, four Correction Officers that were in the Basic Corrections Academy during the Month, one Correction Officer who was out due to a Motor Vehicle Accident while off duty, and one Officer for the continuation of extended Range training for the Optic Conversion. Approving the listed below lines will cover projected overtime costs.

Reduce 10315000.10105 Open Personnel Line Funds by \$7,538.00.

Reduce 10315000.10114 Open Personnel Line Funds by \$5,272.00.

Reduce 10315000.10115 Open Personnel Line Funds by \$7,665.00.

Reduce 10315000.10154 Open Personnel Line Funds by \$5,937.00.

Reduce 10315000.10160 Open Personnel Line Funds by \$5,809.00.

and

Increase 10315000.51093 Jail General Overtime by \$32,221.00.

RECEIVED AND FORWARDED FOR ACTION

SGT \_\_\_\_\_  
LT \_\_\_\_\_  
LT \_\_\_\_\_  
CAPT \_\_\_\_\_  
US \_\_\_\_\_  
SHERIFF \_\_\_\_\_

25T494



**BRIAN M. HESS**  
SHERIFF (ACTING)

**PUTNAM COUNTY  
OFFICE OF THE SHERIFF  
AND  
CORRECTIONAL FACILITY  
THREE COUNTY CENTER  
CARMEL, NEW YORK 10512  
845-225-4300**



**JAMES T. MENTON**  
UNDERSHERIFF

DATE: December 8, 2025  
TO: Amy E. Sayegh, Chairwoman  
FROM: A/Sheriff Brian M. Hess

2025 DEC -9 AM 10:11  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

**SUBJECT: Letter of Necessity, Transfer of Funds to Cover Overtime Costs**

This letter is being sent as a request, to place on the December 9th, 2025 Personnel meeting agenda, to amend the Putnam County Sheriff's Correctional Facility 2025 budget. The request is for fund transfers to cover overtime costs that were incurred in the months of August, September and October due to staff shortages.

We look forward to a favorable response.

Sincerely,  
  
Brian M. Hess  
A/Sheriff

Cc: Diane Trabulsy, Legislative Clerk  
Michele Sharkey, Auditor

#4F

Committee Mtg **Protective Svcs.** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – BUDGETARY AMENDMENT (25A117)- PUTNAM COUNTY SHERIFF'S  
OFFICE INMATE COMMISSARY FUNDS TO PURCHASE A CLASSIFICATION  
PRINTER AND ADDITIONAL ACCESSORIES**

WHEREAS, Sheriff has requested Budgetary Amendment (25A117) to use  
Inmate Commissary Funds to purchase a Zebra dual-sided Classification Printer,  
printer ribbons and cards to be worn by the inmates based upon their classification  
; and

WHEREAS, the Protective Services Committee and the Audit &  
Administration Committee have reviewed and approved said budgetary  
amendment; now therefore be it

RESOLVED, that the following budgetary amendment:

<b>Increase Revenue:</b>		
10315000 427701	Sheriff – Jail - Unclassified	3,592.26
<b>Increase Appropriations:</b>		
10315000 52130	Sheriff – Jail – Computer Equipment	3,592.26

2025 Fiscal Impact – 0 –  
2026 Fiscal Impact – 0 –

\_\_\_\_\_  
Legislator Addonizio  
\_\_\_\_\_  
Legislator Birmingham  
\_\_\_\_\_  
Legislator Crowley  
\_\_\_\_\_  
Legislator Ellner  
\_\_\_\_\_  
Legislator Gouldman  
\_\_\_\_\_  
Legislator Jonke  
\_\_\_\_\_  
Legislator Montgomery  
\_\_\_\_\_  
Legislator Russo  
\_\_\_\_\_  
Chairwoman Sayegh



WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



DEPARTMENT OF FINANCE

*- Tot. Dec 9  
- Audit - Dec 18  
- Year End 12/18*  
SHEILA BARRETT  
First Deputy Commissioner of Finance

ALEXANDRA GORDON  
Deputy Commissioner of Finance

*Reso  
CC: 111*

November 17, 2025

Ms. Diane Trabulsy, Clerk  
Putnam County Legislature  
40 Gleneida Avenue  
Carmel, NY 10512

Dear Ms. Trabulsy,

2025 NOV 20 AM 10:15  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

Pursuant to Code Section 5-1, A, dated February 14, 2010, I am advising you of the following budgetary amendment **25A117** which was submitted for approval:

**Increase Revenue:**

<b>10315000 427701</b>	<b>Sheriff-Jail - Unclassified</b>	<b><u>\$3,592.26</u></b>
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**Increase Appropriations:**

<b>10315000 52130</b>	<b>Sheriff-Jail - Computer Equipment</b>	<b><u>\$3,592.26</u></b>
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2025 Fiscal Impact -0-  
2026 Fiscal Impact -0-

Sheriff Hess has authorized the use of Inmate Commissary Account funds to purchase a Zebra dual-sided Classification printer, printer ribbons and cards to be worn by the inmates based upon their classification. He respectfully requests this amendment to his 2025 budget be approved so the purchase can be completed.

**AUTHORIZATION:**

\_\_\_\_\_  
Date Commissioner of Finance/Designee: Initiation by \$0 - \$5,000.00

\_\_\_\_\_  
Date County Executive/Designee: Authorized for Legislative Consideration \$5,000.01 - \$10,000

\_\_\_\_\_  
Date Chairperson Audit/Designee: \$0 - \$10,000.00

\_\_\_\_\_  
Date Audit & Administration Committee: \$10,000.01 - \$25,000.00

Putnam County Correctional Facility Inmate Commissary Acct check # 1019 ~ \$3,592.26 held in Sheriff's department pending amendment approval.

40 GLENEIDA AVENUE ~ CARMEL NEW YORK 10512 ~ Tel (845) 808-1075 ~ Fax (845) 808-1910

*25A 117*



**BRIAN M. HESS**  
SHERIFF (ACTING)

**PUTNAM COUNTY  
OFFICE OF THE SHERIFF  
AND  
CORRECTIONAL FACILITY  
THREE COUNTY CENTER  
CARMEL, NEW YORK 10512  
845-225-4300**



**JAMES T. MENTON**  
UNDERSHERIFF



October 30, 2025

Mr. William Carlin  
Commissioner of Finance  
County Office Building  
40 Gleneida Avenue  
Carmel, NY 10512

Dear Commissioner Carlin:

I have authorized the expenditure of Inmate Commissary Account Funds to purchase a Classification Printer, Printer Ribbons and Cards for the Incarcerated Individuals to wear based on their classification. These cards are worn as they travel throughout the Sheriff's Office and Correctional Facility.

Accordingly, enclosed find check #1019 in the amount of three thousand five hundred ninety-two and 26/100 dollars (\$3,592.26). It is respectfully requested that \$3,592.26 be placed into Munis budget line #10315000, account code #52130, so that the purchase can be completed.

Please ensure that the necessary information is provided to the legislature to meet the seven (7) day notice for committee action.

Thank you for your attention to this matter.

Very truly yours,

Brian Hess  
Sheriff



# Government, Education, and Corporate Department

For Pricing Requests, Purchase Orders, and Customer Service:

Phone: 800-947-8003  
212-239-7503

Fax: 800-858-5517  
212-239-7759

Email: Education: emailbids@bhphoto.com  
Corporate: corporatesales@bhphoto.com

Fed Gov: federalsales@bhphoto.com  
State and Local: biddept@bhphoto.com

The Professional's Source

420 Ninth Avenue, New York City, NY 10001 • www.bhphotovideo.com

Prices Are Valid Until:

11/28/25

Quote No.: 1124934275

Reference No.: R201202-OMNIA

Sold To: Travis Bjorkander  
Putnam County Sheriff's Dept  
3 County Center  
Attn: Accounts Payable  
CARMEL, NY 10512

Bill Phone: (845)225-5255

Date	Customer Code	Terms	Salesperson	Ship Via	
10/29/25	A5326284	N/A	WB	FDX GROUND	
Line No	Qty Ord	Item Description	SKU# MFR#	Item Price	Amount
1	6	ZEBRA RIBBON 1/ZC300-COLOR/YMCKO/300 IMAGES/REG Country of Origin: CHINA  In Stock - while supplies last.	ZE800300550 (800300-550)	51.75	310.50
2	1	ZEBRA ZC300 DUAL SIDED PRINTER - TAA/REG Country of Origin: CHINA  In Stock - while supplies last.	ZEC3200C0G0U (ZC32-000C0G0US00)	1,514.45	1,514.45
3	1	ZEBRA ZC300 DS STDRD CS2.0 PRNTR w/200 CARDS/REG Country of Origin: CHINA  This Is A Special Order Item, And Is Not Returnable.  Special Order. 7-10 Business Days  PLEASE NOTE: ----- **** Please reference your quote number on all PO's ****	ZEC3200CQ00U (ZC32-000CQ00US00)	1,767.31	1,767.31
Continued on Next Page ...					





# Government, Education, and Corporate Department

For Pricing Requests, Purchase Orders, and Customer Service:

Phone: 800-947-8003  
212-239-7503

Fax: 800-858-5517  
212-239-7759

Email: Education: emailbids@bhphoto.com Fed Gov: federalsales@bhphoto.com  
Corporate: corporatesales@bhphoto.com State and Local: biddept@bhphoto.com

The Professional's Source

420 Ninth Avenue, New York City, NY 10001 • www.bhphotovideo.com

Federal ID#: 13-2768071

Quote No.: 1124934275

Date	Customer Code	Terms	Salesperson	Ship Via	
	A5326284	N/A	Slsm	FDX GROUND	
Line No	Qty Ord	Item Description	SKU# MFR#	Item Price	Amount
		**** ALL PRICES ARE LISTED IN USD ****			
Payment Type - NA			- Amount	Sub-Total:	3,592.26
				Shipping:	Free STND
				Total:	3,592.26

#49.

Committee Mtg **Physical Svcs.** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL BUDGETARY AMENDMENT (25A120) – DEPARTMENT OF PLANNING, DEVELOPMENT AND PUBLIC TRANSPORTATION – RECENTLY EXECUTED TWO (2) FEDERAL TRANSIT ADMINISTRATION (FTA) GRANTS- NY-2025-061 AND NY-2025-043**

WHEREAS, Commissioner of Department of Planning, Development and Public Transportation has requested Budgetary Amendment (25A120) for the recently executed two (2) FTA Grants, NY-2025-061, Cashless Fare and Project Administration, and NY-2025-043, Rolling Stock Purchase of three (3) vehicles; and

WHEREAS, These grants are utilizing 2022 and 2023 Section 5307 and 5339 formula funding; and

WHEREAS, the Physical Services Committee and the Audit & Administration Committee have reviewed and approved said budgetary amendment; now therefore be it

**RESOLVED**, that the following budgetary amendment:

**CAPITAL FUND:**

**Increase Estimated Appropriations:**

10990100 59020	Transfer to Capital Fund	105,091
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**Decrease Estimated Appropriations:**

10199000 54980	Contingency	105,091
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**CAPITAL FUND:**

**Increase Estimated Appropriations:**

55997000 53000 52524	Cashless Fare Project	850,000
55997000 53000 52525	Transit Buses	450,000
55997000 53000 50330	Bikeway 2 Stage 4	2,500,000
		<u>3,800,000</u>

**Increase Estimated Appropriations:**

55997000 53000 52306	Transit Section 5307 FFY 2023	81,579
55997000 53000 52413	Transit Section 5307 FFY 2024	202,331
55997000 53000 52514	Transit Section 5307 FFY 2025	766,991
		<u>1,050,901</u>

**Increase Estimated Revenues:**

55997000 445970 52524	Fed Aid Section 5307-Cashless Fare	680,000
55997000 445970 52525	Fed Aid Section 5307-Transit Buses	360,000
55997000 445970 50330	Fed Aid Section 5307-Bikeway 2 Stage 4	2,000,000

Legislator Addonizio

Legislator Birmingham

Legislator Crowley

Legislator Ellner

Legislator Gouldman

Legislator Jonke

Legislator Montgomery

Legislator Russo

Chairwoman Sayegh

55997000 435970 52524	State Aid Section 5307-Cashless Fare	85,000
55997000 435970 52525	State Aid Section 5307-Transit Buses	45,000
55997000 435970 50330	State Aid Section 5307-Bikeway 2 Stage 4	250,000
55997000 428601 52524	Transfer from General Fund	85,000
55997000 428601 52525	Transfer from General Fund	45,000
55997000 428601 50330	Transfer from General Fund	250,000
		<hr/> 3,800,000

**Increase Estimated Revenues:**

55997000 445970 52306	Fed Aid Section 5307 FFY 2023	65,261
55997000 435970 52306	State Aid Section 5307 FFY 2023	8,159
55997000 428601 52306	Transfer from General Fund	8,159
55997000 445970 52413	Fed Aid Section 5307 FFY 2023	161,865
55997000 435970 52413	State Aid Section 5307 FFY 2023	20,233
55997000 428601 52413	Transfer from General Fund	20,233
55997000 445970 52514	Fed Aid Section 5307 FFY 2023	613,593
55997000 435970 52514	State Aid Section 5307 FFY 2023	76,699
55997000 428601 52514	Transfer from General Fund	76,699
		<hr/> 1,050,901

**Decrease Estimated Appropriations:**

55997000 53000 52006	Transit Section 5307 FFY 2020	100,000
55997000 53000 52103	Transit Section 5307 FFY 2021	73,669
55997000 53000 52103	Transit Section 5307 FFY 2021	952,542
55197000 53000 52206	Transit Section 5307 FFY 2022	26,331
55197000 53000 52206	Transit Section 5307 FFY 2022	1,303,243
55197000 53000 52306	Transit Section 5307 FFY 2023	1,303,212
55197000 53000 52413	Transit Section 5307 FFY 2024	1,193,545
		<hr/> 4,952,542

**Decrease Estimated Revenues:**

55997000 445970 52006	Fed Aid Section 5307 FFY 2020	80,000
55997000 435970 52006	State Aid Section 5307 FFY 2020	10,000
57997000 428601 52006	Transfer from General Fund	10,000
55997000 445970 52103	Fed Aid Section 5307 FFY 2021	58,935
55997000 435970 52103	State Aid Section 5307 FFY 2021	7,367
55997000 428601 52103	Transfer from General Fund	7,367
55997000 449898 52103	Fed Aid – ARPA 2021	632,148
55997000 445894 52103	Fed Aid – CRRSA 2021	320,394
55997000 445970 52206	Fed Aid Section 5307 FFY 2021	21,065
55997000 435970 52206	State Aid Section 5307 FFY 2021	2,633
55997000 428601 52206	Transfer from General Fund	2,633
55997000 445970 52206	Fed Aid Section 5307 FFY 2022	1,042,594
55997000 435970 52206	State Aid Section 5307 FFY 2022	130,324
55997000 428601 52206	Transfer from General Fund	130,325
55997000 445970 52306	Fed Aid Section 5307 FFY 2023	1,042,570
55997000 435970 52306	State Aid Section 5307 FFY 2023	130,321
55997000 428601 52306	Transfer from General Fund	130,321

55997000 445970 52413	Fed Aid Section 5307 FFY 2024	954,836
55997000 435970 52413	State Aid Section 5307 FFY 2024	119,354
55997000 428601 52413	Transfer from General Fund	119,355
		<hr/>
		4,952,542
	2025 Fiscal Impact – \$105,091	
	2026 Fiscal Impact – 0 –	

WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



PHYS-DEC.  
audit -  
year end - 12/18  
KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE

Rec'd  
#49

DEPARTMENT OF FINANCE

MEMORANDUM

To: Diane Trabulsy, Legislative Clerk  
From: William J. Carlin, Jr., Commissioner of Finance *WJC*  
Re: Budgetary Amendment - 25A120  
Date: November 19, 2025

2025 NOV 20 AM 11:34  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

At the request of the Commissioner of Planning, the following budgetary amendment is required.

**CAPITAL FUND:**

**Increase Estimated Appropriations:**

10990100 59020	Transfer to Capital Fund	105,091
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**Decrease Estimated Appropriations:**

10199000 54980	Contingency	105,091
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**CAPITAL FUND:**

**Increase Estimated Appropriations:**

55997000 53000 52524	Cashless Fare Project	850,000
55997000 53000 52525	Transit Buses	450,000
55997000 53000 50330	Bikeway 2 Stage 4	2,500,000
		<u>3,800,000</u>

**Increase Estimated Appropriations:**

55997000 53000 52306	Transit Section 5307 FFY 2023	81,579
55997000 53000 52413	Transit Section 5307 FFY 2024	202,331
55997000 53000 52514	Transit Section 5307 FFY 2025	766,991
		<u>1,050,901</u>

**Increase Estimated Revenues:**

55997000 445970 52524	Fed Aid Section 5307 - Cashless Fare	680,000
55997000 445970 52525	Fed Aid Section 5307 - Transit Buses	360,000
55997000 445970 50330	Fed Aid Section 5307 - Bikeway 2 Stage 4	2,000,000
55997000 435970 52524	State Aid Section 5307 - Cashless Fare	85,000
55997000 435970 52525	State Aid Section 5307 - Transit Buses	45,000
55997000 435970 50330	State Aid Section 5307 - Bikeway 2 Stage 4	250,000



55997000 428601 52524	Transfer from General Fund	85,000
55997000 428601 52525	Transfer from General Fund	45,000
55997000 428601 50330	Transfer from General Fund	250,000
		<u>3,800,000</u>

**Increase Estimated Revenues:**

55997000 445970 52306	Fed Aid Section 5307 FFY 2023	65,261
55997000 435970 52306	State Aid Section 5307 FFY 2023	8,159
55997000 428601 52306	Transfer from General Fund	8,159
55997000 445970 52413	Fed Aid Section 5307 FFY 2023	161,865
55997000 435970 52413	State Aid Section 5307 FFY 2023	20,233
55997000 428601 52413	Transfer from General Fund	20,233
55997000 445970 52514	Fed Aid Section 5307 FFY 2023	613,593
55997000 435970 52514	State Aid Section 5307 FFY 2023	76,699
55997000 428601 52514	Transfer from General Fund	76,699
		<u>1,050,901</u>

**Decrease Estimated Appropriations:**

55997000 53000 52006	Transit Section 5307 FFY 2020	100,000
55997000 53000 52103	Transit Section 5307 FFY 2021	73,669
55997000 53000 52103	Transit Section 5307 FFY 2021	952,542
55197000 53000 52206	Transit Section 5307 FFY 2022	26,331
55197000 53000 52206	Transit Section 5307 FFY 2022	1,303,243
55197000 53000 52306	Transit Section 5307 FFY 2023	1,303,212
55197000 53000 52413	Transit Section 5307 FFY 2024	1,193,545
		<u>4,952,542</u>

**Decrease Estimated Revenues:**

55997000 445970 52006	Fed Aid Section 5307 FFY 2020	80,000
55997000 435970 52006	State Aid Section 5307 FFY 2020	10,000
57997000 428601 52006	Transfer from General Fund	10,000
55997000 445970 52103	Fed Aid Section 5307 FFY 2021	58,935
55997000 435970 52103	State Aid Section 5307 FFY 2021	7,367
55997000 428601 52103	Transfer from General Fund	7,367
55997000 449898 52103	Fed Aid -ARPA 2021	632,148
55997000 445894 52103	Fed Aid - CRRSA 2021	320,394
55997000 445970 52206	Fed Aid Section 5307 FFY 2021	21,065
55997000 435970 52206	State Aid Section 5307 FFY 2021	2,633
55997000 428601 52206	Transfer from General Fund	2,633
55997000 445970 52206	Fed Aid Section 5307 FFY 2022	1,042,594
55997000 435970 52206	State Aid Section 5307 FFY 2022	130,324
55997000 428601 52206	Transfer from General Fund	130,325
55997000 445970 52306	Fed Aid Section 5307 FFY 2023	1,042,570
55997000 435970 52306	State Aid Section 5307 FFY 2023	130,321
55997000 428601 52306	Transfer from General Fund	130,321
55997000 445970 52413	Fed Aid Section 5307 FFY 2024	954,836
55997000 435970 52413	State Aid Section 5307 FFY 2024	119,354
55997000 428601 52413	Transfer from General Fund	119,355
		<u>4,952,542</u>

Fiscal Impact - 2025 - \$ 105,091  
Fiscal Impact - 2026 - \$ 0

This Resolution is required to fund account for Section 5307 Program Funds as per the attached correspondence. Please forward to the appropriate committee.

Approved : : \_\_\_\_\_  
Kevin M, Byrne, County Executive



**Putnam County  
Department of Planning, Development,  
and Public Transportation**

*www.putnamcountyny.com*

**841 Fair Street  
Carmel, NY 10512**

**Phone: (845) 878-3480  
Fax: 845) 808-1948**

TO: William Carlin, Commissioner of Finance

FROM: Barbara Barosa, AICP, Commissioner  
Department of Planning, Development and Public Transportation

DATE: October 24, 2025

RE: Budgetary Amendments for 2025 FTA Executed Grants

---

The Department of Planning, Development & Public Transportation recently executed two FTA Grants, NY-2025-061, Cashless Fare and Project Administration, and NY-2025-043, Rolling Stock Purchase of 3 Vehicles. These grants are utilizing 2022 and 2023 Section 5307 and 5339 formula funding. The details of each grant are:

NY-2025-061 Cashless Fare Software and Project Administration – Total cost \$850,000 with \$680,000 of Federal funds as follows:

\$600,000 FY 2022 NY Section 5307  
\$ 31,199 FY 2022 Danbury, CT Section 5339 ND  
\$ 8,964 FY 2022 Danbury, CT Section 5339 SUZA  
\$ 9,308 FY 2022 NY Section 5339  
\$ 21,294 FY 2023 Danbury, CT Section 5339 ND  
\$ 9,235 FFY 2023 Danbury, CT Section 5339 SUZA  
(\$680,000)  
\$85,000 State match  
\$85,000 Local match

NY-2025-043, Rolling Stock Purchase of 3 Vehicles. Total Project cost is \$450,000 utilizing the following:

\$360,000 FY 2023 NY Section 5307 formula funds.  
\$45,000 State match  
\$45,000 Local match

I kindly request that budgetary amendments be prepared to account for this funding. Thank you in advance for your assistance in this matter.

---



This award does not include an indirect cost rate.

*Indirect Rate Details: N/A*

**Requires E.O. 12372 Review**

No, this application does not require E.O. 12372 Review.

**Delinquent Federal Debt**

No, my organization does not have delinquent federal debt.

## Award Description

**Purpose**

Supplemental funding for construction of the Putnam Bikeway II Stage IV project including security.

**Activities to be performed:**

Construction supplementation of a bikeway project in progress.

**Expected outcomes:**

Construction of the bikeway for recreational activities and safer means of commuting and connecting to existing bus routes within the county.

**Intended beneficiaries:**

Putnam County, NY bicycle and pedestrian public including residents and visitors.

**Subrecipient Activities:**

None

## Application Point of Contact Information

First Name	Last Name	Title	E-mail Address	Phone
Barbara	Barosa	Commissioner of Planning, Development & Public Transportation	barbara.barosa@putnamcountyny.gov	(845) 878-3480 48107

## Application Budget Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
5307 - Urbanized Area Formula Grants (2013 and forward)	5307-2A	20507	\$2,000,000
Local			\$250,000
Local/In-Kind			\$0
State			\$250,000
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
<b>Total Eligible Cost</b>			<b>\$2,500,000</b>

Website

iuoelocal30.org

## Part 2: Application Information

**Title: Putnam County, NY Putnam Bikeway IV Construction & Security FFY 2022 NY & CT 5307 and FFY 2023 and 2024 NY Section 5307**

Application Number	Application Status	Award Type	Application Cost Center	Date Created	Last Updated Date	From TEAM?
1795-2025-1	In-Progress	Grant	Region 2	5/13/2025	5/13/2025	No

### Application Executive Summary

Putnam County, NY seeks \$2,000,000 of Federal funding. Total project cost with local share will be \$2,500,000. The breakdown is as follows:

\$...114,324 FY 2022 NY Section 5307

\$...278,799 FY 2022 Danbury, CT Section 5307

\$...652,041 FY 2023 NY Section 5307

\$...954,836 FY 2024 NY Section 5307

Suballocation resolution is attached to this grant application

Funds will be used to supplement Construction of the Putnam Bikeway IV including Security.

0.75% Safety Requirement: Putnam's budget for Section 5307 funds is \$2,000,000 in this award. FTA requires at least 0.75% of award funds \$15,000.

1% Security Requirement: Putnam receives funds from the New York, NY and Danbury, CT UZAs. Putnam County certifies that it will expend at least 1% of the apportionment on security as required based upon the projects listed within this application that will keep the vehicles in a safe/secure state of good repair. Putnam utilizes local funds from bond proceeds.

P2-Putnam Bikeway IV including Security (FY 2022, 2023, 2024 NY Section 5307 \$1,721,201) & FY 2022 Danbury, CT \$278,799. Project Total \$2,000,000 with \$500,000 NY State & Local funds.

### Frequency of Milestone Progress Reports (MPR)

No Selection Made

### Frequency of Federal Financial Reports (FFR)

No Selection Made

### Does this application include funds for research and/or development activities?

This award does not include research and development activities.

### Pre-Award Authority

This award is using Pre-Award Authority.

### Does this application include suballocation funds?

Recipient organization is the Designated Recipient and can apply for and receive these apportioned funds.

### Will this Grant be using Lapsing Funds?

No Selection Made

### Will indirect costs be applied to this application?

## Application Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
1795-2025-1-P2	129-00 Fixed Guideway Associated Transit (129-) Improvements	\$2,000,000.00	\$500,000.00	\$2,500,000.00	0
1795-2025-1-P2	C/I 12.93.05 Putnam Bikeway IV	\$2,000,000.00	\$500,000.00	\$2,500,000.00	0

## Discretionary Allocations

This application does not contain discretionary allocations.

## Part 3: Project Information

### Project Title: Supplemental Funds Putnam Bikeway IV

Project Number	Temporary Project Number	Date Created	Start Date	End Date
1795-2025-1-P2	1795-2025-1-P2	6/2/2025	1/1/2027	10/31/2028

#### Project Description

Supplemental funding for construction and inspection of a paved bike path from Putnam Avenue to North Main Street in the village of Brewster. The project includes a 5-span bridge over the MetroNorth Railroad tracks, plus retaining walls, utility relocation, and chain link fence. The project also includes inspection by an engineering consultant firm. Funding in the amount of \$2,500,000 of which \$2,000,000 will be a combination of NY & CT FFY 2022, 2023, and 2024 Section 5307 funds. This funding will supplement existing FTA grant agreements and will utilize PreAward Authority.

#### Project Benefits

Completion of an ongoing Bikeway Project

#### Additional Information

*None provided.*

#### Location Description

Village of Brewster, town of Southeast, Putnam County NY.

## Project Location (Urbanized Areas)

UZA Code	Area Name
360010	New York-Jersey City-Newark, NY-NJ
362470	Danbury, CT-NY
360570	Bridgeport-Stamford, CT-NY

## Congressional District Information

District	State
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## Program Plan Information

### STIP/TIP

Date: 5/27/2025

Description: MHS23-65 PIN 8759.05

### UPWP

Date: N/A

Description: N/A

### Long Range Plan

Date: N/A

Description: N/A

## Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
5307 - Urbanized Area Formula Grants (2013 and forward)	5307-2A	20507	\$2,000,000
Local			\$250,000
Local/In-Kind			\$0
State			\$250,000
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
<b>Total Eligible Cost</b>			<b>\$2,500,000</b>

## Project Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
1795-2025-1-P2	129-00 (129- ) Fixed Guideway Associated Transit Improvements	\$2,000,000.00	\$500,000.00	\$2,500,000.00	0
1795-2025-1-P2	12.93.05 C/I Putnam Bikeway IV	\$2,000,000.00	\$500,000.00	\$2,500,000.00	0

## Project Budget Activity Line Items

### Budget Activity Line Item: 12.93.05 - C/I Putnam Bikeway IV

Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
Fixed Guideway Associated Transit Improvements (129-00)	12.93.05	CONSTRUCT PED ACCESS / WALKWAYS	CONSTRUCTION	0

#### Extended Budget Description

Construction and Inspection of a paved bike path from Putnam Avenue to North Main Street in the village of Brewster. The project includes a 5-span bridge over the MetroNorth Railroad tracks, plus retaining walls, utility relocation, and chain link fence. The project also includes inspection by an engineering consultant firm, and a Force Account deposit for MetroNorth Railroad. Funding is \$2,500,000 (\$2,000,000 Federal) from NY & Danbury, CT Section 5307/5340 funds. This funding will supplement existing FTA grant agreements and will utilize PreAward Authority. Project PIN #875905.

#### Will 3rd Party contractors be used to fulfill this activity line item?

Yes, 3rd Party Contractors will be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
5307 - Urbanized Area Formula Grants (2013 and forward)	5307-2A	20507	\$2,000,000
Local			\$250,000
Local/In-Kind			\$0
State			\$250,000
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
<b>Total Eligible Cost</b>			<b>\$2,500,000</b>

Milestone Name	Est. Completion Date	Description
60% Completion	1/1/2027	
90% Completion	6/1/2027	
100% Construction Completion	10/31/2027	
Project Closeout	10/31/2028	

## Project Environmental Findings

### Finding: Class III - Environmental Assessment (EA)

#### Class Level Description

Class III consists of projects that are evaluated through an environmental assessment because the significance of the environmental impact is not clearly established, or it would assist in complying with other environmental laws or requirements.

**Categorical Exclusion Description**

N/A

Date Description	Date
Environmental Assessment (EA) Start Date	
Public Notice of Availability (PNA) of EA Date	
Finding of No Significant Impact (FONSI) Date	

Scope Name / Code	Line Item Number	Line Item Name	Quantity	FTA Amount	Total Eligible Cost
Fixed Guideway Associated Transit Improvements (129-00)	12.93.05	C/I Putnam Bikeway IV	0	\$2,000,000.00	\$2,500,000.00

## Part 4: Fleet Details

No fleet data exists for this application.

## Part 5: FTA Review Comments

There are no review comments to display at this time.

#4h.

Committee Mtg –Physical Svcs. Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – BUDGETARY AMENDMENT (25A122) – COMMISSIONER OF PLANNING – UNIFIED PLANNING WORK PROGRAM (UPWP) REFLECT ACTUAL ALLOCATIONS**

**WHEREAS, Commissioner of Finance requested Budgetary Amendment (25A122) to adjust the UPWP accounts to reflect actual allocations; and**

**WHEREAS, the Physical Services Committee and the Audit & Administration Committee have reviewed and approved said budgetary amendment; now therefore be it**

**RESOLVED, that the following budgetary amendment:**

**CAPITAL FUND:**

**Decrease Estimated Appropriations:**

<b>55997000 53000 52308</b>	<b>UPWP</b>	<b>250,075.11</b>
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**Decrease Estimated Revenues:**

<b>55997000 449895 52308</b>	<b>UPWP</b>	<b>250,075.11</b>
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**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



*Phy. 12.8*  
*Year 14-12.18* *Reso*  
KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE *cc All*

DEPARTMENT OF FINANCE

MEMORANDUM

To: Diane Trabulsy, Legislative Clerk

From: William J. Carlin, Jr., Interim Commissioner of Finance *WJC*

Re: Budgetary Amendment - **25A122**

Date: November 25, 2025

At the request of the Commissioner of Finance, the following budgetary amendment is required.

**CAPITAL FUND:**

**Decrease Estimated Appropriations:**

55997000 53000 52308	UPWP	250,075.11
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**Decrease Estimated Revenues:**

55997000 449895 52308	UPWP	250,075.11
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Fiscal Impact - 2025 - \$ 0

Fiscal Impact - 2026 - \$ 0

This Resolution is consolidate and adjust UPWP accounts to reflect actual allocations.  
Please forward to the appropriate committee.

Approved : : \_\_\_\_\_  
Kevin M, Byrne, County Executive

LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

2025 DEC - 1 AM 11:34



#4i

Committee Mtg –Physical Svcs. Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: Year End Meeting Dec. 18, 2025  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – FUND TRANSFER (25T454) – DEPARTMENT OF PUBLIC WORKS (DPW) - FUNDS TO REPLACE TRUSSES ON ANIMAL SHELTER BUILDING AT TILLY FOSTER FARM**

**WHEREAS, Commissioner of DPW requested Fund Transfer (25T454) to fund the replacement of trusses on the animal shelter building at Tilly Foster Farm; and**

**WHEREAS, the Physical Services Committee and the Audit & Administration Committee have reviewed and approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Decrease:**

<b>10084000 54710 10143</b>	<b>Tilly Foster Farm Bldg. Maintenance/ Repairs Agricultural Center</b>	<b>1,500</b>
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**Increase:**

<b>10084000 54710</b>	<b>Tilly Foster Farm Bldg. Maintenance/ Repairs Agricultural Center</b>	<b>1,500</b>
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**2025 Fiscal Impact – 0 –**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

COUNTY OF PUTNAM  
FUND TRANSFER REQUEST

all  
Phys 12-8-25  
Audit 12-18-25  
year END - 12-18-25  
Reso

TO: Commissioner of Finance

FROM: Thomas Feighery, Commissioner

DEPT: Dept. of Public Works

DATE: November 21, 2025

I hereby request approval for the following transfer of funds:

FROM	TO	AMOUNT	PURPOSE
ACCOUNT#/NAME 10084000 54710 10143 Tilly Bldg Maint/Repairs Agric	ACCOUNT #/NAME 10084000 54710 Tilly Bldg Maint/Repairs	\$ 1500.00	to replace trusses on animal shelter building at Tilly Foster Farm

SIGNATURES NOT NEEDED - THEY WILL BE AUTHORIZED VIA COMPUTER SYSTEM

2025 Fiscal Impact \$0

2026 Fiscal Impact \$0

2025 NOV 25 AM 10:02  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

\_\_\_\_\_  
Department Head Signature/Designee

\_\_\_\_\_  
Date

AUTHORIZATION. : (Electronic signatures)

\_\_\_\_\_  
Date Commissioner of Finance/Designee: Initiation by \$0-\$5,000.00

\_\_\_\_\_  
Date County Executive/Designee: Authorized for Legislative Consideration \$5,000.01 - \$10,000.00

\_\_\_\_\_  
Date Chairperson Audit/Designee: \$0-\$10,000.00

\_\_\_\_\_  
Date Audit & Administration Committee: \$10,000.01 - \$25,000.00

25T454

**BERTHIAUME'S**

Neversink Lumber Co., Inc.

Mailing Address: PO Box 501

Physical Address: 95 Jersey Avenue

Port Jervis, NY 12771

845-856-5161 tel

845-858-8333 fax

neversinklumber@frontiernet.net

County of Putnam  
Parks Department  
Att: Chris Ruthven

November 20, 2025

Re: Animal Shelter/Roof truss system

**QUOTE**

Quoted under RFB-OC168-22/Lumber & Related Materials Bid

Provide and deliver NYS engineered roof trusses for an existing 24' x 18' concrete block (wall) structure as such:

[15] 24'-0" roof trusses, 18" overhang each side, 10/12 pitch

13/attic storage style trusses and 2/gable end trusses

Attic storage area will be built to approximately 12' wide x 7' high

One 'open' gable end truss will need horizontal support across the opening.

Trusses will be delivered to the job site

NYS engineer sealed drawings will be included with the order.

\$8,007.90

~~-1,201.18~~/less discount, Group K, Item #383

**\$6,806.72 total net cost for the above**

Lead-time = 3-4 weeks.

Delivery at no-charge.

Thank you for this inquiry.

Berthiaume's  
NEVERSINK LUMBER CO., INC.

James Rohner, Jr.

#4j

**APPROVAL – AUTHORIZING LEASE AGREEMENT/SPECIAL VICTIM'S UNIT FACILITY**

WHEREAS, the County is currently experiencing a serious and devastating issue relative to sexual crimes involving victims 18 years old and over; and

WHEREAS, this category of victims within the County has been underserved with respect to the investigation of alleged criminal incidents and resources offered to victims by the County, including a dedicated facility for use as a dedicated advocacy/investigation center; and

WHEREAS, the Putnam County Sheriff has recently created a Special Victim's Unit which would handle cases involving victims of sexual crimes who are 18 years of age and older, and which would handle the case management of sexual crimes and the investigation thereof; and

WHEREAS, the Putnam County Sheriff, together with Putnam-Northern Westchester Women's Resource Center, are desirous of creating a proper arena to conduct said investigations and interviews of victims of sexual crimes who are 18 years of age and older much the same as is done for children under the age of 18 at the Child Advocacy Center; and

WHEREAS, the Putnam County Sheriff's Office has currently budgeted for the full lease amount for 2026 to cover the cost of the lease agreement for that period. It is our understanding that Putnam-Northern Westchester Women's Resource Center will be reimbursing those costs through grant money, commencing January 1, 2026 and ending December 31, 2029, not to exceed \$ [REDACTED] for the contract period and requiring no match from the County of Putnam, for the purpose of establishing a Special Victim's Unit Facility; and

WHEREAS, Source Properties, Inc. is the owner of certain real property located at [REDACTED], including the building and appurtenances located thereon; and

WHEREAS, the County of Putnam is desirous of leasing, for the purpose of operating a Special Victim's Unit and Advocacy Facility, [REDACTED]; and

WHEREAS, said property is the ideal location for a much-needed special victim's facility, as it is easily accessible by the Sheriff's Department and District Attorney's Office personnel, as well as by all law enforcement entities serving the County; and

WHEREAS, the Putnam County Sheriff, with the advice and assistance of the County Attorney, has entered negotiations with Source Properties, Inc. for the lease of the building and parking lot located at [REDACTED]; and

WHEREAS, pursuant to Section 215 of the New York State County Law, the Putnam County Sheriff has requested that the Putnam County Legislature grant authorization for such lease; now therefore be it

RESOLVED, that pursuant to Section 215 of the New York State County Law the Lease Agreement between Source Properties, Inc. and the County of Putnam for the premises located at [REDACTED] is approved, as specified herein, and be it further

RESOLVED, that the Putnam County Sheriff and the County Executive shall be authorized, with the advice and assistance of the County Attorney, to execute said Lease Agreement with Source Properties, Inc., which shall be in the form and content attached hereto as Exhibit "A".

RESOLVED, this Resolution shall take effect immediately.

Attached Backup  
is  
CONFIDENTIAL



#4K.

Committee: **Physical Svcs.** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

#### **APPROVAL – AGRICULTURAL DISTRICT INCLUSION CRITERIA**

**WHEREAS, Article XIV of the New York State Constitution establishes the policy of the State to conserve and protect its natural resources, including agricultural lands, for the benefit of present and future generations; and**

**WHEREAS, Article 25-AA of the New York State Agriculture and Markets Law (AML) declares it to be the policy of the State to conserve, protect, and encourage the development and improvement of agricultural lands and to prevent the unreasonable restriction of farm operations within designated Agricultural Districts; and**

**WHEREAS, it is the policy of Putnam County to protect and encourage the development and improvement of agricultural lands and to recognize that the economic vitality of agricultural businesses is essential to the County's economic stability and growth; and**

**WHEREAS, AML §302 authorizes the establishment of a County Agricultural and Farmland Protection Board (AFPB) to advise the Legislature regarding the creation, modification, continuation, and termination of Agricultural Districts; and**

**WHEREAS, by Resolution #304 of 1988, the Putnam County Legislature established the "Great Swamp," as a critical environmental area, which may overlap with lands being considered for inclusion in the Agricultural District; and**

**WHEREAS, by Resolution #144 of 1997, the Putnam County Legislature established the Putnam County Agricultural and Farmland Protection Board with such functions and duties as prescribed in AML §302(1)(c)–(e); and**

**WHEREAS, by Resolution #81 of 2003, Putnam County Legislature created an Agricultural District in the County of Putnam; and**

**WHEREAS, by Resolution #244 of 2003, the Putnam County Legislature established the month of November as the month in which a landowner may request inclusion in the Putnam County Agriculture District; and**

**WHEREAS, by Resolution #139 of 2007, the Putnam County Legislature established supplemental criteria for inclusion into the Agricultural District; and**

**WHEREAS, by Resolution #154 of 2015, the Putnam County Legislature changed the annual thirty-day inclusion request period, from the month of November to April 1st through April 30th, commencing in the year 2016 and each year thereafter; and**

**WHEREAS, pursuant to Article 25AA of the Agriculture & Markets Law section 303- b provides for the inclusion of viable agricultural land into a certified Agricultural District; and**

**WHEREAS, pursuant to Article 25AA of the Agriculture and Markets Law the Putnam County Legislature is charged with determining whether a parcels lands**

\_\_\_\_\_  
Legislator Addonizio

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Legislator Birmingham

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Legislator Crowley

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Legislator Ellner

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Legislator Gouldman

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Legislator Jonke

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Legislator Montgomery

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Legislator Russo

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Chairwoman Sayegh

are "viable agricultural land," as defined in Agriculture & Markets Law §301(7) and suitable for inclusion in the Agricultural District under §303-b of the Agriculture & Markets Law; and

WHEREAS, the Putnam County Legislature wishes to codify the factors by which it shall make such determinations; now it is hereby

RESOLVED, that this resolution supersedes Resolution #139 of 2007, and be it further

RESOLVED, that, consistent with the County's obligations to safeguard the health, safety, and wellbeing of the residents of Putnam County, when considering whether lands are viable agricultural lands and suitable for inclusion in the Agricultural District pursuant to Section 303-b of the Agriculture and Markets Law the following factors, which are not exclusive, shall be considered by AFPB in making their recommendations to the Putnam County Legislature, but no single factor shall ever serve as a sole basis for exclusion:

1. Whether the parcel includes viable agricultural land as defined by Agriculture & Markets Law 301(7)
2. Whether the parcel is under current or proposed agricultural use, including whether the parcel is presently used or reasonably capable of being used for agricultural production;
3. Whether the parcel, if proposed for agricultural use, qualifies as a start-up farm;
4. Whether the parcel's contribution or proposed contribution to the local agricultural economy, including diversification, specialty products, or expansion of agricultural capacity within the County supports or refutes inclusion;
5. Whether a sketch plan, business plan, or any other document by which the viability of the proposed start-up can be assessed has been provided to demonstrate its potential for becoming a financially viable farm operation, if proposed as a start-up farm;
6. Whether vacant lands or proposed start-up farms are part of a current farm already in operation within the Agricultural District, such that the farm is merely transferring location;
7. Whether the parcel is within or adjacent to a Critical Environmental Area, as defined in 6 NYCRR 617.2(i), or a sensitive natural resource (currently identified critical environmental areas and sensitive natural resources are provided in Schedule A annexed hereto);
8. Whether an on-site assessment has been conducted by members of the AFPB ;
9. Whether farm operations follow agricultural Best Management Practices as defined in Agriculture & Markets Law §150(4);
10. Whether each parcel has been confirmed to be in compliance with Town, State, and Federal law and free and clear of any such violations prior to consideration of its application for inclusion, however, parcels shall not be excluded solely due to unrelated Town, State, or Federal violations unless such violations directly undermine agricultural viability or land stewardship, but nothing herein prohibits or enjoins any municipal authority from its lawful code enforcement powers; violations issued after the submission of an Agricultural District application shall not be treated as disqualifying when administrative, unsubstantiated, or



- unrelated to agricultural use; and
11. Whether notice has been provided to adjacent landowners of the applicant's intention to seek inclusion of the specified parcel in the Agricultural District;
  12. Whether observations and findings made by the AFPB relative to these factors during site visits, where such visits are utilized support or refute the propriety of inclusion;
  13. Whether any additional information that bears upon the purposes, intent, and public-interest goals of Article 25-AA, including the protection of farmland, the encouragement of agricultural development, and/or the prevention of unreasonable local restrictions on farm operations support or refute the propriety of inclusion; and be it further

**RESOLVED**, in cases of uncertainty regarding statutory interpretation or agricultural viability, the Legislature may direct the AFPB to request an opinion from the New York State Department of Agriculture and Markets prior to final legislative action; and be it further

**RESOLVED**, that when determining whether land constitutes "viable agricultural land" as defined in AML §301(7) and evaluated under AML §303-b, the Putnam County Legislature shall seek advice based upon the specialized knowledge and expertise of the AFPB in assessing these appropriate factors and their recommendations for a parcel's inclusion or exclusion from the Agricultural District; and be it further

**RESOLVED**, that these considerations are intended to guide AFPB analysis and legislative review, without creating new statutory thresholds or disqualifying criteria, and shall be applied solely within the scope of Article 25-AA; and be it further

**RESOLVED**, that all criteria shall be interpreted in a light most favorable toward inclusion, not exclusion; and be it further

**RESOLVED**, if any factors would adversely affect the application for inclusion in the Agricultural District, the Agriculture & Farmland Protection Board shall notify the applicant upon discovery to give the applicant 10 days to remedy or cure the negative factors; and be it further

**RESOLVED**, if a court of competent jurisdiction deems any factor unlawful or otherwise unenforceable, that factor shall be severed and all other factors shall remain in full force and effect; and be it further

**RESOLVED**, an applicant who is initially recommended for denial for inclusion in the Agricultural District by the Agriculture & Farmland Protection Board may request a re-review of their application by written statement providing grounds for re-review to the Agriculture & Farmland Protection Board within seven (7) days. The Agriculture & Farmland Protection Board, upon consultation with the County's Soil and Water District and Cornell Cooperative Extension, shall then reconsider the application and send recommendations after re-review to the Legislature within thirty (30) days. After reconsideration, the Legislature shall again determine whether to include the parcel in the Agricultural District. If the determination of the Legislature appears to be in contravention of the New York Agriculture and Markets Law, the applicant may make written request that AFPB seek an opinion from the Commissioner of Agriculture and Markets. Upon such written request, the AFPB shall consult with New York State Department of Agriculture and Markets, and shall

**provide all required records necessary, and shall send a written request for an opinion from Commissioner of Agriculture and Markets under AML§308, such opinion shall be adopted and implemented in the final determination of the County Legislature; and be it further**

**RESOLVED, if a parcel is denied inclusion in the Agricultural District during any given application year, such denial does not preclude re-application during future enrollment periods; and be it further**

**RESOLVED, that this resolution shall take effect immediately and apply to all Agricultural District inclusion requests beginning with the 2026 inclusion cycle.**

Legislators:

Schedule A was emailed to each of you and is available on the agenda posted to the website. Copies were not made for each packet because of how voluminous it is.

**If you would like a paper copy please let us know and we can print one for you.**

Year end  
12-18-25

Back-up to  
#4K.

## Schedule A

Expressly incorporated herein by reference are all sensitive areas within the Town of Kent that are designated by NRI website, under Ecosystem Maps 19-23

<https://experience.arcgis.com/template/59002b60193f4d889d3fcf51554fec3f/>;

Further, expressly incorporated herein and appended hereto, are critical environmental areas and sensitive natural resources within Putnam County;

Further, should new sensitive natural resources or critical environmental areas be identified, they are expressly incorporated herein by reference without the need for further action.

**[intentionally blank; attachments follow]**

## Critical Environmental Areas

Critical Environmental Areas (CEAs) are areas in the state which have been designated by a local or state agency to recognize a specific geographical area with one or more of the following characteristics:

- A feature that is a benefit or threat to human health;
- An exceptional or unique natural setting;
- An exceptional or unique social, historic, archaeological, recreational, or educational value; or
- An inherent ecological, geological, or hydrological sensitivity to change that maybe adversely affected by any physical disturbance.

A CEA designation serves to alert project sponsors to the agency's concern for the resources or dangers contained within the CEA. Once a CEA has been designated, potential impacts on the characteristics of that CEA become relevant areas of concern that warrant specific, articulated consideration in determining the significance of any Type I or Unlisted actions that may affect the CEA. Additional information and general guidance regarding CEAs can be found in the SEQR Handbook <https://www.dec.ny.gov/locations/central/2025-09/seqrhandbook.pdf> (PDF).

Contact the designating agency for additional information on a specific CEA.

Local or state agencies may designate a CEA under 617.14(g) of the SEQR regulations. 617.14(g) provides the specific procedures for designating a CEA. These include public notice, hearing, and filing the designation and maps with the Commissioner and others. CEA designations take effect 30 days after the required filings have taken place. In filing with the Commissioner, the designating agency should address the correspondence directly to the attention of the Commissioner at the following address:

Commissioner  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-1010

## CEA Maps: viewing and printing

CEAs can be viewed on the *DECinfo Locator*, an interactive mapping application with more than 65 data layers available to the public. The *DECinfo Locator* also has mapping tools available to create and print your own map.

**Use the following steps to locate a CEA of interest and create a map:**

1. Go to the DECinfo Locator <https://maps.interactive-maps/decinfo-locator> landing page and select the link to launch the mapping application.
2. Down the left side of the screen, you'll see all of the DEC information layers available. With the Environmental Quality tab selected from the top, click on *Environmentally Sensitive Areas*.
3. Place a check in the box for *Critical Environmental Areas* and zoom to the location you're interested in. As you zoom in, the CEAs will appear on the map.
4. Click on the CEA and information about that CEA will appear in a pop up box.
5. Center the CEA as you would like it to appear on your map.
6. Click on *Tools* near the top of your screen along the left side.
7. Click the printer icon; give your printout a Title and select the printout size.
8. Click the *Generate Map* button and choose the appropriate output.



## Current CEAs by County

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Broome	Well Field 4-2,4-3, and 4-4 Recharge Areas	Town of Vesta Primary recharge for well fields.	8-29-90 9-30-93
Broome	8.2 sq. mile portion of the French Tract	Town of Vesta Protect the quality of the ground water.	9-30-93 10-29-93
Cattaraugus	Town of Machias Source Water Area	Town of Machias Protect human Health	6-27-25 7-27-25
Chautauqua	Town of Chautauqua Source Water Area	Town of Chautauqua Protect human health	7-29-25 8-29-25
Chautauqua	Village of Mayville Source Water Area	Village of Mayville Protect human health	7-29-25 8-29-25
Columbia	Town of Greenport Source Water	Town of Greenport Public water supply protection.	3-14-05 4-13-05
Columbia	Warm Spring	Town of New Lebanon Exceptional or unique natural setting	11-27-23 12-27-23
Columbia	The Cool Ravines	Town of New Lebanon Exceptional or unique natural setting	11-27-23 12-27-23
Cortland	Homer Public Water Supply Source	Town of Homer Aquifer protection/public water supply source protection.	7-2-09 8-1-09
Cortland	Property indicated as the "City Water Works" on the filed map	Water Board of the City of Cortland Protect Cortland's sole source aquifer.	11-22-89 12-22-89
Cortland	Groundwater Protection Overlay District	Village of McGraw Provide groundwater protection.	4-28-99 5-28-99
Delaware	Roxbury Water District Aquifers	Town of Roxbury Protect groundwater aquifers.	2-8-90 3-10-90
Dutchess	Hyde Park Landfill Site	County of Dutchess Inactive landfill, toxic pollutants present.	3-5-84 4-4-84
Dutchess	Town of North East Landfill	County of Dutchess Inactive landfill, toxic pollutants present.	3-5-84 4-4-84

<b>County</b>	<b>CEA Name</b>	<b>Designating Agency and Reason for Designation</b>	<b>Recorded Date &amp; Effective Date</b>
Dutchess	Schatz Federal Bearing	County of Dutchess Inactive landfill, toxic pollutants present.	6-19-85 7-18-85
Dutchess	Dutchess Airport Landfill Site	County of Dutchess Inactive landfill, toxic pollutants present.	6-19-85 7-18-85
Dutchess	Jones Sanitation Sludge Disposable	County of Dutchess Inactive disposal area, toxic pollutants present.	6-19-85 7-18-85
Dutchess	Page Industrial Park	County of Dutchess Inactive dump, toxic pollutants present.	6-19-85 7-18-85
Dutchess	F.I.C.A. Landfill Site (formerly Dutchess Sanitation Inactive Portion)	County of Dutchess Inactive landfill, toxic pollutants present.	6-19-85 7-18-85
Dutchess	Sarney Site	County of Dutchess Inactive landfill, toxic pollutants present.	6-19-85 7-18-85
Dutchess	Dutchess Co. Airport Balefill	County of Dutchess Inactive landfill area, toxic pollutants present.	6-19-85 7-18-85
Dutchess	MICA Products (inactive) landfill	County of Dutchess Inactive landfill area, toxic pollutants present.	8-6-85 9-5-85
Dutchess	Great Swamp (Towns of Dover, Pawling, & Vil of Pawling)	County of Dutchess Benefit to human health.	1-10-92 2-8-92
Dutchess	Hamlet of Frost Mills	Town of Clinton Exceptional or unique character.	6-26-87 7-27-87
Dutchess	Hamlet of Pleasant Plains	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87
Dutchess	Hamlet of Clinton Corners	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87
Dutchess	Hamlet of Old Bulls Head	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87
Dutchess	Hamlet of Clinton Hollow	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87
Dutchess	Hamlet of Schultsville	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87

<b>County</b>	<b>CEA Name</b>	<b>Designating Agency and Reason for Designation</b>	<b>Recorded Date &amp; Effective Date</b>
Dutchess	Hamlet of Hibernia	Town of Clinton Exceptional or unique character.	10-27-87 11-27-87
Dutchess	Deuel Hollow Area	Town of Dover Protect water source & natural area.	5-22-86 6-20-86
Dutchess	Aquifer Protection Areas	Town of Fishkill Protect public water supply.	6-8-92 7-8-92
Dutchess	Little Whaley Lake and Watershed	Town of Pawling Unpolluted drinking water source.	8-2-85 9-1-85
Dutchess	Quaker Lake/Deuel Hollow Areas	Town of Pawling Unpolluted drinking water source.	12-10-85 1-8-86
Dutchess	Hurd's Corner	Town of Pawling Significant historical features.	7-29-88 8-27-88
Dutchess	Stissing Mountain	Town of Pine Plains Exceptional or unique character.	1-3-05 2-2-05
Dutchess	Buttercup Farm Sanctuary	Town of Stanford Preserve farmland, wetland & mountain habitat.	3-9-87 4-8-87
Dutchess	Ryder Pond and Cagney Marsh	Town of Stanford Protection of waterfowl.	3-9-87 4-8-87
Dutchess	Bontecou Lake	Town of Stanford Protect migratory & nesting birds.	3-9-87 4-8-87
Dutchess	Millbork Meadow and Associated Wetlands	Town of Stanford Protect wetland.	3-9-87 4-8-87
Dutchess	Snake Hill	Town of Stanford Protect rare plants and animal communities.	3-9-87 4-8-87
Dutchess	Upper Wappinger	Town of Stanford Protect hydrology and water quality, biological and geological uniqueness, and scenic views.	9-17-92 10-16-92
Dutchess	Wappinger Lake	Village of Wappinger Falls Protection of natural resource.	5-29-98 6-29-98

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Dutchess	Hogback Hill	Town of Hyde Park Sensitivity to change & habitat and species protection.	5-8-09 6-7-09
Dutchess	Indian Kill	Town of Hyde Park Sensitivity to change & habitat and species protection.	5-8-09 6-7-09
Dutchess	Maritje Kill	Town of Hyde Park Sensitivity to change & habitat and species protection.	5-8-09 6-7-09
Dutchess	Vanderburgh Cove	Town of Hyde Park Sensitivity to change & habitat and species protection.	5-8-09 6-7-09
Erie	Freshwater Wetlands within Town	Town of Cheektowaga Significant and Sensitive Recharge Area	8-30-79 9-29-79
Erie	Reinstein Woods - 269 acre Nature Preserve with 400' wide peripheral buffer	Town of Cheektowaga Preserve Wildlife and Green Area.	6-27-88 7-27-88
Erie	John Stiglmeier Park	Town of Cheektowaga Preserve Wildlife and Green Area.	8-27-91 9-27-91
Erie	Cayuga Creek to 100 yr floodplain	Town of Cheektowaga Preserve Wildlife and Green Area.	8-27-91 9-27-91
Erie	Eighteen Mile Creek	Town of Hamburg Exceptional or unique character.	4-23-92 5-23-92
Essex	Waters and Wetlands of Lake George	Lake George Park Commission Protect the resources of the park.	10-27-88 11-16-88
Kings	Jamaica Bay - tributaries, tidal wetlands and regulated adjacent areas.	Kings Count Protect ecosystem & large number of wildlife.	1-2-90 2-1-90
Madison	Chittenango Creek	Town of Cazenovia Protection of Unique Natural Resources - Creek.	10-5-09 11-4-09
Madison	Cazenovia Lake	Town of Cazenovia Protection of Unique Natural Resources - Lake.	10-5-09 11-4-09
Madison	Cazenovia Village Well Head	Town of Cazenovia Protection of Unique Natural Resources - Aquifer.	10-5-09 11-4-09

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Monroe	Hotel Creek	Town of Riga Trout habitat & may be spawning ground.	2-15-90 3-17-90
Monroe	Land within 100' of Genesee River Barge Canal, Lake Ontario or River Gorge except in manufacturing industrial zone.	City of Rochester Environmentally Sensitive.	2-12-86 3-14-86
Monroe	Slopes and Crests of the following glacial formations: Cobbs Hill Pinnacle Hill Lesser hills between Conrail ROW and I-590	City of Rochester Environmentally Sensitive.	2-12-86 3-14-86
Monroe	Freshwater Wetlands	City of Rochester Environmentally Sensitive.	2-12-86 3-14-86
Nassau	Jamaica Bay - tributaries, tidal wetlands and regulated adjacent areas.	Nassau County Protect ecosystem & large number of wildlife.	1-2-90 2-1-90
Onondaga	Portions of Nine Mile Creek within Town	Town of Camillus Provide Ground Protection.	8-5-96 9-4-96
Onondaga	The Onondaga Escarpment Nature Corridor	Village of Manlius It's karst topography, inherent hydrological geological.	7-11-07 8-10-07
Onondaga	Certain Real Property in the Town of Manlius	Town of Manlius Environmental sensitivity and unique characteristics.	8-12-09 9-11-09
Ontario	Candice and Hemlock Lakes Area	Town of Candice Preserve open space.	4-14-87 5-15-87
Ontario	All land within village boundaries	Village of East Bloomfield Protect the municipal water supply.	2-5-90 3-7-90
Orange	9 Mile Stretch of Greenwood Lake	Village of Greenwood Lake Natural setting.	9-6-79 10-7-79
Orange	Chadwick Lake Reservoir Environs	Town of Newburgh Development threat to public health.	4-21-87 5-21-87
Orange	Ridge Preservation Areas	Town of Wawaywanda Preserve ridgelines to reduce erosion.	11-2-93 12-2-93

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Oswego	Sandy Ponds	Town of Sandy Creek Protect barrier dunes, wetlands, resources.	2-3-87 3-3-87
Putnam	Great Swamp (Towns of Patterson and Southeast)	Putnam County Exceptional or unique character.	9-23-88 10-23-88
Queens	Jamaica Bay - tributaries, tidal wetlands and regulated adjacent areas.	Queens County Protect ecosystem & large number of wildlife.	1-2-90 2-1-90
Rockland	Upper Grandview and Environs	Town of Orangetown Exceptional or unique character.	9-16-88 10-16-88
Rockland	Historic & Scenic Roads Overlay Potential Timber Rattlesnake Habitat	Village of Montebello Exceptional & Unique environmental characteristics	7-6-21 8-6-21
Rockland	Palisades Slope	Village of Piermont Protect open space and aesthetic.	4-23-85 5-23-85
Rockland	Sparkill Creek	Village of Piermont Protect open space and aesthetic.	4-23-85 5-23-85
Rockland	Piermont Pier	Village of Piermont Protect open space and aesthetic.	4-23-85 5-23-85
Rockland	Hudson River Area	Village of South Nyack (Town of Orangetown) Protection, preservation and enhancement of important aesthetic and scenic qualities, historic significance, ecology, geology, and hydrological sensitivity.	2-4-98 3-6-98
Rockland	Run-Off Area	Village of South Nyack (Town of Orangetown) Protection, preservation: Proximity to Steep hillsides, run-off, erosion and drainage issues, impacts of pollution, noise, and traffic.	2-4-98 3-6-98
Rockland	Mountainous Area	Village of South Nyack (Town of Orangetown) Protection, preservation: Steepness of slopes, Natural Beauty, Aesthetic and Scenic qualities, historic, archeological and recreational significance.	2-4-98 3-6-98
Saratoga	Loughberry Lake Watershed Area	City of Saratoga Springs Protect Loughberry Lake water supply.	5-14-86 6-13-86



County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Schenectady	Aquifer Area Overlay Zone	Town of Rotterdam Conserve, improve, protect natural resources.	3-6-85 4-5-85
Schoharie	Wright Karst Area	Town of Wright Protect water quality.	2-28-97 3-31-97
Schuyler	Queen Catharine Wildlife Management Area	Schuyler County Protection of Plants and Wildlife	12-20-09 1-1-10
Schuyler	Texas Hollow	Schuyler County Diverse Ecological Habitat	3-31-11 4-30-11
St. Lawrence	Great South Woods of the Wilderness	Town of Colton Cultural, historical, recreational, educational value.	10-7-03 10-7-03
Steuben	Valley Fill Aquifer	Town of Wayland Primary source of drinking water.	7-11-96 8-12-96

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
	Lands contemplated for acquisition by the county, known as:		
	<ul style="list-style-type: none"> <li>• Crab Meadow addition - Huntington</li> <li>• Little Plains - Huntington</li> <li>• Carlls River, Babylon</li> <li>• Nissequogue River addition, Smithtown</li> <li>• Fresh Pond Greenbelt - Huntington and Smithtown</li> <li>• Bergen Point addition (Bulks Nursery) - Babylon</li> <li>• San Sousi Lakes addition - Islip</li> <li>• Mill Pond (San Sousi) - Islip</li> <li>• Port Jefferson Headlands addition - Brookhaven</li> <li>• South Seatauket Woods - Brookhaven</li> <li>• Camp Barstow - Brookhaven</li> </ul>	Suffolk County	1-11-88
Suffolk	<ul style="list-style-type: none"> <li>• Carman's River addition - Brookhaven</li> <li>• Southaven Park addition - Brookhaven</li> <li>• Harborview</li> <li>• Terrels River, Brookhaven</li> <li>• Peconic River addition, Brookhaven</li> <li>• Robins Island - Southold</li> <li>• Inlet Pond addition - Southold</li> <li>• Orient Point - Southold</li> <li>• Pine Barrens adjacent to County Center - Southampton</li> <li>• Maple Swamp - Southampton</li> <li>• Sears Bellow Red Creek addition - Southampton</li> <li>• Dwarf Pine Forest - Southampton</li> <li>• Long Pond, Southampton</li> <li>• Montauk addition, East Hampton</li> <li>• Hither Woods, East Hampton</li> </ul>	Benefit to human health & protect drinking water.	2-10-88

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Suffolk	Central Suffolk Pine Barrens	Suffolk County Benefit to human health & protect drinking water.	1-11-88 2-10-88
Suffolk	South Setauket Woods	Suffolk County Benefit to human health & protect drinking water.	1-11-88 2-10-88
Suffolk	Oak Brush Plains	Suffolk County Benefit to human health & protect drinking water.	1-11-88 2-10-88
Suffolk	Scallop Pond in Southampton	Suffolk County Benefit to human health & protect drinking water.	1-11-88 2-10-88
Suffolk	Accabonac Harbor in East Hampton	Suffolk County Benefit to human health & protect drinking water.	1-11-88 2-10-88
Suffolk	Peconic Bay and Environs	Suffolk County Benefit to human health & protect drinking water.	10-14-88 11-13-88
Suffolk	Fishers Island	Suffolk County Benefit to human health & protect drinking water.	2-13-90 3-16-90
Suffolk	Special Groundwater Protection Areas [as required by Article 55 of ECL filed by Long Island Regional Planning Board]  <ul style="list-style-type: none"> <li>• North Hills Map #1</li> <li>• Central Suffolk Map #2</li> <li>• Southold Map #3</li> <li>• Oak Brush Plains Map #4</li> <li>• Hither Hills Map #5</li> <li>• South Fork Map #6</li> <li>• South Setauket Woods Map #7</li> <li>• Oyster Bay Map #8</li> <li>• West Hills - Melville Map #9</li> </ul>	Suffolk County Protect groundwater.	3-19-93 4-18-93
Suffolk	Ketcham's Creek Freshwater Wetlands	Town of Babylon Protect creek bed & wildlife habitat.	9-30-88 10-30-88
Suffolk	Santrapoque Creek Freshwater Wetlands	Town of Babylon Protect freshwater wetland floodplain.	9-30-88 10-30-88

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Suffolk	Santrapoque Creek Tidal Wetlands	Town of Babylon Protect a tidal wetland.	9-30-88 10-30-88
Suffolk	Wheaty Heights Freshwater Wetlands	Town of Babylon Protect a red maple swamp.	9-30-88 10-30-88
Suffolk	CarlIs River Freshwater Wetlands	Town of Babylon Protect freshwater wetland.	9-30-88 10-30-88
Suffolk	Mud Creek Tributary Freshwater Wetlands	Town of Babylon Protect freshwater wetland.	9-30-88 10-30-88
Suffolk	Supwams Creek	Town of Babylon Protect former & remaining wetland.	9-30-88 10-30-88
Suffolk	Route 25A Corridor	Town of Brookhaven Protect public health, open space, wetlands.	2-11-86 3-13-86
Suffolk	Middle Island - Yaphank	Town of Brookhaven Protect public health, open space, wetlands.	2-11-86 3-13-86
Suffolk	Coastal Zone Area South	Town of Brookhaven Protect public health, open space, wetlands.	5-18-87 6-17-87
Suffolk	Water Recharge Overlay District	Town of Easthampton Protect groundwater & drinking water.	1-13-88 2-12-88
Suffolk	Great Edgewood Tract	Town of Huntington WSignificant & sensitive water recharge area.	2-11-86 3-13-86
Suffolk	Tidal Wetlands	Village of Quoque Protection of tidal wetlands.	3-28-86 4-27-86
Suffolk	Tidal Wetlands	Town of Southampton Natural scenic beauty.	1-17-85 2-16-85
Suffolk	Aquifer Protection Overlay District	Town of Southampton Preserve pure water quality.	4-23-84 6-20-84
Suffolk	Shinnecock Indian Contact Period Village Fort	Town of Southampton Protect cultural, historic, archaeological.	10-17-90 11-15-90
Suffolk	Sugar Loaf Hill Shinnecock Indian Burial Ground	Town of Southampton Protect cultural, historic, archaeological.	10-17-90 11-15-90

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Suffolk	Cutchoque Harbor Wetlands	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	Hallock's Bay	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	Dam Pond	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	Downs Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	Orient Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	West Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-22-88 3-24-88
Suffolk	Richmond Creek and Beach	Town of Southold Significant coastal fish & wildlife habitat.	9-20-88 10-20-88
Suffolk	Brush's Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Cedar Beach Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Corey Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Deep Hole Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Goldsmith Inlet	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Halls Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Goose Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Little Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Suffolk	Mill Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Suffolk	Pipes Cove Creek	Town of Southold Significant coastal fish & wildlife habitat.	2-6-90 3-9-90
Sullivan	White Lake and Mountain Lake Watershed	Town of Bethel Exceptional or unique natural setting	12-17-24 1-17-25
Tioga	Well Head Protection Area	Village of Candor Protect geologic and hydrologic sensitivity.	10-27-11 11-26-11
Tioga	Well Head Protection Area	Village of Newark Valley Protect drinking water.	5-10-11 6-9-11
Tompkins	Coy Glen	Town of Ithaca Wide variety of botanical species.	1-15-79 2-14-79
Ulster	Shawangunk Ridge	Town of Shawangunk Soil type, slope, wildlife habitat.	9-1-89 10-1-89
Ulster	Wallkill Public Water Supply, Water Shed & Aquifer	Town of Shawangunk Protect water supply.	9-1-89 10-1-89
Ulster	All State Designated Freshwater Wetlands	Town of Woodstock Protect the wetlands.	10-25-93 11-24-93
Ulster	Catskill-Shawangunk Greenway Corridor	Town of Wawarsing Wildlife, habitat, ecological corridor connectivity.	7-8-19 8-7-19
Ulster	Cedar Swamp	Town of Wawarsing Protect wetland and ground/surface water complex, habitat, buffer areas.	7-8-19 8-7-19
Ulster	Shawangunk Ridge CEA	Town of New Paltz Exceptional or Unique character.	2-25-22 3-25-22
Ulster	Zena Woods	Town of Woodstock Exceptional & Unique environmental characteristics.	6-5-23 7-4-23
Ulster	Beaverdam Creek/Rochester Creek	Town of Olive Exceptional or unique environmental feature.	11-30-23 12-30-23

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Ulster	Pacama Vly Watershed	Town of Olive Exceptional or unique environmental feature.	11-30-23 12-30-23
Warren	Round Pond	Town of Queensbury Unique, glacial kettle pond.	11-5-86 12-5-86
Warren	Rush Pond	Town of Queensbury Unique pond & wetland of undisturbed beauty.	2-15-87 3-16-87
Warren	Glen Lake and Surrounding Area	Town of Queensbury Benefit to human health, natural setting.	10-31-89 11-30-89
Warren	Marl Fen at the Floyd Bennett Memorial Airport	Town of Queensbury Unique characteristics.	10-15-15 11-2-15
Warren	Waters and Wetlands of Lake George	Lake George Park Commission Protect the resources of the park.	10-17-88 11-16-88
Washington	Agriculture District	Town of Easton Unique character of resources.	4-2-84 5-2-84
Washington	Wetlands	Town of Easton Unique character of resources.	4-2-84 5-2-84
Washington	Battenkill Scenic and Erosion Prone Areas	Town of Easton Unique character of resources.	4-2-84 5-2-84
Washington	Waters and Wetlands of Lake George	Lake George Park Commission Protect the resources of the park.	10-17-88 11-16-88
Westchester	Westchester County Airport 60 Ldn Noise Contour	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Croton Point Park	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Byram Lake	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Tarrytown Lakes Reservoirs	Westchester County Exceptional or unique character.	1-2-90 1-31-90



County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Westchester	Long Island Sound	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	County and State Park Lands	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Mianus River	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Mianus Gorge Preserve	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Indian Brook Reservoir	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Larchmont Reservoir & J. G. Johnson Jr. Conservancy	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Poncantino Lakes & Watershed Property	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Hudson River	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Peekskill Hollow Brook	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	All Land 500' Peripheral to Amawalk Reservoir Boundary	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	County Designated Watershed Properties	Westchester County Exceptional or unique character.	1-2-90 1-31-90
Westchester	Geographic Area Overlaying the Aquifer Within Town	Town of Bedford Exceptional or unique character.	10-2-84 11-3-84

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Westchester	Juhring Estate	Village of Dobbs Ferry Drainage and open space resource.	12-29-95 1-27-96
Westchester	Freshwater Wetlands	Town of Greenburgh Protect water and natural area.	10-27-87 11-27-87
Westchester	Floodplains	Town of Greenburgh Protect water and natural area.	10-27-87 11-27-87
Westchester	Hilltops at or above 400' elevation	Town of Greenburgh Preserve open space.	6-10-93 7-10-93
Westchester	East Creek	Village of Larchmont Protect aesthetic beauty.	1-23-89 2-21-89
Westchester	Larchmont Reservoir Sheldrake Leatherstocking FWW Complex	Town of Mamaroneck Important coastal fish & wildlife habitat.	8-31-89 9-30-89
Westchester	Premium River - Pine Brook Wetlands Complex	Town of Mamaroneck Important coastal fish & wildlife habitat.	8-31-89 9-30-89
Westchester	The Hommocks Salt Marsh Complex	Town of Mamaroneck Important coastal fish & wildlife habitat.	8-16-89 9-16-89
Westchester	East Creek	Town of Mamaroneck Important coastal fish & wildlife habitat.	8-16-89 9-16-89
Westchester	Otter Creek	Village of Mamaroneck Protect water and natural area.	11-24-80 12-25-80
Westchester	Guion Creek	Village of Mamaroneck Protect water and natural area.	11-24-80 12-25-80
Westchester	Magid Pond	Village of Mamaroneck Protect water and natural area.	11-24-80 12-25-80
Westchester	Van Amringe Mill Pond	Village of Mamaroneck Protect water and natural area.	11-24-80 12-25-80
Westchester	Mamaroneck Reservoir	Village of Mamaroneck Protect water and natural area.	1-4-85 2-2-85
Westchester	Hampshire Country Club	Village of Mamaroneck Protect water and natural area.	1-4-85 2-2-85

County	CEA Name	Designating Agency and Reason for Designation	Recorded Date & Effective Date
Westchester	Hommock's Conservation Area	Village of Mamaroneck Protect water and natural area.	1-4-85 2-2-85
Westchester	Baldwin Place Area	Town of Somers Difficulties with potable water source.	8-27-90 9-26-90
Westchester	Tarrytown Lakes Watershed Area	Village of Tarrytown Protect water resources.	11-30-83 12-29-83

### Contact for this Page

Division of Environmental Permits  
625 Broadway  
Albany, NY 12233

**Phone:** 518-402-9167  
deppermitting@dec.ny.gov

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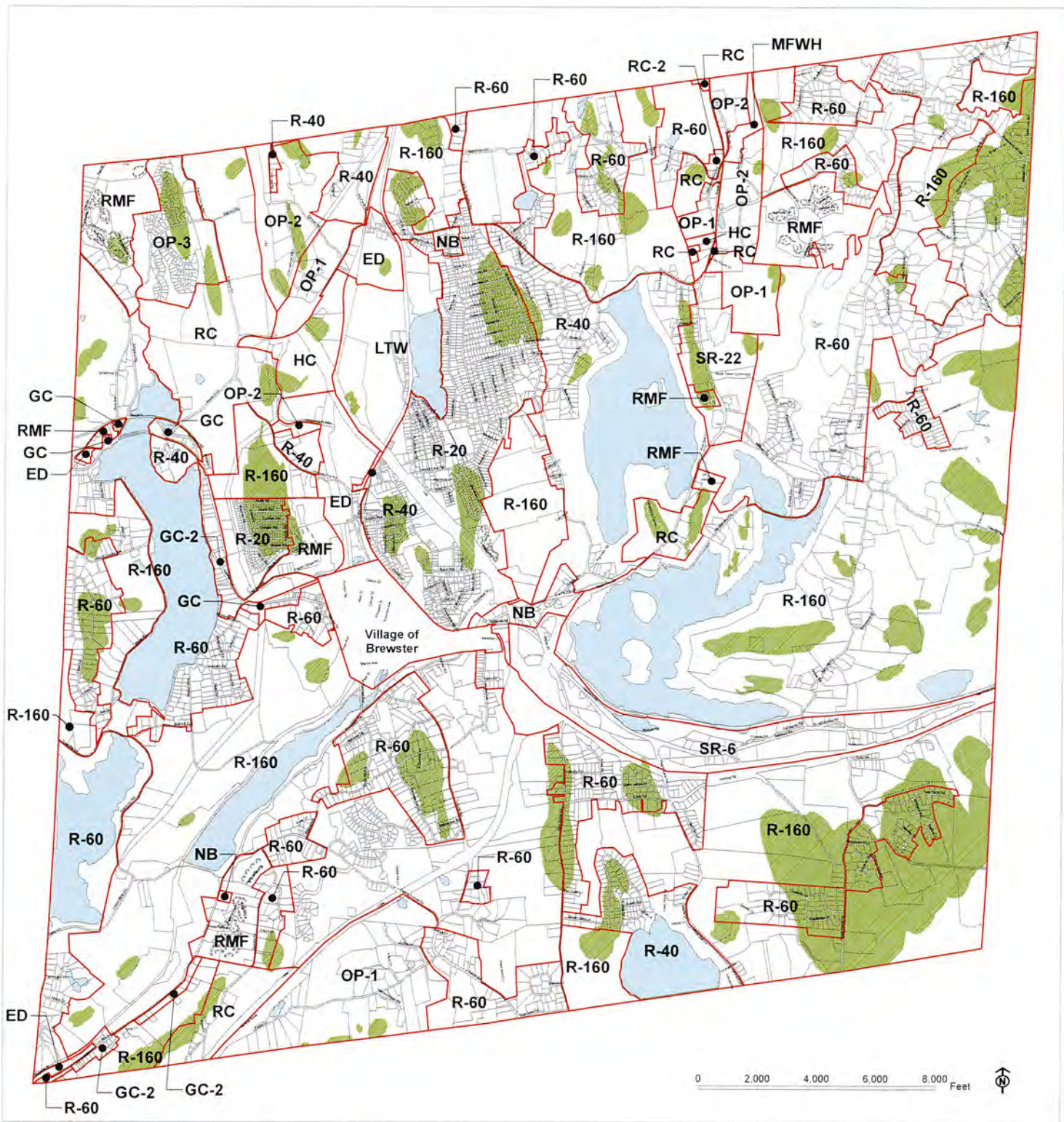
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### Zoning Map

R-160	Residence R-160 District	GC	Gateway Commercial District
R-60	Residence R-60 District	GC-2	Gateway Commercial GC-2 District
R-40	Residence R-40 District	SR-6	Special Route 6 Area District
R-20	Residence R-20 District	ED	Economic Development ED District
RMF	Residence RMF District	OP-1	Office Park OP-1 District
NB	Neighborhood Business District	OP-2	Office Park OP-2 District
LTW	Lake Tonetta Watershed District	OP-3	Office Park OP-3 District
RC	Rural Commercial District	SR-22	Special Route 22 District
RC-2	Rural Commercial 2 District	MFWH	Multifamily Workforce Housing District
HC	Highway Commercial District		
<span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span>	Zoning District Boundaries	<span style="background-color: #90EE90; display: inline-block; width: 10px; height: 10px;"></span>	Ridgeline Overlay District

*Washburn Chudina*

CERTIFIED BY THE TOWN CLERK AS THE OFFICIAL  
ZONING MAP OF THE TOWN OF SOUTHEAST

September 12, 2024



## Elizabeth Robinson

---

**From:** Barbara Barosa  
**Sent:** Friday, December 12, 2025 2:37 PM  
**To:** Elizabeth Robinson; Diane Trabulsy  
**Subject:** FW: Proposed Revision to Resolution 139

**From:** Lana Cappelli <lcappelli@townofkentny.gov>  
**Sent:** Wednesday, December 10, 2025 3:50 PM  
**To:** Barbara Barosa <Barbara.Barosa@putnamcountyny.gov>  
**Cc:** Building Inspector <buildinginspector@townofkentny.gov>; Planning Kent <planningkent@townofkentny.gov>; acampbell@townofkentny.gov; Christopher Ruthven <cruthven@townofkentny.gov>; jmcglasson@townofkentny.gov; Jorma Tompuri <jtompuri@townofkentny.gov>; Shaun Boyd <sboyd@townofkentny.gov>  
**Subject:** RE: Proposed Revision to Resolution 139

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Good afternoon,

In response to your notification of the Putnam County Legislature's revision proposal, I refer you to the link to the NRI map website which includes maps of sensitive areas within the Town of Kent.

The map tool is on the KCAC page : <https://www.townofkentny.gov/conservation-advisory-committee>

Here's the link to the tool.

<https://experience.arcgis.com/template/59002b60193f4d889d3fcf51554fec3f/>

Specifically, maps 19 -23 under "Ecosystem" is what you are looking for. This is also discussed in more detail in the NRI document, which is on the KCAC page as well at

[https://www.townofkentny.gov/sites/g/files/vyhlf4576/f/uploads/town\\_of\\_kent\\_natural\\_resources\\_inventory\\_accessible.pdf](https://www.townofkentny.gov/sites/g/files/vyhlf4576/f/uploads/town_of_kent_natural_resources_inventory_accessible.pdf)

*Yolanda "Lara" Cappelli*

Town Clerk  
Town of Kent  
25 Sybil's Crossing  
Kent Lakes, New York 10512  
845-225-2067 Telephone  
845-306-5282 Fax



[lcappelli@townofkentny.gov](mailto:lcappelli@townofkentny.gov)

**From:** Barbara Barosa <[Barbara.Barosa@putnamcountyny.gov](mailto:Barbara.Barosa@putnamcountyny.gov)>

**Sent:** Wednesday, December 10, 2025 1:45 PM

**To:** Jaime McGlasson <[jmcglasson@townofkentny.gov](mailto:jmcglasson@townofkentny.gov)>; [supervisor@philipstown.com](mailto:supervisor@philipstown.com); [supervisor@pattersonny.org](mailto:supervisor@pattersonny.org); 'mgc@ci.carmel.ny.us' <[mgc@ci.carmel.ny.us](mailto:mgc@ci.carmel.ny.us)>; [jannabi@putnamvalley.gov](mailto:jannabi@putnamvalley.gov); Nick Durante <[ndurante@southeast-ny.gov](mailto:ndurante@southeast-ny.gov)>

**Cc:** Heather Abissi <[Heather.Abissi@putnamcountyny.gov](mailto:Heather.Abissi@putnamcountyny.gov)>; TOWN CLERKS <[TOWNCLERKSPutnam@putnamcountyny.gov](mailto:TOWNCLERKSPutnam@putnamcountyny.gov)>

**Subject:** Proposed Revision to Resolution 139

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Good Afternoon,

I hope all is well. Please see attached; the Putnam County Legislature is currently considering a proposed revision to Resolution #139 of 2007, of which the Putnam County Legislature established supplemental criteria for inclusion into the Putnam County Agricultural District. This proposed revision was discussed at last night's Physical Services Committee meeting, at which time, Factor #7, "Whether the parcel is within or adjacent to a Critical Environmental Area or a sensitive natural resource" was discussed in detail. Several Legislators requested a map and list of the Critical Environmental Areas and sensitive natural resources within the County be included as backup to the Resolution to clarify this factor. Currently, the only CEA identified is the Great Swamp, but we would like to request that any locally sensitive natural resources be identified for inclusion by reference in the updated resolution. Please let me know no later than Friday, December 12, 2025, if you have any sensitive natural resources within your Town that you'd like included. Please feel free to call me if you'd like to discuss or have any questions.

Thank you,  
Barbara



**Barbara Barosa, AICP**

Commissioner • Department of Planning, Development & Public Transportation •

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# 19. Special biological resources I

## Special habitats

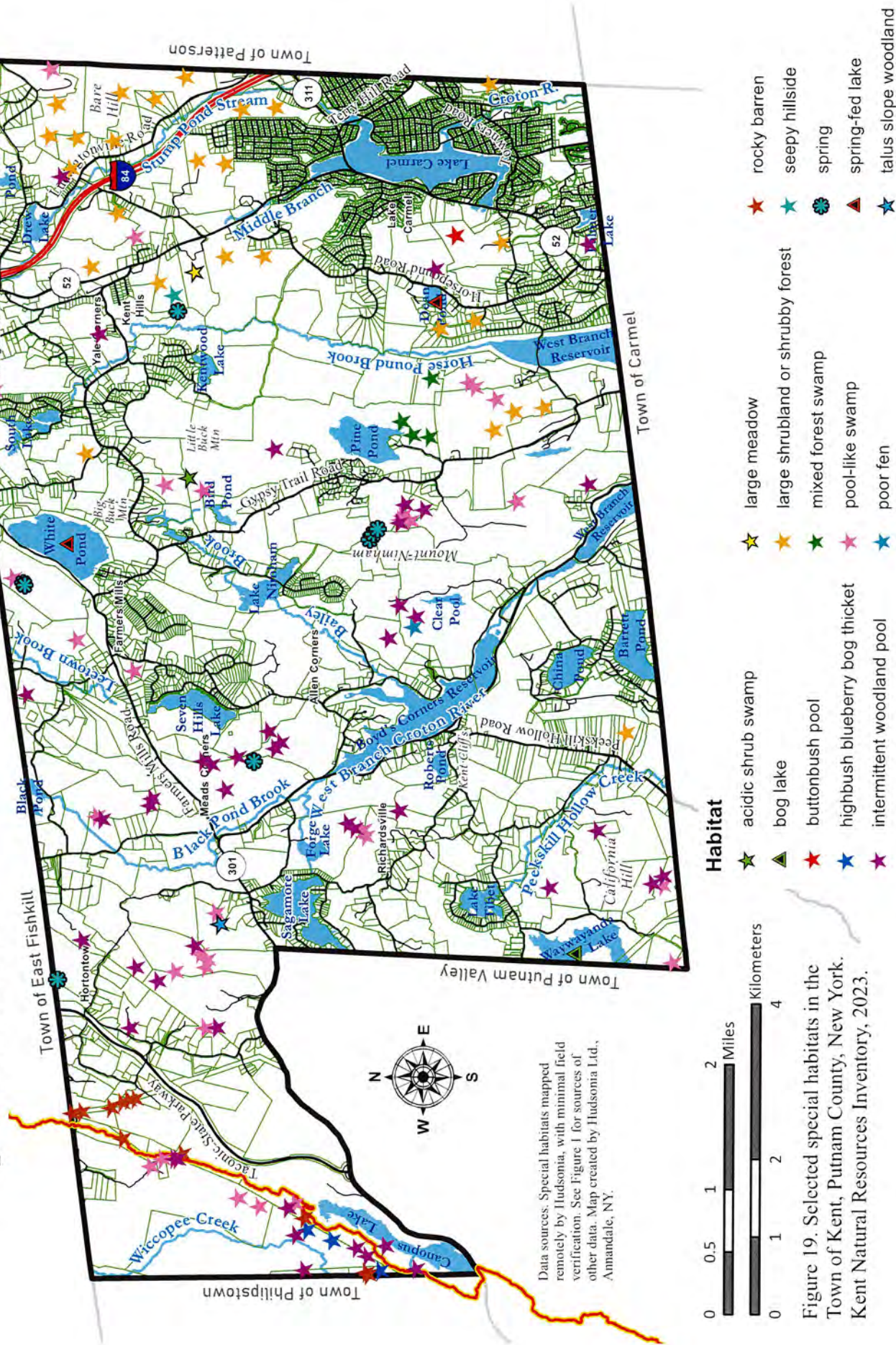


Figure 19. Selected special habitats in the Town of Kent, Putnam County, New York. Kent Natural Resources Inventory, 2023.



## 20. Stream habitats

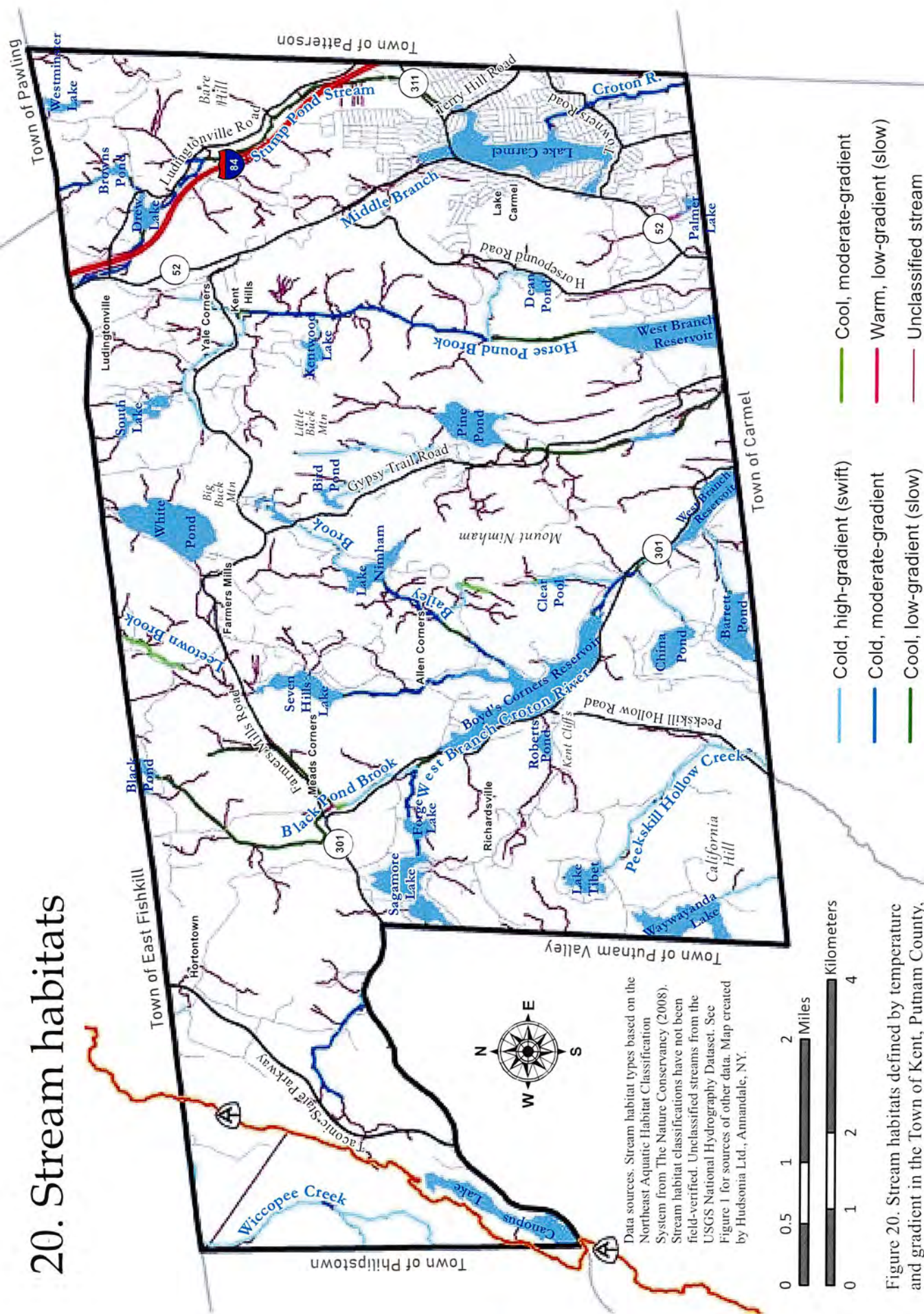


Figure 20. Stream habitats defined by temperature and gradient in the Town of Kent, Putnam County, New York. Habitats were classified only for the larger streams. Kent Natural Resources Inventory, 2023.



# 21. Special biological resources II

## Areas of Known Importance

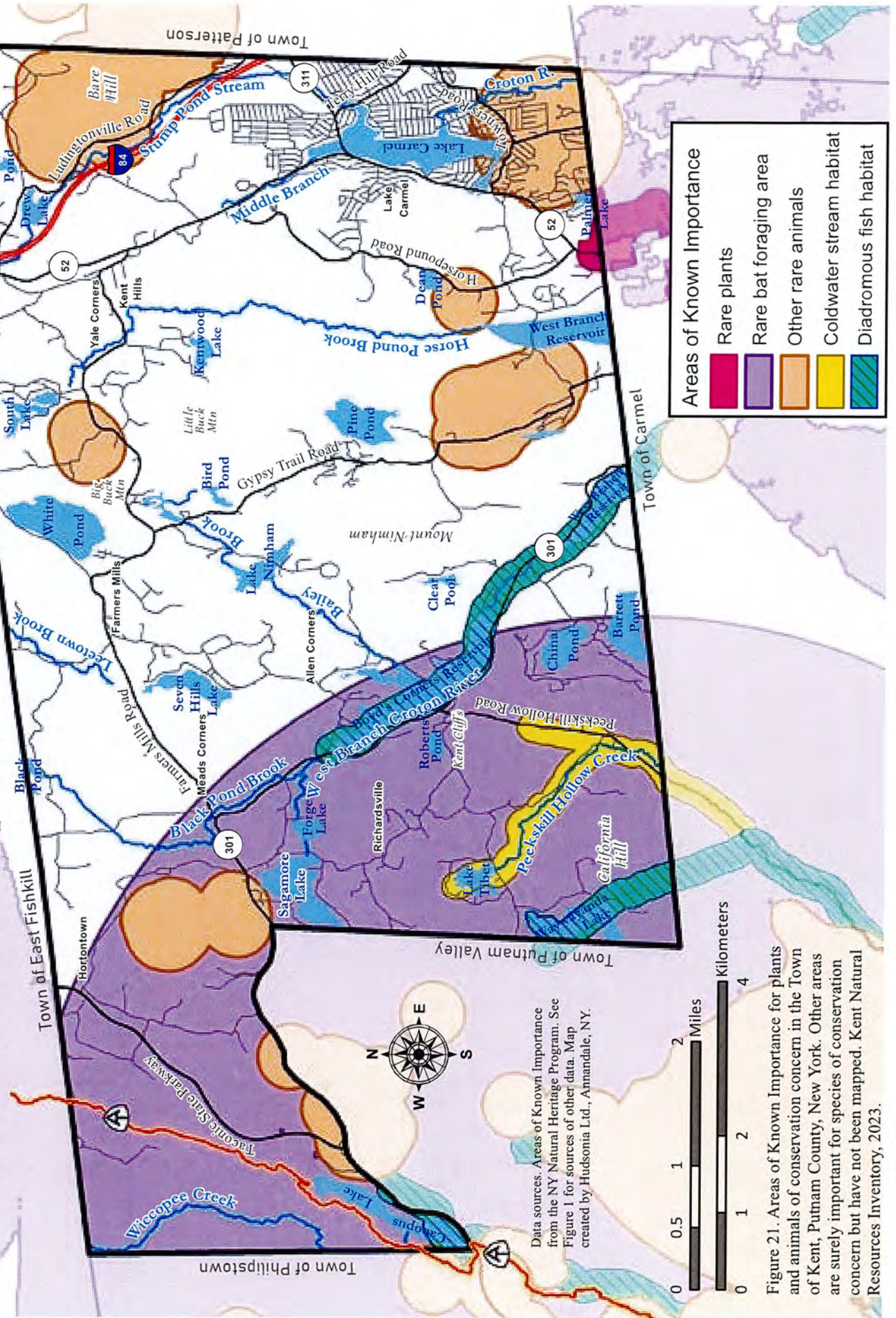


Figure 21. Areas of Known Importance for plants and animals of conservation concern in the Town of Kent, Putnam County, New York. Other areas are surely important for species of conservation concern but have not been mapped. Kent Natural Resources Inventory, 2023.



## 22. Special biological resources III

### Exemplary natural communities

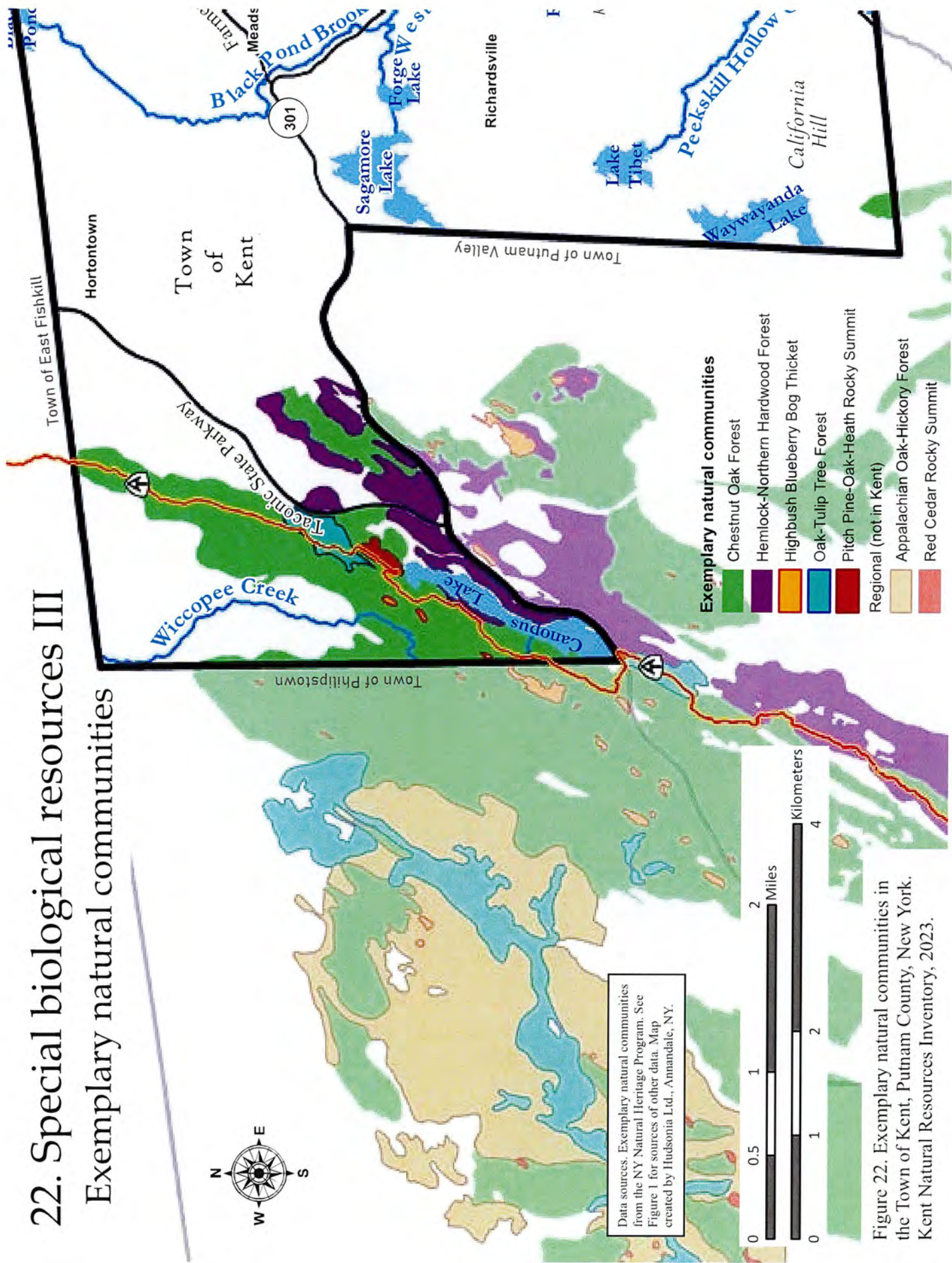


Figure 22. Exemplary natural communities in the Town of Kent, Putnam County, New York. Kent Natural Resources Inventory, 2023.



## 23. Special biological areas

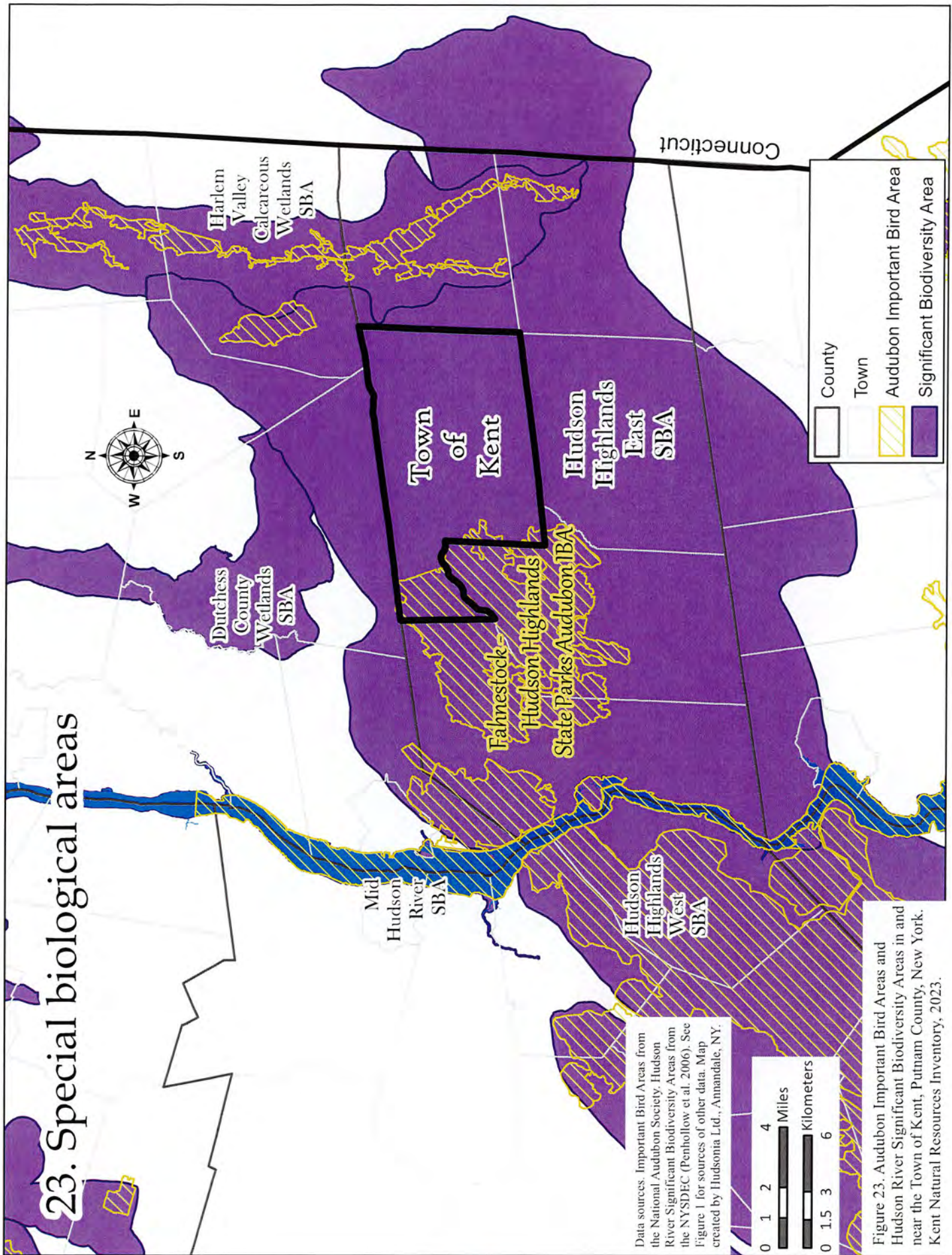
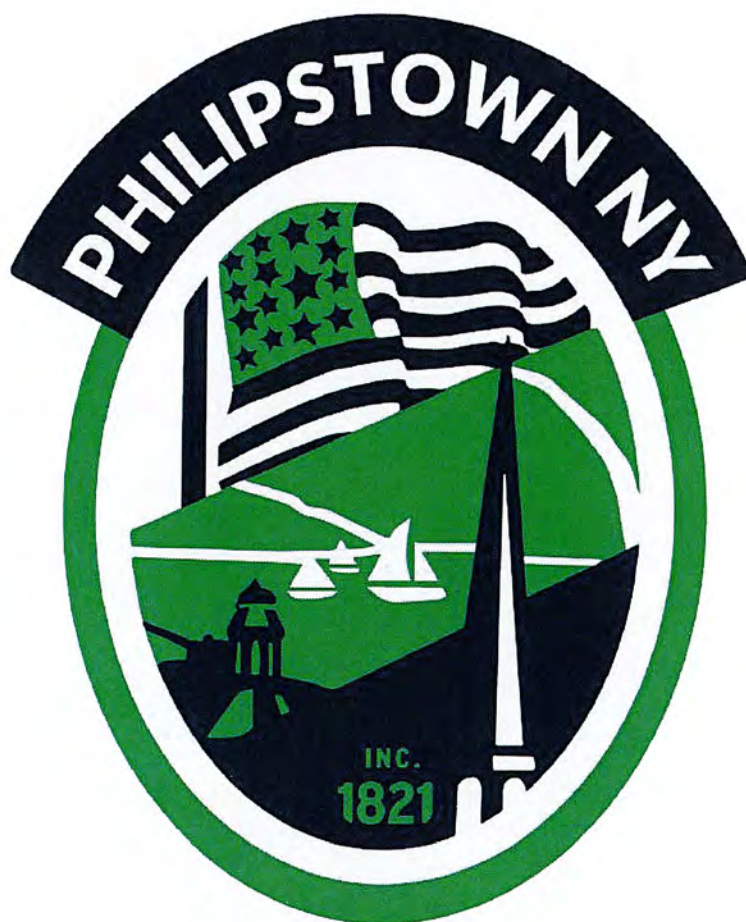


Figure 23. Audubon Important Bird Areas and Hudson River Significant Biodiversity Areas in and near the Town of Kent, Putnam County, New York. Kent Natural Resources Inventory, 2023.





# **Town of Philipstown Natural Resources Inventory**

**December 2020**

*This project has been funded in part by the Climate Smart Community Grant Program, Title 15 of the Environmental Protection Fund through the New York State Department of Environmental Conservation.*

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### **Contributing Editors:**

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Philipstown Zoning Board  
Philipstown Planning Board  
Philipstown Conservation Board  
Philipstown Climate Smart Task Force  
Philipstown Community Congress - Trails Committee  
Philipstown Community Congress - Water Quality Committee  
Philipstown Comprehensive Plan Update Committee  
Glynwood Center for Regional Food and Farming, Inc.  
NYSDEC Hudson River Estuary Program  
Hudson Highlands Land Trust, Inc.  
Ecological Citizens Project, Inc.  
Open Space Institute, Inc.  
Scenic Hudson, Inc.

## **Acknowledgments**

This project has been funded in part by the Climate Smart Community Grant Program, Title 15 of the Environmental Protection Fund through the New York State Department of Environmental Conservation.

Significant map data and narrative text were incorporated into this NRI from the following sources:

NYSDEC Hudson River Estuary Program  
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2007 Town of Philipstown Natural Resource and Open Space Protection Plan  
2016 Town of Philipstown Open Space Index  
2018 Town of Putnam Valley Natural Resources Inventory  
2019 Town of Coeymans Natural Resources Inventory  
2010 Town of Rosendale Natural Resource Inventory  
New York Natural Heritage Program  
New York Rural Water Association  
New York State Department of Environmental Conservation  
New York State GIS Clearinghouse  
New York State Office of Parks, Recreation, and Historic Preservation  
ESRI USA  
Putnam County GIS Department  
Putnam County Soil and Water Conservation District

## **Introduction**

Dear neighbors,

As you likely know, what we now consider the Town of Philipstown has a long history of environmental conservation. This started first with the Mohican people who called the Hudson River “Mahicannituck” (waters that are never still) and the Lenape people who called this land Lenapehoking, both of whom maintained a sustainable and respectful relationship with the land until they were driven from it by European settlers during the 17th and 18th centuries.<sup>1</sup> Following the construction of the West Point Foundry in the Village of Cold Spring in the early 19th century, there was a period of rampant deforestation in order to fuel the fires of the foundry; however, starting in the 1870’s, and thanks to inspiration from the Hudson River School of painters, Philipstown community members began a sustained effort to reforest the hillsides of the Hudson Highlands in order to improve air and water quality in addition to protecting recreational resources. These efforts culminated over half a century later during the New Deal, when our Town was heavily reforested thanks to the volunteer efforts of the Civilian Conservation Corps.<sup>2</sup> And to this day, this tradition of conservation continues through the efforts of municipal, non-profit and citizen groups that strive to protect our natural resources. Notable contributions have come from groups such as Scenic Hudson, the Hudson Highlands Land Trust, the Open Space Institute, the Town of Philipstown’s Town Council and Conservation Board, New York State Parks, the Philipstown Garden Club and many, many more.

In 2007, in this spirit of conservation and as a part of its first Comprehensive Plan, the Town of Philipstown’s Conservation Board created both a Natural Resources and Open Space Protection Plan as well as an Open Space Index in order to both map and list priority natural resources and land areas within Philipstown, as well as to suggest future steps the Town could take to better protect its abundant natural resources for generations to come.

Then in 2017, in an effort to take its conservation values even further, the Town of Philipstown decided to pursue certification as a “Climate Smart Community” as part of the New York State Department of Environmental Conservation’s (NYSDEC) “Climate Smart Communities Program.” In reward for a municipality taking actions to reduce greenhouse gas emissions and adapt to the inevitable effects of climate change, this program offers technical support, grant opportunities for numerous sustainability projects, and bragging rights for achieving various tiers of certification (Bronze, Silver, etc.). As outlined by this program, one of the fundamental steps in both reducing greenhouse gas emissions and adapting to climate change is to complete an up-to-date Natural Resources Inventory in order to document existing resources and highlight

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<sup>1</sup> Levine, David, Discover the Hudson Valley’s Native American History, Hudson Valley Magazine: <https://hvmag.com/life-style/history/hudson-valley-tribes/>

<sup>2</sup> Dunwell, Frances F., The Hudson River Highlands, New York, Columbia University Press, 1991

current and potential threats. Such an inventory offers many benefits, but most of all it forms the basis on which myriad additional sustainability actions may be taken, especially those that focus on conservation, development and changes in land use.

So, with this in mind, the Town of Philipstown applied for and was awarded a Climate Smart Communities grant in 2019 to pay for 50% of the costs to update and expand upon its 2007 Natural Resources and Open Space Protection Plan. This 2020 Philipstown Natural Resources Inventory is the result of that effort and we hope that it serves our community well over the next decade, until it is time for another full update in 2030. That said, this report may also be considered “a living document” and will be periodically added to over the next decade. It is also important to note that, in order to make this project as affordable as possible for the Town, in the narrative sections of this report we have often used large sections of text from resources such as the Hudson River Estuary Program’s “Creating a Natural Resources Inventory” guidebook, among others, in order to save time and costs. When used, these sections of borrowed text deal with general descriptions of natural resources and are accompanied by text that we have written specific to Philipstown.

Lastly - and this is also noted below in the “How to Use this Inventory” section but is worth mentioning here - the Town of Philipstown is developing a public online map tool of all of the maps in this report via a platform called ArcGIS Online. By the beginning of 2021, this tool will be accessible via the Town’s website - Philipstown.com - and will allow all community members, organizations and municipal committees to view the numerous map layers in this report in a more interactive format. Visitors to the online map tool will be able to select from various basemaps (which we’ll explain later in this report), as well as any map layer and combine it with another layer in order to compare the countless resources that are found in Philipstown. Furthermore, visitors will be able to select a parcel of land and select from the numerous map layers to determine which natural resources are on and around a certain property and what the potential impacts of development, conservation and land changes might be. We hope, for example, that this tool will be especially useful to the Town’s Conservation Board as it reviews the potential environmental impacts of proposed development projects. And most of all, we hope that this report and the accompanying online tool will inspire new ideas and efforts to continue and expand upon Philipstown’s long tradition of conservation.

We hope you enjoy reading and learn much from this report!

Sincerely,

Max Garfinkle  
Natural Resources Review Officer  
Town of Philipstown

Roberto Muller  
Climate Smart Coordinator  
Town of Philipstown



## A. Historic Setting

According to the 2018 Putnam Valley Natural Resource Inventory, around Philipstown and Putnam Valley “the earliest known people were of the Canopus group of the Wappinger Confederacy, part of the Algonquin-speaking Mohican Nation.”<sup>3</sup> As noted above, the Lenape people (the local groups of which were called Munsee) also lived in the lower Hudson Valley and cohabitated the region with the Wappingers in a mostly peaceful relationship. Their languages were both part of the larger Algonquin language group, which allowed them to communicate and occasionally unite to protect each other from attacks by the Mohawk / Iroquois Nations to the west and the Mohegan Nation to the east.<sup>4</sup>

Both the Wappingers and Munsee started out as migratory hunter-gatherers that lived in small clans of 10 - 100 people. They hunted “bear, elk, white-tailed deer, rabbits, squirrels, turkey, river otter, raccoons, and woodchucks, as well as various waterfowl. Archaeological sites in the Hudson Valley have also produced evidence of fishing for most freshwater species, and, during the spring, they caught sturgeon, striped bass, shad, and herring, and probably dried, smoked, or roasted them. [They also] gathered plant foods such as hickory, nuts, butternuts, walnuts, acorns, and chestnuts, and various berries to supplement their diet.”<sup>5</sup> By the time Europeans arrived, they were also skilled agriculturalists who grew corn, beans, and various species of squash.

These communities left relics behind following their forced removal by Europeans. For example, many of the stonewalls in this region were built in part by Native Americans. The book “Sermons in Stone” by Susan Allport includes quotes from firsthand material showing that colonial settlers employed Native Americans in order to fill “debts” (often accrued by Native Americans continuing their normal practices that colonists had deemed illegal). One example described in the book is: “Some of the Indians who worked for the settlers were free men who were paid a daily wage, but others were slaves, captives from the King Philip’s Indian War of 1675 who had been subsequently awarded to colonists in compensation for their own participation in that war. Both of these groups of Indians were probably employed in building stone walls.” Allport also includes firsthand accounts demonstrating that enslaved Africans and African-Americans were also forced to build stonewalls.<sup>6</sup>

Unfortunately, Native American land rights were essentially disregarded from the first arrival of Europeans, and eventually Dutch and English settlers completely displaced them. As described

<sup>3</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>4</sup> Levine, David, Discover the Hudson Valley’s Native American History, Hudson Valley Magazine: <https://hvmag.com/life-style/history/hudson-valley-tribes/>

<sup>5</sup> Ibid.

<sup>6</sup> Allport, Susan, Sermons in Stone: The Stone Walls of New England and New York, Second Edition, The Countryman Press, New York, September 17th, 2012



in the Hudson Highlands Land Trust's "[Land Heist in the Highlands](https://www.hhlt.org/land-heist-in-the-highlands/)" article, the Wappingers land, which included current-day Philipstown and the rest of what became Putnam County, was illicitly taken from them by means of one questionable deed and one completely false deed which both involved one of the Town's European founders, Adolph Philipse. Despite pleading their case - the efforts of which were led by their Chief Daniel Ninham, the Wappinger were forcibly removed from their lands, as well as multiple times from the lands they then moved to. Despite their forced removal by Europeans to Wisconsin, Oklahoma, Stockbridge, and areas in Canada, the Wappinger culture is still active in these regions and deserves recognition as the culture whose ancestral lands include Philipstown.<sup>7</sup>

Also, it is ethically essential while studying and preserving Philipstown's history to learn the stories of people who were enslaved by landowners in or near Philipstown. Their stories are often overlooked and undertold and deserve further attention. Stories like that of Caesar, an African American miller enslaved by Adolph Philipse, the wealthy landowner who was involved in creating the false deed that stole most of what is now Putnam County from the Wappinger people. Or of families that were forcibly separated by their enslavers, such as Jack and Parthenia, who were married but held captive by different enslavers who cruelly prevented them from being together by sending Parthenia to Barbados without Jack. Stories like these are documented by Historic Hudson Valley's interactive virtual museum, "People Not Property."<sup>8</sup> The resource can be found here: <https://peoplenotproperty.hudsonvalley.org/>. Also, the Hudson Highlands Land Trust has a webpage dedicated to the "People Not Property" virtual museum, which can be found here: <https://www.hhlt.org/people-not-property/>.

During the time of early European settlement, in 1669, the provincial government of New York designated a postal route between New York City and Albany, which were the two most important European population centers at the time. Before 1669, the route that the postal road followed was originally established by the Wiccoppee and Wappinger. Then in 1703, the provincial government mandated that the postal road become a "public and common general highway" to facilitate travel between the two cities.<sup>9</sup> An original unpaved section of this route still exists today and is known as the "Old Albany Post Road Historic District," which is found along the eastern border of Philipstown.

Philipstown officially became a township of Dutchess County on March 7, 1788, and later became a township of Putnam County when Putnam County broke off from Dutchess County in

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<sup>7</sup> Cutul, Peter, Land Heist in the Highlands: Chief Daniel Ninham and the Wappinger Fight for Homeland, NYS Office of Parks, Recreation and Historic Preservation, Hudson Highlands Land Trust, <https://www.hhlt.org/land-heist-in-the-highlands/>

<sup>8</sup> Historic Hudson Valley, People Not Property: Stories of Slavery in the Colonial North, 2019, <https://peoplenotproperty.hudsonvalley.org/>

<sup>9</sup> Hine, C.G., The New York and Albany Post Road, 1905, Project Gutenberg EBook, Released December 14th, 2007, <http://www.gutenberg.org/files/23857/23857-h/23857-h.htm>

1812.<sup>10</sup> In terms of living conditions, the mostly steep slopes and rocky soils of Philipstown made farming difficult and limited the area's population prior to the construction of the West Point Foundry in the Village of Cold Spring in 1818. Even now the Town remains less developed than many nearby areas. As noted above, "the Town is latticed with historic stonewalls - some constructed up to 300 years ago - which contained livestock and served as repositories for the seemingly endless rocks removed from fields to improve farming."<sup>11</sup>

Prior to the construction of the West Point Foundry, "farmers eked out a subsistence living cultivating berries and fruits, nuts, maple trees for syrup, bees for honey, flax for textiles, and the crops that could be successfully grown. Grazing animals provided meat, dairy products, and wool; trees were logged for railroad ties, ship timber, barrel hoops, and construction materials for the burgeoning cities. Ice harvesting from local lakes provided a winter income; cut ice was packed in straw, driven by wagon to the Hudson, ferried to New York City and then shipped around the globe."<sup>12</sup>

Following the construction of the West Point Foundry, the Village of Cold Spring and surrounding Philipstown began to boom, attracting newcomers who either worked the foundry or formed a new middle class of doctors, lawyers, pastors, shop-owners, teachers and so forth. Furthermore, thanks to the influence of Gouverneur Kemble, who helped create the Foundry, Cold Spring and Philipstown became popular as fresh-air retreats for wealthy and famous New Yorkers, many of whom eventually purchased large estates as second or additional homes throughout the Town, and most prominently in the hamlet of Garrison, evidenced by the existence of such historic buildings as Castle Rock, the (Frederick) Osborne House, Eagle's Rest, and so forth.

Furthermore, the Hudson Highlands of Philipstown attracted painters from the Hudson River School, such as Thomas Cole, which further led to the fame of the region; however, the ever-hungry fires of the foundry eventually led to widespread deforestation throughout Philipstown, which took decades to replace, even after the West Point Foundry closed in 1911. The reforestation efforts, as mentioned above in the introduction letter to this NRI, were carried out in greatest number by the Civilian Conservation Corps during the years of the Great Depression, and are now largely protected in the form of public lands, private fee-owned properties and conservation easements.<sup>13</sup>

<sup>10</sup> McDonald, Don, A Brief History of Philipstown, 2004, <https://philipstown.com/history-of-philipstown>

<sup>11</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>12</sup> Life on a Rocky Farm: Rural Life Near New York City in the Late Nineteenth Century. Excelsior Editions/State University of New York, 2013.

<sup>13</sup> Dunwell, Frances F., The Hudson River Highlands, New York, Columbia University Press, 1991



## B. Community Setting

Today, the Town of Philipstown consists of the villages of Cold Spring and Nelsonville as well as the hamlets of Garrison and Continental Village, and has an area of 51.5 square miles, of which 48.8 square miles is land and 2.7 square miles, or 5.22%, is water<sup>14</sup>. The western border of Philipstown is the Hudson River, with the Orange County towns of Highlands and Cornwall, as well as a small sliver of Stony Point in Rockland County, on the opposite shore. The north Town line borders the Dutchess County towns of Fishkill and East Fishkill, with the south Town line bordering the Westchester County town of Cortlandt. Kent and Putnam Valley border the Town on its east side.

According to the 2018 American Community Survey,<sup>15</sup> Philipstown has a population size of 9,724, a median household income is \$110,205 and a poverty rate is 5.2%. Approximately 53.9% of the adult population has a bachelor's degree or higher. Philipstown is a comparatively older community with a median age of 47.1 years compared to the national average of 37.9 years. In terms of race and language, the Town is predominantly white (91.0%) and has a small percentage of families that speak a language other than English at home (10.5%) compared to the national average of 21.5%. The Town also has a lower military participation rate of 6.7 % compared to the national average of 7.5 %.

Interestingly, Philipstown households tend to have a much longer commute to work (46.1 minutes) compared to the national average (26.6 minutes), and 59.8% of our working adults drive a single-occupancy vehicle to work, compared to carpooling (5.7%), public transportation (19.8% - mostly by Metro North Railroad), walking (1.2%), other means - most likely bicycling (1.0%) or working from home (12.4%), although the latter has almost certainly increased since the onset of the COVID-19 pandemic.

In terms of community character, Philipstown is a relatively tight-knit town that offers numerous community-oriented spaces and activities, such as those offered by the Philipstown Recreation Department, the Depot Theatre, Hudson Valley Shakespeare Festival, the Cold Spring Farmers Market, the Cold Spring Chamber of Commerce, our local governments, our local schools of Haldane, Garrison, St. Basil Academy and Manitou, community groups such as the Philipstown Garden Club and Lions Club, our local churches, youth sports organizations and many more. Philipstown is also home to several Community-Supported Agriculture farms, such as Glynwood and Long Haul Farm, and also hosts community art exhibits organized by Collaborative Concepts at Saunders Farm. Furthermore, numerous non-profit and spiritual organizations can be

<sup>14</sup> United States Census Bureau, 2010 United States Census:  
<https://www.census.gov/quickfacts/philipstowntownputnamcountynynewyork>

<sup>15</sup> United States Census Bureau, 2018 American Community Survey:  
<https://data.census.gov/cedsci/profile?g=0600000US3607957584>

found in Philipstown, including the Garrison Institute, Greymoor, the Hudson Highlands Land Trust, the Ecological Citizens Project, and the Hastings Center.

Philipstown has two weekly newspapers: The *Highlands Current*, founded in 2010 and published on Fridays, and the *Putnam County News & Recorder*, founded in 1868 and published on Wednesdays. The Town is also blessed with many small businesses, many of which can be found in the villages of Cold Spring and Nelsonville and also along the Route 9 corridor. Many Philipstown businesses depend to a large degree on tourism revenue, which has dramatically increased over the past few decades due to the increased fame of the Town's hiking trails as well as the many shops and restaurants that can be found on Main Street in Cold Spring. In a sense, tourists also make up a part of Philipstown's community due to their essential support of local businesses and their use of local state parks and other public resources located within the Town's borders.

Overall Philipstown residents and business owners enjoy a relatively affluent and comfortable way of life that offers numerous community connections and opportunities to give back and to support those in need. This is exemplified by the countless volunteer groups and committees that are addressing various development and community issues. That said, Philipstown has become a progressively expensive place to live and housing costs have increased dramatically over the past several decades. With this has come an increased cost of living, making it difficult for many Philipstown families to remain in the community for more than one or two generations. Also despite the numerous benefits that increased tourism has brought to the Town, there have also been challenges, especially on fair-weather weekends, such as the lack of public parking, crowded streets, heavily-used hiking trails, trash collection, and a shortage of public restrooms that have made it more difficult for local residents to enjoy what the Town has to offer, especially on weekends.

Like any town, Philipstown is constantly engaged in the balancing act of ensuring economic prosperity for its community members while also preserving and protecting its resources and their access. We hope that this Natural Resources Inventory can further support the Town of Philipstown's efforts to find the right balance in the decades ahead.

### **C. Why Inventory Natural Resources?**

“[Philipstown’s] shorelines, wetlands, forests, streams, grasslands, and shrublands are not only habitat for abundant fish and wildlife, but also provide many vital benefits to people. These ecosystems help to keep drinking water and air clean, moderate temperature, filter pollutants, absorb floodwaters, and provide for pollination of agricultural crops. They also present opportunities for outdoor recreation and education, and create the scenery and sense of place that is unique to [Philipstown].

“Land-use planning is instrumental to balancing future growth and development with the protection of natural resources. Although municipalities frequently need to make decisions affecting these resources, they often don’t have adequate data available to inform those decisions. Often they find themselves reacting to proposed development rather than planning for future growth, or making decisions on development projects without considering the larger context. This narrow approach to decision-making loses sight of broader-scale issues and goals, such as climate resilience, walkable communities, connected habitats, or watershed management.

“By identifying and describing natural resources at the local scale, a natural resources inventory (NRI) provides communities with a strong foundation for proactive planning and informed decision-making. The process encourages participation in identifying and prioritizing natural resources important to the community, and provides information that will support careful land-use planning and improved resource protection measures. And by incorporating natural resources into every level of decision-making and planning, municipalities can make a meaningful contribution toward preserving the natural heritage of the region, and can ensure that healthy, resilient ecosystems—and the benefits they provide—are available to their communities for future generations.”<sup>16</sup>

### **D. What is a Natural Resources Inventory (NRI)?**

“A natural resources inventory (NRI) compiles and describes important, naturally occurring resources within a given locality (e.g., municipality, watershed, or region). Cultural resources, such as historic, scenic, and recreational resources, are often included in an NRI, as well. The inventory has two basic purposes: 1) to provide the building blocks for comprehensive land-use and conservation planning, and 2) to allow natural resource information to be included in local planning and zoning. The scope of the NRI is determined by the community. At its simplest, an NRI is the compilation and description of existing natural resources data. At its most complex, it

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<sup>16</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



includes detailed analysis of resources or new data collected specifically for the inventory. An NRI is not a static document. As new and revised data become available, the inventory should be updated to insure its completeness and accuracy.

“Until an inventory has been conducted, many communities don’t have a clear picture of where their natural (and cultural) resources are located, which resources are significant to the community, and why. The compilation of map data tables and descriptions in an NRI contribute to a better understanding and appreciation of the community’s natural resources and provide the foundation for a wide range of planning and conservation applications.”<sup>17</sup>

### **E. How to Use This Inventory**

This Natural Resources Inventory should be a valuable reference for Town officials, interested community and watershed groups, industry, developers, business owners and residents. The maps in this inventory provide a general representation of the Town’s natural and cultural resources, the connections between them, and how they relate to patterns of land use and development in the community. They clearly illustrate how nature transcends political and private boundaries. By depicting resources at the townwide scale and beyond, these maps help us understand the larger context of our Town’s resources, and can be used to help evaluate the potential impacts of our land-use decisions not only on our own community but also on neighboring municipalities and ecosystems.

According to the NYS DEC’s Hudson River Estuary Program, this NRI can be used to:

- “Educate residents and developers about important resources occurring in the Town,
- “Understand the resources occurring on or near a property to inform stewardship,
- “Evaluate potential impacts of proposed actions during routine environmental reviews,
- “Update the natural resources section of the Town comprehensive plan,
- “Inform municipal open space planning,
- “Review and update existing zoning and subdivision regulations,
- “Designate Critical Environmental Areas, and
- “Inform development of new local policies and environmental review procedures.”<sup>18</sup>

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<sup>17</sup> *Ibid.*

<sup>18</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

In addition to this NRI, the NYS DEC's "Hudson Valley Natural Resource Mapper"<sup>19</sup> illustrates many of the resources shown on maps in this document and is a valuable companion tool. Information is organized thematically under estuary habitats, streams and watersheds, wetlands, forests, biodiversity, and scenic and recreation features. Tax parcel boundaries are available for viewing under reference layers.

It is important to keep in mind that the NRI is best suited for municipal-scale planning. The maps are not intended to provide site-specific accuracy and should not be used as a primary source for land use decisions. Any resource shown on a map should be verified in the context of environmental review. Nevertheless, the NRI can be used as a screening tool at the site-scale to raise questions or identify the need for additional site assessment.

This NRI report, including maps, is available as a PDF on the Town website at [philipstown.com](http://philipstown.com) and physical copies are available at the Philipstown Town Hall. Within the report, the PDF maps allow for ease of navigation with the ability to zoom in to an area of interest. In addition, the NRI maps will be available for more interactive and easily accessible public viewing via the Town's ESRI ArcGIS Online Mapper tool, the link for which will also be accessible via the above-mentioned Town web address.

## **Methodology**

As noted above, this Natural Resources Inventory was primarily compiled by the Town's Climate Smart Communities Coordinator and the Town's Natural Resources Officer, with guidance and editing assistance from the Town Conservation Board as well as essential support from the NYS DEC Hudson River Estuary Program, Hudson Highlands Land Trust, Inc. and Ecological Citizens Project, Inc.. Composed of a primary mapping component accompanied by supporting text, this inventory catalogues a broad variety of existing scientific data.

In order to produce a useful document for municipal decision-makers and community residents in a timely and affordable manner, the authors and the Philipstown Conservation Board, which together constituted the NRI working group, agreed during their initial public project kick-off meeting in October of 2019 to set the project area as the Town of Philipstown, including the Villages of Cold Spring and Nelsonville as well as a one-mile buffer around the Town borders. The working group also decided to restrict data gathering to the natural resources listed in the Hudson River Estuary Program's NRI Guidebook, previously mentioned above. The working group determined that the wealth of natural resource data already available online from numerous government agencies and non-profit organizations would provide a sufficient and

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<sup>19</sup> New York State Department of Environmental Conservation, Hudson Valley Natural Resource Mapper, A Tool for Communities in the Hudson River Estuary Watershed: <https://gisservices.dec.ny.gov/gis/hvnrm/>



cost-effective foundation for this NRI, which could be complemented by and lead to future and more-detailed local studies.

Mapping for this NRI was completed in between October 2019 and September 2020 thanks to partial funding from a NYSDEC Climate Smart Communities grant. The maps were created by the Town's Natural Resources Officer, Max Garfinkle, in cooperation with the Town's Climate Smart Communities Coordinator, Roberto Muller, with guidance and feedback from the Town's Conservation Board. The maps display GIS data from federal, state, and county agencies and non-profit organizations including the Hudson Highlands Land Trust, Scenic Hudson and the Ecological Citizens Project. The original source of data sets are included and described in detail in the narrative for each map, which consists of a general description of the data layers depicted in the map, key findings, and, when appropriate, recommendations for further study.

All maps were produced using Environmental Systems Research Institute (ESRI) ArcGIS Desktop Geographic Information Systems (GIS) software. Information on the maps comes from different sources, produced at different times, at different scales, and for different purposes. Most of the GIS data were collected or developed from remote sensing data (i.e., aerial photographs, satellite imagery) or derived from paper maps. For these reasons, GIS data may contain inaccuracies from the original data, plus any errors from converting it. Therefore, maps created in GIS are approximate and best used for planning purposes. They should not be substituted for site surveys. Any resource shown on a map should be verified in the field for legal purposes, including environmental review. Information provided by the maps can be enhanced by local knowledge, and the NRI should be updated at least every 10 years as new data becomes available.

This NRI report incorporates relevant descriptions of resources depicted in each map as well as prior text from the Town's original Natural Resources and Open Space Protection Plan<sup>20</sup>, which was written in 2007 by the former Comprehensive Plan Implementation Subcommittee on Natural Resources. Additional text and background information was drawn from the Hudson River Estuary Programs' "Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed."<sup>21</sup> The authors also followed and used text from the Town of Coeymans Natural Resources Inventory,<sup>22</sup> the Town of Putnam Valley's Natural Resource

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<sup>20</sup> Town of Philipstown Conservation Advisory Council, Town of Philipstown Natural Resources and Open Space Protection Plan, 2007: <https://philipstown.com/Final%20Draft%20Open%20Space%20Plan%20Oct%202007.pdf>

<sup>21</sup> Haeckel, Ingrid, and Laura Hedy. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>22</sup> Town of Coeymans Conservation Advisory Council, Town of Coeymans Natural Resources Inventory, 2019: <https://coeymans.org/documents/natural-resource-inventory/>



Inventory<sup>23</sup> and the Town of Rosendale's Natural Resource Inventory<sup>24</sup> as general guides for map layers, narratives, and report format.

This text of this report was largely written by the Town's Climate Smart Communities Coordinator (Project Coordinator / Editor) and the Town's Natural Resource Officer (Principal Mapper / Editor) between April 2020 and October 2020. During this time the Principal Mapper and Project Manager received much assistance in gathering information from the Hudson River Estuary Program and the Hudson Highlands Land Trust, thanks to already existing guidance documents, as well as supportive communication via email and telephone. Upon completion of the first draft of this report at the end of September 2020, the authors requested comments and suggested edits from the Town's Conservation Board, as well as numerous other entities listed below during the project's official public comment period, which was held between October 2020 and November 2020. This period was initiated and concluded by the second and third public project meetings held in October and November 2020, which each took place as a segment of those monthly Conservation Board meetings.

The following is the schedule of public meetings, information gathering and community engagement that took place in developing and finalizing this inventory:

1. *Public Project Kick-Off Meeting*: Philipstown Conservation Board Monthly Meeting- October 8th, 2019 from 7:30 - 9pm. Attendees: Philipstown Conservation Board, Philipstown Natural Resources Officer, Philipstown Climate Smart Communities Coordinator, and members of the public.
2. *Map Data Gathering*: October 2019 - September 2020; completed by the Philipstown Natural Resources Officer and Philipstown Climate Smart Communities Coordinator.
3. *Report Narrative Writing*: April 2020 - December 2020; completed by the Philipstown Natural Resources Officer and Philipstown Climate Smart Communities Coordinator.
4. *Opening of Public Comments Period*: Initiated on October 13th, 2020 at the monthly Philipstown Conservation Board Monthly Meeting from 7:30 - 9pm. Attendees: Philipstown Conservation Board, Philipstown Natural Resources Officer, Philipstown Climate Smart Communities Coordinator, and members of the public. This was complemented by emailed and telephone requests for comments from the following additional entities (each of whom received a copy of the report's first draft): Philipstown Town Council, Philipstown Climate Smart Task Force, Philipstown Comprehensive Plan Update Committee, NYSDEC Hudson River Estuary Program, Hudson Highlands Land Trust, Ecological Citizens Project, Scenic Hudson, Open Space Institute and the Philipstown Community Congress Trails Committee. Request for General Public

<sup>23</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>24</sup> Town of Rosendale Environmental Commission, Town of Rosendale Natural Resource Inventory, 2010: <http://www.townofrosendale.com/NRI.pdf>

comments was made at the Conservation Board meeting and via the Town's Climate Smart program website: [ClimateSmartPhilipstown.org/nri](https://ClimateSmartPhilipstown.org/nri).

5. *Closing of Public Comments Period:* Closed on December 22nd at 5pm. Comments incorporated into the final report after review by Natural Resources Officer and Climate Smart Coordinator.
6. *Submission of Final Report:* After integrating the suggested edits from the above-mentioned community committees, organizations and members of the public, the Philipstown Natural Resources Officer and the Philipstown Climate Smart Communities Coordinator officially presented the completed report to the Philipstown Town Council at the Town's monthly Board meeting on January 7th, 2021 from 7:30 - 9pm and to the Philipstown Conservation Board at their monthly meeting on January 12th from 7:30 - 9pm. The final version of the report was posted on the Town website and the Town's Climate Smart website, and was shared with all of the above-mentioned entities. An official press release was sent to local papers to announce the official release of this NRI.
7. Finally, at the end of January 2021, the Town's ArcGIS Online interactive version of the maps in this report were made available to the public via a link on the Town's website.

Lastly, it is important to note that the completion of this NRI is only one step. Following the initial period of data gathering, it became clear that while much of the material is plentiful and current, there are certainly areas where data needs updating, and / or requires additional local studies. Suggestions for further study are included in each section of this report, and will ideally be added to this report as appendices over the next decade. In the end, by using and updating this NRI at least every ten years, the Town of Philipstown will continue to ensure that land-use decisions in the Town have the benefit of up-to-date and scientifically-sound information.



## **Chapter 1: Basemaps**

### **1. Basemap - Aerial**

#### *Description:*

The Town of Philipstown “Basemap - Aerial” is the foundation for the full natural resources inventory (NRI) map series. It presents general geographic context, upon which additional map information is layered in subsequent maps. It is composed of two “basemap” layers: Aerial Orthoimagery taken in March of 2016, as well as a mostly transparent Terrain map that better highlights changes in elevation via shading. Each component of this basemap is individually available as a basemap option on the town’s previously-mentioned ArcGIS Online map. The Basemap includes municipal boundaries, state roads, county roads, local roads and streets, and faint outlines of tax parcels, which approximate property boundaries and were provided by the Putnam County Information Technology/GIS Department. The map is oriented to true north and has a scale of 1: 63,360 (1 inch = 1 mile in its 8-½” x 11” printed report form). This scale is a ratio that refers to the relationship of distance on the map to distance on the ground. Furthermore, the Basemap, as well as all of the subsequent maps in the inventory, contains a one-mile buffer area surrounding the town in order to show the natural resource context along in addition to within the Town’s borders.

#### *Data Sources:*

- Aerial Orthoimagery:
  - NYS GIS Clearinghouse 2016 Orthoimagery Inventory:  
<http://gis.ny.gov/gateway/mg/2016/putnam/>
- Terrain Map:
  - Offered as a “Terrain with Labels” basemap option in the ESRI ArcGIS Desktop software used for this NRI. Subdata used for this ESRI basemap are “World Terrain Reference,” “World Terrain Base,” and “World Hillshade.” Copyright: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community.
- Tax Parcels:
  - Putnam County Tax Parcels 2020:  
<https://pcny.maps.arcgis.com/home/item.html?id=0961966ebbd148ec839dc3f12edae50b>

## 2. Terrain

### *Description:*

This Terrain map shows the underlying hill-shading component of the above Aerial Base Map, and includes state, county and local roads. We have included it here to show what the shading looks like without the aerial imagery superimposed upon it. This is also available as a base map option in the Town's ArcGIS Online map.

### *Data Sources:*

- Terrain Map:
  - Offered as a "Terrain with Labels" basemap option in the ESRI ArcGIS Desktop software used for this NRI. Subdata used for this ESRI basemap are "World Terrain Reference," "World Terrain Base," and "World Hillshade." Copyright: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community.

## 3. Tax Parcels

### *Description:*

This map shows the tax parcels with a stronger outline, which approximate property boundaries. It is overlaid on the basemap and is included here as a reference to refer to when studying the additional maps in this inventory. Furthermore, these tax parcels will be included as a layer on the town's ArcGIS Online map, and can be combined with any of the other layers in this report in order to see which resources occur in or around a specific tax parcel. Also, Putnam County's "eParcel" online map is a great complementary tool to use with this inventory, as the county map includes parcel numbers and property information when a parcel is selected, and is available here:

<https://pcny.maps.arcgis.com/apps/webappviewer/index.html?id=1e96617851a74cc091b081fd3b53ff20>

### *Data Sources (not including above-cited basemap):*

- Tax Parcels:
  - Putnam County Tax Parcels 2020:  
<https://pcny.maps.arcgis.com/home/item.html?id=0961966ebbd148ec839dc3f12eda50b>



#### 4. Basemap - Color Infrared Aerial

##### *Description:*

This map displays images obtained from the NYS GIS Clearinghouse 2016 Orthoimagery Inventory - Putnam County, New York. Image pixel size is 0.5' GSD. Image type is 4-band, RGB & NIR. The image horizontal accuracy is within 4' at the 95% confidence level (NSSDA). Each aerial photo that comprises the map covers 2000 ft. by 3000 ft. on the ground, was taken in early spring before most deciduous plants leaf out and thus shows the land's features unobscured by tree canopies and can be used to identify ephemeral streams and small wetlands. The infrared orthoimagery also provides information about the vegetation in an area and can be used to define types of land cover and land use. Red areas on the map are generally coniferous trees or lawns with cool season grasses that can photosynthesize early. Vegetation does not include deciduous trees or other plants that are restricted to the later growing season. The following summary from the United States Geological Service describes the various colors found on the map as well as their significance:

- "Live vegetation is almost always associated with red tones. Very intense reds indicate dense, vigorously growing vegetation. As plant vigor decreases, the vegetation appears as lighter shades of red and pink, various shades of greens, and possibly tans.
- Bare soils appear as shades of white, blue, or green in most agricultural regions. In general, darker shades of each color indicate more moist soil.
- Man-made features appear in tones that relate to the materials with which they are made. Asphalt roads, for example, are dark blue or black; gravel or dirt roads are lighter colors depending on their composition; and clean concrete roads are light in tone. The colors of buildings are similarly dependent on the materials used to create them.
- Water appears as shades of blue, varying from nearly black (clear, clean water) to very pale blue (increasing amounts of sediment). The color of very shallow water is often determined by the material present at the bottom of the water. For example, a very shallow stream with a sandy bottom will appear white due to the high level of sand reflection."<sup>1</sup>

##### *Findings:*

The areas that show the darkest red and thus the most dense, vigorous growth tend to be in large coniferous forested areas, such as the areas south of Rt. 403, sections of Hudson Highlands State Park on the northeast border of the Town and sections of Fahnestock State Park along the Rt. 301

<sup>1</sup> United States Geological Survey, What do the different colors in a color-infrared aerial photograph represent? [https://www.usgs.gov/faqs/what-do-different-colors-a-color-infrared-aerial-photograph-represent?qt-news\\_science\\_products=0#qt-news\\_science\\_products](https://www.usgs.gov/faqs/what-do-different-colors-a-color-infrared-aerial-photograph-represent?qt-news_science_products=0#qt-news_science_products)

corridor. Areas of less intense, but still significant growth then tend to occur in open grassy areas, such as on the Town's golf courses (off of Rt 9 & Travis Corners Rd as well as Rt. 9-D and Rt 403) and on athletic fields such as Philipstown Park and Mayor's Park. The numerous lighter pink areas tend to represent open meadows, pasture and other agricultural fields, as exemplified by the land on Rt 9-D south of Rt 403, as well as Saunders Farm off of Old Albany Post Rd and Glynwood farm off of Rt 301. Also of note is how dark the water bodies are Philipstown, which indicates clear, clean water, in comparison to the Hudson River, which is more of a teal color, indicating higher sedimentation, which is well-known to anyone who has spent any time on or in the Hudson River. Lastly, although they are located beyond the north border of Philipstown, the gravel yards and quarries in Fishkill along Rt 9 are evident by the bright blue color of each property. In comparison, one can see how few gravel or quarry areas there are within the town of any significant size.

*Data Sources:*

- Color Infrared Aerial Orthoimagery:
  - NYS GIS Clearinghouse 2016 Orthoimagery Inventory:  
<http://gis.ny.gov/gateway/mg/2016/putnam/>

## 5. USGS Topography

This is a general-use map at medium scale in 7.5 minute quadrangle format that presents elevation (contour lines), hydrography, geographic place names, as well as a few landmarks, such as the Appalachian Trail corridor. It also represents forested areas in light green compared to developed areas in white. Current-generation topographic maps are created from digital GIS databases, and are branded "US Topo." We have included this map as a reference for elevation within Philipstown and because it is also available as a base map option in the Town's ArcGIS Online map. Also, we've been notified by the Hudson Highlands Land Trust that the trail corridor marked on this for the Appalachian Trail is not completely accurate so should be used for basic reference only.

*Data Sources:*

- USGS Topography:
  - USGS US Topo Map and National Elevation Dataset:  
<https://viewer.nationalmap.gov/basic/?basemap=bl&category=histtopo,ustopo&title=Map%20View>



## **Chapter 2: Geology and Soils**

### **6. Bedrock Geology**

#### *Description:*

According to the 2018 Putnam Valley Natural Resource Inventory, “The geology of the Hudson Valley is diverse and has helped to shape the character of its natural communities as well as its human communities; for example, cement industries line the Hudson River as a result of the area’s large supply of limestone and gypsum. Geological characteristics have an effect on many factors, such as topography, groundwater resources, migration of pollutants, and mineral resources. The properties of bedrock geology and surficial geology (loose deposits above bedrock) also strongly influence soil properties, as well as groundwater and surface water chemistry, which in turn influence the type of ecological communities that can thrive. For example, alkaline environments and the calcium rich or calcareous condition that is often associated with limestone bedrock often support more unique or rare plants and biodiversity than other areas. Significant geological features can also be important economically, by providing destinations for outdoor recreation such as hiking or scenic assets that attract tourists, or opportunity for mining operations.

“Knowledge of geological properties is important for making sound planning decisions. For example, if bedrock is close to the surface, foundation and road construction is more expensive and may cause other environmental problems such as erosion. Information about geology is also used for identifying sand and gravel aquifers and sources of sand, gravel, and crushed stone for building and road construction.”<sup>1</sup>

This map is a digitized version of the Geologic Map of New York State, 1970. 1:250,000. Consists of five sheets: Niagara, Finger Lakes, Hudson-Mohawk, Adirondack, and Lower Hudson, the latter of which is the region where Philipstown is located. It is from the New York State Museum Map and Chart Series No. 15.

#### *Findings:*


“An examination of the Bedrock Geology map shows that the geologic units generally run from southwest to northeast. This is typical of the larger area of the Hudson Highlands and beyond, and was caused by some of the extraordinary events that have shaped the area. The nature of the bedrock plays a major role in soil formation in an area, as well as rendering the area calcareous or acidic, thus influencing the biotic community that can form. The Earth is approximately 4.6

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<sup>1</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

billion years old. The geologic time scale divides the time that the planet has existed into eras and epochs in the following table:<sup>2</sup>

**Table 1. Ages of Bedrock in Philipstown<sup>3</sup>**

	Era	Epoch	Years Ago
Oldest  Youngest	Proterozoic (Precambrian)	Middle Proterozoic	1.6 to 1.0 billion
	Paleozoic	Cambrian	542 to 488.3 million
	Paleozoic	Middle Ordovician	471.8 to 460.9 million
	Paleozoic	Upper Ordovician	460.9 to 443.7 million
	Paleozoic	Upper Devonian	385.3 to 359.2 million

“Over a billion years ago, ancient North America was located near the equator, and the east coast actually faced south. The warm tropical seas deposited sands, silts, muds, and limestone, and that became metamorphic rock. The plates on which the continents rest are in motion (known as plate tectonics), and ancient North America collided with another continent. That collision, known as the Grenville Orogeny, formed the Grenville Mountain range, which stretched from Canada to Mexico. The northeast-southwest trending narrow ridges and valleys evident on the Bedrock Geology maps are the result of the stresses caused by the intense compression of plates of crust. These erosion-resistant Precambrian rocks became the backbone of bedrock in Putnam Valley, and are estimated at 1.3 to 1.1 billion years old.

“In [Philipstown], bedrock is generally covered with a thin layer of recently-deposited (in geologic time) soil. The oldest layers of bedrock are under the younger layers. Some areas of the Town show exposed ancient Proterozoic or Precambrian rock. These rocks, once buried under miles of sediment, have been exposed over time through weathering and the scraping action of glaciers. Additionally, areas in the Hudson Highlands exhibit a curious phenomenon in which

<sup>2</sup> *Ibid.*

<sup>3</sup> Geologic Time Scale, University of California Museum of Paleontology, 6 May 2011, [www.ucmp.berkeley.edu/help/timeform.php](http://www.ucmp.berkeley.edu/help/timeform.php).



geological events have lifted some of the older erosion-resistant Cambrian rock layers above younger Ordovician layers.

“Minerals are the building blocks of rock. Rocks can be classified according to the processes that form them. Igneous rocks cooled from molten rock. Metamorphic rocks formed through plate movements or very deep burial (pressure) or contact with molten rock (temperature). These energy sources cause preexisting rock to “metamorphose” or change. For example, granite is the parent rock that forms gneiss, a metamorphic rock. Sedimentary rocks formed by the accretion of small particles that came from the breakup of igneous, sedimentary, and metamorphic rocks. Iron ore, once a product mined locally, is found in sedimentary rocks that formed over 1.8 billion years ago. Heat and pressure associated with deep burial and tectonic deformation converted sedimentary and igneous rocks to metamorphic rocks (marble, quartzite, phyllite, schist, and gneiss).”<sup>4</sup>

At the end of this section, Table 2: Bedrock Geologic Units, provides additional information about the geologic units found in Philipstown and displayed on the Bedrock Geology map. It is notable that a smaller but significant portion of the Town has bedrock that is calcareous or acidic. Calcareous bedrock is that which is partly or mostly composed of calcium carbonate. The areas with calcareous bedrock (labeled OCi, OCw, Oma, bqpc, bg and mb on the map) are found mostly in the southeast corner of Town around Continental Village or over the border in Putnam Valley, but also as a central strip (bqpc) that runs from the Hudson River through the two villages through East Mountain Road into the Town of Fishkill. Plant communities that tolerate calcareous soils deriving from bedrock of this type are of biodiversity significance.<sup>5</sup> The higher elevations likely include calcareous crest ledge and talus habitat. The lowland areas likely include calcareous wet meadows. All of these areas should be explored further for the presence of rare plants. Similarly, acidic bedrock (labeled Cpg, qtlg, bg, bqpc and qpg on the map) would produce soils with a pH less than 5.5, and support acid-tolerant plant communities.

#### *Further Study:*

Clearly, many areas of the Town may house plant communities that have significant biodiversity and would merit further investigation by a qualified expert with strong field identification skills. Also, potential development in these calcareous and acidic bedrock areas should be carefully considered due to the likelihood of rare species being present.

<sup>4</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>5</sup> Kiviat, Erik, and Gretchen Stevens. Biodiversity Assessment Manual for the Hudson River Estuary Corridor. NYS Department of Environmental Conservation, 2001.

*Data Sources:*

- Bedrock Geology
  - NYS Education Department - Natural Resources - Bedrock Geology  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1327>

**Table 2. Bedrock Geologic Units<sup>6</sup>**

Symbol	Group	Period / Era	Age Formed (million years ago)	Notes <sup>7</sup>
Cpg	Poughquag Quartzite	Cambrian, quartzite	542.0 to 488.3	Quartzite forms when quartz-rich sandstone is altered by the heat, pressure, and chemical activity of metamorphism. Quartzite is one of the most physically durable and chemically-resistant rocks found at Earth's surface. <b>Acidic</b> .
OCi	Inwood Marble	Early Cambrian-Lower Ordovician, marble	542.0 to 471.8	Metamorphosed limestone. This is one of three primary bedrocks that underlie Manhattan island. <b>Calcareous</b> .
OCw	Wappinger Group	Cambrian, limestone and dolostone	542.0 to 488.3	Dolomitic Limestone, Calciritic Dolostone, Arenaceous Dolostones. <b>Calcareous</b> .
Oag	Austin Glen Formation	Cambrian, shale	542.0 to 488.3	Thin to thick-bedded bluish gray graywackes, gray shales
Od	Diorite with hornblende and/or biotite	Upper Ordovician, diorite	460.9 to 443.7	Alkaline but not calcareous.
Oma	Manhattan Formation	Middle Ordovician, schist	471.8 to 460.9	Schist is a metamorphic rock made up of plate-shaped mineral grains that are large enough to see with an unaided eye. To become schist, shale must be metamorphosed in steps through slate and then through phyllite. If the schist is metamorphosed further, it might become a granular rock known as gneiss. <b>Potentially calcareous</b> .
am	Amphibolite, pyroxenic amphibolite	Middle Proterozoic, amphibolite	1600 to 1000	Amphibolite is a coarse-grained metamorphic rock. It is harder than limestone and heavier than granite.
bg	Biotite granite gneiss	Middle Proterozoic, granite gneiss	1600 to 1000	Variable: <b>Acidic</b> and <b>Calcareous</b>
bqpc	Biotite-quartz-plagioclase paragneiss	Middle Proterozoic, gneiss	1600 to 1000	Variable: <b>Acidic</b> and <b>Calcareous</b>

<sup>6</sup> Geology, New York State Museum, [www.nysm.nysed.gov/research-collections/geology/gis](http://www.nysm.nysed.gov/research-collections/geology/gis)

<sup>7</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

h2o	Water	-	-	-
hg	Hornblende granite and granite gneiss	Middle Proterozoic, granite gneiss	1600 to 1000	Gray hornblende granite and granitic gneiss with subordinate leucogranite.
lg	Leucogranitic gneiss	Middle Proterozoic, granite gneiss	1600 to 1000	Pink or gray leucogranitic (alaskitic) gneiss and granofels; Sodic plagioclase ranges from generally subordinate to locally dominant; locally with biotite, hornblende, pyroxene, garnet, sillimanite, disseminated magnetite; commonly contains metasedimentary layers, amphibolite, migmatite; plagioclase-rich variety is host to magnetite ore bodies in eastern Adirondacks.
mb	Calcitic and dolomitic marble, variably siliceous	Middle Proterozoic, marble	1600 to 1000	Dolomitic marble, a metamorphic rock, is produced when dolostone is subjected to heat and pressure. <b>Calcareous.</b>
qpg	Pyroxene-hornblende-quartz-plagioclase gneiss	Middle Proterozoic, mafic gneiss	1600 to 1000	<b>Acidic.</b>
qtcs	Garnet-biotite-quartz-feldspar gneiss	Middle Proterozoic, gneiss	1600 to 1000	Gneiss is a metamorphic rock identified by its bands and lenses of varying composition.
qtlg	Garnet-bearing paragneiss and interlayered quartzite	Middle Proterozoic, gneiss	1600 to 1000	<b>Acidic.</b>
rg	Rusty and gray biotite-quartz-feldspar paragneisses	Middle Proterozoic, gneiss	1600 to 1000	Rusty facies, contains variable amounts of garnet, sillimanite, cordierite, graphite, sulphides; contains subordinate marble and calcsilicate rock.

## 7. Surficial Geology

### *Description:*

The Surficial Geology map illustrates the distribution of surface materials in Philipstown. These materials overlay the bedrock (see 6. Bedrock Geology) and contribute to the composition of the soils (see 8. Soils) in the Town. The map is a digitized version of the Surficial Geologic Map of New York and consists of 5 sheets at the scale of 1:250,000: Finger Lakes Sheet, 1986; Hudson-Mohawk Sheet, 1987; Niagara Sheet, 1988; Lower Hudson Sheet, 1989; Adirondack Sheet, 1991.

According to the Putnam Valley NRI, “the surface deposits are largely the product of the glaciers that repeatedly covered this area, most recently approximately 2.6 million years ago. This moving frozen sheet of water reached a maximum thickness of approximately 2 miles. The glacier picked up materials in its path and then, as it melted and retreated 18,000 years ago with



the changing climate, it left behind materials of varying sizes in the valleys of the Town. Large free-standing rocks that can be found all around Town are termed glacial erratics. Eroded substrate left behind by the glacier is termed till and contains a mixture of variously sized particles. Outwash is material and sediment deposited by the glacial meltwater. Some sediments were left behind in glacial ponds and lakes, others moved around by wind and local streams. The glacial till and water-sorted deposits, derived from the crystalline bedrock, are mostly stony and bouldery sands with some silt and little or no clay.”<sup>8</sup>

Table 3: Surficial Geologic Units, at the end of this section, explains the geological units that are displayed on the Surficial Geology map.

### *Findings:*

The overall topography of the Town is a mixture of rugged upland, lower valleys / floodplains and lower shoreline. The majority of the Town is rocky with little or no soil covering the bedrock as seen by the large areas of bedrock and glacial till. That said, there are still significant areas within the Town that offer potential for agriculture and other uses.

Outwash sand and gravel deposits (og) can be an important economic resource for construction and road maintenance, for example. These deposits in Philipstown are located along Rt 9 north of Rt 301, and in a small section along the southeast border with Putnam Valley. They also are host to numerous prime farmland areas, which will be shown in more detail in Section 8. Soils and also in Section 40. Farmland.

Recent Alluvium (al), Kame deposits (k) and Lacustrine delta (ld) surficial geology areas are found mostly along the Hudson River and overlap with some prime farmland soils. The Kame and Lacustrine areas also suggest the presence of aquifers and groundwater, which will be explored in more detail in Section 14. Groundwater and Drinking Water Resources.

Lastly, the Swamp deposits (pm) suggest the presence of peat-muck wetlands, which is confirmed just by glancing at the map since the Swamp deposits area overlaps with Constitution Marsh. This will be covered in further detail in Section 13. Wetlands and Section 27. Significant Coastal Habitat.

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<sup>8</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

*Further Study:*

One suggestion is to hire a geologist to confirm the presence of these surficial areas and to make more in-depth recommendations and analysis on the potential ecological benefits and natural resource uses of these areas.

*Data Sources:*

- Surficial Geology:
  - NYS Education Department - Natural Resources - Surficial Geology  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1327>

**Table 3: Surficial Geologic Units**

Map Key	Name	Description <sup>9</sup>
al	Recent alluvium	Oxidized fine sand to gravel, permeable, generally confined to flood plains within a valley, in larger valleys may be overlain by silt, subject to flooding, thickness 1-10 meters.
h2o	Water	-
k	Kame deposits	Coarse to fine gravel and/or sand, includes kames, eskers, kame terraces, kame deltas, ice contact, or ice cored deposition, lateral variability in sorting, texture and permeability, may be firmly cemented with calcareous cement, thickness variable (10-30 meters).
ld	Lacustrine delta	Coarse to fine gravel and sand, stratified, generally well sorted, deposited at a lake shoreline, thickness variable (3-15 meters).
lsc	Lacustrine silt and clay	Generally laminated silt and clay, deposited in proglacial lakes, generally calcareous, low permeability, potential land instability, thickness variable (up to 50 meters).
og	Outwash sand and gravel	Coarse to fine gravel with sand, proglacial fluvial deposition, well rounded and stratified, generally finer texture away from ice border, permeable,

<sup>9</sup> Geology, New York State Museum, [nysm.nysed.gov/research-collections/geology/gis](http://nysm.nysed.gov/research-collections/geology/gis)

		thickness variable (2-20 meters).
pm	Swamp deposits	Peat-muck, organic silt and sand in poorly drained areas, unoxidized, commonly overlies marl and lake silt, potential land instability, thickness 2-20 meters.
r	Bedrock	Exposed or generally within 1 meter of surface, in some areas saprolite is preserved
t	Glacial Till	Variable texture (boulders to silt), usually poorly sorted sand-rich diamict, deposition beneath glacier ice, permeability varies with compaction, thickness variable (1-50 meters).

## 8. Soils

### *Description:*

According to the Hudson River Estuary Program, “soil is a natural body comprised of solids (minerals and organic matter), liquid, and gases, and it is the product of physical and biotic factors that degrade bedrock, surficial geological materials, and organic matter (waste products and dead organisms) in various stages of decomposition. To understand the natural processes of the land, and to plan land use accordingly, there is no more fundamental place to start than soil. Soil controls decomposition of organic matter and biogeochemical cycles; regulates water flow; influences the vegetation, habitat type, and agricultural potential of particular locations; and supports human habitation and structures. Soil acts as a natural filter to help protect the quality of water and air, regulates rates of aquifer recharge versus runoff, supports food production, growth of forests, and biological communities that society depends on.

“Soil information is critical for land-use planning as it helps to determine where it is appropriate or feasible to build. Each soil type has a certain set of characteristics defined by (but not limited to) properties such as permeability, drainage, available water capacity, pH, depth to bedrock, and risk of corrosion. Consideration of soil properties is important for planning and designing drainage systems; siting of structures; evaluating the potential for septic systems; assessing the need for specially-designed foundations, basements, and roads; determining the feasibility of excavation; and more.

“Soil properties are important for identifying ecological resources as well. Drainage classes can help predict the occurrence of wetlands. Poorly and very poorly drained soils are typically hydric soils and indicate wetland areas and somewhat poorly drained soils are indicators of possible



wetland locations. Similarly, muck or peat soils indicate probable wetland presence. Soil chemistry is often influenced by underlying bedrock geology, and similarly influences the kinds of ecological communities that occur in a given place. Calcareous soils are often associated with uncommon habitats and biota. Agriculture and forestry practices are also informed by soil data. Soils influence which crops are best to grow, whether irrigation or drainage is needed and how to design irrigation systems, and whether soil amendments are necessary. Soil properties can inform which farms are most valuable for preservation.”<sup>10</sup>

The Putnam and Westchester County Soil Survey,<sup>11</sup> which maps and describes the soils of Philipstown, was completed by soil scientists based on a combination of field surveys and remote analyses. The surveys categorize soil data into series, types, and phases. Soil series delineate soils originating from the same parent materials and having relatively uniform structural engineering properties, except for texture. Soil series are the main unit of a county’s detailed soil survey. Within a series, differing soils are broken down into soil phase categories according to slope and other properties. The USDA Natural Resources Conservation Service (NRCS) Web Soil Survey compiles nationwide soil data and information produced by the National Cooperative Soil Survey.<sup>12</sup> Users can use the Web Soil Survey for easy, interactive access to information from the Putnam County Soil Survey. It is possible to zoom in to an area of interest and print a map of soil units or to classify the soils, as well.

### *Findings:*

The soils mapped within Philipstown are classified according to natural drainage patterns in Table 4: Soils in Philipstown below. It is important to note that the smallest mapping unit is 2 acres in size so there are likely smaller inclusions of different soil types within mapped units. Notably, the Web Soil Survey indicates areas where the loamy soil is fertile and thus “prime farmland” (2,775.7 acres, 8.3%), and also how much land (1,941.2 acres, 5.7%) is flagged as “of state-wide importance.” This will be discussed further in Section 40. Farmland of this report. In addition, certain soils types indicate the likelihood of wetlands due to their poor drainage and are classified as “Hydric Soils.” These are indicated in Table 4 as poorly drained or very poorly drained soils (2,584.9 acres, 7.8%). These Hydric Soils are also collectively shown in Section 13. Wetlands and are discussed in more detail. Also, a much smaller area of somewhat poorly drained soils are considered probable wetlands (48.3 acres, 0.10%). Lastly, included in Table 4 are Septic Tank Field Ratings, which we will cover further in the next section.

<sup>10</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>11</sup> Soil Survey of Putnam and Westchester Counties, New York. United State Department of Agriculture, Soil Conservation Service, 1994, pp. 1–205, Soil Survey of Putnam and Westchester Counties, New York: [nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/new\\_york/putnam\\_westchesterNY1994/putnam\\_westch\\_ester.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/new_york/putnam_westchesterNY1994/putnam_westch_ester.pdf)

<sup>12</sup> Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey: [websoilsurvey.sc.egov.usda.gov/](https://websoilsurvey.sc.egov.usda.gov/)



*Further Study:*

This could include local soil studies to confirm the approximated soil types shown in the map. Special focus could be placed on confirming prime farmland soils as well as hydric soils suggesting the presence of wetlands.

*Data Sources:*

- Soils:
  - NRCS SSURGO Database:  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

**Table 4: Soils in Philipstown<sup>13</sup>**

Soil Symbol	Description	Acreage	Percentage of Total Soils	Farmland Class	Parent Material <sup>14</sup>	Drainage Class	Septic Tank Absorption Fields Rating <sup>15</sup>
Ce	Catden muck, 0 to 2 percent slopes	222.9	0.70%	Prime	Organic	Very Poorly Drained	Very Limited
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	1,157.90	3.50%	Prime	Till	Well Drained	Somewhat limited
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	779.8	2.30%	Of Statewide Importance	Till	Well Drained	Very limited
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	449.5	1.40%		Till	Well Drained	Very Limited
ChE	Charlton loam, 25 to 35 percent slopes	249.9	0.80%		Till	Well Drained	Very Limited
CIB	Charlton fine sandy loam, 3 to 8 percent slopes, very stony	404.3	1.20%		Till	Well Drained	Somewhat limited

<sup>13</sup> Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey: [websoilsurvey.sc.egov.usda.gov/](https://websoilsurvey.sc.egov.usda.gov/)

<sup>14</sup> Heady, Laura, and Gretchen Stevens. Guidebook for Biodiversity Assessment. Hudsonia, 2017

<sup>15</sup> Web Soil Survey, United States Department of Agriculture Natural Resources Conservation Service: [websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx](https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

CIC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	857.9	2.60%		Till	Well Drained	Very Limited
CID	Charlton loam, 15 to 25 percent slopes, very stony	758.9	2.30%		Till	Well Drained	Very Limited
CIE	Charlton loam, 25 to 35 percent slopes, very stony	310	0.90%		Till	Well Drained	Very Limited
CIF	Charlton loam, 35 to 45 percent slopes, very stony	333.6	1.00%		Till	Well Drained	Very Limited
CrC	Charlton - Chatfield complex, 0 to 15 percent slopes, very rocky	5,508.30	16.60%		Till	Well Drained	Very Limited
CsD	Chatfield - Charlton complex, 15 to 35 percent slopes, very rocky	3,202.30	9.60%		Till	Well Drained	Very Limited
CtC	Chatfield - Hollis - Rock outcrop complex, 0 to 15 percent slopes	3,266.80	9.80%		Till	Well Drained	Very Limited
CuD	Chatfield - Hollis - Rock outcrop complex, 15 to 35 percent slopes	4,474.70	13.50%		Till	Well drained	Very Limited
Ff	Fluvaquents - Udifluvents complex, frequently flooded	337.4	1.00%		Alluvium	Poorly Drained	Very Limited
Fr	Fredon silt loam	36.7	0.10%	Prime	Outwash	Poorly Drained	Very Limited
HnB	Hinckley loamy sand, 3 to 8 percent slopes	38.6	0.10%	Of Statewide Importance	Outwash	Excessively drained (dry)	Very limited
HnC	Hinckley loamy sand, 8 to 15 percent slopes	52.8	0.20%		Outwash	Excessively drained (dry)	Very limited

HnD	Hinckley loamy sand, 15 to 25 percent slopes	28.7	0.10%		Outwash	Excessively drained (dry)	Very limited
HrF	Hollis-Rock outcrop complex, 35 to 60 percent slopes	3,216.10	9.70%		Till	Somewhat Excessively Drained	Very limited
Ip	Ipswich mucky peat, 0 to 2 percent slopes, very frequently flooded	293.5	0.90%	-	Organic	Very Poorly Drained	Very Limited
KnB	Knickerbocker fine sandy loam, 2 to 8 percent slopes	8.2	0.00%	Prime	Outwash	Somewhat Excessively Drained	Very limited
LcA	Leicester loam, 0 to 3 percent slopes, stony	93	0.30%		Till	Poorly Drained	Very Limited
LcB	Leicester loam, 3 to 8 percent slopes, stony	270.9	0.80%		Till	Poorly Drained	Very Limited
LeB	Leicester loam, 2 to 8 percent slopes, very stony	604.3	1.80%		Till	Poorly Drained	Very Limited
NcA	Natchaug muck, 0 to 2 percent slopes	171.4	0.50%		Organic	Very Poorly Drained	Very Limited
NdA	Natchaug and Catden mucks, ponded, 0 to 2 percent slopes	46.3	0.10%		Organic	Very Poorly Drained	Very Limited
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	364.9	1.10%	Prime	Till	Well drained	Somewhat Limited
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	595.40	1.80%	Of Statewide Importance	Till	Well drained	Very Limited
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	289.2	0.90%		Till	Well drained	Very Limited
PoB	Paxton fine sandy loam, 0 to 8	52.4	0.20%		Till	Well drained	Somewhat Limited

	percent slopes, very stony						
PoC	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	145.9	0.40%		Till	Well drained	Very Limited
PoD	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	79.5	0.20%		Till	Well drained	Very Limited
Pt	Pits, gravel	84.5	0.30%		Gravel	Not Rated	Not Rated
Pv	Pits, quarry	20.2	0.10%		Unweathered Bedrock	Not Rated	Not Rated
Pw	Pompton silt loam, loamy substratum	48.3	0.10%	Prime	Outwash	Somewhat Poorly Drained	Very Limited
Ra	Raynham silt loam	29.2	0.10%	Prime	Lacustrine	Poorly Drained	Somewhat Limited
RdA	Ridgebury complex, 0 to 3 percent slopes	6.10	0.00%	Of Statewide Importance	Till	Poorly Drained	Very Limited
RdB	Ridgebury complex, 3 to 8 percent slopes	61.80	0.20%	Of Statewide Importance	Till	Poorly Drained	Very Limited
RgB	Ridgebury complex, 0 to 8 percent slopes, very stony	88.70	0.30%		Till	Poorly Drained	Very Limited
RhA	Riverhead loam, 0 to 3 percent slopes	77.30	0.20%	Prime	Outwash	Well Drained	Very Limited
RhB	Riverhead loam, 3 to 8 percent slopes	427.5	1.30%	Prime	Outwash	Well Drained	Very Limited
RhC	Riverhead loam, 8 to 15 percent slopes	114.9	0.30%	Of Statewide Importance	Outwash	Well Drained	Very Limited
RhD	Riverhead loam, 15 to 25 percent slopes	42.9	0.10%		Outwash	Well Drained	Very Limited
RhE	Riverhead loam, 25 to 50 percent	162.9	0.50%		Outwash	Well Drained	Very Limited



	slopes						
Sh	Sun loam	201.3	0.60%	Of Statewide Importance	Till	Very Poorly Drained	Very Limited
Sm	Sun loam, extremely stony	121.40	0.40%		Till	Very Poorly Drained	Very Limited
SuA	Sutton loam, 0 to 3 percent slopes	44.6	0.10%	Prime	Till	Moderately Well Drained	Very Limited
SuB	Sutton loam, 3 to 8 percent slopes	182.2	0.50%	Prime	Till	Moderately Well Drained	Very Limited
Ub	Udorthents, smoothed	235.3	0.70%		Disturbanc e (Fill)	Moderately Well Drained	Very Limited
Uc	Udorthents, wet substratum	162.4	0.50%		Disturbanc e (Fill)	Moderately Well Drained	Very Limited
UdB	Unadilla silt loam, 2 to 6 percent slopes	17	0.10%	Prime Farmland	Lacustrine	Well Drained	Not Rated
Uf	Urban land	26	0.10%		Urban (built)	Not Rated	Not Rated
UhB	Urban land - Charlton complex, 3 to 8 percent slopes	146.4	0.40%		Urban (built)	Well Drained	Not Rated
UhC	Urban land - Charlton complex, 8 to 15 percent slopes	38.2	0.10%		Urban (built)	Well Drained	Not Rated
UIC	Urban land - Charlton - Chatfield complex, rolling, very rocky	17.9	0.10%		Urban (built)	Well Drained	Not Rated
UvB	Urban land - Riverhead complex, 2 to 8 percent slopes	5.4	0.00%		Urban (built)	Well Drained	Not Rated
W	Water	1,828.90	5.50%	-	-	-	-
WdB	Woodbridge loam, 3 to 8	159	0.50%	Prime	Till	Moderately Well	Very Limited

	percent slopes					Drained	
WdC	Woodbridge loam, 8 to 15 percent slopes	143.3	0.40%	Of Statewide Importance	Till	Moderately Well Drained	Very Limited
	<b>Totals:</b>	<b>33,195.80</b>	<b>100.00%</b>				

## 9. Third Party Map: Septic Tank Absorption Fields

### *Description and Findings:*

Interestingly, based on Section 8. Soils, most of the Town (27,780.7 acres, 83.7%) is classified as well drained, somewhat excessively drained or excessively drained; however, when the Town soil drainage is classified according to USDA criteria for septic tank absorption fields, the results are very different. The soils in Philipstown are rated as either *somewhat limited* or *very limited* in terms of septic tank absorption (with a small percentage of unrated areas). These septic tank absorption fields rely on the soil features between depths of 24 and 72 inches that affect the absorption of the effluent: permeability, depth to saturated zone, depth to dense material, and depth to bedrock. (Some areas of Town have a very shallow depth to bedrock - see Section 6. Bedrock Geology and Section 7. Surficial Geology). These features were used to assign the ratings for each soil type in Philipstown.

Septic Tank Absorption Field Ratings are shown in Table 4 above and in the accompanying map for each of the soil types found in Town:

- Somewhat limited (yellow on the map) indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.
- Very limited (red on the map) indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.
- Not Rated or Not Available (grey on the map) indicated water bodies or areas excluded from the study.

### *Data Sources:*

- Septic Field Absorption Ratings:

- NRCS SSURGO Database:  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

## 10. Slopes

### *Description:*

According to the Putnam Valley NRI, “Many of the scenic vistas in [Philipstown] are associated with its varied topography and the ridgelines running predominantly NE-SW. As discussed in the reports accompanying the Bedrock Geology and Surficial Geology maps, these ridgelines are a product of the movement of the bedrock throughout geological history and the retreat of the glaciers that covered this area several times in geological history.

“The Steep Slopes maps categorize the slope of the areas throughout the Town. Slope is defined as the vertical change in elevation over a given horizontal distance. For example, a 10% slope is one that rises 10 feet over a horizontal distance of 100 feet. Because an on-site survey is necessary to determine the exact topographic conditions of a particular parcel, this map should only be considered an approximate depiction of steeply sloped areas in the Town.

“Steep slopes are among the most sensitive environmental features in our landscapes. Steep slopes are highly susceptible to disturbance due to erosion, land slippage, and subsidence and thus pose significant constraints to land development and resource extraction. Such disturbance can harm water quality, damage built structures, and present public safety risks. Steep slopes are vulnerable to soil erosion, excessive stormwater runoff, and slope instability. Disturbance of steep slopes can introduce sediment into water bodies and thus affect the quality of water resources in a watershed. In many settings, steep slopes provide scenic views for neighboring areas, and extensive removal of vegetation along with extensive earthwork can transform these intrinsic resources into visible eyesores. In consideration of these factors, Philipstown should pay close attention to steep slopes in its planning, conservation, and development permitting processes.”<sup>16</sup>

For this map, percent slope was calculated from a Digital Elevation Model (DEM). Each DEM raster has a pixel resolution of approximately 10 meters. Elevation values were derived from USGS contour lines mapped at a scale of 1:24,000. DEMs can be used as source data for digital orthophotos and as layers in geographic information systems for earth science analysis. DEMs can also serve as tools for volumetric analysis, for site location of towers, or for drainage basin delineation. These data are collected as part of the USGS National Mapping Program.

<sup>16</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

### *Findings:*

Philipstown's varied topography results in moderate-to-steep slopes over a sizable portion of the Town. The Town currently has a steep slope ordinance which restricts development on lands with a 20% or greater slope (dark orange and red on the map).<sup>17</sup> The criterion for a steep slope varies with local municipality. While nearby Putnam Valley also uses a steep slope threshold of 20%, Fishkill uses 33% and Cortlandt Manor 15%. Much of Philipstown's acreage is, by definition, protected by the steep slopes ordinance. On the map we have also highlighted areas of 15 - 20% slope as a light orange color since they may have sections greater than 20% slope. While interpreting the map, all areas that are light orange, dark orange or red should be considered as steep slopes and be confirmed in the field. These steeply-sloped areas can be found throughout the Town but are predominant along the major ridgelines. These ridgelines are presented later in this inventory in Section 35. Scenic Resources.

While development is not prohibited on slopes greater than 20%, the Town's Planning Board is charged with reviewing proposals with the goal of "identifying, protecting, and providing for the proper management of steep terrain, ridgelines, and hillsides."<sup>18</sup> If a proposed development of a parcel on a steep slope is approved, developers are required to minimize and mitigate the effects of disturbance in these ecologically sensitive steep slope and ridgeline areas.

The hillsides and ridgelines of Philipstown feature prominently in the Scenic Resources of the Town. Steep slopes with shallow soils (see Section 7. Surficial Geology) are also potential crest ledge and talus habitats, some of which promise to be calcareous based on Section 6. Bedrock Geology and may contain unique biotic communities, worthy of careful conservation practices.

### *Further Study:*

A follow up study could analyze the current amount of development and corresponding ecological impacts on steep slopes within Philipstown and prepare suggestions for improved practices and regulations, if necessary.

### *Data Sources:*

- Slopes
  - U.S. Geological Survey: Index of Digital Elevation Models (DEM), New York  
<https://cugir.library.cornell.edu/catalog/cugir-008186>

<sup>17</sup> Code of the Town of Philipstown, § 175-36. Steep terrain and ridgelines protection regulations.  
<https://www.ecode360.com/6319342#6319342>

<sup>18</sup> Ibid.



## **Chapter 3: Water Resources**

### **11. Watersheds**

#### *Description:*

This U.S. Geological Survey (USGS) map layer displays the National Watershed Boundary Dataset (WBD), focusing on Hydrologic Unit Class 12 (HUC 12) Watersheds. The watershed hydrologic unit boundaries provide a uniquely identified and uniform method of subdividing large drainage areas. A watershed is an area of land draining to a stream, river, lake, or other waterbody. Watersheds are divided by high points on the land, such as ridges, mountains, and hills, and may be made up of many smaller drainage areas, or further watersheds. Each of the watersheds included in this map provide drinking water, either via a well or public water supply, to residents and businesses. Septic systems and wastewater treatment facilities, in addition to numerous other potentially polluting activities, directly impact the quality of water that flows through these watersheds. This data set is intended to be used as a tool for water-resource management and planning activities, particularly for site-specific and localized studies requiring a level of detail provided by large-scale map information.

#### *Findings:*

The Town of Philipstown drains into 8 watersheds, which are as follows:

#### **Annsville Creek:**

A large portion of the Annsville Creek Watershed's headwaters is just over the border in Putnam Valley, but a significant portion passes through the southeast corner of Philipstown. The Annsville Creek Watershed originates at Canopus Lake in Fahnestock State Park in Kent and from there Canopus Creek flows south into the Town of Philipstown, Annsville Creek, and ultimately into the Hudson River. Significant water bodies include Canopus Lake, Indian Lake, Lake Celeste and Cortlandt Lake. Significant streams are the Canopus Creek, West Branch Canopus Creek and the Annsville Creek. Also, the Catskill Aqueduct, which transports water to New York City passes through this watershed. These water bodies and streams will be covered in more detail in the next Section 12. Streams and Waterbodies. Notable human development is centered around the hamlet of Continental Village in Philipstown.

#### Breakneck Brook - Hudson River:

This watershed is located on the northwest border of Philipstown and includes part of the Town of Fishkill. Water flows from the heights of the Hudson Highlands State Park into the significant water bodies of the Melzingah Reservoir and Lake Surprise before continuing down into the Hudson River via Gordons Brook and Breakneck Brook. Other notable streams include Squirrel Hollow Brook and Wades Brook. This watershed includes significant human development in the Village of Cold Spring, including the Cold Spring Wastewater Treatment Plant, which will be covered in more detail in 21. Threats to Water Quality. The Catskill Aqueduct also passes through this watershed.

#### Clove Creek:

This covers the north-central portion of Philipstown and drains primarily through Clove Creek, which originates in Clarence Fahnestock State Park, eventually joins the Fishkill Creek in the Town of Fishkill and thereafter flows into the Hudson River. This watershed drains significant portions of Fahnestock State park, the northeastern edge of Hudson Highlands State Park and all the land in the valley in between, which is bisected by State Rt. 9. Notable water bodies include Jordan Pond, Glynwood's reservoir (through which Clove Creek flows), Barrett Pond, Lake Valhalla and the Beacon Reservoir. Notable streams include Clove Creek, Sand Spring Brook, and Bull Creek. The Clove Creek watershed is also home to significant human development, especially along Rt. 9, East Mountain Road South and North, and around Lake Valhalla. The Rt. 9 corridor not only contains many residential properties with septic systems, but also numerous commercial properties as well as a small area designated for industrial / manufacturing and Soil Mining (shown in Section 37. Zoning). Just over the northern border in Fishkill, there are several open sand and gravel mines that border Clove Creek. All of these combined activities pose numerous potential threats to the health of Clove Creek and the Fishkill Creek into which it flows. This will be covered in more detail in several remaining maps in this chapter.

#### Foundry Brook - Hudson River:

This watershed covers the largest area within Philipstown, consists of many water bodies and streams that flow down to the Hudson River, and also includes several population centers, such as the Village of Nelsonville, part of the Village of Cold Spring and the hamlet of Garrison. In addition to providing drinking water for residents and businesses, this watershed supplies water to several water districts, including the Villages of Nelsonville and Cold Spring and Garrison's Landing. Notable water bodies include the Cold Spring Reservoir, Jaycox Pond, Laths Pond, Dales Pond, Loch Lyall, Catfish Pond and Duck Pond. Notable streams include Foundry Brook, Indian Brook, Philipse Brook, Arden Brook and Copper Mine Brook. The Catskill Aqueduct also

passes through this watershed. This watershed will be covered in much depth in the next few sections.

#### Furnace Brook - Hudson River:

This watershed just barely touches the southern border of Philipstown, but is very large and part of an important watershed for the communities of northern Westchester, including the nearby City of Peekskill. Streams and waterbodies that drain the small area within Philipstown's border include Broccy Creek and Dickiebusch Lake, among others, both of which flow down into the Hudson River.

#### Peekskill Hollow Creek:

This is another major watershed that only drains a small area of Philipstown, in the southeast corner of the Town in Continental Village, but is very important to neighboring communities. According to the Putnam Valley NRI, "the watershed drains a total of 47.4 square miles and flows to the Hudson River via Annsville Creek near the Town's border with the Town of Cortlandt Manor. Peekskill Hollow Creek originates at the outflow of Lake Tibet in the Town of Kent and flows southwest for approximately 17 miles before joining Sprout Creek and then Annsville Creek. Approximately 20 tributaries including Roaring Brook, Wiccopee Brook, Shrub Oak Creek and Oscawana Brook feed it. Lake Peekskill drains to Peekskill Hollow Creek via an unnamed stream below its confluence with Oscawana Brook. The neighboring Town of Putnam Valley's three major lake communities - Roaring Brook Lake, Oscawana Lake and Lake Peekskill - as well as Stillwater Pond and Wiccopee Reservoir are located in the Peekskill Hollow Creek watershed. These lakes were created as impoundments with water levels controlled by their dams. The Peekskill Hollow Creek Watershed is an important secondary source of drinking water for communities in Westchester County and feeds groundwater wells for hundreds of Putnam Valley residents and businesses. The City of Peekskill owns the Wiccopee Reservoir, which supplies drinking water to about 21,000 residents in Peekskill, the Village of Buchanan, and the Town of Cortlandt. The Peekskill Hollow system supplies an additional 23,000 residents in Cortlandt and Yorktown via Northern Westchester Joint Water Works to supplement water from the New York City water supply, which also passes through this watershed via the Catskill Aqueduct."<sup>1</sup>

#### West Branch Croton River:

Although none of the Town of Philipstown lies within this watershed, it is important to note its importance due to its proximity to the Town. According to the Putnam Valley NRI, "this

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<sup>1</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

watershed serves the New York City Water Supply. As seen on the map, part of neighboring Putnam Valley is in the watershed of the West Branch of the Croton River, which feeds the Boyd Corners Reservoir in Kent. Boyd Corners is part of the New York City Water Supply's Delaware System, which supplies up to half of the City's water. Most of the water in this Watershed goes to the City through Kensico Reservoir in Valhalla, New York but some is released into the West Branch Croton River where it eventually either goes to the City through New Croton Reservoir or to the Hudson River via the Croton River."<sup>2</sup>

#### Wicopee Creek - Fishkill Creek:

This watershed drains the northeast corner of Philipstown, including part of Clarence Fahnestock State Park and sections of the East Mountain Road South and East Mountain Road North residential areas. In addition, it drains a small section of the Hudson Highlands State Park found on the north west border of the Town. This watershed is an important source of water for the downhill communities within the Town of Fishkill, the City of Beacon and a small area of the Town of East Fishkill. Notable streams within Philipstown are Trout Creek and Wicopee Creek, which eventually converge as a further section of Wicopee Creek before it joins the Fishkill Creek on its way to the Hudson River. The small western section of the watershed found within Philipstown and the Hudson Highlands State Park drains into the western Beacon Reservoir, which provides potable water to the City of Beacon.

Lastly, Table 5. Tree Canopy Cover and Impervious Cover of Watersheds shows the percentages of tree canopy and impervious areas (buildings, asphalt / concrete / stone pavement, and gravel) within each watershed. This can be a proxy for watershed health (the more canopy area and the less impervious area, the better for the watershed). It is important to note that most of these watersheds cross municipal boundaries and thus the percentages of cover may include areas of conservation or development outside of Philipstown. This highlights the importance of inter-municipal watershed planning, since decisions made in one municipality can have significant consequences for a nearby municipality. The information for this table comes from the Hudson Valley Natural Resource Mapper, and can be accessed by clicking on the polygons for HUC-12 watersheds within Philipstown.<sup>3</sup>

#### *Data Sources:*

- Watersheds
  - NHD: Watershed Boundary Dataset  
<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/water/watersheds/dataset/>

<sup>2</sup> Ibid.

<sup>3</sup> NYS DEC, Hudson Valley Natural Resource Mapper, <https://giservices.dec.ny.gov/gis/hvnmr/>



**Table 5: Tree Canopy Cover and Impervious Cover of Watersheds<sup>4</sup>**

<b>Watershed</b>	<b>Tree Canopy Cover (%)</b>	<b>Impervious Cover (%)</b>
Annsville Creek	66.6	1.7
Breakneck Brook - Hudson River	38.1	8.9
Clove Creek	71.8	2.6
Foundry Brook - Hudson River	59.7	3.6
Furnace Brook - Hudson River	36.6	9.2
Peekskill Hollow Creek	63.2	6.5
West Branch Croton River	64.4	2.4
Wicoppee Creek - Fishkill Creek	58.8	12.9

## 12. Streams and Waterbodies

### *Description:*

This map depicts the streams, lakes, ponds and reservoirs located within Philipstown, all of which offer countless resource functions, such as drinking water resources and wildlife habitat, with benefits to the Town as well as recreational opportunities and scenic beauty. Primary water bodies and streams are labeled, but there are numerous smaller or seasonal streams that are found on the map that are not labeled or have not been named. Data for these layers from the National Hydrography Dataset (NHD), which is used to portray surface water on The National Map. The NHD represents the drainage network with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and streamgages. These data are designed to be used in general mapping and in the analysis of surface water systems.

In addition, we have highlighted streams that are home to trout or trout spawning, which are labeled as Trout Streams. These streams tend to provide cold water temperature, limited sediment loads, diverse macroinvertebrate communities, and low pollution, and thus have the potential to support a trout population or to support trout spawning. This layer was derived from

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<sup>4</sup> Ibid.

the NYS DEC Water Quality Classifications dataset, which is also included and will be covered in more detail in Section 19. NYS DEC Stream Classifications.

This map serves mainly as a reference map for the sections that follow, which dive deeper into issues of water quality, water classifications and potential hazards to our streams and water bodies. We included this map separately to avoid making the subsequent maps in this chapter of the report too busy, but the layers from this map can be combined with any of the preceding or subsequent maps and their layers on the Town's ArcGIS Online map.

#### *Findings:*

As is evident on the map, Philipstown is home to numerous streams and waterbodies, which, as described in Section 11. Watersheds above, all eventually flow into the Hudson River. Many of these water bodies and streams drain into drinking water resources, whether accessed by wells or public water supply systems. And as shown on the map, many of the Town's streams are considered Trout Streams and / or Trout Spawning Streams, which suggest great potential for supporting not only trout, but countless other forms of life, which will be covered later in this report in Chapter 4. Habitats and Wildlife. Lastly, many of the Town's water bodies also offer scenic and recreational opportunities, which will be explored in further detail in Chapter 6. Historic, Scenic and Recreational Resources.

#### *Data Sources:*

- Streams, Lakes and Ponds
  - National Hydrography Dataset  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1337>
- Trout Streams
  - NYS DEC Water Quality Classifications  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1118>

## **16. Wetlands**

#### *Description:*

According to the Hudson River Estuary Program, “wetlands are areas saturated by surface water or groundwater sufficient to support distinctive vegetation adapted for life in saturated soil conditions. In addition to providing critical habitat for many plants and animals, wetlands provide important benefits to human communities. They help to control flooding and reduce

damage from storm surge, act as filters to cleanse water of impurities, and provide recreation opportunities for many people.

“Knowing about local wetlands enables municipalities to proactively plan to conserve this critical resource. Although this map provides approximate locations and extent of wetlands, it is inherently inaccurate and not a substitute for site visits and on-the-ground delineation. Small wetlands in particular are often missed. Nonetheless, the Town can use its updated wetland map as a starting point for further inventorying local wetlands and supplement with more refined data as they become available. To understand how land use decisions can impact wetlands, it’s important to also consider adjacent upland areas and connected hydrologic features such as streams, as already described and also described in later sections of this chapter; the combined NRI maps of this chapter will help illustrate the relationships between these different resources.”<sup>5</sup>

The data for this map came from several sources:

#### Hydric Soils:

Soils considered as “Hydric Soils” from the above Section 8. Soils have been included here since they suggest the presence of wetlands. This “Putnam County soil survey data provides information about poorly drained and very poorly drained soils, which are commonly used indicators of probable wetlands. Somewhat poorly drained soils can be used to predict locations of possible wetlands. In general, the soils maps tend to somewhat overestimate the acreage of wetland soils, due in part to the scale of the soils mapping (the smallest mapping unit is two acres). The Soil Survey Geographic Database (SSURGO) contains digital soil data from the Putnam County Soil Survey.”<sup>6</sup> The specific soils are listed below in Table 6: Hydric Soils.

#### Tidal, Freshwater Emergent, and Freshwater Forested/Shrub Wetlands:

All of these wetland layers come from the National Wetland Inventory (NWI), created by the US Fish and Wildlife Service (USFWS). “These NWI layers are created using aerial photo interpretation and some field checking, and include wetlands of all sizes with some information on habitat. They are not intended for regulatory purposes. NWI maps often underestimate wetland area and omit smaller and drier wetlands. In particular, vernal pools, wet meadows, and swamps are often under-represented on maps and merit further local study.”<sup>7</sup> The following are short descriptions of the layers from the NWI dataset:

<sup>5</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.



1. *Tidal Wetland* - Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean / an estuary, and in which salt water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines, there is appreciable dilution of seawater. Offshore areas with typical estuarine plants and animals, such as red mangroves (*Rhizophora mangle*) and eastern oysters (*Crassostrea virginica*), are also included in the Estuarine System
2. *Freshwater Emergent Wetland* - Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
3. *Freshwater Forested/ Shrub Wetland* - A Forested wetland is characterized by woody vegetation that is 6 m tall or taller; a Shrub wetland includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.”<sup>8</sup>

It is important to note that the National Wetlands Inventory offers an online mapper that is incredibly rich with information, including detailed classification descriptions for every single wetland included in this dataset and on our map. This fantastic additional resource can serve as a supplemental source of information to the Town's wetland conservation efforts and can be accessed here: <https://www.fws.gov/wetlands/data/Mapper.html>.

#### NYS DEC Regulated Wetland Check Zones:

The data for this layer comes from the “NYS DEC Regulatory Freshwater Wetland dataset, which depicts mainly large wetlands (12.4 acres or larger) and a few smaller ones with special attributes. The maps were created by aerial photo interpretation and minimal field checking, and are not intended to be accurate depictions of the limits of state wetland jurisdiction on any site. Many of DEC’s regulatory maps are outdated and have similar inaccuracies to the NWI maps. New York's freshwater wetlands maps only show the approximate location of the actual wetland boundary. They are not precise, regardless of how closely you zoom in on the map.”<sup>9</sup>

<sup>8</sup> Surface Waters and Wetlands, National Wetlands Inventory, U.S. Fish and Wildlife Service, <https://www.fws.gov/wetlands/data/Mapper.html>

<sup>9</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



Since these wetlands mostly duplicate the NWI wetlands already shown on the map, we only included from this dataset the DEC "Check Zones," which are the areas surrounding the NYS DEC Regulated Wetlands that may also include wetland habitat. They are named "Check Zones" because they require in-the-field checking to confirm the actual limits of each regulated wetland. Also, this approach to designing the map allows the NWI wetlands to be clearly seen without being covered by the DEC Regulated Wetlands layer, which on our map are simply those areas within each Check Zone. As noted above, however, these Check Zones are approximate, and must be confirmed in the field.

Conveniently, each DEC Regulated Wetland has already been classified from Class I (which provides the most benefits) to Class IV (which provides fewer benefits). The classification is based on the work that each wetland performs, such as storing flood water and providing wildlife habitat. Information about how any individual wetland was classified is contained in program files at the regional DEC office closest to where the wetland is located. Since it is too cumbersome to include all of the wetland classifications in this report, we instead refer readers to the Hudson Valley Natural Resources Mapper, where, under the "Wetland Layers" category, you may select "State Regulated Freshwater Wetlands," zoom in on the map and then click on any shown wetland to pull up a small window that shows the Wetland ID, Wetland Class, and Wetland Size (Acres). This resource can serve as a valuable complement to the map included in this report, and can be found here: <https://gisservices.dec.ny.gov/gis/hvnrm/>.

Also, for reference, the Wetland Class criteria are described in the Code of New York State here: <https://govt.westlaw.com/nycrr/Document/I4ece2eaecd1711dda432a117e6e0f345?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=%28sc.Default%29>

### *Findings:*

Philipstown is home to numerous high quality and ecologically essential wetlands, including both inland freshwater wetlands, such as those concentrated in the Clove Creek watershed, in the center of Town along Rt. 9 and along the eastern border of the Town, as well as tidal wetlands, sections of which can fluctuate from brackish to freshwater depending on the time of the year, such as Constitution Marsh adjacent to Cold Spring and the marsh around Manitou in the south west corner of the Town. In addition to those wetlands portrayed by the National Wetlands Inventory, the NYS DEC Check Zones suggest an even greater extent of land that may be protected as wetlands. Furthermore, state law requires that all wetlands have an additional 100-foot buffer area surrounding them for added regulation of potential development. Locally these regulations are overseen by the Town's Natural Resources Review Officer / Wetland Inspector and the Conservation Board.

Using the [Hudson Valley Natural Resource Mapper](#) as a complementary source of information, you can see that the Town has a large number of Class I wetlands, including:

- Constitution Marsh (*Wetland ID: WP-7*, Wetland Class: 1, Wetland Size (Acres): 279.20),
- The wetlands located in the Hubbard Estate section of Clarence Fahnestock State Park to the north east of the intersection of Rt. 9 and Rt 301 (*Wetland ID: WP-6*, Wetland Class: 1, Wetland Size (Acres): 145.50), and
- The long stretch of wetlands that runs along Canopus Creek from Putnam Valley into Continental Village in the southeast corner of Town (*Wetland ID: PK-3*, Wetland Class: 1, Wetland Size (Acres): 180.20).

In addition, many smaller wetlands are considered Class I and very few wetlands within the Town are below a Class II rating, further indicating that essentially all of Philipstown's wetlands are worthy of strict protection due to their significant habitat contributions, often for rare species, and also their hydrological and pollution controls features, such as reducing the negative impacts of flooding and filtering harmful pollutants before they travel further downstream through *riparian* (which means "stream-side" or "river-side") habitats.

In addition to the regulated wetlands depicted on the map using data from the National Wetlands Inventory and the NYS DEC Wetlands, the presence of hydric soils outside of the regulated areas suggest the additional presence of wetlands, as described above and presented in Table 6 below. Several large clusters of hydric soils include the area just north of the Town border along Clove Creek (adjacent to the two gravel and sand quarries on Rt 9), the area near the Beacon Reservoir along East Mountain Road North, sections of Fahnestock State Park to the north and northwest of Rt 301 (near and even on Glynwood Farm), the area in the center of Town between Rt 9, Old Albany Post Road, Indian Brook and Philipse Brook, and the area in the hamlet of Garrison between Upper Station Road and Snake Hill Road. These hydric soil areas do not receive the same state regulatory protections as the regulated wetlands, and could benefit from further study to establish their existence, extent and quality to improve their protection.

As noted above, the Town of Philipstown takes our wetlands very seriously and has taken several major steps to protect them. In addition to employing a Natural Resources Review Office and Wetlands Inspector, who is responsible for inspecting any potential development project and its impacts on nearby wetlands in addition to ensuring ongoing compliance with Town regulations, the Town also converted its former Conservation Advisory Committee into the current Conservation Board, which has more regulatory authority when it comes to protecting Natural Resources, such as wetlands.



Going further, the Town adopted a “Freshwater Wetlands and Watercourse Law,”<sup>10</sup> which “[regulates] the dredging, filling, deposition or removal of materials, diversion or obstruction of water flow, placement of structures and other uses in wetlands and watercourses and in certain associated lands and waters located in the Town of Philipstown. It further sets forth permit requirements governing such actions... It is the intent of the Town of Philipstown to control and regulate the use of wetlands and watercourses... within the Town to ensure that the benefits found to be provided by them will not be lost and to protect the important physical, ecological, social, educational, aesthetic, recreational and economic assets of the present and future residents of the Town so as to protect the public interest.” The Law goes into much more detail about the benefits of wetlands, potential threats, regulated activities, exempted activities and so forth and can be found here: <https://www.ecode360.com/6317427>

Lastly, there are numerous potential threats to wetland health, including run-off of silt and salt from gravel roads, salt from paved roads, fertilizers and pesticides used on private residential and commercial properties and farms, leaked or improperly disposed off hazardous waste, leaking septic systems, improper stormwater management, deforestation, dredging, and so forth. These hazards will be covered in more detail in Section 21. Threats to Water Quality.

#### *Further Study:*

As mentioned above, vernal pools, wet meadows, and swamps are often under-represented on maps and merit further local study. Vernal pools are small, isolated wetlands that are often dry in summer. They provide habitat for many animals, including many forest amphibians that use the pools for breeding. Vernal pools often go undetected in the forest due to their small size and seasonal drawdown, and are not protected to the same extent as regulated wetlands.

In neighboring Putnam Valley, a study carried out by the Teatown Lake Reservation mapped potential vernal pools in the Town and other neighboring towns, some of which have been confirmed through actual field visits. Such a study could serve as an additional resource for the Town of Philipstown and as a model for the Town to replicate.<sup>11</sup> Specific management recommendations can be found in Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Development in the Northeastern United States<sup>12</sup>, and the Maine Municipal Guide to Mapping and Conserving Vernal Pool Resources.<sup>13</sup> In

<sup>10</sup> Town of Philipstown, § 93-1 - § 93-19: Freshwater Wetlands and Watercourse Law of the Town of Philipstown, Zoning Code, <https://www.ecode360.com/6317427>

<sup>11</sup> Rubbo, M. 2013. Mapping Woodland Pools in the Hudson Hills and Highlands: Report to the Hudson River Estuary Program. Ossining, NY. 6 pp.

<sup>12</sup> Calhoun, A. and M. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York. [maineaudubon.org/wp-content/uploads/2012/08/Best-Development-Practices-ConservingPool-breeding-Amph.pdf](http://maineaudubon.org/wp-content/uploads/2012/08/Best-Development-Practices-ConservingPool-breeding-Amph.pdf)

<sup>13</sup> Morgan, D. and A. Calhoun. 2012. The Maine Municipal Guide to Mapping and Conserving Vernal Pools. University of Maine, Sustainability Solutions Initiative, Orono, ME.

addition, an updated local study of the Town's wetlands, especially focusing on hydric soils outside of regulated wetlands can add more information to and confirm that which is depicted in this section's map in order to help the Town's Natural Resources Officer and Conservation Board better protect wetlands areas that are more likely to be overlooked.

*Data Sources:*

- Hydric Soils:
  - NRCS SSURGO Database:  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- Tidal, Freshwater Emergent, and Freshwater Forested/Shrub Wetlands:
  - National Wetlands Inventory - NYS  
<https://www.fws.gov/wetlands/data/Mapper.html>
- NYS DEC Wetland Checkzones
  - NYS DEC Regulatory Freshwater Wetlands  
<https://cugir.library.cornell.edu/catalog/cugir-008187?id=111>

**Table 6: Hydric Soils<sup>14</sup>**

Soil Symbol	Description	Acreage	Percentage of Total Soils	Farmland Class	Parent Material <sup>15</sup>	Drainage Class	Septic Tank Absorption Fields Rating <sup>16</sup>
Ce	Catden muck, 0 to 2 percent slopes	222.9	0.70%	Prime	Organic	Very Poorly Drained	Very Limited
Ff	Fluvaquents - Udifluvents complex, frequently flooded	337.4	1.00%		Alluvium	Poorly Drained	Very Limited
Fr	Fredon silt loam	36.7	0.10%	Prime	Outwash	Poorly Drained	Very Limited

[maineaudubon.org/wpcontent/uploads/2012/08/MeAud-ME-Municipal-Guide-to-Mapping-and-Conserving-Vernal-Pool.pdf](http://maineaudubon.org/wpcontent/uploads/2012/08/MeAud-ME-Municipal-Guide-to-Mapping-and-Conserving-Vernal-Pool.pdf)

<sup>14</sup> Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey: [websoilsurvey.sc.egov.usda.gov/](https://websoilsurvey.sc.egov.usda.gov/)

<sup>15</sup> Heady, Laura, and Gretchen Stevens. Guidebook for Biodiversity Assessment. Hudsonia, 2017

<sup>16</sup> Web Soil Survey, United States Department of Agriculture Natural Resources Conservation Service: [websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx](https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)



Ip	Ipswich mucky peat, 0 to 2 percent slopes, very frequently flooded	293.5	0.90%	-	Organic	Very Poorly Drained	Very Limited
LcA	Leicester loam, 0 to 3 percent slopes, stony	93	0.30%		Till	Poorly Drained	Very Limited
LcB	Leicester loam, 3 to 8 percent slopes, stony	270.9	0.80%		Till	Poorly Drained	Very Limited
LeB	Leicester loam, 2 to 8 percent slopes, very stony	604.3	1.80%		Till	Poorly Drained	Very Limited
NcA	Natchaug muck, 0 to 2 percent slopes	171.4	0.50%		Organic	Very Poorly Drained	Very Limited
NdA	Natchaug and Catden mucks, ponded, 0 to 2 percent slopes	46.3	0.10%		Organic	Very Poorly Drained	Very Limited
Pw	Pompton silt loam, loamy substratum	48.3	0.10%	Prime	Outwash	Somewhat Poorly Drained	Very Limited
Ra	Raynham silt loam	29.2	0.10%	Prime	Lacustrine	Poorly Drained	Somewhat Limited
RdA	Ridgebury complex, 0 to 3 percent slopes	6.10	0.00%	Of Statewide Importance	Till	Poorly Drained	Very Limited
RdB	Ridgebury complex, 3 to 8 percent slopes	61.80	0.20%	Of Statewide Importance	Till	Poorly Drained	Very Limited
RgB	Ridgebury complex, 0 to 8 percent slopes, very stony	88.70	0.30%		Till	Poorly Drained	Very Limited
Sh	Sun loam	201.3	0.60%	Of Statewide Importance	Till	Very Poorly Drained	Very Limited
Sm	Sun loam, extremely stony	121.40	0.40%		Till	Very Poorly Drained	Very Limited

## 14. Groundwater and Drinking Water Resources

### *Description:*

According to the Hudson River Estuary Program, “at least one-quarter of New Yorkers depend on groundwater supplies for drinking water, and many Hudson Valley communities depend entirely on groundwater. Groundwater also supports habitats and species, and is particularly important during dry periods when it is often the dominant source of water flowing in streams and rivers. Groundwater is found between grains of sand, gravel, silt, or clay (unconsolidated sediments) or in the cracks and fractures of bedrock (consolidated sediments). The saturated geologic zones in sediments and bedrock that receive, store, and transmit significant amounts of water to wells and springs are called aquifers. The upper surface of the saturated zone is called the water table. Groundwater is recharged when rain and melting snow slowly infiltrate through the soil. The land surface principally contributing to aquifer recharge is called the aquifer recharge area. This is generally all watershed land areas aside from streams and their riparian margins, which are aquifer discharge areas.

An assumption is often made that groundwater is less vulnerable to spills and pathogens than surface water and less likely to be contaminated. In reality, aquifers can become polluted by a variety of mechanisms, including chemical spills, leaking buried sources such as landfills or underground storage tanks, road salt, common household use of herbicides and other chemicals, and improperly spaced or poorly installed septic systems. A wellhead protection area, usually a subset of the larger aquifer recharge area, is the area surrounding and upgradient of a public water supply well or well field of interest. Wellhead protection programs seek to limit contaminants in such areas to limit water quality risks to well water.

Regional aquifer depletion is rare in New York, but local groundwater overuse occurs when water withdrawal exceeds local recharge and can result in nearby wells running dry along with impacts to water bodies and habitats that depend on groundwater for base flow. Excessive extraction can harm fish and other aquatic organisms by changing the stream flows and water temperatures they rely on for survival and successful reproduction. Buildings, parking lots, and roads can interfere with groundwater recharge if adjacent areas do not allow compensatory recharge and may reduce recharge volumes considerably, exacerbating the effects of overconsumption.”<sup>17</sup>

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<sup>17</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

The layers on this map come from several sources. First, those listed under "Aquifer Type" come from the New York State Department of Environmental Conservation, Division of Water, Bureau of Water Resources Management. They are "those aquifers in upstate NY that consist of sand and gravel and yield large supplies of water to wells. Bedrock aquifers, although significant in some areas, are not addressed here. Source data is 1:250,000, same scale as the NYS Geological Survey surficial and bedrock geology maps on which they were based. Together these maps form a consistent set of geologic and groundwater maps for use in regional management of the groundwater resources of the State. These maps indicate only the general location of the unconsolidated aquifers; they are not intended for detailed site evaluations. Determination of the precise location of aquifer boundaries or of well yields may require additional data, according to the authors of the source maps."<sup>18</sup>

The following four types of aquifers were mapped from this data source.

- "1. Kame, Kame Terrace, Kame Moraine, Outwash, Alluvium (collectively described as Unknown Aquifers). These include areas of sand, or sand and gravel for which little to no well data are on file to determine yield potential. These areas require further local study to determine flow rates.
- 2. Lacustrine or Eolian (also described as Unconfined, Low-Yield Aquifers): These include areas of fine sand and gravel as well as silt and clay that have either been deposited from lakes by streams or eroded by wind and deposited by streams. Due to their relative impermeability and thickness, they have flow rates of less than 10 gallons per minute.
- 3. Primary Aquifer Region: these regions include aquifers that are highly productive and are being used as sources of drinking water by major public supply systems. The aquifers in these areas were mapped at the 1:24,000 scale by the USGS and included in separate map reports. Further, these fine scale studies were represented as citation blocks on the 1:250,000 scale unconsolidated aquifer maps. These blocks are a part of this digitized layer. These regions replace the previous "Primary Aquifers" layer, as this digitization is of higher quality. The individual 1:24,000 report layers are in the process of being published as digital files by USGS.
- 4. Unconfined, Mid-Yield Aquifers: These have flow rates of 10 to 100 gallons per minute and consist of sand and gravel with saturated zones generally less than 10 ft thick. Thicker deposits with less permeable silty sand and gravel may also be included. Yields in areas adjacent to streams may exceed 100 gal/min through pumping-induced infiltration, but these areas are too small to show at 1:250,000 scale."<sup>19</sup>

<sup>18</sup> New York State Department of Environmental Conservation, Division of Water, Bureau of Water Resources Management, Unconsolidated Aquifers of Upstate New York at 1:250,000, Metadata:

[http://gis.ny.gov/gisdata/metadata/nysdec.uncon\\_aqui.html#6](http://gis.ny.gov/gisdata/metadata/nysdec.uncon_aqui.html#6)

<sup>19</sup> Ibid.



Although not portrayed on this map, it is important to note that all other areas of the Town not highlighted on the map should be considered to be “Confined Aquifers,” which consist essentially of bedrock without an overlying surficial aquifer. These areas tend to have impermeable material above and below the aquifer and are under pressure so water will rise when punctured by a well, and may produce from 5 to more than 500 gallons per minute.<sup>20</sup> Many Philipstown residences and businesses depend on well water from these confined aquifers, due to their larger area and often higher flow rates. It is *crucial* to note that each of the above listed aquifers, which are collectively described as unconfined aquifers, are more sensitive to pollution since they don’t have an impermeable layer above them as a buffer (only sand, gravel, silt or clay). Confined aquifers, on the other hand, do have such a buffer in the form of bedrock.

The second data source for this map comes from several maps produced by The Chazen Companies for the Town of Philipstown as part of the Town’s Groundwater Resource Management Program. These maps are also shown in Sections 16 and 17 of this report, but we have included a simplified version of them here to highlight the (Clove Creek) Aquifer Protection Priority Parcels and the (Cold Spring) Reservoir Priority Parcels. Both of these sets of parcels are shown in order to portray the importance of conservation efforts in the areas surrounding the aquifers and public drinking water resources already described above and in previous sections. Each of these sets of priority parcels will be described in further detail in subsequent maps.

As a note, in the next section, we have included a copy of the Town’s map that portrays its Watershed Overlay District, Aquifer Overlay District and Regional Aquifer to clearly show the areas that have particular zoning requirements with regard to development that could impact the Town’s water resources. This will be described in more detail in the next section. Also, we will describe the numerous potential threats to the Town’s aquifers and drinking water sources later in this chapter.

### *Findings:*

#### Unconfined Mid-Yield Aquifers, Surface Water Resources and Primary Aquifer Regions:

As the map clearly shows, the majority of the Town’s aquifers and drinking water resources are located in the northern half of the Town, and include the priority areas of the Clove Creek Aquifer (Unconfined, Mid-Yield) and the Cold Spring Reservoir (surface water). As shown in subsequent maps, both of these priority areas drain large portions of the Town and are vulnerable to numerous impacts from human development.

<sup>20</sup> United States Geological Survey. 2018.

[usgs.gov/faqs/what-difference-between-a-confined-and-unconfined-water-table-aquifer?qt-news\\_science\\_products=0-qt-news\\_science\\_products](https://www.usgs.gov/faqs/what-difference-between-a-confined-and-unconfined-water-table-aquifer?qt-news_science_products=0-qt-news_science_products).



The Clove Creek Aquifer provides water to the numerous residences and businesses located along the northern Rt 9 corridor and is also an important part of the Clove Creek - Fishkill Creek watershed and the Fishkill and Sprout Creek Primary Aquifer Region, which is highlighted in pink, and, as noted above, provides drinking water to major public water supply systems to the north of Philipstown, including the Towns of Fishkill and Wappinger, the Village of Fishkill and the City of Beacon.

The Cold Spring Reservoir and Foundry Brook supply water for the Villages of Nelsonville and Cold Spring and thus are considered priority surface water resources. They also include parcels around Barrett Pond, Jaycox Pond and Lake Valhalla, although the latter is not a high priority parcel, which will be explained in the next few sections.

In addition to these priority areas, there are numerous additional aquifers. The Unconfined, Mid-Yield aquifer in the northeast of Philipstown primarily drains into Trout Creek, which flows into Wiccoppee Creek and eventually the Fishkill Creek and Hudson River. As noted above in Section 11. Watersheds and like the Clove Creek Aquifer, this area drains into watersheds that are used for public water supply by the Town of Fishkill, and thus, activities upstream in Philipstown can impact water users downstream in more populated areas.

Another important Unconfined, Mid-Yield aquifer runs along Foundry Brook on the eastern edge of the Villages of Nelsonville and Cold Spring and extends into Garrison around Constitution Marsh. This aquifer, although not primarily used for drinking water, has essential ecosystem impacts due to its flow into Constitution Marsh, which is a sensitive and important habitat for countless forms of life, in addition to being a breeding ground for birds and fish as well as a stopover for migratory birds. Pollution that enters this aquifer upstream can have serious consequences for the health of the treasured resource and ecological community that is Constitution Marsh.

In the southeast corner of Town, several Unconfined, Mid-Yield aquifers supply water to nearby communities both in Philipstown and in neighboring Putnam Valley, Cortlandt and Peekskill. The smallest of these is located near Graymoor, just east of the intersection of Rt. 9 and Rt. 403. This aquifer then flows downhill into the Canopus Creek aquifer, which covers a large portion of Canopus Creek as it flows downstream to eventually merge with Annsville Creek and the Hudson River. Both of these aquifers supply water to the community of Continental Village, which has a public water supply system via the Town's Aqueduct Road, Arden Drive and Howland Drive Pump Houses. This aquifer also feeds Cortlandt Lake, which is used for recreational purposes. This will be discussed in greater detail in subsequent sections, but a major concern for this watershed is the concentrated presence of septic systems that unfortunately are overloading the aquifer and surface water resources around Continental Village with nutrients and are leading to impaired ecosystems and water quality.

Also, although it is beyond the border of Philipstown, it is important to note the presence of the Unconfined Mid-Yield aquifer along the Peekskill Hollow Creek in the most southeast section of the map. As noted above in the Subwatersheds section, this Creek provides water to the communities of Cortlandt and Peekskill and serves thousands of residents and business owners to the south of Philipstown. The southeast corner of Philipstown, east of the Canopus Creek Aquifer, drains into the Peekskill Hollow Aquifer, and thus any detrimental activities that occur in this small section of Philipstown impact our neighbors that depend on this aquifer.

#### Kame, Kame Terrace, Kame Moraine, Outwash, Alluvium (Unknown Yield Aquifers)

There are also a scattering of aquifers of unknown flow rates around Town, including the area around Trout Creek Pond (in the northeast part of Town), along Rt 9 in the center of Town, and in two smaller areas in Garrison along Snake Hill Road and Rt 9. Since these aquifers are relatively unknown, it would merit their further study to test their flow rates to better understand their contributions to local ecosystems and as water resources for human use.

#### Lacustrine & Eolian Aquifers

Although this aquifer is located outside of Philipstown on the northwest border of the Town, it is worth noting its presence. It is a slower flowing aquifer of silt, clay, sand and gravel composition, and, located on the western edge of the Hudson Highlands State Park, it likely serves as a source of groundwater for local habitat and for the relatively small number of rural residences scattered along the edge of the park.

#### *Further Study:*

Although most of its information could not be included in this report, the Town's 2007 Groundwater Report completed by The Chazen Companies offers much more in-depth information about the groundwater resources located within Philipstown. This document rich with information and additional maps can be found at: <https://www.philipstown.com/topgroundwater.pdf>. In addition, a future study that aims to determine the flow rates of the Unknown Yield Aquifers (Kame, Kame Terrace, etc.) within Philipstown would also be worthwhile to understand their contributions to the Town's groundwater resources. Also, since the Chazen study was completed 13 years ago, a follow-up study might be helpful to determine what impacts subsequent development and also climate change have had and might continue to have on the Town's groundwater.

*Data Sources:*

- Aquifer Types
  - Unconsolidated Aquifers at 1:250,000  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1141>
- Aquifer Protection Priority Parcels and Reservoir Protection Priority Parcels
  - Parcel Prioritization - Clove Creek Aquifer Accumulation Area, The Chazen Companies, 2018 (see Section 19)
  - Parcel Prioritization - Reservoir Watersheds, The Chazen Companies, 2018 (see Section 20)

**15. Cold Spring Watershed and Aquifer Overlay Districts***Description:*

As a reference, we have included the Town's 2011 Resource Protection Overlay District Zoning Map that highlights the Cold Spring Reservoir Watershed Overlay District and the Aquifer Overlay District. We did not add these layers to the previous map to avoid cluttering the map with too many layers. Each of these overlay districts receive additional protection from potentially harmful activities, the details and penalties for which are described in the Town's Zoning Code sections § 175-14 Cold Spring Reservoir Watershed Overlay District (WSO) and § 175-16 Aquifer Overlay District (AQO). These sections of the Town's Zoning Code can be found at: <https://www.ecode360.com/6319088>.

*Findings:*

Regarding the WSO, "The Town of Philipstown finds that the drinking water quality of the Cold Spring Reservoirs represents an essential economic and environmental resource. The Comprehensive Plan establishes a sound justification and framework for protecting the quality of the reservoirs' water. It is the purpose of this section to establish regulations on land uses within the Cold Spring Reservoir Watershed to assure the protection of the quality of the water resource. The Town desires to achieve such protection by cooperating with the Villages of Cold Spring and Nelsonville."<sup>21</sup>

Regarding the AQO, "The purpose of the Aquifer Overlay (AQO) District is to protect the health and welfare of residents of the Town of Philipstown by minimizing the potential for contamination and depletion of the Town's aquifer system. The Town of Philipstown contains an

<sup>21</sup> Town of Philipstown, § 175-14 Cold Spring Reservoir Watershed Overlay District (WSO), Article IV Overlay District Regulations, Zoning Code, <https://www.ecode360.com/6319088>



aquifer system that covers the entire Town and, for purposes of this section, has been divided into two areas: A) The Clove Creek Aquifer (CCA) Subdistrict, which is extensively developed and fully dependent on groundwater as a source of water supply; and B) The Regional Aquifer (RA) Subdistrict, which covers the remainder of the Town. Within the RA Subdistrict, most areas depend upon groundwater as the primary source of potable water supply. The combined aquifer system provides drinking water to private wells as well as groundwater and surface water that is essential to the maintenance of healthy aquatic and terrestrial ecosystems. The Town has determined that a limiting factor on the carrying capacity of the land is its capability to provide water in sufficient quality and quantity so that water use by some users does not adversely affect other users. Another limiting factor on the carrying capacity of the land is its ability to absorb wastewater without adversely affecting the quality or quantity of groundwater and surface water necessary for water supplies and other needs of the natural and human environment. The purposes of this § 175-16 are to protect public health and safety by safeguarding the Town's groundwater aquifer system, to provide the most protective standards to those areas of the aquifer at greatest risk of contamination, and to manage development so that groundwater supplies are not depleted or degraded.”<sup>22</sup>

*Data Sources:*

- Cold Spring Reservoir Watershed Overlay District and Aquifer Overlay District
    - Putnam IT Department and The Chazen Companies (2011)
- <https://philipstown.com/zmwsoapril.pdf>

**16. Parcel Prioritization - Clove Creek Aquifer Accumulation Area &  
17. Parcel Prioritization - Reservoir Watersheds**

*Description:*

We have combined the narratives for these two maps into one section since they are from the same third-party source - The Chazen Companies - and were produced for the Hudson Highlands Land Trust and the Town of Philipstown. Created in 2018, these maps rank both undeveloped and relatively unoccupied parcels located around both the Clove Creek Aquifer and the Cold Spring Reservoir in order to guide the Town and private landowners in prioritizing land conservation of these parcels for water resource protection. The following is the description provided by The Chazen Companies that explains what is presented on their maps as well as how the parcel priority rankings were created:

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<sup>22</sup> Town of Philipstown, § 175-16 Aquifer Overlay District (AQO), Article IV Overlay District Regulations, Zoning Code, <https://www.ecode360.com/6319096>



“The Chazen Companies (Chazen) has completed hydrogeologic analyses to identify properties with potential source water conservation value associated with the reservoir and watershed system supporting the Cold Spring and Nelsonville Water Supply (Reservoir Source) and the Clove Creek Aquifer (CCA).

“The two evaluations were completed using similar methodologies, described as follows:

- “Watershed delineations were completed for the CCA and the Reservoir Source utilizing ArcGIS Spatial Analyst software and USGS 10-meter resolution digital elevation models (DEMs).
  - “Clove Creek Aquifer watershed map. This map shows: 1) the aerial extent of the CCA from the existing Philipstown zoning maps (yellow crosshatch), 2) areas where precipitation and groundwater recharge flow into or directly onto the CCA (dark blue hatch), and 3) upland streams and their watersheds which flow onto the CCA (light blue outline). These three zones, respectively, represent the direct aquifer footprint, areas where aquifer recharge directly enters or migrates directly into the CCA, and areas where streamflow passes over and may be drawn into the CCA. The upland watershed (light blue hatch) extends marginally beyond the sheet boundaries north into Dutchess County and south into the Town of Putnam Valley.
  - Reservoir Source map. This map shows: 1) the joint Cold Spring reservoirs on Foundry Pond Road and the Foundry Brook Reservoir with adjoining water plant 2) areas where precipitation and groundwater recharge flow into these reservoirs (dark blue hatch), and 3) streams and their watersheds which flow into the reservoirs (light blue hatch). Respectively, these identify the active municipal reservoirs, areas where groundwater and stormwater flow directly into reservoirs, and areas where streams and their watersheds deliver water to the reservoirs. For planning purposes, the figure also shows Jaycox Pond and related watershed collection areas as far downstream as its outlet confluence with Foundry Brook, in case this reservoir is ever incorporated into the municipal source water system.”
- “For parcels within or partially within these delineation areas, Chazen completed a source water analysis to rank the water conservation value for all vacant or nominally-developed parcels. The scoring was developed as follows:
  - **“Hydrologic Soil Groups:** The Natural Resource Conservation Service assigned all soils into four Hydrologic Soil Groups (**HSG**) based on the soil's runoff potential. HSG A soils are very granular and allow most rain

to recharge into the subsurface, while most HSG D soils include clay that prevents most recharge. For purposes of CCA recharge and sustained flows into Reservoirs, HSG A soils were assigned three points and HSG B soils were assigned two points. Areas with C or D soils provide nominal aquifer recharge and peak runoff to reservoirs which frequently overtop the dams so are considered of lower source water conservation value.

- **Slopes:** Steep slopes promote rapid runoff while lower slopes promote water retention in soils and vegetation allowing time for groundwater infiltration or for delayed arrival at reservoirs. Slopes under 10% were assigned three points. Slopes between 10 and 15 % received two points, and slopes between 15 and 20 percent received one point.
- **Land Cover:** Using 2011 National Land Cover Data (NLCD), non-developed land including forests, scrub/shrub, pasture/hay, and wetlands received three points. Developed open space, typically assigned for low-density rural development and cultivated crops were assigned two points, and low intensity development and barren land were assigned one point.
- **Land within the Clover Creek Aquifer:** for the CCA figure, land directly over the CCA was assigned three bonus points.”

“These scores were assigned on a pixel land area basis and then summed to create a total score per pixel of land area. The sum of the scored pixels values within individual parcels was calculated to determine a parcel’s total conservation score. The score was also divided by the acres within the respective analysis area (CCA or Reservoir Source), yielding the score-per-acre values. Only vacant parcels of two acres or greater, or developed parcels greater than 10 acres, were included in the analyses. Attached spreadsheets provide the scoring record for all parcels evaluated in the CCA and Reservoir Source analyses.

“We hope this analysis provides Hudson Highlands Land Trust and the Town of Philipstown a useful basis for considering source water conservation initiatives. Parcels scoring highly on either a ‘per acre’ or ‘total score’ basis can be interpreted to be of relatively higher conservation importance to the protection of water resources, whether for the current municipal reservoirs or the Clove Creek Aquifer.

“We would welcome the opportunity to continue working together on water supply, water resource, or related natural resource conservation and planning initiatives. In general, the most important measures streamside protection approaches may include risk management along Fishkill Road and broadly-applied stream and floodplain setback and disturbance avoidance programs. And for the source water parcels identified by this

evaluation, source water protection options range from full no-build acquisition/agreements, through less restrictive conservation agreements, to simple due-diligence reviews of site, wastewater, and stormwater designs.”<sup>23</sup>

### *Findings:*

#### Clove Creek Aquifer:

One can see the sheer size of the Clove Creek watershed, depicted on this map as “Stream Input” by the light blue borders and crosshatch areas on the map. Luckily a large portion of this land is already protected as part of the Clarence Fahnestock State Park, although there are also numerous privately-owner parcels that are not currently protected from development, many of which are considered “high priority” or “moderate priority.” On the other hand, the “Direct Flow” area depicted on the map by the dark blue borders and crosshatches is almost entirely covered by privately owned land, and contains all of the “highest priority” parcels, in addition to numerous “high priority” and “moderate priority” parcels. Furthermore, all of the “highest priority” parcels are located on top of the aquifer itself, showing how activities that take place on the land directly above an aquifer are of the utmost importance to the health of that aquifer.

Although too large to include in this report, the above-referenced “attached spreadsheets providing the score record for all parcels” from The Chazen Companies summary can be requested from the Hudson Highlands Land Trust or from The Chazen Companies directly and can be used to understand on a parcel-by-parcel basis what factors are contributing to their prioritization or lack thereof.

Also, although not the highest priority area, it is encouraging to note that since this map was created, the parcels of land uphill from Rt 9 around Lake Valhalla have been converted into protected land, preventing potential development upstream from this sensitive water supply. This is depicted in Section 39. Conservation Open Areas and Open Space Overlay.

#### Cold Spring Reservoir Watershed:

Although it covers a smaller area than the Clove Creek watershed, the Cold Spring Reservoir Watershed serves the public water supply districts of the Villages of Cold Spring and Nelsonville and thus is an essential resource for several of the Town’s population centers. As described above, the light blue areas signify water that enters the reservoir system via stream flow and the dark blue areas show where groundwater flows directly into the reservoir system. Interestingly, there are two direct flow areas that impact the reservoir system - the first around the higher

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<sup>23</sup> Urban Mead, Russell, Professional Services Proposal - Groundwater Resource Management - Chazen Project Number 41824.00 Task 001, The Chazen Companies, October 1, 2018.

elevation Cold Spring Reservoir, and second around the lower-elevation Foundry Brook Reservoir, the latter of which being where the Municipal water districts treat and pipe the potable water to the villages below. Although it is currently not part of the reservoir system, Jaycox Pond and its surrounding area has been included in case some day the villages decide to incorporate it into their water districts.

Similar to above, although not the highest priority area, it is encouraging to note that since this map was created, the parcels of land uphill from the Cold Spring Reservoir that stretch over to Lake Valhalla have been converted into protected land, preventing potential development upstream from this sensitive water supply. This is depicted in Section 39. Conservation Open Areas and Open Space Overlay. As for priority parcels, the majority are located along the Foundry Brook as it flows from the Cold Spring Reservoir down to the Foundry Brook Reservoir, with particular emphasis on the parcels located along Lake Surprise Road, including several large parcels of “high priority” and a scattering of smaller “highest priority” parcels. It is also worth noting that although Jaycox Pond and its watershed are not currently used as reservoirs for the public water supply, they contain several “highest priority” parcels that should be protected in case this area needs to eventually be added as a reservoir.

*Data Sources:*

- Aquifer Protection Priority Parcels and Reservoir Protection Priority Parcels
  - Parcel Prioritization - Clove Creek Aquifer Accumulation Area, The Chazen Companies, 2018
  - Parcel Prioritization - Reservoir Watersheds, The Chazen Companies, 2018

## **18. Flood Zones**

*Description:*

According to the Hudson River Estuary Program, “floodplains are low-lying areas adjacent to streams and other waterbodies that become inundated during heavy precipitation or snowmelt. By slowing and storing floodwaters, floodplains reduce downstream flood damage and serve as a safety zone between human settlement and the damaging impacts of floods. Naturally vegetated floodplains help prevent erosion, recharge groundwater, and can serve as travel corridors for wildlife. These highly productive ecosystems are home to a unique suite of plants and animals that tolerate occasional flooding and support the in-stream food web. When left in their natural state, they provide space for the fluctuations in flow that cause streams to expand, contract, and sometimes change course. Floodplains and other streamside areas are also where land-use change will most easily influence stream quality.



“Floodplains have traditionally been delineated by the Federal Emergency Management Agency (FEMA) and the US Department of Housing and Urban Development based on flood frequency according to the extent of land expected to have a 1% or greater chance of being inundated in any given year (often referred to as the ‘100-year flood’). It is important to note that floodplains and their statistical flooding intervals are estimations based on the best data and technology available at the time of mapping. Due to many variables, such as the often unpredictable nature of floods, local drainage problems, and the variable intensity of land development in watersheds, some flood-prone areas may not appear on designated floodplain maps, and floodplain designations may change over time as more information becomes available.

“As development occurs in a watershed, pavement and other impervious surfaces (e.g., roofs of buildings) increase runoff volume and velocity, leading to more frequent and damaging floods. Preserving floodplains and minimizing the extent of impervious surfaces are ever more important as uplands are developed and as the frequency and magnitude of flood events increases with climate change [see Chapter 5: Climate Change]. Floodplain maps provide a starting point for proactive conservation planning.”<sup>24</sup>

Included on this map are the following layers:

- 100-year Floodplains (A - 1% Annual Chance of Flooding)
- 100-year Floodways (AE - 1% Annual Chance of Flooding)
- 500-Year Floodplains (X - 0.2% Annual Chance of Flooding)

Each of these layers are mapped by FEMA as part of their FEMA National Flood Hazard Layer - County Maps. As noted above, the 100-year floodplain is the extent of land expected to have a 1% or greater chance of being inundated in any given year. The 100-year floodway is defined as the stream channel and adjoining floodplain areas that are reasonably required to carry the 100-year flood without increasing the flood surface elevation by more than a foot. It is the area where flood hazard is generally highest in the floodplain, i.e., where water depths and velocities are the greatest. The 500-year floodplain refers to the area that has a 0.2% chance of being inundated in any given year.<sup>25</sup> Descriptions of these and other floodplain types can be found here: [https://efotg.sc.egov.usda.gov/references/public/NM/FEMA\\_FLD\\_HAZ\\_guide.pdf](https://efotg.sc.egov.usda.gov/references/public/NM/FEMA_FLD_HAZ_guide.pdf).

<sup>24</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>25</sup> FEMA Map Center Service, FEMA Flood Zone Designations (100-year/500-year floodplain) [https://efotg.sc.egov.usda.gov/references/public/NM/FEMA\\_FLD\\_HAZ\\_guide.pdf](https://efotg.sc.egov.usda.gov/references/public/NM/FEMA_FLD_HAZ_guide.pdf).

*Findings:*

Not surprisingly, the Town's Hudson River shoreline falls entirely within the 100-Year Floodway. We have seen this exhibited in recent years due to flooding caused by major storms such as Hurricanes Irene and Sandy. Similarly, essentially the entire lengths of Clove Creek and Canopus Creek fall within the 100-Year Floodways, as well as the majority of Foundry Brook. Each of these streams at one point or another pass through fairly concentrated developed areas, whether along Rt 9, in Nelsonville or in Continental Village. Buildings located in these floodways have the highest flood insurance rates through the National Flood Insurance Program.<sup>26</sup>

The Town also has a handful of designated 100-Year Floodplains, which are distinguished from the 100-Year Floodways because detailed analyses have not been performed for such areas and no depths or base flood elevations are shown within these zones. These zones include:

- The section of Foundry Brook between the Cold Spring Reservoir and Fishkill Road,
- The small stream and wetland areas along Rt 301 as water flows west towards Foundry Brook,
- A significant portion of Clove Creek as it flows from the reservoir on Glynwood Farm down to and along Rt 301 until it reaches the 100-Year Floodway,
- Indian Brook as it flows from Loch Lyall down to the Hudson River, passing under Rt 9 and Rt 9-D on its way, and
- Philipse Brook as it flows from the area north of the Garrison Fish and Game Club, around Earl's Chimney, all the way to the Hudson River, similarly passing under Rt 9 and Rt 9-D on its way.

Both the Philipse Brook and Indian Brook floodplains experienced tremendous flooding and infrastructure damage during Hurricane Irene in August of 2011, including damage to bridges along Snake Hill Road and Avery Road, respectively. It is important to note that the health of riparian areas (stream- / river-side habitats) along streams within Philipstown can have an impact on mitigating or exacerbating flooding. Well-vegetated riparian areas will resist erosion from flooding events and can potentially slow some of the flow of water during such events. On the other hand, streams that have riparian areas with reduced natural vegetation can suffer from increased erosion, which can exacerbate flooding issues, such as the rate of water flow, sedimentation downstream and damage to streamside communities and infrastructure.

And the 500-Year Floodplain covers the rest of the Town and is considered as a minimal risk flood zone, due to the chance of a flood only happening once every 500 years. Unfortunately,

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<sup>26</sup> Ibid.

however, all of the various flood zones will be exacerbated and expanded by climate change in the form of severe flooding events both in-land and also along the Hudson River shoreline. This will further jeopardize natural resources, homes, businesses and infrastructure located in or near these flood-prone areas and has already been exemplified by damage from the Hurricanes mentioned above. This will be explored in more detail in Chapter 5: Climate Change.

#### *Further Study:*

There are certainly additional streams and waterbodies through Philipstown that, although not considered as 100-year floodplains, carry the potential for flooding. Such may include Trout Creek, Bull Creek, Arden Brook, Annsville Creek and Copper Mine Brook. Currently, these streams fall within the 500-year flood zone areas of the Town, most likely because they pose less risk for flooding than the more flood-prone streams, but have not been confirmed as such and thus should be studied further, especially in light of the increased risk of flooding resulting from climate change.

As noted above, the health of riparian areas can have significant impacts on damages from flooding. As the Town looks at its various flood-prone areas and develops plans to mitigate damage from future floods, it will be essential to include a study on the health of riparian areas, especially focusing on the presence or absence of riparian vegetation and its ability to resist erosion from future flooding events. We recommend that the Town include such a study as part of its Vulnerability Assessment and Climate Adaptation Plan, which are discussed in more detail in Chapter 5. Climate Change.

#### *Data Sources:*

- Flood Zones
  - FEMA National Flood Hazard Layer  
<https://msc.fema.gov/portal/availabilitySearch?addcommunity=361026&communityName=PHILIPSTOWN,TOWN%20OF#searchresultsanchor>

## **19. NYS DEC Stream Classifications &**

## **20. Impaired Waterbody Ratings**

#### *Description:*

According to the Hudson River Estuary Program, “in addition to documenting the location of water resources, an NRI should address water quality in the community. The federal government and New York State have developed water quality standards to monitor and protect waterbodies. The Clean Water Act imposes strict standards on water quality and pollutant levels and New



York State's Environmental Conservation Law outlines water quality and priority classifications and standards for waterbodies. DEC Water Quality Standards and Classifications designate the 'best uses' that waterbodies should support and are the basis for programs to protect New York State waters. Freshwater stream segments and open waterbodies are classified by the letters AA, A, B, C, or D, which is the lowest classification."<sup>27</sup> The best uses for each Class are as follows:

- Classifications AA and A are assigned to waters used as a source of drinking water;
- Classification B indicates a best usage for swimming and other contact recreation, but not for drinking water;
- Classification C is for waters supporting fisheries and suitable for non-contact activities;
- Classification D is the lowest classification and reflects a best use for fishing."

According to the Putnam Valley NRI, "additional designations of 'T' or 'TS' can be added to Class A, B, or C streams if they have sufficient amounts of dissolved oxygen, cold water temperatures, high macroinvertebrate populations, low sedimentation and low pollution levels in order to support trout (T) and/or trout spawning (TS). Waterbodies that are designated as 'C (T)' or higher (e.g., 'C (TS),' 'B,' 'A,' or 'AA') are collectively referred to as protected streams, and are subject to additional regulations and require a State permit for disturbance of the bed or banks. Disturbance may be temporary or permanent in nature. Examples of activities requiring this permit include placement of structures in or across a stream, fill placement for bank stabilization or to isolate a work area, excavations for gravel removal or as part of a construction activity and lowering stream banks to establish a stream crossing. In addition to state regulations, waterbodies can receive more comprehensive protection at the municipal level.

"It is important to note that the DEC waterbody classification does not relate directly to water quality; rather, it reflects the quality expected of a waterbody. The DEC Waterbody Inventory/ Priority Waterbodies List tracks the degree to which waterbodies are meeting their 'best uses' based on their DEC classification, provides a summary of general water quality conditions, and monitors progress toward the identification and resolution of water quality problems, pollutants, and sources.

"To assess actual water quality and track human-induced impacts, many parameters are measured and monitored. Monitoring programs sample the chemical condition of water, sediments, and fish tissue to determine levels of constituents such as dissolved oxygen, nutrients, metals, oils, and pesticides. They also monitor physical conditions such as temperature, flow, sediments, and the erosion potential of stream banks and lakeshores. Biological monitoring or biomonitoring uses the abundance and variety of aquatic plant and animal life to provide information on the quality of streams and waterbodies. The results of these programs can be used

<sup>27</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



to describe water quality in the study area, identify potential threats, and develop recommendations in the NRI. Careful quality monitoring can help specify targeted mitigation, for example, where nutrient management is needed, where shading and stormwater controls are needed for thermal management, or where streambed/bank restoration is needed to stabilize sources of sediment.”<sup>28</sup>

The data for these two maps came from the DEC Water Quality Standards and Classifications and the DEC Waterbody Inventory/Priority Waterbody List, respectively. The first map indicates which streams are considered as state-protected waters and the second map identifies the waterbodies that are not meeting their “best uses” and the relative impacts or lack thereof on their water quality. We decided to combine these two maps into one narrative since their interpretation is closely related.

### *Findings:*

#### Stream Classifications:

Philipstown is home to several Class-A-rated streams, including that which flows from Lake Valhalla down into Clove Creek, two streams that flow into the Beacon Reservoir near East Mountain Road North, the upper half of Foundry Brook including a few tributaries, and the stream flowing from Jaycox Pond to Foundry Brook. The remainder of the Town is made up of numerous streams of either Class B or Class C rating, most of which are considered as protected streams if they are at least Class C (T) or higher.

As for Trout (T) and/or Trout Spawning (TS) streams, there are many sections of streams that meet such requirements within Philipstown, such as Foundry Brook, Clove Creek, Bull Creek, Trout Creek, Indian Brook, Philipse Brook, Annsville Creek and Canopus Creek and thus are considered protected streams by the NYS DEC. These are also highlighted on the map for Section 12. Streams and Waterbodies. It is clear that a large number of Philipstown streams are important habitat for trout and trout spawning, and thus should be carefully protected from potential hazards. Note that NYSDEC’s water quality information does not reflect site-specific habitat quality. As noted above, trout are sensitive to warmer temperatures, requiring well-shaded, cool-to-cold flowing water with low sedimentation, diverse macroinvertebrate communities, and low pollution. While all streams benefit from adequate streamside vegetation, it is especially important for maintaining clean, cold-water habitats that support native species like brook trout.<sup>29</sup> Thus the protection of riparian habitat, especially that which provides shade

<sup>28</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>29</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

over stream, should be a priority for efforts to protect brook trout. This will be discussed in more detail in Section 28. Stream Habitats.

### Impaired Waterbody Ratings:

In addition to streams, this map also shows the ratings for the Hudson River estuary and lakes within Philipstown. Each of the waterbodies portrayed on this map is accompanied by a waterbody fact sheet that is available via the DEC's [Hudson Valley Natural Resource Mapper](#). To access the fact sheet for each waterbody, select any of the Priority Waterbody Lists under "Stream and Watershed Layers," and then click on a waterbody to open up a small window with a link to the factsheet. We will provide a brief overview of findings from this data set here, but we encourage readers to visit the Hudson Valley Natural Resource Mapper to access more in depth information on each waterbody. Here are summaries of a few primary waterbodies within the Town that have a rating of Impaired or Minor Impacts (CAPITALS indicate primary concerns):<sup>30</sup>

#### 1. Hudson River: **Impaired**

- Public Bathing - Stressed, Suspected
- FISH CONSUMPTION - Impaired, Known
- Recreation - Stressed, Known
- Habitat/Hydrology - Stressed, Suspected
- Habitat/Hydrology - Stressed, Suspected
- Type of Pollutant(s)
  - Known: METALS (cadmium), PRIORITY ORGANICS (PCBs);
  - Suspected: Pathogens, Problem Species, Thermal Changes;
  - Possible: - - -
- Source(s) of Pollutant(s)
  - Known: TOX/CONTAM. SEDIMENT, Comb. Sewer Overflow, Urban/Storm Runoff;
  - Suspected: Habitat Modification, Power Generation;
  - Possible: - - -

#### 2. Canopus Creek: **Minor Impacts**

- Aquatic Life - Stressed, Suspected
- Type of Pollutant(s)
  - Known: - - -
  - Suspected: NUTRIENTS
  - Possible: Priority Organics (PAHs), Acid/Base (pH), Unknown Toxicity

<sup>30</sup> NYSDEC, Streams and Watershed Layers - Priority Waterbody Lists, Hudson Valley Natural Resource Mapper, <https://giservices.dec.ny.gov/gis/hvnrm/>

- Source(s) of Pollutant(s)
  - Known: - - -
  - Suspected: AGRICULTURE, Urban/Storm Runoff
  - Possible: Atmosph. Deposition

### 3. Lake Celeste, **Needs Verification**

- Recreation - Stressed, Possible
- Type of Pollutant(s)
  - Known: NUTRIENTS (phosphorus)
  - Suspected: ALGAL/WEED GROWTH
  - Possible: - - -
- Source(s) of Pollutant(s)
  - Known: - - -
  - Suspected: AGRICULTURE, URBAN/STORM RUNOFF
  - Possible: - - -

### 4. Arden Brook, **Minor Impacts**

- Aquatic Life - Stressed, Suspected
- Type of Pollutant(s)
  - Known: - - -
  - Suspected: NUTRIENTS
  - Possible: - - -
- Source(s) of Pollutant(s)
  - Known: - - -
  - Suspected: AGRICULTURE, Urban/Storm Runoff
  - Possible: - - -

### 5. Philipse Brook, **Minor Impacts**

- Aquatic Life - Stressed, Suspected
- Type of Pollutant(s)
  - Known: - - -
  - Suspected: NUTRIENTS
  - Possible: - - -
- Source(s) of Pollutant(s)
  - Known: - - -
  - Suspected: AGRICULTURE, Urban/Storm Runoff
  - Possible: - - -

### 6. Breakneck Brook, **Minor Impacts**

- Aquatic Life - Stressed, Suspected



- Type of Pollutant(s)
  - Known: - - -
  - Suspected: NUTRIENTS
  - Possible: - - -
- Source(s) of Pollutant(s)
  - Known: - - -
  - Suspected: AGRICULTURE, Urban/Storm Runoff
  - Possible: - - -

The remaining streams and waterbodies on the map have either been Unassessed (e.g. Trout Creek, Indian Brook, Annsville Creek and all of the Town's lakes and ponds) or have been assessed and determined to have No Known Impact (Foundry Brook, Clove Creek, Bull Creek and Sand Spring Brook). Even the streams that have No Known Impact, however, are at risk for contamination and impairment due to current and potential activities that could occur in the watersheds, especially if further development takes place.

#### *Further Study:*

This dataset strongly suggests the need to assess streams and waterbodies within the Town that have yet to be assessed and also to confirm that the ratings given by the DEC match up-to-date water quality sampling. One obvious concern is that Cortlandt Lake has yet to be assessed, although it is fairly common knowledge within Philipstown that the lake is suffering issues with runoff and algae that are impairing its use as a recreational water source and also as wildlife habitat. Similarly, Indian Brook is one of the major streams in Philipstown, and it has yet to be assessed to determine its overall health.

With this in mind, the number-two voted issue from the recently held Philipstown Community Congress is "Clean Water," and there is a local effort supported by the Town and the Hudson Highlands Land Trust in addition to community-member volunteers to conduct further studies and improve protections to ensure the health of Philipstown's water systems.<sup>31</sup>

Also, the Hudson River Estuary Program recommends using the NYS DEC's "Water Assessments by Volunteer Evaluators" (WAVE) program to organize local water quality monitoring efforts in unassessed areas. More information about the program can be found here:

<https://www.dec.ny.gov/chemical/92229.html>

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<sup>31</sup> Philipstown Community Congress, 2017 Voting Results, <http://ecologicalcitizens.org/philipstowncommunitycongress>



*Data Sources:*

- NYS DEC Stream Classifications
  - NYS DEC Water Quality Classifications  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1118>
- Impaired Waterbody Ratings
  - NYS DEC Water Inventory / Priority Waterbodies List  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1117>

## 21. Threats to Water Quality

*Description:*

According to the Hudson River Estuary Program, “stormwater and wastewater problems can impact a community’s water resources. By including the locations of stormwater and wastewater infrastructure in the NRI, planners in Philipstown have access to additional information on potential threats to water quality. New York State uses the State Pollutant Discharge Elimination System (SPDES) to control wastewater and stormwater discharges to groundwater and surface water in accordance with the Clean Water Act. The SPDES program requires that a permit be obtained prior to initiation of construction or discharge of wastewater to surface or ground waters. The program also regulates construction or operation of sewage treatment plants and other disposal systems.”<sup>32</sup> These SPDES point source locations within Philipstown were mapped to identify potential pollution locations.

A Municipal Separate Storm Sewer System (MS4) is a stormwater collection and conveyance system owned by a state, city, Town, village, or other public entity that is not part of a sewage treatment plant or combined sewer system. As a permit condition, designated MS4 municipalities are required to map their stormwater outfalls where polluted runoff can enter waterbodies, which are highlighted on the map as “Culverts in MS4.” Philipstown’s MS4 district in its southeast corner around Continental Village is shown on the map, as well. This MS4 system is only for stormwater runoff and does not involve household or commercial wastewater, which is dealt with in septic tanks. That said, they can still serve as major concentration points where road salt, silt from dirt roads and other chemicals can enter streams and other waterbodies. This will be explored in more detail in the *Findings* section below.

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<sup>32</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

In addition, NYS Department of Transportation (DOT) Large Culverts along or near State Highways and NYSDOT facilities were mapped. NYS Department of Transportation record plans were used to determine outfall locations when they occurred in closed systems or were inaccessible, but essentially show where large culverts pass under state roads. Due to their location along major roads, these culverts can be concentration points for road salt and other chemicals to enter into streams and other waterbodies and thus are important points to monitor for pollution. Improperly installed culverts can also prevent aquatic life from traveling up or downstream and thus can essentially create separate segments of streams, which can be detrimental to aquatic life, especially fish or amphibians that depend on accessing larger lengths of a stream.

NYS DEC Bulk Storage Locations were mapped, including Petroleum Bulk Storage, Chemical Bulk Storage (which can include Chlorine for water treatment, for example) and Major Oil Storage Facilities. These point sources came from the NYS DEC's "Bulk Storage Sites in NYS" Dataset, and were gathered to provide a digital representation of the locations of major oil, chemical and petroleum bulk storage facilities in New York State by the NYSDEC Division of Environmental Remediation. The extent of a storage area cannot be determined from this dataset. The points in this file represent only the existence of an active facility at these locations. It's also worth noting that although not included on the map, the Philipstown Highway Department and Cold Spring Highway Department Salt Sheds are discussed in the findings section below.

In addition, most roads within the Town were included both as reference points but also as potential sources of contamination for local habitats, especially streams, wetlands and other waterbodies, due to the use of road salt, silt runoff from dirt roads and runoff of other chemicals released by motor vehicles that travel on these roads.

Lastly, certain potential sources of contamination were not mapped, such as PCB's and other pollutants in the Hudson River, potential contamination from the now-remediated Marathon Battery Plant in Cold Spring (on the northern edge of Constitution Marsh), potential septic tank leakage from residential and commercial properties and potential fertilizer and herbicide/pesticide runoff also from residential, commercial and agricultural properties. Although, not mapped, each of these potential sources will be discussed in more detail below.

### *Findings:*

As mentioned above, there are numerous potential sources of contamination that can negatively impact water quality within Philipstown. We'll explore those highlighted on the map first and then will cover those additional threats mentioned in other sections of this chapter as well as above.

### NYSDOT Large Culverts:

There are numerous large culverts that pass under state roads within Philipstown, including those on Route 9, Route 9-D, Route 403 and Route 301. Due to their location along major roads, these culverts can be concentration points for road salt and other chemicals to enter into streams and other waterbodies and thus are important points to monitor for pollution. Potential leakage from upstream failing septic systems can also introduce harmful pathogens, which can concentrate around these large culverts. Also, many of these culverts are installed in ways that essentially divide sections of streams and make it difficult if not impossible for aquatic life to travel through a culvert. This is extremely damaging to aquatic life, especially larger animals like fish that depend on access to a large length of stream habitat to survive.

Although not yet fully complete, the NYSDEC's Hudson River Estuary Program is currently conducting an "Aquatic Connectivity" study of culverts within Philipstown through the North Atlantic Aquatic Connectivity Collaborative. Although this assessment is currently in progress, the results so far are covered in more detail in this report in Section 28. Stream Habitats & Section 29. Road-Stream Crossings in Philipstown and Putnam Valley. The assessment offers further point-source locations of culverts and outfalls, as well as photographs of such sites and any sampling done at each site. It also rates culverts and bridges based on how their construction allows or prevents the movement of aquatic life as well as water, and prioritizes each piece of infrastructure for replacement and upgrade based on these ratings. For more information, please see the following as well as the sections mentioned above:

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/culvertfactsheet19.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/culvertfactsheet19.pdf)

### State Pollutant Discharge Elimination System Point Source Locations:

The two SPDES sites on the map are 1) the Cold Spring Wastewater Treatment Plant located on Fair Street along the edge of the Hudson River in the Village of Cold Spring and 2) the Lake Surprise Camp Wastewater Treatment Plant located downstream of Lake Surprise on Breakneck Brook.

The Cold Spring Wastewater Treatment Plant treats wastewater from residential and commercial sanitary use within the Village of Cold Spring. It also has capacity to handle the wastewater of the neighboring Village of Nelsonville, whose residences and businesses currently rely on septic systems. The Cold Spring plant can handle a flow of 0.5 Million Gallons per Day (MGD) and releases its water following treatment into the Hudson River, which is classified as a Class B waterbody.<sup>33</sup> Occasionally during extremely heavy rainstorms, the system can be overwhelmed

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<sup>33</sup> NYS DEC, Environmental Notice Bulletin SPDES Renewals, Consolidated Public Notice for SPDES Permit Renewal, [https://www.dec.ny.gov/enb/20190213\\_spdes.html](https://www.dec.ny.gov/enb/20190213_spdes.html)



with too much flow from the village's stormwater system, in which case some water that enters the Hudson River from the plant can be slightly contaminated, although this rarely happens. The plant is required to submit data sampling reports to the NYS DEC to ensure that water discharge effluent levels are below the required limits.

The wastewater treatment plant at Lake Surprise Camp is a private facility that receives flow from domestic users. Wastewater consists of domestic sanitary wastewater. The treatment plant provides tertiary treatment for a design flow of 0.05 MGD. Treatment consists of preliminary, primary, secondary, tertiary and disinfection. Treated sanitary sewage is discharged via Outfall 001 to Breakneck Valley Brook, a Class B waterbody. A State Environmental Quality Review determined that the plant will not have a significant impact on the environment. That said, contamination is possible, and thus the plant is required to provide monthly sampling data on water discharge.<sup>34</sup>

#### NYSDEC Bulk Storage Locations:

The location of Petroleum Bulk Storage (PBS), Chemical Bulk Storage (CBS) facilities and Major Oil Storage Facilities are shown on the map. The NYSDEC defines petroleum bulk storage as one or more tank systems designed to store 1,100 combined gallons or more of petroleum in aboveground and/or underground storage tanks, or one or more underground tank systems designed to store 110 or more gallons of petroleum.<sup>35</sup> The map shows 39 PBS facilities in Philipstown, including facilities such as heating-fuel businesses, gasoline stations, schools and highway departments. Such facilities pose the potential of leaks that could contaminate local habitat as well as surface and potentially groundwater. Thus any property that meets the above criteria is considered a "facility" and all tank systems storing petroleum must be registered with DEC and managed in compliance with applicable regulations for the storage of petroleum. In addition, all aboveground and underground tank systems designed to store used oil, regardless of size, must be registered with DEC and managed with the applicable regulations for storage and handling of petroleum.

Looking at the map, one can see that many PBS facilities are located along or near primary waterbodies, such as the northern section of Route 9 along the Clove Creek (which flows into a significant drinking water supply for towns and villages north of Philipstown), numerous facilities along Foundry Brook in Nelsonville and within the Village of Cold Spring, which pose impacts to both the Foundry Brook and the Hudson River, including the fragile and ecologically essential habitat of Constitution Marsh, a clustering of facilities in Garrison that could impact both the Philipse Brook and Arden Brook, and a cluster of facilities along the southern section of Route 9 that can impact the Annsville Creek and the Continental Village MS4 stormwater

<sup>34</sup> NYS DEC, ENB Region 3 Completed Applications 07/08/2020, Putnam County, [https://www.dec.ny.gov/enb/20200708\\_reg3.html](https://www.dec.ny.gov/enb/20200708_reg3.html)

<sup>35</sup> NYSDEC 2018. Bulk Storage of Chemicals, Petroleum and Liquefied Natural Gas. [dec.ny.gov/chemical/287.html](https://www.dec.ny.gov/chemical/287.html)



discharge system. From the map it is evident that the proper management of oil storage facilities via the NYSDEC's Petroleum Bulk Storage Program is crucial. For reference, Table 7. Petroleum Bulk Storage Facilities at the end of this section lists the PBS sites found within Philipstown.

Within Philipstown there is only one Chemical Bulk Storage (CBS) site located at the Cold Spring Drinking Water Treatment Plant on Fishkill Road. This facility treats drinking water for the villages of Cold Spring and Nelsonville and is supplied by the Cold Spring Reservoir upstream. The facility uses Sodium Hypochlorite to disinfect the water of harmful microbes, and thus stores the chemical in large enough amounts to be classified as a Chemical Bulk Storage facility. The NYSDEC defines chemical bulk storage as 185 or more gallons of hazardous materials aboveground, and any amount below ground.<sup>36</sup> Although the chemicals on site are used to treat drinking water, if there were a spill, the chemicals would flow into the Foundry Brook, which could have harmful effects on downstream ecosystems, including the Constitution Marsh at the mouth of the brook. Thus, compliance with the CBS Program and required monitoring and reporting is essential to ensuring the continued safe use of these chemicals.

Also, although not considered as Chemical Bulk Storage sites, it is worth noting that the Philipstown Highway Department Salt Shed is located adjacent to the PBS site at 50 Fishkill Road (see Table 8), which is uphill from the Foundry Brook along Fishkill Road, and if improperly managed could be a major source of contamination for that watershed. The Salt Shed, however, is covered from the elements, and currently is not considered a concern to the Foundry Brook. The Cold Spring Highway Department Salt Shed is located uphill from the Hudson River adjacent to the PBS site at 49 Fair Street (also in Table 7) and poses similar potential risks, although it is also covered and is not currently considered to be a concern to downhill habitat. The potential impacts of road salt will be discussed later in this section.

Although within Philipstown there are no Major Oil Storage Facilities, which store a total of 400,000 gallons or more of petroleum in aboveground and underground storage tanks, it is worth noting that across the river at West Point Military Academy, there is such a facility. Of course, Philipstown has no jurisdiction over such a facility, but it is important to note its presence and the possibility of a major oil spill if the facility were severely compromised. The presence of this facility should inform preparation planning in case of such a spill and include communities both on this side and on the other side of the Hudson River in order to coordinate what a potential response would look like and what each community's responsibilities would be. Such a hazard mitigation plan could also potentially include the freight trains that transport petroleum along the west side of the Hudson River, in case of an accident and subsequent spill.

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<sup>36</sup> NYSDEC 2018. Bulk Storage of Chemicals, Petroleum and Liquefied Natural Gas. [dec.ny.gov/chemical/287.html](http://dec.ny.gov/chemical/287.html)

#### Philipstown MS4 + Culverts in MS4:

As noted above, MS4 stands for Municipal Separate Storm Sewer System, and Philipstown's MS4 is located in the southeast corner of Town around Continental Village. The purpose of this system is to control the flow of stormwater so as to avoid damaging property and infrastructure within the MS4 boundary. Stormwater outfalls within this system flow into Annsville Creek, Canopus Creek and Peekskill Hollow Creek, each of which eventually flows into the Hudson River. Although this system does not involve wastewater from households and businesses, which is instead handled via septic systems, there is still the potential for concentrated runoff and concentration of pesticides, fertilizers and other potentially hazardous chemicals used by private landowners within the MS4.

As you can see on the map, there are a lot of stormwater outfalls (where stormwater enters a stream or other waterbody) within the MS4, and are especially concentrated in the urbanized area of Continental Village. As a NYSDEC permit condition, designated MS4 municipalities, such as Philipstown, are required to map their stormwater outfalls where polluted runoff can enter waterbodies, which are highlighted on the map as "Culverts in MS4." These are also available in more detail on the Town's website at:

<https://philipstown.com/ms4%20maps.pdf>

In addition to these maps, the Town is required to submit an annual report documenting the proper management of its MS4 district, including information on Public Education, Public Involvement, Illicit Discharge, Construction Site Run Off, Post Construction and Pollution Prevention efforts. Each Annual Report can be found at the above website address. The majority of the effort so far has focused on educating property owners and construction contractors on best practices management of the MS4 stormwater system as it relates to failing septic systems, silt runoff, use of fertilizers and herbicides/pesticides and the illegal disposal of hazardous materials, such as paints, motor oils, and pharmaceuticals, among others. The Town has a variety of informational pamphlets available at the above website and has also organized public presentations in Continental Village and at Town Conservation Board meetings, in addition to posting signs within the MS4 discouraging the illegal dumping of pollutants, especially around storm drains. The Town has also improved mapping of stormwater drains and outfalls as well as cleaning practices and frequency of the MS4 components. A detailed account of the Town's future plans for improving the MS4 is available at the above website under the title "Annual Report 2019," and includes additional GIS mapping of the MS4 outfalls and catchment basins, improving communication between development contractors and government officials, improving accountability of post-construction stormwater management practices, and conducting



comprehensive water quality testing within the MS4 with the assistance of the Hudson Highlands Land Trust and the Chazen Companies.

#### Paved and Dirt Roads - Road Salt:

Many Paved and Dirt Roads were included on the map both as reference points and as potential sources of water contamination. Specifically the State, County and Town roads located within Philipstown are unfortunately significant sources of water quality pollution. Road salt applied in winter flows into adjacent streams, water bodies and aquifers, posing detrimental effects to local ecosystems. Specifically, increased salinity can be harmful to drinking water resources, especially wells located near heavily-salted roads. High salinity can also have serious impacts on aquatic life, such as cold water fish and amphibians, among others. High salt levels can also lower oxygen levels in certain waterbodies, such as lakes and ponds, by altering the gas exchange cycle of the base of such a waterbody. Furthermore, road salt run-off can increase chloride levels in local water systems. Chloride is toxic to aquatic life and even small amounts can be harmful, inhibiting growth and reproduction as well as harming food supplies. Road salt also progressively damages vehicles and infrastructure, such as bridges and culverts, accelerating the replacement cycle for each. Worst of all, road salt can linger in local ecosystems for decades and continue to have compounding effects as more road salt enters the ecosystem each winter. In short, something that many automobile drivers take for granted in order to keep roads drivable during the winter can have increasing consequences to the quality of our local water systems and our aquatic habitats and lifeforms.<sup>37</sup>

In terms of specific locations, the State Route 9 corridor and State Route 301 corridor along Clove Creek receive substantial road salt applications during the winter, the run-off from which flows directly into the Clove Creek aquifer and subsequent public water supply for towns north of Philipstown. This also can affect water quality for property owners who depend on wells adjacent to both roadways. Similarly, Foundry Brook along Fishkill Road (a County Road) is exposed to road salt due to its close proximity to the road, which is a heavily trafficked commuter route for drivers heading from Route 9 to Route 9-D and the Palisades Parkway south to the New York City Metropolitan area. In addition, Arden Brook flows along a significant section of State Route 403 and is exposed to road salt runoff from this heavily trafficked commuter route which connects vehicles heading from Route 9-D to Route 9 heading south to Westchester County and the NY Metro area. Also, Annsville Creek along the southern section of State Route 9, is exposed to road salt due to its proximity to the road for a substantial portion of its length in Philipstown and thereafter in the Town of Cortlandt as it flows down into the Hudson River.

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<sup>37</sup> Hinsdale, Jeremy, How Road Salt Harms the Environment, State of the Planet, Columbia University Earth Institute, December 11, 2018, <https://blogs.ei.columbia.edu/2018/12/11/road-salt-harms-environment/>

Furthermore, the significant use of road salt in the densely populated areas of Nelsonville and Cold Spring, the North Highlands population centers around Barrett Pond Road, Hustis Road and Perks Boulevard, and Continental Village lead to large amounts of road salt runoff entering the Foundry Brook, Clove Creek and Canopus Creek, respectively. Finally, the less-heavily trafficked Town roads, both paved and unpaved, receive road salt during the winter and similarly contribute to increasing salinity and chloride levels of nearby habitat and the Town's watersheds in general. Notable mentions are Old Albany Post Road, East Mountain Roads South and North, and Sprout Brook Road, due to their substantial length, use as residential roads, and especially due to the need to sufficiently salt the roads to provide safe access to school buses that transport students from these areas. While road salt increases the safety of winter use of the numerous roads throughout the Town, it also, unfortunately, increases the adverse effects on water quality and aquatic habitat, the consequences of which are still taking shape on the scale of decades.

#### Dirt Roads - Silt Runoff:

Certainly a controversial concern within Philipstown, the benefits of dirt roads are important to keep in mind, especially in terms of preserving rural historic character; however, it is also necessary to consider the unfortunately detrimental effects that dirt roads can have on local water systems, especially local aquatic life. According to an EPA report,<sup>38</sup> dirt roads can have serious impacts on aquatic life in waterbodies, especially streams, that are nearby. Specifically, animals like trout and stream insects, many of which require rocks or gravel or other clean surfaces to live on, can be harmed by dirt road runoff. When the fine sediments – silt, clay, and other fine particles – are washed off of dirt roads, they can smother the habitats for these animals. Sedimentation from unpaved roads can also raise streambeds, increasing the chances of flooding.

#### Additional Water Quality Threats:

Lastly, as mentioned above, although certain potential sources of contamination were not mapped - such as the presence of Polychlorinated biphenyls (PCBs) and other pollutants in the Hudson River, potential contamination from the now-remediated Marathon Battery Plant in Cold Spring (on the northern edge of Constitution Marsh), potential run-off from the capped and closed former Philipstown Landfill off of Lane Gate Road, potential septic tank leakage from residential and commercial properties and potential fertilizer and herbicide/pesticide runoff also from residential, commercial and agricultural properties - it is important to note the potential effects of these sites and activities. Each is covered in more detail below.

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<sup>38</sup> EPA, Polluted Runoff: Nonpoint Source (NPS) Pollution, "Environmentally Sensitive Maintenance for Dirt and Gravel Roads," <https://www.epa.gov/nps/environmentally-sensitive-maintenance-dirt-and-gravel-roads>.



### Hudson River PCBs:

As many locals know, the Hudson River has been polluted over the centuries in many ways, but the most egregious pollutant has been Polychlorinated biphenyls or PCBs. According to the US Environmental Protection Agency, PCBs “were widely used as a fire preventive and insulator in the manufacture of electrical devices, like transformers and capacitors, because of their ability to withstand exceptionally high temperatures. During a 30-year period ending in 1977, when the EPA banned the production of PCBs, it is estimated that approximately 1.3 million pounds of PCBs were discharged into the Hudson River from two General Electric (GE) capacitor manufacturing plants located in the towns of Fort Edward and Hudson Falls, New York. Once PCBs entered the river, they were deposited and mixed with the sediments at many locations on the river bottom and at some locations along the shoreline in the floodplain.

According to the EPA, “PCBs build up in the environment (bioaccumulate), increasing in concentration as they move up the food chain. The primary health risk associated with the site is the accumulation of PCBs in the human body through eating contaminated fish. Since 1976, high levels of PCBs in fish have led New York State to close various recreational and commercial fisheries and to issue advisories restricting the consumption of fish caught in the Hudson River. PCBs are considered probable human carcinogens and are linked to other adverse health effects such as low birth weight, thyroid disease, and learning, memory, and immune system disorders. PCBs in the river sediment also affect fish and wildlife. In 1984, 200 miles of river, between Hudson Falls and the Battery in New York City, was placed on EPA’s National Priorities List of the country’s most contaminated hazardous waste sites.

“Today the Hudson River exists as one of the most extensively studied rivers in the country, having been monitored almost continuously for a period of more than 25 years. Ongoing evaluations of water quality, sediment, air quality, fish, and wildlife by the Federal Government and the State of New York demonstrated that the river was not cleaning itself and PCBs in the sediment posed a serious risk to human health and the environment. Studies conducted to evaluate the extent of the problem revealed that most of the contaminated sediments were in “hot spots” situated in a 40-mile stretch of the river between the town of Fort Edward and the Troy Dam.”<sup>39</sup>

According to the EPA, dredging efforts paid for by General Electric and overseen by the EPA have removed approximately 2.75 million cubic yards of PCB-contaminated sediment from the river bottom between 2009 and 2015. This removal took place in a 40-mile section of the Upper Hudson River from Fort Edward to Troy, NY. In addition, due to the presence of PCBs downriver in the lower Hudson River (from Troy to Manhattan), the EPA and numerous local

<sup>39</sup> EPA, Hudson River PCBs Superfund Site, Hudson River Cleanup, <https://www.epa.gov/hudsonriverpcbs/hudson-river-cleanup#quest1>

agencies have begun sampling and monitoring PCB levels in the water column, sediment, fish and habitat. Unfortunately, the section of the Hudson River adjacent to Philipstown is still considered an impaired waterbody due to PCB, Cadmium (covered below) and sewage pollution levels, as described above in Section 20. Impaired Waterbody Ratings. For more information on PCBs please visit: <https://www.epa.gov/hudsonriverpcbs/hudson-river-cleanup#quest1>.

#### Marathon Battery Plant:

The following is a summary from the EPA:

“A nickel-cadmium battery factory located in Cold Spring, NY operated from the 1950s to the 1970s and discharged contaminated wastewater into the Hudson River and adjacent cove and marsh and spewed contaminated dust onto neighboring residential yards. A small VOC-contaminated groundwater plume also exists on the former factory grounds. The remedies chosen in the three Records of Decision (1986, 1988, and 1989) included the dredging and excavation of contaminated sediments from the Hudson River, East Foundry Marsh and Cove, excavation of contaminated soils from the former factory grounds and adjacent yards, demolition of the former battery factory, restoration of the marsh and natural attenuation of the plume. The remedial construction occurred from 1993-1995 and the site was delisted in 1996. The marsh, cove and groundwater continue to be monitored. The former battery factory property is now owned by a developer and is awaiting redevelopment. The marsh and the adjacent (never contaminated) 87 acres are now owned by Scenic Hudson, a non-for-profit environmental preservation organization and have been reestablished into a public park, The West Point Foundry Preserve, a National Historic Site.”<sup>40</sup>

Although this site has been declassified as a Superfund site, it is worth including here to note the severity of the contamination in terms of ecological and human health consequences and the extent and cost of work that had to be done to clean up the site. Furthermore, there is still evidence of trichloroethylene (TCE) contamination of the site’s groundwater and efforts continue to remove and monitor the presence of this contaminant. The damage created at this battery plant serves as a warning regarding the construction and operation of industrial facilities adjacent to residential areas and sensitive and precious natural communities, such as Constitution Marsh.

#### Herbicides/Pesticides, Fertilizer, Failing Septic Systems and other Hazardous Runoff:

Finally, it seems worthwhile to highlight that, although not depicted on the map, runoff from residential and commercial (including agricultural) properties of herbicides/pesticides, fertilizer,

<sup>40</sup> EPA, Superfund Success Stories: EPA Region 2, Marathon Battery Company Superfund Site, <https://www.epa.gov/superfund/superfund-success-stories-epa-region-2#marathon>



failing septic systems and other hazardous materials (e.g. pharmaceuticals, paints, and motor oils and fluids), although at an individual level may not seem so harmful, can be damaging to water quality and aquatic life in cumulative effect. As noted above in the MS4 section, public education, public participation and enforcement practices are essential to empowering property owners to use best practices when dealing with the above potential contaminants. Although outlined in more detail on the Town of Philipstown's Stormwater Management Program webpage, available at:

<https://philipstown.com/government/building-department/stormwater-management-program>.

we have included the following summary of best practices for each issue, provided by the Putnam County Soil and Water Conservation District:

1. "Minimize the damage from herbicides and pesticides by applying organic alternatives, planting naturally pest-resistant vegetation and/or landscape in ways that do not require as much intervention. For example, rather than maintaining a pristine homogenous lawn that may require constant herbicide application, property owners can pursue alternative landscaping techniques such as wildflowers, bushes, mulch, rock gardens and so forth. Or having an imperfect lawn with occasional weeds can be a simpler compromise if a lawn already exists. Also, increased presence of trees and bushes can reduce the amount of surface stormwater that flows downstream into catchment basins and water bodies, reducing the chance of contaminants concentrating downstream. Avoiding cutting down trees and clearing bushes and adding trees and shrubs to a landscape can have positive effects on stormwater management
2. In terms of agriculture, herbicides, pesticides and fertilizer may be unavoidable, but using best organic practices as well as strategically using natural forms of fertilizer such as manure and compost and carefully containing stores of such fertilizer can prevent runoff from these potential pollutants from accumulating in waterbodies downstream from their place of application. Also, striving wherever possible to use organic farming and gardening practices can similarly reduce the quantity of harmful pollutants that enter the town's watersheds.
3. Putnam County Soil and Water Conservation District recommends having a septic system inspected at least every two years to avoid a failing system leaking harmful microbes and human waste into local ecosystems. Similarly, septic tanks must be pumped every 3 - 5 years to avoid tank failures. Planting trees or parking vehicles over a septic field can damage the system and lead to leaks. And lastly, disposing of any materials or substances (especially chemicals) other than human waste and toilet paper can harm essential bacteria that process the septic waste, and can lead to system blockages and failure.
4. Simply put, all hazardous materials must be disposed of properly, rather than poured down a sink or storm drain, flushed down the toilet, and thrown carelessly in the garbage can. Most hazardous substances such as paints, motor oils, batteries, and countless other chemicals should be safely stored and then disposed of at the annual Putnam County

Hazardous Waste Day or at a local waste collection facility that accepts such waste. The latter facilities accept almost all hazardous waste and are relatively inexpensive compared to the harmful and often expensive consequences to water quality and wildlife that improper disposal can have.”<sup>41</sup>

*Further Study:*

As mentioned above, the NYSDEC’s Hudson River Estuary Program is currently conducting a broad culvert assessment within Philipstown, the most recent results of which are covered in more detail in Section 28. Stream Habitats & 29. Road-Stream Crossings in Philipstown and Putnam Valley. The assessment information complements and expands upon the data presented in this map and can serve as an additional resource for improving road and stormwater management practices around culverts within the Town, especially in terms of prioritizing and better connecting segments of streams that have been divided by improperly designed culverts. Please see the above-mentioned sections for current results, and again, a summary of the program can be found here:

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/culvertfactsheet19.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/culvertfactsheet19.pdf)

Also, periodically, wastewater monitoring data from SPDES permit sites can be requested from the NYSDEC or the treatment facility and evaluated to identify areas that are stressed or threatened due to increased effluent levels or cumulative land-use impacts. So far, the Town’s two SPDES sites are in compliance and are not deemed to be having a detrimental effect on local water quality.

The Town of Philipstown is also collaborating with the Hudson Highlands Land Trust, the Chazen Companies and the Philipstown Community Congress “Water Quality” committee to complete an updated Ground Water Study similar to that produced by the Chazen Companies for the Town back in 2007. So far, the study has covered Clove Creek and Foundry Brook and is covered in detail in Section 28. Stream Habitats. In addition, the Town’s 2007 Groundwater Report and Planning Resource (<https://www.philipstown.com/topgroundwater.pdf>) offers a much more in-depth analysis of the Town’s water resources and potential threats to water quality than is covered in this Natural Resource Inventory.

Lastly, further study could include a small project to map and research the impacts of additional smaller potential sources of pollution such as any junkyards located within the Town, sand and gravel quarries or storage areas, bulk landscaping/agricultural material storage sites and any additional locations that might store materials potentially hazardous to water quality.

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<sup>41</sup> Putnam County Soil and Water Conservation District, Preventing Stormwater Pollution: Tips for Homeowners. Pamphlet, [https://philipstown.com/SW\\_preventing%20polution.pdf](https://philipstown.com/SW_preventing%20polution.pdf)



*Data Sources:*

- NYSDOT Large Culverts
  - NYSDOT Stormwater Outfalls  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1160>
- SPDES Point Source Locations
  - State Pollutant Discharge Elimination System  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1010>
- NYS DEC Bulk Storage Locations
  - Bulk Storage Sites in NYS  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1253>
- Philipstown MS4 Boundary + Culverts in MS4
  - Philipstown Stormwater Management MS4 Boundary and Outfalls - Created by Hudson Highlands land Trust (GIS shapefiles obtained from the Town of Philipstown by Town Natural Resources Office). Source maps are found here:  
<https://philipstown.com/ms4%20maps.pdf>

**Table 7: Petroleum Bulk Storage Facilities<sup>42</sup>**

Site Number	Facility Name	Site Address
3-011657	GARRISON UNION FREE SCHOOL	1100 ROUTE 9D
3-012645	TOWN OF PHILIPSTOWN HIGHWAY DEPARTMENT	RFD 35A FISHKILL RD
3-033219	ST BASIL ACADEMY	79 ST. BASIL ROAD
3-035920	D. GIUSTI	18 STONE RIDGE ROAD
3-038687	D & B SERVICE STATION INC.	316 MAIN STREET
3-068098	FRANCISCAN SISTERS OF THE ATONEMENT	ST FRANCIS CONVENT GRAYMOOR
3-068241	FRANCISCAN SISTERS OF THE ATONEMENT	MOTHER LURANA HOUSE
3-122904	GLENCLYFFE	ROUTE 9D BOX 192
3-138819	POLHEMUS CONSTRUCTION CO,INC.	12 MANITOU STATION ROAD
3-174947	FRIARS OF ATONEMENT	ROUTE 9 D GRAYMOOR
3-179345	AT&T PUTNAM VALLEY NEW YORK FACILITY	RD #1 BOX 367
3-180254	E & E ALLEN	349 MAIN STREET

<sup>42</sup> NYSDEC 2018. Bulk Storage Database Search. [dec.ny.gov/cfm/externalapps/derexternal/index.cfm?pageid=4](http://dec.ny.gov/cfm/externalapps/derexternal/index.cfm?pageid=4)

3-408956	HAROLD LYONS & SONS INC	3175 ROUTE 9
3-409367	NYS DOT	1659 ROUTE 301
3-411736	FRIARS OF THE ATONEMENT	US ROUTE 9 - GRAYMOOR
3-413070	APPALACHIAN EQUITIES LLC	1467 ROUTE 9
3-486116	LINE DRIVE PROPERTIES; LLC	3021 ROUTE 9
3-600477	GARRISON YACHT CLUB	GARRISON LANDING
3-600562	VAMCO REALTY OF PEEKSKILL INC.	3090 ROUTE 9
3-600626	STEPHEN GARY WEST	ROUTE 9
3-600775	GLYNWOOD CENTER	ROUTE 301
3-600782	RT 9 AUTO SERVICE INC.	3467 ROUTE 9
3-600909	TOWN OF PHILIPSTOWN HIGHWAY	50 FISHKILL ROAD
3-601260	VILLAGE OF COLD SPRING	49 FAIR STREET
3-601291	GARRISON MART	1135 ROUTE 9D
3-601353	HRF DOCKSIDE	10 WEST STREET
3-601429	BADEY & WATSON; P.C.	3063 ROUTE 9
3-601483	PIDALA OIL CO.; INC.	3524 ROUTE 9
3-601498	INN CREDIBLE CATERERS - BREAKNECK LODGE	3250 ROUTE 9D
3-601529	GARRISON GARAGE	1627 ROUTE 9
3-601552	DOWNNEY PROPERTY	MARKET STREET
3-601664	R&N REALTY CORP.	3315 ROUTE 9
3-601733	THE GARRISON INSTITUTE	14 MARY'S WAY ROUTE 9D
3-601942	NORTH HIGHLANDS FIRE STATION	504 FISHKILL ROAD
3-601984	RDR EQUITIES LLC	1510 ROUTE 9
3-602031	GARRISON GOLF CLUB	2015 ROUTE 9
3-602098	CLAUDIO MARZOLLO COMMUNITY CENTER	107 GLENCLYFFE DRIVE
3-602101	RIVERVIEW INDUSTRIES INC.	3012 ROUTE 9
3-602108	RIVERVIEW INDUSTRIES; INC.	3006 ROUTE 9
3-602221	IMP. DEVELOPMENT CORP.	37 FAIR STREET
3-602389	MAVIS DISCOUNT TIRE	3212 ROUTE 9
3-602400	OLSPAN; LLC	2700 ROUTE 9
3-602414	FORMER JULIA BUTTERFIELD HOSPITAL	65 PAULDING AVENUE
3-991148	FLINN RESIDENCE	88 CANOPUS HILL ROAD

## Chapter 4. Habitats and Wildlife

### 22. NYS Parks Biodiversity Indicator

#### *Description:*

According to Philipstown's 2007 Natural Resource and Open Space Protection Plan, *biodiversity* is defined as the "variety of plants, animals and habitats that make up an ecosystem, and the interconnectedness of the system. Simply put, one species depends on many other species and habitats to live in balance - and to be sustained - including humans. The interdependence of species and ecosystems is not always obvious, and impairing one system or species can have serious, unintended consequences for biodiversity, and health of our community."<sup>1</sup>

According to the NYS Office of Parks, Recreation and Historic Preservation, "Intact, connected habitats are critical for the long-term survival of native biodiversity (plants, animals, and their habitats). To aid in biodiversity conservation, New York State Parks created a Biodiversity Indicator Tool (BIT). This GIS-based tool indicates areas throughout the state with potentially high biodiversity, including common and rare species and their habitats.

"This conservation planning tool can help inform decisions related to land conservation, land-use planning, and biodiversity protection, and can be useful for state agencies, land trusts, municipalities, and others. The tool can help to identify opportunities for open space protection statewide and for maintaining habitat connectivity between protected lands and natural areas across the landscape. While there are many criteria used for open space acquisition and other land protection measures, the Biodiversity Indicator Tool can be utilized to incorporate biodiversity into the decision making process. The BIT was developed using a scientifically-based methodology, and provides a credible basis for site comparisons when planning for open space conservation.

"The Biodiversity Indicator Tool was constructed by adding a suite of individual data layers, and then rescoring the combined result to a convenient scale of 0 – 100. These input layers included the richness of rare or threatened animals and plants; the presence of significant natural communities; the richness of common vertebrate species; the presence and size of contiguous blocks of core forest; the presence of other natural lands, such as grasslands; the presence of wetlands; proximity to streams and water bodies; and proximity to areas of high environmental stress caused by anthropogenic features and activities. Higher scores indicate that more biodiversity features from the input data layers were present; lower scores indicate fewer

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<sup>1</sup> Chmar, Andy, *et al.*, Philipstown Natural Resources and Open Space Protection Plan, Comprehensive Plan Implementation Subcommittee on Natural Resources, Town of Philipstown, 2007, <https://www.philipstown.com/Final%20Draft%20Open%20Space%20Plan%20Oct%202007.pdf>



co-occurring features. The Biodiversity Indicator gives a general indication of areas that may have high value for biodiversity. As such, it is limited by the accuracy and choice of data layers used to construct it. The Biodiversity Indicator is a predictive model and is not a substitute for field work or detailed ecological knowledge of existing conditions on the ground.”<sup>2</sup>

It is essential to note that although this BIT resource was originally developed to measure biodiversity in state parks and their adjacent lands, it has been expanded upon and is now considered a statewide tool for indicating biodiversity levels on all types of lands throughout New York State. That said, since some of the input data on flora and fauna are much more developed for State Park lands (due to the ease of access to such lands compared to private property), there is a bias in the tool towards higher ratings for park lands. Nonetheless, “the Biodiversity Indicator Tool can support decision making in four key arenas at different geographic scales: 1) The tool provides information about potentially high biodiversity locations within State Parks and Sites; 2) BIT also provides priority ranking of areas for biodiversity protection on lands adjacent to OPRHP lands; 3) The tool can help identify opportunities for maintaining or increasing connectivity between State Park lands and natural areas within the landscape; and 4) Finally, the tool can be used to identify opportunities for open space protection statewide.”<sup>3</sup>

For more on the BIT tool, visit:

<https://parks.ny.gov/documents/environment/BITToolSummary.pdf>

Also, although we did not include it on the map because it covers the entire town, Philipstown is part of the “Hudson Highlands East” and “Mid Hudson River” Significant Biodiversity Areas as determined by the NYSDEC and its program partners: “The New York State Department of Environmental Conservation (NYSDEC) Hudson River Estuary Program worked with the New York Cooperative Fish and Wildlife Research Unit at Cornell University and the NY Natural Heritage Program to develop Significant Biodiversity Areas (SBAs) for the Hudson River estuary region of New York State. SBAs are landscape areas with a high concentration of biological diversity or value for regional biodiversity. As a set, the 22 areas count for much of the range in biodiversity found in the region, but should not be interpreted as the only important areas within the region. The SBAs were first described and published in Penhollow et al. (2006) (<http://www.dec.ny.gov/lands/5096.html>).”

“SBAs are defined by unique topography, geology, hydrology, and biology that distinguish them from neighboring areas. Biologists analyzed existing data provided by the US Fish and Wildlife Service (USFWS 1997), New York Natural Heritage Program (Finton et al. 1999, Finton et al.

<sup>2</sup> NYS Office of Parks, Recreation and Historic Preservation, “Biodiversity Indicator Tool,” <https://parks.ny.gov/environment/biodiversity-tool.aspx>

<sup>3</sup> NYS Office of Parks, Recreation and Historic Preservation, “Biodiversity Indicator Tool (BIT) Product Summary, September 6th, 2016, <https://parks.ny.gov/documents/environment/BITToolSummary.pdf>



2000, Howard et al. 2002), the National Audubon Society (Wells 1998), and the New York Cooperative Fish and Wildlife Research Unit (Smith et al. 2001) to determine the general locations of significant ecological features. The areas were then further inventoried and the boundaries refined following two years of field survey by the NY Natural Heritage Program (Howard et al. 2002).

“Significant Biodiversity Areas carry no regulatory designation. Instead, it is hoped that recognition of these areas will serve as a basis for their voluntary conservation through conservation partnerships involving multiple stakeholders. Landscape conservation initiatives focusing on the Shawangunk Ridge, Hudson Highlands, and Albany Pine Bush involve partners such as non-profit organizations, landowners, businesses, and government agencies and serve as regional models for conservation of SBAs. The identification of SBAs supports research, monitoring, and conservation efforts focused on conserving the patterns and processes that maintain biodiversity at the local to northeast regional scales.”<sup>4</sup> More information on our local SBAs can be found at: [https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hrebcf2sba.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrebcf2sba.pdf)

### *Findings:*

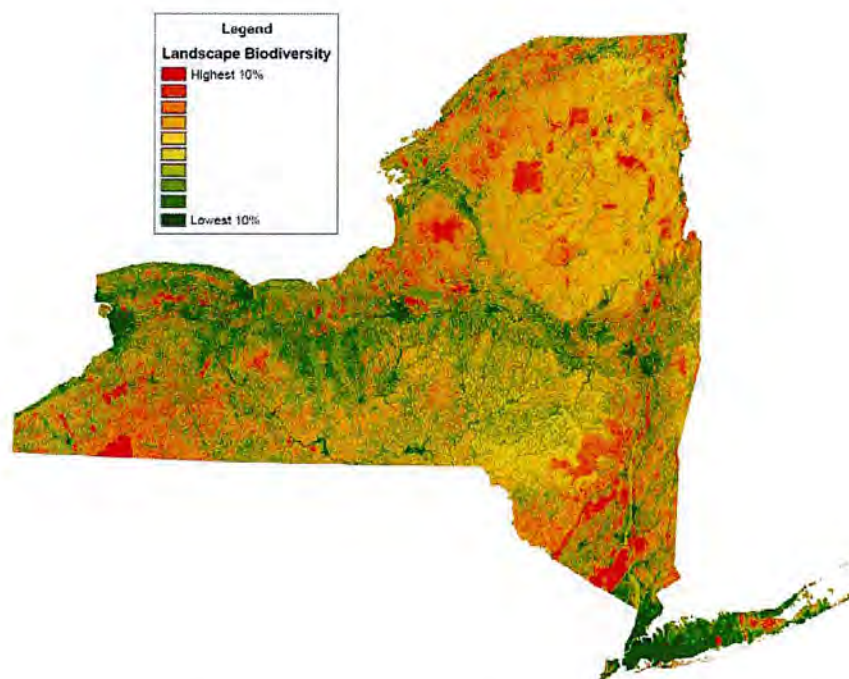
As the map shows, Philipstown has large expanses of extremely high biodiversity landscapes. Areas of note include the various sections of Hudson Highlands State Park, Constitution Marsh, Clarence Fahnestock State Park, and sections along the eastern border of the town, many of which are already protected as conservation easements or public lands. It is no coincidence that the areas that have the highest biodiversity also tend to be the largest contiguous protected areas. Diverse ecosystems need large areas to satisfy the needs of their innumerable life forms, and thus large forest blocks such as those found in the State parks and additional connected protected areas offer the best environment for species to flourish. On the other hand, one can see that despite many areas on the map being forested (see Section 38. Land Cover and Forest Types), those that are not part of large forest blocks tend to have much lower biodiversity. Forests divided by roads and other forms of development tend to be somewhat isolated and are hindered in their ability to provide sufficient resources for a complex and highly diverse ecosystem. This map clearly shows the importance of forest connectivity and large forest blocks. Furthermore, the map also shows how incredibly diverse Constitution Marsh is, despite it being a small area surrounded by low-biodiversity areas, such as the Village of Cold Spring. This highlights even further the importance of protecting these estuary wetlands. Also, most of the streams throughout the town show up on the map as red areas, which also emphasizes how important it is to protect our waterways, not only for the sake of the life forms that live in and along them, but also for those forms of life that travel from one biodiverse area to another via our stream corridors.

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<sup>4</sup> NYSDEC *et al.*, Hudson River Significant Biodiversity Areas, Metadata, 2006, [http://gis.ny.gov/gisdata/metadata/nysdec.hr\\_sba.xml](http://gis.ny.gov/gisdata/metadata/nysdec.hr_sba.xml)

The areas that show up looking grey on the map are sections that did not receive a biodiversity score and are thus “Not Rated.” Unfortunately we were unable to find an explanation for why some small areas were not rated. However, it is fairly safe to assume that their score is similar to the areas surrounding them. Further study could confirm their quality of habitat compared to similar areas and thus deduce a comparative biodiversity score.

We have also included the following figure to emphasize just how rare and precious the biodiversity found in our town is. As you can see in Figure 1, there are some but not many areas within New York State that show up as concentrations of red. One of the areas that do show up mostly red is the Hudson Highlands in the southeast part of New York State, from Rockland County into Putnam and Dutchess Counties. The red section to the east of the Hudson River comprises Hudson Highlands State Park and Clarence Fahnestock State Park in addition to the other areas mentioned above. This figure shows that we live in one of the most concentrated biodiverse areas not only in the Hudson Valley but in the entire state of New York. Thus, we have a great responsibility to protect it, and especially to ensure that the various high biodiversity areas within our Town are connected so that wildlife can move from one area to another as easily as possible.



**Figure 1:** Statewide distribution of scores for the Biodiversity Indicator Tool.

Source: <https://parks.ny.gov/documents/environment/BITToolSummary.pdf>



In terms of the two Significant Biodiversity Areas that occur in Philipstown, a much more detailed description of each may be found at the following website, although we will also provide brief summaries below:

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hrebcf2sba.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrebcf2sba.pdf)

#### Hudson Highlands East:

“This significant area represents one of the largest unfragmented landscape blocks in New York State that creates an important landscape corridor that links the mid-Atlantic states (New Jersey and Pennsylvania) with New England. Along with the continuous and relatively unfragmented forests, the area contains higher elevation ridges and several networks of relatively undisturbed wetlands in the valleys. The ecological significance of this area relates to its large, contiguous forest and wetland habitats and the disturbance sensitive species dependent on these habitats, as well as the diversity of plants, communities, and animals unique to this region.”<sup>5</sup>

#### Mid Hudson River:

“The Hudson River is one of the most extensive freshwater tidal river systems in the northeastern United States. The tidal communities found here are regionally and globally rare. Wetland habitats are the cornerstone of the Hudson River Estuary ecosystem because they play a critical role as nursery grounds for fish and shellfish species, nesting sites and migration stops for birds, and sources of nutrients to the food chain. The marshes and tidal flats of the Hudson River Estuary contribute essential nutrients to aquatic and terrestrial food webs that extend throughout the river system and far into the Atlantic Ocean.

“The productive and regionally significant Mid-Hudson River estuary is generally fresh water in winter and has low salinity in summer. This section encompasses regionally significant spawning migratory and nursery habitat for anadromous, estuarine, and freshwater fish, important winter feeding and roosting areas for the federally listed threatened bald eagle, and globally and regionally rare brackish and freshwater tidal communities and plants. The open water and tidal wetlands in this reach are spawning and nursery habitats and a migratory pathway between the upper and lower estuary for anadromous and resident fish.”<sup>6</sup>

#### *Further Study:*

As noted above, further study could confirm the biodiversity scores of areas on the map that show up grey or brown by comparing their habitats to similar areas and deducing a similar score for the unassessed areas.

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<sup>5</sup> NYSDEC, Hudson River Estuary Wildlife and Habitat Conservation Framework (p. 59-106) Part II - Significant Biodiversity Area Descriptions, 2006, [https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hrebcf2sba.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrebcf2sba.pdf)

<sup>6</sup> Ibid.

Also, once the town's ArcGIS Online mapping tool is live, the town and community will be able to overlap layers onto this Biodiversity Indicator layer to specifically prioritize parcels for protection, reforestation, and so forth, in addition to comparing how the town's zoning areas and land uses align or conflict with the biodiversity ratings of areas throughout the town.

*Data Sources:*

- Biodiversity Indicator
  - New York State Office of Parks, Recreation and Historic Preservation Biodiversity Indicator Tool  
<https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1338>

## 23. Significant Natural Communities

*Description:*

According to the NYSDEC's Hudson River Natural Resource Mapper, "A natural community is an assemblage of interacting plant and animal populations that share a common environment; particular assemblages occur across the landscape in areas with similar environmental conditions. Natural communities include wetlands, forests, grasslands, streams, and other types of habitats, ecosystems, and natural areas. They are considered significant from a statewide perspective because they are rare or high quality based on size, habitat condition, and quality of the surrounding landscape. Significant natural communities may provide habitat for rare plants and animals, support intact ecological processes, and contribute other ecosystem benefits. Conservation and management guidance for significant natural communities is available through the New York Natural Heritage Program (NYNHP) online conservation guides."<sup>7</sup>

The features on this map "represent occurrences of rare or high-quality natural communities (ecological communities), as recorded by the New York Natural Heritage Program. An occurrence is one natural community type at one location. Examples of community types include deep emergent marsh, red maple-hardwood swamp, dwarf shrub bog, hemlock-northern hardwood forest, and tidal creek."<sup>8</sup> Although this is a highly useful resource to guide conservation efforts, it should be noted that land with conservation easements aren't necessarily regularly included in NYNHP studies.

<sup>7</sup> New York Natural Heritage Program, Significant Natural Communities, Hudson Valley Natural Resource Mapper, 2018, <https://giservices.dec.ny.gov/gis/hvnrm/layerInfo.html#snc>

<sup>8</sup> GIS.NY.GOV, Natural Heritage Community Occurrences - NYNHP, Description, <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1241>



### *Findings:*

There are thirteen different Significant Natural Communities located within or along the borders of Philipstown, as the map shows. Some, such as Chestnut Oak Forest, Appalachian Oak-Hickory Forest and Oak-Tulip Tree Forest, cover large or fairly large areas of Philipstown. Others, such as Rocky Summit Grassland, Red Cedar High Summit and Acidic Talus Slope Woodland (to name a few), have limited or very small areas in or around Philipstown. Each Significant Community is summarized below in Table 8. NYS Natural Heritage Communities - Community Types, which includes community descriptions, identification characteristics, state and global vulnerability rankings, and a link to more information on each community.

We have included the following detailed description of how the New York Natural Heritage Program determines the state and global rankings for each natural community (this is the same ranking system used for rare plants and animals covered in subsequent sections):

“Each natural community is assigned a rank based on its rarity and vulnerability. Like all state heritage programs, the NY Natural Heritage ranking system assesses rarity at two geographic scales. Each community is assigned a global rank and a state rank. The global rank reflects the rarity of the community throughout its range, whereas the state rank indicates its rarity within New York State. Both of these ranks are usually based on the range of the community, the number of occurrences, the viability of the occurrences, and the vulnerability of the community around the globe or across the state. As new data become available, the ranks may be revised to reflect the most current information.”<sup>9</sup>

*“Explanation of ranks and codes used in Natural Heritage database reports:* Each element has a global and state rank as determined by NY Natural Heritage. These ranks carry no legal weight but are believed to accurately reflect the relative rarity given of the element. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. The global rank for communities is an estimate of the rarity of the state type throughout its range:

#### “STATE RANK

- S1 = Critically Imperiled. Typically 5 or fewer occurrences, very few remaining individuals (for species), acres, or miles of stream, or some factor of its biology and/or ecology making it especially vulnerable in New York State.

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<sup>9</sup> Edinger, G. J., *et al.*, 2014. Ecological Communities of New York State, Second Edition, New York Natural Heritage Program, NYSDEC, p. xi, [http://www.dec.ny.gov/docs/wildlife\\_pdf/ecocomm2014.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/ecocomm2014.pdf)

- S2 = Imperiled. Typically 6 to 20 occurrences, few remaining individuals (for species), acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
- S3 = Vulnerable. Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
- S4 = Apparently secure in New York State.
- S5 = Demonstrably secure in New York State.
- SH = Historically known from New York State, but not seen in the past 20 years.
- SX = Apparently extirpated from New York State.
- SE = Non-native species, not native to New York State.
- SR = State report only, no verified specimens (for species) known from New York State.
- SU = Status unknown.

#### “GLOBAL RANK

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology and/or ecology.
- G2 = Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.
- G3 = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or vulnerable to extinction throughout its range because of other factors.
- G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- GH = Historically known, with the expectation that it might be rediscovered.
- GX = Species believed to be extinct.
- GU = Status unknown.<sup>10</sup>

As Table 8 shows, some natural communities within Philipstown are considered apparently or demonstrably secure at the state or global level, emphasizing the effectiveness of conservation efforts so far to protect such communities and also the resilience that such communities may have in the face of the pressures from human development. On the other hand, there are also numerous communities within Philipstown which are considered vulnerable, imperiled or even

<sup>10</sup> Edinger, G. J., *et al.*, 2014. Ecological Communities of New York State, Second Edition, New York Natural Heritage Program, NYSDEC, p. 145, [http://www.dec.ny.gov/docs/wildlife\\_pdf/ecocomm2014.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/ecocomm2014.pdf)



critically imperiled, and thus deserve immediate attention to prioritize efforts to protect them through town policy and the efforts of local organizations, volunteers and property owners. Luckily many of these areas are currently protected as public lands or through private conservation easements, but there may be areas that could be better protected. This will be easier to determine once the town's ArcGIS Online Mapper is live and allows the overlapping of this map layer with various other layers, such as the town's Zoning Districts, Land Cover and Forest Types, and Conservation Open Areas. In the meantime, although listed in Table 8 in more detail, and for immediate reference, Philipstown's most jeopardized natural communities (based on the most conservative state ranking) are:

**Critically Imperiled (S1):**

- Brackish Intertidal Mudflats

**Imperiled (S2):**

- Oak-Tulip Tree Forest

**Vulnerable (S3):**

- Acidic Talus Slope Woodland
- Hemlock-Northern Hardwood Forest
- Pitch Pine-Oak-Heath Rocky Summit
- Red Cedar Rocky Summit
- Rocky Summit Grassland
- Highbush Blueberry Bog Thicket
- Brackish Tidal Marsh

Although the descriptions of "Threats" to these natural communities are unfortunately too long to include here, they can be read at the linked website listed in Table 8 for each community. These links lead to pages within the New York Natural Heritage Program's "Online Conservation Guides" under the "Community Guides" section, for general reference.<sup>11</sup>

*Further Study:*

According to the Hudson River Estuary Program NRI Guidebook "it is important to note that since many areas have never been surveyed for rare species, the NYNHP database is incomplete. Lack of records shouldn't be interpreted as evidence that rare species or significant natural communities are absent."<sup>12</sup> As the map shows, there are significant areas within Philipstown that

<sup>11</sup> New York Natural Heritage Program, Ecological Community Guides, NYSDEC, 2020, <https://guides.nynhp.org/communities/>

<sup>12</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

may not have been included in the NYNHP Significant Natural Communities study due to their lack of public park protections. Thus, a local study to compare identified significant natural communities to other areas in the town could yield additional areas worthy of special attention and protections.

Also, the Hudson River Estuary Program recommends carrying out an updated “biodiversity assessment... to document examples of rare or significant natural communities in the study area and also provide opportunities to document rare plants and animals in the field.”<sup>13</sup> Such a study could complement the data presented in other sections of this chapter and could include local photographs of documented species within the studied natural communities.

#### *Data Sources:*

- NYS Natural Heritage Communities
  - Natural Heritage Community Occurrences - NYNHP  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1241>

**Table 8. NYS Natural Heritage Communities - Community Types<sup>14</sup>**

Common Name	Description	Characteristics Most Useful for Identification	State / Global Rank	Link to More Information
Acidic Talus Slope Woodland	An open to closed canopy woodland that occurs on talus slopes composed of non-calcareous bedrock such as granite, quartzite, or schist.	The combination of vegetation indicating acidic soils and open areas showing a broken-up rocky slope (talus) generally identifies this community. Acidic tolerant trees include chestnut oak, red oak, white oak, white pine, red pine, paper birch, black birch, and mountain paper birch. Rock polypody is a fern often found on the rocks.	S3 - Vulnerable / G4? - Apparently Secure (uncertain)	<a href="https://guides.nynhp.org/acidic-talus-slope-woodland/">https://guides.nynhp.org/acidic-talus-slope-woodland/</a>
Appalachian Oak-Hickory Forest	A hardwood forest that occurs on well-drained sites, usually on ridge tops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several variants. The dominant trees include one or more species of oak.	This forest invariably has a mixture of tree oaks (red, white, black) and hickories (pignut, shagbark, sweet pignut). Also, maple-leaf viburnum is commonly found in the understory.	S4 - Apparently Secure / G4G5 - Apparently or Demonstrably Secure	<a href="https://guides.nynhp.org/appalachian-oak-hickory-forest/">https://guides.nynhp.org/appalachian-oak-hickory-forest/</a>
Chestnut Oak Forest	A hardwood forest that occurs on well-drained and often rocky sites in glaciated portions of the Appalachians and on the coastal plain. The combined cover of chestnut, red,	Dominant trees are typically chestnut oak ( <i>Quercus montana</i> ) and red oak ( <i>Q. rubra</i> ). Common associates are white oak ( <i>Q. alba</i> ), black oak ( <i>Q. velutina</i> ), and red maple ( <i>Acer rubrum</i> ). American chestnut	S4 - Apparently Secure / G5 - Secure	<a href="https://guides.nynhp.org/chestnut-oak-forest/">https://guides.nynhp.org/chestnut-oak-forest/</a>

<sup>13</sup> *Ibid.*

<sup>14</sup> New York Natural Heritage Program, Ecological Community Guides, NYSDEC, 2020, <https://guides.nynhp.org/communities/>



	white, and black oak should generally exceed 25%. Typically, there is more chestnut oak than hickories. The understory may vary, with high abundance of mountain laurel, huckleberry, or Pennsylvania sedge. At least three edaphic variants with different understory dominants are known: 1) a tall shrub-dominated understory with 60-90% mountain laurel, 2) a short shrub-dominated understory with dense dwarf heaths, such as black huckleberry, and 3) a herb-dominated understory with Pennsylvania sedge.	( <i>Castanea dentata</i> ) was a common associate in these forests prior to the chestnut blight; chestnut sprouts are still found in some stands. The shrub layer is predominantly ericaceous, characteristic shrubs are black huckleberry ( <i>Gaylussacia baccata</i> ), mountain laurel ( <i>Kalmia latifolia</i> ), and blueberry ( <i>Vaccinium pallidum</i> ). Common ground layer plants are Pennsylvania sedge ( <i>Carex pensylvanica</i> ), wild sarsaparilla ( <i>Aralia nudicaulis</i> ), wintergreen ( <i>Gaultheria procumbens</i> ), and cushions of the moss <i>Leucobryum glaucum</i> .		
Hemlock-Northern Hardwood Forest	A mixed forest that typically occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps. Eastern hemlock ( <i>Tsuga canadensis</i> ) is codominant with any one to three of the following tree species: American beech ( <i>Fagus grandifolia</i> ), sugar maple ( <i>Acer saccharum</i> ), red maple ( <i>A. rubrum</i> ), black cherry ( <i>Prunus serotina</i> ), white pine ( <i>Pinus strobus</i> ), yellow birch ( <i>Betula alleghaniensis</i> ), black birch ( <i>B. lenta</i> ), red oak ( <i>Quercus rubra</i> ), and basswood ( <i>Tilia americana</i> ). The relative cover of eastern hemlock is quite variable, ranging from nearly pure stands in some steep ravines to as little as 20% of the canopy cover. Striped maple ( <i>Acer pensylvanicum</i> ) is often prominent as a mid-story tree. This is a broadly defined and very widespread community with many variants. For example, in the Hudson Valley, eastern hemlock is sometimes codominant with red oak; in the Adirondacks, yellow birch and sugar maple are sometimes codominant.	A close-canopy forest with eastern hemlock present in the canopy. Hemlock may occur in nearly pure stands, with nearly 100% canopy cover, or reach an abundance as low as 20% canopy cover, intermingled with other canopy trees.	S3 - Vulnerable / G4G5 - Apparently or Demonstrably Secure	<a href="https://guides.nvnhp.org/hemlock-northern-hardwood-forest/">https://guides.nvnhp.org/hemlock-northern-hardwood-forest/</a>
Oak-Tulip Tree Forest	Oak tulip-tree forest is a mesophytic hardwood forest community that occurs on moist, well-drained sites in southeastern New York. The dominant trees include a mixture of oaks ( <i>Quercus</i> spp.), tulip tree ( <i>Liriodendron tulipifera</i> ), American beech ( <i>Fagus grandifolia</i> ), black birch ( <i>Betula lenta</i> ), and red maple ( <i>Acer rubrum</i> ). The subcanopy often includes flowering dogwood ( <i>Cornus florida</i> ), and common understory associates include witch hazel ( <i>Hamamelis virginiana</i> ), sassafras ( <i>Sassafras albidum</i> ), and lowbush blueberries ( <i>Vaccinium angustifolium</i> , <i>V. pallidum</i> ). The herb layer is moderate to sparse and may include New York fern ( <i>Thelypteris noveboracensis</i> ), white wood aster ( <i>Eurybia divaricata</i> ), and Solomon's plume ( <i>Maianthemum racemosum</i> ).	A moist, well-drained, closed-canopy hardwood forest with codominating tulip tree and oak species. The subcanopy often includes flowering dogwood, and other common understory associates include witch hazel, sassafras, and lowbush blueberry.	S2S3 - Imperiled or Vulnerable / G4 - Apparently Secure	<a href="https://guides.nvnhp.org/oak-tulip-tree-forest/">https://guides.nvnhp.org/oak-tulip-tree-forest/</a>

Pitch Pine-Oak-Heath Rocky Summit	A community that occurs on warm, dry, rocky ridge tops and summits where the bedrock is non-calcareous (such as quartzite, sandstone, or schist), and the soils are more or less acidic. The vegetation may be sparse or patchy, with numerous rocky outcrops. This community is broadly defined and includes examples that may lack pines and instead are dominated by scrub oak or heath shrubs; this variation is apparently related to fire regime. Pitch pine-oak-heath rocky summit communities are often surrounded by chestnut oak forest.	This community occurs on rocky slopes, ridges, or summits. When visiting these dry rocky sites, look for a short shrubby layer of heath species with scattered taller scrub oaks, tree oaks, and pitch pine. Characteristic species include pitch pine ( <i>Pinus rigida</i> ), chestnut oak ( <i>Quercus montana</i> ), red oak ( <i>Q. rubra</i> ), and scarlet oak ( <i>Q. coccinea</i> ). Other trees may include black cherry ( <i>Prunus serotina</i> ), red maple ( <i>Acer rubrum</i> ), gray birch ( <i>Betula populifolia</i> ), choke-cherry ( <i>Prunus virginiana</i> ), shadbush ( <i>Amelanchier arborea</i> ), white pine ( <i>Pinus strobus</i> ), and a few black gum ( <i>Nyssa sylvatica</i> ). Characteristic shrubs include scrub oak ( <i>Q. ilicifolia</i> ), common juniper ( <i>Juniperus communis</i> ), blueberry ( <i>Vaccinium angustifolium</i> , <i>V. pallidum</i> ), sweet-fern ( <i>Comptonia peregrina</i> ), and black huckleberry ( <i>Gaylussacia baccata</i> ). Other shrubs include highbush blueberry ( <i>Vaccinium corymbosum</i> ), sheep laurel ( <i>Kalmia angustifolia</i> ), mountain laurel ( <i>Kalmia latifolia</i> ), chokeberry ( <i>Aronia</i> spp.), and deerberry ( <i>Vaccinium stamineum</i> ). Characteristic herbs include Pennsylvania sedge ( <i>Carex pensylvanica</i> ), poverty-grass ( <i>Danthonia spicata</i> ), common hairgrass ( <i>Deschampsia flexuosa</i> ), three-toothed cinquefoil ( <i>Potentilla tridentata</i> ), and cow-wheat ( <i>Melampyrum lineare</i> ). Other herbs include bracken fern ( <i>Pteridium aquilinum</i> ), wintergreen ( <i>Gaultheria procumbens</i> ), little bluestem ( <i>Schizachyrium scoparium</i> ), and pink corydalis ( <i>Corydalis sempervirens</i> ). Characteristic lichens include various crustose, foliose, and fruticose lichens, such as <i>Cetraria arenaria</i> , <i>Cladonia</i> spp. and <i>Cladonia</i> spp. Characteristic mosses include hair cap moss ( <i>Polytrichum</i> spp.) and pincushion moss ( <i>Leucobryum glaucum</i> ).	S3S4 - Vulnerable or Apparently Secure / G4 - Apparently Secure	<a href="https://guides.nvnhp.org/pitch-pine-oak-heath-rocky-summit/">https://guides.nvnhp.org/pitch-pine-oak-heath-rocky-summit/</a>
Red Cedar Rocky Summit	A community that occurs on warm, dry, rocky ridge tops and summits where the bedrock is calcareous (such as limestone or dolomite, but also marble, amphibolite, and calcsilicate rock), and the soils are more or less calcareous. The vegetation may be sparse or patchy, with numerous lichen-covered rock outcrops. This community is often surrounded by Appalachian oak-hickory forest. Eastern red cedar ( <i>Juniperus virginiana</i> ) is a characteristic tree. In many examples, dead or dying red cedars may be evident, which is often associated with the severe heat stress characteristic of this community (Edinger et al. 2014).	Red cedar rocky summits are characterized by a sparse to moderate woodland located on a rocky outcrop, ridge, or summit, featuring canopy species such as eastern red cedar, red oak ( <i>Quercus rubra</i> ), shagbark hickory ( <i>Carya ovata</i> ), white ash ( <i>Fraxinus americana</i> ), eastern hop hornbeam ( <i>Ostrya virginiana</i> ), and serviceberry ( <i>Amelanchier</i> spp.). A large variety of shrub and herbaceous species may comprise the understory, including lowbush blueberry ( <i>Vaccinium pallidum</i> , <i>V. angustifolium</i> ), scrub oak ( <i>Quercus ilicifolia</i> ), downy arrowwood ( <i>Viburnum rafinesquianum</i> ), little bluestem ( <i>Schizachyrium scoparium</i> ), tufted hairgrass ( <i>Deschampsia flexuosa</i> ), rockcresses ( <i>Arabis</i> spp.), and maidenhair spleenwort ( <i>Asplenium trichomanes</i> ). Characteristic nonvascular species include lichens such as <i>Cladonia</i> spp. ,	S3 - Vulnerable / G3G4 - Vulnerable or Apparently Secure	<a href="https://guides.nvnhp.org/red-cedar-rocky-summit/">https://guides.nvnhp.org/red-cedar-rocky-summit/</a>



		and bryophytes such as <i>Polytrichum</i> spp		
Rocky Summit Grassland	A grassland community that occurs on rocky summits, ridges, and exposed outcrops. The vegetation is dominated by herbaceous plants, especially grasses. Woody species, such as red oak ( <i>Quercus rubra</i> ) and lowbush blueberry ( <i>Vaccinium pallidum</i> , <i>V. angustifolium</i> ), are sparse, and may be present near the community margins (Edinger et al. 2002).	Rocky summit grasslands occur on rocky outcrops and summits with thin soils, and are dominated by grass species such as little bluestem ( <i>Schizachyrium scoparium</i> ), tufted hairgrass ( <i>Deschampsia flexuosa</i> ), poverty-grass ( <i>Danthonia spicata</i> , <i>D. compressa</i> ), and Indian grass ( <i>Sorghastrum nutans</i> ). Also common are Pennsylvania sedge ( <i>Carex pensylvanica</i> ), ebony spleenwort ( <i>Asplenium platyneuron</i> ), and fragrant goldenrod ( <i>Solidago odora</i> ).	S3 - Vulnerable / G3G4 - Vulnerable or Apparently Secure	<a href="https://guides.nvnhp.org/rocky-summit-grassland/">https://guides.nvnhp.org/rocky-summit-grassland/</a>
Highbush Blueberry Bog Thicket	An ombrotrophic or weakly minerotrophic peatland dominated by tall, deciduous, ericaceous shrubs and peat mosses, the water is usually nutrient-poor and acidic. The dominant shrub is usually highbush blueberry. At least three regional variants are recognized in New York. The first is found throughout central and western New York, the second is primarily a northern variant, and the third is a southern variant with coastal plain species.	A peatland that is dominated by tall (2 m) highbush blueberry ( <i>Vaccinium corymbosum</i> ) shrubs.	S3 - Vulnerable / G4 - Apparently Secure	<a href="https://guides.nvnhp.org/highbush-blueberry-bog-thicket/">https://guides.nvnhp.org/highbush-blueberry-bog-thicket/</a>
Brackish Tidal Marsh	Brackish tidal marsh communities occur where water salinity levels are between 0.5 to 18 parts per thousand (ppt) and water is less than 2 m (6 feet) at high tide. The vegetation is very dense, dominated by graminoid species, and is made up of a mix of salt marsh and freshwater tidal marsh species. Characteristic species include narrowleaf cattail ( <i>Typha angustifolia</i> ), crimson eyed rose mallow ( <i>Hibiscus moscheutos</i> ), seaside goldenrod ( <i>Solidago sempervirens</i> ), saltmarsh fleabane ( <i>Pluchea odorata</i> ), and various bulrushes ( <i>Schoenoplectus</i> spp., <i>Bolboschoenus</i> spp.). Brackish tidal marshes that are dominated by reedgrass ( <i>Phragmites australis</i> ssp. <i>australis</i> ) as a result of anthropogenic disturbance are classified as cultural communities (e.g., estuarine impoundment marsh, estuarine dredge spoil). Brackish marshes that have had the tidal influence restricted may be classified as a palustrine cultural community, such as reedgrass/purple loosestrife marsh.	A brackish marsh community made up of a mix of salt marsh and freshwater tidal marsh species dominated by tall graminoids. Water salinity values range from 0.5 to 18 ppt and water depth is less than 2 m (6 feet).	S3S4 - Vulnerable or Apparently Secure / G4 - Apparently Secure	<a href="https://guides.nvnhp.org/brackish-tidal-marsh/">https://guides.nvnhp.org/brackish-tidal-marsh/</a>
Brackish Intertidal Mudflats	Brackish intertidal mudflat communities occur on exposed intertidal mudflats in which the salinity ranges from 0.5 to 18 parts per thousand (ppt). The vegetation is usually sparse, and consists of aquatic species such as spongy arrowhead ( <i>Sagittaria montevidensis</i> ), strap-leaf arrowhead ( <i>Sagittaria subulata</i> ), mudwort ( <i>Limosella australis</i> ), and	A sparsely-vegetated intertidal community on exposed mudflats where salinity ranges from 0.5 to 18 ppt. This community, which typically has low-growing rosette-leaved plants, is submerged during high tide, and exposed at low tide.	S1 - Critically Imperiled / G3G4 - Vulnerable or Apparently Secure	<a href="https://guides.nvnhp.org/brackish-intertidal-mudflats/">https://guides.nvnhp.org/brackish-intertidal-mudflats/</a>

	tapegrass ( <i>Vallisneria americana</i> ). The community is completely submerged at high tide, and completely exposed at low tide			
Tidal River	The aquatic community of continuously flooded substrates that support no emergent vegetation. Within the river there are two zones; the deepwater zone includes areas in which substrates are usually over 2 m (6 feet) deep at low tide, the shallow zone includes submerged areas less than 2 m (6 feet) deep at low tide that lack rooted aquatic vegetation. In the river there is a vertical salinity gradient, with a surface layer of fresh water (with salinity values less than 0.5 parts per thousand) floating over a deeper layer of brackish water (with salinity values between 0.5 and 18.0 parts per thousand). Salinity values at any one place in the river may fluctuate as the tides flow in and out because the "salt wedge" of brackish water alternately rises and falls with the tides (Edinger et al. 2002).	A large river, such as the Hudson River, that has a salinity gradient (i.e., very salty at the river mouth, brackish upstream, and freshwater inland), and shows evidence of two daily tides along the shoreline.	S3 - Vulnerable / G4 - Apparently Secure	<a href="https://guides.nvnhp.org/tidal-river/">https://guides.nvnhp.org/tidal-river/</a>
Cliff Community	A community that occurs on vertical exposures of resistant, non-calcareous bedrock (such as quartzite, sandstone, or schist) or consolidated material, these cliffs often include ledges and small areas of talus. There is minimal soil development, and vegetation is usually sparse. Plant species present are somewhat dependent on the microclimate conditions, which can range from shady and moist to sun-exposed and dry. Vegetation often inhabits shallow pockets of soil that accumulate on ledges, and in cracks and crevices within the cliff wall.	Characteristic species include rock polypody ( <i>Polypodium virginianum</i> ), marginal wood fern ( <i>Dryopteris marginalis</i> ), common hairgrass ( <i>Deschampsia flexuosa</i> ), mountain laurel ( <i>Kalmia latifolia</i> ), and eastern hemlock ( <i>Tsuga canadensis</i> ). Bryophytes that are characteristic of acidic cliffs include the mosses <i>Andreaea rothii</i> , <i>Dicranum fulvum</i> , <i>Dicranum montanum</i> , white cushion moss ( <i>Leucobryum glaucum</i> ), <i>Plagiothecium laetum</i> , <i>Pohlia nutans</i> , <i>Pylaisiadelphina tenuirostris</i> , and the leafy liverworts <i>Blepharostoma trichophyllum</i> , <i>Jamesoniella autumnalis</i> , and <i>Scapania nemorea</i> . The rare two-ranked moss ( <i>Pseudotaxiphyllum distichaceum</i> ) and the uncommon leafy liverwort <i>Herbertus aduncus</i> ssp. <i>tenuis</i> are also known from acidic cliff communities. The common raven ( <i>Corvus corax</i> ) is a characteristic bird that nests on cliffs.	S4 - Apparently Secure / G5 - Secure	<a href="https://guides.nvnhp.org/cliff-community/">https://guides.nvnhp.org/cliff-community/</a>

## 24. Important Areas for Rare Species

### *Description:*

According to the Hudson River Estuary Program, "successful conservation of rare species requires protecting habitat rather than simply focusing on point locations where a species has been documented. Building on species occurrence records, the New York Natural Heritage Program has identified areas of importance for sustaining populations of rare plants and animals



based on their habitat requirements or the surrounding area required to maintain a natural community. Important Areas encompass the specific locations where rare species have been observed, habitat areas which may be used at different times of the year, and the associated areas critical to maintaining those habitats. Proactive planning that considers how species move across the landscape, with careful attention to maintaining connected habitat complexes, will contribute to the long-term survival of rare animals and to the persistence and dispersal of rare plants.”<sup>15</sup>

Data for this map were obtained from the NYNHP’s “Natural Heritage Important Areas” dataset. Important Areas “are generated using GIS Important Area spatial models (IA models) applied to occurrences of rare plants and animals and significant natural communities in the New York Natural Heritage database, or applied to observation locations of other species obtained from other sources. IA models are specific to a species or species group, and are based on the life histories and habitats of that species or species group; for communities, models are based on the community type’s size and natural ecological processes.”<sup>16</sup>

It is important to “note that information regarding the locations of rare species is considered sensitive. The distribution of information which identifies the locations of rare species or their habitats may lead to the collection or disturbance of the animals and plants at those locations. NYSDEC has the legal authority, under New York State Environmental Conservation Law, to restrict access to such information, and has adopted a policy regarding the release of information compiled by the New York Natural Heritage Program. Under this policy, the level of detail provided about the locations and identities of rare species may be limited in order to protect the sensitive resources.”<sup>17</sup>

### *Findings:*

As the map shows, Philipstown is almost completely considered important habitat for one species or another, whether plant or animal. The largest areas covering the town offer important habitat for bats, but there are also substantial areas that are important to terrestrial (land-based) animals as well as smaller areas important to wetland fauna (animals) as well as important habitat for rare plant species. As we noted in the previous section, it is important to understand that this map is not a complete picture of possible important habitats, many of which may exist in other areas within the town, but have not yet been accounted for. This map, however, gives a good summary of areas that are known to provide important habitat for rare species within and around Philipstown. Potential Species of Conservation Concern (endangered, protected, special

<sup>15</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>16</sup> NYSDEC, Natural Heritage Important Areas, Abstract, 2018, [http://gis.ny.gov/gisdata/metadata/nysdec/IA\\_Animals\\_Aquatic.html](http://gis.ny.gov/gisdata/metadata/nysdec/IA_Animals_Aquatic.html)

<sup>17</sup> NYSDEC, Request Natural Heritage Information, NY Natural Heritage Program - Information Services, <https://www.dec.ny.gov/animals/31181.html>

concern, threatened, or rare species) that may be found in these areas are summarized below in Table 9 - Plants and Table 10 - Animals. Additional species of Birds, Reptiles & Amphibians and Fish that are not included in these tables will be covered in later sections of this report.

Although summarized in the tables below, we want to lend special attention to the Important Bat Foraging Areas layer on this map. The following is from the 2018 Putnam Valley NRI, which also applies to Philipstown due to the existence of old mines and potential caves in Philipstown that may serve as locations for hibernation as well as the similarity of many of Philipstown's forests to those of neighboring Putnam Valley:

"Bat hibernacula are sites where bats hibernate over the winter, most often caves. Indiana bat (US and NY – Endangered), northern long-eared bat (US and NY – Threatened) and other priority bat species have been found in a Putnam Valley cave and the surrounding forest. Bats will return year after year to the same hibernation site and are susceptible to human disturbance and disease. The recent spread of white-nose syndrome, a fungal disease, has devastated bat colonies throughout the northeast, resulting in large die-offs of bats across the region. Mapped important areas include the immediate areas surrounding known hibernaculum (wintering shelters) and summer roost sites.

"At-risk bats, including Indiana bat, northern long-eared bat, and others, may travel long distances from their winter hibernacula during the summer months, using forested areas and stream corridors for shelter and foraging for insect prey. Female bats roost in trees and snags in maternity colonies to raise their young. Existing state and federal restrictions on tree cutting aim to protect threatened bat species, especially during the period when mothers are birthing and raising pups. Bat conservation areas depict bat summer habitat areas in Putnam Valley. NYSDEC recommends restricting any tree-cutting activities to the winter months (November 1-March 31) in areas occupied by protected bats to avoid direct impacts to the species."<sup>18</sup>

The US Fish and Wildlife Service also has restrictions on harvesting trees in order to prevent damage to federally endangered bat species. For more information, visit: <https://www.dec.ny.gov/animals/106090.html>.

For your convenience, we have also included again the following detailed description of how the New York Natural Heritage Program determines the state and global rankings for each of the species that we have listed in the tables below:

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<sup>18</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

*“Explanation of ranks and codes used in Natural Heritage database reports:* Each element has a global and state rank as determined by NY Natural Heritage. These ranks carry no legal weight but are believed to accurately reflect the relative rarity given of the element. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. The global rank for communities is an estimate of the rarity of the state type throughout its range.

#### “STATE RANK

- S1 = Critically Imperiled. Typically 5 or fewer occurrences, very few remaining individuals (for species), acres, or miles of stream, or some factor of its biology and/or ecology making it especially vulnerable in New York State.
- S2 = Imperiled. Typically 6 to 20 occurrences, few remaining individuals (for species), acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
- S3 = Vulnerable. Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
- S4 = Apparently secure in New York State.
- S5 = Demonstrably secure in New York State.
- SH = Historically known from New York State, but not seen in the past 20 years.
- SX = Apparently extirpated from New York State.
- SE = Non-native species, not native to New York State.
- SR = State report only, no verified specimens (for species) known from New York State.
- SU = Status unknown.

#### “GLOBAL RANK

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology and/or ecology.
- G2 = Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.
- G3 = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or vulnerable to extinction throughout its range because of other factors.
- G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.



- GH = Historically known, with the expectation that it might be rediscovered.
- GX = Species believed to be extinct.
- GU = Status unknown.

#### “TAXON RANK

- T1 - T5 = indicates a rank assigned to a subspecies following the Global Rank definitions above.
- Q = indicates a question exists whether or not the taxon is a good taxonomic entity.
- ? = indicates a question exists about the rank.”<sup>19</sup>

Also, the following are the definitions of New York State and Federal Legal Status for Plants and Animals:

#### “New York State Legal Status

“Animals - Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E - Endangered Species: any species which meet one of the following criteria:

- Any native species in imminent danger of extirpation or extinction in New York.
- Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T - Threatened Species: any species which meet one of the following criteria

- Any native species likely to become an endangered species within the foreseeable future in NY.
- Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

SC - Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York.

P - Protected Wildlife: (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U - Unprotected: (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.

G - Game: (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental

<sup>19</sup> Edinger, G. J., *et al.*, 2014. Ecological Communities of New York State, Second Edition, New York Natural Heritage Program, NYSDEC, p. 145, [http://www.dec.ny.gov/docs/wildlife\\_pdf/ecocomm2014.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/ecocomm2014.pdf)



Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

“Plants - The following categories are defined in regulation 6NYCRR part 193.3 and apply to New York State Environmental Conservation Law section 9- 1503.

E - Endangered Species: listed species are those with:

- 5 or fewer extant sites, or
- fewer than 1,000 individuals, or
- restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
- species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T - Threatened: listed species are those with:

- 6 to fewer than 20 extant sites, or
- 1,000 to fewer than 3,000 individuals, or
- restricted to not less than 4 or more than 7 U.S.G.S. 7 and ½ minute topographical maps, or
- listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R - Rare: listed species have:

- 20 to 35 extant sites, or
- 3,000 to 5,000 individuals statewide.

V - Exploitably Vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.

U - Unprotected: no state status.

### **“Federal Legal Status**

“Plants and Animals - The categories of federal status are defined by the United States Department of the Interior as part of the 1974 Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 50, no. 188, pp. 39526 - 39527. The codes below without parentheses are those used in the Federal Register. The codes below in parentheses are created by Heritage to deal with species which have different listings in different parts of their range, and/or different listings for different subspecies or varieties.

(blank): No Federal Endangered Species Act status.

LE: The element is formally listed as endangered.

LT: The element is formally listed as threatened.

PE: The element is proposed as endangered.

PT: The element is proposed as threatened.

C: The element is a candidate for listing.

LE, LT: The species is formally listed as endangered in part of its range, and as threatened in the other part; or, one or more subspecies or varieties is listed as endangered, and the others are listed as threatened.

LT, PDL: Populations of the species in New York are formally listed as threatened, and proposed for delisting.

(LE): If the element is a full species, all subspecies or varieties are listed as endangered; if the element is a subspecies, the full species is listed as endangered.

LT, T (S/A): One or more subspecies or populations of the species is formally listed as threatened, and the others are treated as threatened because of similarity of appearance to the listed threatened subspecies or populations.

PS: Partial status - the species is listed in parts of its range and not in others; or, one or more subspecies or varieties is listed, while the others are not listed.”<sup>20</sup>

Lastly, and although threats to each species are covered in the webpage link for each, we will also briefly summarize the primary threats to species of conservation concern. This is taken from the town’s 2007 Natural Resource and Open Space Protection Plan:

“The following potential impacts from development pose a significant risk to biodiversity:

**i. Forest Fragmentation:** Fragmentation occurs when large, continuous forests are divided into smaller blocks, either by roads or other human development. Most of northern and eastern Philipstown is part of a vast forested landscape that extends east to Putnam Valley and north to Dutchess County. This unfragmented forest land provides habitat and travel corridors for a variety of species. As the forest becomes fragmented, the interconnectedness of species and habitat is negatively affected. Species associated with developed areas and having less specific habitat requirements (white tailed deer, Canada geese, etc.) thrive in fragmented areas and often replace development sensitive species, resulting in an overall loss of biodiversity. Recent research at the Institute of Ecosystem Studies demonstrates forest fragmentation can also directly affect human health. This research indicates that the tick population is considerably higher in small woodlots than in larger forests, leading to an increase in Lyme disease. Also, fragmentation makes it more difficult for species to adjust their habitat areas in response to climate change, as it can destroy the wildlife connectivity corridors (or “green corridors”) that allow wildlife to migrate to new habitats. This movement is especially important as wildlife move in response to climate change-induced pressures.

<sup>20</sup> NYSDEC, Conservation Status Definitions, New York Natural Heritage Program, <https://guides.nynhp.org/definitions/>

**ii. Filling in/destroying vernal pools:** Vernal pools usually retain standing water during the winter and spring and dry up by mid-summer. These shallow pools are surrounded by upland forest and serve as critical breeding places for several amphibians. Vernal pools can range from less than .2 acre to over 1 acre. Currently, wetland areas less than 1/4 acre are not regulated by the Town's Freshwater Wetlands and Watercourses Law; therefore, many vernal pools can be disturbed, damaged, or filled without a permit or notification to the Town.

**iii. Decrease in large grasslands:** Grasslands are often filled with native biodiversity – wildflowers, small mammals, birds, butterflies, and insects. A variety of bird species rely on grassland for breeding and foraging but grasslands areas are declining throughout the Hudson Valley due to a decline in farming, increase in development and transformation of abandoned farm fields to forests.

**iv. Degradation of the Hudson River and its Tributaries:** The Hudson River is tidal along the shores of Philipstown which creates distinct habitats, including mud flats, marshes, swamps and tributary mouths. Much of the River shoreline is unprotected from development. Throughout the Town, development can adversely affect the health of the river and its tributaries through polluted run-off and sedimentation, which often originate in the river tributaries. Also, a number of catadromous and anadromous fish rely on the river's tributaries for a portion of their life cycles and the river and/or ocean for another portion. Degradation of one aquatic habitat can have cascading effects on connected aquatic ecosystems.

**v. Filling in and disturbance of wetland habitats:** Wetlands provide critical habitat to a variety of plants and animals. Current threats to existing wetland habitat include increased invasive plants, sedimentation, and pollution. Currently, a 100 foot buffer zone is established to protect wetlands from the negative impact of development. These zones are not established on a site specific basis and do not consider the surrounding topography; therefore, current regulated buffer areas can fall short of protecting the upland habitat used by marsh animals. As noted in the previous section on water resources, wetland mitigation rarely succeeds in restoring the habitat functions of existing high quality wetlands."<sup>21</sup>

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<sup>21</sup> Chmar, Andy *et al.* 2007, Natural Resource and Open Space Protection Plan, Town of Philipstown, <https://philipstown.com/government/building-department/town-code>



And we have also included here suggested measures to protect biodiversity from the town's 2007 Natural Resource and Open Space Protection Plan:

“Biodiversity

- a) Require a Biodiversity Survey and Assessment to assess the existing environmental conditions, identify any areas of ecological sensitivity, and determine what the impact of the proposed development will be. Habitat review must be done from two perspectives - site specific and the context, or surrounding landscape. The Town of Milan in Dutchess County has a Biodiversity Assessment Guide that can be a model for Philipstown, see Appendix C.
- b) A biodiversity assessment will identify habitats, but it is also necessary to recognize important biotic corridors. These corridors connect areas rich in biodiversity, or 'hubs', and allow species to travel between these hubs. Since flora and fauna do not recognize municipal and county boundaries it is important for Philipstown to coordinate efforts with neighboring towns to protect habitats, and to establish biotic corridors.
- c) Review current wetlands law, timber harvest law, soil mining provisions, and other existing ordinances with a goal of modifying them for better overall habitat/biodiversity protection. For example, do wetland regulations protect appropriate buffers of upland habitats; does timber harvest have restrictions to prevent disturbance of nesting by rare species of birds during nesting seasons?
- d) Though needing protection, endangered species should not be overemphasized at the expense of ignoring our common woodlands and forests. Philipstown's efforts should strive to protect proper abundances and distributions of common species that provide key ecological functions.
- e) The Hudson River is rich in aquatic and terrestrial biodiversity. Develop protection measures along the shoreline to protect current habitats.”<sup>22</sup>

Each of these suggestions, many of which are still applicable to current threats to species, can be further developed in the town's eventual Vulnerability Assessment and Climate Adaptation Plan, which will prioritize and plan out actions, respectively, to protect the town's natural resources as well as infrastructure from climate change and other threats. Links to descriptions of these potential projects can be found here:

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<sup>22</sup> *Ibid.*

Vulnerability Assessment:

<https://climatesmart.ny.gov/actions-certification/actions/#open/action/85>

Climate Adaptation Plan:

<https://climatesmart.ny.gov/actions-certification/actions/#open/action/88>

*Further Study:*

Recommendations for further study are similar to those for Significant Natural Communities, such as carrying out an updated biodiversity assessment to document rare plants and animals in the field. Such a study could complement the data presented in other sections of this chapter and could include local photographs of documented species within the studied natural communities, as well as more detailed descriptions of each species than can be provided in this inventory.

In addition, completion of a Vulnerability Assessment and Climate Adaptation Plan, as outlined above, will go a long way to protecting species for decades to come. These two projects should be priorities for the town in the next two or three years.

Lastly, a “Green Corridors” Study and Corresponding Action Plan for this area and surrounding Eastern Highlands municipalities is in progress. As the Hudson Highlands Land Trust and the Department of Environmental Conservation collect stakeholder input and complete the Plan, results showing priority green corridors could help inform planning to protect these critical wildlife movement zones. Similarly, establishing a Community Conservation Plan subcommittee and creating a Community Conservation Plan could describe how best to conserve lands that are important to the Philipstown community.

*Data Sources:*

- Important Habitat Areas
  - Natural Heritage Important Areas - NYNHP  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1297>

**Table 9. Plant Species of Conservation Concern within Philipstown<sup>23</sup>**

Common Name	Scientific Name	Habitat	State / Federal Protection	State / Global Rank	Link to More Information
Bog Huckleberry	<i>Gaylussacia bigeloviana</i>	Found in dwarf shrub bogs along the edge of a lake, in a shrub swamp within a pitch pine forest, and in wet, sphagnum openings along roadsides and trailsides	Endangered / Not Listed	S1S2 / G4G5	<a href="https://guides.nynhp.org/northern-dwarf-huckleberry/">https://guides.nynhp.org/northern-dwarf-huckleberry/</a>
Common Rattlebox	<i>Crotalaria Sagittalis</i>	Open disturbed sites with sandy soils, including pine plantations, pastures, and mowed fields	Endangered / Not Listed	S1 / G5	<a href="https://guides.nynhp.org/rattlebox/">https://guides.nynhp.org/rattlebox/</a>
Georgia Bulrush	<i>Scirpus georgianus</i>	Occurs in full sun in mesic to damp fields/meadows, edges of wet forests, and edges of marshes	Endangered / Not Listed	S1S2 / G5	<a href="https://guides.nynhp.org/georgia-bulrush/">https://guides.nynhp.org/georgia-bulrush/</a>
Heart Sorrel	<i>Rumex hastatulus</i>	Brackish meadows and sandy shorelines	Endangered / Not Listed	SH / G5	<a href="https://guides.nynhp.org/heart-sorrel/">https://guides.nynhp.org/heart-sorrel/</a>
Hudson River Water Nymph	<i>Najas muenscheri</i>	Shallow water or pools of tidal mudflats of the Hudson River on mucky or gravel and rock soils	Endangered / Not Listed	S2 / G5T2	<a href="https://guides.nynhp.org/hudson-river-water-nymph/">https://guides.nynhp.org/hudson-river-water-nymph/</a>
Lily-Leaved Twayblade	<i>Liparis liliifolia</i>	Known to occur in a variety of both upland and wetland habitats. It has been found in several red maple-dominated swamps with a substrate of sphagnum peat, growing on hummocks. In contrast it also occurs in dry woods on limestone-influenced soil and wooded talus slopes, and along RR grades at the edge of swamps	Endangered / Not Listed	S1 / G5	<a href="https://guides.nynhp.org/lily-leaved-twayblade/">https://guides.nynhp.org/lily-leaved-twayblade/</a>
New England Bulrush	<i>Bolboschoenus novae-angliae</i>	Brackish marshes along tidal creeks and rivers	Endangered / Not Listed	S1 / G5	<a href="https://guides.nynhp.org/saltmarsh-bulrush/">https://guides.nynhp.org/saltmarsh-bulrush/</a>
Ovate Spike Rush	<i>Eleocharis ovata</i>	Artificial ponds, shallow natural ponds in larger swamps, and from marshy area on river islands	Endangered / Not Listed	S1S2 / G5	<a href="https://guides.nynhp.org/ovate-spike-rush/">https://guides.nynhp.org/ovate-spike-rush/</a>
Sharp-Angled Spike Rush	<i>Eleocharis tenuis</i> var. <i>pseudoptera</i>	Wet, fresh, often calcareous meadows, swales, springy places, woods, prairie,	Endangered / Not Listed	S1 / G5T5?	<a href="https://guides.nynhp.org/slippery-spike-rush/">https://guides.nynhp.org/slippery-spike-rush/</a>

<sup>23</sup> New York Natural Heritage Program, NYNHP Online Conservation Guides, NYSDEC, 2020, <https://guides.nynhp.org/>



		serpentine barrens, ditches			
Shining Bedstraw	<i>Galium concinnum</i>	Hemlock-Northern Hardwood and Oak-Hickory forests, as well as along roadsides, trails, and riverside meadows	Endangered / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/shining-bedstraw/">https://guides.nvnhp.org/shining-bedstraw/</a>
Smartweed Dodder	<i>Cuscuta polygonorum</i>	Cattail marshes and wet meadows	Endangered / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/smartweed-dodder/">https://guides.nvnhp.org/smartweed-dodder/</a>
Southern Snailseed Pondweed	<i>Potamogeton diversifolius</i>	Ponds (including dammed ponds) usually on the margins where the water is shallow and in deep emergent marshes	Endangered / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/southern-snailseed-pondweed/">https://guides.nvnhp.org/southern-snailseed-pondweed/</a>
Stalked Bugleweed	<i>Lycopus rubellus</i>	Marshes, fens, and flooded swamps	Endangered / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/stalked-bugleweed/">https://guides.nvnhp.org/stalked-bugleweed/</a>
Water Pigmyweed	<i>Crassula aquatica</i>	Tidal mud flats, marshes, and rocky shores along the lower Hudson River	Endangered / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/water-pigmyweed/">https://guides.nvnhp.org/water-pigmyweed/</a>
Whorled Mountain Mint	<i>Pycnanthemum verticillatum</i> var. <i>verticillatum</i>	Fens, interdunal swales, and other open, calcareous wetlands, usually on wet sandy substrates	Endangered / Not Listed	S1S2 / G5T5	<a href="https://guides.nvnhp.org/whorled-mountain-mint/">https://guides.nvnhp.org/whorled-mountain-mint/</a>
Alternate-flowered Water Milfoil	<i>Myriophyllum alterniflorum</i>	Lakes, ponds and streams	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/alternate-flowered-water-milfoil/">https://guides.nvnhp.org/alternate-flowered-water-milfoil/</a>
Annual Saltmarsh Aster	<i>Symphyotrichum subulatum</i> var. <i>subulatum</i>	Along the lower Hudson River it also occurs in brackish marshes and along brackish tidal drainages sometimes occurring in disturbed habitats adjacent to these marshes.	Threatened / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/annual-saltmarsh-aster/">https://guides.nvnhp.org/annual-saltmarsh-aster/</a>
Atlantic White Cedar	<i>Chamaecyparis thyoides</i>	Swamps and ponds, typically at sites with a high water table and deep organic soils.	Threatened / Not Listed	S2 / G4	<a href="https://guides.nvnhp.org/atlantic-white-cedar/">https://guides.nvnhp.org/atlantic-white-cedar/</a>
Clustered Sedge	<i>Carex cumulata</i>	Open rocky habitats, particularly in damp areas on acidic bedrock or shallow soil. Also found in recently burned areas with shallow soils and exposed bedrock, powerline corridors, open oak or woodlands, heathlands, and various successional habitats	Threatened / Not Listed	S2S3 / G4G5	<a href="https://guides.nvnhp.org/clustered-sedge/">https://guides.nvnhp.org/clustered-sedge/</a>
Cream-Colored Avens	<i>Geum virginianum</i>	Appalachian oak-hickory forests, northern-hardwood forests, woodlands on limestone bedrock and on sand dunes, muddy	Threatened / Not Listed	S2G5	<a href="https://guides.nvnhp.org/cream-colored-avens/">https://guides.nvnhp.org/cream-colored-avens/</a>



		riverbanks, forested swamps, marshes, and roadsides.			
Culver's Root	<i>Veronicastrum virginicum</i>	Forest edges, including along bike trails and driveways. It has been found on north or northwest-facing slopes as well as along the bottomlands of major rivers, prairie remnants, fens, and meadows; river banks; deciduous woodlands (especially with oaks); moist and dry upland woods and prairies	Threatened / Not Listed	S2 / G4	<a href="https://guides.nvnhp.org/culvers-root/">https://guides.nvnhp.org/culvers-root/</a>
False Hop Sedge	<i>Carex lupuliformis</i>	Silver maple-ash swamps, red maple hardwood swamps, floodplain forests, marshes, shrub swamps, and mucky soils	Threatened / Not Listed	S2 / G4	<a href="https://guides.nvnhp.org/false-hop-sedge/">https://guides.nvnhp.org/false-hop-sedge/</a>
Great Plains Flat Sedge	<i>Cyperus lupulinus</i> ssp. <i>lupulinus</i>	Sandy soils at beaches, railroads, roadsides, pastures, dry woods and fields	Threatened / Not Listed	S1S2 / G5T5?	<a href="https://guides.nvnhp.org/great-plains-flat-sedge/">https://guides.nvnhp.org/great-plains-flat-sedge/</a>
Hill's Pondweed	<i>Potamogeton hillii</i>	Alkaline waterways including ponds, streams, lakes, ditches, and other impoundments.	Threatened / Not Listed	S2S3 / G3	<a href="https://guides.nvnhp.org/hills-pondweed/">https://guides.nvnhp.org/hills-pondweed/</a>
Meadow Horsetail	<i>Equisetum pratense</i>	A diversity of different upland habitats, both shaded and open, usually in rocky or gravelly soil, on slopes or banks adjacent to rivers, roads, or railroads	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/meadow-horsetail/">https://guides.nvnhp.org/meadow-horsetail/</a>
Purple Spring Cress	<i>Cardamine douglassii</i>	A variety of sites, generally with moist to wet, rich soils. These include wet places within upland deciduous forests, streambeds, alluvial woods and fields, swampy pastures, springs, and calcareous swamps	Threatened / Not Listed	S4 / G5	<a href="https://guides.nvnhp.org/purple-cress/">https://guides.nvnhp.org/purple-cress/</a>
Rhodora	<i>Rhododendron canadense</i>	Wetlands of acidic rocky summits and barrens, as well as boggy habitats containing a mixture of organic material and gravel	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/rhodora/">https://guides.nvnhp.org/rhodora/</a>
Smooth Beggar Ticks	<i>Bidens laevis</i>	Freshwater and brackish tidal mud flats and tidal marshes	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/smooth-beggar-ticks/">https://guides.nvnhp.org/smooth-beggar-ticks/</a>
Spongy-Leaved Arrowhead	<i>Sagittaria montevidensis</i> ssp. <i>spongiosa</i>	Brackish to fresh-water tidal mudflats and salt marshes	Threatened / Not Listed	S2 / G5T4	<a href="https://guides.nvnhp.org/spongy-arrowhead/">https://guides.nvnhp.org/spongy-arrowhead/</a>
Spotted Pondweed	<i>Potamogeton pulcher</i>	Still or slowly moving water (1-2+ meters deep) of deep	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/spotted-pondweed/">https://guides.nvnhp.org/spotted-pondweed/</a>



		emergent marshes, small streams, small lakes/ponds, and open pools			
Stiff Flat-topped Goldenrod	<i>Solidago rigida</i> var. <i>rigida</i>	Open areas on dry shaley slopes or on limestone bedrock; open areas among shrubby thickets and edge of grasslands over shallow, dry, sandy and rocky soils on limestone; dry post-agricultural successional habitats, usually on alkaline soils; successional fields on clay soils; rocky summit grasslands on alkaline and circum-neutral soils; grassland habitats on dry, clayey, stony soils; woodland edges between calcareous woodlands and successional old fields; and dry shaly hillsides and slopes	Threatened / Not Listed	S2 / G5T5	<a href="https://guides.nvnhp.org/stiff-flat-topped-goldenrod/">https://guides.nvnhp.org/stiff-flat-topped-goldenrod/</a>
Swamp Cottonwood	<i>Populus heterophylla</i>	Wet pockets of red maple-hardwood swamps with some calcareous influences within the Hudson Valley and red maple-blackgum swamps along the swamp. It also may be found in swamp white oak wetlands, shallow emergent marshes adjacent to forested swamps, wet swales, and other types of hardwood swamps	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/swamp-cottonwood/">https://guides.nvnhp.org/swamp-cottonwood/</a>
Toothcup	<i>Rotala ramosior</i>	Along the shorelines and edges of ponds and lakes, as well as those of artificial wetlands including reservoirs and roadside catchment basins. It also will occupy seasonally-wet sites such as wet meadows or agricultural fields, especially where paths or other disturbance provides bare soil substrate. It has been found growing in organic muck as well as in sandy soil	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/tooth-cup/">https://guides.nvnhp.org/tooth-cup/</a>
Violet Wood Sorrel	<i>Oxalis violacea</i>	Primarily on steep rocky slopes and open summits, generally on rocky, often rich soils. The most common surrounding forest type is oak-hickory, and at many sites the plants were found along trails, ledges, or other openings	Threatened / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/violet-wood-sorrel/">https://guides.nvnhp.org/violet-wood-sorrel/</a>
Virginia Snakeroot	<i>Endodeca</i>	Well-drained wooded slopes, rocky slopes of oak	Threatened / Not Listed	S2 / G4	<a href="https://guides.nvnhp.org/virginia-snakeroot/">https://guides.nvnhp.org/virginia-snakeroot/</a>



	<i>serpentaria</i>	woods, open woods, moist woods, rich woods, and only rarely in clearings. It particularly seems to favor drainage patterns on southwest to southeast facing slopes in oak-hickory forests or chestnut oak forest.			
Wild Hydrangea	<i>Hydrangea arborescens</i>	Slopes of forested ravines along the Southern Tier adjacent to the Pennsylvania border. It is often found in the upper headwater ravine systems where it may be close to the stream, along the ravine slopes, or occasionally on ledges. The moist soil may be rocky and/or have a high clay content	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/wild-hydrangea/">https://guides.nvnhp.org/wild-hydrangea/</a>
Wild Sweet William	<i>Phlox maculata</i> ssp. <i>maculata</i>	Open or shrubby wet sites, including fens, wet meadows, shrub swamps, cattail marshes, and roadside seeps and wet thickets	Threatened / Not Listed	S2 / G5T4T5	<a href="https://guides.nvnhp.org/wild-sweet-william/">https://guides.nvnhp.org/wild-sweet-william/</a>
Woodland Agrimony	<i>Agrimonia rostellata</i>	Rich mesic forests, forested gorge slopes cutting through calcareous bedrock, streambanks in rich forests, forested slopes adjacent to streams, forested limestone benches, dry oak woods, wooded pastures on rich soil, shrub thickets, and other mesic sites that are typically wooded and on calcareous soils	Threatened / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/woodland-agrimony/">https://guides.nvnhp.org/woodland-agrimony/</a>
Estuary Beggar Ticks	<i>Bidens bidentoides</i>	Freshwater tidal mudflats and marshes, often at the border between mudflat and marsh, or along sandy or muddy openings within a marsh	Rare / Not Listed	S3 / G3G4	<a href="https://guides.nvnhp.org/elmarva-beggar-ticks/">https://guides.nvnhp.org/elmarva-beggar-ticks/</a>
Five-angled Dodder	<i>Cuscuta pentagona</i>	Stream banks, swamps, and a variety of dry and wet prairie, glade, and forest types. Also frequently a weed in fields and along railroads. Parasitizes a wide variety of woody and nonwoody plants.	Rare / Not Listed	S3 / G4G5	<a href="https://guides.nvnhp.org/five-angled-dodder/">https://guides.nvnhp.org/five-angled-dodder/</a>
Small-flowered Buttercup	<i>Ranunculus micranthus</i>	South and southeast-facing slopes of ridges and summits. It seems to prefer neither open grasslands or shrublands, nor closed forest, but partial shade and small openings. Many, though not all, of these sites	Rare / Not Listed	S3 / G5	<a href="https://guides.nvnhp.org/small-flowered-crowfoot/">https://guides.nvnhp.org/small-flowered-crowfoot/</a>



		have rich soils and high plant diversity, although it has also been collected from apparently acidic, sandstone-derived soils as well. This species has been found in a wide variety of forest types, from beech-sugar maple, to oak-hickory, to red cedar summits			
Spreading Globeflower	<i>Trollius laxus</i>	Open areas of calcareous wetlands, including casually grazed pastures, openings in cedar, tamarack, or hemlock swamps, rich sloping fens, rich graminoid fens, powerline right-of-ways through rich shrub swamps, seepage areas, and other such sites	Rare / Not Listed	S3 / G5T3	<a href="https://guides.nynhp.org/spreading-globeflower/">https://guides.nynhp.org/spreading-globeflower/</a>

**Table 10. Animal Species of Conservation Concern within Philipstown<sup>24</sup>**

Common Name	Scientific Name	Habitat	State / Federal Protection	State / Global Rank	Link to More Information
Bog Turtle	<i>Glyptemys muhlenbergii</i>	Open-canopy wet meadows, sedge meadows, and calcareous fens.	Endangered / Threatened	S2 / G2G3	<a href="https://guides.nynhp.org/bog-turtle/">https://guides.nynhp.org/bog-turtle/</a>
Hessel's Hairstreak	<i>Callophrys hesseli</i>	Coastal and inland Atlantic White Cedar swamps	Endangered / Not Listed	S1 / G3	<a href="https://guides.nynhp.org/hessels-hairstreak/">https://guides.nynhp.org/hessels-hairstreak/</a>
Peregrine Falcon	<i>Falco peregrinus</i>	Often nest on ledges or holes on the faces of rocky cliffs. They will also nest on manmade structures such as bridges and tall buildings, especially near or in urban areas. Wintering birds frequent buildings, towers, and steeples in urban areas, and open areas with plentiful prey in more natural settings.	Endangered / Migratory Bird Treaty Act	S3B / G4	<a href="https://guides.nynhp.org/peregrine-falcon/">https://guides.nynhp.org/peregrine-falcon/</a>
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	Inhabit the Hudson River estuary. These fishes reportedly prefer deep pools with soft substrates and vegetated bottoms, but individuals may vary in preference for various water depths and substrate types	Endangered / Endangered	S1 / G3	<a href="https://guides.nynhp.org/shortnose-sturgeon/">https://guides.nynhp.org/shortnose-sturgeon/</a>
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	During spawning, the Atlantic sturgeon can be found in the	Protected - no open season /	S1 / G3	<a href="https://guides.nynhp.org/atlantic-sturgeon/">https://guides.nynhp.org/atlantic-sturgeon/</a>

<sup>24</sup> New York Natural Heritage Program, NYNHP Online Conservation Guides, NYSDEC, 2020, <https://guides.nynhp.org/>



		freshwater and brackish/salt water regions of the Hudson River north to Albany, but the species is usually confined to the deeper parts of the river. The adults spend most of their time at sea and the juveniles spend the first few years of their lives in freshwater streams.	Endangered		<a href="#">/</a>
Barn Owl	<i>Tyto alba</i>	Open and partly open country including grasslands, marshes, and agricultural areas.	Protected Bird / Migratory Bird Treaty Act	S1S2 / G5	<a href="https://guides.nvnhp.org/barn-owl/">https://guides.nvnhp.org/barn-owl/</a>
Great Blue Heron	<i>Ardea herodias</i>	Typically, Great Blue Heron habitat includes freshwater and brackish marshes that are near lakes, rivers, bays, lagoons, ocean beaches, fields, or meadows. Nests tend to be high in the trees of swamps and wooded areas.	Protected Bird / Migratory Bird Treaty Act	S5 / G5	<a href="https://guides.nvnhp.org/great-blue-heron/">https://guides.nvnhp.org/great-blue-heron/</a>
Kentucky Warbler	<i>Geothlypis formosa</i>	Rich, moist, flat or preferably hilly woodlands especially with stream-bearing ravines and a dense understory.	Protected Bird / Migratory Bird Treaty Act	S2B / G5	<a href="https://guides.nvnhp.org/kentucky-warbler/">https://guides.nvnhp.org/kentucky-warbler/</a>
Cerulean Warbler	<i>Setophaga cerulea</i>	Found in both riparian and upland forest habitats in New York within landscapes that are heavily forested. They typically inhabit forested wetlands and riparian corridors with a mature canopy composed of sycamore, silver maple, red maple, and green ash, or dry ridge tops and side-slopes with mature oak-hickory or mixed mesophytic forest	Special Concern / Migratory Bird Treaty Act	S3?B / G4	<a href="https://guides.nvnhp.org/cerulean-warbler/">https://guides.nvnhp.org/cerulean-warbler/</a>
Common Loon	<i>Gavia immer</i>	Breed on a wide variety of lakes and reservoirs in the Adirondacks ranging from oligotrophic (low-nutrient) to eutrophic (high-nutrient), small to large, shallow to deep, clear to turbid, and remote to heavily developed. Nonbreeding habitat is primarily seacoasts, bays, inlets, and estuaries, less frequently along lakes and rivers, and occasionally up to 100 km off the coast	Special Concern / Migratory Bird Treaty Act	S4 / G5	<a href="https://guides.nvnhp.org/common-loon/">https://guides.nvnhp.org/common-loon/</a>
Eastern Small-footed Bat	<i>Myotis leibii</i>	Winter in caves and mines, and openings deep within rock crevices in outcrops, summer in a broad range of forested areas.	Special Concern / Not Listed	S1S3 / G4	<a href="https://guides.nvnhp.org/eastern-small-footed-mvotis/">https://guides.nvnhp.org/eastern-small-footed-mvotis/</a>
Eastern Wormsnake	<i>Carphophis amoenus</i>	Moist (mesic) forests and drier forests may also be inhabited	Special Concern / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/eastern-wormsnake/">https://guides.nvnhp.org/eastern-wormsnake/</a>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	A variety of shrubby habitats with herbaceous cover including successional fields, regenerating clearcuts, utility line	Special Concern / Migratory Bird Treaty Act	S3B / G4	<a href="https://guides.nvnhp.org/golden-winged-warbler/">https://guides.nvnhp.org/golden-winged-warbler/</a>



		rights-of-way, beaver meadows, the edges of tamarack swamps, aspen clearcuts, young conifer plantations, pine barrens, and upland swamps (			
New England Cottontail	<i>Sylvilagus transitionalis</i>	Open woods, disturbed areas, shrubby areas, thickets, and marshes	Special Concern / Not Listed	S1S2 / G3	<a href="https://guides.nvnhp.org/new-england-cottontail/">https://guides.nvnhp.org/new-england-cottontail/</a>
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Open areas with scattered trees (e.g., parks, golf courses, roadsides), and open swamps and river bottoms with dead, standing trees	Special Concern / Migratory Bird Treaty Act	S2?B / G5	<a href="https://guides.nvnhp.org/red-headed-woodpecker/">https://guides.nvnhp.org/red-headed-woodpecker/</a>
Spotted Turtle	<i>Clemmys guttata</i>	Clear, clean water with a soft substrate and aquatic or emergent vegetation. Vernal pools and small permanent pools are often used in the spring, although other habitats such as marshes, fens, and open early successional wetlands may also be used	Special Concern / Not Listed	S3 / G5	<a href="https://guides.nvnhp.org/spotted-turtle/">https://guides.nvnhp.org/spotted-turtle/</a>
Whip-poor-will	<i>Antrostomus vociferus</i>	Dry deciduous or mixed woods, pine barrens and barrens-like habitats, and some shrublands	Special Concern / Migratory Bird Treaty Act	S3B / G5	<a href="https://guides.nvnhp.org/whip-poor-will/">https://guides.nvnhp.org/whip-poor-will/</a>
Wood Turtle	<i>Glyptemys insculpta</i>	Clear, flowing streams and rivers or in the habitats surrounding them such as woodlands, meadows, and forest edges	Special Concern / Not Listed	S3 / G3	<a href="https://guides.nvnhp.org/wood-turtle/">https://guides.nvnhp.org/wood-turtle/</a>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Typically found near large bodies of water, such as bays, rivers, and lakes, that support a healthy population of fish and waterfowl, their primary food source. Generally, Bald Eagles tend to avoid areas with human activities. They will perch in either deciduous or coniferous trees. Large, heavy nests are usually built near water in tall pine, spruce, fir, cottonwood, oak, poplar, or beech trees.	Threatened / Migratory Bird Treaty Act	S2S3B, S2N / G5	<a href="https://guides.nvnhp.org/bald-eagle/">https://guides.nvnhp.org/bald-eagle/</a>
Blanding's Turtle	<i>Emydoidea blandingii</i>	Shallow wetlands such as shrub swamps, marshes, and shallow ponds. Vernal pools are used in the spring. Blanding's Turtles will frequently travel through uplands and cross roads, especially during the nesting period or when moving between wetlands.	Threatened / Not Listed	S2S3 / G4	<a href="https://guides.nvnhp.org/blandings-turtle/">https://guides.nvnhp.org/blandings-turtle/</a>
Fence Lizard	<i>Sceloporus undulatus</i>	Naturally occurring fence lizard populations are confined to the Hudson Highlands region of the	Threatened / Not Listed	S1 / G5	<a href="https://guides.nvnhp.org/fence-lizard/">https://guides.nvnhp.org/fence-lizard/</a>



		state. These areas are characterized by steep slopes with extensive open rocky areas that are surrounded by mixed-deciduous, oak-dominated, forests.			
Least Bittern	<i>Ixobrychus exilis</i>	Shallow or deep emergent marshes, freshwater tidal marshes (lower Hudson River), or brackish tidal marshes (Long Island). They prefer stands of cattails or bulrush with bur-reed, sedges, or common reed.	Threatened / Migratory Bird Treaty Act	S3B,S1N / G4G5	<a href="https://guides.nvnhp.org/least-bittern/">https://guides.nvnhp.org/least-bittern/</a>
Northern Harrier	<i>Circus hudsonius</i>	A wide range of open grasslands, shrubland, and salt and freshwater marshes	Threatened / Migratory Bird Treaty Act	S3B,S3N / G5	<a href="https://guides.nvnhp.org/northern-harrier/">https://guides.nvnhp.org/northern-harrier/</a>
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Mature interior forest, tend to avoid woodlands with significant edge habitat, may most often be found in cluttered or densely forested areas including in uplands and at streams or vernal pools	Threatened / Threatened	S1 / G1G2	<a href="https://guides.nvnhp.org/northern-long-eared-bat/">https://guides.nvnhp.org/northern-long-eared-bat/</a>
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Quiet marshes, marshy shorelines of ponds, shallow lakes, or marshy bays and slow moving streams with sedgy banks or adjacent marshes; rarely in brackish marshes with limited tidal fluctuation.	Threatened / Migratory Bird Treaty Act	S3B,S1N / G5	<a href="https://guides.nvnhp.org/pied-billed-grebe/">https://guides.nvnhp.org/pied-billed-grebe/</a>
Timber Rattlesnake	<i>Crotalus horridus</i>	Mountainous or hilly deciduous or mixed deciduous-coniferous forests, often with rocky outcroppings, steep ledges, and rock slides	Threatened / Not Listed	S3 / G4	<a href="https://guides.nvnhp.org/timber-rattlesnake/">https://guides.nvnhp.org/timber-rattlesnake/</a>
Atlantic Needlefish	<i>Strongylura marina</i>	Primarily marine, but is a resident fish during the summer months in the Hudson River estuary	Not Listed / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/atlantic-needlefish/#habitat">https://guides.nvnhp.org/atlantic-needlefish/#habitat</a>
Atlantic Silverside	<i>Menidia menidia</i>	Inhabit fresh, brackish, and salt water marshes in the lower Hudson River estuary and Long Island from the spring through the fall, although they may not be as inclined to enter fresh water as the inland silverside	Not Listed / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/atlantic-silverside/#habitat">https://guides.nvnhp.org/atlantic-silverside/#habitat</a>
Inland Silverside	<i>Menidia beryllina</i>	The shallows of tidal salt marshes and estuaries, showing a stronger preference for low salinity waters. They can also be found in freshwater ponds, lakes, and reservoirs and have been introduced into some locations	Not Listed / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/inland-silverside/#habitat">https://guides.nvnhp.org/inland-silverside/#habitat</a>
Needham's Skimmer	<i>Libellula needhami</i>	Coastal species that inhabits ponds, lakes, tidal river areas, and	Not Listed / Not Listed	S3 / G5	<a href="https://guides.nvnhp.org/needhams-skimmer/">https://guides.nvnhp.org/needhams-skimmer/</a>



		brackish wetlands in New York State			<a href="#">mer/#habitat</a>
Appalachian Azure	<i>Celastrina neglectamajor</i>	Rich deciduous forest with the foodplant Black Cohosh ( <i>Actaea racemosa</i> ) in the understory.	Not Listed / Not Listed	S1S3 / G4	<a href="https://guides.nvnhp.org/appalachian-azure/">https://guides.nvnhp.org/appalachian-azure/</a>
Comet Darner	<i>Anax longipes</i>	Inhabits a wide variety of (semi)permanent small lakes, coastal plain ponds, abandoned shallow quarry ponds, natural rocky ponds, and sometimes constructed farm ponds. The habitat feature in common seems to be an abundance of floating and submerged vegetation	Not Listed / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/comet-darner/#habitat">https://guides.nvnhp.org/comet-darner/#habitat</a>
Tiger Spiketail	<i>Cordulegaster erronea</i>	Coldwater streams, small spring trickles, or seeps in partial shade that are too small for fish where there is a constant, slight water flow and a non-silt substrate	Not Listed / Not Listed	S1 / G4	<a href="https://guides.nvnhp.org/tiger-spiketail/">https://guides.nvnhp.org/tiger-spiketail/</a>
Arrowhead Spiketail	<i>Cordulegaster obliqua</i>	Arrowhead spiketails oviposit and spend most of their time at small spring fed streams and seeps with soft bottoms and sometimes rocks. These streams are usually in forested areas although the seepage areas themselves may be in small areas of more open habitat types such as meadows dominated by ferns and other moisture dependent herbaceous plants. Adults may feed in forest clearings in the vicinity of the principal breeding habitat.	Not Listed / Not Listed	S3 / G4	<a href="https://guides.nvnhp.org/arrowhead-spiketail/">https://guides.nvnhp.org/arrowhead-spiketail/</a>
Mocha Emerald	<i>Somatochlora linearis</i>	Inhabit small, shaded streams in forested areas that are about 1-3 yards wide with sand, gravel, or rocky substrates. Larvae are aquatic and found in the water during this life stage, whereas adults are terrestrial and are found in habitats surrounding forested streams.	Not Listed / Not Listed	S2S3 / G5	<a href="https://guides.nvnhp.org/mocha-emerald/">https://guides.nvnhp.org/mocha-emerald/</a>

## 25. Terrestrial Areas of Ecological Importance

### Description:

The integrity and richness of significant natural communities, especially forest communities, often depend on the expanse of contiguous forest surrounding each community. As we saw in previous sections of this chapter, the biodiversity of an ecosystem can be heavily influenced by



its total uninterrupted area, in addition to its connection to other rich ecosystems and the unique geology, topography and hydrology both within and around the ecosystem. With this in mind, we created this map in order to show the connection between significant natural communities and large forest areas within Philipstown.

According to the Hudson River Estuary Program, “Conserving and managing large forested areas is necessary to provide wildlife habitat, clean water, climate moderation, and economically viable forest products. In general, larger forests provide greater ecological value than smaller, fragmented patches. However, the value of each forest is relative to the values of other forests in the community, watershed, or natural landscape. Even small patches of forest can be extremely valuable depending on different factors. For example, a network of forest patches along a stream can create a riparian corridor that helps maintain water quality and wildlife habitat, and that serves as a travel route for forest animals. Similarly, wooded hedgerows in an agricultural landscape often provide a refuge for animals that do not typically use agricultural fields.

“A great diversity of forest types occur across the Hudson Valley, including a range of upland hardwood and conifer forest communities and more unusual occurrences such as pitch pine-oak-heath barrens, mountain spruce-fir forest, and patches of old growth. Mature lowland forests with uncompacted soils and diverse herbaceous plant communities are rare remnants of ecosystems that were once widespread in the region (Penhollow et al. 2006). Many wildlife species depend on intact forests isolated from human development, including migratory songbirds, red-shouldered hawk, bobcat, black bear, and timber rattlesnake.

“Despite their wide extent, experts are concerned with the future of New York’s forests. New York’s forest land is largely privately owned and unprotected from development. The fragmentation of large blocks of uninterrupted forests into smaller areas is a problem of statewide concern, and the number of large forest tracts is rapidly declining in many areas. Smaller forest blocks generally have reduced habitat value, are more vulnerable to the spread of invasive species, and are less viable for timber production. Limited forest regeneration is also a concern, particularly in southeastern New York State; sustained overbrowse by deer is one of the contributing factors (Shirer and Zimmerman 2010).”<sup>25</sup>

Matrix forests blocks “represent the largest, most intact forests in the northeastern United States, whose size and natural condition allow for the maintenance of ecological processes, forest communities, and populations of forest-interior species. Conserving large, high quality forests and connections between them will allow plants and animals to move north and higher in

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<sup>25</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



elevation as the climate warms.”<sup>26</sup> Data for this layer comes from the NYSDEC’s “Matrix Block and Linkages” dataset. The Matrix Forest Blocks were developed in partnership between the New York Natural Heritage Program and The Nature Conservancy. The goal of the matrix forest selection for this dataset was to “identify viable examples of the dominant forest types that, if protected and allowed to regain their natural condition, would serve as critical source areas for all species requiring interior forest conditions or associated with the dominant forest types.”<sup>27</sup>

Forest Linkage Zones on the other hand are “largely intact forested connections between matrix forest blocks that allow animals and plants to move or disperse across the landscape. Forest linkages enable genetic exchange among populations and will allow plants and animals to move north and higher in elevation as the climate warms.”<sup>28</sup> This portion of the dataset was developed by the New York Natural Heritage Program.

“Critical Environmental Areas,” according to the NYSDEC, refers to “areas that have been designated as Critical Environmental Areas (CEAs) under 6 NYCRR Part 617 - State Environmental Quality Review (SEQR). Local agencies may designate specific geographic areas within their boundaries as a “Critical Environmental Area” (CEA). State agencies may also designate as a CEA a geographic area which they own, manage or regulate. To be designated as a CEA, an area must have an exceptional or unique character which has a benefit or threat to human health, a natural setting (e.g. fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality), agricultural, social, cultural, historic, archaeological, recreational, or educational values, or an inherent ecological, geological or hydrological sensitivity that may be adversely affected by any change.”<sup>29</sup> Although there are no designated Critical Environmental Areas within Philipstown, there are several along the borders of the town and thus we have included them on the map for reference.

We have also included generalized terrestrial layers for the New York Natural Heritage Program’s Significant Natural Communities, which were covered in detail in Section 23. Significant Natural Communities, in order to highlight how the majority of these significant communities occur within the Matrix Forest Block. All non-wetland forests and grasslands were generalized as “Terrestrial,” and freshwater wetlands were categorized as “Palustrine.” The following are the summary descriptions for each of these natural community categories:

<sup>26</sup> The Nature Conservancy Eastern Conservation Science and the New York Natural Heritage Program, Matrix Forest Blocks, Information About the Layers, Hudson Valley Natural Resource Mapper, 2006, <https://giservices.dec.ny.gov/gis/hvnrm/layerInfo.html#mfb>

<sup>27</sup> The Nature Conservancy (TNC) Eastern Conservation Science, Matrix Forest Blocks and Linkages, Metadata - Purpose, 2012, [http://gis.ny.gov/gisdata/metadata/nysdec.MatrixForestBlocksAndLinkages\\_Meta.xml](http://gis.ny.gov/gisdata/metadata/nysdec.MatrixForestBlocksAndLinkages_Meta.xml)

<sup>28</sup> The Nature Conservancy Eastern Conservation Science and the New York Natural Heritage Program, Forest Linkage Zones, Information About the Layers, Hudson Valley Natural Resource Mapper, 2006, <https://giservices.dec.ny.gov/gis/hvnrm/layerInfo.html#flz>

<sup>29</sup> NYSDEC, Critical Environmental Areas in New York State, Metadata - Description, 2013, [http://gis.ny.gov/gisdata/metadata/nysdec.Critical\\_Env\\_Areas\\_Metadata.html](http://gis.ny.gov/gisdata/metadata/nysdec.Critical_Env_Areas_Metadata.html)

“Palustrine: The palustrine system consists of non-tidal, perennial wetlands characterized by emergent vegetation. The system includes wetlands permanently saturated by seepage, permanently flooded wetlands, and wetlands that are seasonally or intermittently flooded (these may be seasonally dry) if the vegetative cover is predominantly growing in water and soils are hydric (soil that formed under conditions of saturation, flooding or ponding). Wetland communities are distinguished by their plant composition, substrate, and flooding regime. Peatlands, including bogs and fens, are a special type of wetland in which the substrate primarily consists of accumulated peat (partly decomposed plant material such as mosses, sedges, and shrubs) or marl (organically derived calcium carbonate deposits), with little or no mineral soil. In a natural landscape there are continuous gradients in soils from mineral soils to peat soils. The boundaries between different types of wetlands are not always discrete. Several different types of wetlands may occur together in a complex mosaic.

“Terrestrial: The terrestrial system consists of upland habitats. These habitats have well-drained soils that are dry to moist, and vegetative cover that is never predominantly growing in water, even if the soil surface is occasionally or seasonally flooded or saturated. In other words, this is a broadly defined system that includes everything except aquatic, wetland, and subterranean communities.”<sup>30</sup>

### *Findings:*

Much of Philipstown is part of the 51,402 acre “Hudson Highlands” matrix forest, which also covers most of Putnam Valley and sections of Fishkill, East Fishkill and Kent. This large matrix forest is connected to the 16,384 acre West Point/Black Rock matrix forest via the Forest Linkage Zone between Storm King Mountain and Crow’s Nest (horizontal lines near Route 218), and also is connected to the 28,730 Mid-Dutchess matrix forest via a Forest Linkage Zone that starts off the map in the town of Kent. To see these other matrix forests and linkage zones, please visit the Hudson Valley Natural Resource Mapper at <https://gisservices.dec.ny.gov/gis/hvnrm/> and select “Forest Linkage Zones” and “Matrix Forest Blocks” under the “Forest Layers” category.

It is also noteworthy that the majority of significant terrestrial and palustrine communities within Philipstown can be found within the Hudson Highlands matrix forest. This should be no surprise since we have already seen how high biodiversity, rare species and unique ecological communities often depend on large buffers from developed areas, and thus they are most likely to be found in large, high-quality forested areas. High quality estuarine communities, on the other hand, do not depend as much on forest buffers as they do on shoreline protection from

<sup>30</sup> NYSDEC, Ecological Community System Descriptions, New York Natural Heritage Program, 2020 <https://guides.nynhp.org/community-systems/#systems>



development, which is exemplified by conservation efforts along the shores of Constitution Marsh.

It is also worth emphasizing that the fairly large area of significant terrestrial communities in the southwest corner of town are not considered part of the Matrix Forest. This is most likely due to the number of roads surrounding the area that makes the contiguous forest too small to be considered a matrix forest block. This highlights how even a fairly sizable section of forest that is home to significant communities can be considered a lower quality forest due to being cut off from other continuous forest areas, even though the condition of the forest itself may be strong and rich with biodiversity (as the next section of this chapter will show). Thus, efforts to connect this area of forest to the larger matrix forest block are even more important in order to allow safe passage for wildlife and to maintain and even strengthen biodiversity within each forest. Groups such as the Hudson Highlands Land Trust have been working to permanently protect areas that can serve as corridors to connect high quality forests and other ecological communities. Please see Section 39. Conservation Open Areas and Open Space Overlay for more information on this effort.

Although not found within Philipstown, it's worth noting the presence of Critical Environmental Areas (CEAs) along the town's borders. First, along the border with Fishkill is the Fishkill Aquifer Protection Area, which was designated as a CEA in 1992 in order to protect the Clove Creek Aquifer for the Town of Fishkill's public drinking water supply. As noted above, CEAs are established either by a municipal government or state agency in order to provide additional protections to an area of significant natural resource. If the town of Philipstown wanted to establish a CEA for the section of the Clove Creek aquifer within Philipstown, for example, it could do so. For more information on CEAs, please visit: <https://www.dec.ny.gov/permits/6184.html>.

Other nearby CEAs include the Peekskill Hollow Brook CEA on the southern border of Philipstown, which Westchester County designated in 1990 due to the brook's exceptional and unique character, both ecologically and historically, as well as the Hudson River CEA established by Westchester County in 1990 to protect the entire eastern shoreline of the Hudson River in Westchester County in order to preserve its unique and exceptional character from excessive development (although one can argue that there has been much deleterious development on the river's shores in Westchester nonetheless). The northern tip of this latter CEA is visible in the southwest corner of this NRI's map. To see the full scale of nearby CEA's as well as others throughout the state, please visit the Hudson Valley Natural Resource Mapper at: <https://gisservices.dec.ny.gov/gis/hvnrm/> and select "Critical Environmental Areas" under "Reference Layers."

*Data Sources:*

- Matrix Forest Blocks & Forest Linkage Zones
  - NYSDEC Matrix Forest Blocks and Linkages  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1261>
- Critical Environmental Areas
  - Critical Environmental Areas - New York State (NYSDEC)  
<https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1330>
- Natural Communities
  - Natural Heritage Community Occurrences - NYNHP  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1241>

**26. Forest Condition Index***Description:*

According to the Hudson River Estuary Program's Forest Condition Index Fact Sheet, "forests are a critical component of healthy watersheds, and have tremendous ecologic and economic value. They provide habitat for wildlife and plants, protect water and air quality, mitigate the effects of climate change, and provide opportunities for outdoor recreation and the forest products industry. While approximately 65% of the Hudson River estuary watershed is forested, the condition of that forest land is variable, with only about half meeting the criteria of higher-quality, intact core forest. In 2019, the Hudson River Estuary Program partnered with the New York Natural Heritage Program to assess the condition of forests in the watershed so that conservation, restoration, and management decisions can be informed by the best available data.

"The Forest Condition Index is a spatial data set that: 1) Identifies forest patches >100 acres using the most recent land cover data, and 2) Estimates the condition of each forest patch relative to other patches in the watershed using a variety of region-wide data. The 2019 index improves upon previous forest patch data for the estuary watershed by considering not only size, but also condition. Forests included in the index were identified using the 2016 National Land Cover Database. All roads and railroads were removed to reveal patches of continuous forest. Forests at least 100 acres in size were then selected to create a large forest patch data layer. The forest patches were further analyzed to delineate core forests, which are interior forest areas at least 100 meters from a forest edge.



“To create the index, large forest patches were assigned points for 22 metrics relating to forest size, fragmentation (e.g. proportion of core forest to overall patch size), habitat connectivity (e.g. proportion of forest cover in the surrounding area), stressors (e.g. density of nearby roads), habitat and ecosystem values (e.g. presence of rare species and significant ecosystems), and carbon sequestration. Points for each forest patch were summed and used to rank the forest patches by percentile. The resulting Forest Condition Index estimates the condition and relative importance of each large forest patch relative to other forests in the estuary watershed. The complete Forest Condition Index methodology is available in the project report at <https://www.nynhp.org/forest-patches>.<sup>31</sup>

### *Findings:*

As you can see, Philipstown is blessed with an enormous area of high quality forests, which in this case are considered to be in the top 20% or higher of forests in the Hudson Valley. Of the three largest forest blocks that meet this criteria, the block along the northeastern border of town is the highest quality, within the 98.6 percentile of Hudson Valley forests, followed by the forest block on the eastern border of town between Indian Brook Road and South Highlands Road, which is in the 97.9 percentile, and then the forest block that covers Hudson Highlands State Park and its vicinity, which is in the 93.6 percentile. Other areas rated as high quality within the town are between the 80th and 90th percentiles. Detailed scoring breakdowns for each of these forest blocks as well as the other blocks in and around Philipstown can be reviewed using the Hudson Valley Natural Resource Mapper at: <https://gisservices.dec.ny.gov/gis/hvnm/>. Select “Forest Condition Index (Percentile)” under Forest Layers and then select a forest block to pull up a window with more details.

It is not surprising, unfortunately, that Route 9 serves as a major disconnecter between high quality forests within Philipstown, as the map shows. Both the Hudson Highlands State Park forest block as well as the forest block between Route 403, Route 9D and Route 9 are cut off from the high quality forest corridor along the eastern border of Philipstown and throughout Clarence Fahnestock State Park by the high-speed and busy corridor of Route 9. Those forest areas that are found between these high quality areas are much smaller and suffer from lower forest condition ratings, thus making it more challenging for wildlife to move between forest areas of higher quality. That said, even lower quality forests can still play important roles as habitat corridors and also in terms of carbon sequestration, which will be explored in more detail in Section 38. Land Cover and Forest Types. Some of the lower quality forests may be too small to do much about their forest condition rating since the size of their interior core forest (the section of forest that is at least 100 meters from the nearest forest edge) is so small and thus limits biodiversity and other ecosystem services, but other sections may benefit from strategic

<sup>31</sup> Haeckel, Ingrid and Nate Nardi-Cyrus, Forest Condition Index Fact Sheet, Hudson River Estuary Program, NYSDEC, [https://www.nynhp.org/sites/default/files/ForestIndex\\_FactSheet\\_FINAL.pdf](https://www.nynhp.org/sites/default/files/ForestIndex_FactSheet_FINAL.pdf)



forest management, removal of invasive species, and changes to speed limits or other measures to limit the impacts of motor vehicles on forest quality, wherever possible.

The ratings of each forest index type “can be incorporated into proactive conservation and land-use planning by municipalities, land trusts, watershed alliances, and other groups. Combined with additional data sets and community input, the index can help set conservation goals. The index can also identify opportunities to preserve or restore forests with high landscape connectivity, habitat and ecosystem values, or other notable properties.”<sup>32</sup> Specifically it can be used to prioritize which private parcels of land should be targeted for conservation easements or for potential public purchase and management both for the sake of improving habitat connectivity, but also to protect other vital ecosystem services such as carbon sequestration.

According to the Hudson River Estuary Program, “although thousands of acres of forest land in New York are protected by government agencies or conservation organizations, 14 million acres (75% of the state’s forested area) are privately owned and generally vulnerable to fragmentation and degradation. The Forest Condition Index can inform planning and stewardship to conserve large forests and the numerous benefits they provide. General measures to conserve forest values include:

- “Protect large, unfragmented forests.
- Avoid or minimize disturbance to core (interior) forest habitat. Preserve broad forest corridors to maintain habitat connectivity.
- Concentrate new development along existing roads or forest edges.
- Allow sound forestry and promote sustainable forest uses.”<sup>33</sup>

#### *Further Study:*

The Hudson River Estuary Program recommends the following for further study:

- “Biodiversity assessment can produce more accurate and detailed information about forest cover, type, and habitat quality. See Appendix E for details. Managed forest land. Landowners with at least 50 contiguous acres of forest are eligible to participate in the New York State 480-A tax law program, which encourages the long-term management of woodlands to produce forest crops and offers landowners property tax reductions. Landowners must follow a DEC-approved forest management plan for 10 consecutive years upon entering the program. Information on parcels enrolled in the 480-A program can be obtained from the local tax assessor’s office or from the DEC Forest Stewardship Program.

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<sup>32</sup> Ibid.

<sup>33</sup> Haeckel, Ingrid and Nate Nardi-Cyrus, Forest Condition Index Fact Sheet, Hudson River Estuary Program, NYSDEC, [https://www.nynhp.org/sites/default/files/ForestIndex\\_FactSheet\\_FINAL.pdf](https://www.nynhp.org/sites/default/files/ForestIndex_FactSheet_FINAL.pdf)

- “Potential lands for sustainable forestry (silvicultural potential). Identifying and encouraging an increase in the acreage of sustainably managed forest can help maintain land in a forested use and benefit wildlife, water quality, and other natural resources. The analysis should exclude lands with steep slopes, which are more vulnerable to negative impacts from soil disturbance. A full methodology for identifying potential silvicultural lands is provided in the Green Infrastructure Center’s publication *Evaluating and Conserving Green Infrastructure Across the Landscape: A Practitioner’s Guide*.<sup>34</sup>

Also, the New York Natural Heritage program, which developed the Forest Condition Index suggests that local on-the-ground forest condition studies should complement this dataset to ensure that the forest condition ratings accurately represent the forest blocks within Philipstown: “The best way to assess the condition of a forest is to conduct a field survey and quantify the native species, invasive species, structural and habitat heterogeneity, forest health indicators, forest stress indicators, and other measures of forest condition. Lacking the ability to visit every forest patch, however, there are many remote measures that estimate different aspects of forest health that might be used, in concert, to estimate forest condition. These data are intended to be used to provide additional information and context to municipalities and land use managers about the character of their forests to aid in management, planning, and conservation priority setting. They are not meant to substitute for on the ground condition assessments.”<sup>35</sup> This suggests that follow up studies to confirm the findings of this Forest Condition Index dataset would be useful to the town’s long-term conservation goals.

#### *Data Sources:*

- Forest Condition Index
  - NYSDEC Hudson Valley Forest Index  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1364>

## **27. Significant Coastal Habitat**

### *Description:*

According to the Hudson River Estuary Program, “the 153-mile stretch of the Hudson River from the Federal Lock and Dam in Troy to New York Harbor is tidal and thus defined as an estuary. The state of Hudson River shorelines varies from natural to engineered, from tidal

<sup>34</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>35</sup> Conley, A. K., et. al, Hudson Valley Forest Patch Update and Assessment, New York Natural Heritage Program, December 2019. [https://www.nynhp.org/sites/default/files/Forest\\_Patch\\_Assessment\\_NYNHP\\_2019\\_20200228.pdf](https://www.nynhp.org/sites/default/files/Forest_Patch_Assessment_NYNHP_2019_20200228.pdf)



habitat to industrial waterfront. Knowing the status of tidal shoreline habitat can help guide restoration and management of a more natural shoreline and identify natural shorelines that might be priorities for conservation. Furthermore, global sea level rise will fundamentally affect the shoreline of the Hudson River estuary in the coming decades. Natural shorelines will potentially allow for the migration of tidal and shoreline habitats as sea level rises.

“Tidal marshes, submerged aquatic vegetation (SAV), mudflats, and other significant habitats in and along the estuary support a great diversity of life and contribute to the economic significance of the estuary. More than 200 species of fish are found in the Hudson, including key commercial and recreational species like striped bass, and species of conservation concern like Atlantic and shortnose sturgeon. SAV beds consist of under-water plants that improve water quality in the Hudson and provide essential habitat for invertebrate animals, which feed fish and waterfowl that use the estuary. Tidal wetland habitats play a critical role as nursery grounds for fish and shellfish species, as well as providing nesting sites and migration stops for birds and sources of nutrients for the estuary food web. These wetland systems also help filter pollutants, buffer shoreline properties, and help stabilize the river’s shoreline.”<sup>36</sup>

The Significant Coastal Habitat on this map comes from the NYSDEC, which “has identified and evaluated coastal habitats throughout the state’s coastal regions, providing recommendations to the New York State Department of State so that the most important or ‘significant’ habitats may be designated for protection in accordance with the New York Waterfront Revitalization and Coastal Resources Act (Executive Law, Article 42). The Significant Coastal Fish and Wildlife Habitats are useful for planning at the local level because they describe the highest quality habitats on the Hudson, outlining fish and wildlife values and activities that may have large impacts on the habitats.”<sup>37</sup>

Specific protection for such areas involve a Habitat Impairment Test. Such a test “must be met for any activity that is subject to consistency review under Federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area. The specific habitat impairment test that must be met is as follows. In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would: 1. destroy the habitat; or, 2. significantly impair the viability of a habitat.”<sup>38</sup> More information on this test can be found at:

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<sup>36</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>37</sup> Ibid.

<sup>38</sup> NYS Department of State (DOS), Coastal Fish and Wildlife Rating Form, Hudson Highlands, 2021, [https://www.dos.ny.gov/opd/programs/consistency/Habitats/HudsonRiver/Hudson\\_Highlands\\_FINAL.pdf](https://www.dos.ny.gov/opd/programs/consistency/Habitats/HudsonRiver/Hudson_Highlands_FINAL.pdf)



[https://www.dos.ny.gov/opd/programs/consistency/Habitats/HudsonRiver/Hudson\\_Highlands\\_FINAL.pdf](https://www.dos.ny.gov/opd/programs/consistency/Habitats/HudsonRiver/Hudson_Highlands_FINAL.pdf)

And a detailed summary of the rating system for Significant Coastal Habitats can be found at:

[https://www.dos.ny.gov/opd/programs/pdfs/1984\\_SCFWH\\_technical\\_memorandum.pdf](https://www.dos.ny.gov/opd/programs/pdfs/1984_SCFWH_technical_memorandum.pdf)

Tidal Wetland Community Types were also included on the map. These wetlands “occur in slightly salty or brackish conditions in the southern and middle reaches of the estuary, and freshwater conditions in the northern reaches. The distribution of Hudson River estuary tidal wetlands from Hastings-on-Hudson to Troy was mapped in 2007. Each mapped wetland was assigned a classification; for example, lower intertidal mix or wooded swamp.”<sup>39</sup> This layer was created by Cornell University’s Institute for Resource Information Sciences (IRIS), the Hudson River National Estuarine Research Reserve and the Hudson River Estuary Program.

#### *Findings:*

#### Significant Coastal Habitat:

Philipstown has three Significant Coastal Habitats:

- Hudson Highlands: which extends along the eastern shore of the Hudson River from the border of Philipstown and the Town of Fishkill all the way down to Verplanck in the Town of Cortlandt.
- Constitution Marsh: Philipstown’s most substantial tidal wetland.
- Manitou Marsh: A tidal wetland located in the southwest corner of Philipstown.

We have included below the full program descriptions<sup>40</sup> of each of the above Significant Coastal Habitats for convenience. Each of these summaries, including point breakdowns showing how the habitats earned their “significant” ratings, can also be found at:

<https://www.dos.ny.gov/opd/programs/consistency/scfwhabitats.html#hudson>

<sup>39</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

<sup>40</sup> NYS Department of State, Significant Coastal Fish and Wildlife Habitats, Hudson River, <https://www.dos.ny.gov/opd/programs/consistency/scfwhabitats.html#hudson>

### **“Hudson Highlands:**

“LOCATION AND DESCRIPTION OF HABITAT: Hudson Highlands extends roughly from Denning’s Point to Stony Point, in the Towns of New Windsor, Cornwall and Highlands, Orange County; Stony Point, Rockland County; Fishkill, Dutchess County; Philipstown, Putnam County; and Cortlandt, Westchester County (7.5’ Quadrangles: West Point, N.Y.; and Peekskill, N.Y.; Haverstraw, N.Y.). The fish and wildlife habitat encompasses 6,700 acres of the main river channel below mean low water and adjacent shallows and shoals, over an approximate twentymile reach. This area is a very narrow and deep (up to 200 feet deep) section of the Hudson River with strong currents and a rocky bottom substrate. The land area bordering Hudson Highlands is predominantly steep, rocky, hillsides with a variety of land uses including undeveloped forestland (e.g., Storm King, Bear Mountain, and Hudson Highlands State Park Preserve), small urban centers, and the West Point Military Reservation. In addition, railroad tracks closely follow the shoreline on both sides of Hudson River in this habitat area. Water salinity throughout is variable as the salt front migrates up and down the river through this area depending on tidal conditions and the amount of freshwater inflows up-river, which are dependent on seasonal weather patterns and extreme events. US Geological Survey data between 1992 and 2012 show that the salt front can occur on a daily basis from as far south as the Battery (RM 0) to north of Poughkeepsie (RM 77), but during this 20 year period the salt front was generally between River Miles 30-70. The habitat also includes most of Iona Island, which is part of the Hudson River National Estuarine Research Reserve, an area dedicated to environmental research and education. The submerged aquatic vegetation beds occurring along the eastern shore are dominated by water celery (*Vallisneria americana*).

“FISH AND WILDLIFE VALUES: Hudson Highlands is the Hudson’s deepest and narrowest segment, with strong currents and rocky substrates. The inputs of three major tributaries (Wappinger, Fishkill, and Moodna Creeks) contribute to the development of strong currents within the narrow, deep river channel. The combination of swift currents, rocky substrates, and freshwater inflow (during spring runoff) over this large area provides highly favorable conditions for reproduction by coastal migratory fishes, especially striped bass (*Morone saxatilis*). Based on egg abundance data, Hudson Highlands is one of two areas of high striped bass egg deposition in the estuary. Generally, striped bass enter the area to spawn in May and June; the adults leave the area shortly after spawning and within several weeks the eggs have hatched and larval fish begin moving downstream to nursery areas in the brackish portion of the Hudson River. Although the commercial fishery for striped bass in the Hudson River was closed in 1985, the Hudson Highlands contributes to coastal commercial and recreational fisheries.

Deepwater areas such as Hudson Highlands are also used by concentrations of species that spawn elsewhere in the Hudson River estuary. Deep areas are used as migrational routes by Atlantic sturgeon (*Acipenser oxyrinchus*) (E) and shortnose sturgeon (*Acipenser brevirostrum*) (E) and are important nursery areas and summering areas for juvenile Atlantic sturgeon and summering areas for post-spawn adults. As the salt front moves up through this area a variety of marine species, such as bluefish, anchovy, silversides, and blue claw crab may also enter the area. Associated with the fisheries resources in Hudson Highlands is a significant concentration of wintering bald eagles (*Haliaeetus leucocephalus*) (T). Because this area rarely freezes in winter it provides a dependable forage habitat for these birds. Winter residence in the area generally extends from December through March. These birds feed throughout Hudson Highlands, and Iona Island is a primary roosting area; the latter has been designated an eagle sanctuary by the Palisades Interstate Park Commission. Other roosting areas include undisturbed woodlands along both sides of the river, especially near 3 sheltered coves. The concentrations of anadromous and marine fishes occurring in Hudson Highlands results in recreational fishing opportunities within the area, attracting visitors from throughout the lower Hudson Valley. Hudson Highlands is a critical habitat for most estuarine-dependent fisheries originating from the Hudson River. This area contributes directly to the production of in-river and ocean populations of food, game, and forage fish species. Consequently, commercial and recreational fisheries throughout the Atlantic Coast benefit from these biological inputs from the Hudson River estuary.

“IMPACT ASSESSMENT: Any activities that would degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in the Hudson Highlands would result in significant impairment of the habitat. Of primary concern in this deep estuarine area would be diversion of freshwater flows out of the Hudson, contamination by toxic chemicals, major structural alterations to the underwater habitat (e.g., dredging, filling, or construction of jetties), and thermal discharges. All species may be adversely affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity or sediment loading, nonpoint source runoff, and waste disposal (including vessel wastes). Discharges or runoff of sewage effluent, pesticides, or other hazardous materials into the river could result in adverse impacts on the habitat area. Any physical modification of the habitat or adjacent wetlands, through dredging, filling or bulkheading, would result in a direct loss of valuable habitat area. Transient habitat disturbances, such as dredging or in-river construction activities, could have significant impacts on striped bass populations during spawning and incubation periods (May-July, primarily). Habitat disturbances would be most detrimental during bird nesting, and fish spawning and nursery periods, which generally extend from April through August for most warm water species, as well as bald eagle overwintering periods (December through March). Thermal



discharges, depending on time of year, could have adverse effects on use of the area by migratory and resident species. Activities that result in the presence of significant electric, magnetic, or electromagnetic fields may affect benthic communities, migratory fish movement, and fish egg and larval development. Entrainment and impingement causes significant mortality to all life stages of fish, including endangered species. Activities that would enhance migratory, spawning, or nursery fish habitat, particularly where an area is essential to a species' life cycle or helps to restore an historic species population would be beneficial. It is essential that activities in the vicinity of Iona Island also be evaluated with respect to its use for environmental research and education, and the need to maintain natural or controlled experimental conditions.

#### **“Constitution Marsh:**

“LOCATION AND DESCRIPTION OF HABITAT: Constitution Marsh is located on the east side of the Hudson River, between the villages of Garrison and Cold Spring, in the Town of Philipstown, Putnam County (7.5' Quadrangle: West Point, N.Y.). The fish and wildlife habitat is an approximate 430 acre wetland, separated from the Hudson River by Constitution Island and the Metro North railroad. The predominant ecological communities in the area include tidal marshes and flats, ranging in salinity from freshwater to brackish. Approximately three-fourths of this area is tidal emergent marsh, dominated by narrow-leaved cattail (*Typha angustifolia*); the remainder is predominantly intertidal mudflats, and shallow, subtidal beds of aquatic vegetation, mainly water celery (*Vallisneria spiralis*). Constitution Marsh receives freshwater inflows from several small, high gradient, coldwater streams, including Foundry Brook, Indian Brook and Philipse Brook. The wetland is hydrologically connected to the Hudson River through openings in the railroad causeway at each end of Constitution Island. The land area surrounding Constitution Marsh is generally steep, rocky, currently undeveloped, forestland. Most of the Constitution Marsh fish and wildlife habitat is owned by New York State and is managed by the National Audubon Society as a wildlife sanctuary. Scenic Hudson owns and manages a portion of Foundry Cove. Remaining portions are privately owned. This area provides habitat for numerous threatened and endangered plant species: clustered sedge (*Carex lasiocarpa*) (T), Eastern annual saltmarsh aster (*Symphyotrichum subulatum*) (T), Long's bittercress (*Cardamine longii*) (T), smooth bur-marigold (*Bidens laevis*) (T), spongy arrowhead (*Sagittaria calycina*) (T), and water pigmyweed (*Crassula aquatica*) (E). Habitat disturbances include invasive plant species including common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) and water chestnut (*Trapa natans*) and past chemical pollution. The chemical pollution (especially cadmium and nickel) is the result of past discharges of wastewater from the Marathon Battery Company in Cold Spring. The contamination was concentrated at the

north end of Constitution Marsh in Foundry Cove and in the Hudson River. Remediation and restoration of the contaminated areas was completed in 1995.

“FISH AND WILDLIFE VALUES: Constitution Marsh is a large undeveloped tidal wetland with a diverse vegetation community and multiple freshwater inflows creating favorable habitat conditions for many fish and wildlife species. The extensive shallow water areas and stream mouths provide spawning and nursery habitat for a variety of coastal migratory and resident freshwater fishes. Species found in the area include alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), banded killifish (*Fundulus diaphanus*), mummichog (*Fundulus heteroclitus*), four spined stickleback (*Apeltes quadracus*), and largemouth bass (*Micropterus salmoides*). Red-fiddler crabs (*Uca minax*) have been observed in the habitat area. Constitution Marsh is also used seasonally by snapper bluefish and Atlantic needlefish. The submerged aquatic vegetation provides food for fish, invertebrates and waterfowl as well as refuge for fish and invertebrates. This area also provides habitat for water snake (*Nerodia s. sipedon*), Eastern garter snake (*Thamnophis sirtalis*), black rat snake (*Elaphe obsoleta*), Eastern milk snake (*Lampropeltis triangulum*), red-spotted newt (*Notophthalmus v. viridescens*), Eastern redback salamander (*Plethodon cinereus*), Eastern American toad (*Bufo americanus*), gray treefrog (*Hyla versicolor*), spring peeper (*Pseudacris crucifer*), American bullfrog (*Rana catesbeiana*), green frog (*Rana clamitans*) and wood frog (*Rana sylvatica*). 3 Sizeable populations of common snapping turtle (*Chelydra serpentina*) have been reported in the area as well. Eighty-one bird species have been confirmed or are probable breeders at Constitution Marsh. This marsh is especially important for marsh-nesting birds; probable or confirmed breeding species include green backed heron (*Butorides virescens*), Virginia rail (*Rallus limicola*), least bittern (*Ixobrychus exilis*) (SC), Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), wood duck (*Aix sponsa*), spotted sandpiper (*Actitis macularia*), belted kingfisher (*Ceryle alcyon*), marsh wren (*Cistothorus palustris*), red winged blackbird (*Agelaius phoeniceus*), willow flycatcher (species at-risk) (*Empidonax traillii*), and swamp sparrow (*Melospiza georgiana*). A number of other birds are known to utilize the marsh and surrounding woodlands, including sora (*Porzana carolina*), American black duck (*Anas rubripes*), American goldfinch (*Carduelis tristis*), common yellowthroat (*Geothlypis trichas*), yellow warbler (*Dendroica petechia*), merlin (regular migrant) (*Falco columbarius*), blue-winged warbler (probable breeder), cerulean warbler (*Vermivora pinus*) (SC), worm-eating warbler (*Helmitheros vermivorus*) (species at-risk in adjacent woodlands), and Canada warbler (*Wilsonia canadensis*) (regular migrants). Concentrations of herons, waterfowl, and shorebirds also occur in Constitution Marsh during spring and fall migrations (March-April and September-November, respectively). American bittern (SC), osprey (*Pandion haliaetus*)(SC), bald eagle (*Haliaeetus*

leucocephalus) (T) Cooper's hawk ( *Accipiter cooperii*)(SC), least bittern (*Ixobrychus exilis*) (T) hundreds of American black duck, bobolink (*Dolichonyx oryzivorus*), common grackle (*Quiscalus quiscula*), mallard (*Anas platyrhynchos*), red winged blackbird (*Agelaius phoeniceus*), swallows, willow flycatcher (*Empidonax traillii*), wood duck (*A. sponsa*), Northern harrier (*Circus cyaneus*)(T), osprey (*P. haliaetus*) (SC), peregrine falcon (*Falco peregrinus*)(E), pied-billed grebe (*Podilymbus podiceps*) (T), red-shouldered hawk (*Buteo lineatus*)(SC) and sharp-shinned hawk (*Accipiter striatus*)(SC) have been observed in this habitat. Bald eagles (*H. leucocephalus*) have been observed nesting in the vicinity of the marsh. The diversity and abundance of wildlife species in Constitution Marsh is unusual in the lower Hudson River. Opportunities for birdwatching, wildlife photography, and informal nature study attract visitors from throughout the Hudson Valley. In addition, the National Audubon Society has an active program of environmental education and research focused on this productive wetland area.

“IMPACT ASSESSMENT: It is essential that any potential impacts on Constitution Marsh be evaluated with respect to its use for environmental research and education, and the need to maintain natural or controlled experimental conditions. Any activity that would substantially degrade water quality, increase turbidity or sedimentation, reduce freshwater inflows, or alter tidal fluctuations in Constitution Marsh would result in significant impairment of the habitat. Elimination of wetlands or shallow areas, through dredging, filling, or bulkheading, would result in a direct impact on valuable fish and wildlife habitats. Activities that would subdivide this relatively large, undisturbed area into smaller fragments should be restricted. Habitat management activities, including expansion of productive littoral areas, may be designed to maintain or enhance populations of certain fish or wildlife species. Despite past remedial action, contaminated soils remain. Any activity, other than further remediation, that would mobilize existing contaminants should be avoided. Elimination of existing adjacent wetland and forested habitats would adversely affect the habitat. Existing vegetated riparian buffer zones woodlands bordering Constitution Marsh should be maintained for their value as cover, soil stabilization, perch sites, and buffer zones; significant human encroachment into the adjacent area could adversely affect certain species of wildlife. Habitat disturbances would be most detrimental during bird nesting, and fish spawning and nursery periods, which generally extend from April through August for most warm water species. The submerged aquatic vegetation beds would be negatively impacted by changes in the littoral zone through dredging and/or filling as well as changes in water quality. Where opportunities exist, appropriate restoration of intertidal and subtidal shallow habitats should be undertaken using the best available science and proper monitoring protocols. Restoration and enhancement efforts should be monitored, and the associated habitat effects should be reported and evaluated. The presence of invasive species and the



expansion of their range within the habitat may result in changes in native plant, vertebrate and invertebrate species composition and abundance. In particular, changes in plant communities may affect marsh-nesting birds. Effective control of invasive plant species, through a variety of means, may improve fish and wildlife species use of the area. Control methods, including biological controls and regulated use of herbicides must only be implemented, if other methods of control have been explored, and then only under permit with strict adherence to all precautionary measures to avoid impacts to non-target species. The primary goals of such efforts must be recovery and maintenance of habitat for native fish and wildlife species.

**“Manitou Marsh:**

“LOCATION AND DESCRIPTION OF HABITAT: Manitou Marsh is an approximately 75-acre enclosed freshwater to low salinity tidal marsh located on the eastern shore of the Hudson River in the Town of Philipstown in Putnam County (7.5' Quadrangles: Peekskill N.Y.). This marsh is almost completely hydrologically isolated from the Hudson River by a railroad causeway and natural ledge. Two culverts allow water interchange with the Hudson River. Manitou Station Road bisects the wetland into northern and southern sections, although water flows through a small culvert. The marsh is bordered by upland forest to the east and railway causeway to the west. This habitat is dominated by narrow-leaf cattail (*Typha angustifolia*) with arrow arum (*Peltandra virginica*) inhabiting banks of creeks and low elevation zones. The invasive species common reed (*Phragmites australis*) is the dominant plant in the northern portion of the site and is expanding into the southern portion of the marsh. Purple loosestrife (*Lythrum salicaria*) is distributed throughout the habitat. Beds of submerged aquatic vegetation, dominated by water celery (*Vallisneria spiralis*) are also found here. Manitou Marsh is part of Manitou Point Preserve, which is owned by Scenic Hudson and managed by the Scenic Hudson Land Trust. Disturbances to this habitat include activities related to a small residential community, activities along the railroad causeway, and expansion of invasive species.

“FISH AND WILDLIFE VALUES: Manitou Marsh provides important nursery habitat for resident freshwater, migratory and estuarine/marine species. Resident freshwater fish include carp (*Cyprinus carpio*), black-nose dace (*Rhinichthys atratulus*), yellow perch (*Perca flavescens*), redbreast sunfish (*Lepomis auritus*), golden shiner (*Notemigonus crysoleucas*), inland silverside (*Menidia beryllina*), pumpkinseed (*Lepomis gibbosus*), brown bullhead (*Ameiurus nebulosus*), bluegill (*Lepomis macrochirus*), Eastern silvery minnow (*Hybognathus regius*), largemouth bass (*Micropterus salmoides*). Migratory fish species include alewife (*Alosa pseudoharengus*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), and blueback herring (*Alosa aestivalis*). Other estuarine resident species include: Northern pipefish (*Syngnathus fuscus*), naked goby (*Gobiosoma*

bosci), four-spined stickleback (*Apeltes quadracus*), mummichog (*Fundulus heteroclitus*), tessellated darter (*Etheostoma olmstedii*), spottail shiner (*Notropis hudsonius*), banded killifish (*Fundulus diaphanous*), white perch (*Morone americana*), Atlantic silverside (*Menidia menidia*), Atlantic needlefish (*Strongylura marina*), Atlantic blue crab (*Callinectes sapidus*) and grass shrimp. Red-jointed fiddler crab (*Uca minax*) have also been observed in the habitat area. The submerged aquatic vegetation, dominated by water celery (*Vallisneria americana*) provides food for fish, invertebrates and waterfowl as well as shelter for fish and invertebrates. Manitou Marsh supports a variety of waterfowl, wading birds and song birds including wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), Virginia rail (*Rallus limicola*), great blue heron (*Ardea herodias*), belted kingfisher (*Ceryle alcyon*), marsh wren (*Cistothorus palustris*). Spotted turtle (*Clemmys guttata*) (SC), and wood turtle (*Clemmys insculpta*) (SC) have been observed in the area, however, additional information on the importance of the ecosystem to the species is needed prior to inclusion in the Species Vulnerability ranking. The area also provides habitat for spring peeper (*Pseudacris crucifer*), black racer (*Coluber constrictor*), snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), Northern water snake (*Nerodia s. sipedon*) and green frog (*Rana clamitans*). Needham's skimmer (*Libellula needhami*) have also been observed in the area.

“IMPACT ASSESSMENT: Any activities that would degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in the Manitou Marsh would adversely affect the biological productivity of this area. All species may be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity or sediment loading, nonpoint source runoff, and waste disposal. Any physical alteration of the habitat, through dredging, filling, or bulkheading, would result in a direct loss of valuable habitat area. However, habitat management activities, including expansion of productive littoral areas, may be designed to maintain or enhance populations of certain fish or wildlife species. Plans to reduce or eliminate the impacts of existing hydrological modifications should be developed, including improvements to fish passage, and/or the removal of obstructions or barriers. Habitat disturbances would be most detrimental during bird nesting, and fish spawning and nursery periods, which generally extend from April through August for most warm water species. Activities that would subdivide this largely undeveloped area into smaller fragments should not be allowed. Elimination or disturbance of wetland or shallow areas would result in a direct loss of valuable habitat. Vegetated upland buffer zones (e.g., wetlands and forested areas) should be protected, and where possible restored to provide bank cover, stabilize soil, maintain or improve water quality and provide buffer areas from development. Alteration to existing railroad causeways and bridges could affect the hydrology and extent of shoreline habitat areas. Any construction related to these structures should utilize the best available science and

technology to reduce and avoid negative impacts to the habitat area. The presence of invasive species and the expansion of their range within the habitat may result in changes in native plant, vertebrate and invertebrate species composition and abundance. In particular, expansion of common reed (*Phragmites australis*) has been correlated with reductions in populations of several marsh-breeding birds and declines in avian biodiversity. Effective control of invasive plant species, through a variety of means, may improve fish and wildlife species use of the area. Control methods, including biological controls and regulated use of herbicides must only be implemented, if other methods of control have been explored, and then only under permit with strict adherence to all precautionary measures to avoid impacts to non-target species. The primary goals of such efforts must be recovery and maintenance of habitat for native fish and wildlife species.”<sup>41</sup>

#### Tidal Wetland Community Types:

The following are descriptions, including commons species, of each type of wetland community. Some species are found in more than one wetland community type. These descriptions come from the Hudson River Estuary Wetlands 2007 metadata under “Data Quality Information,” and were provided by the Cornell Institute for Resource Information Sciences (Cornell IRIS).<sup>42</sup>

**“Lower Intertidal Mix** is found on periodically flooded sandflats and mudflats in brackish and freshwater tidal marshes. Classified as “LI”, it is dominated by *Nuphar advena* in association with *Pontederia cordata*, *Scirpus tabernaemontani*, *Zizania aquatica*, *Sagittaria latifolia*, *Peltandra virginica*, *Spirodela polyrhiza*, *Trapa natans*, *Polygonum* sp., *Scirpus pungens*, *Typha angustifolia*, *Scirpus fluviatilis*, *Myriophyllum spicatum*, *Potamogeton perfoliatus*, *Sagittaria* sp., *Sagittaria calycina* and *Typha latifolia*.

**Open Water:** Occurs in or along areas that are very frequently if not always flooded. This community type was classified as “OW.” *Panne* is often found in high and low salt marshes and was also classified “OW.” It is a shallow depression with poor drainage and with or without standing water. Vegetation may or may not be present.

***Phragmites australis* (Common Reed):** Is found in the highest elevation zone of the freshwater tidal marshes and was classified as “PA.” The vegetation is dominated by *Phragmites australis* in association with *Typha angustifolia*, *Peltandra virginica*, *Lythrum salicaria*, *Scirpus* sp., *Impatiens capensis*, *Spartina cynosuroides*, *Thelypteris palustris*,

<sup>41</sup> Ibid.

<sup>42</sup> Cornell Institute for Resource Information Sciences (Cornell IRIS), Hudson River Estuary Tidal Wetlands 2007, [http://gis.ny.gov/gisdata/metadata/nysdec.hre\\_tidal\\_wetlands2007.shp.xml#Data\\_Quality\\_Information](http://gis.ny.gov/gisdata/metadata/nysdec.hre_tidal_wetlands2007.shp.xml#Data_Quality_Information)



*Acorus calamus*, *Spartina patens*, *Althaea officinalis*, *Scirpus americanus*, *Boehmeria cylindrica*, *Eupatoriadelphus fistulosus*, *Distichlis spicata*, *Hibiscus moscheutos*, *Pilea pumila*, *Scirpus pungens*, *Scutellaria galericulata*, *Onoclea sensibilis*, *Cicuta maculata*, *Cornus racemosa*, *Scirpus fluviatilis*, *Spartina alterniflora*, *Toxicodendron radicans* and *Vitis*.

**Scrub / Shrub:** is generally found in areas of higher elevation in freshwater marshes and was classified as "SS." The vegetation is dominated by *Salix* species in association with *Peltandra virginica*, *Lythrum salicaria*, *Typha angustifolia*, *Impatiens capensis*, *Equisetum fluviatile*, *Eupatoriadelphus fistulosus*, *Iris* sp., *Onoclea sensibilis*, *Polygonum* sp., *Panicum clandestinum*, *Sagittaria latifolia*, *Solidago* sp., *Scirpus fluviatilis*, *Fraxinus americanus*, *Acer* sp., *Platanus* sp., and *Apios americana*. The height of the canopy is approximately 10-12 feet or more.

**Submerged Aquatic Vegetation:** A community of continuously flooded substrates with rooted aquatic vegetation and was classified as "SV." It may be found in tidal channels or close to the shore of the Hudson River. Species present may include *Vallisneria americana*, *Myriophyllum spicatum*, *Ceratophyllum demersum*, *Elodea nuttallii*, *Najas* sp., and *Potamogeton perfoliatus*.

**Trapa Natans (Water Chestnut):** Was classified as "TN" and occupied open water/tidal channel areas. *Trapa natans* is dominant in association with *Spirodela polyrhiza*, *Myriophyllum spicatum*, and *Nuphar advena*.

**Typha Angustifolia (Narrowleaf Cattail):** Occurs in brackish and freshwater tidal marshes and was classified as "TA." It is dominated by *Typha angustifolia* in association with *Peltandra virginica*, *Lythrum salicaria*, *Impatiens capensis*, *Phragmites australis*, *Acorus calamus*, *Althaea officinalis*, *Scirpus fluviatilis*, *Sagittaria latifolia*, *Polygonum* sp., *Hibiscus moscheutos*, *Thelypteris palustris*, *Pontederia cordata*, *Scirpus* sp., *Salix* sp., *Ambrosia trifida*, *Iris* sp., *Scirpus tabernaemontani*, *Spartina patens*, *Leersia oryzoides*, *Nuphar advena*, *Pilea pumila*, *Sparganium eurycarpum*, *Zizania aquatica*, *Boehmeria cylindrica*, *Convolvulus* sp., *Distichlis spicata*, *Equisetum fluviatilis*, *Eupatoriadelphus fistulosus*, *Mentha* sp., *Onoclea sensibilis*, *Orontium aquaticum*, *Phalaris arundinacea*, *Sagittaria* sp., *Scirpus pungens*, *Spirodela polyrhiza*, *Trapa natans*, and *Ulmus* species. *Typha latifolia* and *Typha glauca* are included in this category.

**Unvegetated Flats:** Are mudflats along shores of tidal creeks or the river in both brackish and freshwater tidal marshes, and were classified as "UF." No species of plant is present.

**Upland:** Occurs at an elevation somewhat higher than that of the marsh and was classified as "UP." Species present may include *Ambrosia trifida*, *Ailanthus altissima*, *Aster* sp. Wrack Line occurs where debris and flotsam are deposited by high tide on the freshwater, brackish or salt marsh. Wrack Line was also classified as "UP."

**Upper Intertidal Mix:** Occurs in the higher sand flats of freshwater tidal marshes and was classified as "UI." The dominant species is *Scirpus americanus*. Associated species include *Phragmites australis*, *Typha angustifolia*, *Althaea officinalis*, *Distichlis spicata*, *Hibiscus moscheutos*, *Scirpus* sp., *Scirpus fluviatilis*, *Scirpus tabernaemontani*, *Spartina patens*, *Thelypteris palustris*, *Althaea officinalis*, *Distichlis spicata*, *Peltandra virginica*, *Zizania aquatica*, *Impatiens capensis*, *Lythrum salicaria*, *Sagittaria latifolia*, *Spartina cynosuroides*, *Boehmeria cylindrica*, *Onoclea sensibilis*, *Polygonum* sp., *Pontederia cordata*, *Scirpus pungens*, *Acorus calamus*, *Centauria* sp., *Ceratophyllum demersum*, *Eupatoriadelphus fistulosus*, *Galium* sp., *Iris* sp., *Leersia oryzoides*, *Orontium aquaticum*, *Pilea pumila*, *Sagittaria* sp., *Sagittaria calycina*, *Sagittaria subulata*, *Spartina alterniflora* and *Spirodela polyrhiza*.

**Wooded Swamp** is characteristic of lowlands along large river systems with gentle slope gradients coupled with tidal influence and was classified as "WS." *Symplocarpus foetidus* is dominant and is associated with *Boehmeria cylindrical*, *Impatiens capensis*, *Salix* sp., *Liriodendron tulipifera*, *Quercus bicolor*, *Ulmus* sp., *Scutellaria galericulata*, *Scirpus* sp., *Thelypteris palustris*, *Acorus calamus*, *Leersia oryzoides*, *Onoclea sensibilis*, *Peltandra virginica*, *Typha angustifolia*, *Acer negundo*, *Acer rubrum*, *Berberis thunbergii*, *Betula lenta*, *Carya ovata*, *Carya tomentosa*, *Fraxinus americanus*, *Quercus alba*, *Quercus prinus*, *Quercus rubra*, *Quercus velutina*, *Rubus angustifolium*, *Tsuga Canadensis*, *Rubus occidentalis* and *Vaccinium angustifolium*. The height of the canopy may be as much as 60 to 90 feet and the difference in height between the canopy and the understory is quite large."<sup>43</sup>

More detailed descriptions of each tidal wetland area within Philipstown, including fish and wildlife values as well as potential threats are covered above in the Significant Coastal Habitat section.

#### *Data Sources:*

- Significant Coastal Habitat
  - Significant Coastal Fish and Wildlife Boundaries  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=318>
- Tidal Wetland Community Types

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<sup>43</sup> Ibid.

- Hudson River Estuary Tidal Wetlands 2007  
<https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1210>

## **28. Stream Habitats &**

### **29. Third Party Map: Road-Stream Crossings in Philipstown and Putnam Valley**

#### *Description:*

According to the Hudson River Estuary Program, “streams and streamside or *riparian* areas are important transitional zones where land and water are linked. Riparian zones support the aquatic stream environment and are important ecosystems themselves, providing a suite of conditions that are optimal for many plants and animals. Streams and riparian areas often support high biological diversity and can provide potential routes for wildlife movement, seed dispersal, and gene flow across landscapes.

“Streams include channel habitat and riparian areas on the tops of the banks, the floodplain, and non-floodplain areas adjoining the stream. A typical stream channel contains microhabitats such as pools, riffles, and runs. Pools and slow runs may support submerged vegetation while channel bars and portions of lower banks are often vegetated by shrubs and plants that are tolerant of flooding and ice damage. Similarly, floodplains support habitats that can withstand occasional flooding, such as wet meadow, swamp, marsh, and lowland forest, as well as drier habitats like upland meadow. Riparian vegetation helps to stabilize banks and is a source of woody debris that helps to create microhabitat in the stream channel.

“Well-shaded, cool to coldwater streams with clean gravel substrate are able to support native coldwater fish such as brook trout that are sensitive to warmer temperatures and sedimentation. Some streams support migratory routes for diadromous fish, such as American eel and herring species. Many other species rely on streams for foraging, breeding, migration, hibernation, and refuge, including mink, muskrat, river otter, bats, woodcock, belted kingfisher, herons, wood turtle, stream salamanders, and many invertebrates, such as dragonflies.

“The suitability of stream and riparian habitat for supporting this biological diversity can be altered by agricultural and timber harvesting activities, the creation of physical structures such as buildings, roads, culverts, and dams, and other disturbances that cause clearing of vegetation, sedimentation, or pollution. Dams and poorly designed and installed culverts can isolate and severely limit the range of aquatic species and other organisms that use stream corridors, and can also have serious effects on local flooding and water quality. Such aquatic disconnections are significant barriers for resident species such as brook trout, as well as migratory fish species that



rely on aquatic connectivity along tributary streams to complete their life cycles. With proper planning and use of best management practices, stream corridors can continue to support natural and human communities.”<sup>44</sup>

The first map in this section is an expansion on the map from Section 21. Threats to Water Quality. It combines the previous map layers on potential barriers to the movement of aquatic life as well as potential threats of contamination to aquatic habitat with the added layers showing various types of important aquatic habitat as well as potential trout streams. NYSDEC Dams, NYSDOT Large Culverts and Culverts in MS4 are already described in more detail in Section 21 of this report, but in summary, they each may prevent the movement of aquatic wildlife from one section of a stream to another, in effect creating fragmented streams, which decrease their potential to provide sufficient habitat for some aquatic species. These barriers may also serve as concentration points for pollution released upstream, further endangering the health of aquatic species that need to pass through the dam or culvert

Trout streams, also described above in Section 19. NYS DEC Stream Classifications, are those streams that have sufficient amounts of dissolved oxygen, cold water temperature, clean stream beds and low sedimentation and pollution levels to support trout and/or trout spawning. Waterbodies designated as trout streams are collectively referred to as protected streams, and are subject to additional regulations and require a State permit for disturbance of the bed or banks. Disturbance may be temporary or permanent in nature. Examples of activities requiring this permit include placement of structures in or across a stream, fill placement for bank stabilization or to isolate a work area, excavations for gravel removal or as part of a construction activity and lowering stream banks to establish a stream crossing.

The Important Aquatic Habitat layer comes from the New York Natural Heritage Program and “identifies areas of importance for sustaining known populations of rare animals based on occurrence records from the New York Natural Heritage Program (NYNHP) database. Important Areas include the specific locations where rare animals have been observed, as well as additional habitat needed to support animal populations. This includes areas which may be used by rare animals for breeding, nesting, feeding roosting, or over-wintering; and areas that support the ecological processes critical to maintaining the habitats of these rare animal populations. Proactive planning that avoids or minimizes impact to the habitat quality of Important Areas and maintains habitat connections for wildlife movement will contribute to the long-term survival of rare animal species and their associates. This 2018 update classifies rare animal Important Areas according to the primary habitat type used by the animal species: terrestrial, aquatic, and wetland. Note that the data set includes animals that are not listed as threatened or endangered, but are tracked by NYNHP. Important Areas for two non-tracked Special Concern turtle species

<sup>44</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



are also included based on records from the 1990-1999 NY Amphibian and Reptile Atlas,<sup>45</sup> which is covered in more detail in Section 31. Amphibians and Reptiles of Philipstown below.

The Important Diadromous Fish Habitat layer refers to areas important to migratory fish that travel between saltwater and freshwater. “This data set identifies areas of importance for sustaining known populations of migratory fish based on DEC Bureau of Fisheries surveys and other studies completed in New York since 1980. The important areas highlight stream reaches providing important passage for fish traveling between ocean and freshwater habitats, such as American eel and river herring. Routes were modeled from tributary stream reaches with documented migratory fish presence to the Atlantic Ocean. Specific documented migratory fish species may be identified using the Migratory Fish Runs data set, located under Estuary data layers [in the Hudson Valley Natural Resource Mapper]. The important areas include upstream habitat and stream adjacent areas that support the health and integrity of stream habitats used by migratory fish. Proactive planning that avoids or minimizes impacts to the habitat quality of Important Areas and maintains habitat connectivity will contribute to the long-term survival of migratory fish populations.”<sup>46</sup>

Finally, the Important Cold Water Stream Habitat layer “identifies areas of importance for sustaining coldwater habitat based on New York State Department of Environmental Conservation (DEC) fish survey records and habitat modeling from the New York Natural Heritage Program. Coldwater streams are important to maintaining native wild brook trout and other coldwater fishes in region-wide decline due to habitat loss, fragmentation, and degradation. Brook trout inhabit clear, cool, well-oxygenated streams and lakes and depend on clean gravel areas for spawning. They are sensitive to increases in water temperature and sedimentation of stream habitats. Other threats include the introduction of exotic species such as smallmouth bass and non-native trout, which are better adapted to warm water temperatures. Mapped areas include wild brook trout locations identified in DEC fish surveys since 1980, as well as buffers along associated stream and waterbody segments to account for lands most likely to contribute to the continued presence and quality of the stream habitat. The map [layer] does not account for habitat fragmentation that might be caused by local dams and culverts. Please note that this map does NOT indicate areas with public fishing rights, and many areas are unsuitable for recreational trout fishing due to small fish populations and small fish size.”<sup>47</sup>

The second map - 29. Road Stream Crossings in Philipstown and Putnam Valley - was provided by Megan Lung of the NYSDEC and Hudson River Estuary Program as part of the North Atlantic Aquatic Connectivity Collaborative’s “Non-Tidal Connectivity Assessment” project.

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<sup>45</sup> NYSDEC, Information About the Layers - Known Important Areas for Animals (Aquatic, Wetland, Terrestrial, Bat Foraging), Hudson Valley Natural Resource Mapper, 2018, <https://giservices.dec.ny.gov/gis/hvnrm/layerInfo.html#ira>

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

This project is ongoing, and thus the data presented on this map are incomplete, but the program has already assessed to what degree most stream crossings (culverts) within Philipstown act as barriers to the safe movement of aquatic life from one stream section to another. Each assessed culvert is given a rating somewhere between “No Barrier” to “Severe Barrier,” as shown in the map legend. Some culverts are yet unassessed and some culverts require still more data for a complete assessment, but this project is nearing its completion and data is progressively being updated. The full project data set as well as an online version of the culvert map can be accessed at:

[https://naacc.org/naacc\\_search\\_crossing.cfm?start=1&sp=1&srt=11](https://naacc.org/naacc_search_crossing.cfm?start=1&sp=1&srt=11)

To see the data from this page, scroll down until you see “Map with Google Maps.” Select this and a new window will open showing different color dots for various culverts within Philipstown. Make the map full screen and then click on any of the dots to pull up more information, including photographs showing why the dot is rated as it is. For the map legend, click on “Map Information” in the top left corner of the window. This tool will serve as an essential resource for improving the aquatic connectivity of some of Philipstown’s streams, which are unfortunately being fragmented by poorly installed or degrading culverts, as the map shows. We will discuss a few of the most severe culvert barriers below.

### *Findings:*

As we’ve seen in other sections of this report, Philipstown is home to numerous streams, many of which are considered to be high quality, and thus provide important habitat to many species that live / breed in or migrate through Philipstown. The town of Philipstown has already completed several studies that look at the importance of Philipstown streams and waterbodies to aquatic species as well as other species and ecosystems. These prior studies will be referenced appropriately below.

### Important Aquatic Habitat:

As the map shows, the New York Natural Heritage Program has identified several streams as Important Aquatic Habitat within Philipstown. These highlighted areas are essential both for rare species as well as other species that the NYNHP has identified for conservation concern that depend on such habitat for survival, whether or not they live along or in the stream. For the list of species, please see Table 10: Animal Species of Conservation Concern within Philipstown in Section 24. Important Areas for Rare Species. Notable species that may depend on these habitats include Atlantic Sturgeon, Shortnosed Sturgeon, Bog Turtle, Barn Owl, Great Blue Heron, Spotted Turtle, Wood Turtle, Bald Eagle, Atlantic Needlefish, and Blanding’s Turtle, among



many others. For detailed information please see Table 10, especially the Habitat description for each species.

Four key areas have been identified as Important Aquatic Habitat within Philipstown:

1. The Hudson River, including Constitution Marsh and Manitou Marsh.
2. The Foundry Brook system, which extends to the Cold Spring Reservoir and also includes tributaries draining from Jaycox Pond as well as the Catskill Aqueduct Tunnel.
3. The system of streams draining into Constitution Marsh from Lath's Pond and Dale's Pond.
4. The Philipse Brook system, which extends almost all the way up to Duck Pond over the border in Putnam Valley and includes a portion of the Catskill Aqueduct as well.

The protection and possible improved management of these highlighted areas is essential to the survival of the many animal species that depend on these habitats. Of these mentioned areas, both the Foundry Brook and Philipse Brook systems, in addition to many other streams throughout the town, are also considered to be potential Trout Streams and thus receive additional protections from development from the NYSDEC, as outlined in more detail Section 19. NYS DEC Stream Classifications. Although no native Brook Trout has been documented by the New York Natural Heritage Program in these above-mentioned streams, they have been spotted during previous local stream assessment studies, and many of the town's streams are still considered capable of hosting brook trout, especially if certain barriers are removed, which we will cover below.

#### Important Diadromous Fish Habitat:

As mentioned above, Diadromous fish are those that live in both saltwater and freshwater at different points in their lives, often traveling to freshwater to breed in the same location where they were spawned themselves. The only documented diadromous fish within Philipstown is the American Eel, although there is some likelihood that other species could travel from the Hudson up several of Philipstown's streams as well. One example might be the Alewife fish, which has been observed in Cascade Brook and Gordons Brook just over the northwest border of Philipstown in the Town of Fishkill. In addition, the following migratory fish species have been documented traveling along the Hudson River, indicating their possible use of some of Philipstown's streams or at least the outlets of such streams: Alewife, American Shad, Atlantic Tomcod, Blueback Herring, Rainbow Smelt, Sea Lamprey, Striped Bass and Shortnose Sturgeon.<sup>48</sup>

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<sup>48</sup> NYSDEC, Hudson River Estuary Layers - Migratory Fish Runs, Hudson Valley Natural Resource Mapper, original data from New York Natural Heritage Program and the Nature Conservancy, 2011, <https://giservices.dec.ny.gov/gis/hvnm/>

With respect to American Eel, NYSDEC Bureau of Fisheries data, and an aquatic habitat connectivity study by the NY Natural Heritage Program, indicate that sections of Foundry Brook and Indian Brook as well as the entire length of Canopus Creek are migratory routes for American Eel, which is considered a Species of Greatest Conservation Need, according to the NYS Wildlife Action Plan.<sup>49</sup> “This fish species begins life in the Atlantic Ocean and migrates to the headwaters of North American tributary streams as tiny ‘glass eels.’ American Eel is in decline throughout much of its range, and though eels are able to bypass certain dams, culverts, and other aquatic barriers, they rely on aquatic connectivity along streams to complete their life cycles and return to the sea to spawn.”<sup>50</sup>

#### Important Cold Water Habitat / Trout Streams:

There is only one area in Philipstown that is reported as Important Cold Water Habitat, and that is the section of Clove Creek from where it combines with Sand Spring Brook until it is joined by Bull Creek, and includes sections of each of these tributaries. Although not specified by the New York Natural Heritage Program, it is likely that this section of Clove Creek and these two tributaries are habitat for wild Brook Trout as well as other species that thrive in cold water habitats, such as the Tiger Spiketail and Arrowhead Spiketail, both of which are rare dragonflies that have been documented in Philipstown. Essential components of high-quality cold water habitat are substantial shade cover over the stream, as well as cool, clean and well-oxygenated waters flowing over a sandy or gravel substrate. Threats to this habitat include deforestation, over sedimentation from dirt roads and construction, road salt runoff, general pollution runoff from pesticides, herbicides, fertilizers and other chemicals, and also the introduction of exotic species such as smallmouth bass and non-native trout, which are better adapted to warm water temperatures, and can outcompete native brook trout as average stream temperatures increase due to climate change.<sup>51</sup>

And as you can see, there are many other streams throughout Philipstown that could potentially be suitable habitat for brook trout and other cold water species. These streams include the rest of Clove Creek and its other tributaries, Trout Creek, Wiccopee Creek, Indian Brook, Philipse Brook, Annsville Creek and Canopus Creek. The removal of any significant stream connectivity barriers could potentially allow the reestablishment of brook trout in some of these streams if they are not already present.

<sup>49</sup> New York State Wildlife Action Plan. 2015. New York State Department of Environmental Conservation, Albany, NY. [www.dec.ny.gov/animals/7179.html](http://www.dec.ny.gov/animals/7179.html)

<sup>50</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>51</sup> NYSDEC, Information About the Layers - Known Important Areas for Cold Water Habitat, New York Natural Heritage Program, 2018, <https://gisservices.dec.ny.gov/gis/hvnm/layerInfo.html#irc>



### Barriers to Aquatic Connectivity:

For this section, we will review each stream system to highlight the existing and potential barriers that may prevent or hinder the safe movement of aquatic life. For details on the culvert barriers for each of these locations, including photographs, please visit:

[https://naacc.org/naacc\\_search\\_crossing.cfm?start=1&sp=1&srt=11](https://naacc.org/naacc_search_crossing.cfm?start=1&sp=1&srt=11)

And use the following directions to navigate this webpage (also covered above in the *Description* section): To see the data from this page, scroll down until you see “Map with Google Maps.” Select this and a new window will open showing different color dots for various culverts within Philipstown. Make the map full screen and then click on any of the dots to pull up more information, including photographs showing why the culvert is rated as it is. For the map legend, click on “Map Information” in the top left corner of the window.

### *Clove Creek:*

As Map 28. Stream Habitats shows, Clove Creek and its tributaries host an Important Cold Water Habitat as well as miles of potential trout habitat. A recent study by the Hudson Highlands Land Trust in partnership with the Town of Philipstown and Village of Cold Spring found that an abundance of mayflies, stoneflies and caddisflies were found at favorite fishing spots along Clove Creek, indicating high water quality since these insects can only thrive in areas with clean water. On the other hand, levels of these three insects were lower near dams, indicating lower water quality likely caused by the impact of dams.<sup>52</sup> Similarly, although a number of culverts require further study or have not yet been studied by the Hudson River Estuary Program’s NAACC project (Map 29. Road-Stream Crossings in Philipstown and Putnam Valley), there is sufficient information to draw some conclusions about Clove Creek and its tributaries. Based on the study so far, Clove Creek is relatively unhindered by culverts, although there are several that should be prioritized for improvements to allow safer movement of aquatic life. These locations include severe barriers along East Mountain Road North, East Mountain Road South, Horton Road and at the outlet of Jordan Pond, a moderate barrier where Clove Creek first joins Route 301 (the yellow circle is almost entirely hidden by a green (insignificant barrier) circle, but when you zoom in close on the map, you can see the faint outline of the yellow point), and minor barriers on East Mountain Road North and near Route 9 as Clove Creek passes under East Mountain Road South. There are also a handful of dams along several tributaries of Clove Creek, which likely impede the movement of aquatic life along these streams and can reduce water

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<sup>52</sup> Smith, Michelle and Nicole Wooten, 2020, Keeping Our Water Clean: Good News from Recent Studies, Hudson Highlands Land Trust Special to the Putnam County News and Recorder, April 29th 2020, <https://www.pcnr.com/articles/keeping-our-water-clean-good-news-from-recent-studies/>



quality due to increased build-up of sediment upstream from the dam and reduced water flow downstream from each dam.

*Trout Creek and Wiccopee Creek:*

Both creeks are considered to be suitable as trout habitat although there have not been any reported sightings of native brook trout in these streams. Water quality is generally expected to be good in each creek, although the large number of dams on Trout Creek combined with proximity of the dirt road section of East Mountain Road South along certain sections of Trout Creek may decrease water quality due to higher levels of sedimentation. In terms of culverts, Trout Creek has several barriers that require further study, which has not yet been completed by NAACC program, as the second map shows. This stream deserves further analysis to determine the impacts of the dams and dirt road run-off.

*Foundry Brook:*

As mentioned above, Foundry Brook is a crucial stream within Philipstown. It delivers drinking water to the Villages of Nelsonville and Cold Spring, is considered suitable for trout habitat, is considered Important Aquatic Habitat, and the lower section of it is also considered Important Habitat for Diadromous Fish. Foundry Brook, according to the same recent Hudson Highlands Land Trust study also has upper sections that contain high levels of macroinvertebrates, thus suggesting high water quality.<sup>53</sup> On the other hand, Foundry Brook is also used for drinking water and thus has several dams as the map shows. And it was long ago used as a power source for the West Point Foundry, which had left the remnants of a dam where the brook passes underneath Route 9D, which may impede the movement of diadromous fish traveling upstream. As Map 29. Road-Stream Crossings... shows, there are also several severe barriers along the brook, which include a culvert where Foundry Brook passes under Peekskill Road and the culvert that connects a tributary that drains from Bull Hill and passes under Main Street in Nelsonville to connect with Foundry Brook. Furthermore a moderate barrier include a culvert at the intersection of Route 301 and Fishkill Road where Foundry Brook passes under Route 301 and Healy Road (on the map it is mostly covered by a blue circle signifying that the long culvert is not counted twice passing under both roads, which is confusing, but basically means that the very long culvert that passes under both roads is considered to be a moderate barrier). Other moderate barriers are present on tributaries of Foundry Brook draining from the Jaycox Pond and at the intersection of Route 301 and Jaycox Road. There are also three minor barriers located at several locations: a culvert where Foundry Brook crosses under Fishkill Road adjacent to the Cold Spring Drinking Water Treatment Plant, a culvert connecting the wetlands on both sides of Fishkill Road near North Highlands Fire Department, and a culvert where Foundry Brook passes under Lake Surprise Road following a long artificially channelled section of the brook that has

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<sup>53</sup> Ibid.

been found in a previous local study to reduce water and habitat quality in that section of the brook.<sup>54</sup>

*Breakneck Brook:*

Although not considered prime aquatic or trout habitat, Breakneck Brook is still located in a heavily forested area and potentially provides important water habitat for species that live in the Hudson Highlands State Park. Potential threats to this stream include the two dams located near Lake Surprise Camp as well as the WasteWater Treatment Facility located along the brook. Also, this area is heavily used by hikers on weekends between April - November, which can prevent local wildlife from visiting the brook for drinking water or other uses.

*Laths Pond and Dales Pond Stream System:*

These small streams are considered to be Important Aquatic Habitat and contain one dam at the outlet of Laths Pond as well as a NYSDOT Large Culvert that passes under Route 9D, which is considered to be a severe barrier in addition to a second severe barrier culvert that passes under Beverly Warren Road just downstream. Both of these barriers are on the stream that flows from Laths Pond. In addition another stream in this system that drains from Dales Pond must cross through a minor barrier culvert that crosses under Route 9D just north of Boscobel. Because both of these streams drain into Constitution Marsh, which is an incredibly rich aquatic habitat, it is reasonable to suspect that these barriers may prevent the safe movement of aquatic life that would benefit from a contiguous interconnection between Constitution Marsh and both Dales Pond and Laths Pond. These streams could benefit from further study to also determine the relative impact of these barriers.

*Indian Brook:*

This stream also drains into Constitution Marsh and is considered suitable for brook trout. It also has a significant section that is considered Important Habitat for Diadromous Fish. In terms of culvert barriers, Indian Brook has many points that remain to be studied, as the myriad black triangles on the second map show. That said, we can see on the first map that aquatic life traveling up or down Indian Brook must pass both the dam that has formed Loch Lyall as well as a NYSDOT Large Culvert that passes under Route 9. Based on a previous local study, an upper section of Indian Brook was deemed to have fair water quality due to its relatively good condition but due to its heavier levels of sedimentation from dirt road runoff was not able to provide quality habitat for macroinvertebrates, which also led to increased flooding of the brook. A lower section of the brook on the hand hand yielded abundant macroinvertebrates, thus

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<sup>54</sup> Hudson Highlands Land Trust, Streamwalk 2004 - Philipstown, NY - Foundry Brook, Indian Brook, Philipse Brook & Clove Creek, 2004, <https://philipstown.com/government/conservation-board/cb-documents>

indicating high water quality. Some small brown trout were even observed by volunteer water samplers, although their species was not confirmed (still suspected to be native Brook Trout).<sup>55</sup>

*Philipse Brook:*

This stream system is considered both Important Aquatic Habitat as well as potential trout habitat. One NYSDOT Large Culvert exists as Philipse Brook passes under Route 9 but according to the NAACC program has not yet been assessed for aquatic connectivity. The majority of assessed culverts have been deemed either as “no barrier” or “insignificant barrier,” although there is one “moderate barrier” located where Philipse Brook passes under South Highland Road before forming the pond where the Garrison Fish and Game Club is located. Based on a previous study of this stream system, the upper sections are deemed as good and fair quality due to relative forested stream sections but higher amounts of sedimentation from erosion and dirt road runoff, especially along the section adjacent to Philipse Brook Road. The section of Philipse Brook west of Route 9 along Philipse Brook, however, was rated as excellent due to great shading, clear water and deep pools within the stream. Another section from Snake Hill Road to Avery Road was deemed to be poor due to a large number of small dams, discharge pipes and bridges located along this section, in addition to the channelized nature of this segment. The lower section of Philipse brook, on the other hand was deemed to be excellent due to good canopy cover, clear water and a number of pools located within the stream.<sup>56</sup>

*Arden Brook:*

Neither considered important aquatic habitat or suitable for brook trout, Arden Brook is further impacted by its proximity to Route 403 as well as having to pass through two NYSDOT Large Culverts and one Dam, the latter of which is located just west of Route 9D. The lower of the two NYSDOT Large Culverts has also been rated as a minor barrier by the NAACC program as the second map shows.

*Curry Pond and Copper Mine Brook Stream Systems:*

Although a dam and three NYSDOT Large Culverts impact each of these stream systems, they have either not been rated or are deemed to have insignificant barriers by the NAACC program. Neither stream is considered as an important habitat, but perhaps each could be studied in further detail to determine if there are any negative impacts from the existing culverts. Copper Mine Brook runs along the western portion of South Mountain Pass and used to be impacted by silt runoff from the former dirt road, which was not long ago paved for various reasons, including to reduce sedimentation of the stream. The eastern part of South Mountain Pass remains a dirt road,

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<sup>55</sup> Ibid.

<sup>56</sup> Ibid.



however, which may have some sedimentation impact on the tributary of Annsville Creek covered below.

*Annsville Creek:*

This creek and its tributaries are considered suitable habitat for trout, but unfortunately run along a long section of Route 9 as well as along a dirt road portion of South Mountain Pass. This likely means that the creek is impacted by both silt runoff as well as large amounts of road salt from the heavily salted Route 9. The main branch of the creek passes through four NYSDOT Large Culverts within Philipstown as well as one smaller culvert in the Philipstown MS4 district. The southernmost Large Culvert that passes under Route 9 at Diamond Hill Road is rated as a severe barrier (although it is obscured by a blue circle that is placed directly over it on the second map). There are also numerous culverts that are predicted to be present but are yet to be rated, further suggesting that this stream may be segmented numerous times, which makes safe mobility for aquatic life difficult.

*Canopus Creek:*

This stream has a relatively small segment as it passes through Philipstown, but is considered both Important Diadromous Fish Habitat as well as suitable for trout. Despite being surrounded by countless culverts within the Philipstown MS4 District, the stream itself flows relatively unhindered through Continental Village and Putnam Valley. There are several dams located on its tributaries, which will impede the movement of aquatic life, as well as one severe barrier (passing under Old West Point Road East) and one minor barrier (passing under Old Albany Post Road), both of which impede the tributary that runs adjacent to Old Albany Post Road to the west of Canopus Creek. Outside of Philipstown across the border in neighboring Putnam Valley, there are a total of six severe barriers, two moderate barriers and four minor barriers along the Canopus Creek and its tributaries, which impact the ability of aquatic life to travel along the entire length of the creek, including the section that passes through Philipstown. And as noted in Section 21. Threats to Water Quality of this NRI, numerous other sources of pollution, such as pesticides, fertilizer and leaking septic systems, are potentially impacting the water quality and habitat quality of the Canopus Creek as it passes through Philipstown. This could potentially prevent some species from migrating further up the creek to the less developed areas of Putnam Valley, exemplifying why an inter-municipal approach to water protection planning is essential for watersheds that cross municipal lines.

*Further Study:*

Numerous studies have already been done on some streams within Philipstown, especially Foundry Brook and Clove Creek, and there are current studies that are in progress or planned.

The results from these reports will further inform decisions that Philipstown makes regarding its aquatic ecosystems. In addition, as we've seen, certain streams have received less attention, such as the streams draining from Dales Pond and Laths Pond, which might be worthy of further study due to their consideration as Important Aquatic Habitat. We will list here the previous studies that we are aware of that have focused on aquatic habitat quality with Philipstown, which can offer further information than can be covered in this inventory:

2004 Stream Walk - Philipstown, NY - Hudson Highlands Land Trust -  
<https://philipstown.com/government/conservation-board/cb-documents>

2005 State of the Tributaries - Tidal Influenced Portions of Three Tributaries  
 Philipstown, NY - Putnam County Soil and Water Conservation District & Hudson  
 Highlands Land Trust -  
<https://philipstown.com/government/conservation-board/cb-documents>

2007 Natural Resources and Open Space Protection Plan - Town of Philipstown -  
<https://philipstown.com/government/building-department/town-code>

2007 Town of Philipstown Groundwater Report and Planning Resource - The Chazen  
 Companies - <https://philipstown.com/government/building-department/town-code>

2014 Natural Areas and Wildlife in Your Community, A Habitat Summary Prepared for  
 the Town of Philipstown - NYSDEC Hudson River Estuary Program -  
<https://philipstown.com/government/conservation-board/cb-documents>

*Lastly, although it doesn't include the Town of Philipstown, the following study has  
 recommendations that can be applied locally:*

2004 Croton-to-Highlands Biodiversity Plan, Metropolitan Conservation Alliance,  
<https://www.yorktownny.org/planning/croton-highlands-biodiversity-plan>

Finally, the Hudson Highlands Land Trust recommends the formation of a local volunteer NYS  
 DEC Water Assessments by Volunteer Evaluators (WAVE) group by local residents, which  
 would help create an ongoing data record for reference and assessment of trends. More  
 information is available on the WAVE program here:

<https://www.dec.ny.gov/chemical/92229.html>

*Data Sources:*

28. Stream Habitats

- Dams
  - NYS DEC Dams <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1130>
- NYS DOT Large Culverts
  - NYS Large Culverts <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1255>
- Culverts in MS4
  - Philipstown Stormwater Management MS4 Boundary and Outfalls, <https://philipstown.com/ms4%20maps.pdf>
- Streams & Lakes and Ponds
  - National Hydrography Dataset <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1337>
- Trout Streams
  - NYS DEC Water Quality Classifications <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1118>
- Important Aquatic Habitat
  - Natural Heritage Important Areas <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1297>
- Important Diadromous Fish Habitat
  - Natural Heritage Important Areas <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1297>
- Important Cold Water Stream Habitat
  - Natural Heritage Important Areas <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1297>

29. *Third Party Map:* Road-Stream Crossings in Philipstown and Putnam Valley

- Road-Stream Crossings in Philipstown and Putnam Valley
  - NYSDEC Hudson River Estuary Program - NAACC database [https://naacc.org/naacc\\_search\\_crossing.cfm?sp=1](https://naacc.org/naacc_search_crossing.cfm?sp=1)



### 30. Important Bird Areas and Breeding Bird Atlas Blocks

#### *Description:*

Although covered to some degree in Section 24. Important Areas for Rare Species, additional resources such as the NYS Breeding Bird Atlas and Audubon New York's Important Bird Areas (IBAs) offer more detailed information on bird species that can be found within Philipstown as well as important bird habitat. Each of these resources offer much more detailed information than can be covered in this report, but we will give a general overview of the findings of each as well as links recommending where to find more information.

Specifically shown on this map, the "New York Breeding Bird Atlas is a statewide inventory of all the birds breeding in the state. The first Atlas was conducted from 1980-1985, the second from 2000-2005, and DEC is currently working with agency and conservation partners to conduct the third atlas from 2020-2024. Field work is conducted by dividing the state into small blocks (~9 miles<sup>2</sup>) within which volunteers record all the bird species using that area and document evidence of breeding. The primary products of the Atlas are detailed maps of the distribution of breeding birds in the state. Birds are a good choice for conducting such a detailed survey because they are easy to observe, identifiable by many people, and serve as indicators of environmental health. The results of the third Atlas will allow us to detect distributional changes in New York's avifauna over the last 40 years."<sup>57</sup>

The Breeding Bird Atlas Blocks shown on the map are those that include portions of Philipstown. It is important to note that "the Breeding Bird Atlas is a presence/absence survey. While a record of a species in a block is highly suggestive of its breeding presence, the lack of a record does not guarantee absence of the species as a breeder in the block. Atlasers were directed to work in a block until 76 species had been recorded; therefore the list of species reported breeding within a block was not intended to be comprehensive."<sup>58</sup>

Despite its limitations, "atlas data are proven to be among the most important tools for conservation and land management in the state. They provide critical information on where threatened and endangered species are breeding, which is invaluable for reviewing the impacts of proposed development projects like solar and wind farms. The distributional and change data are critical for determining which species are of conservation concern (e.g., Species of Greatest Conservation Need and Threatened and Endangered species) and knowing which areas should be protected or managed to support those species (e.g., Bird Conservation Areas). DEC has a Breeding Bird Atlas dataset for Google Maps and Google Earth that shows the location of the

<sup>57</sup> NYSDEC, 2020, New York State Breeding Bird Atlas, <https://www.dec.ny.gov/animals/7312.html>

<sup>58</sup> NYSDEC, Breeding Bird Atlas (2000 - 2005) - Description, NYS GIS Clearinghouse, <https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1256>

Atlas survey blocks in New York State, a list of birds breeding in each block, and a map of the distribution for each species that breeds in New York.”<sup>59</sup> The link for this is available at:

<https://www.dec.ny.gov/pubs/103459.html#Wildlife>

In terms of the Important Bird Areas shown on the map, “Audubon New York has identified over 130 Important Bird Areas (IBAs) across the state through a rigorous scientific process by leading avian experts. Each recognized IBA meets one of three criteria: a place where birds congregate in large numbers at one time; a place for species that are at-risk; or a place that supports groups of birds representing certain habitats such as forests, wetlands, grasslands and shrublands. IBAs can be a catalyst for bird conservation through open space preservation, habitat management and restoration, monitoring, and education.”<sup>60</sup> Also it’s important to note that due to easier public access provided by state parks, this dataset may have a bias that indicates higher counts within state parks compared to private lands.

#### *Findings:*

#### NYS Breeding Bird Atlas:

The following findings are from the 2014 Habitat Summary completed for the Town of Philipstown by the NYSDEC Hudson River Estuary Program. For a list of referenced species as well as additional species, please see Table 11: Bird Species of Conservation Concern in Philipstown, provided by the Hudson River Estuary Program using data from the NYS Breeding Bird Atlas:<sup>61</sup>

“The NYS Breeding Bird Atlas has numerous records of birds that indicate the availability of high-quality forest habitat (e.g., northern goshawk, sharp-shinned Hawk, cerulean warbler) and high-quality riparian forest habitat (Louisiana waterthrush, yellow-throated vireo) in Philipstown. The remarkably intact forest communities and bird assemblages of the Highlands region were justifications for Audubon NY’s designation of the Fahnestock and Hudson Highlands State Parks Important Bird Area. Conserving the town’s large, contiguous forested areas, particularly those that provide broad, connected corridors; smaller forest patches that act as stepping stones between larger forests; and forested floodplains will help ensure there is adequate habitat to sustain these species, as well as other forest plants and animals. This strategy will also help to preserve

<sup>59</sup> *Ibid.*

<sup>60</sup> National Audubon Society, 2007, Important Bird Areas - New York, [https://www.audubon.org/important-bird-areas/state/new-york?field\\_iba\\_status=All&priority=All&page=3](https://www.audubon.org/important-bird-areas/state/new-york?field_iba_status=All&priority=All&page=3)

<sup>61</sup> Haeckel, Ingrid, 2014, Natural Areas and Wildlife in Your Community, A Habitat Summary Prepared for the Town of Philipstown, NYSDEC Hudson River Estuary Program, <https://philipstown.com/government/conservation-board/cb-documents>

the ecosystem services that the town's forests are providing to its residents. Audubon New York's website has specific information on managing habitat for forest birds.

“Upland grassland or meadow habitat can support a variety of life, including rare plants, butterflies, reptiles, and birds, in addition to providing agricultural uses and scenic values. The quantity and quality of grasslands for wildlife have rapidly decreased in the Northeast during the last century due to increased human population, changes in agricultural technology, and abandonment of family farms. This continuing trend threatens populations of grassland birds that have adapted to the agricultural landscape. Breeding bird records from Philipstown indicate that grassland habitat is present in the town. Table 11 shows two grassland bird species of state conservation concern known to breed in Philipstown (NYS Breeding Bird Atlas): American kestrel and bobolink. Grassland breeding birds respond to habitat structure rather than species composition, so even hayfields dominated by non-native grasses can provide suitable habitat for species of conservation concern if they are managed appropriately. Audubon New York offers guidance on managing habitat for grassland birds.

“[And lastly,] the NYS Breeding Bird Atlas documented twelve species of conservation concern in Philipstown that prefer young forest and shrubland habitat, including American woodcock, ruffed grouse, and whip-poor-will. Extensive young forests and those that form large complexes with meadow habitats may be particularly important for nesting by these species, as well as for grassland nesting birds; for more information, see Audubon's guidance on managing habitat for shrubland birds.”<sup>62</sup>

#### Important Bird Areas:

“Audubon New York has identified three areas of statewide importance for birds in Philipstown; summaries of the sites are available on the National Audubon Society webpage [and are also covered below]. The Lower Hudson River site, extending from Croton Point Park to the Newburgh-Beacon Bridge, is one of the most critical wintering bald eagle sites in the state, and becoming an important breeding area for bald eagles. Constitution Marsh hosts over 200 species of birds and large numbers of waterfowl use the area during winter and migration. The large unfragmented forest tract spanning Fahnestock and Hudson Highlands State Parks supports an assemblage of bird species representative of deciduous and mixed forests, including a large number of regional conservation priorities.”<sup>63</sup>

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<sup>62</sup> Ibid.

<sup>63</sup> Ibid.



The following are the descriptions for each Important Bird Area, from the National Audubon Society:<sup>64</sup>

*“Lower Hudson River:*

Key Species: Bald Eagle

This site includes the Lower Hudson River, extending just north of the Newburgh-Beacon Bridge south to, and including, Croton Point Park. Some additional winter roost sites for eagles in the surrounding uplands are also included. This site includes state, county, and private ownership.

Ornithological Summary: One of the most critical wintering Bald Eagle sites in the state, and becoming an important breeding area for Bald Eagles. Croton Point Park supports wintering and breeding grassland birds including the Northern Harrier (year-round), Short-eared Owl (up to six individuals in winter), Grasshopper Sparrow (observed in breeding season), Vesper Sparrow (observed during migration), and Henslow’s Sparrow (observed during migration). Supports about 10% of the state’s winter Bald Eagle population.

Conservation Issues: This site is included in the 2002 Open Space Conservation Plan under the project name Hudson River Corridor Estuary and Greenway Trail. Inventory and monitoring of eagles should continue. Ensuring the protection of key winter roost sites is strongly recommended.”<sup>65</sup>

For more, please visit: <https://netapp.audubon.org/iba/Reports/2790> and <https://www.audubon.org/important-bird-areas/lower-hudson-river>.

*“Constitution Marsh Sanctuary:*

Key Species: American Black Duck and Least Bittern

This site consists of a 4,000-5,000 year old fresh and brackish (depending on the time of year) tidal marsh (270 acres) and forested uplands (80 acres) located on the east shore of the Hudson River, directly opposite West Point Military Academy, and 52 miles north of New York City. There are a series of human-made dikes and channels that were constructed in the 1830s for wild rice farming within the marsh. The site is administered

<sup>64</sup> National Audubon Society, 2007, Important Bird Areas - New York, [https://www.audubon.org/important-bird-areas/state/new-york?field\\_iba\\_status=All&priority=All&page=3](https://www.audubon.org/important-bird-areas/state/new-york?field_iba_status=All&priority=All&page=3)

<sup>65</sup> Ibid.

by the New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP) and managed by Audubon New York.

Ornithological Summary: This important wetland site hosts a diversity of birds (more than 200 species have been identified). Characteristic wetland breeders at the site include Least Bitterns (2-4 pairs each year), Virginia Rails, Marsh Wrens, and Swamp Sparrows. Large numbers of waterfowl use the area during winter and migration, with average fall concentrations of 1,500 individuals and occasional peak counts of 2,000 that can include 700 Wood Ducks and several hundred American Black Ducks and Mallards. Mixed flocks of blackbirds (Bobolinks, Red-winged Blackbirds, and Common Grackles) numbering in the thousands, use the site as a staging area and migratory stopover in the fall. Other at-risk species using the site include Pied-billed Grebes (occasional migrants), American Bitterns (uncommon but regular migrants), Ospreys (regular migrants, non-breeding visitors), Bald Eagles (averaging 2-5 in winter, with a maximum of 30), Northern Harriers (regular migrants), Sharp-shinned Hawks (fairly common foragers), Cooper's Hawks (probable breeders), Red-shouldered Hawks (rare migrants), Merlins (regular migrants), Peregrine Falcons (occasional foragers), Willow Flycatchers (estimated 3-5 breeding pairs), Wood Thrushes (breed in adjacent woodlands), Blue-winged Warblers (possible breeders), Cerulean Warblers (regular migrants), Wormeating Warblers (breed in adjacent woodlands), and Canada Warblers (regular migrants). Until the mid-1990s, fall swallow concentrations at the site typically numbered about 20,000 individuals, but reached as high as 100,000. Today, swallow concentrations number in the thousands.

Conservation Issues: This site is listed in the 2002 Open Space Conservation Plan as a priority site under the project name Hudson River Corridor Estuary/Greenway Trail. The site is part of the Hudson Highlands State Park and is managed by Audubon New York as a wildlife conservation area. Portions have been designated as a state Bird Conservation Area. There is an Audubon Center on site that provides education programs to thousands of people each year. Non-native invasive plants and animals that require monitoring include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), European water chestnut (*Trapa natans*), zebra mussels (*Dreissena polymorpha*), and Mute Swans. The sanctuary is part of a federal Superfund Site and cadmium and nickel contamination have been remediated. Regular monitoring of contaminant levels is ongoing."<sup>66</sup>

For more information visit: <https://netapp.audubon.org/iba/Reports/767> and <https://www.audubon.org/important-bird-areas/constitution-marsh-sanctuary>

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<sup>66</sup> Ibid.

*“Fahnestock and Hudson Highlands State Parks:*

Key Species: Eastern Wood-Pewee, Hooded Warbler, Least Flycatcher, Louisiana Waterthrush, Northern Flicker, Worm-eating Warbler, Yellow-throated Vireo, Rose-breasted Grosbeak, Scarlet Tanager, Wood Thrush, Black-and-white Warbler, Blue-gray Gnatcatcher

This rugged area (elevation change from sea level, along the Hudson River, to over 1,400 feet on the summit of Mt. Taurus) lies in a heavily wooded section of Putnam County, a very developed part of the state, and provides a resource for hiking, skiing, swimming, boating, fishing, bow hunting, camping, and other recreational activities. It includes the largest state park in the Taconic region, Fahnestock State Park, and the Hudson Highlands State Park. The Taconic Outdoor Education Center educates school and recreational groups and presents a variety of public programs. Within Fahnestock State Park, the Hubbard/ Perkins Conservation Area is a large unfragmented forest tract. The area includes six lakes, a hemlock stream ravine, and marsh habitat. Much of the forest is oak and mixed hardwoods, with an understory of mountain laurel. According to the NY GAP land cover data, approximately 90% of the site is forested, and includes Appalachian oak-pine, deciduous wetland, evergreen northern hardwood, evergreen plantation, oak, and sugar maple mesic forests. Also present are relatively large stands of hemlock and white pine.

Ornithological Summary: The deciduous and mixed forests support a representative bird community. Breeding birds include Ruffed Grouse, Sharp-shinned Hawks (confirmed breeders), Cooper’s Hawks (confirmed breeders), Red-shouldered Hawks (at least three breeding sites), Broadwinged Hawks, Northern Goshawks (foragers, probable breeders), Barred Owls, Whip-poor-wills (at least four breeding sites), Acadian Flycatchers, Yellow-throated Vireos, Blue-headed Vireos, Warbling Vireos, Winter Wrens, Blue-gray Gnatcatchers, Veeries, Hermit Thrushes, Blue-winged Warblers, Black-throated Green Warblers, Blackburnian Warblers (at least two locations), Prairie Warblers, Cerulean Warblers, Worm-eating Warblers, Kentucky Warblers (at least two locations), Canada Warblers (at least one location), Ovenbirds, Northern and Louisiana Waterthrushes, Hooded Warblers, Scarlet Tanagers, and Dark-eyed Juncos. The granite cliffs provide nesting sites for Peregrine Falcons and Common Ravens. The adjacent Hudson River supports migrating shorebirds, ducks, geese, and a variety of other waterbirds.

Conservation Issues: This site is listed in the 2002 Open Space Conservation Plan as a priority site under the project name Fahnestock State Park and the Highlands Greenway Corridor. Portions of the Fahnestock State Park have been designated a state Bird Conservation Area. There are some potential pollution problems from oil spills and



dumping in the Hudson River. Hiking traffic can be very heavy during the warmer months and could pose a threat to nesting Peregrine Falcons, so should be carefully monitored. Some wetlands have populations of invasive common reed (*Phragmites australis*), which should be monitored. Increased mountain bike traffic and the illegal use of all-terrain vehicles may be problematic and need to be monitored. Inventory and monitoring of breeding birds, especially at-risk species, are needed.”<sup>67</sup>

For more information visit: <https://netapp.audubon.org/iba/Reports/868> and [www.audubon.org/important-bird-areas/fahnestock-and-hudson-highlands-state-parks](http://www.audubon.org/important-bird-areas/fahnestock-and-hudson-highlands-state-parks)

Lastly, please see Table 11 below for a list of and more information on Bird Species of Conservation Concern within Philipstown.

#### *Further Study:*

The NYSDEC will be conducting its third Breeding Bird Atlas from 2020 - 2024. Following the completion of this third edition, Table 11 below should be updated in collaboration with the Hudson River Estuary Program with any changes to the list of bird species provided by the updated 2020- 2024 NYS Breeding Bird Atlas.

Also, the printed full version of the 2000 - 2005 NYS Breeding Bird Atlas, which offers much more information than can be covered here, is available for purchase at: [https://www.buteobooks.com/mm5/merchant.mvc?Store\\_Code=BBBAO&Screen=PROD&Product\\_Code=12875](https://www.buteobooks.com/mm5/merchant.mvc?Store_Code=BBBAO&Screen=PROD&Product_Code=12875). We recommend that the Town of Philipstown purchase two copies to keep at Town Hall - one for use by the Conservation Board and one as a reference for interested parties.

#### *Data Sources:*

- Breeding Bird Atlas Blocks
  - Breeding Bird Atlas (2000 - 2005)
    - <https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1256>
- Important Bird Areas
  - Audubon Important Bird Areas
    - [https://www.audubon.org/important-bird-areas/state/new-york?field\\_iba\\_status=All&priority=All&page=3](https://www.audubon.org/important-bird-areas/state/new-york?field_iba_status=All&priority=All&page=3)

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<sup>67</sup> Ibid.

**Table 11: Bird Species of Conservation Concern within Philipstown<sup>\*68</sup>**

Common Name	Scientific Name	NYS Conservation Status**	Link to More Information
Forest Birds			
Acadian Flycatcher	<i>Empidonax virens</i>	-	<a href="https://www.audubon.org/field-guide/bird/acadian-flycatcher">https://www.audubon.org/field-guide/bird/acadian-flycatcher</a>
American Redstart	<i>Setophaga ruticilla</i>	-	<a href="https://www.audubon.org/field-guide/bird/american-redstart">https://www.audubon.org/field-guide/bird/american-redstart</a>
Baltimore Oriole	<i>Icterus galbula</i>	-	<a href="https://www.audubon.org/field-guide/bird/baltimore-oriole">https://www.audubon.org/field-guide/bird/baltimore-oriole</a>
Black-and-white Warbler	<i>Mniotilta varia</i>	-	<a href="https://www.audubon.org/field-guide/bird/black-and-white-warbler">https://www.audubon.org/field-guide/bird/black-and-white-warbler</a>
Black-throated Green Warbler	<i>Dendroica virens</i>	-	<a href="https://www.audubon.org/field-guide/bird/black-throated-green-warbler">https://www.audubon.org/field-guide/bird/black-throated-green-warbler</a>
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/black-throated-blue-warbler">https://www.audubon.org/field-guide/bird/black-throated-blue-warbler</a>
Broad-winged Hawk	<i>Buteo platypterus</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/broad-winged-hawk">https://www.audubon.org/field-guide/bird/broad-winged-hawk</a>
Cerulean Warbler	<i>Dendroica cerulea</i>	-	<a href="https://www.audubon.org/field-guide/bird/cerulean-warbler">https://www.audubon.org/field-guide/bird/cerulean-warbler</a>
Cooper's Hawk	<i>Accipiter cooperii</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/coopers-hawk">https://www.audubon.org/field-guide/bird/coopers-hawk</a>
Downy Woodpecker	<i>Picoides pubescens</i>	-	<a href="https://www.audubon.org/field-guide/bird/downy-woodpecker">https://www.audubon.org/field-guide/bird/downy-woodpecker</a>
Eastern Wood-Pewee	<i>Contopus virens</i>	-	<a href="https://www.audubon.org/field-guide/bird/eastern-wood-pewee">https://www.audubon.org/field-guide/bird/eastern-wood-pewee</a>

<sup>68</sup> Haeckel, Ingrid, 2014, Natural Areas and Wildlife in Your Community, A Habitat Summary Prepared for the Town of Philipstown, NYSDEC Hudson River Estuary Program, <https://philipstown.com/government/conservation-board/cb-documents>



Hooded Warbler	<i>Wilsonia citrina</i>	-	<a href="https://www.audubon.org/field-guide/bird/hooded-warbler">https://www.audubon.org/field-guide/bird/hooded-warbler</a>
Louisiana Waterthrush	<i>Seiurus motacilla</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/louisiana-waterthrush">https://www.audubon.org/field-guide/bird/louisiana-waterthrush</a>
Magnolia Warbler	<i>Dendroica magnolia</i>	-	<a href="https://www.audubon.org/field-guide/bird/magnolia-warbler">https://www.audubon.org/field-guide/bird/magnolia-warbler</a>
Northern Flicker	<i>Colaptes auratus</i>	-	<a href="https://www.audubon.org/field-guide/bird/northern-flicker">https://www.audubon.org/field-guide/bird/northern-flicker</a>
Northern Goshawk	<i>Accipiter gentilis</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/northern-goshawk">https://www.audubon.org/field-guide/bird/northern-goshawk</a>
Northern Parula	<i>Parula americana</i>	-	<a href="https://www.audubon.org/field-guide/bird/northern-parula">https://www.audubon.org/field-guide/bird/northern-parula</a>
Red-shouldered Hawk	<i>Buteo lineatus</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/red-shouldered-hawk">https://www.audubon.org/field-guide/bird/red-shouldered-hawk</a>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	-	<a href="https://www.audubon.org/field-guide/bird/rose-breasted-grosbeak">https://www.audubon.org/field-guide/bird/rose-breasted-grosbeak</a>
Scarlet Tanager	<i>Piranga olivacea</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/scarlet-tanager">https://www.audubon.org/field-guide/bird/scarlet-tanager</a>
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/sharp-shinned-hawk">https://www.audubon.org/field-guide/bird/sharp-shinned-hawk</a>
Veery	<i>Catharus fuscescens</i>	-	<a href="https://www.audubon.org/field-guide/bird/veery">https://www.audubon.org/field-guide/bird/veery</a>
Wood Thrush	<i>Hylocichla mustelina</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/wood-thrush">https://www.audubon.org/field-guide/bird/wood-thrush</a>
Worm-eating Warbler	<i>Helmitheros vermivorum</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/worm-eating-warbler">https://www.audubon.org/field-guide/bird/worm-eating-warbler</a>
Yellow-throated Vireo	<i>Vireo flavifrons</i>	-	<a href="https://www.audubon.org/field-guide/bird/yellow-throated-vireo">https://www.audubon.org/field-guide/bird/yellow-throated-vireo</a>
Young Forest and Shrubland Birds			
American Woodcock	<i>Scolopax minor</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/american-woodcock">https://www.audubon.org/field-guide/bird/american-woodcock</a>
Black-Billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/black-billed-cuckoo">https://www.audubon.org/field-guide/bird/black-billed-cuckoo</a>



Blue-Winged Warbler	<i>Vermivora pinus</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/blue-winged-warbler">https://www.audubon.org/field-guide/bird/blue-winged-warbler</a>
Brown Thrasher	<i>Toxostoma rufum</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/brown-thrasher">https://www.audubon.org/field-guide/bird/brown-thrasher</a>
Canada Warbler	<i>Wilsonia canadensis</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/canada-warbler">https://www.audubon.org/field-guide/bird/canada-warbler</a>
Eastern Kingbird	<i>Tyrannus tyrannus</i>	-	<a href="https://www.audubon.org/field-guide/bird/eastern-kingbird">https://www.audubon.org/field-guide/bird/eastern-kingbird</a>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	-	<a href="https://www.audubon.org/field-guide/bird/eastern-towhee">https://www.audubon.org/field-guide/bird/eastern-towhee</a>
Field Sparrow	<i>Spizella pusilla</i>	-	<a href="https://www.audubon.org/field-guide/bird/field-sparrow">https://www.audubon.org/field-guide/bird/field-sparrow</a>
Indigo Bunting	<i>Passerina cyanea</i>	-	<a href="https://www.audubon.org/field-guide/bird/indigo-bunting">https://www.audubon.org/field-guide/bird/indigo-bunting</a>
Prairie Warbler	<i>Dendroica discolor</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/prairie-warbler">https://www.audubon.org/field-guide/bird/prairie-warbler</a>
Ruffed Grouse	<i>Bonasa umbellus</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/ruffed-grouse">https://www.audubon.org/field-guide/bird/ruffed-grouse</a>
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/eastern-whip-poor-will">https://www.audubon.org/field-guide/bird/eastern-whip-poor-will</a>
Willow Flycatcher	<i>Empidonax traillii</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/willow-flycatcher">https://www.audubon.org/field-guide/bird/willow-flycatcher</a>
Yellow-breasted Chat	<i>Icteria virens</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/yellow-breasted-chat">https://www.audubon.org/field-guide/bird/yellow-breasted-chat</a>
Grassland Birds			
American Kestrel	<i>Falco sparverius</i>	-	<a href="https://www.audubon.org/field-guide/bird/american-kestrel">https://www.audubon.org/field-guide/bird/american-kestrel</a>
Bobolink	<i>Dolichonyx oryzivorus</i>	SGCN	<a href="https://www.audubon.org/field-guide/bird/bobolink">https://www.audubon.org/field-guide/bird/bobolink</a>
Wetland Birds			
Least Bittern	<i>Ixobrychus exilis</i>	SGCN, T	<a href="https://www.audubon.org/field-guide/bird/least-bittern">https://www.audubon.org/field-guide/bird/least-bittern</a>

Marsh Wren	<i>Cistothorus palustris</i>	-	<a href="https://www.audubon.org/field-guide/bird/marsh-wren">https://www.audubon.org/field-guide/bird/marsh-wren</a>
Purple Martin	<i>Progne subis</i>	-	<a href="https://www.audubon.org/field-guide/bird/purple-martin">https://www.audubon.org/field-guide/bird/purple-martin</a>
Birds of Other Habitats			
Bald Eagle (open water/forest)	<i>Haliaeetus leucocephalus</i>	SGCN, T	<a href="https://www.audubon.org/field-guide/bird/bald-eagle">https://www.audubon.org/field-guide/bird/bald-eagle</a>
Belted Kingfisher (open water)	<i>Megasceryle alcyon</i>	-	<a href="https://www.audubon.org/field-guide/bird/belted-kingfisher">https://www.audubon.org/field-guide/bird/belted-kingfisher</a>
Chimney Swift (urban)	<i>Chaetura pelagica</i>	-	<a href="https://www.audubon.org/field-guide/bird/chimney-swift">https://www.audubon.org/field-guide/bird/chimney-swift</a>
Osprey (open water/wetland)	<i>Pandion haliaetus</i>	SGCN, SC	<a href="https://www.audubon.org/field-guide/bird/osprey">https://www.audubon.org/field-guide/bird/osprey</a>
Peregrine Falcon (cliffs)	<i>Falco peregrinus</i>	SGCN, E	<a href="https://www.audubon.org/field-guide/bird/peregrine-falcon">https://www.audubon.org/field-guide/bird/peregrine-falcon</a>

\*This table was provided by the NYSDEC Hudson River Estuary Program to list bird species of conservation concern that were observed in Philipstown during the 2000-2005 New York State Breeding Bird Atlas. Species are included in the table if 1) they were documented in Atlas blocks that are more than 50% in Philipstown, and 2) they have been identified as Hudson River Valley Priority Birds by Audubon NY.<sup>69</sup> Young forest and shrubland habitat designations are from DEC Biologist Paul Novak. Updated links have been added to the table for each species, which will take you to much more information about each bird provided by the National Audubon Society, including bird calls, habitat, migration ranges and climate vulnerability.

\*\*NYS Conservation Status Definitions:<sup>70</sup>

*E = Endangered Species* are determined by the NYSDEC to be in imminent danger of extinction or extirpation in NY State, or are federally listed as endangered.

*T = Threatened Species* are determined by the NYSDEC as likely to become endangered within the foreseeable future in NY State, or are federally listed as threatened.

<sup>69</sup> Audubon NY. 2009. Bird Conservation in the Hudson River Valley, <http://ny.audubon.org/hudson-river-valley-conservation>

<sup>70</sup> NYSDEC, NYS Endangered and Threatened Species, Checklist of Amphibians, Reptiles, Birds and Mammals of New York State, 9th revision, 2010, Division of Fish, Wildlife and Marine Resources [https://www.dec.ny.gov/docs/administration\\_pdf/lpendangerfs.pdf](https://www.dec.ny.gov/docs/administration_pdf/lpendangerfs.pdf)



*SC = Species of Special Concern* are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in NY State. The Special Concern category exists within NYSDEC rules and regulations, but such designation does not provide any additional protection. Special Concern species may be protected under other laws.

*SGCN = Species of Greatest Conservation Need* are those species that are rare or declining, and could potentially become threatened or endangered, and thus are qualified for conservation efforts funded by the NYSDEC Wildlife Grants program.<sup>71</sup>

### **31. Third Party Map: Amphibians and Reptiles of Philipstown**

This map is an example from the NYSDEC's Amphibian & Reptile Atlas Project (Herp Atlas), and in this case shows occurrences of both the Blue-spotted Salamander (blue dots) and the hybridized Blue-spotted Salamander-Jefferson Salamander Complex (yellow rectangles), which will be explained in more detail below.

According to the NYSDEC Herp Atlas Project, "the word 'herp' is short for herpetofauna, which is the general term for amphibians and reptiles as a group. Frogs, toads, and salamanders are amphibians. Turtles, snakes, and lizards are reptiles. The Amphibian & Reptile Atlas Project (Herp Atlas) was a ten year survey (1990-1999) that was designed to document the geographic distribution of New York State's herpetofauna. There are approximately 70 species of amphibians and reptiles in New York State. They occur in a wide variety of habitats from the Adirondack Mountains to the Finger Lakes to Long Island's ocean waters, as well as in the cities and suburbs in between. Records prior to 1989 were also sought, and together the data was combined to form an overall NYS herpetological database.

"The unit of measurement for collecting atlas data is the USGS 7.5 minute topographic quadrangle. There are 979 atlas blocks (topographic quadrangles) in the state. The goal was to record at least 20 species in each of these quadrangles. Some quadrangles, such as those in the lower Hudson Valley, have many more species present. Others, such as those in the Adirondacks and where there are high human populations, have fewer. The species distribution maps show the known range of each species found in New York. In a few cases, new locations are noted on the maps with additional reports that were gathered up to 2007. Data from the Atlas should be carefully considered before used for environmental review purposes.

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<sup>71</sup> NYSDEC, Species of Greatest Conservation Need (SGCN), <https://www.dec.ny.gov/animals/9406.html>



“In order to monitor changes in populations and to make sound management decisions, we must have a reliable information base from which to work. The information gathered on the current status of our populations will help us to document what changes may be taking place. In the past decade or two there has been much discussion concerning the status of populations of amphibians. While there seems to be a general decline in this group of animals, long-term monitoring projects are the only way to address this problem with scientific accuracy.”<sup>72</sup>

The goal of this section is to present the herpetological species that have been detected in Herp Atlas Blocks that include Philipstown and provide basic information as well as links to further information on each species. This will be covered below in Table 12: Amphibians and Reptiles of Philipstown. It is important to repeat that the numbers below indicate species found within a block that includes Philipstown. Herpetofauna are far less mobile than birds, so just because a herp was found in a block that includes Philipstown, it doesn't mean that it is present in the Town, although there is a high likelihood that it does occur within the Town due to the Town's comparatively extensive conserved land that includes a variety of significant natural communities and idea habitats for herpetofauna, as shown in previous sections of this chapter.

#### *Findings:*

According to the NYS Herp Atlas, the atlas blocks that include Philipstown are rich in amphibian and reptile species. Specifically there are:

- 11 species of salamanders
- 2 species of toads
- 8 species of frogs
- 11 species of turtles
- 2 species of lizards, and
- 13 species of snakes

Thus, 57 out of the documented 72 species from the NYS Herp Atlas can likely be found within Philipstown. This is a tremendous amount of herpetological biodiversity for one municipality. Most of these species are considered of Special Concern and some are Threatened or Endangered at the NYS level. Common habitat for many, if not all of these species includes wetlands, vernal (spring) pools, streams and forested areas, thus emphasizing how important it is for the Town of Philipstown to protect each of these ecological areas from fragmentation and other threats. Furthermore, due to a lack of data on local vernal pools, a follow-up study to document and map vernal pools and then add these areas to the existing wetlands protection overlay in the town's Zoning Code would go a long way to protecting many of the species listed in the table below.

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<sup>72</sup> NYSDEC, Herp Atlas Project, <https://www.dec.ny.gov/animals/7140.html>

For reference, the NYS Herp Atlas Distribution Maps for each group of amphibians and reptiles can be found at the following links:

- Salamanders: <https://www.dec.ny.gov/animals/7485.html>
- Toads and Frogs: <https://www.dec.ny.gov/animals/7487.html>
- Turtles: <https://www.dec.ny.gov/animals/7479.html>
- Lizards and Snakes: <https://www.dec.ny.gov/animals/7483.html>

*Further Study:*

As noted above, a study to document and map vernal pools within Philipstown could help protect areas that are currently not protected by the town's wetlands protection overlay in the town's zoning code. Putnam Valley has conducted such a study, which could be replicated in Philipstown. For information on this study, please see "Verified and Potential Vernal pools" in the "Wetlands" section of the Putnam Valley NRI, available at:

<https://putnamvalleyresidents.com/NRI%20files%20by%20chapter/Wetlands.pdf>

*Data Sources:*

- Amphibians and Reptiles of Philipstown
  - NYS Amphibian and Reptile (Herp) Atlas  
<https://www.dec.ny.gov/animals/7140.html>

**Table 12: Amphibians and Reptiles of Philipstown**

Common Name	Scientific Name	Habitat Description (from "More Information" link)	State / Federal Protection <sup>73</sup>	State / Global Rank <sup>74</sup>	Link to More Information
Salamanders					
Marbled Salamander	<i>Ambystoma opacum</i>	Upland and floodplain deciduous forests with wet depressions that provide fall breeding pools.	Special Concern / Not Listed	S3 / G5	<a href="https://www.dec.ny.gov/docs/wildlife_pdf/sgcnmarblesalamander.pdf">https://www.dec.ny.gov/docs/wildlife_pdf/sgcnmarblesalamander.pdf</a>
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Occur in deciduous forest and mixed deciduous-coniferous forests with abundant tree stumps and downed logs that provide shelter. They also occur in bottomland forests adjacent to disturbed and agricultural lands. Breeding occurs in ephemeral pools and in semipermanent wetlands adjacent to woodland habitats. Breeding pools are generally cool, slightly turbid, and with a forested shoreline and emergent vegetation on the bottom. Fish-free ponds are preferred but some populations will breed where fish are present.	Special Concern / Not Listed	S4 / G4	<a href="https://www.dec.ny.gov/docs/wildlife_pdf/sgcnjeffsalamander.pdf">https://www.dec.ny.gov/docs/wildlife_pdf/sgcnjeffsalamander.pdf</a>
Jefferson Salamander Complex	<i>Ambystoma jeffersonianum x laterale</i>	The Jefferson Salamander Complex is a hybrid mixed with the Blue-spotted Salamander. Requires similar habitat to either the Jefferson or Blue-spotted Salamander.	Special Concern / Not Listed	S4 / G4G5	<a href="https://www.dec.ny.gov/docs/wildlife_pdf/sgcnbssalamander.pdf">https://www.dec.ny.gov/docs/wildlife_pdf/sgcnbssalamander.pdf</a>
Blue-spotted Salamander	<i>Ambystoma laterale</i>	Not a strong burrower, and can usually be found under logs, leaf litter and other ground cover. It occurs in damp deciduous or deciduous-coniferous forests, as well as open areas including pastures and grassy fields that support permanent or ephemeral pools or ponds. It is occasionally found in areas of sandy soils, but is also associated with bogs, marshes and other poorly drained sites.	Special Concern / Not Listed	S4 / G5	<a href="https://www.dec.ny.gov/docs/wildlife_pdf/sgcnbssalamander.pdf">https://www.dec.ny.gov/docs/wildlife_pdf/sgcnbssalamander.pdf</a>
Spotted Salamander	<i>Ambystoma maculatum</i>	Hardwood and mixed forests close to stagnant water sources like swamps, ponds, and vernal pools.	Not Listed / Not Listed	n/a	<a href="https://www.nwf.org/Educational-Resources/Wildlife-Guide/Amphibians/Spotted-Salamander">https://www.nwf.org/Educational-Resources/Wildlife-Guide/Amphibians/Spotted-Salamander</a>
Red-spotted Newt	<i>Notophthalmus v. viridescens</i>	Moist forest floors and among leaf litter. Small bodies of fresh water such as ponds, lakes, marshes, and relatively slow-moving waters with a muddy substrate. They are commonly found in	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/animals/67022.html">https://www.dec.ny.gov/animals/67022.html</a>

<sup>73</sup> New York Natural Heritage Program, NYNHP Online Conservation Guides, NYSDEC, 2020, <https://guides.nynhp.org/>

<sup>74</sup> Ibid.



		beaver ponds and man-made water bodies.			
Northern Redback Salamander	<i>Plethodon c. cinereus</i>	Wooded areas. Found underground or underneath logs, stumps, rocks, and moist leaf litter. During rainy nights, may climb vegetation in search of prey.	Not Listed / Not Listed	n/a	<a href="https://wildlife.state.nh.us/wildlife/profiles/redback-salamander.html">https://wildlife.state.nh.us/wildlife/profiles/redback-salamander.html</a>
Northern Slimy Salamander	<i>Plethodon glutinosus</i>	Eastern deciduous forests under bark or other debris on ground, especially on hillsides.	Not Listed / Not Listed	n/a	<a href="https://herpetology.inhs.illinois.edu/species-lists/ilspecies/northern-slimy-salamander/">https://herpetology.inhs.illinois.edu/species-lists/ilspecies/northern-slimy-salamander/</a>
Four-toed Salamander	<i>Hemidactylum scutatum</i>	Occur in moist forest habitats of a wide variety as long as they include small ponds, seeps, bogs, or swamps. Eggs are laid in mossy areas that just overhang water, a microhabitat that may be limited even in relatively large wetlands. Vegetative moisture level appears to be more critical than the species of moss that are present.	Species of Greatest Conservation Need / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/wildlife/pdf/sgcnfourtoesalam.pdf">https://www.dec.ny.gov/docs/wildlife/pdf/sgcnfourtoesalam.pdf</a>
Northern Red Salamander	<i>Pseudotriton r. ruber</i>	Prefer cold, clear streams and are also found in wooded areas under rocks, bark and leaf litter.	Not Listed / Not Listed	n/a	<a href="https://nationalzoo.si.edu/animals/northern-red-salamander">https://nationalzoo.si.edu/animals/northern-red-salamander</a>
Northern Two-lined Salamander	<i>Eurycea bislineata</i>	Generally is found close to streams. This species is associated with moderately to fast-flowing rocky streams, which may be tiny creeks or actual rivers, in deciduous or mixed forests. During the day, the northern two-lined salamanders can be found under nearby rocks. It spends the winter buried in the stream bed or tucked away in sheltered rocky or gravelly areas.	Not Listed / Not Listed	n/a	<a href="https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/northern-two-lined-salamander/">https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/northern-two-lined-salamander/</a>
Toads					
Eastern American Toad	<i>Bufo a. americanus</i>	This toad prefers rocky, wooded areas and often lives along the edge of hardwood forests. Individuals hide during the day under rocks where there is loose, moist dirt, or they burrow into a depression where dead leaves have accumulated. Like most toads, this species becomes active at dusk.	Not Listed / Not Listed	n/a	<a href="https://nature.mdc.mo.gov/discover-nature/field-guide/eastern-american-toad">https://nature.mdc.mo.gov/discover-nature/field-guide/eastern-american-toad</a>
Fowler's Toad	<i>Bufo fowleri</i>	Fowler's toads can be found in a range of habitats associated with flood plains, including wooded areas, river valleys, near streams and ponds, marshlands and in agricultural fields. Fowler's toads burrow into the soil or hide under rocks, plants or other cover when inactive, usually during daylight hours.	Not Listed / Not Listed	n/a	<a href="https://nationalzoo.si.edu/animals/fowlers-toad">https://nationalzoo.si.edu/animals/fowlers-toad</a>
Frogs					
Gray Treefrog	<i>Hyla versicolor</i>	May be found in many types of tree and shrub communities located near permanent water. The species usually lives in woodlands but may also	Not Listed / Not Listed	n/a	<a href="https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/gray-treefrog/">https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/gray-treefrog/</a>

		frequent orchards. The gray treefrog is a true "tree frog" it can be found at the top of even the tallest trees. These frogs are rarely seen outside the breeding season. When they are not active, they hide in tree holes, under bark, in rotten logs, and under leaves and tree roots. Gray treefrogs overwinter under leaf litter and snow cover. Their eggs and larvae develop in shallow woodland ponds and marshes, puddles, ponds in forest clearings, swamps, bogs and many other kinds of permanent or temporary waterbodies that have no significant current, including ponds that humans have excavated.			<a href="#">y-treefrog/</a>
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>	Deciduous woodlands, swamps, marshland fields and meadows.	Not Listed / Not Listed	n/a	<a href="https://www.paherps.com/herps/frogs-toads/northern-spring-peeper/">https://www.paherps.com/herps/frogs-toads/northern-spring-peeper/</a>
Bullfrog	<i>Rana catesbeiana</i>	Along the banks, edges, and shallows of wetlands such as freshwater ponds and lakes, swamps, marshes, and slow moving streams and rivers. Bullfrogs are especially common where there are areas of emergent, submerged, or floating patches of plants that provide cover.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/animals/58652.html">https://www.dec.ny.gov/animals/58652.html</a>
Green Frog	<i>Rana clamitans melanota</i>	Found in ponds, marshes, lake fringes and sometimes along stream sides.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf">https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf</a>
Wood Frog	<i>Rana sylvatica</i>	Found in close-canopied forests, it breeds in cold, clear waters of temporary pools, and sometimes in beaver meadows, swamps and bogs	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf">https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf</a>
Northern Leopard Frog	<i>Rana pipiens</i>	Submerged grassy habitats near marshes and ponds	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf">https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf</a>
Southern Leopard Frog	<i>Rana sphenoccephala utricularius</i>	Submerged grassy habitats near marshes and ponds	Special Concern / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf">https://www.dec.ny.gov/docs/administration_pdf/frogs.pdf</a>
Pickereel Frog	<i>Rana palustris</i>	During spring mating season, they are found in aquatic habitats, including marshes, bogs, fens, rocky ravines, meadow streams, and the weedy, shallow borders of ponds and lakes. After breeding, they disperse into the surrounding terrestrial habitat and may be found in deciduous or mixed woods and low-lying open fields and meadows.	Not Listed / Not Listed	n/a	<a href="https://www.wildadironacks.org/adiroondack-amphibians-pickereel-frog-lithobates-palustris.html#habitat">https://www.wildadironacks.org/adiroondack-amphibians-pickereel-frog-lithobates-palustris.html#habitat</a>
Turtles					
Common Snapping Turtle	<i>Chelydra s. serpentina</i>	Lakes, ponds, rivers, streams, and marshes throughout New York, particularly in slow moving, shallow waters with a muddy bottom. One of the most adaptable reptiles in New York, they are even found in urban waterways.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/animals/55703.html">https://www.dec.ny.gov/animals/55703.html</a>



		Females move to upland nesting locations predominantly in the early morning or early evening. The preferred nesting locations are within 100 feet of the water and typically occur in sandy or loamy soils, making backyard gardens a frequent nesting location.			
Common Musk Turtle	<i>Sternotherus odoratus</i>	A variety of water bodies that have a soft, muddy substrate, submerged vegetation, and little or no current. They may be found in canals, ponds, large streams, marshes, and weedy coves of natural lakes and rivers	Species of Greatest Conservation Need / Not Listed	S5 / G5	<a href="https://www.dec.ny.gov/docs/wildlife_pdf/sgcnemuskturtle.pdf">https://www.dec.ny.gov/docs/wildlife_pdf/sgcnemuskturtle.pdf</a>
Spotted Turtle	<i>Clemmys guttata</i>	Spend their lives in marshy meadows, bogs, swamps, ponds, ditches, or other small bodies of still water.	Special Concern / Not Listed	S3 / G5	<a href="https://www.dec.ny.gov/animals/7150.html">https://www.dec.ny.gov/animals/7150.html</a>
Wood Turtle	<i>Clemmys insculpta</i>	Clear, flowing streams and rivers or in the habitats surrounding them such as woodlands, meadows, and forest edges	Special Concern / Not Listed	S3 / G3	<a href="https://guides.nynhp.org/wood-turtle/">https://guides.nynhp.org/wood-turtle/</a>
Bog Turtle*	<i>Clemmys muhlenbergii</i>	This is a semi-aquatic species, preferring habitat with cool, shallow, slow-moving water, deep soft muck soils, and tussock-forming herbaceous vegetation. In New York, the bog turtle is generally found in open, early successional types of habitats such as wet meadows or open calcareous boggy areas generally dominated by sedges	Endangered / Threatened	S2 / G2G3	<a href="https://www.dec.ny.gov/animals/7164.html">https://www.dec.ny.gov/animals/7164.html</a>
Eastern Box Turtle	<i>Terrapene c. carolina</i>	Usually found near ponds, fields, meadows, and woodlands	Special Concern / Not Listed	n/a	<a href="https://www.nwf.org/Educational-Resources/Wildlife-Guide/Reptiles/Eastern-Box-Turtle">https://www.nwf.org/Educational-Resources/Wildlife-Guide/Reptiles/Eastern-Box-Turtle</a>
Northern Diamondback Terrapin	<i>Malaclemys t. terrapin</i>	Found in brackish waters of coastal salt marshes, tidal creeks, estuaries, bays, and coves.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/animals/59652.html">https://www.dec.ny.gov/animals/59652.html</a>
Common Map Turtle	<i>Graptemys geographica</i>	Found in waters that are stagnant or slow moving with a lot of vegetation.	Not Listed / Not Listed	n/a	<a href="https://turtleowner.com/native-turtles-of-new-york-with-pictures/#Common-Map-Turtle-(Graptemys-geographica)">https://turtleowner.com/native-turtles-of-new-york-with-pictures/#Common-Map-Turtle-(Graptemys-geographica)</a>
Red-eared Slider	<i>Trachemys scripta elegans</i>	INVASIVE to NYS. Native to more southern regions of the USA. Red-eared sliders are well-poised to be effective invaders. They reach sexual maturity at a young age and have high fecundity. Red-eared sliders compete with native turtle species for food, habitat, and other resources. These turtles can get quite large (10-12") and are notoriously aggressive, and can bully native turtles out of basking sites, a critical resource for these reptiles. Reduced access to these sites can slow growth and increase mortality of native turtles. Additionally, turtles raised in captivity can develop diseases that are unfamiliar to wild turtles. Upon release, these red-eared	Not Listed / Not Listed	n/a	<a href="http://www.invasive-speciesinitiative.com/redeared-slider">http://www.invasive-speciesinitiative.com/redeared-slider</a>



		sliders can introduce diseases that can seriously harm native populations.			
Painted Turtle	<i>Chrysemys picta</i>	Prefer to live in freshwater, and they can be usually found in slow moving rivers, ponds, and lakes.	Not Listed / Not Listed	n/a	<a href="https://turtleowner.com/native-turtles-of-new-york-with-pictures/#Eastern_Painted_Turtle_(Chrysemys_picta)">https://turtleowner.com/native-turtles-of-new-york-with-pictures/#Eastern_Painted_Turtle_(Chrysemys_picta)</a>
Blanding's Turtle	<i>Emydoidea blandingii</i>	Found in isolated coves and weedy bays, and further inland in shallow, marshy waters and ponds, and can be found in shrubby wetlands dominated by woody vegetation such as buttonbush and willow.	Threatened / Not Listed	S2S3 / G4	<a href="https://www.dec.ny.gov/animals/7166.html">https://www.dec.ny.gov/animals/7166.html</a>
Lizards					
Northern Fence Lizard	<i>Sceloporus undulatus hyacinthinus</i>	Naturally occurring fence lizard populations are confined to the Hudson Highlands region of the state. These areas are characterized by steep slopes with extensive open rocky areas that are surrounded by mixed-deciduous, oak-dominated, forests.	Threatened / Not Listed	S1 / G5	<a href="https://guides.nynhp.org/fence-lizard/">https://guides.nynhp.org/fence-lizard/</a>
Five-lined Skink	<i>Plestiodon fasciatus</i>	Prefer moist, partially wooded habitat that provides ample cover, trees as well as sites to bask in the sun. They live in forest edges, mixed pine-hardwood forests, along wooded river margins, in rocky areas, stumps, logs, brush piles or inside walls of abandoned buildings.	Species of Greatest Conservation Need / Not Listed	n/a	<a href="http://animalia.bio/american-five-lined-skink">http://animalia.bio/american-five-lined-skink</a>
Snakes					
Northern Water Snake	<i>Nerodia s. sipedon</i>	Northern water snakes like a wide variety of aquatic habitats. They can be seen basking on rocks and prefer slow-moving or standing water near places where they can bask in the sun, such as ponds, vernal pools (seasonal pools of water), and lakes.	Not Listed / Not Listed	n/a	<a href="https://www.nwf.org/Educational-Resources/Wildlife-Guide/Reptiles/Northern-Water-Snake">https://www.nwf.org/Educational-Resources/Wildlife-Guide/Reptiles/Northern-Water-Snake</a>
Northern Brown Snake	<i>Storeria d. dekayi</i>	This snake lives in moist to wet areas in woodland, prairies, marshes, and in the margins of swamps, bogs and ponds. In areas of human habitation it sometimes occurs in vacant lots and gardens.	Not Listed / Not Listed	n/a	<a href="https://www.oplin.org/snake/fact%20pages/brownsnake_n/brownsnake_n.html">https://www.oplin.org/snake/fact%20pages/brownsnake_n/brownsnake_n.html</a>
Northern Redbelly Snake	<i>Storeria o. occipitamaculata</i>	Lives in wet fields, forests (both coniferous and deciduous), and gardens. These snakes are very secretive and often hide under large rocks, rotten logs and boards.	Not Listed / Not Listed	n/a	<a href="https://animalsofupstateny.weebly.com/red-bellied-snake.html">https://animalsofupstateny.weebly.com/red-bellied-snake.html</a>
Common Garter Snake	<i>Thamnophis sirtalis</i>	New York's most common snake species, frequently found in lawns, old fields and woodland edges.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf">https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf</a>
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>	Eastern Ribbon Snakes are semi-aquatic in nature and can be easily found in the wetlands and on the corners of bogs, streams, salt marshes and lakes. They	Not Listed / Not Listed	n/a	<a href="http://www.snake-removal.com/eastern-ribbonsnake.html">http://www.snake-removal.com/eastern-ribbonsnake.html</a>

		are equally comfortable in water and on land. With the arrival of winters, they move into the dens and go into the state of hibernation.			
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	Feeds almost exclusively on toads and is most frequently found in sandy habitats.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf">https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf</a>
Northern Ringneck Snake	<i>Diadophis punctatus edwardsii</i>	Ring-necked snakes are found in forested areas, including forest edges and clearings. These snakes are most common in areas with shallow soil and surface bedrock, where they are frequently found under rocks, logs or bark. They hibernate underground and will also retreat underground during especially warm weather.	Not Listed / Not Listed	n/a	<a href="https://ontariounature.org/programs/citizen-science/reptile-amphibian-atlas/northern-ring-necked-snake/">https://ontariounature.org/programs/citizen-science/reptile-amphibian-atlas/northern-ring-necked-snake/</a>
Eastern Worm Snake	<i>Carphophis a. amoenus</i>	Moist forests and drier forests may also be inhabited	Special Concern / Not Listed	S2 / G5	<a href="https://guides.nvnhp.org/eastern-worm-snake/">https://guides.nvnhp.org/eastern-worm-snake/</a>
Northern Black Racer	<i>Coluber c. constrictor</i>	Black racer habitat includes lightly wooded areas, open forest, fields, meadows, powerline cuts and roadsides	Species of Greatest Conservation Need / Not Listed	n/a	<a href="http://wildlifeofct.com/northern%20black%20racer.html">http://wildlifeofct.com/northern%20black%20racer.html</a>
Black Rat Snake	<i>Elaphe o. obsoleta</i>	A woodland species, but is found around barns where it is highly desirable for its ability to seek and destroy mice and rats	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf">https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf</a>
Eastern Milk Snake	<i>Lampropeltis t. triangulum</i>	A woodland species, but are frequently found in and around barns, outbuildings and houses where they are attracted to mice.	Not Listed / Not Listed	n/a	<a href="https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf">https://www.dec.ny.gov/docs/administration_pdf/snakes.pdf</a>
Northern Copperhead	<i>Agkistrodon contortrix mokasen</i>	Copperheads live in a range of habitats, from terrestrial to semiaquatic, including rocky, forested hillsides and wetlands. They are also known to occupy abandoned and rotting wood or sawdust piles, construction sites and sometimes suburban areas. They climb into low bushes or trees to hunt prey and will also bask in the sun and swim in the water.	Not Listed / Not Listed	n/a	<a href="https://nationalzoo.si.edu/animals/northern-copperhead">https://nationalzoo.si.edu/animals/northern-copperhead</a>
Timber Rattlesnake	<i>Crotalus horridus</i>	Timber rattlesnakes are generally found in deciduous forests in rugged terrain. In the summer, gravid (pregnant) females seem to prefer open, rocky ledges where temperatures are higher, while the males and non-gravid females seem to prefer cooler, thicker woods where the forest canopy is more closed. Rattlers generally migrate from 1.3 to 2.5 miles from their den each summer, with a maximum movement of 4.5 miles observed	Threatened / Not Listed	S3 / G4	<a href="https://www.dec.ny.gov/animals/7147.html">https://www.dec.ny.gov/animals/7147.html</a>



\*Although these species' Herp Atlas Distribution Map doesn't show them occurring in Philipstown, they have been observed in other parts of Putnam County and/or in neighboring Dutchess County, and it is reasonable to suggest that they may be present in Philipstown as well. For this reason we have included them in this table.

### 35. Invasive Species

#### *Description:*

According to the New York Natural Heritage Program, "an invasive species is an organism that is introduced to an area outside its native range that causes or has the potential to cause harm to the environment, economy, or human health. [They are often problematic because they have few or no native predators that can keep their populations under control, and thus can quickly outcompete native species that have local checks on their populations]. One of the first steps to understanding the impact or potential impact of invasive species is to know where they occur. Many different groups of people are recording the locations of invasive species, but generally they are focused on a small local area or on lands that they directly manage.

"In order to get a large scale picture of where species are occurring, these sightings need to be shared. iMapInvasives was created to be an invasive species reporting and data management tool that is on-line and map-based. It was developed through a partnership between The Nature Conservancy, NatureServe, the New York Natural Heritage Program, and the Florida Natural Areas Inventory, with many other collaborators. The primary focus for iMapInvasives is to track invasive species locations and management efforts. iMapInvasives tools can be used by citizen scientists, land owners, natural resources managers, and others who are working to prevent, control, or manage invasive species. The project works with groups, institutions, and state government to gather data on aquatic and terrestrial invasive species, prioritize invasive species control, and assist in the restoration of natural habitats. Project information is used to analyze data gaps and prioritize survey efforts, create emerging invasive species watch lists, and publicize invasive species threats."<sup>75</sup>

The data used for this map comes from the iMapInvasives online mapping tool. Whereas the online tool presents individual points for every reported species (which unfortunately end up looking a bit like a blob of countless points unless zoomed in closely), instead, for the sake of presenting the information in a friendlier format, we have broken the iMapInvasives data into two parts:

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<sup>75</sup> iMapInvasives, What is an Invasive Species?, New York Natural Heritage Program, <https://www.imapinvasives.org/what-makes-a-species-invasive>



- Map 32. Invasive Species, which simply shows the relative density of reported invasive species within and around Philipstown; and
- Table 13: Top Twenty Confirmed Invasive Species in Philipstown, which lists the twenty most-reported invasive species within Philipstown.

It is essential to note that *this map and list should not be interpreted as conclusive since the results are only based on volunteer reporting*; however, they should give a good indication of the areas that are being exposed the most to invasive species, what those species are, and what potential threats they pose to Philipstown's natural resources.

### *Findings:*

As the map shows, there are numerous areas within Philipstown that have relatively high concentrations of confirmed reported invasive species, according to the iMapInvasives program. High reported occurrences could mean two things: there are a large number of invasive species and/or there is a higher rate of reporting in these areas (usually due to increased presence of people that are interested in reporting invasives). Separating one from the other is not possible based on the data available from iMapInvasives, but we can still draw certain conclusions about the type of areas that are showing high reporting levels of invasives.

1. Hudson River Shoreline - the map also shows that almost all of Philipstown's Hudson River shoreline has a high density of reported invasive species. This is not surprising since there are many aquatic invasive species, such as water chestnut, which can be introduced by human activities such as recreational boating. In addition, the Hudson River is used as a shipping route, which can also be the source of introduced species. This is especially problematic in Philipstown due to the precious existence of Constitution Marsh and Manitou Marsh along the Hudson River, which we have already learned are incredibly important habitat areas for many plant and animal species, some of which are rare or threatened.
2. State Parks and Popular Hiking Areas - the map shows that a large number of reports have occurred in the Hudson Highlands State Park, both in the northwestern and southwestern parts of Philipstown, including popular hiking areas such as Breakneck Ridge, Bull Hill, Sugarloaf and Anthony's Nose. Similarly, popular trail areas in Clarence Fahnestock Memorial State Park, such as off of Route 301 and East Mountain Road South, have high reporting densities of invasives. And the Appalachian Trail corridor, which connects the southwestern parts of Hudson Highlands State Park to Fahnestock State Park have high rates of reporting. Outside of Philipstown, popular hiking areas around Sunken Mine Road in Putnam Valley, Storm King across from

Breakneck Ridge and Bear Mountain across from Anthony's Nose also show high concentrations of reported invasives.

Why is this the case? Hiking trails often overlap with previous development in current recreational areas, such as along old logging or mining roads (e.g. within Fahnestock State Park) as well as areas that used to be developed private property (e.g. the Cornish Estate within Hudson Highlands State Park) and were accessed by motorized vehicles. These prior uses of the land around hiking trails are a major reason for the occurrence of invasive species in the same spaces where recreational use now occurs. Additionally, many invasives in Philipstown are carried by birds, other wild animals, wind, or intentional (historic or current) landscaping. Thus some invasive species may likely have been present for a long time, long preceding the presence of hikers. That said, there is the possibility of hikers introducing invasives into these areas by accident, such as by depositing plant seeds stuck in their boots, although this is unlikely compared to other causes.

Regardless of the means of introduction, there is an important bias to the iMapInvasives data: Because invasive species along trails are more visible to hikers, they are more likely to be seen and reported. Hiking trails also tend to begin along forest or field edges, which are common places for invasive species to establish themselves. Their higher visibility along these edges also makes them more likely to be seen and thus reported. And it is very likely the case that people who are out hiking on public trails are more likely to report invasive species due to their passion for the outdoors and increased motivation to report invasives in hopes of preserving native ecosystems in the beautiful areas that are currently popular for hiking. Thus, this data must be considered as suggestive but incomplete in terms of presenting a comprehensive picture of where invasives are occurring within Philipstown. Solutions to this are described in the Further Study section below.

To complement the map, Table 13 below shows the twenty most-reported invasive species within Philipstown, such as well-known invasives like *japanese barberry*, *water chestnut*, *common carp* and *hemlock wooly adelgid*, to name a few. In addition, the following invasive species have been reported in lesser numbers (but did not make the top twenty):

*Norway Maple, Emerald Ash Borer, Bishops' Goutweed, Porcelain Berry, Orange-Eye Butterfly Bush, Goldfish, Narrowleaf Bittercress, Celandine, Chinese Mustersnail, Japanese Virgin's Bower, Scotch Broom, Chinese Yam, Zebra Mussel, Chinese Mitten Crab, Lesser Celandine, Brown Marmorated Stink Bug, English Ivy, Morning Glory, Yellow Flag Iris, Privet (species unknown), Japanese Honeysuckle, Morrow Honeysuckle, Giant Lupine, Moneywort, Purple Loosestrife, White Mulberry, True*

*Forget-me-not, Watercress, Boston Ivy, Empress Tree, Reed Canarygrass, Canada Bluegrass, Eastern Redbelly Turtle, Common Buckthorn, Black Jethead, Black Locust, Cutleaf Blackberry, Rusty Willow, Crack Willow, Basket Willow, Red-eared Slider Turtle, Coltsfoot, Siberian Elm, Common Speedwell, Wisteria (species unknown).*

After reviewing species descriptions for each of the top twenty invasives (available via the “More Information” links for each species in the table below), it became clear that there were four common themes for how most invasive species are introduced and where they thrive:

1. **Increased Forest Fragmentation:** Many terrestrial invasive plants thrive on the edge of forests and in open fields, but do not establish well in core forests. This clearly suggests that the increased fragmentation of forests will not only reduce the forests’ capacity to provide quality habitat to its many species (as covered in other sections of this chapter), but will also make it more likely that invasive species will become established and begin to compete with native species.
2. **Waterways:** As mentioned above, numerous aquatic invasive species have been introduced due to recreational and commercial human activities, much of which has concentrated on the Hudson River, but can also occur in local lakes due to the use of boats that have not been thoroughly cleaned. The NYSDEC has numerous regulations and educational material<sup>76</sup> dedicated to stopping the introduction of invasives by this means, but unfortunately these state efforts sometimes go ignored, which can lead to severe consequences for native flora and fauna, in addition to the integrity of recreational resources.
3. **Landscaping and Released Pets:** Many of the species reported in Philipstown are used as ornamental plantings on the yards of residences or businesses and unfortunately this can lead to the spread of these species beyond the boundaries of a given property. Seeds on the wind don’t have much concern for private property, after all. Similarly, some animal species, such as the Red-eared Slider Turtle have been kept as pets and then released into the wild, where they end up outcompeting and jeopardizing the survival of native species.
4. **Climate Change:** as noted in Chapter 5: Climate Change, increasingly mild winters are enabling non-native species to survive in Philipstown, and without native predators, these species have an advantage in outcompeting their native counterparts. Similarly, many invasive species that tend to thrive on forest edges, roadsides, etc. also tend to be more resilient to the unpredictability of climate change since they are not as finely-tuned to local weather patterns as native species. This means that, for example, following a natural disaster, such as a powerful wind storm that knocks over numerous trees, invasive species

<sup>76</sup> NYSDEC, Nuisance and Invasive Species, <https://www.dec.ny.gov/animals/265.html>



will be more likely to survive and take over the exposed open habitat. Once established, they will have an even better chance of expanding their range and further outcompeting native species. This feedback loop is unfortunately projected to worsen over the rest of the 21st century and will require active human intervention to remove invasive species and plant native species in order to level the playing field.<sup>77</sup>

*Further Study:*

The NYSDEC has enacted numerous policies and programs, including grant opportunities, to prevent the spread of invasive species. The Town of Philipstown may take advantage of this information and these opportunities to better protect its natural resources from further damage by invasives. For more information, please visit: <https://www.dec.ny.gov/animals/265.html>.

Also, the Town of Philipstown in collaboration with local conservation organizations could organize a local invasive species reporting and removal program targeting the above-listed areas and sources of introduction as well as residential or commercial areas that have been less covered by participants of iMapInvasives. The program could prioritize the top twenty species listed in the table below, but also consider any of the less common species listed above. Such a project could also involve the Town's Climate Smart Task Force as part of the committee's efforts related to climate adaptation. More information and examples of such projects can be found at: <https://www.dec.ny.gov/animals/114620.html> and <https://www.imapinvasives.org/imap-in-action>

*Data Sources:*

- Density of Reported Invasive Species
  - NYNHP iMapInvasives <https://www.nyimapinvasives.org/data-and-maps>

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<sup>77</sup> Burgiel, S.W. and Thomas Hall, Bioinvasions in a Changing World: A Resource on Invasive Species-Climate Change Interactions for Conservation and Natural Resource Management, The Ad Hoc Working Group on Invasive Species and Climate Change, NISC & USDA, [https://www.fws.gov/uploadedFiles/Ad\\_Hoc\\_Working\\_Group\\_on\\_Invasive\\_Species\\_and\\_Climate\\_Change\\_2014.pdf](https://www.fws.gov/uploadedFiles/Ad_Hoc_Working_Group_on_Invasive_Species_and_Climate_Change_2014.pdf)

**Table 13: Top Twenty Confirmed Invasive Species in Philipstown<sup>78</sup>**

Common Name(s)	Scientific Name	Confirmed Occurrences	Percentage	Rank	More Information
Japanese Barberry	<i>Berberis thunbergii</i>	605	26.03%	1	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-barberry">https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-barberry</a>
Multiflora Rose; Rambler Rose	<i>Rosa multiflora</i>	261	11.23%	2	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/multiflora-rose">https://www.invasivespeciesinfo.gov/terrestrial/plants/multiflora-rose</a>
Oriental Bittersweet	<i>Celastrus orbiculatus</i>	254	10.93%	3	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/oriental-bittersweet">https://www.invasivespeciesinfo.gov/terrestrial/plants/oriental-bittersweet</a>
Common Carp	<i>Cyprinus carpio</i>	182	7.83%	4	<a href="https://nas.er.usgs.gov/queries/factsheet.aspx?speciesID=4">https://nas.er.usgs.gov/queries/factsheet.aspx?speciesID=4</a>
Garlic Mustard	<i>Alliaria petiolata</i>	161	6.93%	5	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/garlic-mustard">https://www.invasivespeciesinfo.gov/terrestrial/plants/garlic-mustard</a>
Japanese Stiltgrass, Nepalese Browntop, Japanese stilt grass, Nepalgrass	<i>Microstegium vimineum</i>	106	4.56%	6	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-stiltgrass">https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-stiltgrass</a>
Eurasian Water-milfoil; European Water-milfoil; Spiked Water-milfoil	<i>Myriophyllum spicatum</i>	104	4.48%	7	<a href="https://www.invasivespeciesinfo.gov/aquatic/plants/eurasian-watermilfoil">https://www.invasivespeciesinfo.gov/aquatic/plants/eurasian-watermilfoil</a>
Water Chestnut	<i>Trapa natans</i>	97	4.17%	8	<a href="https://www.invasivespeciesinfo.gov/aquatic/plants/water-chestnut">https://www.invasivespeciesinfo.gov/aquatic/plants/water-chestnut</a>
Black Swallow-wort; Louise's Swallow-wort; Dog-strangling Vine	<i>Vincetoxicum louseae</i>	62	2.67%	9	<a href="https://gobotany.nativeplanttrust.org/species/cynanchum/louiseae/">https://gobotany.nativeplanttrust.org/species/cynanchum/louiseae/</a>
Wineberry, Japanese Wineberry, Wine Raspberry	<i>Rubus phoenicolasius</i>	59	2.54%	10	<a href="http://nyis.info/invasive_species/wineberry/">http://nyis.info/invasive_species/wineberry/</a>
Common Reed, phragmites, Common reed grass	<i>Phragmites australis ssp. australis</i>	51	2.19%	11	<a href="http://nyis.info/invasive_species/common-reed/">http://nyis.info/invasive_species/common-reed/</a>
Honeysuckle (species unknown)	<i>Lonicera spp (species unknown)</i>	40	1.72%	12	<a href="http://nyis.info/invasive_species/honeysuckle/">http://nyis.info/invasive_species/honeysuckle/</a>
Tree-of-heaven; Chinese Sumac; Ailanthus	<i>Ailanthus altissima</i>	37	1.59%	13	<a href="https://www.invasivespeciesinfo.gov/terrestrial/plants/tree-heaven">https://www.invasivespeciesinfo.gov/terrestrial/plants/tree-heaven</a>

<sup>78</sup> NYSDEC, iMapInvasives Data, New York Natural Heritage Program, Invasive Species Database, 2020, <https://www.nyimainvasives.org/data-and-maps>

Brittle Naiad, Brittle Water-nymph, Lesser Naiad, Slender-leaved naiad	<i>Najas minor</i>	34	1.46%	14	<a href="https://www.dnr.state.mn.us/invasives/aquaticplants/brittlenaiad/index.html">https://www.dnr.state.mn.us/invasives/aquaticplants/brittlenaiad/index.html</a>
Japanese Angelica Tree	<i>Aralia elata</i>	29	1.25%	15	<a href="http://adkinvasives.com/Invasive-Species/Detail/54">http://adkinvasives.com/Invasive-Species/Detail/54</a>
Burning Bush, Winged Euonymus, Winged Burning Bush, Winged Spindletree	<i>Euonymus alatus</i>	25	1.08%	16	<a href="https://www.invasive.org/alien/pubs/midatlantic/eual.htm">https://www.invasive.org/alien/pubs/midatlantic/eual.htm</a>
Japanese Knotweed, Japanese Bamboo	<i>Reynoutria japonica</i> var. <i>japonica</i> : <i>Fallopia japonica</i> var. <i>japonica</i>	23	0.99%	17	<a href="http://nyis.info/invasive_species/japanese-knotweed/">http://nyis.info/invasive_species/japanese-knotweed/</a>
Mugwort	<i>Artemisia vulgaris</i> var. <i>vulgaris</i>	21	0.90%	18	<a href="http://nyis.info/invasive_species/mugwort-draft/">http://nyis.info/invasive_species/mugwort-draft/</a>
Hemlock Woolly Adelgid	<i>Adelges tsugae</i>	17	0.73%	19	<a href="http://nyis.info/invasive_species/hemlock-woolly-adelgid/">http://nyis.info/invasive_species/hemlock-woolly-adelgid/</a>
Mile-a-minute Weed, Mile-a-minute Vine, Asiatic Tearthumb	<i>Persicaria perfoliata</i>	16	0.69%	20	<a href="http://nyis.info/invasive_species/mile-a-minute/">http://nyis.info/invasive_species/mile-a-minute/</a>
	<i>All Other Invasive Species Combined</i>	140	6.02%	-	



## Chapter 5: Climate Change

### 33. Sea Level Rise & Climate Conditions and Projections

#### *Description:*

According to the NYS Energy Research and Development Administration (NYSERDA), “climate in the Hudson Valley region is temperate and variable, from warm summers bringing occasional heat waves and droughts to cold, snowy winters. Climate change has already affected the normal variability in weather patterns, and is projected to continue to significantly alter climate conditions in the future. It is important for municipalities to understand the risks posed by changing climate conditions, and how they relate to local natural resources and human health, as well as to the built environment. Increasing temperature, sea level rise, and variability in precipitation are the primary climate change-related hazards in the Northeast region. These hazards may pose significant risks to natural resources and human communities, namely through heat waves, drought, flooding, and poor air quality. Recognizing the value of natural resources as ‘green infrastructure’ in devising climate adaptation strategies is essential.

“Air temperature, sea level, and the frequency and intensity of extreme precipitation events are projected to increase through 2100 in the Hudson Valley region. For example, New York’s annual average temperature has risen nearly two degrees Fahrenheit and winter temperature almost 5 degrees since 1970.<sup>1</sup> Sea level, which influences the Hudson River, has risen 15 inches in New York Harbor over the last 150 years. The Northeast has also experienced a 74% increase in the amount of precipitation occurring in heavy rainfall events between the periods of 1950-1979 and 1980-2009. These factors combine to create more frequent and severe heat waves, short-term drought, and flooding.”<sup>2</sup>

Specifically concerning sea level rise, Scenic Hudson states, “The Hudson River is an extension of the Atlantic Ocean, a 150-mile-long estuary that stretches from the Narrows in New York Harbor to the Federal Dam at Troy. Sea level along the entire estuary is thus linked to any changes in water levels in the Atlantic and around the globe. Over the past century, sea level on the Hudson has risen about a foot — more precisely about 2.8 mm per year — a rate greater than the global average. In recent decades, the rate of sea level rise has accelerated, averaging about 4.5 mm per year since 1991. The best data available indicates that we can expect the Hudson’s

<sup>1</sup> Rosenzweig, C., W. Solecki, A. DeGaetano, M. O’Grady, S. Hassol, P. Grabhorn (editors). 2011. Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation. Synthesis Report. New York State Energy Research and Development Authority (NYSERDA), Albany, NY. [nysenda.ny.gov/climaid](http://nysenda.ny.gov/climaid)

<sup>2</sup> Haeckel, Ingrid, and Laura Hedy. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

water levels to continue rising six feet or more by the end of this century, and perhaps that much again during the next century.

“What’s at Stake? Over 9,000 acres of riverfront lands lie within the expanding reach of daily high tides, threatening both the most critical river habitats and approximately 3,600 households and 6,900 people. Accompanying shifts of flood-prone areas will put approximately 6,400 more households and 12,200 people at greater risk from damaging storm surges and floodwaters. At the same time, the most critical habitats of the Hudson River ecosystem — the 13,000 acres of tidal wetlands and shallow water vegetation beds — will be increasingly stressed by rising water levels.”<sup>3</sup>

Furthermore, Scenic Hudson says that, “Rising tides along the Hudson River will affect commuter and commercial rail transport, drinking water and wastewater plants, and a great variety of riverfront businesses, private properties and popular venues such as public parks. New systems and solutions will have implications for taxpayers.”<sup>4</sup> Clearly, sea level rise poses expensive and ecologically dangerous threats to Philipstown’s shorelines, including those of the Village of Cold Spring.

The map for this section is a screenshot of Scenic Hudson’s “Sea Level Rise Mapper,” which is available for viewing here: <https://www.scenichudson.org/our-work/climate/sea-level-rise/>. The Mapper allows you to zoom into an area of interest, such as the Village of Cold Spring waterfront (which is at sea level on the Hudson River Tidal Estuary) in the example map, and then select various sea level rise scenarios as well as the Current 100-Year Flood Zone and what that flood zone would look like with varying sea level rise. The tool allows you to click on an inundated area for a projection of what the water depth would be at that point with that given amount of sea rise. The tool also has a chart that shows estimates of when various degrees of sea level rise will occur, and includes both “likely” and “possible” scenarios.

In terms of forecasting future climate conditions, the New York State Energy Research and Development Authority (NYSERDA) has been studying, documenting, and modeling the impacts of climate change in New York State for several years. Climate trends and projections for the East Hudson and Mohawk River Valleys come from NYSERDA’s Responding to Climate Change in New York State (ClimAID) and include projects for precipitation, temperature and sea-level rise.<sup>5</sup>

<sup>3</sup> Scenic Hudson, Climate, Sea Level Rise, 2020, <https://www.scenichudson.org/our-work/climate/sea-level-rise/>

<sup>4</sup> Scenic Hudson, Press Releases, Experts Help Municipal and Business Leaders with Climate Impacts Along the Hudson, April 27th, 2017, <https://www.scenichudson.org/press-release/experts-help-municipal-and-business-leaders-with-climate-impacts-along-the-hudson/>

<sup>5</sup> Rosenzweig, C., W. Solecki, A. DeGaetano, M. O’Grady, S. Hassol, P. Grabhorn (editors). 2011. Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation.



It is also important to add that Philipstown's forests, wetlands and open meadows, in addition to providing numerous other ecosystem services, also capture and store carbon from the atmosphere, thus helping to mitigate the effects of greenhouse gases on climate change. Specifically, Philipstown's ecosystems capture 40%, or approximately 80,000 Metric Tons of CO<sub>2</sub>-equivalent, of the Town's total annual community greenhouse gas emissions in a year, most of which is performed by the Town's deciduous forests.<sup>6</sup> The ability of our forests to capture carbon can be jeopardized by increased climatic chaos in the form of damaging storms, droughts, flooding and the migration of insects that can harm and even kill off large numbers of existing trees within our forests. This emphasizes how important it is to protect the integrity of our existing forests while also working tirelessly to reduce our greenhouse gas emissions to minimize the potential damage that could happen. Also, tree replanting initiatives will likely become necessary to keep pace with the damages described above.

Although the vast majority of carbon capture is done by the Town's deciduous forests, wetlands also play a hugely important role because they tend to store massive amounts of carbon in the peat and muck below their surfaces. This includes both tidal wetlands and inland wetlands. Specifically, Philipstown's wetlands currently store the equivalent of *20 years-worth*, or roughly 4 million Metric Tons of CO<sub>2</sub>-equivalent, of annual Philipstown community greenhouse gas emissions.<sup>7</sup> If these wetlands are damaged or lost, whether to development or climate changes such as extreme flooding or sea level rise, a potentially catastrophic release of carbon could occur, undermining the Town's current efforts to reduce its annual community emissions. Tidal wetlands, specifically, could release large amounts of such carbon if the sediment below is disturbed and removed by rising tides and stronger flowing currents within the existing wetlands areas.

#### *Findings:*

Three significant climate hazards are expected to affect Philipstown during the 21st century: sea level rise, increasing temperatures and changing precipitation patterns. These hazards will not only affect human activities, but also pose great threats to the balance of ecological communities and specifically will impact certain species more than others, such as some migratory birds, for example, that depend on arriving to feed at the exact time that their prey are in their greatest numbers, which can be completely thrown off by chaotic climate changes from year to year.

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Synthesis Report. New York State Energy Research and Development Authority (NYSERDA), Albany, NY. [nyserdera.ny.gov/climaid](https://nyserdera.ny.gov/climaid)

<sup>6</sup> Apicello J., J. Angell., *et al.*, "Sink, Store, Reduce, Offset," Philipstown Inventory Report 2020, Town of Philipstown + Ecological Citizens Project + ICLEI USA, 2020, <https://www.climatesmartphilipstown.org/>

<sup>7</sup> *Ibid.*



### Sea Level Rise:

As outlined above, the Hudson River has already risen 1 foot over the previous century and is forecast to rise somewhere between 2 to 6 feet by 2100, with some data suggesting it will be on the high side. As Scenic Hudson's Sea Level Rise Mapper shows, significant portions of the Cold Spring, Garrison's Landing and Manitou waterfronts will possibly be submerged by 2100. Large sections of Metro North train tracks will also be jeopardized by sea level rise, most likely requiring expensive adjustments to sections, especially causeways crossing marsh areas of Philipstown's shoreline. The 100-Year Flood Zone will also expand and could flood such important infrastructure as the Cold Spring Wastewater Treatment Plant, Fair Street in Cold Spring, most of Route 9D north of Cold Spring, the Cold Spring Metro North parking lot (See Sea Level Rise Mapper and Tables 14 and 18 below).

In terms of ecological impacts, both Constitution Marsh and Manitou Marsh will experience changes due to rising shorelines. Scenic Hudson has created an accompanying tool called Protecting the Pathways in order to "analyze the effects of sea level rise on Hudson River Estuary (HRE) tidal wetlands to project future wetland status and distribution." Specifically, the Protecting the Pathways tools states that "through accretion, if there is enough sediment and organic matter being deposited by decomposing plants and sediment flowing from upstream. Wetlands can migrate upland, if there are no barriers. As the lower plants succumb to deeper waters, newly tidal areas grow new wetland plants. Wetlands will be lost to inundation if SLR [Sea Level Rise] rates are too high for accretion to keep up (and sediment inadequate) or barriers prevent migration."<sup>8</sup>

Unfortunately, Constitution Marsh is forecasted to lose more wetlands than gain new wetlands from accretion and migration. This is because the marsh does not have much of a floodplain beyond and so it will have to depend heavily on accretion rather than migration to survive. On the other hand, Manitou Marsh is projected to expand in area due to sea level rise, although this projected expansion will possibly come into conflict with developed residential areas along the shore of the marsh.

### Temperature:

Annual average temperatures have been steadily rising in New York State. Since 1970, they have been increasing at a rate of 0.6 degrees Fahrenheit (°F) per decade. In winter months, this warming effect is even greater, at 1.1°F per decade. Models project that annual average

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<sup>8</sup> Scenic Hudson, Protecting the Pathways, Case Study: Constitution Marsh, <https://arcg.is/1jbXG4>

temperature in the Lower Hudson Valley region will rise by an additional 4 to 6°F by 2050; and 6 to 11°F by 2100 (see Table 15).<sup>9,10</sup>

Overall temperature increases accompanied by chaotic changes in temperature will have some positive effects, such as potentially extending the growing season for local agriculture, but can also lead to severe droughts, heat waves, the migration of invasive species and agricultural pests, and complicate growing practices in early spring and late fall caused by unpredictable seasonal temperature swings that can lead to unexpected frosts, for example. Temperature changes can also completely throw off the normal rhythms of our local ecosystems and can have disastrous consequences on certain species, such as local white-tailed deer, as locals have seen this year: the northward migration of midges carrying a deadly hemorrhagic virus has decimated Philipstown's white-tailed deer population. It is suspected that the midges were carried up to New York by late summer tropical storms, such as Tropical Storm Isaias in early August.<sup>11</sup> This is an example of how the increased chaos caused by temperature changes can wreak havoc on one species, which then can have tremendous consequences on the rest of its ecosystem.

#### Changing Precipitation Patterns:

According to the Putnam Valley NRI, "the Northeast has also experienced a 74% increase in the amount of precipitation occurring in heavy rainfall events between the periods of 1950-1979 and 1980-2009. Projections indicate that total annual precipitation could increase almost 15% by mid-century. In the future, Philipstown and other Hudson Valley communities can expect more dry periods intermixed with heavy rain events and decreased snow cover in winter (Table 16)."<sup>12</sup>

Similar to temperature changes, varying dry periods intermixed with heavy rain events and decreased snow cover will drastically reduce the predictability of local water cycles, impacting both human and ecosystem water needs. Changing from lighter rainfalls to heavier downpours leads to an increase in stormwater runoff and reduced water retention in local water tables since the sheer amount of water falling in a short period of time will more likely find its ways into streams that flow with speed towards the Hudson River. This can lead to a reduced presence of vernal pools, which are essential for the breeding of many amphibians in the spring, as well potentially lower aquifer levels for human use. Increased severe storm and rainfall events can also increase landslides and damage to steep slope ecosystems, potentially washing out existing

<sup>9</sup> Rosenzweig, C., W. Solecki, A. DeGaetano, M. O'Grady, S. Hassol, P. Grabhorn (editors). 2011. Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation. Synthesis Report. New York State Energy Research and Development Authority (NYSERDA), Albany, NY. [nysenda.ny.gov/climaid](http://nysenda.ny.gov/climaid)

<sup>10</sup> Climate Smart Communities, New York State. [climatesmart.ny.gov](http://climatesmart.ny.gov)

<sup>11</sup> Cronin, B.P.J., Highlands Current, "State IDs Fatal Deer Virus," September 11th, 2020, <https://highlandscurrent.org/2020/09/11/state-ids-fatal-deer-virus/>

<sup>12</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

wetlands (although their presence is essential to mitigate flood damage) and undermining the root systems of vegetation.

Also, as we've seen from Hurricane Irene, which landed in New York on August 28th, 2011, extreme rainfall in a short period of time overwhelmed local waterbodies and streams and led to severe flooding and destruction of several pieces of infrastructure: a dam adjacent to East Mountain Road South near Fahnestock State Park and bridges on Avery Road and Snake Hill Road in Garrison, in addition to damages to numerous residence. Unfortunately, storms like Hurricane Irene are projected to come more likely in the decades ahead as climate change progresses, and thus preparation for the worst and efforts to mitigate climate change are essential to avoid further damages and loss of life.

#### Summary of Climate Impacts:

According to the Town of Putnam Valley's NRI, "The [above] factors... will combine to create more frequent and severe heat waves [Table 17], short-term drought, and flooding [Table 18]. These climate risks will affect human health in Philipstown directly as well as change habitats and associated biotic communities. New York's changing climate presents new challenges and opportunities for communities. It is vital for our Town and county decision-makers to understand the community's vulnerability to changing climatic conditions and consider natural resources as an important asset in planning for resilience, managing climate risks, and recovering quickly from extreme weather events. Changing precipitation patterns will necessitate redrawing of flood zones around area waterways [see Section 18. Flood Zones]. The incentive to build in areas of higher elevation to house families displaced from flood zones in the Town and greater region may put pressure on current areas of open space."<sup>13</sup>

On a positive note, Philipstown already "has ecological assets that will contribute to its resilience, including large forest areas, wetlands, and healthy streams. The Town's forest habitats abut those in nearby areas providing corridors of connectivity that may help to preserve biodiversity in the face of a changing climate."<sup>14</sup> Philipstown is in a good position to protect its natural resources from the detrimental effects of climate change and luckily has a motivated community of volunteers, non-profit staff, elected officials, government staff, homeowners and business-owners who are already working to ensure that our abundant natural resources last for generations despite the challenges that climate change will present to us.

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<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*



### *Further Study:*

The New York Climate Smart Communities program<sup>15</sup> suggests numerous ways to put our Town's NRI in action for building climate resilience. Some examples include: completing a Vulnerability Assessment to rank resources and infrastructure vulnerable to climate change, reviewing and updating Town policies on Climate Resiliency, Hazard Mitigation, Flood Management and Heat Emergency Planning, and conserving or restoring wetlands and forests to manage stormwater, recharge groundwater and mitigate flooding. Each suggested action contains much more detail and guidance on best practices and how to earn points towards the Town's Climate Smart Certification goals.

Furthermore, a much more in-depth study of how the forecasted impacts of climate change - temperature, precipitation and sea level rise - will specifically impact the numerous resources accounted for in this NRI would be well-worth the time and expense. Specifically, such a study could use local data gathering to determine the types of local species most vulnerable to climate change, establish priority protection zones for these species and research best practices on how to support the resiliency of such species and their ecosystems in the face of the unavoidable effects of climate change.

Also, Cornell University offers useful guidance resources for municipalities on improving climate resilience through the Hudson Estuary Watershed Resilience Project. This includes Flood Guides, Managing Shore Zones and examples of what other municipalities have already done. It can be accessed at: <http://blogs.cornell.edu/estuaryresilience/resources/municipal-officials/>.

Finally, Columbia University offers an alternative sea level rise mapper called Hudson River Flood Impact, which can serve as an additional source of sea-level rise information for the Town's work in the future. The tool is available at: <http://www.ciesin.columbia.edu/hudson-river-flood-map/>

### *Data Sources:*

- Sea level Rise
  - Scenic Hudson Sea Level Rise Mapper  
<https://www.scenichudson.org/our-work/climate/sea-level-rise/>
- Climate Conditions and Projections
  - Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation [nyserda.ny.gov/climaid](http://nyserda.ny.gov/climaid)
  - Climate Projections In The Hudson River Estuary A Fact Sheet for the Public  
[dec.ny.gov/docs/remediation\\_hudson\\_pdf/cphv.pdf](http://dec.ny.gov/docs/remediation_hudson_pdf/cphv.pdf)

<sup>15</sup> Climate Smart Communities, New York State, [climatesmart.ny.gov](http://climatesmart.ny.gov)

Note: in the following tables, the categories “NYC/Lower Hudson Valley,” “Lower Hudson Valley,” and “Coastal New York” each include Philipstown.

**Table 14. Sea Level Rise Projections for the Hudson<sup>16</sup>**

	Baseline 1971–2000	2020’s	2050’s	2080’s	2100
Mid-Hudson Region	-	1 - 9”	5 - 27”	10 - 54”	11 - 71”
NYC/Lower Hudson Region	-	2 - 10”	8 - 30”	13 - 58”	15 - 75”

**Table 15. Air Temperature Projections for Lower Hudson Valley<sup>17</sup>**

	Baseline 1971–2000	2020’s	2050’s	2080’s	2100
Average air temperature (°F)	50	52.3 - 53.2	54.5 – 56.2	55.6 – 59.7	56.1 – 61.4
Increase in annual average (°F)	-	2.3 – 3.2	4.5 - 6.2	5.6 – 9.7	6.1 – 11.4

<sup>16</sup> Climate Projections In The Hudson River Estuary A Fact Sheet for the Public, NYSDEC Hudson River Estuary Program, [dec.ny.gov/docs/remediation\\_hudson\\_pdf/cphv.pdf](http://dec.ny.gov/docs/remediation_hudson_pdf/cphv.pdf)

<sup>17</sup> *Ibid.*

**Table 16. Precipitation Projections for the Lower Hudson Valley<sup>18</sup>**

	<b>Baseline 1971–2000</b>	<b>2020's</b>	<b>2050's</b>	<b>2080's</b>	<b>2100</b>
<b>Total annual precipitation (inches)</b>	51"	52 – 54.5"	53 – 57"	53.5 – 58.5"	53.5 – 61.5"
<b>% Increase in annual precipitation</b>	-	2 – 7%	4 – 12%	5 – 15%	5 – 21%
<b># Days with precipitation &gt; 1 inch</b>	10	14 – 15	14 – 16	15 – 17	-
<b># Days with precipitation &gt; 2 inches</b>	1	3 – 4	4	4 - 5	-

**Table 17. Heat Wave Projections for the Lower Hudson Valley<sup>19</sup>**

	<b>Baseline 1971–2000</b>	<b>2020's</b>	<b>2050's</b>	<b>2080's</b>	<b>2100</b>
<b># Days per year above 90°F</b>	10	26 – 31	39 – 52	44 – 76	-
<b># Days per year above 95°F</b>	1	2 – 4	3 – 10	6 – 25	-
<b># Heat waves per year</b>	1	3 – 4	5 – 7	6 – 9	-
<b>Average # days of each heat wave</b>	4	5	5 - 6	5 – 7	-
<b># Days per year ≤ 32°F</b>	155	127 – 136	104 – 119	84 – 109	-

<sup>18</sup> *Ibid.*<sup>19</sup> *Ibid.*



**Table 18. Flood Projections for Coastal NY<sup>20</sup>**

	<b>Baseline 1971–2000</b>	<b>2020's</b>	<b>2050's</b>	<b>2080's</b>	<b>2100</b>
<b>Increase in probability of 100-year flood</b>	-	20 – 50%	70 - 190%	140 - 610%	-
<b>Flood height of 100-year flood (feet)</b>	15	15.3 - 15.7	15.9 - 16.8	16.5 - 18.3	-

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<sup>20</sup> *Ibid.*

## Chapter 6: Historic, Scenic & Recreational Resources

### 34. Historic Resources

#### *Description:*

According to the Hudson River Estuary Program, “local history is intimately linked with natural heritage. Historic districts and individual sites often reflect the availability of natural resources that supported economic activities and a way of life that may or may not continue to exist. Many times, they are associated with significant natural areas or open spaces. Documentation of historic resources in an NRI can broaden understanding of how a community developed, what makes it interesting from a historical perspective, and illuminate how land-use patterns today reflect patterns of growth in the past.

“The rural Hudson Valley landscape has many examples of historic features: prehistoric Native American settlements, colonial estates, Revolutionary War battlefields, bluestone quarries, parks and gardens designed by noted landscape architects, and vernacular barns, stonewalls, and other reminders of rural livelihoods in the past. Historic districts and sites establish a link with the past and help to provide a community’s sense of identity and stability.”<sup>1</sup>

The data used for this map comes from the National Register of historic sites and buildings, made available by the NYSDEC. Data include buildings, structures, objects, and historic districts listed in the National Register. Archeological sites and properties determined eligible for listing were not included. Also, although there are none within Philipstown, we included data from the New York State Park and Historic Site Boundaries dataset, which included a state historic site just across the river at Fort Montgomery, in the southwest corner of the map.

#### *Findings:*

Historic resources are an essential part of the natural beauty and character of Philipstown, and offer a sense of connection to the past. Along with natural, recreational, and scenic resources, the Town is fortunate to have many well-preserved historic structures. Many of these historic resources, discussed below and shown on the Historic Resources map, should be considered when making development and other land-use decisions.

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<sup>1</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

According to the Putnam Valley NRI, around Philipstown and Putnam Valley “the earliest known people were of the Canopus group of the Wappinger Confederacy, part of the Algonquin-speaking Mohican Nation.”<sup>2</sup> These communities left relics behind following their forced removal by Europeans. For example, many of the stonewalls in this region were built in part by Native Americans. The book “Sermons in Stone” by Susan Allport includes quotes from firsthand material showing that colonial settlers employed Native Americans in order to fill “debts” (often accrued by Native Americans continuing their normal practices that colonists had deemed illegal). One example described in the book is: “Some of the Indians who worked for the settlers were free men who were paid a daily wage, but others were slaves, captives from the King Philip’s Indian War of 1675 who had been subsequently awarded to colonists in compensation for their own participation in that war. Both of these groups of Indians were probably employed in building stone walls.” Allport also includes firsthand accounts demonstrating that enslaved Africans and African-Americans were also forced to build stonewalls.<sup>3</sup>

Unfortunately, Native American land rights were essentially disregarded from the first arrival of Europeans, and eventually Dutch and English settlers completely displaced them. As described in the Hudson Highland Land Trust’s “[Land Heist in the Highlands](https://www.hhlt.org/land-heist-in-the-highlands/)” article, the Wappingers land, which included current-day Philipstown and the rest of what became Putnam County, was illicitly taken from them by means of one questionable deed and one completely false deed which both involved one of the Town’s European founders, Adolph Philipse. Despite pleading their case - the efforts of which were led by their Chief Daniel Ninham, the Wappinger were forcibly removed from their lands, as well as multiple times from the lands they then moved to. Despite their forced removal by Europeans to Wisconsin, Oklahoma, Stockbridge, and areas in Canada, the Wappinger culture is still active in these regions and deserves recognition as the culture whose ancestral lands include Philipstown.<sup>4</sup>

Also, it is ethically essential while studying and preserving Philipstown’s history to learn the stories of people who were enslaved by landowners in or near Philipstown. Their stories are often overlooked and undertold and deserve further attention. Stories like that of Caesar, an African American miller enslaved by Adolph Philipse, the wealthy Dutch landowner who was involved in creating the false deed that stole most of what is now Putnam County from the Wappinger people. Or of families that were forcibly separated by their enslavers, such as Jack and Parthenia, who were married but held captive by different enslavers who cruelly prevented them from being together by sending Parthenia to Barbados without Jack. Stories like these are

<sup>2</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>3</sup> Allport, Susan, Sermons in Stone: The Stone Walls of New England and New York, Second Edition, The Countryman Press, New York, September 17th, 2012

<sup>4</sup> Cutul, Peter, Land Heist in the Highlands: Chief Daniel Ninham and the Wappinger Fight for Homeland, NYS Office of Parks, Recreation and Historic Preservation, Hudson Highlands Land Trust, <https://www.hhlt.org/land-heist-in-the-highlands/>



documented by Historic Hudson Valley's interactive virtual museum, "People Not Property."<sup>5</sup> The resource can be found here: <https://peoplenotproperty.hudsonvalley.org/>. Also, the Hudson Highlands Land Trust has a webpage dedicated to the "People Not Property" virtual museum, which can be found here: <https://www.hhlt.org/people-not-property/>.

During the time of early European settlement, in 1669, the provincial government of New York designated a postal route between New York City and Albany, which were the two most important European population centers at the time. Before 1669, the route that the postal road followed was originally established by the Wiccoppee and Wappinger. Then in 1703, the provincial government mandated that the postal road become a "public and common general highway" to facilitate travel between the two cities.<sup>6</sup> An original unpaved section of this route still exists today and is known as the "Old Albany Post Road Historic District," which is found on this map along the eastern border of Philipstown.

Philipstown officially became a township of Dutchess County on March 7, 1788, and later became a township of Putnam County when Putnam County broke off from Dutchess County in 1812.<sup>7</sup> In terms of living conditions, the mostly steep slopes and rocky soils of Philipstown made farming difficult and limited the area's population prior to the construction of the West Point Foundry in the Village of Cold Spring in 1818. Even now the Town remains less developed than many nearby areas. As noted above, "the Town is latticed with historic stone walls - some constructed up to 300 years ago - which contained livestock and served as repositories for the seemingly endless rocks removed from fields to improve farming."<sup>8</sup>

Prior to the construction of the West Point Foundry, "farmers eked out a subsistence living cultivating berries and fruits, nuts, maple trees for syrup, bees for honey, flax for textiles, and the crops that could be successfully grown. Grazing animals provided meat, dairy products, and wool; trees were logged for railroad ties, ship timber, barrel hoops, and construction materials for the burgeoning cities. Ice harvesting from local lakes provided a winter income; cut ice was packed in straw, driven by wagon to the Hudson, ferried to New York City and then shipped around the globe."<sup>9</sup>

Following the construction of the West Point Foundry, the Village of Cold Spring and surrounding Philipstown began to boom, attracting newcomers who either worked the foundry or

<sup>5</sup> Historic Hudson Valley, People Not Property: Stories of Slavery in the Colonial North, 2019, <https://peoplenotproperty.hudsonvalley.org/>

<sup>6</sup> Hine, C.G., The New York and Albany Post Road, 1905, Project Gutenberg EBook, Released December 14th, 2007, <http://www.gutenberg.org/files/23857/23857-h/23857-h.htm>

<sup>7</sup> McDonald, Don, A Brief History of Philipstown, 2004, <https://philipstown.com/history-of-philipstown>

<sup>8</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

<sup>9</sup> Life on a Rocky Farm: Rural Life Near New York City in the Late Nineteenth Century. Excelsior Editions/State University of New York, 2013.



formed a new middle class of doctors, lawyers, pastors, shop-owners, teachers and so forth. Furthermore, thanks to the influence of Gouverneur Kemble, who helped create the Foundry, Cold Spring and Philipstown became popular as fresh-air retreats for wealthy and famous New Yorkers, many of whom eventually purchased large estates as second or additional homes throughout the Town, and most prominently in the hamlet of Garrison, evidenced by the existence of such historic buildings as Castle Rock, the (Frederick) Osborne House, Eagle's Rest, and so forth.

Furthermore, the Hudson Highlands of Philipstown attracted painters from the Hudson River School, such as Thomas Cole, which further led to the fame of the region; however, the ever-hungry fires of the foundry eventually led to widespread deforestation throughout Philipstown, which took decades to replace, even after the foundry closed in 1911. The reforestation efforts, as mentioned in the Introduction to this NRI, were carried out in greatest number by the Civilian Conservation Corps during the years of the Great Depression, and are now largely protected in the form of public lands, private fee-owned properties and conservation easements (See Section 39. Conservation Open Areas and Open Space Overlay).<sup>10</sup>

As the map shows, there are a large number of historic districts within Philipstown, including those in the Villages of Cold Spring and Nelsonville, the majority of which are located near the Hudson River. The number of historic buildings and places within the Town is enormous and especially dominated by buildings and sites within Cold Spring and Nelsonville, which were and remain two of the most concentrated population centers of the Town. The section of Garrison near Moore House as well as the Valhalla Highlands Historic District both are home to numerous historic sites. These prominent areas include historic sites such as residences, businesses, churches, cemeteries, farms and preserved forest lands, as well as some of the old rock walls mentioned above. Also, while not located within Philipstown, it is worth noting the tremendous number of historic sites located across the river at West Point U.S. Military Academy and along the Hudson's shores to the south all the way to Bear Mountain. This includes, as mentioned above, the Fort Montgomery State Historic Site, which is highlighted in the southwest corner of the map.

Due to the sheer number of historic sites, we will not list and describe them in this inventory. However, more information about every single historic site and district depicted on this map can be accessed via the NYS Cultural Resource Information System (CRIS) online tool, made available by the NY State Historic Preservation Office (NY SHPO). This tool is free, open to the public and presents historic districts and sites in both GIS map form as well as in list form, and includes links to photographs and historic documents available for each site. This tool can be accessed here: <https://cris.parks.ny.gov/Login.aspx>. After reviewing the terms of access, click "I Agree" and then on the next page select "Proceed as Guest" to open the tool. Then in the

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<sup>10</sup> Dunwell, Frances F., *The Hudson River Highlands*, New York, Columbia University Press, 1991

navigation menu at the top of the page, select “Search” and then “Criteria” to enter Putnam County and Philipstown / Cold Spring / Nelsonville into the search boxes for either “USN” (Unique Site Number) or “National Register” to pull up a list of results for historic sites and districts. These will also appear on the map when you zoom in closely. Click on a given site or district on the map or list and then select “View” to pull up related documents about that site or district.

Also, once the Town of Philipstown launches its ArcGIS Online tool, readers will also be able to use that tool to pull up basic information on each historic site and district presented on this map, although more detailed information will be limited to access via the CRIS tool.

#### *Further Study:*

An additional study could compile a list of the historic sites and districts within Philipstown as well as detailed historic information, photographs, site maps, and so forth, and could be added to this NRI as an appendix. Such a study could also include stories about each site, including those of enslaved people, owners, family members and caretakers. Such a study should also go to lengths to document the way of life of the Wappinger and their influences on early European settlement, and emphasize that Philipstown remains the ancestral lands of many displaced Native American communities.

Also, in considering the racist history of Philipstown’s settlement, a tangible step that the Town of Philipstown could take to bring this history to light would be to develop an Anti-Racism Employee Training program that includes learning about the experiences of Native Americans and African Americans who were exploited by Europeans who claimed Philipstown as their own, and what effects such experiences have had on their relatives and displaced communities today. Such a program could involve the support of the Hudson Highlands Land Trust, which has expertise in this historic field, and could also lead to information sharing with local schools. The “People Not Property” virtual museum as well as the anti-racist historical articles available from the Hudson Highlands Land Trust offer a wealth of information that every Town employee and Philipstown community member would do well to learn.

#### *Data Sources:*

- State Historic Sites
  - NYS Historic Sites and Park Boundary  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=430>
- Historic Buildings or Places
  - NYSDEC - National Register Sites  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=429>



- NYS Historic Districts
  - NYSDEC - National Register Sites  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=429>

### 35. Scenic Resources

#### *Description:*

According to the Hudson River Estuary Program, “a community’s landscape defines its cultural, natural, and historic heritage. Scenic roads, waterfronts, prominent high points, river trails, special landscape features, and vistas of all kinds contribute to a community’s sense of place and aesthetic quality. They can also provide tourism-related economic opportunities for communities. Poorly planned development can impact and undermine these values.

“Preserving the integrity of scenic vistas requires consideration of both scenic views and the areas visible from them, which together comprise “the viewshed.” Identifying the full suite of scenic resources is the first step toward assessing potential impacts from development and determining strategies for protection.”<sup>11</sup>

Philipstown, due to its location in the heart of the Hudson Highlands, its long history of conservation as well as its numerous historic sites and districts, is one of the most scenic townships in NYS. Local, county, state and national efforts to protect scenic resources both within and within sight of Philipstown (e.g. Storm King Mountain) have led to a tremendous local consciousness about the importance of preserving Philipstown’s character and culture through the protection of its scenic resources.

Included in this map are NYS “Scenic Areas of Statewide Significance” (SASS), which were developed by the NYS Department of State to identify scenic resources in several Hudson Valley counties in 1993. SASS designation protects scenic landscapes through review of projects requiring State or federal actions, including direct actions, permits, or funding. These areas encompass unique, highly scenic landscapes accessible to the public and recognized for their outstanding quality. NYS Scenic Byways were included as well, and were provided by the NYS Department of Transportation’s list of “Designated Scenic Roads,” per Article 49 of NYS Environmental Conservation Law.

Philipstown’s Scenic Protection Overlay (SPO) was also added to this map and were taken from the Town’s zoning maps created in 2011. According to the Town Zoning Code, the Town’s SPO

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<sup>11</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

was created to provide “Special protection of the Hudson River corridor and scenic road corridors is necessary to preserve the attractive rural and historic quality of the Town. The purpose of this section is to regulate land uses within designated scenic corridors to protect the Town's scenic beauty and rural character. This section is intended to apply to those sections of road and river corridors that are visible to the public and that substantially retain their scenic character.”<sup>12</sup> The details of this SPO will be covered below.

Lastly the Town's Scenic Ridgelines were added to this map to highlight the most visible points throughout the Town. These ridgelines were taken from the Town's 2011 “Ridgelines” Zoning Map. Philipstown designated these ridgelines and established ridgeline protections in order to “maintain the scenic beauty and rural character of the Town by minimizing visual intrusions into the landscape and preserving the important aesthetic, scenic, and ecological character of the Town's ridgelines and adjacent hillsides.”<sup>13</sup> The details of the protection afforded to these ridgelines is also covered below.

#### *Findings:*

#### Scenic Areas of Statewide Significance:

The SASS located in Philipstown is titled “Hudson Highlands” and extends from Denning Point in the City of Beacon, Dutchess County, along the east and west shores of the Hudson River all the down to the southern border of Bear Mountain State Park in Rockland County. The Hudson Highlands are the namesake and heart of this scenic area and include such notable scenic resources as Storm King Mountain, Crow's Nest, Mount Beacon, Breakneck Ridge, Bull Hill, Cold Spring, Nelsonville, Garrison, West Point, Highland Falls, Fort Montgomery, Bear Mountain and Anthony's Nose, among many others. Suffice it to say that this area is one of the treasures of New York State due to its scenic beauty, historical significance and proximity to the state's largest population centers, which allows nearby access to millions of state residents and visitors. This scenic area is broken up into 28 separate subunits that include the above-listed scenic highlights. Detailed descriptions of the entire scenic area as well as each subunit can be found in a tremendously comprehensive report written in 1993, titled “Scenic Areas of Statewide Significance,” which was produced by the New York State Department of State's Division of Coastal Resources and Waterfront Revitalization.<sup>14</sup> This report can be accessed here:

<https://www.dos.ny.gov/opd/programs/HudsonSASS/Hudson%20River%20Valley%20SASS.pdf>

<sup>12</sup> Town of Philipstown, § 175-15 Scenic Protection Overlay District (SPO), <https://www.ecode360.com/6319090>

<sup>13</sup> Town of Philipstown, § 175-36 Steep terrain and ridgeline protection regulations, <https://www.ecode360.com/6319176#6319342>

<sup>14</sup> New York State Department of State, Scenic Areas of Statewide Significance, Division of Coastal Resources and Waterfront Revitalization, 1993 (reprinted 2004), pp. 269 - 367, <https://www.dos.ny.gov/opd/programs/HudsonSASS/Hudson%20River%20Valley%20SASS.pdf>



### Scenic Byways:

Within the Town of Philipstown, there is only one official State Scenic Byway: an 8.08-mile section of State Route 9D which runs from Beacon to Bear Mountain Bridge via Philipstown, as shown on the map. According to the NYS Department of Transportation, “The New York State Scenic Byways program was created in 1992 by the State Legislature. The program encourages both economic development and resource conservation, recognizing that each of these aspects of a byway must be fostered to ensure the success of the other. State Scenic Byways are transportation corridors that are of particular statewide interest. They are representative of a region's scenic, recreational, cultural, natural, historic or archaeological significance.”<sup>15</sup>

As Route 9D winds its way through Philipstown it offers dramatic views of the Hudson Highlands while passing through the Village of Cold Spring and by historic buildings, farms and estates on its way through Garrison down to the Historic Bear Mountain Bridge and beyond. The route is a popular drive for daytrippers as well as cyclists. Although a popular cycling route, the scenic byway is notorious for safety concerns due to its tight shoulders and high-speed commuter traffic, despite being designated as a section of the official NYS Bike Route 9, which according to the NYSDOT, “is a signed on-road bicycle route that extends 345 miles from New York City to Rouses Point on the New York - Quebec border. This route connects with the Velo Quebec cycling routes in Quebec and eastern Canada. It also intersects with the New York City bicycle route network and State Bicycle Routes 5, 11 and 17, and the NYS Canalway Trail.”<sup>16</sup>

### Scenic Protection Overlay:

Philipstown’s Scenic Protection Overlay provides special protections for scenic districts within the Town, including most of the state, county and Town roads within the Town, such as Old Albany Post Road, as well as the entire length of Philipstown between the Hudson River and State Route 9D, as the maps shows. Specifically the SPO has the following regulations from Philipstown Code:

“§ 175-15 Scenic Protection Overlay District (SPO).

A. Findings and purpose. Special protection of the Hudson River corridor and scenic road corridors is necessary to preserve the attractive rural and historic quality of the Town.

The purpose of this section is to regulate land uses within designated scenic corridors to

<sup>15</sup> NYS Department of Transportation, NYS Byways Program, <https://www.dot.ny.gov/display/programs/scenic-byways/programs>

<sup>16</sup> NYS Department of Transportation, Bicycling in New York, State Bike Route 9, 2008, [https://www.dot.ny.gov/portal/pls/portal/MEXIS\\_APP.DYN\\_BIKE\\_TRAIL\\_DETAIL\\_MAIN.show?p\\_arg\\_names=p\\_trail\\_id&p\\_arg\\_values=145](https://www.dot.ny.gov/portal/pls/portal/MEXIS_APP.DYN_BIKE_TRAIL_DETAIL_MAIN.show?p_arg_names=p_trail_id&p_arg_values=145)



protect the Town's scenic beauty and rural character. This section is intended to apply to those sections of road and river corridors that are visible to the public and that substantially retain their scenic character.

B. Boundaries. The SPO District includes all land shown on the Resource Protection Overlay Districts Zoning Map as part of the SPO District, including land lying between the Hudson River shoreline and New York State Route 9D and land lying within 250 feet of the right-of-way of all state, county and Town roads, excluding land lying within a SR, OC, HC, M, HM, or HR District.

C. Regulatory effect on land uses. Within the SPO District, all of the underlying land use district regulations remain in effect, except as they are specifically modified by this section.

D. Site plan approval requirement. The provisions of this § 175-15 shall apply only to uses, construction, or other land disturbance where other provisions of this chapter require site plan review or a special permit. Within the SPO District, site plan approval shall also be required for the construction of any dwelling exceeding 3,000 square feet in floor area. Site plan approval shall also be required for any land disturbance of more than 10,000 square feet within any one-year period or more than 20,000 square feet in total over any time period, in any location that is visible from a publicly accessible place (as defined in § 175-74) when there are no leaves on the trees. Nothing in this section shall affect the ability of landowners to cut, clear, or remove vegetation on their property as necessary to keep and maintain views that existed on the date of original adoption of this § 175-15.

E. Site plan approval exemptions. Within the SPO District, the site plan approval requirement shall not apply to:

- (1) Agricultural uses, except for agricultural structures with a footprint exceeding 10,000 square feet.
- (2) The repair and maintenance of existing structures.
- (3) Activities carried out pursuant to a site plan or special use permit approved prior to the enactment of this section.
- (4) Clearing and grading associated with construction of unpaved hiking trails.
- (5) Any other activity not included in Subsection D above.

F. General standards where site plan review or a special permit is required. Within the SPO District, site plan approval may only be granted if, with appropriate conditions attached, the proposed activity:

- (1) Will minimize degradation of scenic character and will satisfy the requirements in Subsections G through J below, except where site features are screened from public roads or trails.
- (2) Will minimize the removal of native vegetation, and avoid such removal if it would permit any structure to become visible from publicly accessible places. This shall not prevent trimming or removal of vegetation, either to open up small "keyhole views" from private property or to protect public visibility of scenic views and panoramas from publicly accessible places.
- (3) Will locate and cluster buildings and other structures in a manner that minimizes their visibility from publicly accessible places.

G. Landscape requirements where site plan review or a special permit is required.

- (1) A continuous green buffer, consisting of existing vegetation or new landscaping, at least 100 feet deep along Routes 9 and 9D and the Hudson River, and at least 50 feet deep along the other scenic roads, shall be maintained, except where the land is not visible from the scenic road or river. This buffer shall consist of trees and shrubs, as well as fields, meadows, and lawns. Invasive species shall not be planted and native species are preferred as provided in the list of designated native species approved by the Town Board. Bike paths and/or sidewalks may be constructed within this landscaped buffer. This buffer requirement shall not apply in the immediate area around existing residences located within the buffer area. This buffer requirement may be modified by the Planning Board in the course of site plan review where the Planning Board determines that it is unnecessary, does not serve the purposes of this section, or would be impractical to implement.
- (2) Shade trees shall be provided within 25 feet of the right-of-way at intervals averaging every 50 feet. An applicant for site plan or special permit approval shall not be required to plant more than one shade tree per 1,000 square feet of floor area proposed to be developed on the parcel.
- (3) To the maximum extent practicable, existing noninvasive trees, lawns, and shrubs shall be preserved, unless they are proposed to be replaced by native trees or other noninvasive vegetation deemed appropriate by the Planning Board.
- (4) Trees and shrubs shall be planted as deemed necessary by the Planning Board to reduce visibility of new structures from public roads or trails.
- (5) Existing stone walls and historic mileposts lying within 100 feet of a road right-of-way shall be preserved, except that portions of stone walls may be removed where necessary for driveway entrances, provided that the portions of such walls adjoining the sections removed are reconstructed in a manner consistent with the historic character of the existing stone wall.

(6) The Route 9D Scenic Byway Corridor Management Plan (2006) shall be consulted for guidance in compliance with the requirements in this subsection as applicable to Route 9D.

H. Architecture where site plan review or a special permit is required.

(1) Existing structures with historic or architectural significance, as determined by any historic or architectural survey approved by the Town Board or by the eligibility criteria for listing on the National or State Register of Historic Places, shall be retained to the extent practicable. Alterations to such structures shall be compatible with the architecture of the existing structure. New structures shall be compatible with the historic structures in their vicinity.

(2) The Planning Board shall consult the building form guidelines referred to in § 175-5 in considering any applications under this section.

I. Fences where site plan review or a special permit is required.

(1) Stockade or other fence designs that block visual access to land in a scenic road corridor shall be prohibited, unless such fences are necessary to screen a preexisting use that does not conform to the requirements of this section.

(2) Fences that are likely to inhibit the passage of wildlife, as determined by the Natural Resources Review Officer, shall be limited to those that enclose, in the aggregate, no more than the larger of 40,000 square feet or 30% of the area of any lot. However, the total area enclosed by such fencing on any parcel shall not exceed 10 acres.

(3) The Natural Resources Review Officer may allow exceptions to the requirements of Subsection I(2) above based upon the site-specific impacts on wildlife, including consideration of the maintenance and improvement of wildlife corridors.

(4) The restrictions in this Subsection I shall not apply to a farm operation growing crops or raising livestock for commercial sale or to not-for-profit organizations that manage wildlife preserves, demonstration farms, or gardens where the intrusion of wildlife would interfere with the fulfillment of the organization's objectives.

J. Ridgeline and hillside protection. See § 175-36C.

K. Rural siting principles where site plan review or a special permit is required. New development in the SPO District shall comply with the rural siting principles in § 175-31 to the extent practicable.”<sup>17</sup>

<sup>17</sup> Town of Philipstown, § 175-15 Scenic Protection Overlay District (SPO). <https://www.ecode360.com/6319090>



### Scenic Ridgelines:

As the map shows, there are numerous ridgelines located throughout the Town, generally running southwest to northeast with some exceptions. The following section of the Town of Philipstown Zoning Code summarizes the goals of protecting the Town's ridgelines as well as the restrictions on developing those ridgelines:

“§ 175-36 Steep terrain and ridgeline protection regulations.

...

C. Ridgeline and hillside protection. The purpose of this Subsection C is to maintain the scenic beauty and rural character of the Town by minimizing visual intrusions into the landscape and preserving the important aesthetic, scenic, and ecological character of the Town's ridgelines and adjacent hillsides. The Town of Philipstown Resource Protection Zoning Map, Scenic Ridgelines designates significant ridgelines for protection.

[Amended 9-7-2011 by L.L. No. 4-2011]

(1) Designation of ridgeline and hillside protection area. The ridgeline and hillside protection area shall consist of all land lying 50 feet downslope, measured vertically, below a ridgeline indicated on the Zoning Map.

(2) Review of development within protection area. Within the ridgeline and hillside protection area, any structure containing 500 square feet or more of floor area or that is more than 20 feet in height, and any land disturbance (as defined herein) of 2,000 square feet or more, shall be subject to site plan review. Structures built within the ridgeline and hillside protection area shall be no more than 30 feet in height, notwithstanding the provisions of § 175-30E, and shall not project above such ridgeline when viewed from any publicly accessible place. Vegetative screening of new structures shall be required as necessary to minimize visibility from publicly accessible places, consistent with the limitations in Subsection C(3) below. The Planning Board may, but shall not be required to, waive this site plan review requirement if it finds that the proposed development site is not visible from any publicly accessible place.

(3) Notwithstanding any other provision in this chapter, landowners shall not be required to plant vegetative screening and shall be permitted to cut, clear, or remove vegetation on their property to the extent necessary to keep and maintain views that existed on May 5, 2011, the date of original adoption of this § 175-36.”<sup>18</sup>

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<sup>18</sup> Town of Philipstown, § 175-36 Steep terrain and ridgeline protection regulations, <https://www.ecode360.com/6319176#6319342>

### *Further Study:*

According to the Hudson River Estuary Program, “A comprehensive inventory of local scenic resources can begin the process of prioritizing and protecting areas with scenic value or serve to update previous scenic resource identification efforts. Many methods exist to inventory and evaluate scenic resources according to a wide range of attributes, including physical features (e.g., farm structures), as well as measures of the diversity, pattern, disturbance, contrast, access, and other important aspects of scenic views. Community-led scenic resources inventories can be challenging because views are complex and their values are subjective and often elicit emotional reactions. However, priorities usually emerge as the community begins the process of identifying important scenic attributes.

“The work group should determine the most appropriate criteria for assessing local scenic values and fully document methods. A survey of community residents can help identify important scenic viewpoints and their vistas or viewsheds. Consultants can help to carry out surveys, conduct viewshed analyses in GIS, or undertake the entire scenic resources inventory.

“Scenic information can be added manually to an existing map or digitized for use in GIS. Scenic vistas can be marked as numbered point locations and listed in an accompanying descriptive table. Designated scenic roads can be shown by highlighting the appropriate section of road on the map. Photographs are useful components of scenic resources inventories, and can be included in the report that accompanies the inventory maps. Using GIS data layers, GIS providers can conduct a viewshed analysis from key vistas or multiple vantage points to determine the most visible areas.”<sup>19</sup>

Lastly, the Hudson River Estuary Program just finalized a handbook for landowners on how to create views to the Hudson that balance historic, scenic, and conservation values. This can serve as a reference document for landowners and also for the Town’s Zoning, Planning and Conservation Boards in their work balancing development and preservation / conservation needs. The handbook can be accessed here:

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hrviewshbk.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrviewshbk.pdf)

### *Data Sources:*

- Scenic Areas of Statewide Significance
  - NYS SASS <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=321>
- Scenic Byways

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<sup>19</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



- NYSDOT Scenic Roads  
<https://www.dot.ny.gov/display/programs/scenic-byways/ScenicRoads-no-detail-info>
- Scenic Overlay District
  - Philipstown Resource Protection Overlay District Zoning Map - Scenic Overlay District <https://philipstown.com/zmspoapril.pdf>
- Scenic Ridgelines
  - Philipstown Resource Protection Overlay District Zoning Map - Scenic Ridgelines <https://philipstown.com/ridgelineapril.pdf>

### 39. Recreational Resources

#### *Description:*

According to the Hudson River Estuary Program, “the Hudson Valley is well-known for the quality and variety of its recreational resources, which include hiking trails, camping areas, trout streams, mountains, whitewater, rock-climbing, ski areas, lakes, ponds, wetlands, and the Hudson River estuary. Public lands such as the Catskill Park, state parks, county parks, and municipal parks, as well as private nonprofit conservation areas provide important recreational opportunities. In addition, some private landowners allow public access to their land for recreational purposes, e.g., snowmobile and hiking trails. Land-use changes, ownership changes, and misuse of recreational areas can threaten the availability of privately owned land for recreational use. Conversely, the expansion or creation of new parks and conservation areas and the rails-to-trails movement can expand access to public and private lands, provide new recreational opportunities, and help generate local tourism and economic growth.”<sup>20</sup>

Philipstown and its vicinity offers many recreational opportunities, especially hiking trails, but also public athletic fields, fishing locations, boat launches and designated bicycle routes. Included in this map are public lakes accessible to fishing from the NYSDEC Public Fishing Recommended Sites data set; Bike Routes from the NYS Department of Transportation’s “Biking in New York” program; and Hiking Trails and Carriage Roads, which were gathered by Philipstown volunteer Emily Cheadle as part of the Philipstown Community Congress’s “Trails Committee,” and which includes both hiking trails within state parks (the boundaries of which are included on the map) as well as trails and old carriage roads on federal, county, municipal and private land, some of which are open to the public. As the map legend notes, however, some of the trails outside of state parks may not be open to the public. Thus, this map is not intended to be used as a trail map, but rather as a planning resource for the Town as it finds ways to connect

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<sup>20</sup> *Ibid.*



existing trails with potential trails and preserve areas that have old historic trails or carriage roads that are not yet protected from development.

### *Findings:*

As the map shows, Philipstown is criss-crossed with hiking trails and old carriage roads, the majority of which are located within the Hudson Highlands and Clarence Fahnestock State Parks. The names and descriptions of these state park trails are available here:

<https://parks.ny.gov/recreation/trails/trails-in-state-parks.aspx>

There are also some trails that are located on other government lands (e.g. Appalachian Trail on Federal Lands east of Route 9) as well as on private lands that permit public access, such as the trails around Manitou Station Road or in the Village of Nelsonville. Trail summaries and guides for such trails are available at the New York New Jersey Trail Conference website at the following link: [https://www.nynjtc.org/hike-finder-map#!/filter\\_hike=hike](https://www.nynjtc.org/hike-finder-map#!/filter_hike=hike)

Although none are located within Philipstown, the NYS DEC has highlighted lakes with public fishing access, which are located at Lake Canopus in the northeast corner of the map and at Hessian Lake at Bear Mountain as shown on the map. We also highlighted the NYS Department of Transportation's designated section of the official NYS Bike Route 9, as it passes through Philipstown. Heading south from Fishkill, the route follows Route 9, turns right onto Route 301, left on Peekskill Road in Nelsonville, left onto Route 9D and finally crosses the Bear Mountain Bridge to leave the Town, after which it turns left to continue south on Route 9W. The route, according to the NYSDOT, "is a signed on-road bicycle route that extends 345 miles from New York City to Rouses Point on the New York - Quebec border. This route connects with the Velo Quebec cycling routes in Quebec and eastern Canada. It also intersects with the New York City bicycle route network and State Bicycle Routes 5, 11 and 17, and the NYS Canalway Trail."<sup>21</sup>

Although not shown, there are several potential biking / walking trail projects in the works or in their infancy stages. A proposed Hudson Highlands Fjord trail is projected to connect the Village of Cold Spring to the City of Beacon via Route 9D and adjacent lands. This project is being developed by NYS and Scenic Hudson, along with other partners, to improve safety and non-motorized access for locals and visitors who want to hike the numerous trails throughout the Hudson Highlands State Park. More information can be found at:

<https://www.scenichudson.org/our-work/trail-projects/hudson-highlands-fjord-trail/>

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<sup>21</sup> NYS Department of Transportation, *Bicycling in New York, State Bike Route 9*, 2008, [https://www.dot.ny.gov/portal/pls/portal/MEXIS\\_APP.DYN\\_BIKE\\_TRAIL\\_DETAIL\\_MAIN.show?p\\_arg\\_names=p\\_trail\\_id&p\\_arg\\_values=145](https://www.dot.ny.gov/portal/pls/portal/MEXIS_APP.DYN_BIKE_TRAIL_DETAIL_MAIN.show?p_arg_names=p_trail_id&p_arg_values=145)

Also, although in its early stages, the Philipstown Community Congress's Trails Committee is researching and exploring the possibility of developing a community biking / walking trail to connect Cold Spring to Garrison via such sites as Boscobel, Constitution Marsh, Philipstown Park and the Philipstown Recreation Center. The goal is to create a safe, fun and non-motorized alternative to traveling north and south within the Town by motor vehicle. For more information or to get involved, please visit:

<http://ecologicalcitizens.org/philipstowncommunitycongress>.

In addition to the resources shown on the map, the Town of Philipstown also offers a variety of other recreational opportunities. These include:

- Philipstown Recreation Department facilities: Claudio Marzollo Community Center, the Depot Theatre, Philipstown Park and North Highlands Park (open to Town residents)
- Continental Village Clubhouse and surrounding facilities (open to Continental Village residents)
- Mayor's Park in Cold Spring (open to the public)
- Haldane Central School District athletics fields (open to the public except during interscholastic competitions)
- Garrison Union Free School athletic fields (open to the public except during interscholastic competitions)
- North Highlands baseball fields (open to the public)
- Hudson Valley Shakespeare Festival (now relocated to a new property adjacent to The Garrison golf course)
- St. Basil Academy soccer field (private but often hosts tournaments open to the public)
- Garrison Fish and Game Club (members only)

#### *Further Research:*

The above-mentioned Philipstown Trails Committee is still working on documenting all trails and carriage roads throughout the Town, so those shown on this map may be added to in the years ahead.

Although not offered by online resources, which mostly limited the scope of this report (due to time and budget constraints), a supplemental project could document and add to this map the locations of public boat launches, and public fishing access points along the Hudson River, and also highlight athletic fields and municipal parks. At the same time, recreational resources within the Town have generally become heavily used by tourists in recent years, making hiking local trails a crowded experience on weekends from late spring to late autumn, and so there may be some wisdom in keeping some of our recreational resources under the radar for the sake of maintaining quiet access for locals.



*Data Sources:*

- Public Lakes Accessible to Fishing
  - NYSDEC Public Fishing Recommended Sites  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1252>
- Bike Routes
  - NYSDOT Bike Routes  
<https://gisportalny.dot.ny.gov/portalny/apps/webappviewer/index.html?id=e1f0619b174740fabdcd13667888b1ed>
- Documented Hiking Trails
  - Philipstown Community Congress Trails Committee - accessed by personal request. For more information on and to contact the Committee, please visit:  
<http://ecologicalcitizens.org/philipstowncommunitycongress>
- NYS Parks
  - NY Protected Areas Database <http://nypad.org/Download>



## **Chapter 7: Land Use**

### **37. Zoning**

#### *Description:*

According to the Hudson River Estuary Program, “local governments have the authority to enact zoning regulations to promote the public health, safety, and general welfare of their communities, among other purposes. Zoning is primarily enacted to control the use of land and the density of those uses, as deemed appropriate for the community. Zoning can encourage a variety of uses that are desirable, strictly regulate those that may be potentially inharmonious, or prohibit those uses that are unwanted in the community. Zoning laws can protect important natural areas and cultural resources such as historic landmarks or districts, wetlands, floodplains, groundwater, wildlife habitats, and scenic areas. Various statutes define the use of zoning to encourage ‘the most appropriate use of land.’”

“An overlay map of current zoning at the scale of the NRI will give a general indication of land use as it relates to the natural resource base. This map may reveal areas that are zoned for uses that can threaten a critical resource or for which the resource base cannot reasonably or economically support. For example, an overlay map of zoning might point out that portions of the community’s groundwater supply are zoned to allow for conflicting land uses, such as allowing gas stations, petroleum bulk storage, or salt storage over important aquifers. Or the overlay may reveal that an area designated for high-density residential homes is situated in a large, unfragmented forest where the headwaters of a recreational creek are located.

“Parcel-based tax map information is also helpful when reviewed together with the other NRI maps. A tax map overlay can help in the implementation phase of the NRI project, and can provide helpful information for a voluntary land protection program.”<sup>1</sup>

For this section we used the Town of Philipstown’s “Land Use and Development Overlay Zoning Map,” which was created for the Town of Philipstown by the Hudson Highlands Land Trust in 2011. Zoning districts are determined by Town Zoning Code and tax parcels, which are also portrayed on the map, were provided by the Putnam County IT Department.

In addition to this map, the Town also has several other zoning maps, the data from which are covered in other sections of this report. Although their implications will be covered mostly in

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<sup>1</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.

other sections, for reference, these other zoning districts and their respective sections in this report are:

1. Open Space Overlay and Open Space Index - Map 45. Conservation Open Areas & Open Space Overlay
2. Scenic Protection Overlay District - Map 40. Scenic Resources
3. Cold Spring Watershed Overlay District and Aquifer Overlay District - Map 18. Cold Spring Watershed and Aquifer Overlay Districts
4. Scenic Ridgelines - Map 40. Scenic Resources
5. Wetlands and Watercourses - Map 16. Wetlands

Each of the Town's original maps portraying these zoning districts and protected resources can be found at: <https://philipstown.com/government/building-department/zoning-maps>

### *Findings:*

As shown on the map, the Town of Philipstown has 12 Land Use / Development Overlay Districts as well as the above mentioned resource protection overlay districts. Overlay districts are intended to provide additional protection of important environmental resources and/or to permit certain types of economically productive uses that would not otherwise be allowed in a particular land use district. Overlay districts may overlap different land use districts, but they do not change the use and dimensional requirements of the underlying land use districts unless specifically stated in the Town's Zoning Code. The following are summary explanations of the Town's Overlay Districts from Town Zoning Code section § 175-7:<sup>2</sup>

"A. Rural Conservation District (RC). The purpose of this district is to promote land conservation, agriculture, forestry, recreation, and the preservation of open space, as well as other compatible rural uses, by encouraging such activities and by discouraging large-scale residential development, while allowing low-density residential uses.

B. Institutional Conservation District (IC). The purpose of this district is to preserve existing institutional uses of property of 20 acres or more that maintain significant amounts of contiguous open space and/or historic structures.

C. Rural Residential District (RR). The purpose of this district is to allow residential uses in a rural setting at a lower density than is allowed in the hamlets.

D. Hamlet Mixed-Use District (HM). The purpose of this district is to allow the creation and expansion of hamlets in the traditional scale, density, architectural style, and

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<sup>2</sup> Town of Philipstown, Zoning Code, Article II Land Use and Overlay Districts, § 175-7 Establishment of Districts, <https://www.ecode360.com/6319062>

mixed-use character of the existing hamlets of Garrison and Garrison Landing and of the Villages of Cold Spring and Nelsonville.

E. Hamlet Residential District (HR). The purpose of this district is to maintain the traditional scale, density, and character of residential hamlets such as Continental Village, as well as residential neighborhoods surrounding designated hamlet mixed-use areas.

F. Suburban Residential (SR). The purpose of this district is to maintain the character of existing suburban density residential developments and to allow a limited extension of suburban growth patterns.

G. Highway Commercial District (HC). The purpose of this district is to allow commercial uses that rely heavily on automobile and truck access and that would not be compatible with a hamlet mixed-use area.

H. Office/Commercial/Industry Mixed-Use District (OC). The purpose of this district is to allow areas for light industrial, service commercial, office, and research facilities. Such districts may also include, where compatible, housing and limited retail commercial development intended to support the primary uses or to provide adaptive reuses for existing commercial or industrial buildings.

I. Industrial/Manufacturing District (M). The purpose of this district is to allow industrial and related uses that are not compatible with most commercial, office, or residential uses, in isolated and well-buffered locations.

J. Floodplain Overlay District (FPO). The purpose of this overlay district is to control development within the one-hundred-year floodplain in order to minimize flood damage and protect water resources. This district also incorporates by reference the Town's existing Floodplain Protection Law, Chapter 90 of the Town Code. See § 175-13.

K. Cold Spring Watershed Overlay District (WSO). The purpose of this overlay district is to protect the water supply of the Villages of Cold Spring and Nelsonville, which includes the entire watershed of Foundry Brook. See § 175-14.

L. Scenic Protection Overlay District (SPO). The purpose of this overlay district is to protect the character of scenic resources in the Town, including designated scenic road corridors and the Hudson River viewshed. See § 175-15.

M. Aquifer Overlay District (AQO). The purpose of this overlay district is to protect groundwater resources that provide drinking water for private wells and that may be used in the future to provide public water supplies. See § 175-16.

N. Soil Mining Overlay District (SMO). The purpose of this overlay district is to provide appropriate locations for soil mining to occur where landowners can achieve a reasonable



return on their land from sand and gravel mining without adversely impacting their neighbors. See § 175-17.

O. Open Space Conservation Overlay District (OSO). The purpose of this overlay district is to afford special protections to tracts of land that have been identified in the Town of Philipstown Open Space Index and that are 30 acres or more in size. See § 175-18.

P. Mobile Home Park Overlay District (MHO). The purpose of this overlay district is to provide appropriate locations for mobile home parks, consistent with the requirements of § 175-44.”

Although it was not feasible to include all of these zoning layers on one map, readers will be able to combine any of these layers once the Town’s ArcGIS Online tool is up at the end of 2020. This tool will greatly facilitate the analysis of how different overlay districts overlap with each other and the myriad resources within the Town and how zoning districts could potentially be improved on to better protect the Town’s resources while allowing necessary development. An example would be using the ArcGIS tool to combine the layers from this map with the Biodiversity Indicator layer or the Areas of Ecological Importance layers from Chapter 4 to see how well zoning code is actually protecting ecological rich areas. Also, once this tool is ready, the Town’s Planning Board, Zoning Board and Conservation Board, among others, will be able to take the next steps of reviewing current overlays and consider updates to better protect sensitive or threatened resources..

In the meantime, we can briefly point out some findings from looking at the Zoning map. As has often been the case throughout human history, much development - both of roads and of houses, businesses, and industry - has occurred along waterways, especially rivers and streams, and Philipstown is no different. Looking at the map, you can see how many residential, commercial and even industrial zoned areas there are along the Clove Creek and over the Clove Creek Aquifer along the northern corridor of Route 9. Even a Soil Mining Overlay District exists directly over the Clove Creek Aquifer. Similarly, there are concentrated commercial and residential areas in the two Villages of Cold Spring and Nelsonville, through which passes Foundry Brook on its way to Constitution Marsh, in the section of Garrison between Philipse Brook and Arden Brook, along the southern portion of Route 9 adjacent to Annsville Creek, and also along and around Canopus Creek in Continental Village. Much of this historical development is perhaps unavoidable since Philipstown has so many steeply sloped areas, which are not only protected but also limit development to the flatter floodplain valleys of the Town, which also happen to be where most of the Town’s streams pass through.

That said, compared to many neighboring towns, the Town of Philipstown is also doing an excellent job through its zoning code of protecting both the historical character of its many hamlets and rural areas as well as conserving its abundant natural landscapes and resources. It is no coincidence, for example, that the majority of the Town is zoned as Rural Conservation, much of which is already protected as State Park or by conservation easements (see Section 43. Protected Lands for more on this). Following that, the numerous Institutional Conservation and Rural Residential zoned areas throughout the Town help to preserve much more open space than the hamlet sections of Town, and discourage destructive overdevelopment and isolation of natural areas. In addition, the Town has designated numerous properties as priority conservation properties within its Open Space Overlay, which will be covered in more detail in the next several sections of this chapter. Likewise, the Town's Scenic Resource Overlays, Water Resource Overlays and Wetlands maps will also offer additional insights when combined with other layers within this inventory, and may inform further protection measures in the years ahead.

#### *Further Study:*

Most further study can revolve around using the Town's ArcGIS Online tool to take a much deeper dive into analyzing how the zoning overlays are actually protecting resources within the Town. In addition, the Town can look further into examples of what other towns have done to protect certain natural resources or change zoning overlays based on updated natural resources data. A major focus could revolve, for example, on how to reduce the negative impacts of concentrated development along Clove Creek via updated zoning restrictions.

#### *Data Sources:*

- Zoning Districts
  - Town of Philipstown Zoning Code and Zoning Maps  
<https://philipstown.com/government/building-department/zoning-maps>
- Tax Parcels
  - Putnam County IT Department - eParcel  
<https://www.putnamcountyny.com/itgis/eparcels/>

## 38. Land Cover and Forest Types

### *Description:*

According to the Hudson River Estuary Program, “patterns of human land uses and natural land cover in a watershed strongly influence water resources and biological communities through the interactions of water, soil, organisms, and chemical components. Changes in natural land cover (especially forests, floodplains, and wetlands) accompanying conventional development patterns often result in substantial increases in impervious surfaces (e.g., roofs, parking lots, and roads) and can drastically alter stream health and hydrology by adding pollutants and sediment. Research has found that increases in impervious cover are linked to degradation in water quality and aquatic habitat value and an increase in flooding problems (Walsh et al. 2005).<sup>3</sup> Without the use of best management practices, extensive agricultural land use in a watershed can likewise impair water quality through delivery of excess nutrients, sediment, and potentially pathogens to waterways. Furthermore, the fragmentation of natural areas by roads and development impedes wildlife movement, facilitates the spread of invasive species, and reduces overall habitat value.

“Knowing the general distribution of land use and land cover in a municipality and its larger watershed context can help a community better understand past and present development patterns and plan for future growth. Directing new development to existing centers uses land more efficiently and saves money by taking advantage of existing infrastructure and allowing for greater density in already settled areas. Concentrating greater density in existing centers is often the best option to protect water resources, biological communities, and farmland because it takes pressure off development of the community’s remaining green spaces.”<sup>4</sup>

This guest map was created by Philipstown resident and volunteer Emily Cheadle as part of the Town of Philipstown and Ecological Citizens Project’s collaborative 2020 Community Greenhouse Gas Emissions Inventory report titled “Sink, Store, Reduce, Offset,” which can be accessed at [climatesmartphilipstown.org](https://climatesmartphilipstown.org). It shows National Land Cover Database (NLCD) land cover types within the Town as well as tax parcels from the Putnam County IT Department. This map uses the most up to date NLCD dataset, from 2016.

<sup>3</sup> Walsh, C., A. Roy, J. Feminella, P. Cottingham, P. Groffman, and R. Morgan III. 2005. The Urban Stream Syndrome: Current Knowledge and the Search For A Cure. *Journal of the North American Benthological Society*, 24(3):706-723.

<sup>4</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



### *Findings:*

“Philipstown’s area is roughly 33,000 acres, of which 79.9% is forested, 7.4% is developed open space (i.e., lawns and golf courses), 2.8% is developed impervious (i.e., buildings, roads, driveways), 2.4% open water (Hudson River, lakes and streams), 2.3% woody wetlands, with the remaining land use types occupying less than 2% of Town land each.”<sup>5</sup>

In terms of undeveloped land, Philipstown contains large blocks of primarily deciduous forest and also has smaller but significant clusters of woody wetlands and hay/pasture. As described in other sections of this report, these land cover types perform countless ecosystem functions and provide numerous benefits to all forms of life, especially the Town’s forests and wetlands. The next section will cover how many acres of the Town’s land are protected and the types of land cover found within protected areas. It’s interesting to note how relatively little farm land there is within Philipstown compared to other areas of the Hudson Valley or the United States. As seen above and in the subsequent Section. 40 Farmland, Philipstown’s geology does not lend itself easily to farming and the large areas of already protected and forested land as well as their relatively high prices per acre discourage to some degree the development of farms. However, it is important to note that the development of local agriculture is an essential step in developing resilience to climate change, as noted above in Chapter 5, and it is thus important as the Town continues to make land use and land conservation decisions to take into account a likely future need to expand farmed land or convert existing hay/pasture into areas of cultivated crops. This will be explored further in Section 40. Farmland.

As for developed land, the Town has a handful of development clusters, namely Cold Spring and Nelsonville, Continental Village, sections of Garrison along Route 9D and Route 9 and the northern section of Route 9 above the Clove Creek Aquifer. Overall, the Town has done well to limit development to concentrated areas so as to limit deforestation, fragmentation and other damages to ecosystems in the remaining sections of Town. Unfortunately, as we’ve already seen, some sections of high density development are located near fragile wetland ecosystems like the area around Barrett Pond, or adjacent to or above drinking water supplies, such as along Clove Creek. Concentrated development has also created septic and stormwater runoff issues in some areas, such as Continental Village, where the MS4 district focuses on community education to reduce pollution of local ecosystems and water bodies. These development issues are perhaps unavoidable to some degree due to the relatively large percentage of sloped areas of Philipstown and limited areas that are flat enough for many forms of development. Unfortunately, this also puts many of these areas at risk for flooding, especially with the forecasted increase in flooding events caused by climate change, as described in Chapter 5. Climate Change.

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<sup>5</sup> Apicello J., J. Angell., *et al.*, “Sink, Store, Reduce, Offset,” Philipstown Inventory Report 2020, Town of Philipstown + Ecological Citizens Project + ICLEI USA, 2020. <https://www.climatesmartphilipstown.org/>

Solutions for such concerns may have to involve limits on development even in areas zoned for such uses, or development of concentrated multi-housing zones to reduce the amount of impervious surfaces per capita as more newcomers are attracted to the many charms and beauty of Philipstown and choose to move here.

*Data Sources:*

- Land Cover and Forest Types
  - Apicello J., J. Angell, *et al.*, “Sink, Store, Reduce, Offset,” Philipstown Inventory Report 2020, Town of Philipstown + Ecological Citizens Project + ICLEI USA, 2020, <https://www.climatesmartphilipstown.org/>

### **39. Conservation Open Areas and Open Space Overlay**

*Description:*

According to the Hudson River Estuary Program, “by definition, protected lands are properties that are generally undeveloped and protected from future development. Mapping the study area’s protected lands helps identify potential needs and opportunities for expanding these areas to provide links between protected areas, or to add buffers to sensitive areas. The protected lands map can also be used to identify priority resource areas currently limited or lacking in protection. These lands can include a variety of public and privately-owned lands. Public lands may include federal, state, county, and municipally-owned lands. Note that public land ownership doesn’t necessarily ensure that land is protected in perpetuity. Land trusts are private, non-profit organizations that protect land through a variety of voluntary methods, including outright purchase and conservation easements, a legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. In addition to private lands under protection from development, lands held by religious or educational institutions might be considered to function as protected lands.”<sup>6</sup>

Local land trusts that are active in Philipstown include Scenic Hudson Land Trust, Open Space Institute and Hudson Highlands Land Trust, which work towards conservation of important natural resources. Their conservation mechanisms include partnering with state agencies to purchase land for conservation, managing donated lands, and establishing conservation easements with private landowners.

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<sup>6</sup> Haeckel, Ingrid, and Laura Heady. *Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed*. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



The map for this section was developed by Julia Rogers of the Hudson Highlands Land Trust (HHLT) in February of 2020. It shows conservation areas in Philipstown that are either permanently protected public land (e.g. State Parks), protected private land owned by a conservation land trust (e.g. HHLT), or private land protected by a conservation easement managed by a local land trust (e.g. Scenic Hudson).

The map also shows the Town's Open Space Conservation Overlay District (OSO), which was created to afford special protections to tracts of land that have been identified in the Town of Philipstown Open Space Index and that are 30 acres or more in size. The Open Space Index was originally created in 2007 as part of the Town's Natural Resource and Open Space Protection Plan and then updated in 2016. The map used here is the most up-to-date version and contains parcels conserved since 2016 as well as those covered in the 2016 Open Space Index update. For more information, please review the 2007 Natural Resource and Open Space Protection Plan as well as the 2016 Open Space Index Update, which contains descriptions of each OSO area presented on the map, available here:

<https://philipstown.com/government/building-department/town-code>

#### *Findings:*

#### Conservation Open Areas:\*

*\*For more information on specific parcels referenced in this section, including their legal means of conservation, please visit: <https://www.putnamcountyny.com/itgis/eparcel/>.*

The majority of protected land within Philipstown is State Park, namely the Hudson Highlands State Park and the Clarence Fahnestock Memorial State Park (see Section. 36. Recreational Resources). The latter is contiguous, and the former is broken up into various sections within Philipstown, including the main section along the Fishkill Ridge, a small section that covers Constitution Marsh, and various disconnected sections in southern Philipstown, including Anthony's Nose and Sugarloaf. One key finding from this map is the importance of connecting sections of the Hudson Highlands State Park to each other via other land protections, such as federal, county, town and non-profit lands as well as private conservation easements. Luckily, as the map shows, this work is well underway, thanks to the efforts of local land trusts and landowners. That said, you can also see that there are many gaps and various thin corridors that connect some of the larger protected areas, which, as we already discussed in Chapter 4. Habitats and Wildlife, is a step in the right direction, but due to their narrowness can make it challenging for wildlife to safely migrate from one larger forest area to another while avoiding roads and developed areas.

Federal Protected lands within Philipstown include Constitution Island as well as a section of the Appalachian Trail east of Route 9, which is conserved to maintain public access for hikers using



this section of the trail not protected by State Parks. For more information on the Appalachian Trail, including additional maps, visit: <https://www.nps.gov/appa/index.htm>

Putnam County owns various protected properties within Philipstown, mostly in Continental Village, but also a small conservation area in the Manitou section of Garrison along the Hudson River (southwest part of Town) and a property adjacent to Mayor's Park in Cold Spring, which includes a lagoon separated from the Hudson River by a Metro North Railroad causeway. These various protected County properties vary from public parks to undeveloped land. More information on County lands may be found here:

<https://www.putnamcountyny.com/itgis/eparcel/>

The cities of Beacon and New York also own protected land within Philipstown. This land includes parcels owned by the City of Beacon along East Mountain Road North, which are protected as a reservoir for the City's water supply. New York City also owns land that cuts diagonally across Philipstown from northwest to southeast, which is part of the Catskill Aqueduct system that serves New York City with potable water. It is managed by the New York City Department of Environmental Protection. For more information, please visit:

<https://www1.nyc.gov/site/dep/water/current-water-distribution.page>

Philipstown itself also owns various conservation properties to protect either recreational land or land used by water delivery facilities. These include, from north to south,

- The Philipstown Park at Glasbury Court off of Route 9, which includes an enclosed dog park for residents, a pond, and walking trails;
- The Philipstown Park located on Route 9D south of St. Basil Academy, which includes athletic fields and hiking trails that access a waterfall vista of Philipse Brook;
- A new property that was recently donated to the Town by the Open Space Institute. The property is located at the intersection of Route 403 and Route 9D, with access located across Route 403 from the Desmond Fish Library entrance. This property will be partially used for the "New Leaf" community garden, and possibly for additional athletic fields and a solar panel array in the future;
- The Philipstown Community Center (also known as the Recreation Center) located on Route 9D, which consists of athletic fields and an former school building converted into offices, community classrooms and athletic facilities;
- A small park along Canopus Creek and Winston Lane in Continental Village; and
- A larger set of properties that includes the Continental Village Club House, its adjacent buildings and part of Cortlandt Lake.

The Village of Cold Spring owns two properties outside of the village, which include the Cold Spring Reservoir and the Foundry Brook water treatment plant, as well as Dockside Park in the Village along the Hudson River. The Village of Nelsonville also owns several protected properties along the east boundary of Hudson Highlands State Park, which are home to numerous public hiking trails and are protected by conservation easements held by the Open Space Institute. Two new protected sections are currently being added to this area, which will be included on a future update of this map.

Throughout the Town there are also numerous protected properties owned by Scenic Hudson, the Open Space Institute and the Hudson Highlands Land Trust or privately owned and protected by conservation easements held by one of these land trusts. As noted in Chapter 4, one of the main efforts of these organizations is to connect isolated parcels of protected land to each other by creating *conservation corridors*. These corridors allow the movement of all manner of species from one high quality ecosystem to another and especially prioritize facilitating the north-south movement of wildlife in response to climate change. A notable example is how the Hudson Highlands Land Trust has been able to conserve lands that connect a section of the Hudson Highlands State Park to the Federally owned section of the Appalachian Trail corridor to the east of Route 9. The Hudson Highlands Land Trust is currently coordinating a partnership project called “Green Corridors.” Its purpose is to identify key lands in Philipstown, Putnam Valley, and beyond that are important for wildlife movement, as well as what tools, partners, and partners are available to support the conservation of these lands.

Also, a notable recent addition to the list of protected lands is the group of properties (green striped parcels in the northwest corner of the map) located around Lake Valhalla, which consist of 1,178 acres of most deciduous forest that were recently purchased by Scenic Hudson. According to an article by the Highlands Current (a local newspaper), 520.5 acres of this land will eventually be donated to NYS and incorporated into the Hudson Highlands State Park, 193.5 acres will be transferred to a Lake Valhalla homeowner association and will remain protected under a conservation easement to limit development, and 52 acres, with one or two homes, would be sold but similarly protected by a conservation easement. The remaining 412 acres will remain under Scenic Hudson ownership and be protected as a fee-owned property.<sup>7</sup> Ensuring the conservation of these 1,178 acres is a great achievement by Scenic Hudson, and it will have the tremendous long-term benefits of protecting the Cold Spring and Nelsonville drinking water supply via the adjacent Cold Spring Reservoir, protecting high quality contiguous forest along Hudson Highlands State Park, and ensuring continued access to Lake Valhalla for local homeowners.

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<sup>7</sup> Schevchuk Armstrong, Liz, Philipstown Approves Lake Valhalla Split, 9/26/2020  
<https://highlandscurrent.org/2020/09/26/philipstown-approves-lake-valhalla-split/>



### Land Cover of Protected Areas:

As noted in the previous section, “Philipstown’s area is roughly 33,000 acres, of which 79.9% is forested, 7.4% is developed open space (i.e., lawns and golf courses), 2.8% is developed impervious (i.e., buildings, roads, driveways), 2.4% open water (Hudson River, lakes and streams), 2.3% woody wetlands, with the remaining land use types occupying less than 2% of Town land each.”<sup>8</sup>

The vast majority of protected lands consist of deciduous forest. There are also scatterings of evergreens and mixed forest within those deciduous forest areas. As the 2020 Philipstown Community GHG Emissions Inventory explains, only 50% of Philipstown’s forests are protected. However, all of the forests are capturing carbon dioxide from the atmosphere and storing it in their trunks and the soil, thus performing an essential service to prevent Philipstown’s ghg emissions from rising higher than they already are and to work towards the Town’s carbon emission goal of 100% reduction by 2040. These forests also provide innumerable other benefits to all forms of life that reside or pass through Philipstown, and their *sustained* protection is essential for preserving the integrity of the Town’s forests, which emphasizes the importance of working to conserve as much of the remaining unprotected forested lands throughout the Town as is economically possible.

In addition there are numerous wetlands, especially within Fahnestock State Park, in protected areas, but only 36% of the Town’s total inland wetlands are currently protected. These wetlands perform countless essential ecosystem services, one of which is to store enormous amounts of carbon in their peat or muck below the surface, which if developed, would release enormous amounts of CO<sub>2</sub> back into the atmosphere, undermining the Town’s GHG emissions reduction efforts.<sup>9</sup>

Also, there are numerous protected hay/pasture areas as well as “developed open space” areas which consist of lawns and golf courses. The hay/pasture areas offer numerous ecosystem services, especially for predatory birds and small rodents, but also capture decent amounts of CO<sub>2</sub> from the atmosphere and thus require sufficient protection as well. On the other hand, due to mowing practices, lawns and golf courses tend to capture little net carbon from the atmosphere in addition to performing far fewer ecosystem services. Compared to an open meadow, for example, a lawn is a fairly inhospitable and barren ecosystem, despite its aesthetic and recreational qualities. This information should be incorporated into community conservation and climate change campaigns to inform land owners about best practices when it comes to land protection and landscaping choices.

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<sup>8</sup> Apicello J., J. Angell., *et al.*, “Sink, Store, Reduce, Offset,” Philipstown Inventory Report 2020, Town of Philipstown + Ecological Citizens Project + ICLEI USA, 2020, <https://www.climatesmartphilipstown.org/>

<sup>9</sup> *Ibid*



All of this said, it is evident that Philipstown already has a tremendous conservation ethic compared to many neighboring communities, and although there remain large areas of unprotected lands with precious forested, wetland and meadow habitats, the Town is well on its way to protecting as much land as possible with the help of other levels of government as well as local land conservation organizations, whose contributions cannot be overstated.

Open Space Overlay (OSO):

Town Code § 175-18 Open Space Conservation Overlay District states the following with respect to the OSO:

- A. "Findings and purpose. Special protection of large tracts of land identified as important for conservation by the Town's Open Space Index is necessary to preserve the Town's natural resources and attractive rural quality. The purpose of this section is to afford special protection to such tracts by reducing potential development and ensuring that the important resource values of these areas are preserved.
- B. Boundaries. The OSO District includes all land shown on the Resource Protection Overlay Districts Zoning Map<sup>[1]</sup> as part of the OSO District. The OSO District shall include land shown in the Open Space Index that is located on parcels of 30 acres or more, as such parcels existed on January 1, 2010. The OSO District shall consist of only the land shown on the index, which may be a portion of a larger tract. Only that portion of a tract which has been mapped on the Open Space Index shall be included in the district. Any land not mapped by the Town Board as part of the OSO District shall not be part of the district, and the map shall take priority over any conflicting language in this subsection. Land lying within a SR, OC, HC, M, HM, or HR District shall be excluded from the OSO District.
- C. Regulatory effect on land uses. Within the OSO District, all of the underlying land use district regulations remain in effect, except that:
  - (1) The maximum density for a conservation subdivision shall be five acres per dwelling unit;
  - (2) The minimum lot area for a conventional subdivision shall be 15 acres; and
  - (3) The minimum percentage of open space to be preserved in a conservation subdivision shall be 80%.
- D. Institutional uses. The provisions in Subsection C above shall not apply in the IC District.
- E. Use of Open Space Index. The conservation resource values identified in the Open Space Index shall be preserved to the maximum extent practicable in any development approval."<sup>10</sup>

<sup>10</sup> Town of Philipstown, Zoning Code, § 175-18 Open Space Conservation Overlay District, <https://www.ecode360.com/6319173?highlight=open%20space.overlay&searchId=29619260457455342#6319173>

As the map shows, some of these OSO properties prioritized for conservation have already been protected as either fee-owned properties or via conservation easements during the period between 2007 - 2016 and some more recently between 2016 and 2020. As noted above, a recent major success has been the protection of 1,178 acres in the Lake Valhalla conservation area (green-striped parcels in the north-west corner of the map), thanks to efforts by Scenic Hudson. Also, one can see that a number of properties were protected between 2007 - 2016, especially in the southern part of Town around South Mountain Pass and along Route 9 and Old Albany Post Road. These recently protected lands, as noted above, have formed corridors connecting other protected lands, which enables the movement of wildlife between protected areas.

More work remains to be done, but the conservation organizations within Philipstown that are leading this effort should be extremely proud of their accomplishments so far, and we hope that Philipstown community members understand and celebrate the efforts of our local land protectors - Hudson Highlands Land Trust, Open Space Institute and Scenic Hudson - as well as the local governments, nonprofit organizations and private landowners that have agreed to convert their properties to conservation easements.

#### *Further Study:*

Additional study, as noted in the previous section, could focus on conducting a local in-the-field study to confirm the land cover classifications for various parcels within the Town, due to the limited scope of accuracy of the National Land Cover Database.

Furthermore, additional properties are being protected on a constant basis and periodic updating of this section of the report, including incorporating the results of the Hudson Highlands Land Trust's "Green Corridors" project, as well as creating an updated map every several years, would be useful to maintain the most up-to-date understanding of protected lands and remaining lands to prioritize for protection, based on information in this section and other sections of this report.

#### *Data Sources:*

- Conservation Open Areas and Open Space Overlay
  - This map was produced by the Hudson Highlands Land Trust using data from the Town of Philipstown (OSO), NY Protected Areas Database (conserved land) and the Putnam County IT Department (Tax Parcels); for more information about this map, please contact Hudson Highlands Land Trust at: <https://www.hhlt.org/>



## 40. Farmland

### *Description:*

According to the Hudson River Estuary Program, “farmland includes cropland, hayfields, pastures, orchards, and nurseries. Millions of acres of crop and pasture land in New York State have been converted to non-farm uses or allowed to revert to forest cover in the last century. In many cases, marginal farmland has been abandoned and prime farmland preserved. In other cases, prime farmland is rapidly being converted to residential development. According to the American Farmland Trust, over the last 25 years, New York has lost almost half a million acres of farmland to subdivisions, strip malls, and scattered development, threatening food security and local economies. An inventory of valuable farmland is important to understand the extent of local resources and prioritize the most important areas to conserve.

“Farmlands provide much more than a place to produce crops and livestock. In New York’s primarily forested landscape, fields and other agricultural lands provide habitat for a variety of wildlife species and are important elements of rural community character and scenic views. Farmlands also provide an important historic link with the past. Conserved farm properties safeguard wildlife habitat and environmentally sensitive areas such as meadows, woodlands, wetlands, and streams. In fact, as much as 50% of the current acreage of Hudson Valley farm properties is forested or wetland habitat.

“Prime farmland, as defined by the USDA Natural Resource Conservation Service (NRCS), is land best suited to food, feed, forage, fiber, and oilseed crops. It may be cultivated land, pasture, woodland, or other land potentially available for growing crops, but does not include developed land or surface water areas. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources. Prime farmland soils with current agricultural use are the most valuable farmland assets. Soils of Statewide Importance are lands, in addition to prime farmlands, that are of statewide importance for crop production [but may require improvement to perform as well as prime farmland]. Both prime farmland soils and soils of statewide importance are derived from county soil surveys based on soil unit attributes supplied by NRCS.”<sup>11</sup>

This map contains two data sources: 1) Prime Farmland Soils and Soils of Statewide Importance, which were derived from the NRCS’s Web Soil Survey, which was also used for the Chapter 2. Soils, and 2) properties designated as Putnam County “Agricultural District,” which were obtained from the NYSDEC Agricultural District Boundaries dataset. According to the Putnam

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<sup>11</sup> Haeckel, Ingrid, and Laura Heady. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed. (Ithaca, NY: Department of Natural Resources, Cornell University, and New York State Department of Environmental Conservation, 2014): <https://www.dec.ny.gov/lands/100925.html>.



Valley NRI, “Enacted in 1971, New York’s Agricultural Districts Law (ADL) is a very effective tool for maintaining lands in agriculture and ensuring New York’s position as an outstanding agricultural state. These Agricultural Districts have been designated on the basis of proposals from landowners. The land designated by Putnam County’s Agricultural and Farmland Protection Board and the County Planning Board as an Agricultural District must be at least 250 acres in size and show viable farming activity. Land owners of such properties receive partial real property tax relief (agricultural assessment and special benefit assessments), and protections against overly restrictive local laws, government funded acquisition or construction projects, and private nuisance suits involving agricultural practices.”<sup>12</sup>

#### Findings:

Not surprisingly, due to its high percentage of steep slopes, bedrock and glacial till, much of Philipstown’s land (76%) is unsuitable for agriculture. Prime Farmland makes up 8.3% of the Town’s area and farmland with Soils of Statewide Importance, a step down from Prime Farmland, makes up 5.7% of the Town’s area. The percentages of each soil type shown on the map as well as additional soil properties are presented in Table 19: Prime Farmland and Soils of Statewide Importance.

Thus, only 14% of the total acreage in Philipstown supports soils suitable for farmland, though much of that area is either forested or used for other development purposes today, as seen when comparing this map with the map from Section 38. Land Cover and Forest Types. For example, there are quality soils around Lake Valhalla, Hustis Rd, Barrett Pond and also along the northern border of Town that are not being used for agriculture. This is not surprising since many of these areas are also located along waterways and flood plains and thus tend to collect the types of soils that are much more amenable to growing crops or feed for livestock. As is often the case, the competition for flat or less sloped land within Philipstown has led to conflicts of use between different forms of development as well as with efforts to protect essential ecological services. Thus, most of the quality farmland soil in this area in northern Philipstown is instead covered by forest or has been developed for residential and commercial purposes, and is ironically covered with what are very likely healthy lawns rather than used for efficient food production.

And it’s even more complicated. The irony is that although many of the soils in this area are of high quality for agriculture, if they were developed for such purposes, potential fertilizer / herbicide / pesticide runoff could have disastrous effects on the Clove Creek Aquifer and adjacent water supplies, and thus there would need to be strict regulation and enforcement of such agriculture to prevent these potential negative effects. This highlights the importance of comparing various layers of this NRI to each other using the ArcGIS Online tool to determine

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<sup>12</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>

which areas of the Town are being used or protected in the best possible way to balance development with conservation needs. This is not a simple process and will require careful further analysis by the Town over the years and decades ahead. Luckily, it will potentially provide much guidance as the Town continues to grow, adapt to climate change and protect its precious resources for future generations.

Similarly, there are numerous other areas across Town that offer quality farming soils but are currently not being used as such. These include the central Route 9 corridor from Perk's Boulevard to Land Gate Road; the Route 301 corridor between Route 9 and Nelsonville; a large central section of Garrison between Indian Brook Road, Old Albany Post Road, Upper Station Road and Route 9D; as well as smaller sections along southern Route 9D and in the vicinity of Continental Village. Although there are agricultural districts within some of these areas, you can see how many quality soils are not being used for farming, but rather are forested or used for residential or commercial buildings.

The majority of existing farms grow hay/pasture for livestock (confirmed by Section 38. Land Cover and Forest Types), although there are a handful of farms that also or only grow vegetables for sale. Some registered Agricultural Districts of note include (this information and more details are publically available via Putnam County's eParcel database):

- Glynwood off of Route 301;
- Land belonging to the Healy family along Healy Road and Lane Gate Road;
- Land belonging to the Buck family along Route 9D southeast of Cold Spring;
- Saunders Farm and adjacent agricultural districts along Old Albany Post Road and South Highland Road in eastern Garrison;
- Land belonging to the Will family and land belonging to the Lanza family between Upper Station Road and Nelson Lane in western Garrison;
- Land belonging to the Cook family between Sugarloaf and Route 9D in southern Garrison near the Hudson River; and
- Land belonging to the Hilpert family along southern Route 9 in Garrison near Old Highland Turnpike.<sup>13</sup>

Interestingly, although some Agricultural Districts overlap with prime or important farmland soils, there are several districts that include significant areas of poor agricultural soils or have hardly any quality agricultural soils at all. This speaks to the value of determining the quality of soils within the Town and potentially facilitating the use of certain parts of Town for agricultural purposes, especially to prioritize access to tax relief provided for by the NYS Agricultural Districts Law. This is not to say that existing farms with poor soils should not also continue to receive tax relief to preserve historically and communally important agriculture, but rather to

<sup>13</sup> Putnam County, eParcel Database, 2020, <https://www.putnamcountyny.com/itgis/eparcel/>



best guide the creation and sustainability of future farms within the Town.

According to the Putnam Valley NRI, “Tax relief is an important issue for New York farmers. Farms need land to operate and property taxes on farmland are often a significant expense. At the same time, farmland tends to pay more in property tax than it requires in public services. ‘Cows and corn don’t go to school,’ [after all]. Cost of Community Services studies from around the country have demonstrated that farm and forest land generate a net property tax ‘profit’ while houses generally cause a property tax ‘loss’ (due to the high cost of their associated public services). Thus, having farmland in a community can help maintain a lower demand for public services and keep property taxes lower. By maintaining a balance of land uses and by focusing growth in areas with access to underutilized infrastructure, communities can promote fiscal efficiency, preserve farmland and open space, and avoid other costs of sprawl. Increasingly, state and local governments are recognizing that keeping farmland in production may help control the cost of providing community services.”<sup>14</sup>

As Chapter 5. Climate Change has shown, as climate change progresses, the need for more resilient local agriculture will increase and PhilipsTown currently has a shortage of locally-produced food. The need to convert certain land areas to agricultural use should be informed by the quality of soils presented on this map, especially considering that “regenerative agriculture,” which focuses on top-soil regeneration and can improve the capacity of soils to store carbon from the atmosphere.

The Town could also go further by using this map to develop an “Agricultural Soils Overlay District” to provide special protections and privileges to parcels that contain prime and important farmland, in preparation for a greater need to expand local agricultural production. Furthermore, these potential farms could contribute to the Town’s Open Space goals and add to the historic character of the region.

In addition, local farms tend to be community hubs, both economic and cultural, as exemplified by the Community Supported Agriculture approaches of several existing farms, including Long Haul Farm on South Mountain Pass and Glynwood on Route 403. Community Support Agriculture (CSA) is a term for farming that relies on up-front membership payments by customers, which reduces the need for farmers to take out loans to finance production and thus reduces some of the up-front risk involved in running a farm. Customers then receive weekly deliveries or pick-ups of produce in exchange for their initial investment. CSA’s can also request “sweat equity” from customers who agree to contribute a certain number of hours of farm labor per season in order to reduce the cost of their membership, which can further contribute to a sense of community. Local farms also further support the existence of the year-round Cold

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<sup>14</sup> Town of Putnam Valley Committee for the Conservation of the Environment, Town of Putnam Valley Natural Resource Inventory, 2018: <https://putnamvalleyresidents.com/NRI.html>



Spring Farmers Market, which has become a major community hub over the years, and a key location of sustainability education and outreach.

In summary, Philipstown's existing farms already contribute to the Town's food production, culture and ecosystem services in many ways. The expansion of farms will inevitably conflict with other needs presented in the rest of this inventory. Thus it will be essential to prioritize creation of farms in areas that have quality agricultural soils, as shown on this map. Using this information, the Town of Philipstown can wisely guide the development of more small local farms in a way that minimizes their negative aspects and maximizes their essential contributions to our community.

#### *Further Study:*

Additional research could include organizing a local study of existing farms to document their specific agricultural production and community participation (e.g. CSA, Farmer's Markets, Community Events, etc.).

Also, a study to confirm the existence of prime and important agricultural soils at each of the areas displayed on the map would help to best inform a potential Agricultural Soils Overlay District that could be created by the Town of Philipstown.

Lastly, a study to determine if any existing small farms are not protected as Agricultural Districts and to see if there are alternative ways to afford such farms appropriate tax relief, if possible, would help to preserve smaller farms that are not eligible for Putnam County Agricultural District classification due to its 250-acre minimum requirement (as noted in the Description section above). This would greatly enable start-up small farmers to access additional support within Philipstown.

#### *Data Sources:*

- Agricultural Districts
  - NYSDEC Agricultural District Boundaries  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=400>
- Prime Farmland and Soils of Statewide Importance
  - NRCS SSURGO Database  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

**Table 19: Prime Farmland and Soils of Statewide Importance<sup>15</sup>**

Soil Symbol	Description	Acreage	Percentage of Total Soils	Farmland Class	Parent Material <sup>16</sup>	Drainage Class	Septic Tank Absorption Fields Rating <sup>17</sup>
HnB	Hinckley loamy sand, 3 to 8 percent slopes	38.6	0.10%	Of Statewide Importance	Outwash	Excessively drained (dry)	Very limited
WdC	Woodbridge loam, 8 to 15 percent slopes	143.3	0.40%	Of Statewide Importance	Till	Moderately Well Drained	Very Limited
RdA	Ridgebury complex, 0 to 3 percent slopes	6.10	0.00%	Of Statewide Importance	Till	Poorly Drained	Very Limited
RdB	Ridgebury complex, 3 to 8 percent slopes	61.80	0.20%	Of Statewide Importance	Till	Poorly Drained	Very Limited
Sh	Sun loam	201.3	0.60%	Of Statewide Importance	Till	Very Poorly Drained	Very Limited
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	779.8	2.30%	Of Statewide Importance	Till	Well Drained	Very limited
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	595.40	1.80%	Of Statewide Importance	Till	Well drained	Very Limited
RhC	Riverhead loam, 8 to 15 percent slopes	114.9	0.30%	Of Statewide Importance	Outwash	Well Drained	Very Limited
<b>Total Soils Of Statewide Importance:</b>		<b>1941.2</b>	<b>5.70%</b>				
SuA	Sutton loam, 0 to 3 percent slopes	44.6	0.10%	Prime	Till	Moderately Well Drained	Very Limited
SuB	Sutton loam, 3 to 8 percent	182.2	0.50%	Prime	Till	Moderately Well	Very Limited

<sup>15</sup> Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey: [websoilsurvey.sc.egov.usda.gov/](http://websoilsurvey.sc.egov.usda.gov/)

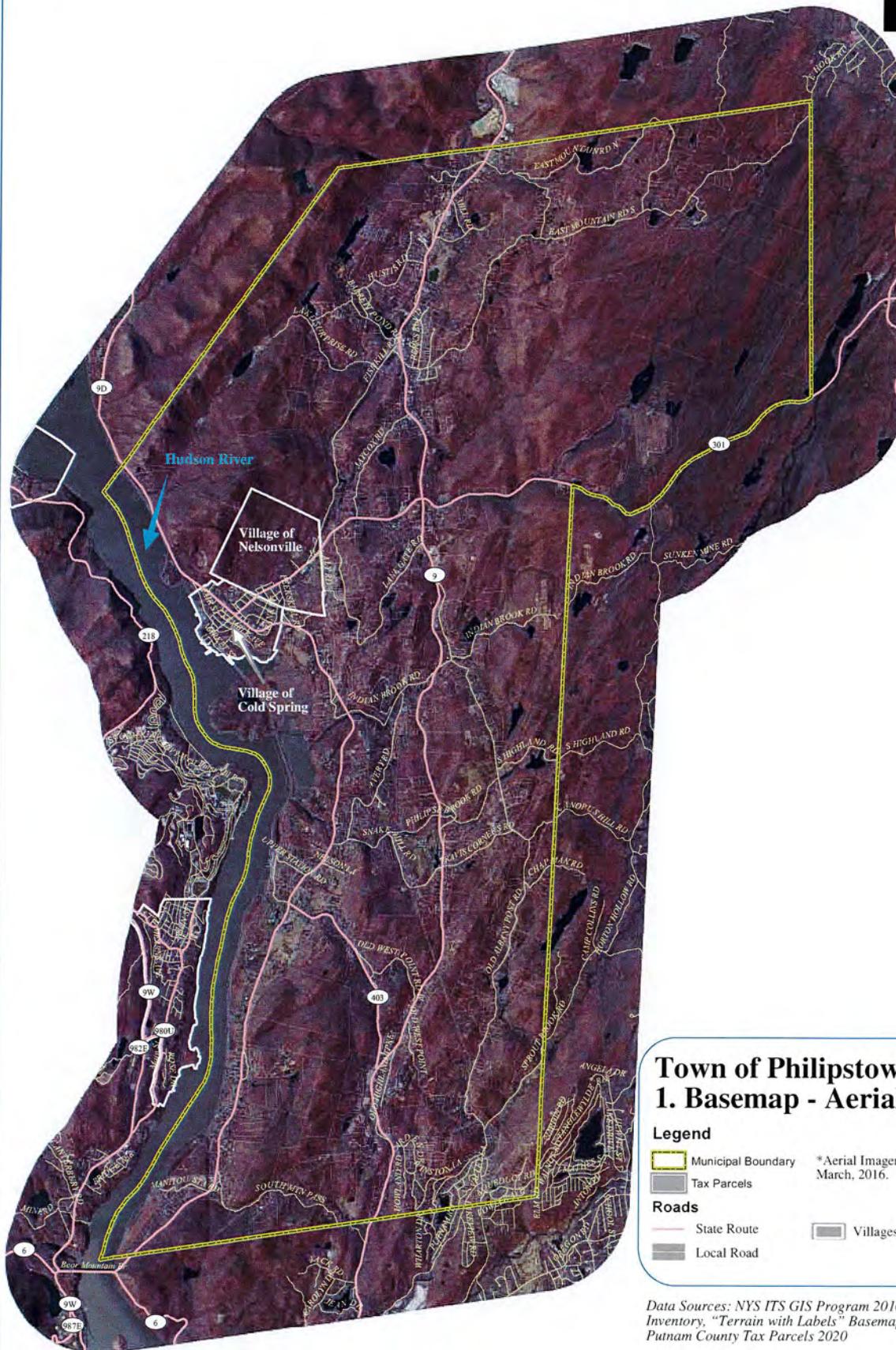
<sup>16</sup> Heady, Laura, and Gretchen Stevens. Guidebook for Biodiversity Assessment. Hudsonia, 2017

<sup>17</sup> Web Soil Survey, United States Department of Agriculture Natural Resources Conservation Service: [websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx](http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)


	slopes					Drained	
WdB	Woodbridge loam, 3 to 8 percent slopes	159	0.50%	Prime	Till	Moderately Well Drained	Very Limited
Fr	Fredon silt loam	36.7	0.10%	Prime	Outwash	Poorly Drained	Very Limited
KnB	Knickerbocker fine sandy loam, 2 to 8 percent slopes	8.2	0.00%	Prime	Outwash	Somewhat Excessively Drained	Very limited
Pw	Pompton silt loam, loamy substratum	48.3	0.10%	Prime	Outwash	Somewhat Poorly Drained	Very Limited
Ce	Catden muck, 0 to 2 percent slopes	222.9	0.70%	Prime	Organic	Very Poorly Drained	Very Limited
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	1,157.90	3.50%	Prime	Till	Well Drained	Somewhat limited
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	364.9	1.10%	Prime	Till	Well drained	Somewhat Limited
RhA	Riverhead loam, 0 to 3 percent slopes	77.30	0.20%	Prime	Outwash	Well Drained	Very Limited
RhB	Riverhead loam, 3 to 8 percent slopes	427.5	1.30%	Prime	Outwash	Well Drained	Very Limited
UdB	Unadilla silt loam, 2 to 6 percent slopes	17	0.10%	Prime	Lacustrine	Well Drained	Not Rated
Ra	Raynham silt loam	29.2	0.10%	Prime	Lacustrine	Poorly Drained	Somewhat Limited
<b>Total Prime Farmland Soils:</b>		<b>2,775.70</b>	<b>8.30%</b>				
<b>Sum Total Quality Farmland Soils:</b>		<b>4,716.90</b>	<b>14.00%</b>				



## Natural Resource Inventory



### Legend

-  Municipal Boundary  
 Tax Parcels

\*Aerial Imagery taken in March, 2016.

## Roads

-  State Route
  Villages
-  Local Road

*Data Sources: NYS ITS GIS Program 2016 Orthoimagery  
Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS,  
Putnam County Tax Parcels 2020*

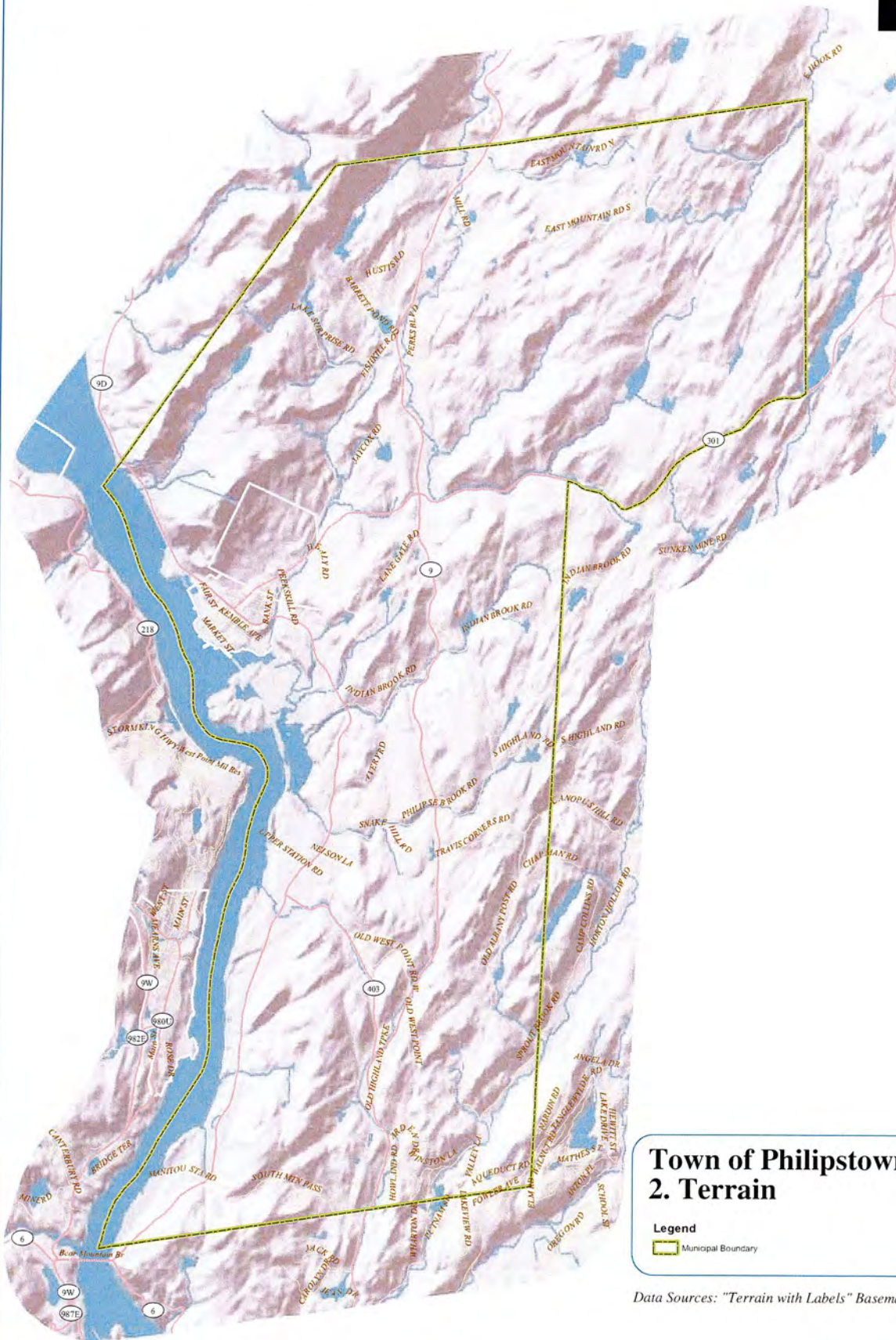
1 in = 1 miles





# Town of Philipstown

## Natural Resource Inventory



## Town of Philipstown 2. Terrain

**Legend**  
 Municipal Boundary

Data Sources: "Terrain with Labels" Basemap - ESRI ArcGIS

1 in = 1 miles

0 0.5 1 2 3 Miles







# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 3. Tax Parcels

### Legend

 Municipal Boundary  Tax Parcels

Data Sources: NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

1 in = 1 miles

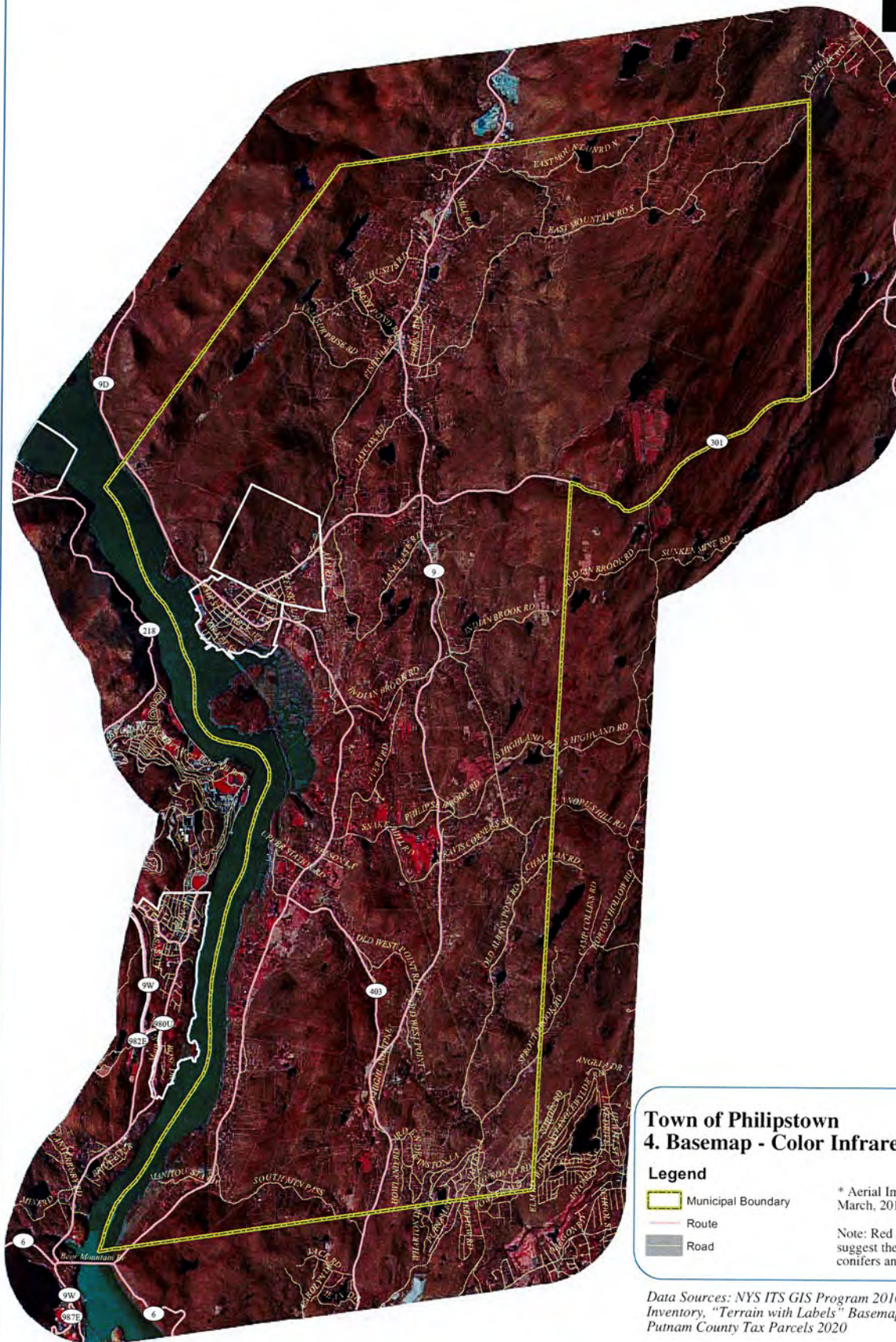
0 0.5 1 2 3 Miles





# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown

#### 4. Basemap - Color Infrared Aerial\*

##### Legend

- Municipal Boundary
- Route
- Road

\* Aerial Imagery taken in March, 2016.

Note: Red and pink suggest the presence of conifers and grassy areas.

Data Sources: NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

1 in = 1 miles

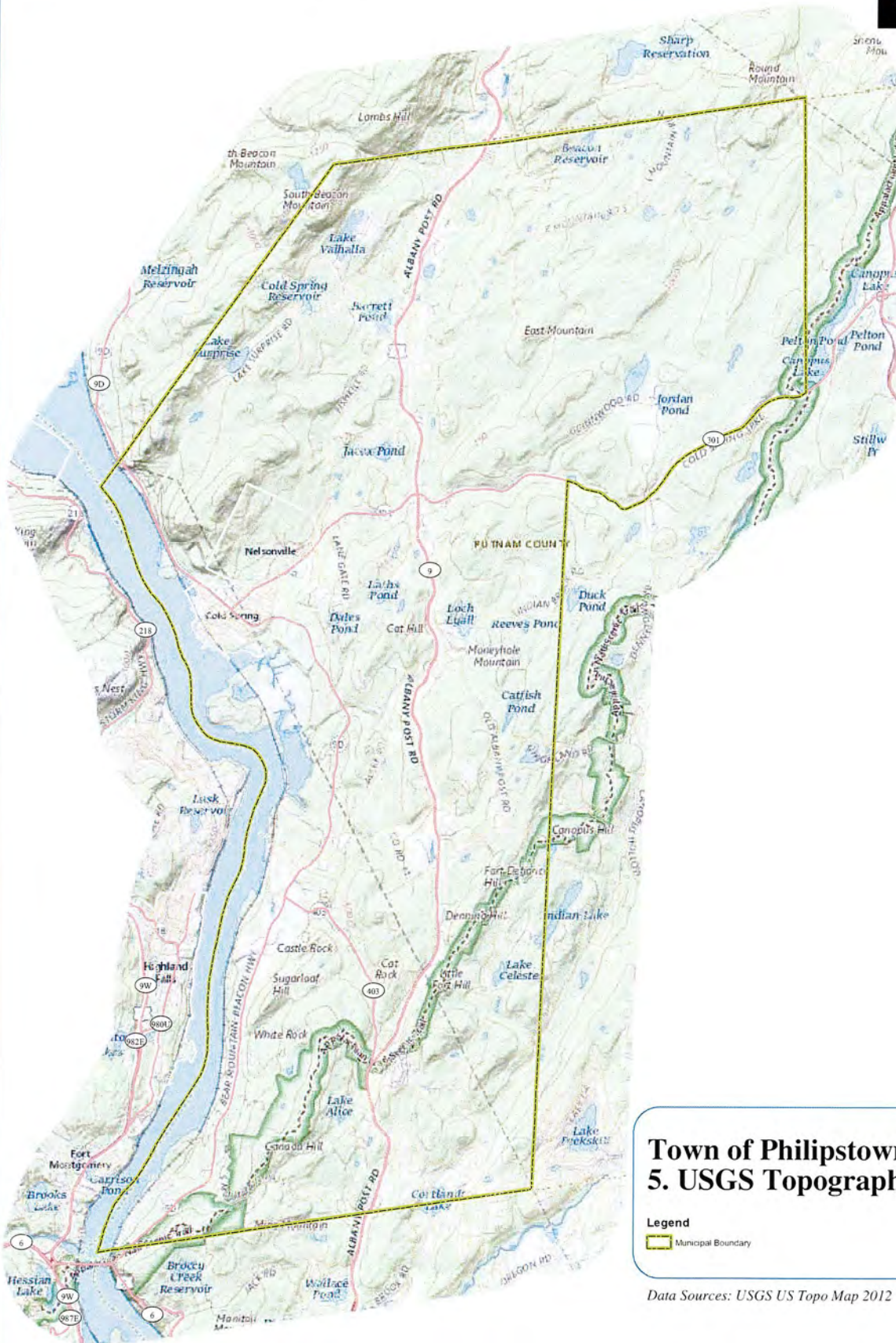
0 0.5 1 2 3 Miles





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 5. USGS Topography

**Legend**  
 Municipal Boundary

Data Sources: USGS US Topo Map 2012

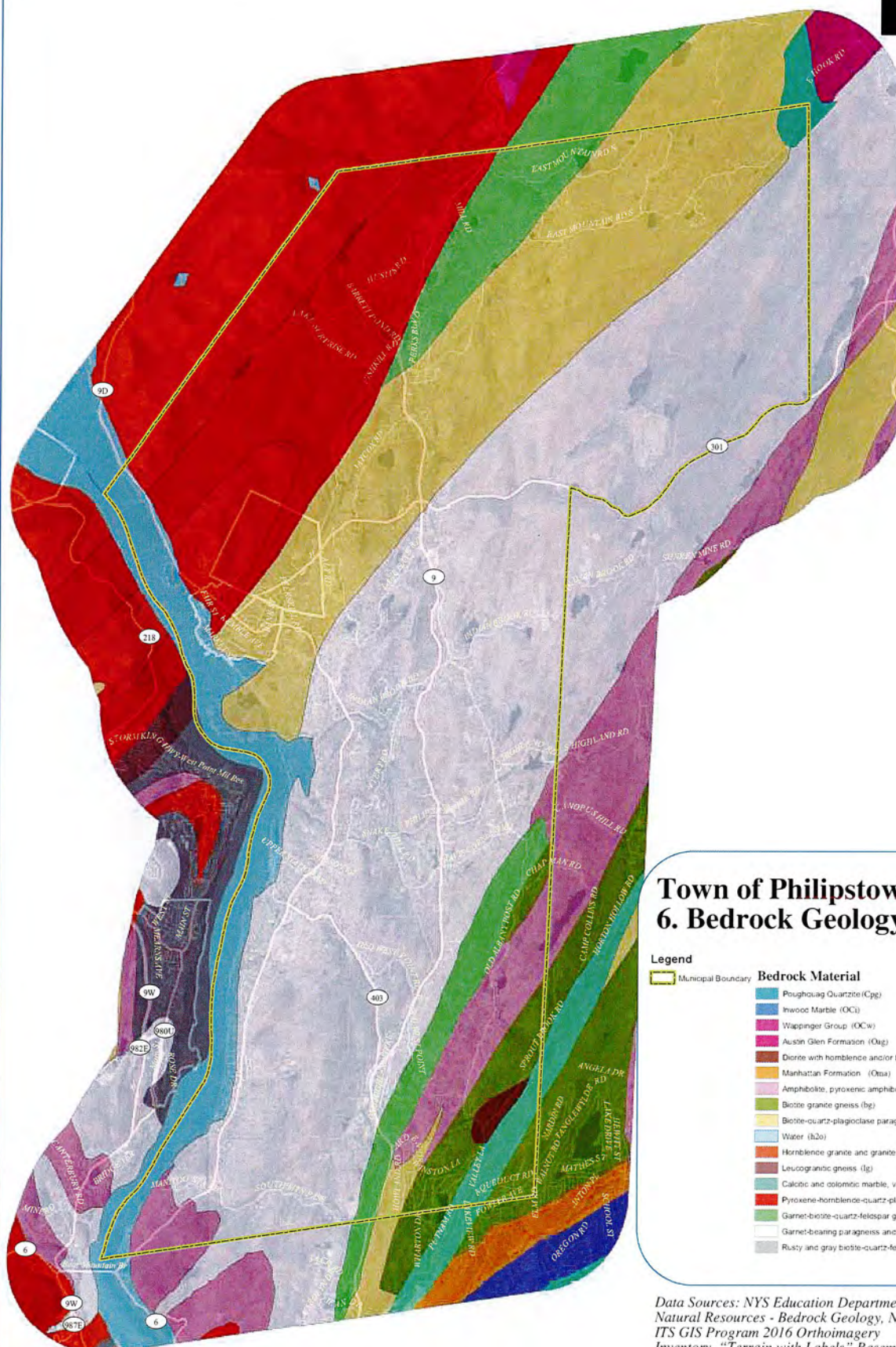
1 in = 1 miles

0 0.5 1 2 3 Miles





### Natural Resource Inventory



### Legend

 Municipal Boundary

### Bedrock Material

- Poughaug Quartzite (Cpg)
- Inwood Marble (OCi)
- Waipingo Group (OCw)
- Austin Glen Formation (Oug)
- Diorite with hornblende and/or biotite (Od)
- Manhattan Formation (Oma)
- Amphibolite, pyroxenic amphibolite (am)
- Biotite granite gneiss (bg)
- Biotite-quartz-plagioclase paragneiss (bgpc)
- Water (h<sub>2</sub>O)
- Hornblende granite and granite gneiss (hg)
- Leucogranitic gneiss (lg)
- Caliche and calcimic marble, variably siliceous (mb)
- Pyroxene-hornblende-quartz-plagioclase gneiss (pgp)
- Garnet-biotite-quartz-felspar gneiss (gpc)
- Garnet-bearing paragneiss and interlayered quartzite (rg)
- Rusty and gray biotite-quartz-felspar paragneiss (rgl)

*Data Sources: NYS Education Department - Natural Resources - Bedrock Geology, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020*



1 in = 1 miles

A number line representing distance in miles. The line starts at 0 and ends at 3. There are tick marks at 0, 0.5, 1, 2, and 3. The line is divided into four equal segments by these tick marks. The segments are colored as follows: the first segment (0 to 0.5) is black, the second (0.5 to 1) is white, the third (1 to 2) is black, and the fourth (2 to 3) is white. The word "Miles" is written at the end of the line.

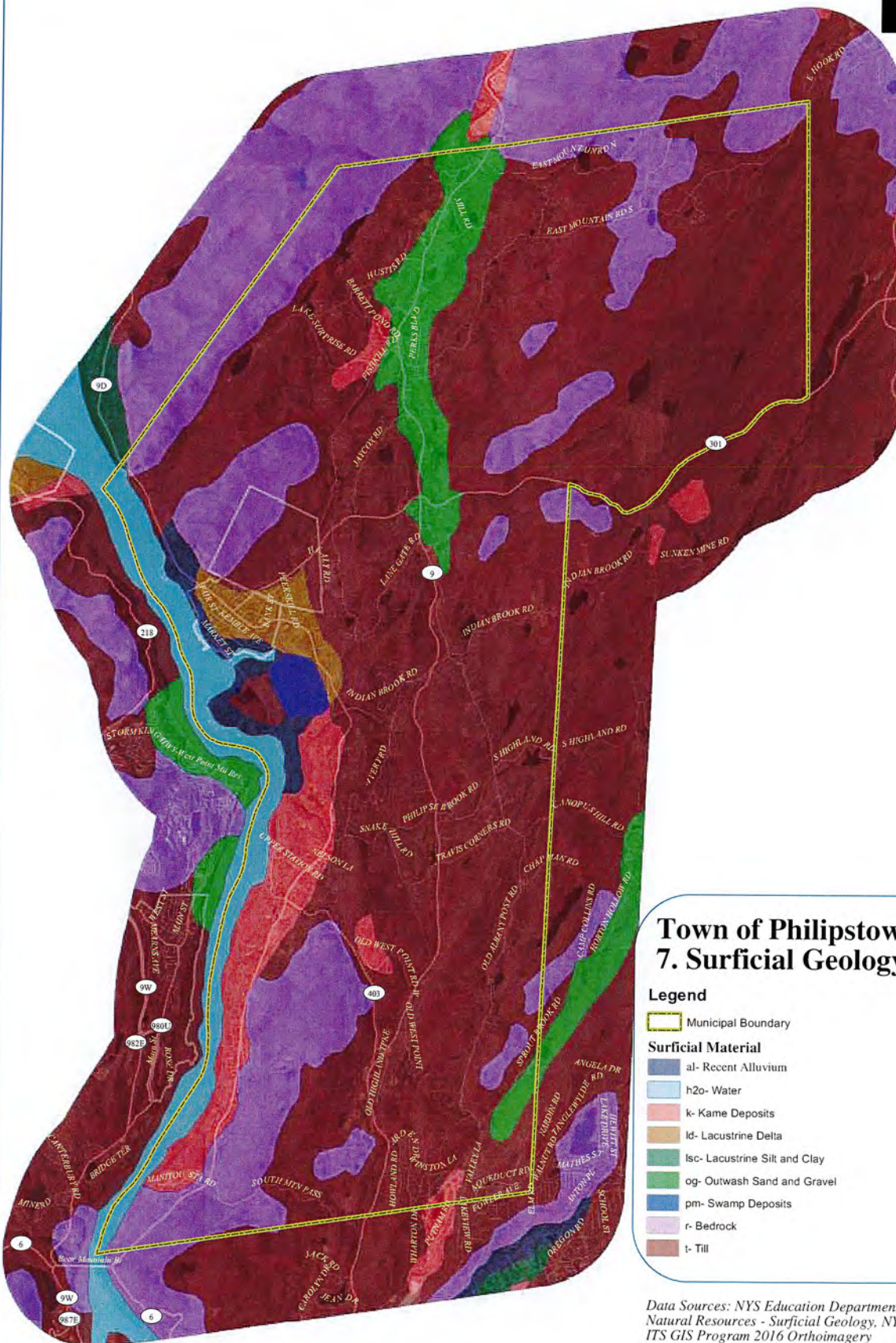
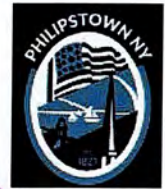
Date: 12/12/2020

This map is intended for informational purposes only and should not be used for legal determinations.



# Town of Philipstown

## Natural Resource Inventory



## Town of Philipstown 7. Surficial Geology

### Legend

Municipal Boundary

### Surficial Material

- al- Recent Alluvium
- h2o- Water
- k- Kame Deposits
- ld- Lacustrine Delta
- lsc- Lacustrine Silt and Clay
- og- Outwash Sand and Gravel
- pm- Swamp Deposits
- r- Bedrock
- t- Till

Data Sources: NYS Education Department -  
Natural Resources - Surficial Geology, NYS  
ITS GIS Program 2016 Orthoimagery  
Inventory, "Terrain with Labels" Basemap -  
ESRI ArcGIS, Putnam County Tax Parcels 2020



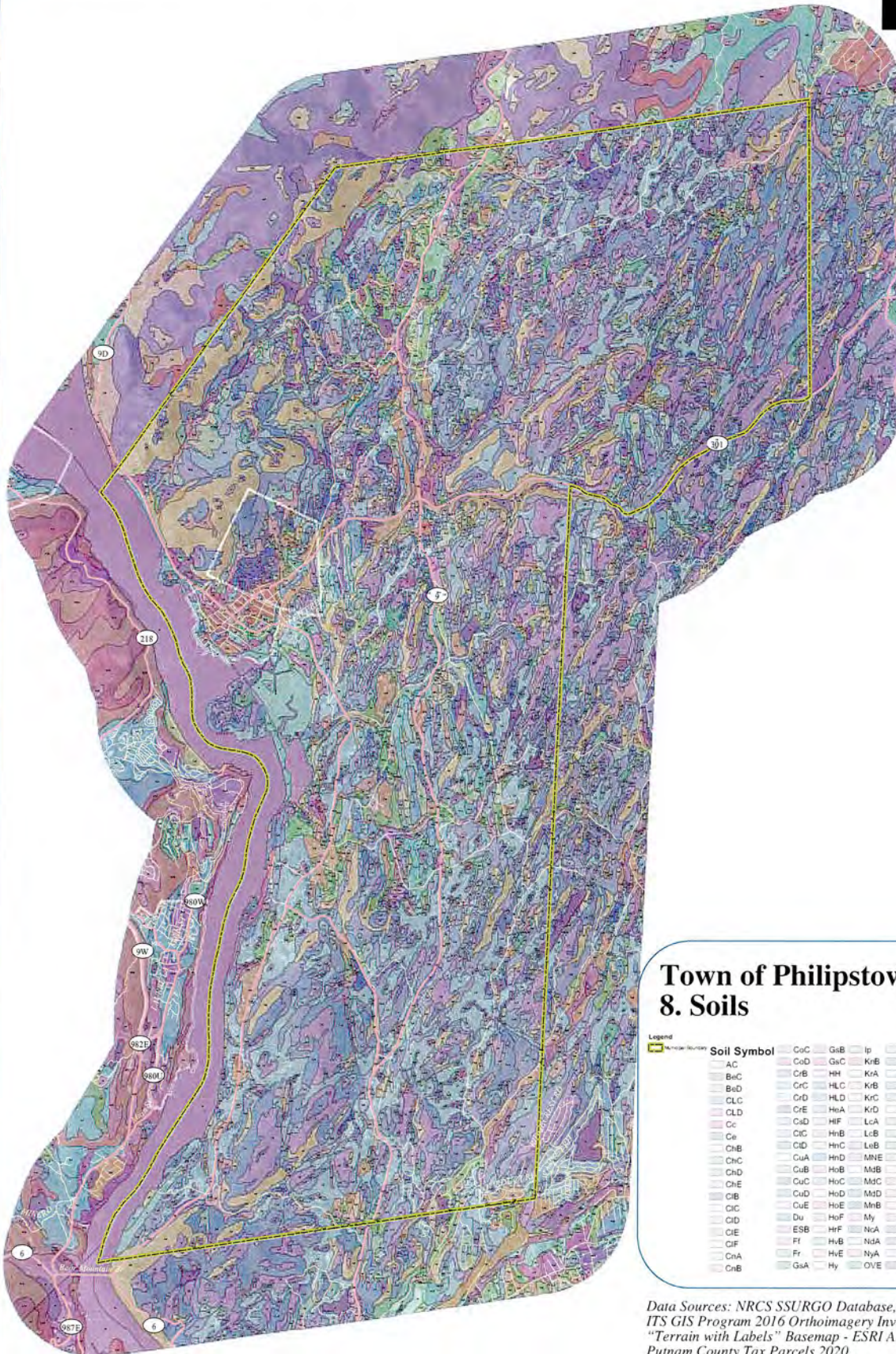
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 8. Soils

Legend		Soil Symbol															
	Municipal Boundary	AC	CoC	GsB	Ip	Pg	RhA	Uc									
		BuC	CoD	GsC	KrB	PhB	RhB	Ud									
		BuD	CrB	HH	KrA	PhC	RhC	UdB									
		CLC	CrC	HLA	KrB	PhD	RhD	Uf									
		CLD	CrD	HLB	KrC	PhE	RhE	UfB									
		Cc	CrE	HsA	KrD	PhF	RhF	UfC									
		Ce	CaD	HsB	LcA	PhG	RhG	UfD									
		ChB	CiC	HsC	LcB	PhH	RhH	UfE									
		ChC	CiD	HsD	LcC	PhI	RhI	UfF									
		ChD	CuA	HsE	MnA	PhJ	RhJ	UfG									
		ChE	CuB	HsF	MnB	PhK	RhK	UfH									
		CiB	CuC	HsG	MnC	PhL	RhL	UfI									
		CiC	CuD	HsH	MnD	PhM	RhM	UfJ									
		CiD	CuE	HsI	MnE	PhN	RhN	UfK									
		CiE	Du	HsJ	MnF	PhO	RhO	UfL									
		CiF	ESB	HsK	MnG	PhP	RhP	UfM									
		CnA	Fi	HsL	MnH	PhQ	RhQ	UfN									
		CnB	Fr	HsM	MnI	PhR	RhR	UfO									
			GsA	Hy	OvE	RgB	Ub										

Data Sources: NRCS SSURGO Database, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

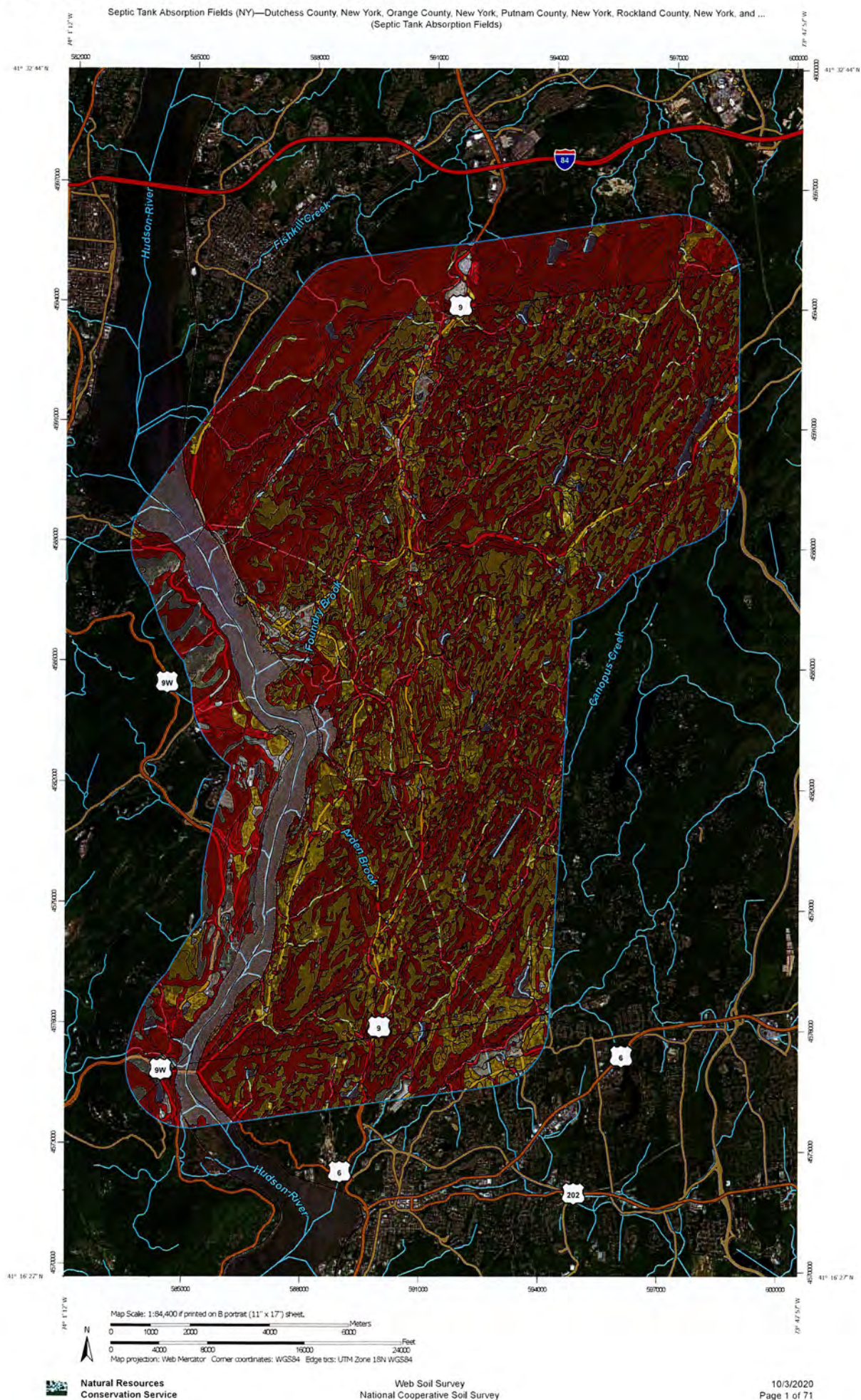
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0 0.5 1 2 3 Miles





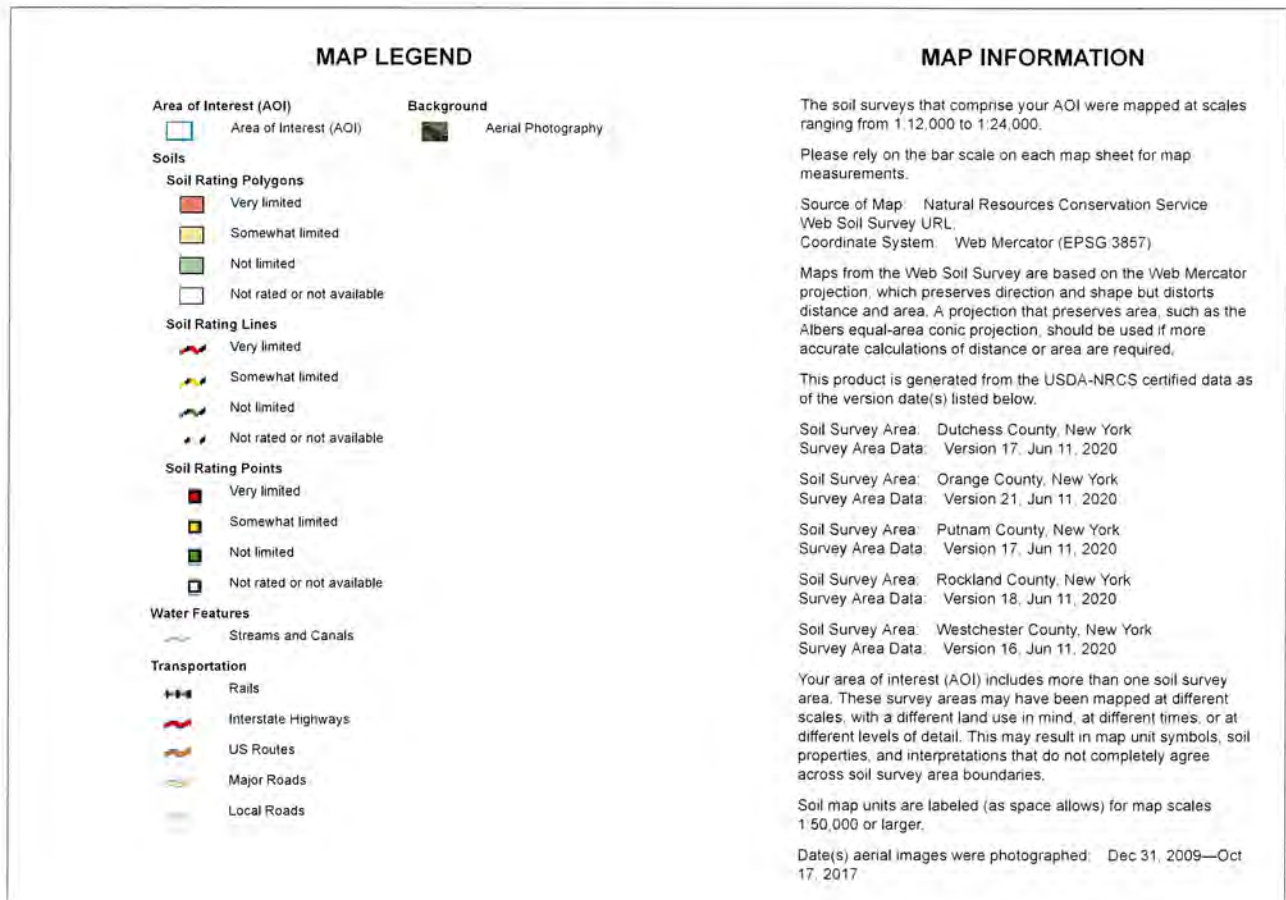
## 9. Third Party Map - Septic Tank Absorption Fields (page 1 of 2)





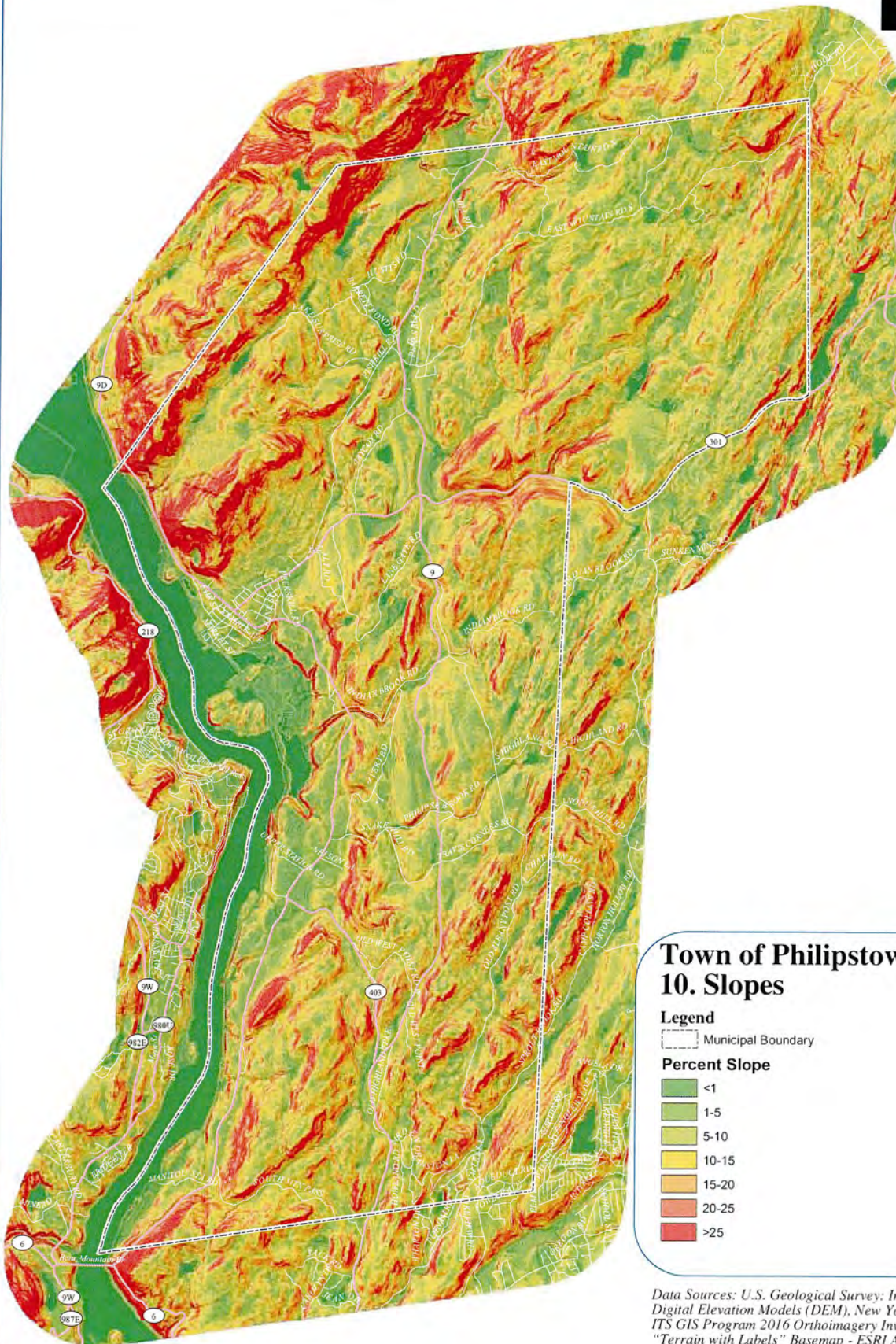
## 9. Third Party Map - Septic Tank Absorption Fields (page 2 of 2)

Septic Tank Absorption Fields (NY)—Dutchess County, New York, Orange County, New York, Putnam County, New York, Rockland County, New York, and Westchester County, New York  
(Septic Tank Absorption Fields)



# Town of Philipstown

## Natural Resource Inventory

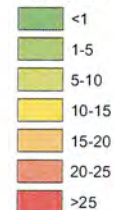


### Town of Philipstown 10. Slopes

#### Legend

Municipal Boundary

#### Percent Slope



Data Sources: U.S. Geological Survey; Index of Digital Elevation Models (DEM), New York, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



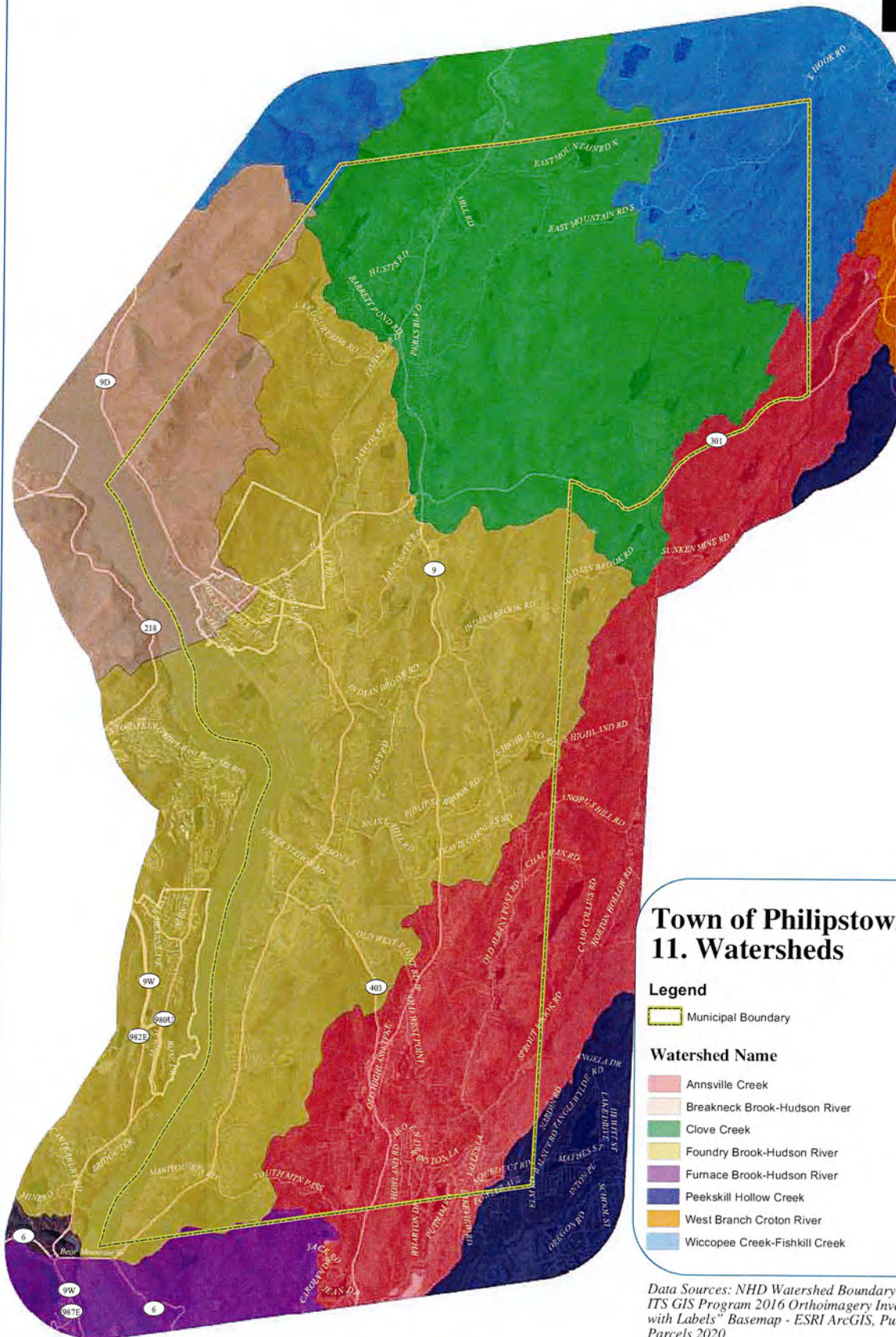
1 in = 1 miles





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 11. Watersheds

### Legend

Municipal Boundary

### Watershed Name

- Annsville Creek
- Breakneck Brook-Hudson River
- Clove Creek
- Foundry Brook-Hudson River
- Furnace Brook-Hudson River
- Peekskill Hollow Creek
- West Branch Croton River
- Wicoppee Creek-Fishkill Creek

Data Sources: NHD Watershed Boundary Dataset, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

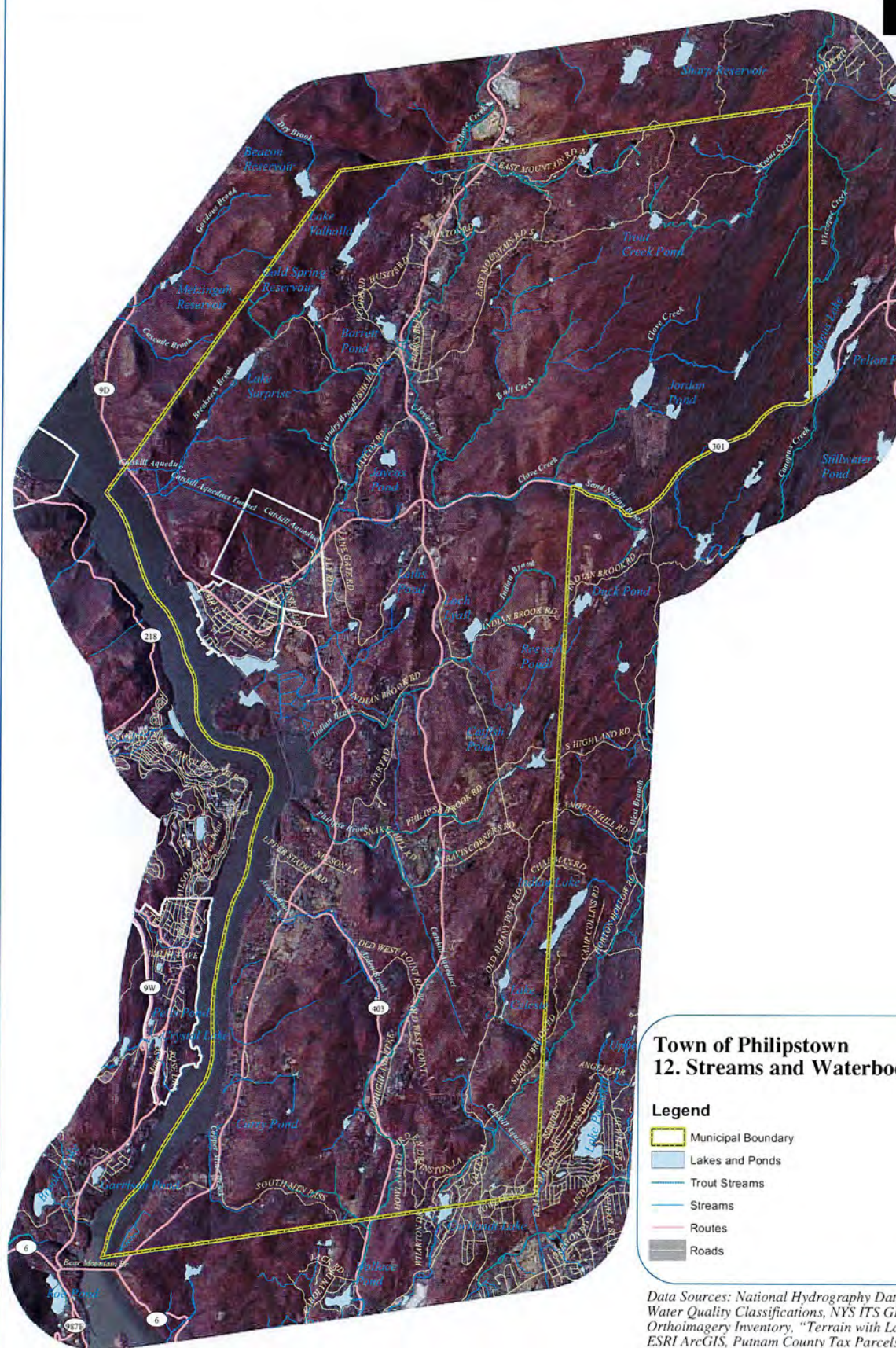
1 in = 1 miles

0 0.5 1 2 3 Miles











### Natural Resource Inventory



## Town of Philipstown

### 12. Streams and Waterbodies

### Legend

-  Municipal Boundary
-  Lakes and Ponds
-  Trout Streams
-  Streams
-  Routes
-  Roads

*Data Sources: National Hydrography Dataset, NYS DEC Water Quality Classifications, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020*



1 in = 1 miles

Date: 12/12/2020

This map is intended for informational purposes only and should not be used for legal determinations.



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 13. Wetlands

### Legend

- Municipal Boundary
- Hydric Soils
- Tidal Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- NYS DEC Regulated Wetland Check Zone
- Stream Wetland

Data Sources: NRCS SSURGO Database, National Wetlands Inventory - NYS, NYS DEC Regulatory Freshwater Wetlands, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

1 in = 1 miles

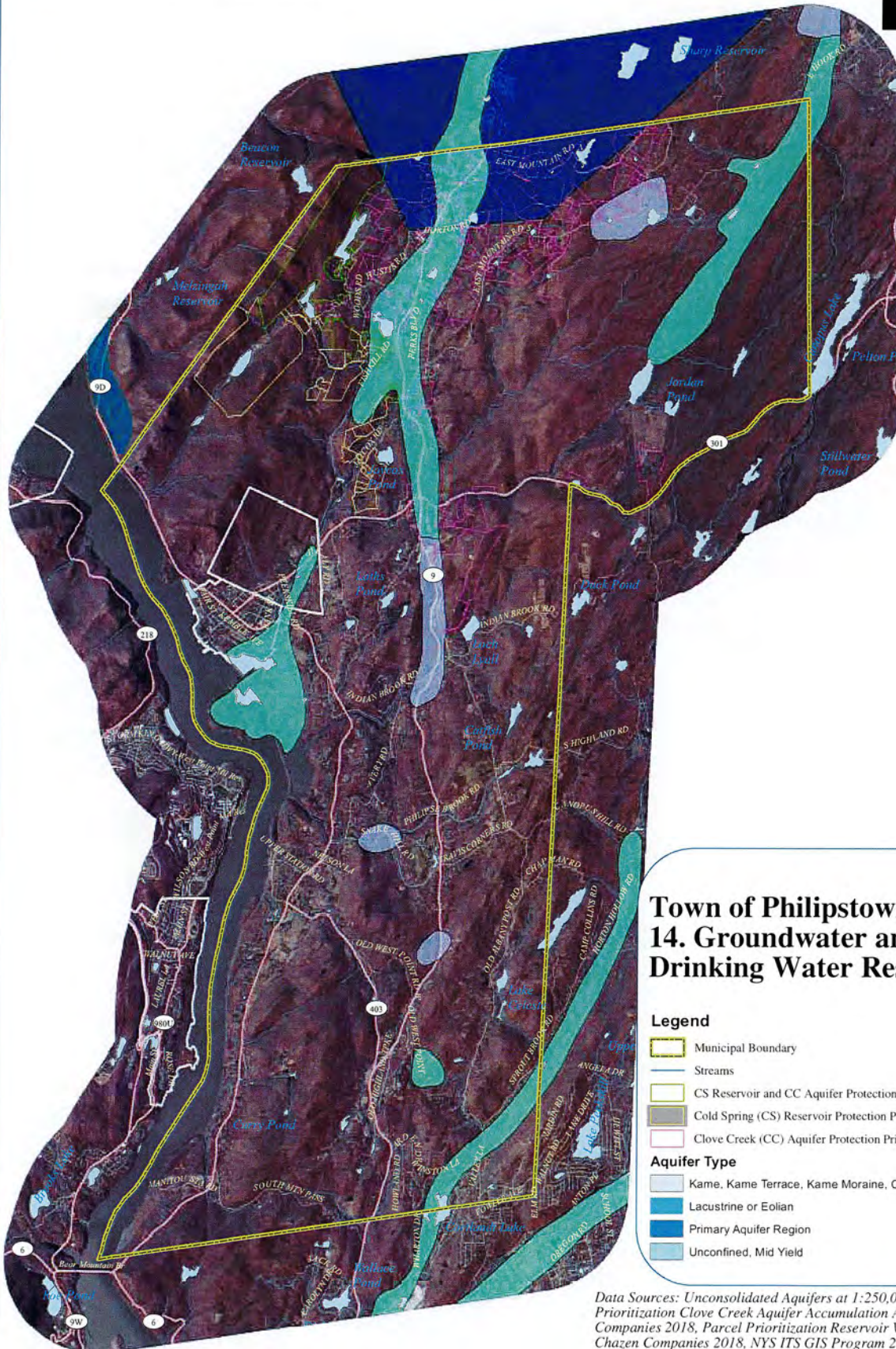
0 0.5 1 2 3 Miles





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 14. Groundwater and Drinking Water Resources

### Legend

- Municipal Boundary
- Streams
- CS Reservoir and CC Aquifer Protection Priority Parcels
- Cold Spring (CS) Reservoir Protection Priority Parcels
- Clove Creek (CC) Aquifer Protection Priority Parcels

### Aquifer Type

- Kame, Kame Terrace, Kame Moraine, Outwash, Alluvium
- Lacustrine or Eolian
- Primary Aquifer Region
- Unconfined, Mid Yield

Data Sources: Unconsolidated Aquifers at 1:250,000, Parcel Prioritization Clove Creek Aquifer Accumulation Area - The Chazen Companies 2018, Parcel Prioritization Reservoir Watersheds - The Chazen Companies 2018, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

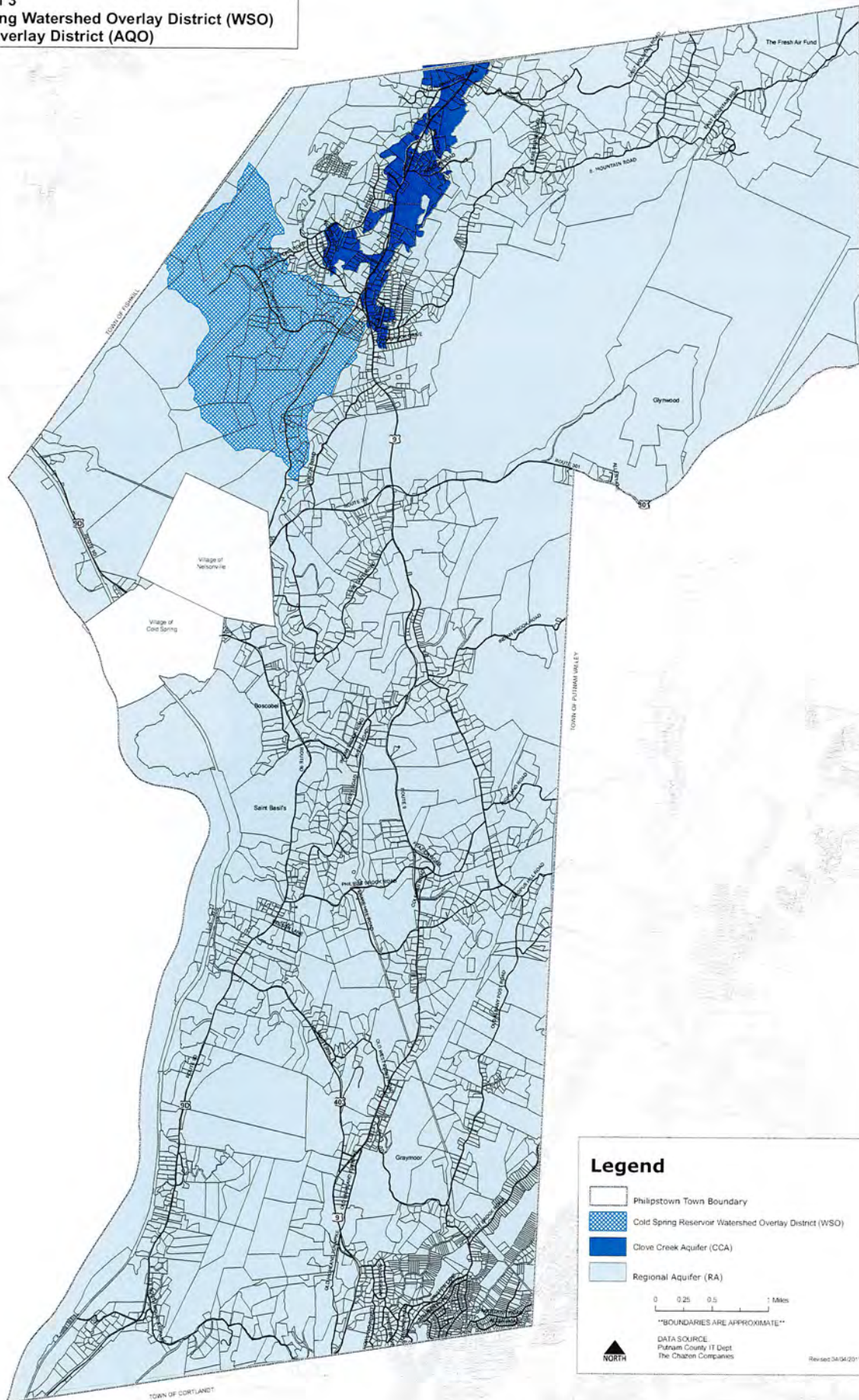
1 in = 1 miles

0 0.5 1 2 3 Miles



## 15. Third Party Map - Cold Spring Watershed and Aquifer Overlay Districts

Town of Philipstown  
Resource Protection Overlay District Zoning Map  
Sheet 3 of 3  
Cold Spring Watershed Overlay District (WSO)  
Aquifer Overlay District (AQO)



### Legend

- Philipstown Town Boundary
- Cold Spring Watershed Overlay District (WSO)
- Aquifer Overlay District (AQO)
- Regional Aquifer (RA)

0 0.25 0.5 1 Miles

"BOUNDARIES ARE APPROXIMATE"

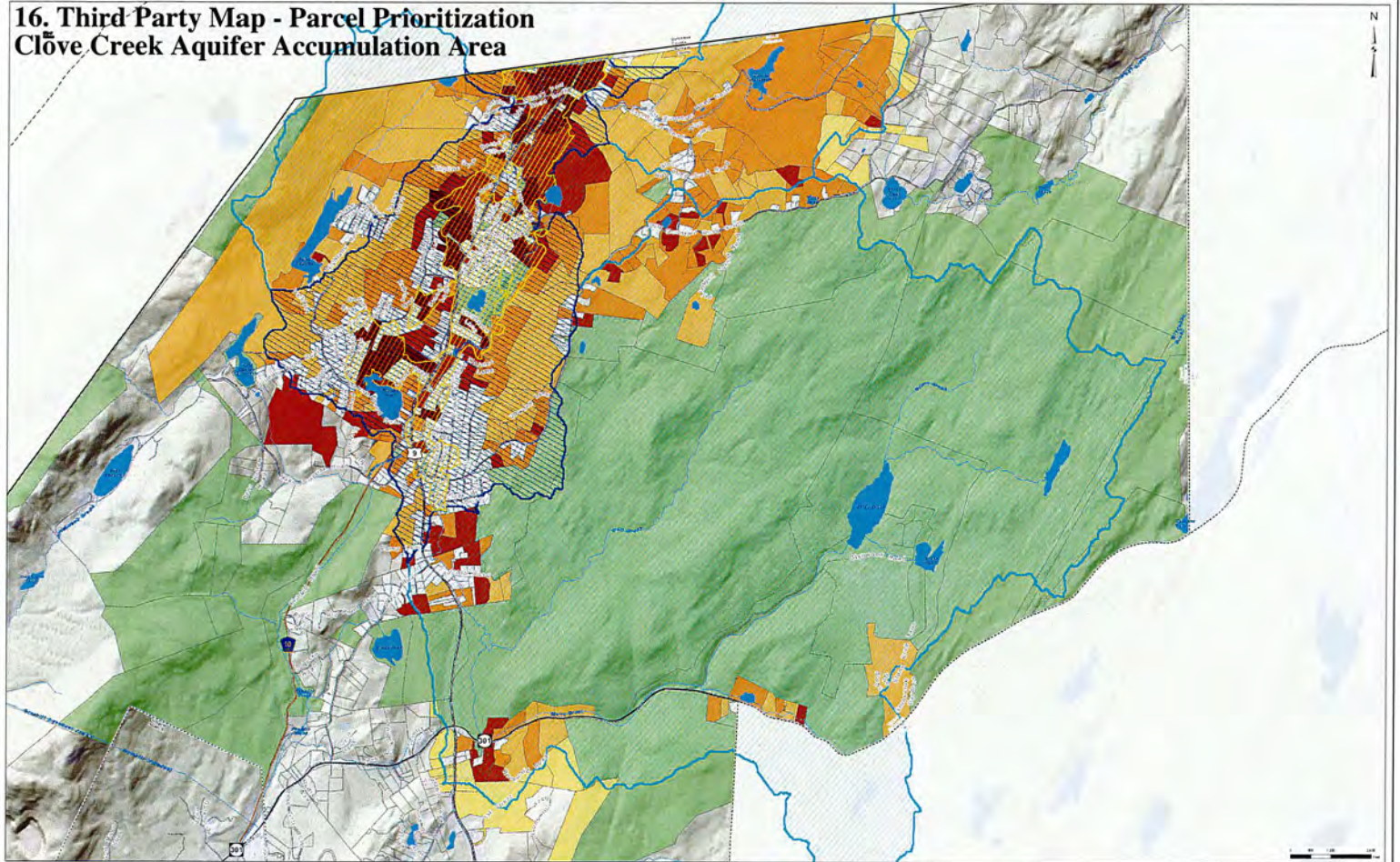
DATA SOURCE  
Putnam County IT Dept  
The Chatham Companies



Revised 04/04/2011



## 16. Third Party Map - Parcel Prioritization Clove Creek Aquifer Accumulation Area



**THE CHAZEN COMPANIES**  
Providing the Best in Land Surveying & Landscape Architecture

### CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

#### OFFICE LOCATIONS

Dutchess County Office  
217 Park Street  
Poughkeepsie, NY 12601  
Phone: (845) 454-3360

Capital District Office  
3477 Route 28  
Troy, NY 12180  
Phone: (518) 273-0555

North County Office  
275 Bay Road  
Queensbury, NY 12254  
Phone: (518) 872-2613

This map is a product of The Chazen Companies. It should be used for reference purposes only. Reasonable efforts have been made to ensure the accuracy of this map. The Chazen Companies disclaims any responsibility or liability for the use of this map for any purpose other than its intended use.

Clover Creek Aquifer  
 Protected Land  
 Tax Parcels

Direct Flow  
 Stream Input

Clover Creek Aquifer Accumulation Area

#### Prioritization based on score per acre

Highest Priority  
 High Priority  
 Moderate Priority  
 Lower Priority  
 Lowest Priority

#### Philpottown Groundwater Resource Management

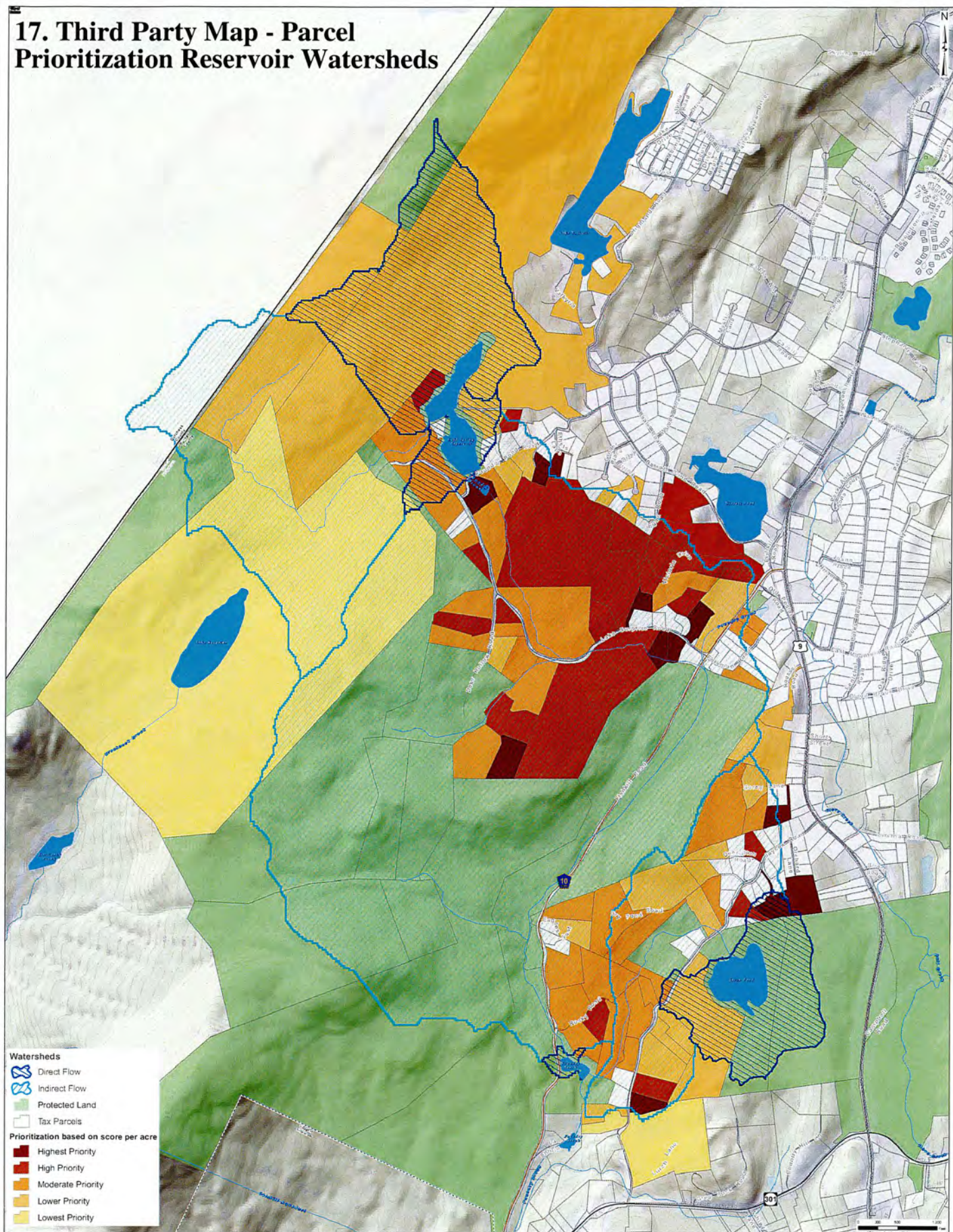
### Parcel Prioritization Clove Creek Aquifer Accumulation Area

Town of Philpottown - Putnam County, New York

CHAZEN CO.  
Date: 01/14/2016  
Scale: 1 inch = 1,000 feet  
Project: 41524-00  
Figure: 16



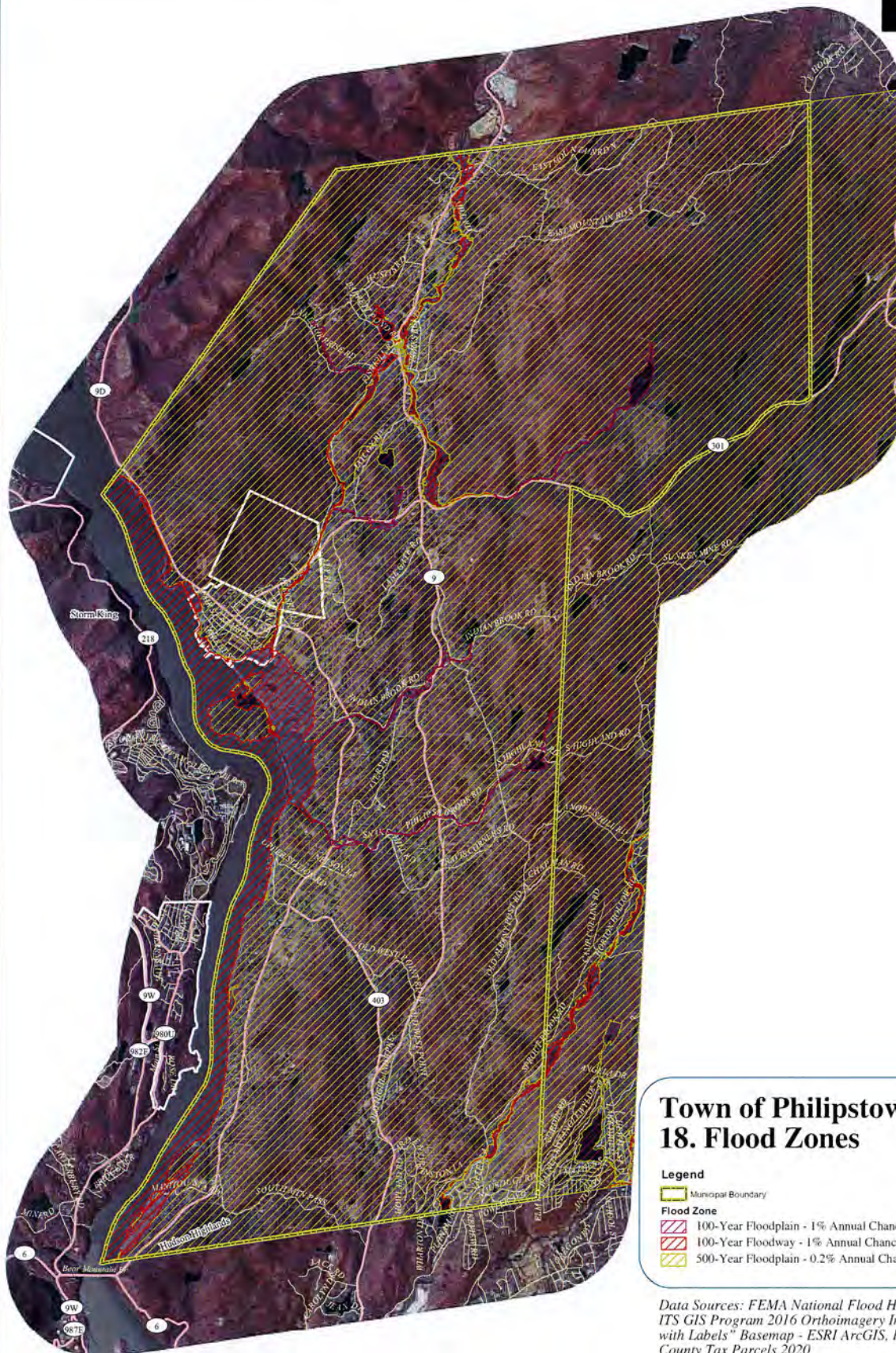
# 17. Third Party Map - Parcel Prioritization Reservoir Watersheds





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 18. Flood Zones

### Legend

Municipal Boundary

### Flood Zone

- 100-Year Floodplain - 1% Annual Chance of Flooding
- 100-Year Floodway - 1% Annual Chance of Flooding
- 500-Year Floodplain - 0.2% Annual Chance of Flooding

Data Sources: FEMA National Flood Hazard Layer, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

1 in = 1 miles

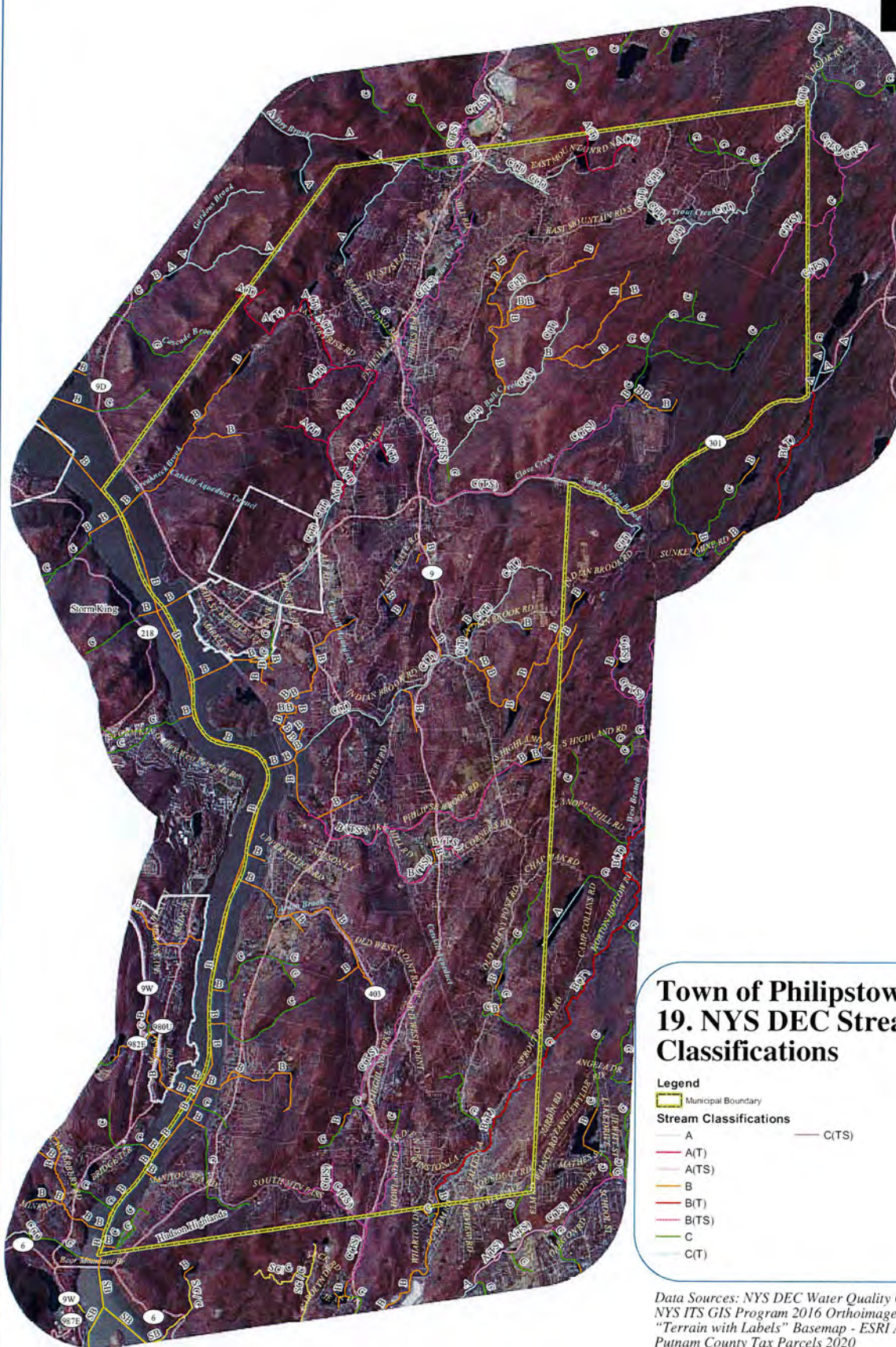
0 0.5 1 2 3 Miles





# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown 19. NYS DEC Stream Classifications

- Legend**
- Municipal Boundary
  - Stream Classifications**
    - A
    - A(T)
    - A(TS)
    - B
    - B(T)
    - B(TS)
    - C
    - C(T)
    - C(TS)

Data Sources: NYS DEC Water Quality Classifications,  
NYS ITS GIS Program 2016 Orthoimagery Inventory,  
"Terrain with Labels" Basemap - ESRI ArcGIS,  
Putnam County Tax Parcels 2020

1 in = 1 miles

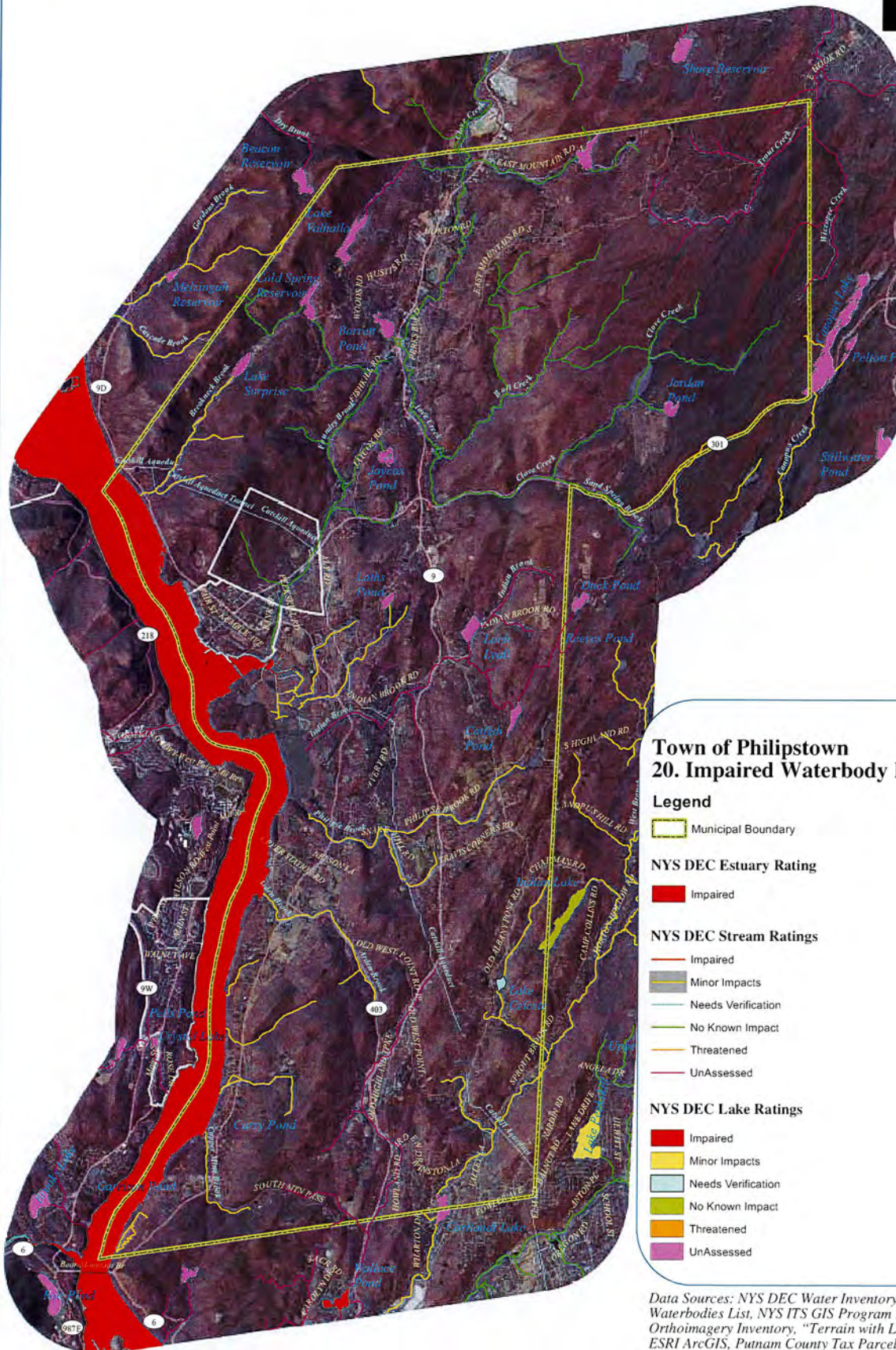
0 0.5 1 2 3 Miles





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 20. Impaired Waterbody Ratings

### Legend

Municipal Boundary

### NYS DEC Estuary Rating

Impaired

### NYS DEC Stream Ratings

Impaired

Minor Impacts

Needs Verification

No Known Impact

Threatened

UnAssessed

### NYS DEC Lake Ratings

Impaired

Minor Impacts

Needs Verification

No Known Impact

Threatened

UnAssessed

Data Sources: NYS DEC Water Inventory / Priority Waterbodies List, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

1 in = 1 miles

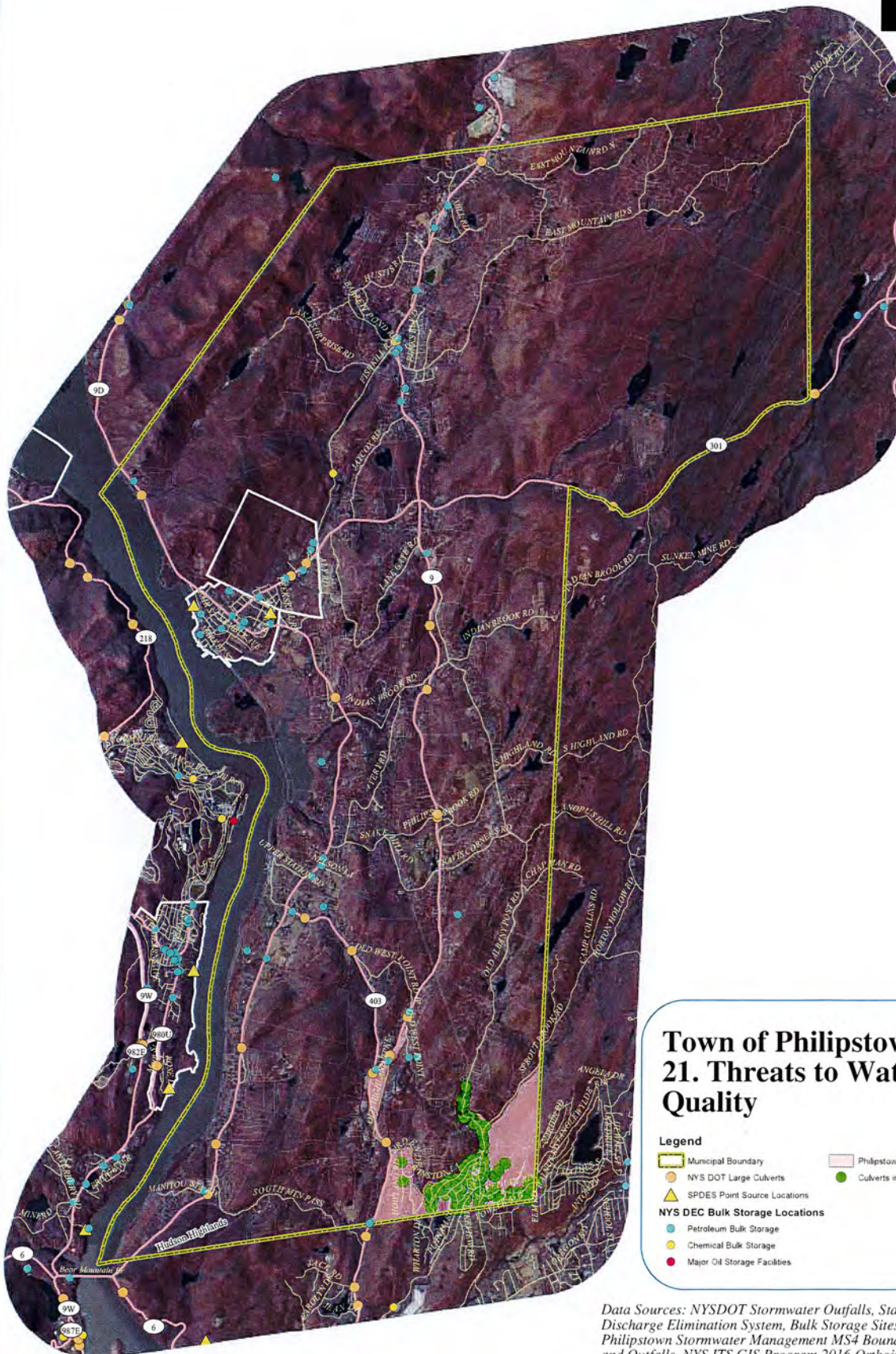
0 0.5 1 2 3 Miles





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 21. Threats to Water Quality

### Legend

- Municipal Boundary
- Philipstown MS4 Boundary
- NYS DOT Large Culverts
- Culverts in MS4
- ▲ SPDES Point Source Locations
- NYS DEC Bulk Storage Locations**
  - Petroleum Bulk Storage
  - Chemical Bulk Storage
  - Major Oil Storage Facilities

Data Sources: NYSDOT Stormwater Outfalls, State Pollutant Discharge Elimination System, Bulk Storage Sites in NYS, Philipstown Stormwater Management MS4 Boundary and Outfalls, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



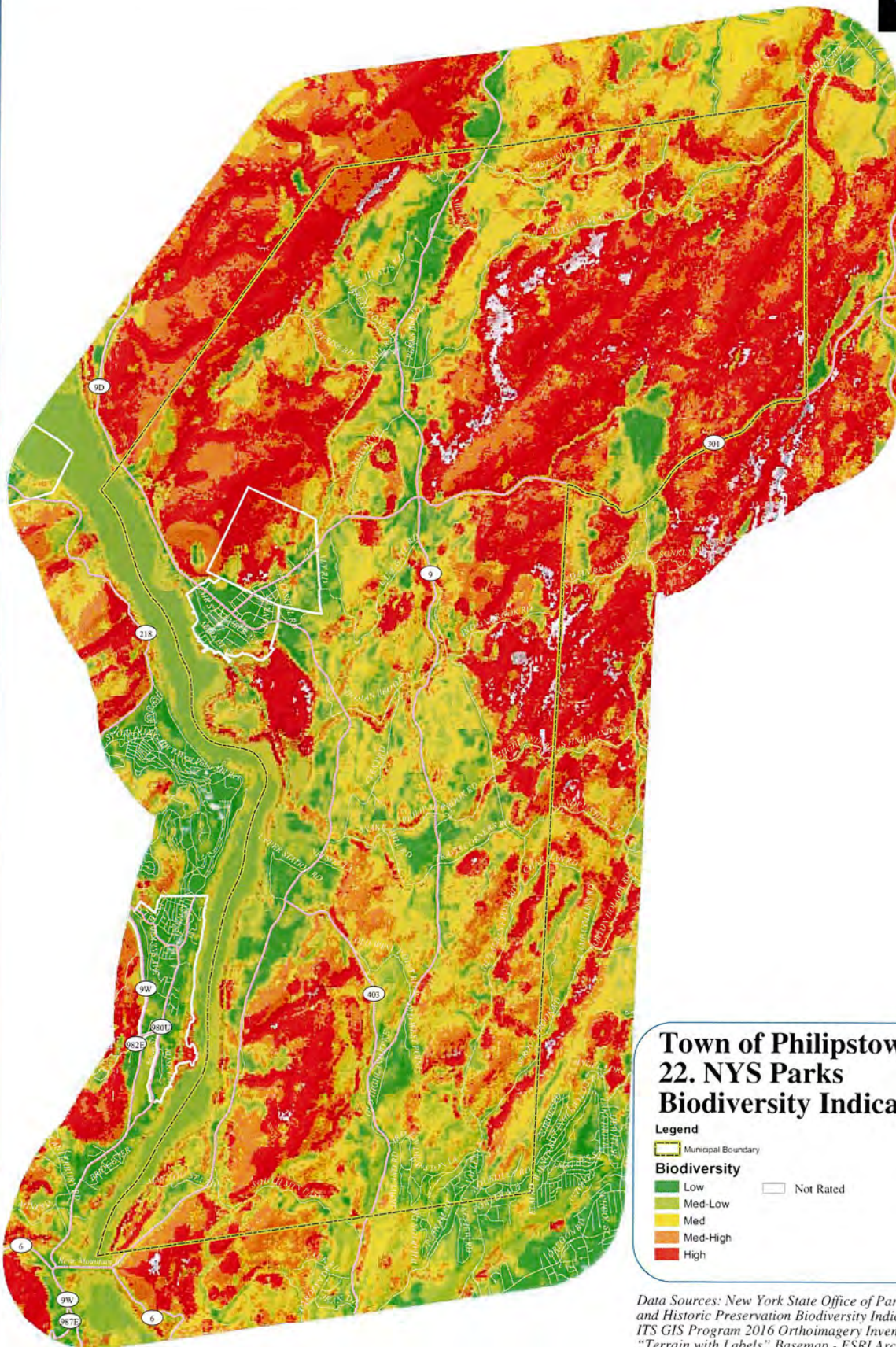
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 22. NYS Parks Biodiversity Indicator

### Legend

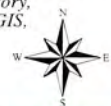
Municipal Boundary

### Biodiversity

Low  
Med-Low  
Med  
Med-High  
High

Not Rated

Data Sources: New York State Office of Parks, Recreation and Historic Preservation Biodiversity Indicator Tool, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown 23. Significant Natural Communities

#### Legend

Municipal Boundary

#### Community Type

- Aodic talus slope woodland
- Appalachian oak-hickory forest
- Chestnut oak forest
- Hemlock-northern hardwood forest
- Oak-tulip tree forest
- Pitch pine-oak-heath rocky summit
- Red cedar rocky summit
- Rocky summit grassland
- Highbush blueberry bog thicket
- Brackish tidal marsh
- Brackish intertidal mudflats
- Tidal river
- Cliff community

Data Sources: Natural Heritage Community Occurrences -  
NYNHP, NYS ITS GIS Program 2016 Orthoimagery  
Inventory, "Terrain with Labels" Basemap -  
ESRI ArcGIS, Putnam County Tax Parcels 2020

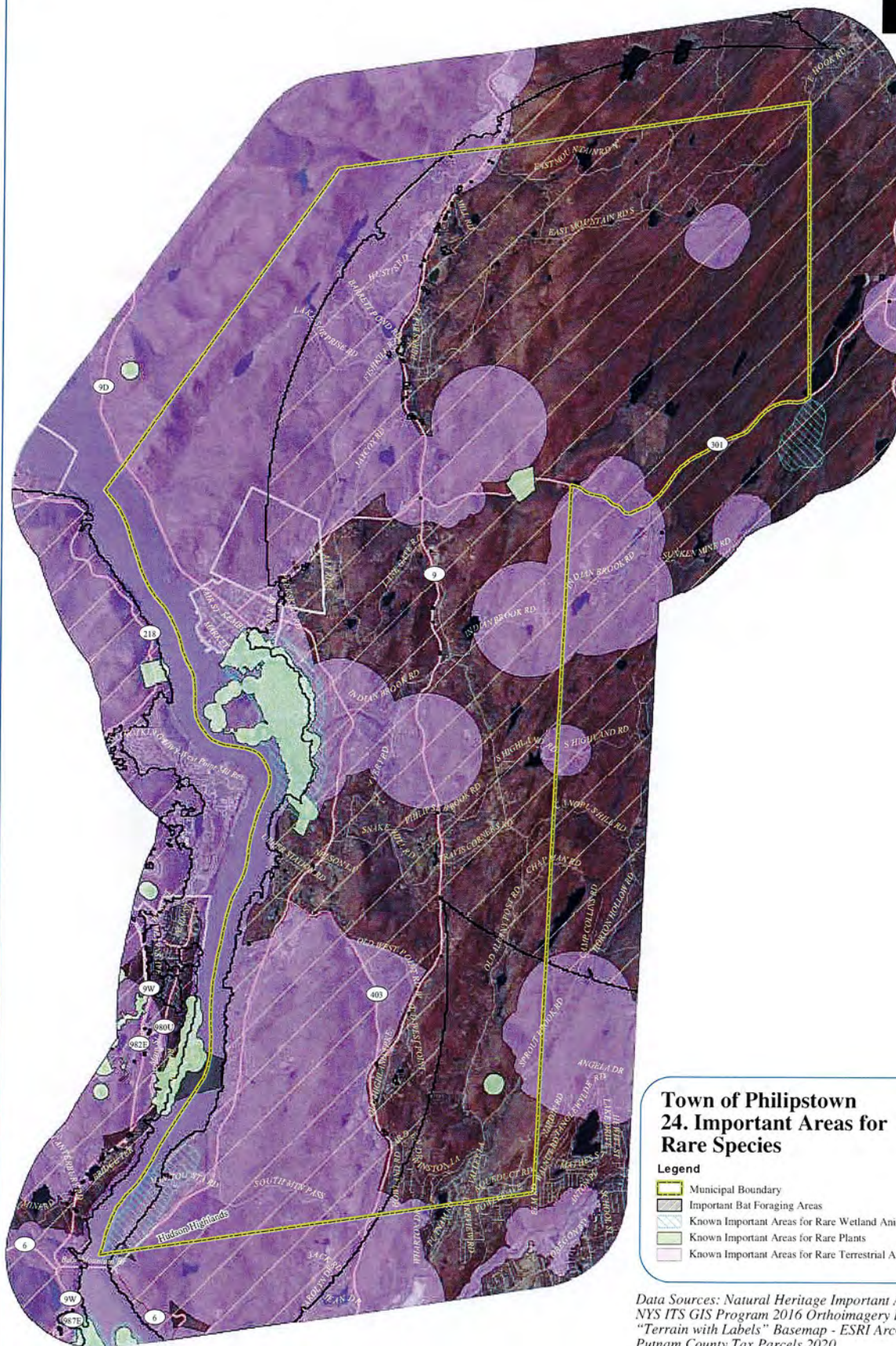


1 in = 1 miles






0 0.5 1 2 3 Miles



## Natural Resource Inventory



**Legend**

-  Municipal Boundary
-  Important Bat Foraging Areas
-  Known Important Areas for Rare Wetland Animals
-  Known Important Areas for Rare Plants
-  Known Important Areas for Rare Terrestrial Animals

Data Sources: Natural Heritage Important Areas - NYNHP,  
NYS ITS GIS Program 2016 Orthoimagery Inventory,  
"Terrain with Labels" Basemap - ESRI ArcGIS,  
Putnam County Tax Parcels 2020

1 in = 1 miles

A number line representing distance in miles. The line is marked from 0 to 3. The segment from 0 to 1 mile is shaded black. The segment from 1 to 2 miles is shaded white. The segment from 2 to 3 miles is unshaded.

Date: 12/9/2020

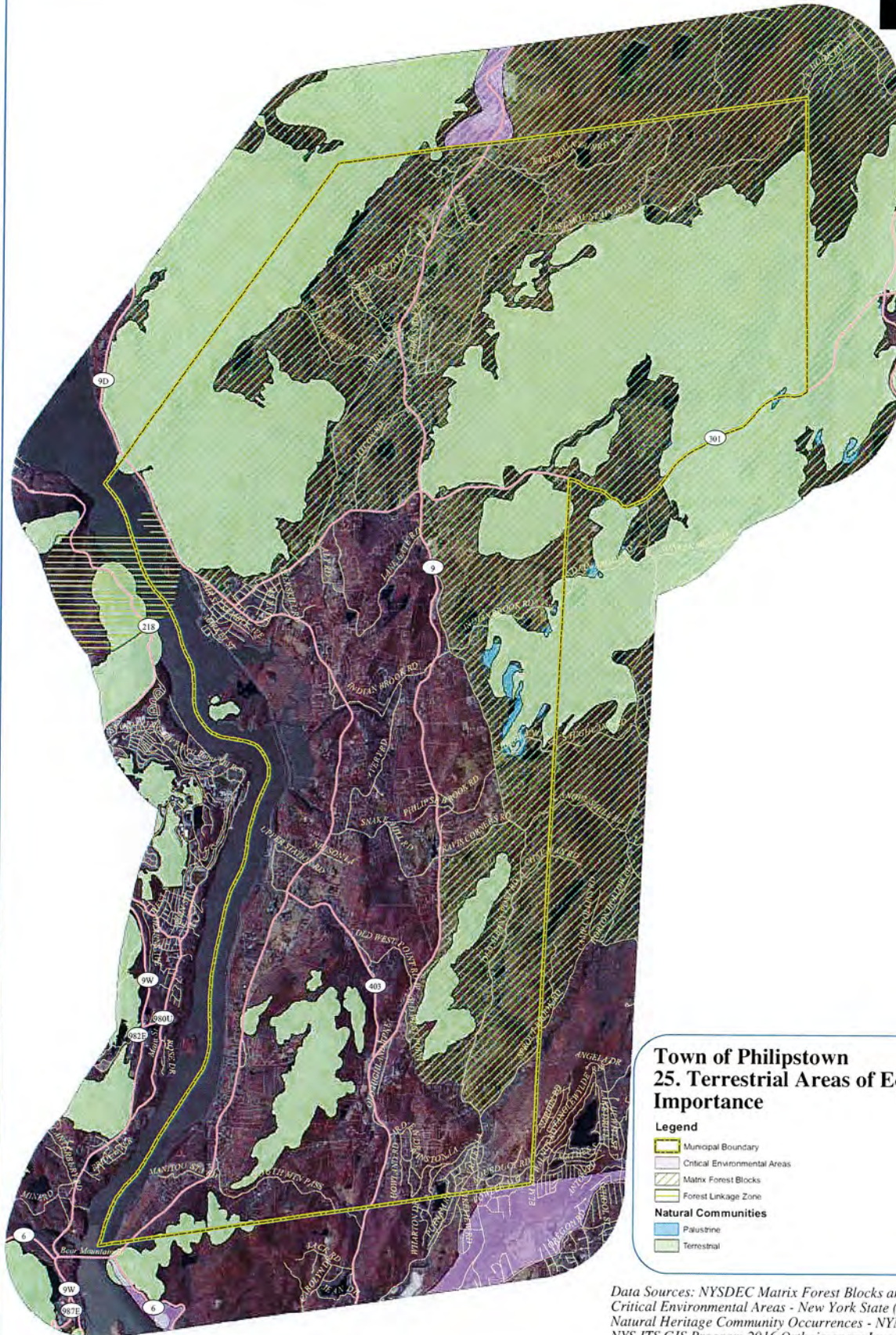
This map is intended for informational purposes only and should not be used for legal determinations.





# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown 25. Terrestrial Areas of Ecological Importance

#### Legend

- Municipal Boundary
- Critical Environmental Areas
- Matrix Forest Blocks
- Forest Linkage Zone
- Natural Communities**
- Palustrine
- Terrestrial

Data Sources: NYSDEC Matrix Forest Blocks and Linkages, Critical Environmental Areas - New York State (NYSDEC), Natural Heritage Community Occurrences - NYNHP, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



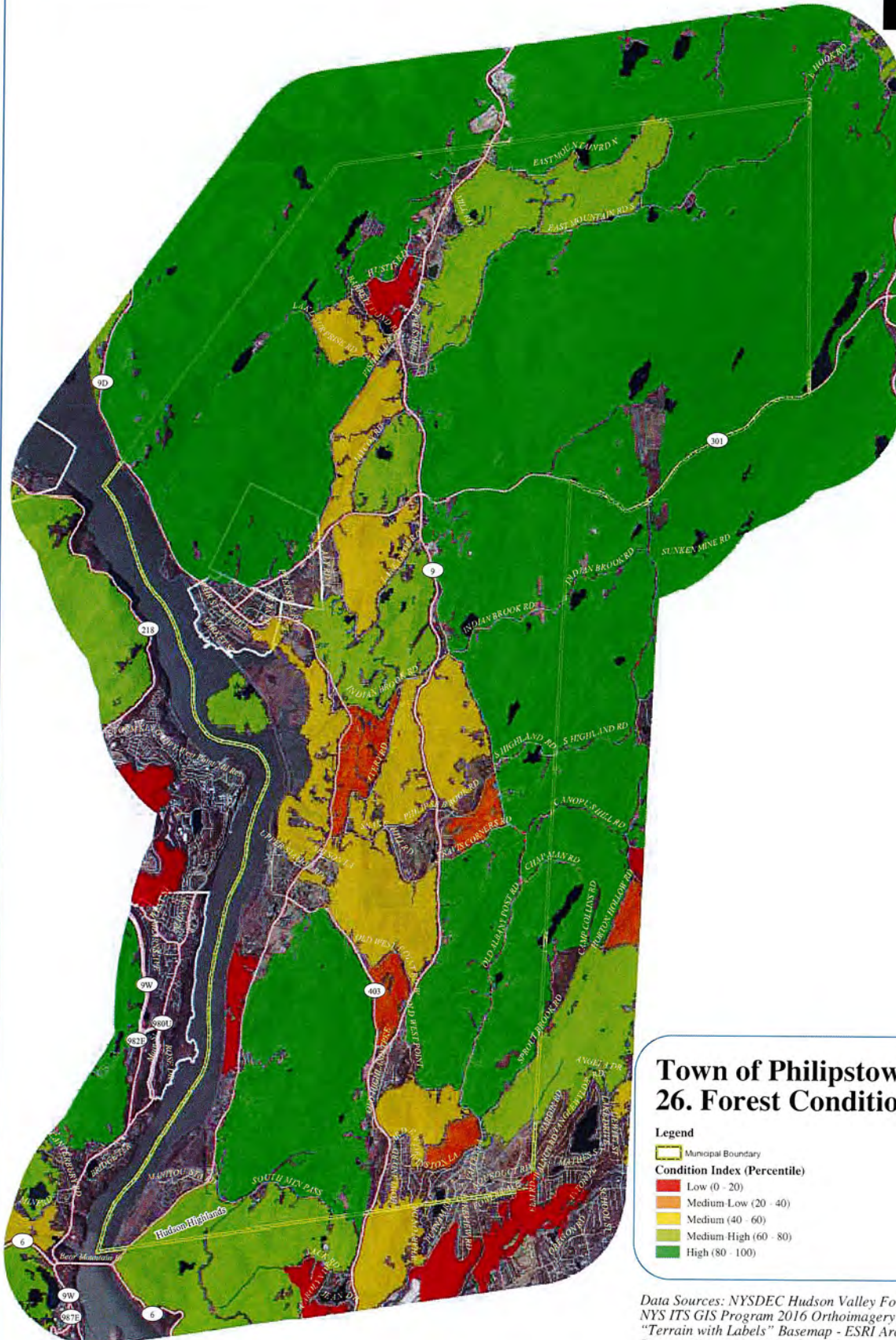
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 26. Forest Condition Index

### Legend

Municipal Boundary

### Condition Index (Percentile)

- Low (0 - 20)
- Medium-Low (20 - 40)
- Medium (40 - 60)
- Medium-High (60 - 80)
- High (80 - 100)

Data Sources: NYSDEC Hudson Valley Forest Index,  
NYS ITS GIS Program 2016 Orthoimagery Inventory,  
"Terrain with Labels" Basemap - ESRI ArcGIS,  
Putnam County Tax Parcels 2020



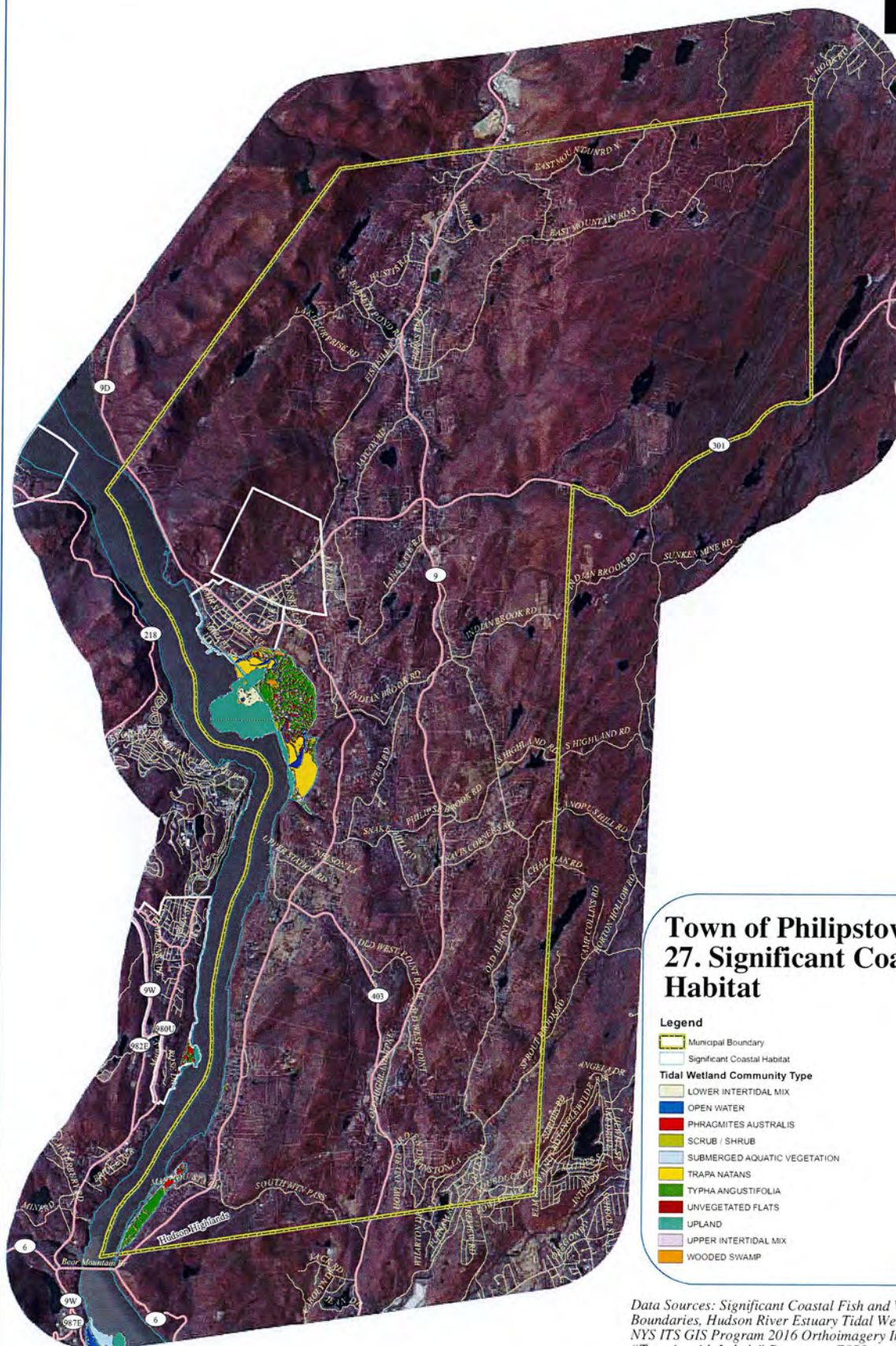
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 27. Significant Coastal Habitat

### Legend

- Municipal Boundary
- Significant Coastal Habitat
- Tidal Wetland Community Type**
- LOWER INTERTIDAL MIX
- OPEN WATER
- PHRAGMITES AUSTRALIS
- SCRUB / SHRUB
- SUBMERGED AQUATIC VEGETATION
- TRAPA NATANS
- TYPHA ANGUSTIFOLIA
- UNVEGETATED FLATS
- UPLAND
- UPPER INTERTIDAL MIX
- WOODED SWAMP

Data Sources: Significant Coastal Fish and Wildlife  
Boundaries, Hudson River Estuary Tidal Wetlands 2007,  
NYS ITS GIS Program 2016 Orthoimagery Inventory, N  
"Terrain with Labels" Basemap - ESRI ArcGIS,  
Putnam County Tax Parcels 2020



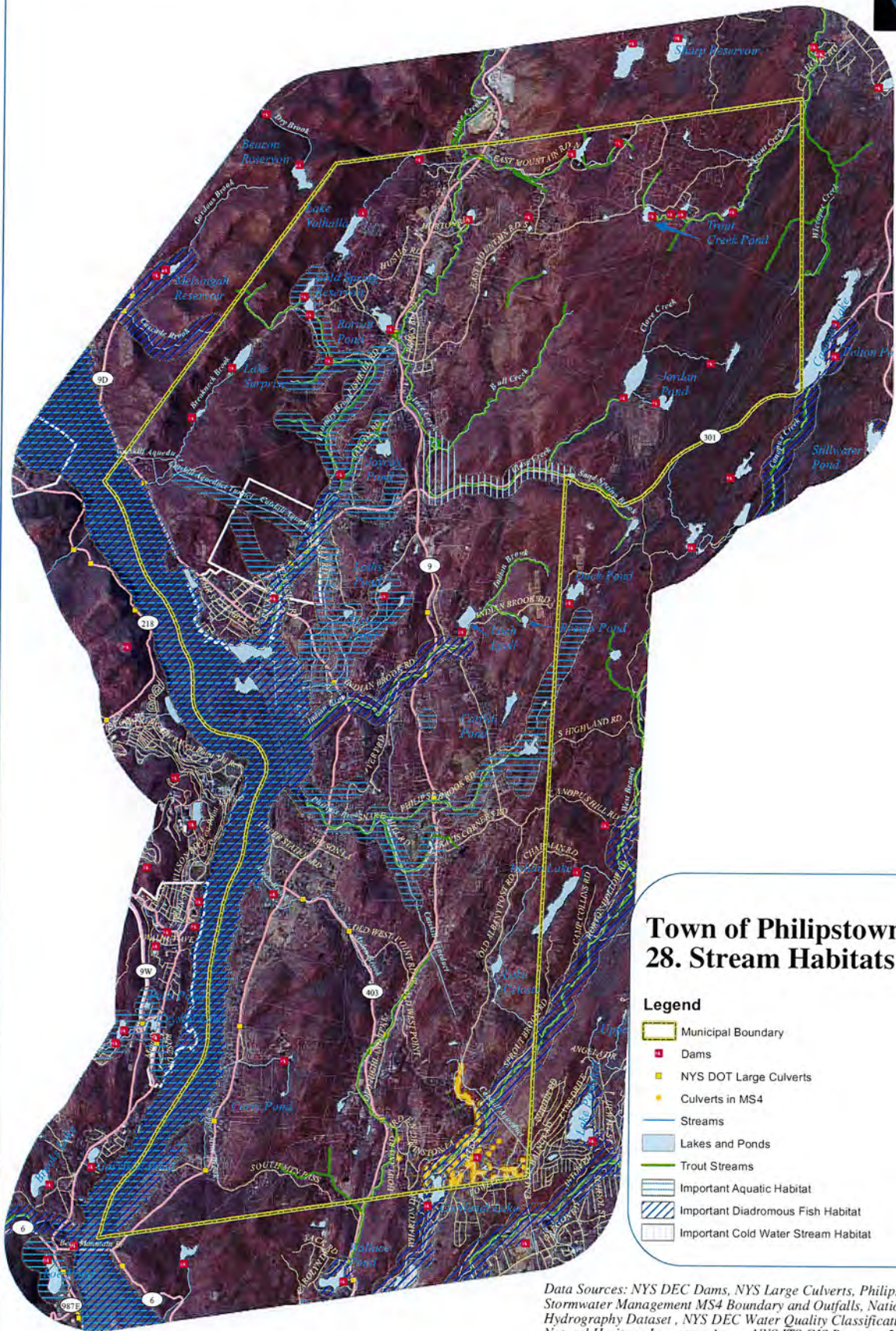
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown 28. Stream Habitats

#### Legend

- Municipal Boundary
- Dams
- NYS DOT Large Culverts
- Culverts in MS4
- Streams
- Lakes and Ponds
- Trout Streams
- Important Aquatic Habitat
- Important Diadromous Fish Habitat
- Important Cold Water Stream Habitat

1 in = 1 miles

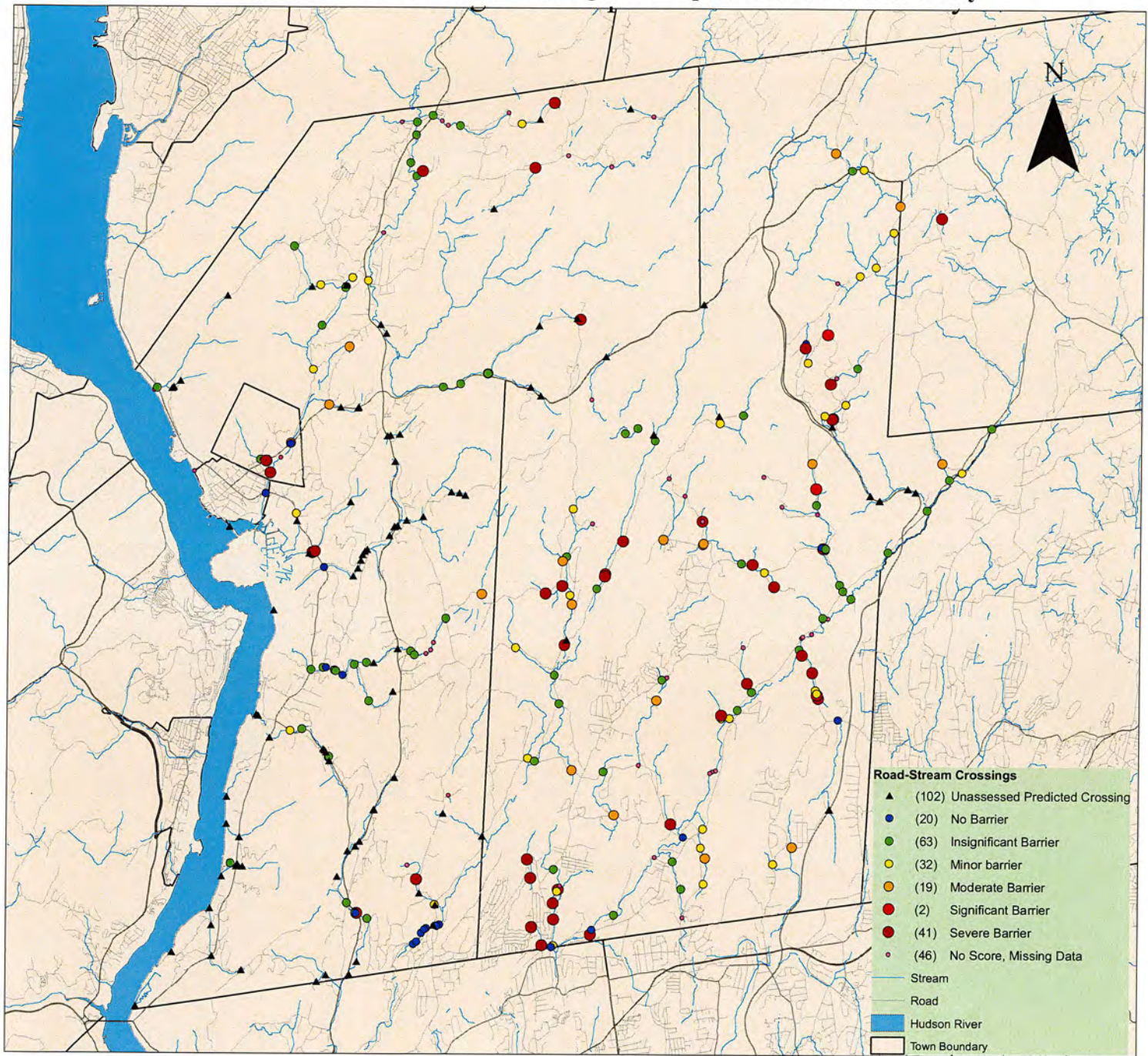
0 0.5 1 2 3 Miles

Data Sources: NYS DEC Dams, NYS Large Culverts, Philipstown Stormwater Management MS4 Boundary and Outfalls, National Hydrography Dataset, NYS DEC Water Quality Classifications, Natural Heritage Important Areas, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



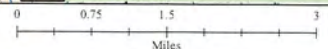


## 29. Third Party Map - Road-Stream Crossings in Philipstown and Putnam Valley



**Hudson River  
Estuary Program**

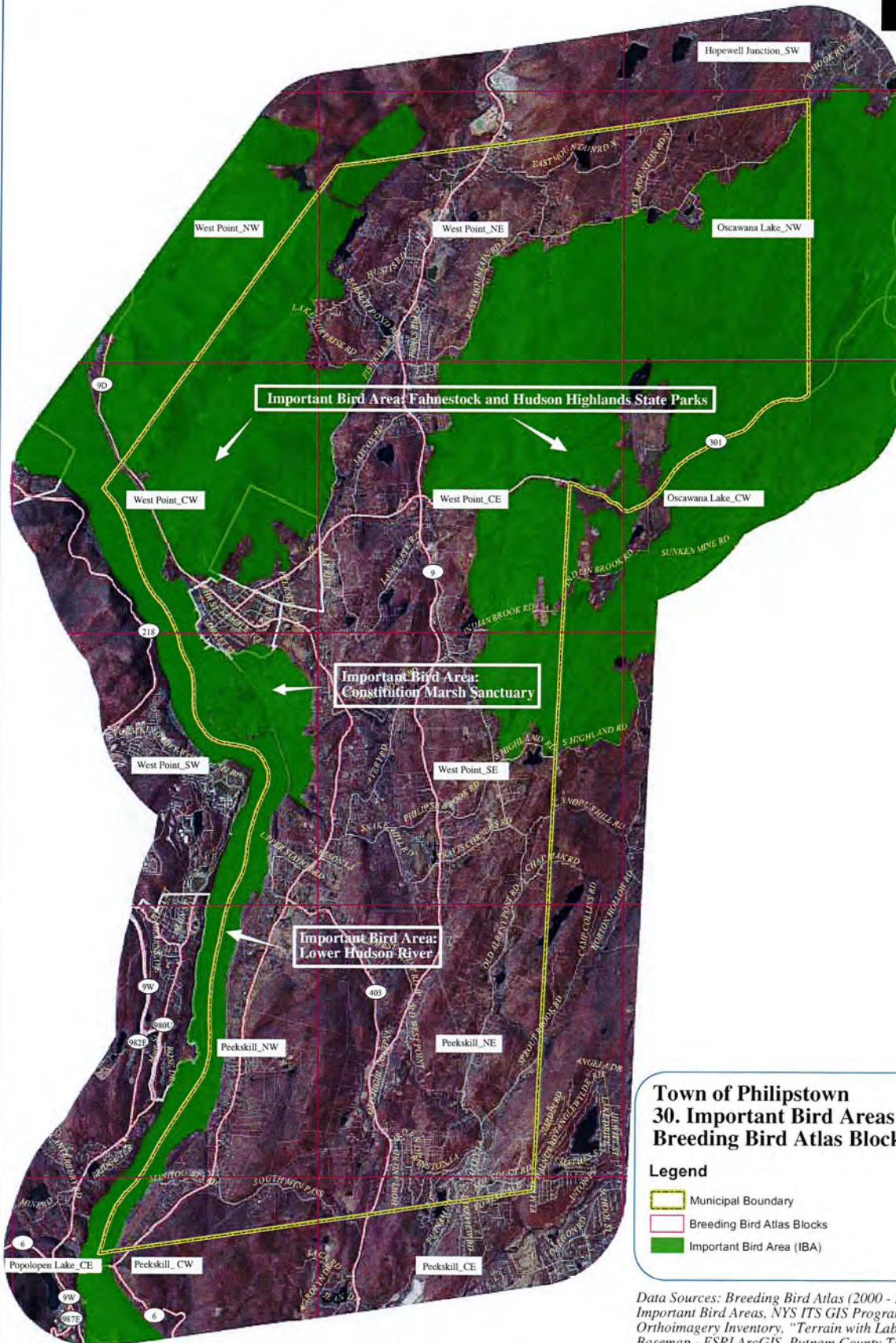
A Program of the New York State Department of Environmental Conservation





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 30. Important Bird Areas and Breeding Bird Atlas Blocks

### Legend

- Municipal Boundary
- Breeding Bird Atlas Blocks
- Important Bird Area (IBA)

Data Sources: Breeding Bird Atlas (2000 - 2005), Audubon Important Bird Areas, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020

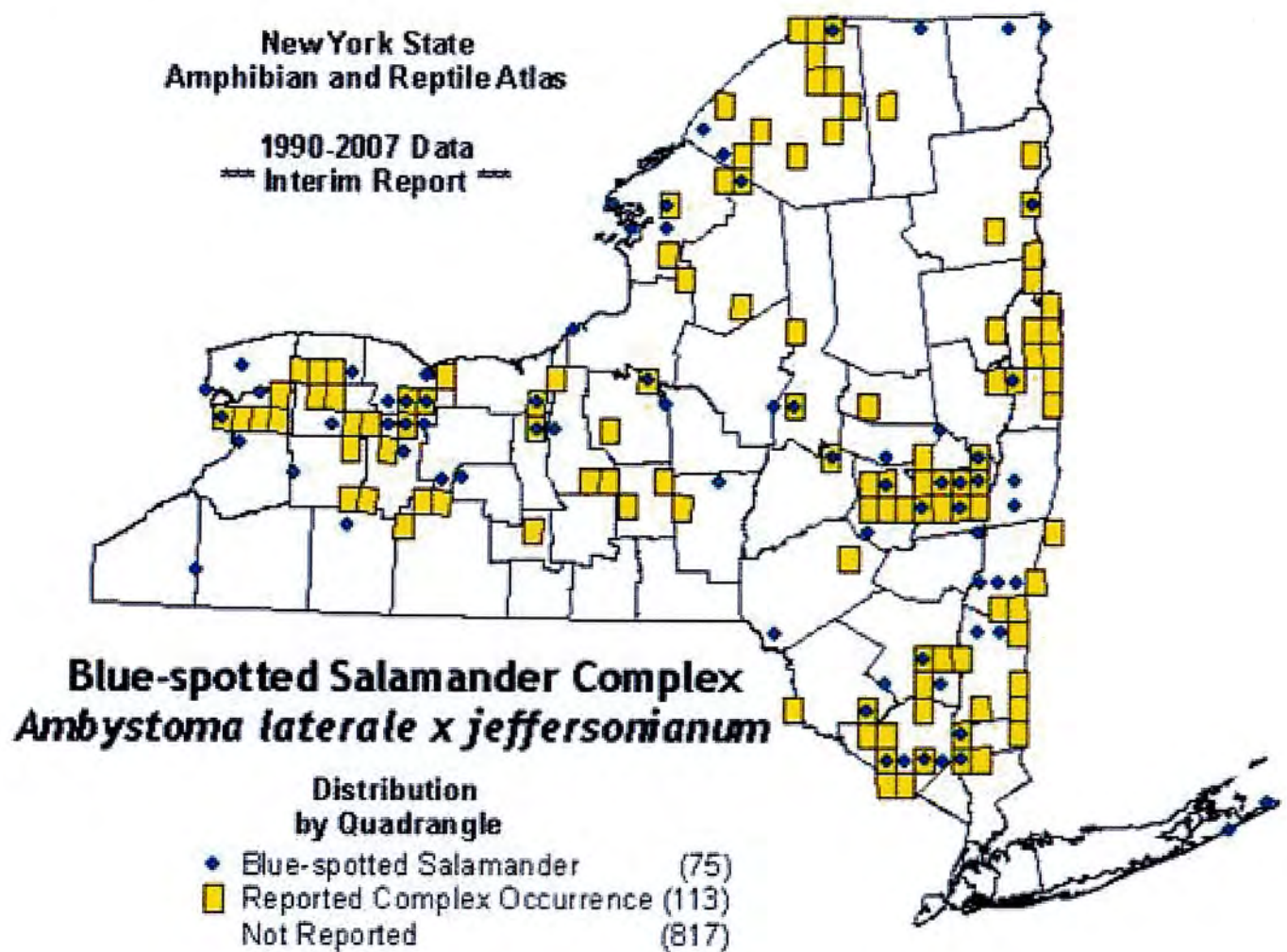


1 in = 1 miles

0 0.5 1 2 3 Miles

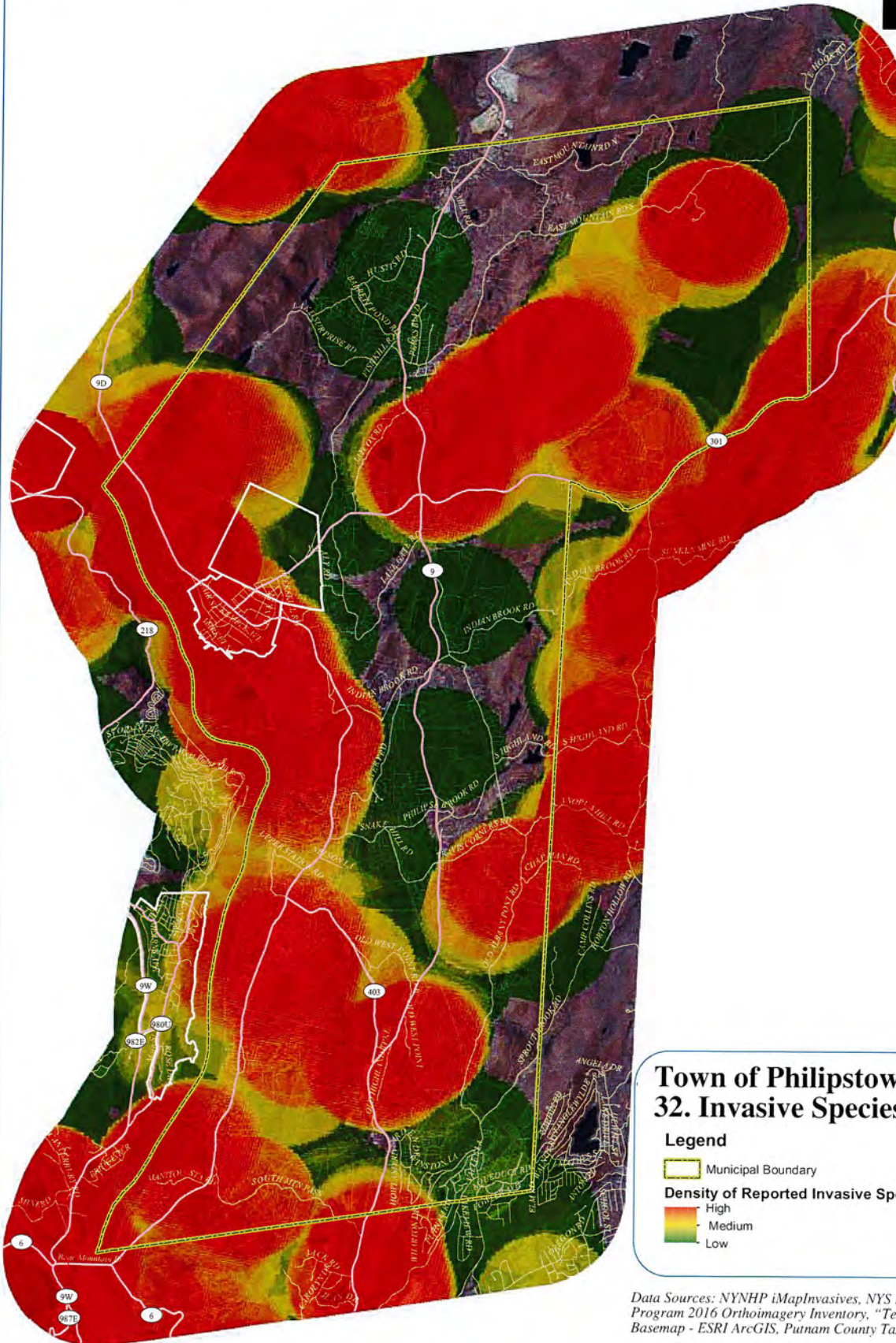


### 31. Third Party Map - Important Amphibian and Reptile Areas (Example Map)



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 32. Invasive Species

### Legend

Municipal Boundary

### Density of Reported Invasive Species

High  
 Medium  
 Low

Data Sources: NYNHP iMapInvasives, NYS ITS GIS  
Program 2016 Orthoimagery Inventory, "Terrain with Labels"  
Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



1 in = 1 miles  
0 0.5 1 2 3 Miles

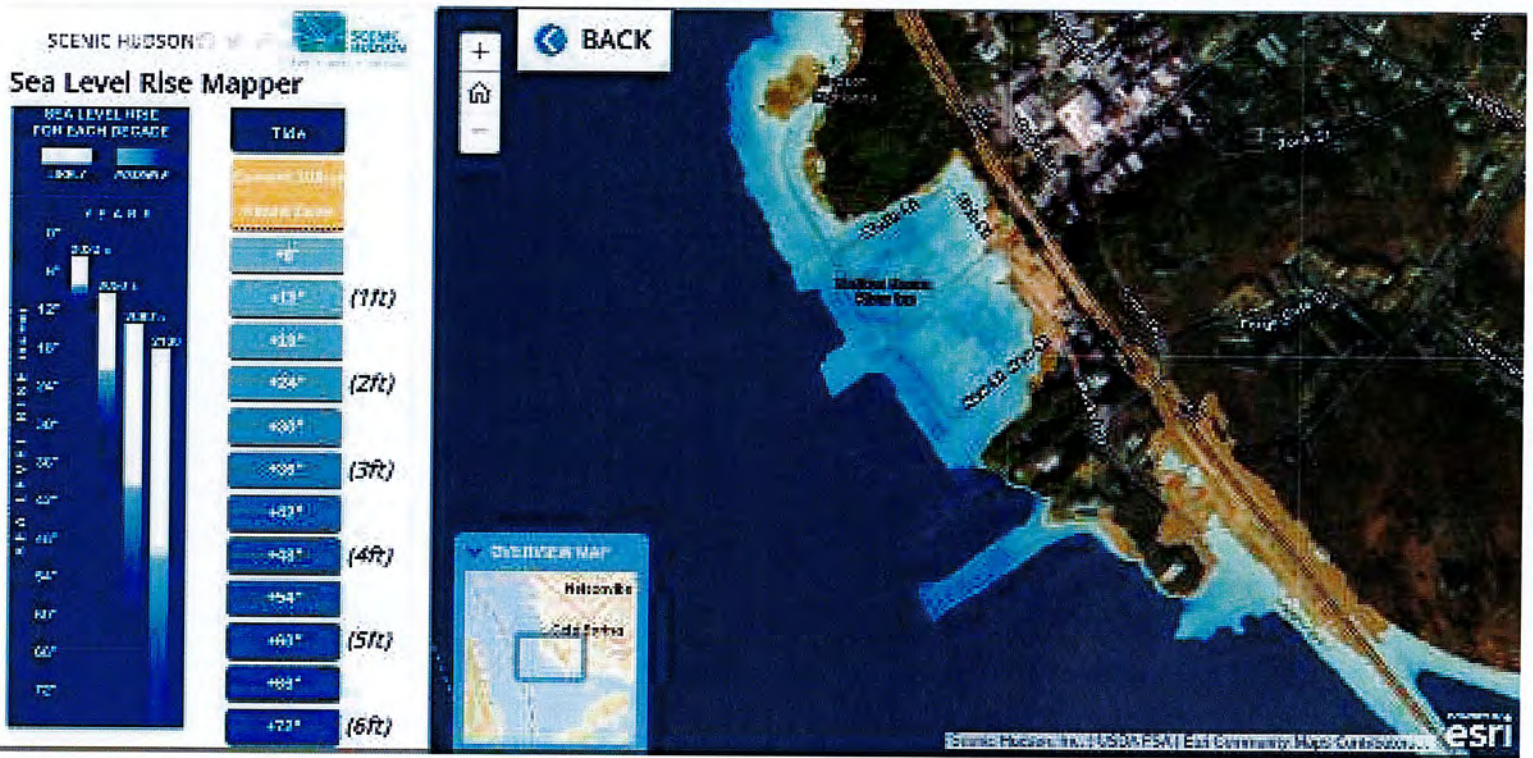
Map Created by Max Garfinkle NRRO Town of Philipstown

Date: 12/13/2020

This map is intended for informational purposes only and should not be used for legal determinations.



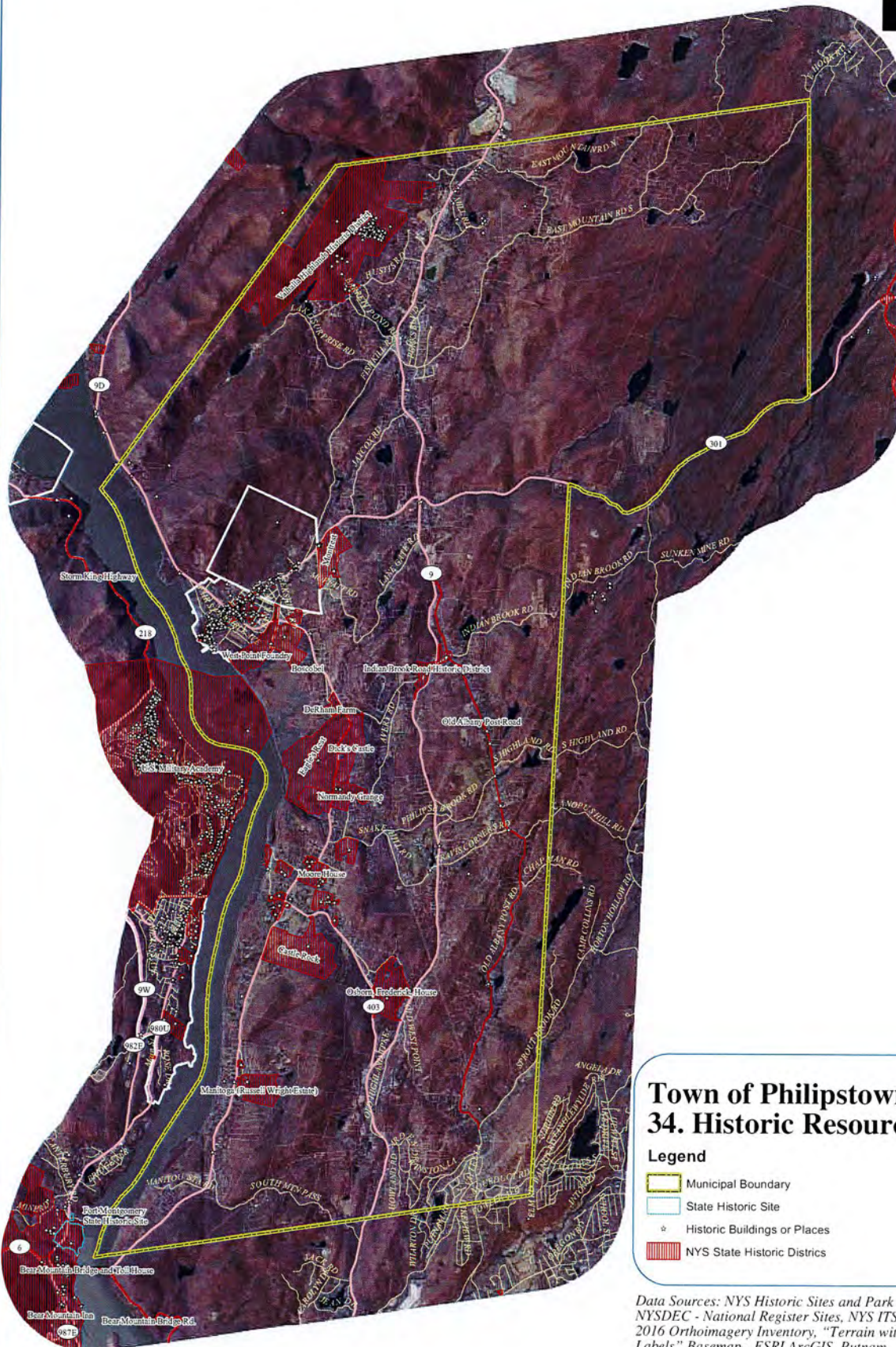
### 33. Third Party Map - Sea Level Rise (Example Shoreline)





# Town of Philipstown

## Natural Resource Inventory



### Town of Philipstown

#### 34. Historic Resources

##### Legend

- Municipal Boundary
- State Historic Site
- ☆ Historic Buildings or Places
- NYS State Historic Districts

Data Sources: NYS Historic Sites and Park Boundary, NYSDEC - National Register Sites, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



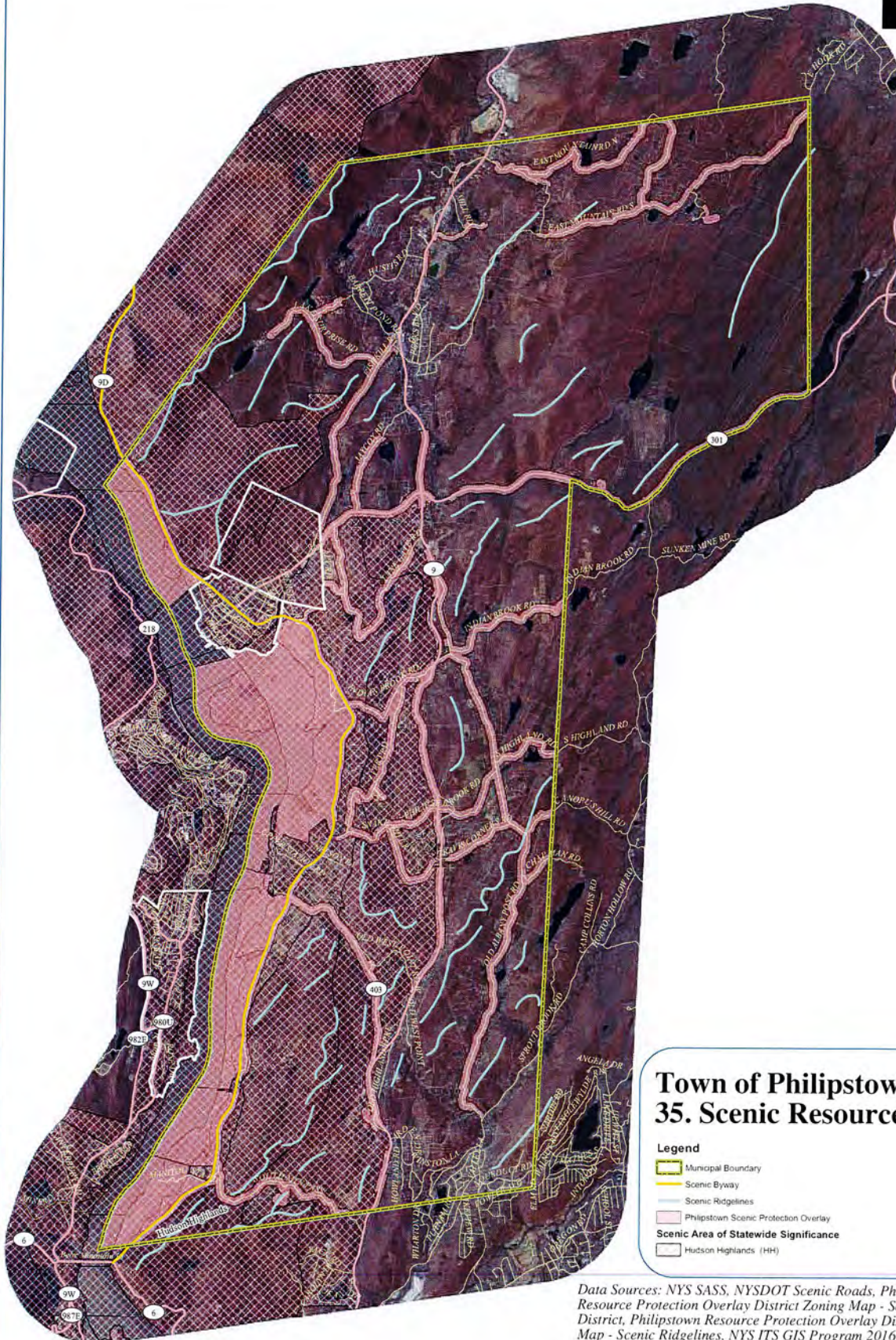
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 35. Scenic Resources

### Legend

- Municipal Boundary
- Scenic Byway
- Scenic Ridgelines
- Philipstown Scenic Protection Overlay
- Scenic Area of Statewide Significance
- Hudson Highlands (HH)

Data Sources: NYS SASS, NYSDOT Scenic Roads, Philipstown Resource Protection Overlay District Zoning Map - Scenic Overlay District, Philipstown Resource Protection Overlay District Zoning Map - Scenic Ridgelines, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



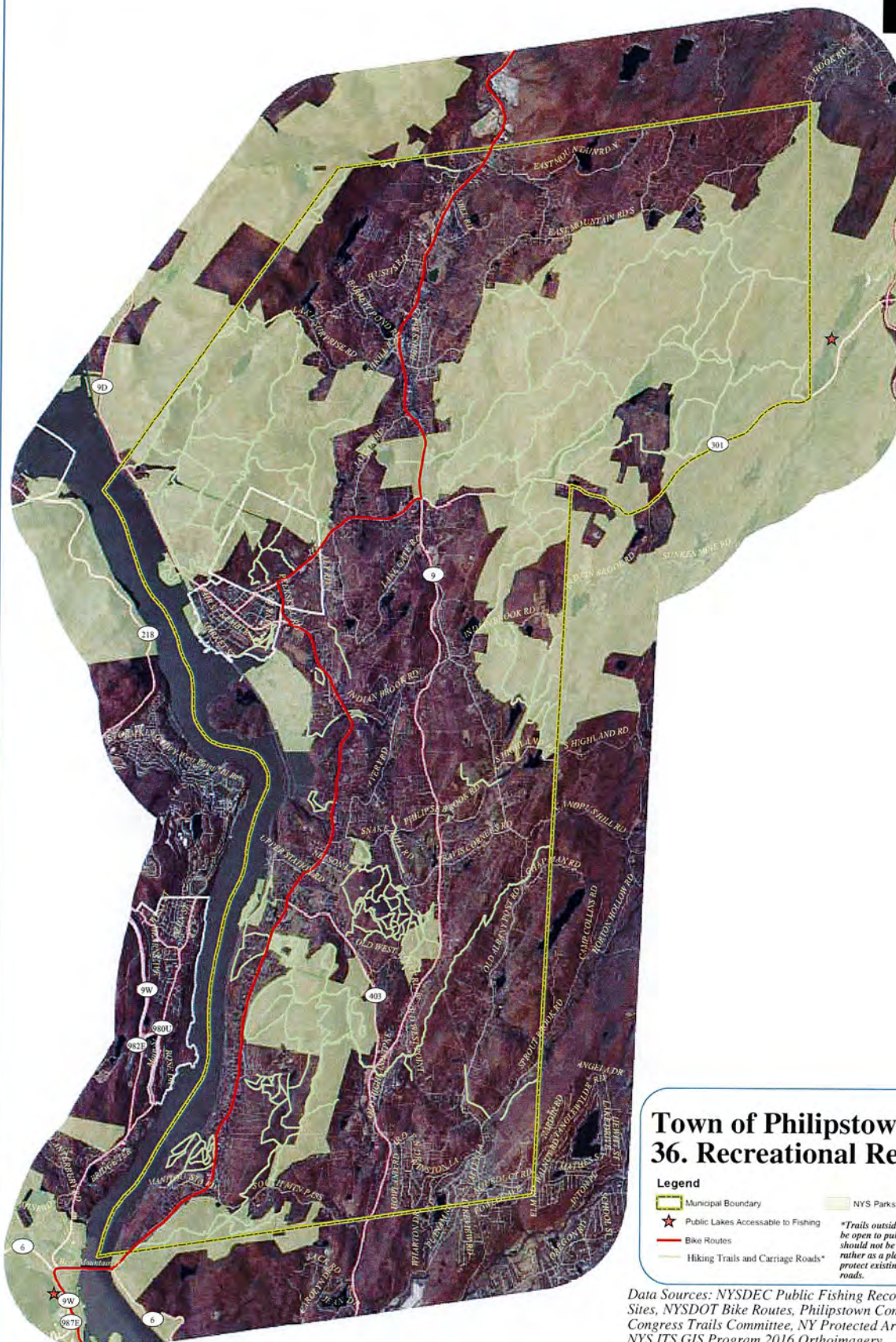
1 in = 1 miles

0 0.5 1 2 3 Miles



# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 36. Recreational Resources

### Legend

- Municipal Boundary
- ★ Public Lakes Accessible to Fishing
- Bike Routes
- Hiking Trails and Carriage Roads\*
- NYS Parks

\*Trails outside of state parks may not be open to public access. This map should not be used as a trail map, but rather as a planning reference to protect existing trails and carriage roads.

Data Sources: NYSDEC Public Fishing Recommended Sites, NYSDOT Bike Routes, Philipstown Community Congress Trails Committee, NY Protected Areas Database, NYS ITS GIS Program 2016 Orthoimagery Inventory, "Terrain with Labels" Basemap - ESRI ArcGIS, Putnam County Tax Parcels 2020



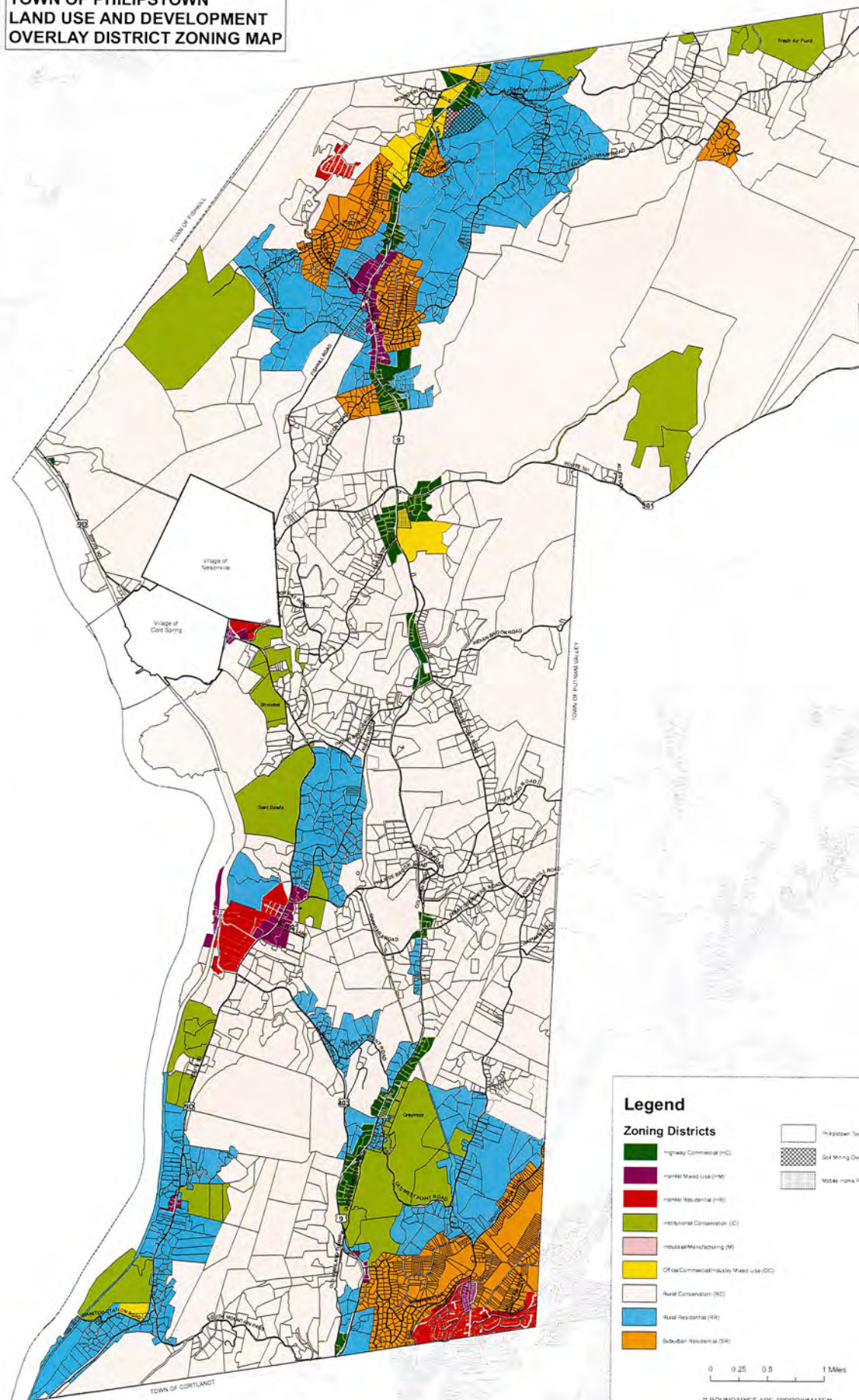
1 in = 1 miles

0 0.5 1 2 3 Miles



# 37. Third Party Map - Zoning Districts

## TOWN OF PHILIPSTOWN LAND USE AND DEVELOPMENT OVERLAY DISTRICT ZONING MAP



### Legend

#### Zoning Districts

- Highway Commercial (HC)
- Homebased Mixed Use (HMC)
- Homebased Residential (HR)
- Institutional Conservation (IC)
- Industrial/Manufacturing (IM)
- Office/Commercial/Industrial Mixed Use (OC)
- Rural Conservation (RC)
- Rural Residential (RR)
- Suburban Residential (SR)
- Philipstown Town Boundary
- Gold Mining Overlay District (SMO)
- Mobile Home Park Overlay District (MHO)

0 0.25 0.5 1 Miles

BOUNDARIES ARE APPROXIMATE

DATA SOURCE:  
Putnam County IT Dept

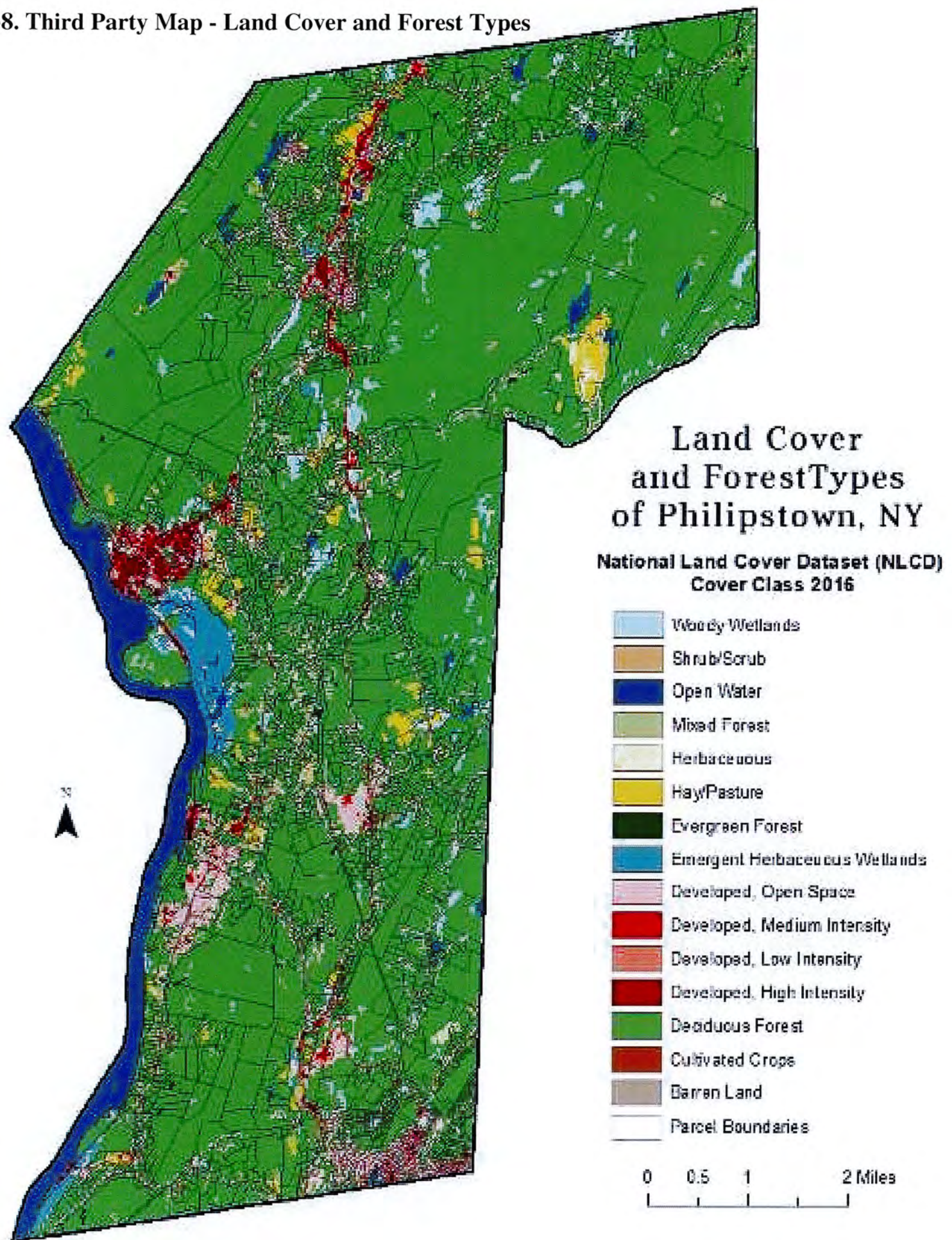
Revised 07/01/2014  
to reflect change made by  
local law #1 of 2014 (S21114)



1:24,000



### 38. Third Party Map - Land Cover and Forest Types

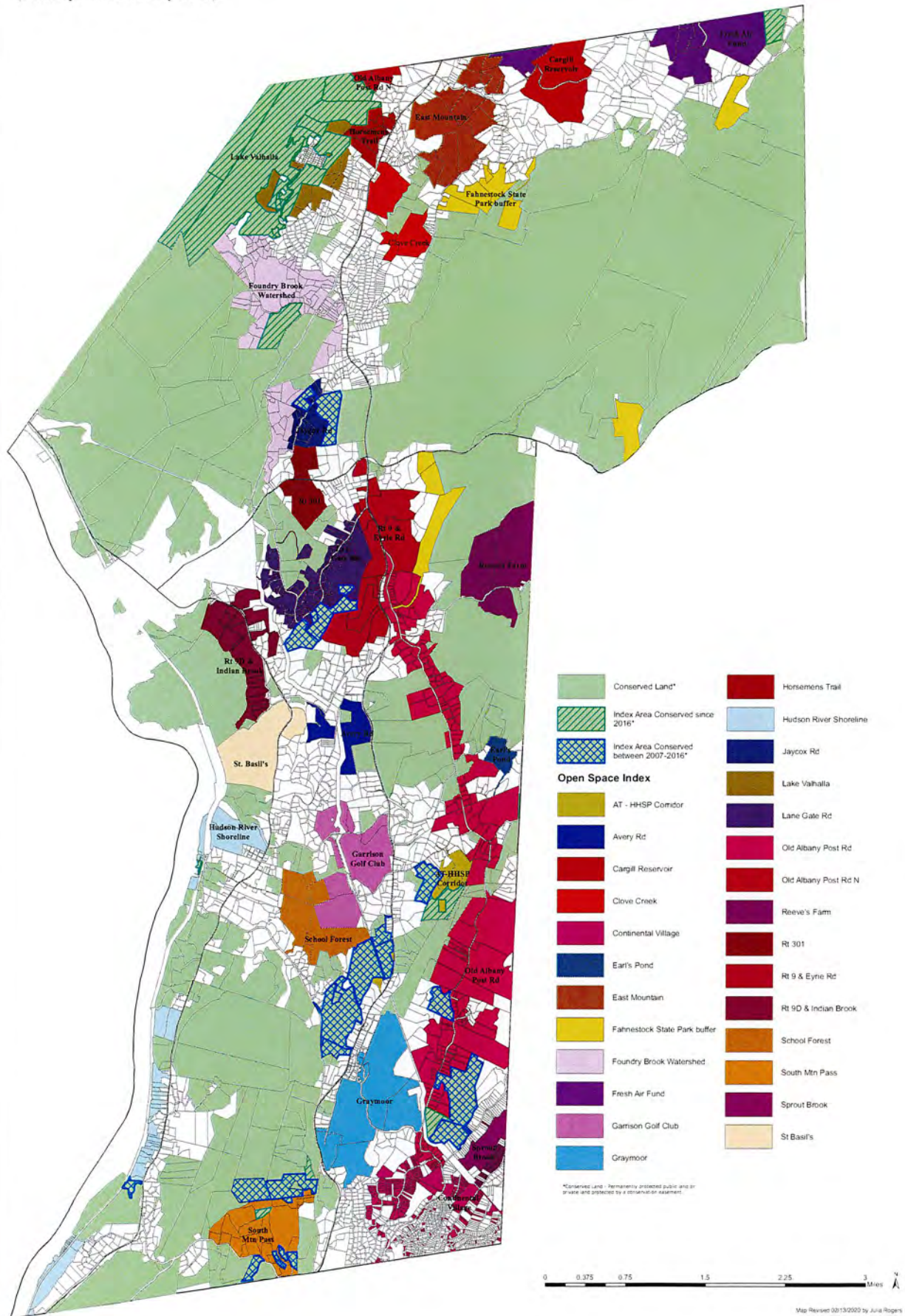


NLCD 2016 Land Cover .Multi-Resolution Land Characteristics Consortium (U.S.).  
National land cover dataset (NLCD). eParcel Putnam County IT/GIS



# 39. Third Party Map - Conservation Open Areas and Open Space Overlay

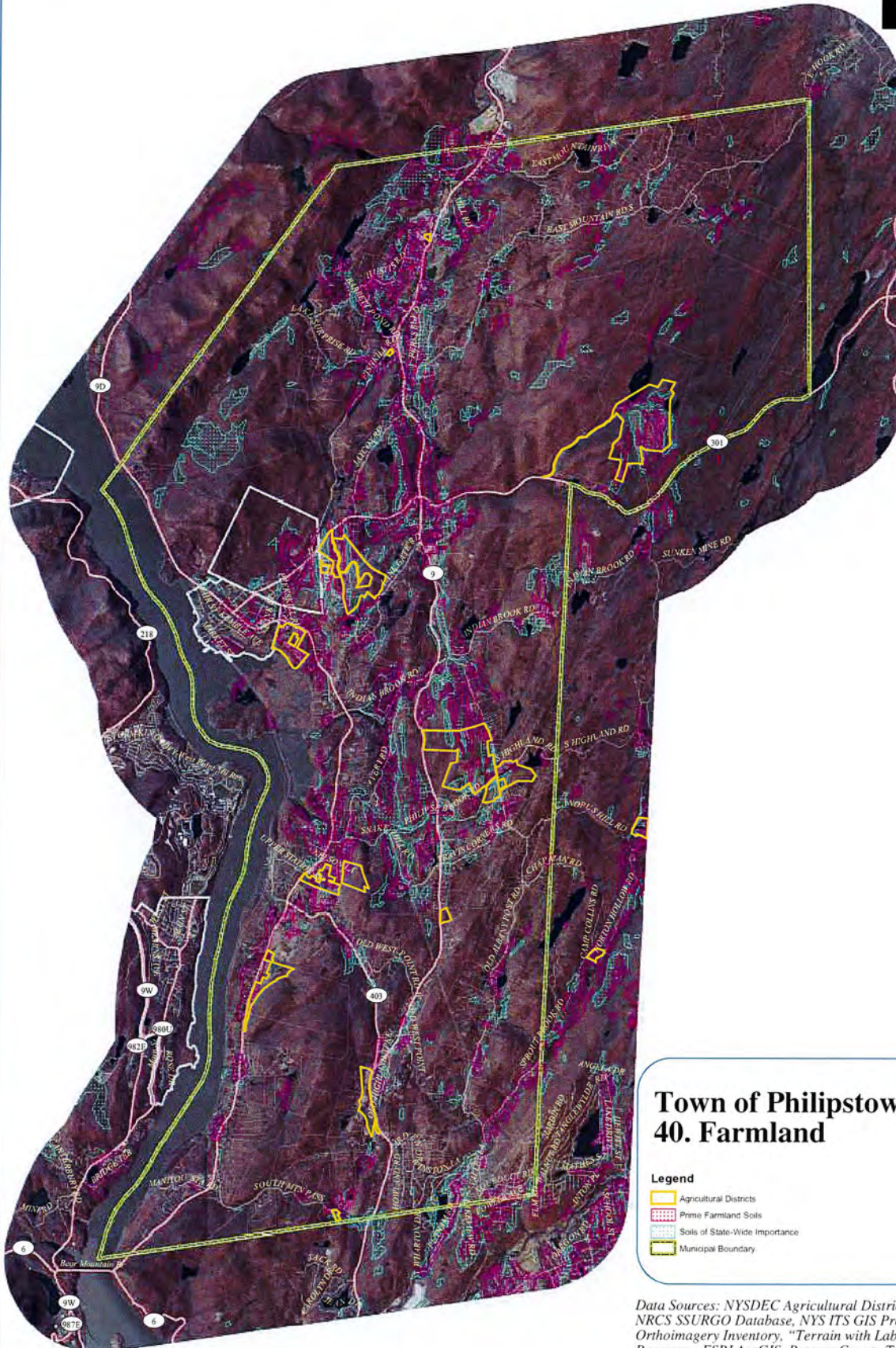
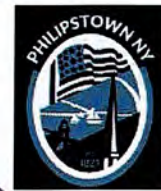
Conservation Open Areas Map  
Philipstown, NY  
(Updated June 2016)  
(Draft updated February 2020)





# Town of Philipstown

Natural Resource Inventory



## Town of Philipstown 40. Farmland

- Legend**
- Agricultural Districts
  - Prime Farmland Soils
  - Soils of State-Wide Importance
  - Municipal Boundary

Data Sources: NYSDEC Agricultural District Boundaries,  
NRCSSURGO Database, NYS ITS GIS Program 2016  
Orthoimagery Inventory, "Terrain with Labels"  
Basemap - ESRI ArcGIS, Putnam County Tax  
Parcels 2020



1 in = 1 miles





#46.

Committee Mtg **Audit & Administration** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

#### **APPROVAL/ RENEW CONTRACT/ OUTSIDE AUDITORS**

**WHEREAS, by Resolution #174 of 2020 the Putnam County Legislature designated O'Connor Davies, LLP for outside services for the fiscal years 2020 - 2024 under the terms set forth in their September 18, 2020, response to a Request for Proposal; and**

**WHEREAS, said Request for Proposal included an option of two, one year renewals; and**

**WHEREAS, the Putnam County Legislature desires to exercise the option to renew the contract agreement with OConnor Davies, LLP for the year 2025 under the terms set forth in their letter of December 5, 2025, to Legislative Chairwoman Sayegh; now therefore be it**

**RESOLVED, that the Putnam County Legislature approves the renewal of the contract with O'Connor Davies, LLP for outside services for the year 2025 under the terms set forth in their letter of December 5, 2025.**

**Attached Backup  
is  
CONFIDENTIAL**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh



# 4m.

Committee Mtg **Audit & Administration** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – BUDGETARY AMENDMENT (25A059) – COMMISSIONERS OF BOARD OF ELECTIONS – RECOGNIZE GRANT FUNDS FROM NEW YORK STATE FOR ELECTRONIC POLL BOOKS**

WHEREAS, Commissioners of Board of Elections (BOE) requested Budgetary Amendment (25A059) to recognize grant funds from New York State for Electronic Poll Books; and

WHEREAS, the Audit & Administration Committee has reviewed and approved said budgetary amendment; now therefore be it

RESOLVED, that the following budgetary amendment:

**Increase Estimated Revenues:**

10145000 430972	BOE Capital Grants Project	91,432
-----------------	----------------------------	--------

**Increase Estimated Appropriations:**

10145000 54783	BOE – Licensing & Accessories	2,133
10145000 52630	BOE – Computer Equipment	4,824

**Increase Appropriations:**

10199000 54980	General Contingencies	84,475
----------------	-----------------------	--------

**2025 Fiscal Impact – (84,475)**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio  
\_\_\_\_\_  
Legislator Birmingham  
\_\_\_\_\_  
Legislator Crowley  
\_\_\_\_\_  
Legislator Ellner  
\_\_\_\_\_  
Legislator Gouldman  
\_\_\_\_\_  
Legislator Jonke  
\_\_\_\_\_  
Legislator Montgomery  
\_\_\_\_\_  
Legislator Russo  
\_\_\_\_\_  
Chairwoman Sayegh

WILLIAM J. CARLIN, JR.  
CPA  
Commissioner Of Finance



SHEILA M. BARRETT  
First Deputy Commissioner Of Finance

ALEXANDRA GORDON  
Deputy Commissioner Of Finance

DEPARTMENT OF FINANCE

December 5, 2025

Ms. Diane Trabulsy, Clerk  
Putnam County Legislature  
40 Gleneida Avenue  
Carmel, NY 10512

Dear Ms. Trabulsy,

At the request of the Board of Elections Commissioner, the following budgetary is required.

Increase Estimated Revenues:

10145000.430972	BOE Capital Grants Project	\$ 91,432
-----------------	----------------------------	-----------

Increase Estimated Appropriations:

10145000.54783	BOE – Licensing & Accessories	\$ 2,133
10145000.52630	BOE – Computer Equipment	\$ 4,824

Increase Appropriations:

10199000.54980	General Contingencies	\$ 84,475
----------------	-----------------------	-----------

2025 Fiscal Impact –(84,475)  
2026 Fiscal Impact -0-

This budgetary is to recognize the grant from New York State for Electronic Poll Books.

AUTHORIZATION:

Date	Commissioner of Finance/Designee: Initiation by \$0 - \$5,000.00
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Date	County Executive/Designee: Authorized for Legislative Consideration \$5,000.01 - \$10,000
------	---

Date	Chairperson Audit/Designee: \$0 - \$10,000.00
------	---

25A059

Date	Audit & Administration Committee: \$10,000.01 - \$25,000.00
------	---

cc All  
12-18 Audit  
12-18 Year End #4m  
RCSO

2025 DEC - 8 PM 4:16  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY



# STATE OF NEW YORK CONTRACT FOR GRANTS FACE PAGE

<p>STATE AGENCY (Name &amp; Address):</p> <p>New York State Board of Elections 40 North Pearl Street, Suite 5 Albany, NY 12207</p>	<p>BUSINESS UNIT/DEPT. ID: BOE01/1110000</p> <p>CONTRACT NUMBER: C005038</p> <p>CONTRACT TYPE (select one):</p> <p><input type="checkbox"/> Multi-Year Agreement</p> <p><input type="checkbox"/> Simplified Renewal Agreement</p> <p><input checked="" type="checkbox"/> Fixed Term Agreement</p>
<p>CONTRACTOR NAME:</p> <p>Putnam County Board of Elections</p>	<p>TRANSACTION TYPE:</p> <p><input checked="" type="checkbox"/> New</p> <p><input type="checkbox"/> Renewal (list periods):</p> <p><input type="checkbox"/> Amendment (list periods):</p>
<p>CONTRACTOR IDENTIFICATION NUMBERS:</p> <p>NYS Vendor ID Number: 1000002443</p> <p>Federal Tax ID Number: 14-6002759</p>	<p>PROJECT NAME:</p> <p>Electronic Poll Book Grant Program</p> <p>ASSISTANCE LISTINGS (formerly CFDA) NUMBER (ALN) (Federally Funded Grants Only):</p>
<p>CONTRACTOR PRIMARY MAILING ADDRESS:</p> <p>25 Old Route 6 Carmel NY 10512</p> <p>CONTRACTOR PAYMENT ADDRESS:</p> <p><input checked="" type="checkbox"/> Check if same as primary mailing address</p> <p>CONTRACT MAILING ADDRESS:</p> <p><input checked="" type="checkbox"/> Check if same as primary mailing address</p> <p>CONTRACTOR PRIMARY E-MAIL ADDRESS:</p>	<p>CONTRACTOR STATUS:</p> <p><input type="checkbox"/> For Profit</p> <p><input checked="" type="checkbox"/> Municipality</p> <p><input type="checkbox"/> Tribal Nation</p> <p><input type="checkbox"/> Individual</p> <p><input type="checkbox"/> Not-for-Profit</p> <p>Charities Registration Number:</p> <p>Exemption Status/Code:</p> <p><input type="checkbox"/> Sectarian Entity</p> <div style="border: 1px solid black; padding: 5px; transform: rotate(-5deg);"> <p>RECEIVED</p> <p>FEB 06 2025</p> <p>NEW YORK STATE BOARD OF ELECTIONS</p> </div>

# STATE OF NEW YORK CONTRACT FOR GRANTS FACE PAGE

<p><b>CURRENT CONTRACT TERM:</b></p> <p>From: 04/01/2024      To: 03/31/2025</p> <p><b>AMENDED TERM:</b></p> <p>From:                      To:</p>	<p><b>CONTRACT FUNDING AMOUNT</b>  <i>(Fixed Term - enter current period amount; Simplified Renewal - enter cumulative amount to date; Multi-year - enter total projected amount of the contract):</i></p> <p>CURRENT: \$91,431.55</p> <p>AMENDED:</p> <p>FUNDING SOURCE(S)</p> <p> <input checked="" type="checkbox"/> State  <input type="checkbox"/> Federal  <input type="checkbox"/> Other         </p>
---	---

**ATTACHMENTS INCLUDED AS PART OF THIS AGREEMENT (select all that apply):**

Appendix A

Attachment A:

- ☒ A-1 Agency Specific Terms and Conditions
- ☐ A-2 Program Specific Terms and Conditions
- ☐ A-3 Federally Funded Grants and Requirements Mandated by Federal Laws

Attachment B:

- ☒ B-1 Expenditure Based Budget
- ☐ B-2 Performance Based Budget
- ☐ B-3 Capital Budget
- ☐ B-4 Net Deficit Budget
- ☐ B-1(A) Expenditure Based Budget (Amendment)
- ☐ B-2(A) Performance Based Budget (Amendment)
- ☐ B-3(A) Capital Budget (Amendment)
- ☐ B-4(A) Net Deficit Budget (Amendment)

Attachment C: Work Plan

Attachment D: Payment and Reporting

Other:



IN WITNESS THEREOF, the parties hereto have executed or approved this Master Contract on the dates below their signatures.

CONTRACTOR:

Putnam County

By: 

Kevin M. Byrne

Printed Name

Title: Putnam County Executive

Date: 1/31/25

STATE AGENCY:

NYS Board of Elections

By: 

Kristen Zebrowski Stavisky

Printed Name

Title: Kristen Zebrowski Stavisky

Raymond J. Riley III

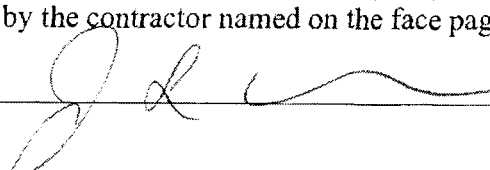
Date: Co-Executive Directors

2.7.2025

STATE OF NEW YORK

County of Putnam

On the 31<sup>st</sup> day of January, 2025 before me personally appeared Kevin M. Byrne, to me known, who being by me duly sworn, did depose and say that he/she resides at Mahopac, NY, that he/she is the County Executive of the County of Putnam, the contractor described herein which executed the foregoing instrument; and that he/she signed his/her name thereto as authorized by the contractor named on the face page of this Master Contract.

(Notary) 

Contract. JENNIFER L CARUSO  
NOTARY PUBLIC, STATE OF NEW YORK  
Registration No. 02CA6395487  
Qualified in Putnam County  
My Commission Expires September 15, 2027

ATTORNEY GENERAL'S SIGNATURE

STATE COMPTROLLER'S SIGNATURE

Printed Name

Title: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED

DEPT. OF AUDIT & CONTROL

Printed Name

Feb 26 2025

Laura Coyle

Title: \_\_\_\_\_

Date: \_\_\_\_\_

FOR THE STATE COMPTROLLER

## Pratt, Elijah D (OGS)

---

**From:** Maggi, Benjamin <Benjamin.Maggi@ag.ny.gov>  
**Sent:** Friday, February 21, 2025 9:16 AM  
**To:** Pratt, Elijah D (OGS); Contract Approval  
**Cc:** Courcelle, Matthew (OGS)  
**Subject:** Approved - RE: OGS SUBMISSION AS HOSTING AGENCY / BOE01-C005038-1110000 / Putnam County /E-Poll Book

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Approved as to Form: 2/21/2025 by Benjamin Maggi  
Received: 2/19/2025

OAG: CAS please file and enter. "G" Amount: 91,431.55

Reminder: Agencies must forward the contract approved by the OAG Contract Approval Section along with the email in which the OAG Contract Approval Section approved the contract, to OSC via the Comptroller's EDSS system. If you are not enrolled in the EDSS system and have not made alternative arrangements with OSC on how to submit your transaction, please contact OSC at 518-408-4672 or email [ITServiceDesk@osc.ny.gov](mailto:ITServiceDesk@osc.ny.gov).

Benjamin L. Maggi  
Section Chief  
Contract Approval Section  
New York State Office of the Attorney General  
Contract Approval Section  
The Capitol, Albany, NY 12224

### ATTORNEY CLIENT PRIVILEGED/NOT FOR DISSEMINATION

The information contained in this electronic mail message is privileged and confidential and intended only for the individual or individuals named above. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please reply to the sender immediately to notify us of the error and delete the original message. Thank you.

**From:** Pratt, Elijah D (OGS) <Elijah.Pratt@ogs.ny.gov>  
**Sent:** Wednesday, February 19, 2025 10:03 AM  
**To:** Contract Approval <contractapproval@ag.ny.gov>  
**Cc:** Courcelle, Matthew (OGS) <Matthew.Courcelle@ogs.ny.gov>  
**Subject:** OGS SUBMISSION AS HOSTING AGENCY / BOE01-C005038-1110000 / Putnam County /E-Poll Book

---

[EXTERNAL]

Hello,

Enclosed for review is a proposed grant contract between Putnam County Board of Elections and the NYS Board of Elections for the purpose of "E-Poll Book Grant Program".



OGS is submitting as a hosting agency on behalf of BOE.

## **Elijah Pratt**

Contract Management Specialist 1

### **Office of General Services**

32nd Floor, Corning Tower, ESP, Albany, NY 12242

p. (518) 486-3338 | [Elijah.Pratt@ogs.ny.gov](mailto:Elijah.Pratt@ogs.ny.gov)

[www.ogs.ny.gov](http://www.ogs.ny.gov)

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**STATE OF NEW YORK  
CONTRACT FOR GRANTS**

This State of New York Contract for Grants, including all attachments and appendices (hereinafter referred to as "Contract" or "Agreement"), is hereby made by and between the State of New York acting by and through the applicable State Agency (State or Agency) and the public or private entity (Contractor) identified on the face page hereof (Face Page).

**WITNESSETH:**

**WHEREAS**, the State has the authority to regulate and provide funding for the operation of a program or performance of a service; and desires to contract with a responsive and responsible Contractor possessing the necessary resources to provide such services or work; and

**WHEREAS**, the Contractor is ready, willing, and able to provide such services or work and possesses or can make available all necessary qualified personnel, licenses, facilities and expertise to perform or have performed the services or work, as applicable, required pursuant to and in compliance with the terms of the Contract, specifications outlined in the grant solicitation, resulting award, and other associated documents comprising the Agreement.

**NOW THEREFORE**, in consideration of the promises, responsibilities, and covenants herein, the State and the Contractor agree to as follows:

**STANDARD TERMS AND CONDITIONS**

**I. GENERAL PROVISIONS**

**A. Order of Precedence:** In the event of a conflict among (i) the terms of the Contract or (ii) between the terms of the Contract and the original request for proposal, solicitation document, the program application or other documentation that was completed and executed by the Contractor in connection with a grant award, the order of precedence is as follows:

1. Appendix A – Standard Clauses for New York State Contracts
2. Contract for Grants Standard Terms and Conditions
3. Modifications to the Face Page
4. Modifications to Attachment A-2: Program Specific Terms and Conditions; Attachment A-3: Federally Funded Grants and Requirements Mandated by Federal Laws (modifications not required by the Federal government)<sup>1</sup>, Attachment B: Budget, Attachment C: Work Plan, and Attachment D: Payment and Reporting
5. The Face Page

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<sup>1</sup> For modifications required by the Federal government see Section I(M).



6. Attachment A-2: Program Specific Terms and Conditions, Attachment A-3: Federally Funded Grants and Requirements Mandated by Federal Laws, Attachment B: Budget, Attachment C: Work Plan; and Attachment D: Payment and Reporting
7. Modifications to Attachment A-1: Agency Specific Terms and Conditions
8. Attachment A-1: Agency Specific Terms and Conditions
9. Other attachments, including, but not limited to, the request for proposal or program application, if incorporated by reference on the Face Page

The documents above, collectively, comprise the entire Agreement and govern the program for the entirety of the term of the Contract and any resulting renewals.

**B. Funding:** Funding for the term of the Contract shall not exceed the amount specified as "Contract Funding Amount" on the Face Page or as subsequently revised to reflect an approved renewal or cost amendment. Funding for the initial and subsequent periods of the Contract shall not exceed the applicable amounts specified in the applicable Attachment B form (Budget).

**C. Contract Performance:** The Contractor shall perform all services or work, as applicable, and comply with all provisions of the Contract to the satisfaction of the State. The Contractor shall provide services or work, as applicable, and meet the program objectives summarized in Attachment C (Work Plan) in accordance with the provisions of the Contract, relevant laws, rules and regulations, administrative, program and fiscal guidelines, and where applicable, operating certificate for facilities or licenses for an activity or program.

**D. Modifications:** Any modifications to this Agreement, including any budgetary changes, must be mutually agreed to in writing by both parties and be reflected on the Face Page where such terms are modified. Modifications may be subject to the approval of the AG and OSC in accordance with Appendix A, Section 3, Comptroller's Approval. A modification that would result in a transfer of funds among program activities or budget cost categories that does not affect the amount, consideration, scope or other terms of such Contract may be subject to the approval of the AG and OSC where the amount of such modification is, as a proportion of the total value of the Contract, equal to or greater than ten percent for contracts of five million dollars or less, or five percent for contracts of more than five million dollars. Modifications that are not subject to the AG and OSC approval shall be processed in accordance with the guidelines stated in the Contract.

**E. Severability:** Any provision of the Contract that is held to be invalid, illegal or unenforceable in any respect by a court of competent jurisdiction, shall be ineffective only to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions hereof; provided, however, that the parties to the Contract shall attempt in good faith to reform the Contract in a manner consistent with the intent of any such ineffective provision for the purpose of carrying out such intent. If any provision is held void, invalid or unenforceable with respect to particular circumstances, it shall nevertheless remain in full force and effect in all other circumstances.

**F. Interpretation:** The headings in the Contract are inserted for convenience and reference only and do not modify or restrict any of the provisions herein. All personal pronouns used herein shall be considered gender neutral. The Contract has been made under the laws of the State of New York, and the venue for

resolving any disputes hereunder shall be in a court of competent jurisdiction of the State of New York.

**G. Notice:** All Notices under this Contract, including termination notices, shall be made in writing and directed to the representatives identified herein, or their designees and shall be transmitted by: a) certified or registered United States mail, return receipt requested; b) facsimile transmission; c) personal delivery; d) expedited delivery service; and/or e) e-mail. Notice shall be deemed to have been given either at the time of personal delivery or, in the case of expedited delivery service or certified or registered United States mail, as of the date of first attempted delivery at the address and in the manner provided herein, or in the case of facsimile transmission or e-mail, upon receipt.

The parties may, on written notice, designate other individuals as their representatives. Such representatives shall request, oversee, supervise, and accept performance of services provided by the Contractor and shall receive any required submissions. Whenever an action is to be taken, or approval for services given by the Agency, such action or approval may be given only by the representatives designated pursuant to this Section.

**H. Indemnification:** The Contractor shall be solely responsible and answerable in damages for all accidents, incidents, and/or injuries to persons (including death) or property arising out of or related to the services to be rendered by the Contractor or its subcontractors pursuant to this Contract. The Contractor shall indemnify and hold harmless the State and its officers and employees from claims, suits, actions, damages, and cost of every nature arising out of the provision of services pursuant to the Contract.

**I. Legal Action:** No litigation or regulatory action shall be brought against the State of New York, the State Agency, or against any county or other local government entity with funds provided under the Contract. The term "litigation" shall include commencing or threatening to commence a lawsuit, joining, or threatening to join as a party to ongoing litigation, or requesting any relief from the State of New York, the State Agency, or any county, or other local government entity. The term "regulatory action" shall include commencing or threatening to commence a regulatory proceeding or requesting any regulatory relief from the State of New York, the State Agency, or any county, or other local government entity.

**J. Partisan Political Activity and Lobbying:** Funds provided pursuant to the Contract shall not be used for any partisan political activity, or for activities that attempt to influence legislation or election or defeat of any candidate for public office.

**K. Reporting Fraud and Abuse:** Contractor acknowledges that it has reviewed information on how to prevent, detect, and report fraud, waste, and abuse of public funds, including information about the Federal False Claims Act, the New York State False Claims Act, and whistleblower protections and will comply with requirements therein.

**L. Reporting Risks to Performance:** If any specific event, conjunction of circumstances, or any occurrence involving the staff, volunteers, directors, officers, subcontractors, or program participants of the Contractor threatens the successful completion of this project, in whole or in part, the Contractor agrees to notify the State Agency within three (3) calendar days of becoming aware of the occurrence describing the occurrence and the risk it poses to performance under the Contract. The Contractor's notice shall include a written description of the event and a recommended solution. Such events may include, but not be limited to, death or serious injury, an arrest or possible criminal activity.

**M. Federally Funded Grants and Requirements Mandated by Federal Laws:** All the Specific Federal



requirements that are applicable to the Contract are identified in Attachment A-3 (Federally Funded Grants and Requirements Mandated by Federal Laws), attached hereto. To the extent that the Contract is funded, in whole or part, with Federal funds or mandated by Federal laws: (i) the provisions of the Contract that conflict with Federal rules, Federal regulations, or Federal program specific requirements shall not apply and (ii) to the extent that the modifications to Attachment A-3 are required by Federal requirements and conflict with other provisions of the Contract, the modifications to Attachment A-3 shall supersede all other provisions of this Contract; and (iii) the Contractor agrees to comply with all applicable Federal rules, regulations and program specific requirements including, but not limited to, those provisions that are set forth in Attachment A-3 (Federally Funded Grants and Requirements Mandated by Federal Laws), attached hereto.

#### **N. Renewal:**

1. **General Renewal:** The Contract may consist of successive periods on the same terms and conditions, as specified within the Contract (a "Simplified Renewal Contract"). Each additional or superseding period shall be on the forms specified by the State and shall be incorporated in the Contract.
2. **Renewal Notice to Not-for-Profit Contractors:** The Contract, as specified herein, may consist of successive periods on the same terms and condition referred to as a "Simplified Renewal Contract." Each additional or superseding period shall be on the forms specified by the State and shall be incorporated into the Contract. Pursuant to State Finance Law §179-t, if the Contract is with a not-for-profit Contractor and provides for a renewal option, the State shall notify the Contractor of the State's intent to renew or not to renew the Contract no later than ninety (90) calendar days prior to the end of the term of the Contract, unless funding for the renewal is contingent upon enactment of an appropriation, than thirty (30) calendar days after the appropriation becomes law, whichever is later. Notwithstanding the foregoing, in the event the State is unable to comply with the time frames set forth in this paragraph due to unusual circumstances beyond the control of the State ("Unusual Circumstances"), no payment of interest shall be due to the Contractor. For purposes of State Finance Law §179-t, "Unusual Circumstances" shall not mean the failure by the State to (i) plan for implementation of a program, (ii) assign sufficient staff resources to implement a program, (iii) establish a schedule for the implementation of a program or (iv) anticipate any other reasonably foreseeable circumstance. Notification to the Contractor of the State's intent to not renew the Contract must be in writing in the form of a letter, with the reason(s) for the non-renewal included. If the State does not provide notice to the Contractor of its intent not to renew the Contract as required in this Section and State Finance Law §179-t, the Contract shall be deemed continued until the date the State provides the necessary notice to the Contractor, in accordance with State Finance Law §179-t. Expenses incurred by the not-for-profit Contractor during such extension shall be reimbursable under the terms of the Contract.

## **II. TERMINATION AND SUSPENSION**

#### **A. Termination:**

##### **1. Grounds:**

- a) Mutual Consent: The Contract may be terminated at any time upon mutual written consent of the State and the Contractor.

b) Cause: The State may terminate the Contract immediately, upon written notice of termination to the Contractor, if the Contractor fails to comply with any of the terms and conditions of the Contract and/or any applicable laws, rules, regulations, policies, or procedures. If the termination for cause results from unsatisfactory performance by the Contractor, the value of the work performed by the Contractor prior to termination shall be established by the State.

c) Non-Responsibility: Upon written notice to the Contractor, and a reasonable opportunity to be heard by the appropriate State officials or staff, this Contract may be terminated by the State at the Contractor's expense where the Contractor is determined by the State to be non-responsible. In such event, the State may complete contractual requirements in any manner it deems advisable and pursue available legal or equitable remedies for breach.

d) Convenience: The State may terminate the Contract in its sole discretion upon thirty (30) calendar days prior written notice.

e) Lack of Funds: If for any reason the State or the Federal government terminates or reduces its appropriation to the applicable State Agency or entity entering into the Contract or fails to pay the full amount of the allocation for the operation of one or more programs funded under this Contract, the Contract may be terminated or reduced at the State Agency's discretion. No reduction or termination shall apply to allowable costs already incurred by the Contractor whereby funds are available to the State Agency for payment of such costs. Upon termination or reduction of the Contract, all remaining funds paid to the Contractor that are not subject to allowable costs already incurred by the Contractor shall be returned to the State Agency. In any event, no liability shall be incurred by the State (including the State Agency) beyond monies available for the purposes of the Contract. The Contractor acknowledges that any funds due to the State Agency or the State of New York because of disallowed expenditures after audit shall be the Contractor's responsibility.

f) Force Majeure: Performance under the Contract may be terminated or suspended by the State immediately upon the occurrence of a "force majeure" event. For purposes of the Contract, "Force majeure" shall include, but not be limited to, natural disasters, war, rebellion, declared pandemics, insurrection, riot, strikes, lockout, and any unforeseen circumstances and acts beyond the control of the parties which render the performance of contractual obligations impossible.

## **2. Effect of Notice and Termination on State's Payment Obligations:**

Upon receipt of notice of termination provided pursuant to the notice requirements prescribed in this Agreement, the Contractor shall stop work immediately and complete only those specific assignments and/or obligations, if any, subsequently approved by the State. In the event of termination other than for cause, the Contractor shall be entitled to compensation for services performed through the date of termination that are accepted by the State, and for any subsequent services that are accepted by the State, rendered in connection with any successor consultants and contractors, including transfer of records, briefing and any other services deemed necessary or desirable by the State. The Contractor agrees to cooperate to the fullest respect with any successor consultants and contractors.

## **3. Effect of Termination Based on Misuse or Conversion of State or Federal Property:**

Where the Contract is terminated for cause based on Contractor's failure to use some or all of the real property or equipment purchased pursuant to the Contract for the purposes set forth herein, the State



may, at its option, require: a) repayment to the State of any monies previously paid to the Contractor; b) return of any real property or equipment purchased under the terms of the Contract; or c) an appropriate combination of clauses (a) and (b) herein.

Nothing herein shall be intended to limit the State's ability to pursue such other legal or equitable remedies as may be available.

#### **4. Suspension:**

The State may, in its discretion, order the Contractor to suspend performance for a reasonable period of time. In the event of such suspension, the Contractor shall be given formal written notice outlining the specific details of such suspension. Upon issuance of such notice, the Contractor shall comply with the particulars of the notice. The State shall have no obligation to reimburse Contractor's expenses during such suspension period. Activities may resume at such time as the State issues a formal written notice authorizing a resumption of performance under the Contract.

### **III. ADDITIONAL OBLIGATIONS, REPRESENTATIONS AND WARRANTIES**

#### **A. Contractor as an Independent Contractor/Employees:**

1. The State and the Contractor agree that the Contractor is an independent contractor, and not an employee of the State and may neither hold itself out nor claim to be an officer, employee, or subdivision of the State nor make any claim, demand, or application to or for any right based upon any different status. Notwithstanding the foregoing, the State and the Contractor agree that if the Contractor is a New York State municipality, the Contractor shall be permitted to hold itself out, and claim, to be a subdivision of the State.

The Contractor shall be solely responsible for the recruitment, hiring, provision of employment benefits, payment of salaries and management of its project personnel. These functions shall be carried out in accordance with the provisions of the Contract, and all applicable Federal and State laws and regulations.

2. The Contractor warrants that it, its staff, and any and all subcontractors have all the necessary licenses, approvals, and certifications currently required by the laws of any applicable local, state, or Federal government to perform the services or work, as applicable, pursuant to the Contract and/or any subcontract entered into under the Contract. The Contractor further agrees that such required licenses, approvals, and certificates shall be kept in full force and effect during the term of the Contract, or any extension thereof, and to secure any new licenses, approvals, or certificates within the required time frames and/or to require its staff and subcontractors to obtain the requisite licenses, approvals, or certificates. In the event the Contractor, its staff, and/or subcontractors are notified of a denial or revocation of any license, approval, or certification to perform the services or work, as applicable, under the Contract, Contractor shall immediately notify the State.

#### **B. Subcontractors:**

1. If the Contractor enters into subcontracts for the performance of work pursuant to the Contract, the Contractor shall take full responsibility for the acts and omissions of its subcontractors. Nothing in the subcontract shall impair the rights of the State under the Contract. No contractual relationship shall be deemed to exist between the subcontractor and the State.

2. If requested by the State, the Contractor agrees not to enter into any subcontracts, or revisions to subcontracts, that are in excess of \$100,000 for the performance of the obligations contained herein until it has received the prior written permission of the State, which shall have the right to review and approve each and every subcontract in excess of \$100,000 prior to giving written permission to the Contractor to enter into the subcontract. All agreements between the Contractor and subcontractors shall be by written contract, signed by individuals authorized to bind the parties. All such subcontracts shall contain provisions for specifying (1) that the work performed by the subcontractor must be in accordance with the terms of the Contract, (2) that nothing contained in the subcontract shall impair the rights of the State under the Contract, and (3) that nothing contained in the subcontract, nor under the Contract, shall be deemed to create any contractual relationship between the subcontractor and the State. In addition, subcontracts shall contain any other provisions which are required to be included in subcontracts pursuant to the terms herein.

3. If requested by the State, the Contractor agrees to require the subcontractor to provide to the State the information the State needs to determine whether a proposed subcontractor is a responsible vendor.

4. When a subcontract equals or exceeds \$100,000, the subcontractor shall submit a Vendor Responsibility Questionnaire (Questionnaire).

5. If requested by the State, upon the execution of a subcontract, the Contractor shall provide detailed subcontract information (a copy of subcontract will suffice) to the State within fifteen (15) calendar days after execution. The State may request from the Contractor copies of subcontracts between a subcontractor and its subcontractor.

6. The Contractor shall require any and all subcontractors to submit to the Contractor all financial claims for Services or work to the State agency, as applicable, rendered and required supporting documentation and reports as necessary to permit Contractor to meet claim deadlines and documentation requirements as established in Attachment D (Payment and Reporting). Subcontractors shall be paid by the Contractor on a timely basis after submitting the required reports and vouchers for reimbursement of services or work, as applicable. Subcontractors shall be informed by the Contractor of the possibility of non-payment or rejection by the Contractor of claims that do not contain the required information, and/or are not received by the Contractor by said due date.

#### **C. Use of Material, Equipment, Or Personnel:**

1. The Contractor shall not use materials, equipment, or personnel paid for under the Contract for any activity other than those provided for under the Contract, except with the State's prior written permission.

2. Any interest accrued on funds paid to the Contractor by the State shall be deemed to be the property of the State and shall either be credited to the State at the close-out of the Contract or, upon the written permission of the State, shall be expended on additional services or work, as applicable, provided for under the Contract.

#### **D. Property:**

1. For the purposes of the Contract, "Property" is defined as real property, equipment, or tangible



personal property having a useful life of more than one year and an acquisition cost of \$1,000 or more per unit. For Federally funded contracts, if there is any conflict in the definition of "Property" the federal awarding Agency definitions will apply.

- a) If an item of Property required by the Contractor is available as surplus to the State, the State at its sole discretion, may arrange to provide such Property to the Contractor in lieu of the purchase of such Property. Such Property shall be returned to the State at the Contractor's cost and expense upon the expiration of the Contract unless the State consents in writing to the Contractor retaining possession of the Property to use for similar purposes.
- b) In addition, the Contractor agrees to permit the State to inspect the Property and to monitor its use at reasonable intervals during the Contractor's regular business hours.
- c) The Contractor shall be responsible for maintaining and repairing Property purchased or procured under the Contract at its own cost and expense. The Contractor shall procure and maintain insurance at its own cost and expense in an amount satisfactory to the State Agency, naming the State Agency as an additional insured, covering the loss, theft, or destruction of such equipment. The Contractor may not charge rental or use fees under this Contract for use or acquisition of Property to carry out its obligations under the Contract.
- d) The State has the right to review and approve in writing any new contract for the purchase of or lease for rental of Property (Purchase/Lease Contract) operated in connection with the provision of the services or work as specified in the Contract, if applicable, and any modifications, amendments, or extensions of an existing lease or purchase prior to its execution. If, in its discretion, the State disapproves of any Purchase/Lease Contract, then the State shall not be obligated to make any payments for such Property.
- e) No member, officer, director, or employee of the Contractor shall retain or acquire any interest, direct or indirect, in any Property, paid for with funds under the Contract, nor retain any interest, direct or indirect, in such, without full and complete prior disclosure of such interest and the date of acquisition thereof, in writing to the Contractor and the State.

2. For non-Federally funded contracts, unless otherwise provided herein, the State shall have the following rights to Property purchased with funds provided under the Contract:

- a) For cost-reimbursable contracts, all right, title and interest in Property with a remaining useful life shall belong to the State unless otherwise agreed to, in writing, by the State and the Contractor. However, upon agreement by the State, title shall pass to Contractor upon the end of the Property's useful life (as the phrase "useful life" is defined in Internal Revenue Code § 1.169-2).
- b) For performance-based contracts, all right, title and interest in such Property shall belong to the Contractor.

3. For Federally funded contracts, title to Property whose requisition cost is borne in whole or in part by monies provided under the Contract shall be governed by the terms and conditions of Attachment A-3 (Federally Funded Grants and Requirements Mandated by Federal Laws).

4. The Contractor shall maintain an inventory of all Property that is owned by the State and obtained

by the Contractor under this Agreement.

5. The Contractor shall execute any documents which the State may reasonably require to effectuate the provisions of this section.

#### **E. Records and Audits:**

##### **1. General:**

- a) The Contractor shall establish and maintain, in paper or electronic format, complete and accurate books, records, documents, receipts, accounts, and other evidence directly pertinent to its performance under the Contract (collectively, Records).
- b) The Contractor agrees to produce and retain for the balance of the term of the Contract, and for a period of six years from the later of the date of (i) the Contract and (ii) the most recent renewal of the Contract, any and all Records necessary to substantiate upon audit, the proper deposit and expenditure of funds received under the Contract. Such Records may include, but not be limited to, original books of entry (e.g., cash disbursements and cash receipts journal), and the following specific records (as applicable) to substantiate the types of expenditures noted:
  - (i) personal service expenditures: cancelled checks and the related bank statements, time and attendance records, payroll journals, cash and check disbursement records including copies of money orders and the like, vouchers and invoices, records of contract labor, any and all records listing payroll and the money value of non-cash advantages provided to employees, time cards, work schedules and logs, employee personal history folders, detailed and general ledgers, sales records, miscellaneous reports and returns (tax and otherwise), and cost allocation plans, if applicable.
  - (ii) payroll taxes and fringe benefits: cancelled checks, copies of related bank statements, cash and check disbursement records including copies of money orders and the like, invoices for fringe benefit expenses, miscellaneous reports and returns (tax and otherwise), and cost allocation plans, if applicable.
  - (iii) non-personal services expenditures: original invoices/receipts, cancelled checks and related bank statements, consultant agreements, leases, and cost allocation plans, if applicable.
  - (iv) receipt and deposit of advance and reimbursements: itemized bank stamped deposit slips, and a copy of the related bank statements.
- c) The OSC, AG and any other person or entity authorized to conduct an examination, as well as the State Agency or State Agencies involved in the Contract that provided funding, shall have access to the Records during the hours of 9:00 a.m. until 5:00 p.m., Monday through Friday (excluding State recognized holidays), at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying.
- d) The State shall protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law provided that: (i) the Contractor shall



timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records, as exempt under Section 87 of the Public Officers Law, is reasonable.

- e) Nothing contained herein shall diminish, or in any way adversely affect, the State's rights in connection with its audit and investigatory authority or the State's rights in connection with discovery in any pending or future litigation.

#### **F. Confidentiality:**

1. Contractor agrees that it will not use confidential, personally identifiable information relating to individuals who may receive services, or proprietary information disclosed to Contractor in connection with the services or work ("Confidential Information") for any purpose other than in connection with the services or work and in compliance with all applicable provisions of State and federal law. The Contractor is fully responsible for its staff, its subcontractor(s), and any subcontractor's staff with regard to Confidential Information and shall ensure that they meet all obligations with respect to maintaining the confidentiality and security of any information deemed confidential.
2. Information which falls into any of the following categories shall not be considered Confidential Information: a) information that is previously rightfully known to the Contractor without restriction on disclosure; b) information that becomes, from no breach of the Contract on the part of the Contractor, generally known in the relevant industry, or is otherwise publicly available; and c) information that is independently developed by Contractor without use of the Confidential Information.
3. Except as specifically permitted in this Agreement, Contractor shall not, at any time, in any fashion, form or manner, divulge, disclose, communicate, or use, any Confidential Information other than in connection with the services or as otherwise provided herein.
4. Contractor may disclose Confidential Information if such information is required to be disclosed by Contractor by any law, rule, regulation, judicial or administrative process or applicable professional standards, provided that, to the extent permitted by applicable law or regulation, the Contractor notifies the State prior to any such required disclosure.
5. Contractor agrees that, as between the Parties, all Confidential Information in its possession obtained in connection with the services or work hereunder is at all times the sole property of the State.
6. Where allowable by law and agreed to by the State, Contractor may retain one copy of the Confidential Information and any summaries, analyses, notes, or extracts prepared by Contractor which are based on or contain portions of the Confidential Information evidencing its services or work for the State as required by law, regulation, professional standards, or reasonable business practice.
7. In protecting the Confidential Information, Contractor shall exercise the same standard of care used by Contractor to protect its own confidential and proprietary information, to prevent the disclosure of Confidential Information to any third party. Contractor shall not use Confidential Information for any purpose other than in furtherance of its services or work for the State.

#### **G. Publicity:**

1. Publicity regarding the work, services, performance, and/or project governed by this Agreement

may not be released without prior written approval from the State. For the purposes of this Agreement, "Publicity" includes, but is not limited to: news conferences; news releases; public announcements; advertising; brochures; reports; discussions or presentations at conferences or meetings; and/or the inclusion of State materials, the State's name, or other such references to the State in any document or forum.

2. Any Publicity, publications, presentations or announcements of conferences, meetings or trainings which are funded in whole or in part through any activity supported under the Contract may not be published, presented or announced without prior written approval of the State. Any such publication, presentation or announcement shall:

- a) Acknowledge the support of the State of New York and, if funded with Federal funds, the applicable Federal funding agency; and
- b) State that the opinions, results, findings and/or interpretations of data contained therein are the responsibility of the Contractor and do not necessarily represent the opinions, interpretations, or policy of the State or if funded with Federal funds, the State and the applicable Federal funding agency.

3. Notwithstanding the above, (i) if the Contractor is an educational research institution, the Contractor may, for scholarly or academic purposes, use, present, discuss, report or publish any material, data or analyses, other than Confidential Information, that derives from activity under the Contract and the Contractor agrees to use best efforts to provide copies of any manuscripts arising from Contractor's performance under this Contract, or if requested by the State, the Contractor shall provide the State with a thirty (30) calendar day period in which to review each manuscript for compliance with Confidential Information requirements prior to publication; or (ii) if the Contractor is not an educational research institution, the Contractor may submit for publication, scholarly or academic publications that derive from activity under the Contract (but are not deliverable under the Contract), provided that the Contractor first submits such manuscripts to the State forty-five (45) calendar days prior to submission for consideration by a publisher in order for the State to review the manuscript for compliance with confidentiality requirements and restrictions and to make such other comments as the State deems appropriate. All derivative publications shall follow the same acknowledgments and disclaimer as described in Section III(F)(2) (Publicity) hereof.

#### **H. Web-Based Applications-Accessibility:**

Any network-based information and applications development, or programming delivered to or by the State pursuant to this Contract or procurement, will comply with Section 508 of the Rehabilitation Act of 1973, as amended, and be consistent with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Information Communication Technology, as such policy may be amended, modified, or superseded (the "Accessibility Policy"). The Accessibility Policy requires that State Entity Information Communication Technology shall be accessible to persons with disabilities as determined by accessibility compliance testing. Such accessibility compliance testing will be conducted by (State Entity name, contractor or other) and any report on the results of such testing must be satisfactory to (State Entity name).

#### **I. Unemployment Insurance Compliance:**

The Contractor shall remain current in both its quarterly reporting and payment of contributions or

payments in lieu of contributions, as applicable, to the State Unemployment Insurance system as a condition of maintaining this grant.

1. The Contractor hereby authorizes the State Department of Labor to disclose to the State Agency staff only such information as is necessary to determine the Contractor's compliance with the State Unemployment Insurance Law. This includes, but is not limited to, the following: a) any records of unemployment insurance (UI) contributions, interest, and/or penalty payment arrears or reporting delinquency; b) any debts owed for UI contributions, interest, and/or penalties; c) the history and results of any audit or investigation; and d) copies of wage reporting information.
2. Such disclosures are protected under Section 537 of the State Labor Law, which makes it a misdemeanor for the recipient of such information to use or disclose the information for any purpose other than the performing due diligence as a part of the approval process for the Contract.

**J. Charities Registration:**

If applicable, the Contractor agrees to (i) obtain not-for-profit status, a Federal identification number, and a charitable registration number (or a declaration of exemption) and to furnish the State Agency with this information as soon as it is available, (ii) be in compliance with the OAG charities registration requirements at the time of the awarding of this Contract by the State and (iii) remain in compliance with the OAG charities registration requirements throughout the term of the Contract.

**K. Vendor Responsibility:**

The Contractor hereby acknowledges that the State Vendor Responsibility Questionnaire (Questionnaire) and certification are made part of this Contract and that any misrepresentation of fact in the Questionnaire and attachments, or in any Contractor responsibility information that may be requested by the State, may result in termination of this Contract.

The Contractor shall at all times during the contract term remain responsible. During the term of this Contract, any changes in the provided Questionnaire shall be disclosed to the State Agency, in writing, in a timely manner. Failure to make such disclosure may result in a determination of non-responsibility and termination of this Contract. Furthermore, the Contractor agrees, if requested by the State, it must present evidence of its continuing legal authority to do business in New York State, its integrity, experience, ability, prior performance, and organizational and financial capacity.

The State, in its sole discretion, reserves the right to make a final determination of non-responsibility at any time during the term of the Contract, based on any information provided in the Questionnaire and/or any updates, clarifications, or amendments thereof; and/or when it discovers information that calls into question the responsibility of the Contractor. Prior to making a final determination of non-responsibility, the State shall provide written notice to the Contractor that it has made a preliminary determination of non-responsibility. The State shall detail the reason(s) for the preliminary determination, and shall provide the Contractor with an opportunity to be heard.

The State reserves the right to suspend any or all activities under this Contract, upon discovery of such information warranting review of responsibility. In the event of such suspension, the Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the State issues a written notice authorizing a resumption of performance under this Contract.



**L. Workers' Compensation Benefits:**

1. In accordance with Section 142 of the State Finance Law, the Contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of the Contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

2. If a Contractor believes they are exempt from the Workers Compensation insurance requirement they must apply for an exemption.

**APPENDIX A**

**STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS**

**PLEASE RETAIN THIS DOCUMENT  
FOR FUTURE REFERENCE.**

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## **STANDARD CLAUSES FOR NYS CONTRACTS**

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

**1. EXECUTORY CLAUSE.** In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

**2. NON-ASSIGNMENT CLAUSE.** In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

**3. COMPTROLLER'S APPROVAL.** In accordance with Section 112 of the State Finance Law, if this contract exceeds \$50,000 (or \$75,000 for State University of New York or City University of New York contracts for goods, services, construction and printing, and \$150,000 for State University Health Care Facilities) or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$25,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services, either for itself or its customer agencies by the Office of General Services Business Services Center, is required when such contracts exceed \$85,000. Comptroller's approval of contracts established as centralized contracts through the Office of General Services is required when such contracts exceed \$125,000, and when a purchase order or other procurement transaction issued under such centralized contract exceeds \$200,000.

**4. WORKERS' COMPENSATION BENEFITS.** In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

**5. NON-DISCRIMINATION REQUIREMENTS.** To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment, nor subject any individual to harassment, because of age, race, creed, color, national origin, citizenship or immigration status, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

**6. WAGE AND HOURS PROVISIONS.** If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in

accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

**7. NON-COLLUSIVE BIDDING CERTIFICATION.** In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

**8. INTERNATIONAL BOYCOTT PROHIBITION.** In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR § 105.4).

**9. SET-OFF RIGHTS.** The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

**10. RECORDS.** The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, the "Records"). The Records

must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

**11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.**

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information; is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

**12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.**

In accordance with Section 312 of the Executive Law and 5 NYCRR Part 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "(a), (b) and (c)" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not

apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this clause. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

**13. CONFLICTING TERMS.** In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

**14. GOVERNING LAW.** This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

**15. LATE PAYMENT.** Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

**16. NO ARBITRATION.** Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

**17. SERVICE OF PROCESS.** In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

**18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS.** The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this



law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in § 165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

**19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES.** In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

**20. OMNIBUS PROCUREMENT ACT OF 1992.** It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development  
Division for Small Business and Technology Development  
625 Broadway  
Albany, New York 12245  
Telephone: 518-292-5100

A directory of certified minority- and women-owned business enterprises is available from:

NYS Department of Economic Development  
Division of Minority and Women's Business Development  
633 Third Avenue 33rd Floor  
New York, NY 10017  
646-846-7364  
email: [mwbusinessdev@esd.ny.gov](mailto:mwbusinessdev@esd.ny.gov)  
<https://ny.newnycontracts.com/FrontEnd/searchcertifieddirectory.asp>

The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)-(p)) requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority- and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

**21. RECIPROCITY AND SANCTIONS PROVISIONS.**

Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5)) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 2023, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.

**22. COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS.**

Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law §§ 899-aa and 899-bb and State Technology Law § 208).

**23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW.**

If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4)(g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

**24. PROCUREMENT LOBBYING.** To the extent this agreement is a "procurement contract" as defined by State Finance Law §§ 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law §§ 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

**25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.**

To the extent this agreement is a contract as defined by Tax Law § 5-a, if the contractor fails to make the certification required by Tax Law § 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law § 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

**26. IRAN DIVESTMENT ACT.** By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <https://ogs.ny.gov/iran-divestment-act-2012>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

**27. ADMISSIBILITY OF REPRODUCTION OF CONTRACT.** Notwithstanding the best evidence rule or any other legal principle or rule of evidence to the contrary, the Contractor acknowledges and agrees that it waives any and all objections to the admissibility into evidence at any court proceeding or to the use at any examination before trial of an electronic reproduction of this contract, in the form approved by the State Comptroller, if such approval was required, regardless of whether the original of said contract is in existence.

New York State Board of Elections  
40 N Pearl Street, 5<sup>th</sup> Floor, Albany, New York 12207

**Attachment A-1**

**County Boards of Elections reimbursement program for actual expenses related to electronic poll books and associated software, on-demand ballot printers and related cyber security software.**

The New York State Capital Projects Budget authorized \$14.7 million for the reimbursement of eligible costs related to the purchase of electronic poll books. The Board of Elections has established a program to reimburse County Boards of Elections for actual expenses related to electronic poll books (E-Poll Books) and associated software, on-demand ballot printers and related cyber security.

A copy of such plan shall be sent to the director of the Division of Budget, the Senate Finance Committee, and the Assembly Ways and Means Committee.

This grant fund distribution program does not provide for the direct release of State funds to counties.

County Boards of Elections may submit a claim for payment, after the purchase of such products and services with county funds, for reimbursement of either some or all those costs, provided the purchases were reasonable, allowable and allocable. Substantial evidence must be included with each claim, and prior to the award of any reimbursement, all claims will be reviewed for the products' and/or services' compliance with the NYSBOE guidelines for allowable expenses. Reimbursement will be made for allowable costs which have not previously been claimed for reimbursement for the same expenses elsewhere.

To receive reimbursement, county Boards of Elections must complete and submit a claim for payment to the State Board of Elections. Forms to be completed are included in the claim for payment section of Attachment A-1.

General Information	
<b>Purpose of Program</b>	Reimburse County Boards of Elections for local dollars spent to further implement the purchase of E-Poll Books and associated software, on-demand ballot printers and related cyber security software.
<b>Submission of Reimbursement Request</b>	Upon a county's payment of invoices related to items and services allowable



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**Attachment A-1**

	under the State's Electronic Poll Book Grant Program.
<b>Duration of Electronic Poll Book Grant Program</b>	The Electronic Poll Book Grant Program expires when there are no funds remaining of the county's specific allocations, as evidenced in the regular accounting and reporting of such funds provided by NYS Office of General Services, but no later than March 31, 2025. Eligible expenses must take place between April 1, 2024 and March 31, 2025. All Claims for Payment must be submitted to State Board of Elections no later than June 29, 2025.

Such funds may be used to reimburse County Boards of Elections for allowable expenditures made in securing products or services related to purchase of E-Poll Books and associated hardware, on-demand ballot printers and related cyber security software.

**Requirements:**

1. Each claim for payment must be fully completed. Missing information may result in a delay, or your county may not receive reimbursement for the items requested.
2. Each claim for payment must describe how the County Board of Elections has expended funds to implement E-Poll Books and associated software, on-demand ballot printers and related cyber security software. Each claim for payment must be accompanied by all exhibits that are specified herein.
3. County Boards should make claim for payment for the total sum of money expended in the purchase of E-Poll Books and associated software, on-demand ballot printers and related cyber security software, as available to the respective county board, pursuant to the funding schedule, Attachment E. Claims for payment made in excess of the county's available funds will be decreased to their available amount and paid as such.
4. The request for the reimbursement of funds must be directly associated with products and services which will serve all voters, without exclusion.
5. The county Board of Elections must certify that funds have been expended according to the budget and workplan submitted under Attachment B1 & C, which must be included and incorporated herein.
6. The County agrees to submit to the State Board of Elections, copies of all executed contracts, payment vouchers, or other financial documentation that is required to

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**Attachment A-1**

document the county Board of Elections' expenditures under the provisions of the Electronic Poll Book Grant Program.

7. The requirements of the Electronic Poll Book Grant Program are subject to modification by the State Board of Elections as they may deem necessary and appropriate.
8. The County governing body must be informed in writing by the County Board of Elections, of the terms and conditions of this Agreement that apply to the receipt and use of these funds. A copy of such written notice shall be attached to the claim for payment.
9. The County acknowledges that all funds received are subject to audit by appropriate state agencies.
10. The County agrees to retain all cost supporting records and documentation for a period of six years from the date that it receives its final Electronic Poll Book Grant Program reimbursement payment from the State Board or the final audit of its financial records is completed by a certified public accountant or other independent governmental auditor, whichever is later.
11. The County agrees to comply with all applicable Federal, State, and local procurement laws, regulations and directives. The County agrees to comply with all bidding regulations and directives, where required to do so.
12. Funds reimbursed under this program may not be used for expenses unrelated to the approved program.

**Allowable expenses include:**

- E-Poll Book systems and associated software
- Signature pad
- Barcode Scanner
- On-demand ballot printers
- Initial maintenance service agreements for E-Poll Books systems or on-demand ballot printers
- Purchase or renewal of related cyber security software

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40 N Pearl Street, 5<sup>th</sup> Floor, Albany, New York 12207

**Attachment A-1**

- Purchase or renewal of software used in the maintenance of electronic poll book data
- Connectivity devices including but not limited to network switches, router or MiFi, network extenders, and signal boosters
- Connectivity services including but not limited to cellular and internet service providers for poll sites
- Thermal Receipt Printers
- Secure memory devices for transferring data on an E-Poll Book system
- Stylus for touch screen interfacing, including those specially designed to assist voters with disabilities
- Electronic poll book related peripherals including but not limited to security containers, seals, pouches or bags for secure storage and transport of E-Poll Book system, memory cards, canvass reports, voting system results tapes, transmittals and other similar E-Poll Book system-related items
- Consumables including but not limited to thermal paper rolls, ballot paper for printers, ink, and other materials
- E-Poll Book and on-demand ballot printer training for election day workers and Board of Elections staff

**IMPERMISSIBLE EXPENSES include, but are not limited to:**

- Funds expended for lobbying
- Funds expended for partisan political purposes
- Funds expended for campaigns for elected offices or ballot issues
- Entertainment, meals, lodging and alcoholic beverages
- Fundraising



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**Attachment A-1**

- Funds expended for litigation or the payment of fines
- Association dues
- Costs for cell phones with associated contract plans
- Funds expended to conduct voter outreach or other training efforts which in way whatsoever, whether real or implied, name any elected public official

**Claim for Payment/Request for Reimbursement:**

The State Board of Elections will not process requests for reimbursement of payments to any supplier of goods and/or services without having all of the following in its possession:

- Narrative Summary: If funding is being requested for more than one project, item or service, the narrative section should include information for each project and/or item. After developing the narrative section as outlined, the claim for payment should include a summary.
  - The purpose of the expenditure of county funds
  - The methodology/means to address the expansion and replacement of Electronic Poll Books
  - The actual cost to address the expansion and replacement of Electronic Poll Books
- A properly authorized purchase document.
- Documentation verifying the goods/services were satisfactorily received and/or performed.
- Original receipts/Proofs of payment.
- Copy of executed Attachment B1 & C.
- An accurate and correct supplier invoice.

An 'accurate' invoice is defined as including the following:

New York State Board of Elections  
40 N Pearl Street, 5<sup>th</sup> Floor, Albany, New York 12207  
**Attachment A-1**

- County Board of Elections order number or contract number.
- Identification of goods acquired, quantities, unit price, extension, description, etc.
- Services provided, service period, unit price (i.e. hourly, monthly) and quantity applicable to service.
- Accurate billing address as stated on the purchase order or contract.
- Supplier invoice number.
- Supplier invoice date.
- Supplier name and remittance address.

**Terms and Conditions and Assurances**

In order to have costs reimbursed, county Boards of Elections must certify the following:

- Expenditure of funds was the most reasonable, economical and responsible way to purchase Electronic Poll Books and associated software, on-demand ballot printers and related cyber security software.
- The County governing body has been informed in writing by the county Board of Elections, of the terms and conditions of this Agreement that apply to the reimbursement of these funds. A copy of such written notice is attached to the Claim for Payment.

**Budget:**

All applicants must follow the criteria below when preparing their budgets and complete the standard budget format (Attachment B1 & C).

- All requested reimbursements must be deemed reasonable, allowable, and allocable.
- Appropriate receipts and proof of payment should be attached to the Claim for Payment.

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**Attachment A-1**

**Claim for Payment Form:**

Submit the completed and signed claim for payment:

New York State Board of Elections  
ATTN: Grants  
40 N Pearl Street, 5<sup>th</sup> Floor  
Albany, NY 12207  
Email: [grants@elections.ny.gov](mailto:grants@elections.ny.gov)

**Review and Payment Process:**

1. After receipt of the county Board of Elections' Claim for Payment, the State Board of Elections shall review the request to determine whether the funds expended by the county Board of Elections are eligible for reimbursement under this program.
2. The State Board of Elections will make every reasonable effort to review, determine approval or disapproval and so notify the county Board of Elections within two weeks of the receipt of the Claim for Payment. As the total amount of money available to each county for reimbursement of expenses is limited, the full reimbursement of the county's expenditures may not be covered by this program.
3. In the event that a Claim for Payment or a part thereof is rejected, the State Board of Elections shall provide details of what is being reimbursed, including a percentage representing the amount of reimbursement.
4. Payments will be issued by voucher on a reimbursement basis.

**Administrative Requirements:**

Appropriate records relating to the initial purchase and any subsequent reimbursement shall be required to be kept by the County Board of Elections for the balance of the calendar year in which they were made and for six (6) additional years thereafter.

**Assistance:**

For Grant Program assistance, contact:

New York State Board of Elections  
Public Information Unit - Grants Office



New York State Board of Elections  
40 N Pearl Street, 5<sup>th</sup> Floor, Albany, New York 12207  
**Attachment A-1**

40 N Pearl St., 5<sup>th</sup> Floor  
Albany, NY 12207  
Ph # 518-474-1953  
Email: [grants@elections.ny.gov](mailto:grants@elections.ny.gov)

We have read and understand the NYSBOE Attachment A-1 for receiving Electronic Poll Book Grant Program reimbursement funds, and the associated terms, conditions and assurances for receipt of such funds, and certify that the County of Rutnam is, or will be, as applicable, in compliance with these terms and conditions as specified.

Kelly R Primavera Commissioner  
Catherine Croft Commissioner

Date: 1 / 1 / 28 / 25

Election Commissioner Contact Information	
Name: <u>Catherine Croft</u>	Name: <u>Kelly R. Primavera</u>
Full Address: <u>25 Old Route 6</u> <u>Carmel, NY 10512</u>	Full Address: <u>25 Old Route 6</u> <u>Carmel, NY 10512</u>

New York State Board of Elections  
40 N Pearl Street, 5<sup>th</sup> Floor, Albany, New York 12207  
**Attachment A-1**

Email: Catherine.Croft@putnamcountyny.gov	Email: Kelly.Frimavera@putnamcountyny.gov
Phone: 845-808-1315	Phone: 845-808-1316
Fax:	Fax:
County Finance Official's Contact Information	
Name: Michael J. Lewis	
Full Address: 40 Gleneida Ave Room 202 Carmel, NY 10512	
Email: michael.lewis@putnamcountyny.gov	
Phone: 845-808-1075 x 49325	
Fax:	
Comments:	

## Attachment B-1 (Budget) & C (Workplan)

COUNTY Putnam DATE 1/27/25  
Electronic Poll Book Grant Program Workplan / Budget

If funding is being requested for more than one project, item or service, the narrative section should include information for each project, item or issue being addressed. After developing the narrative section as outlined, the Claim for Payment should include a summary.

Narrative: Include (1) description of the expenditures necessary, with specific costs detailed to purchase and utilize e-poll books and associated software, on-demand ballot printers and cyber security software and the various accompanying services and/or accessories for which the County Board of Elections seeks reimbursement, (2) how the funding requested further advances the use of electronic poll books; (3) affirmation that the costs are allowable, allocable and reasonable; and (4) how the County Board of Elections will evaluate the success of the expenditure in continuing the use of electronic poll books.

Description of Expenditures:

Putnam County will purchase 105 pollpads to replace the outdated pollpads that were purchased in 2019.

How request further advances the use of electronic poll books:

Are the costs listed allowable, allocable and reasonable?

☒ Yes ☐ No

Evaluation of Expenditures:

Applicants' Comments:



Expense Category (see allowable expenses listed in Attachment A-1)	Quantity	Unit Price	Total
Hardware	105	449 <sup>00</sup>	47,145.00
Stands	105	100 <sup>00</sup>	10,500.00
Charging Cords	105	40 <sup>00</sup>	4,200.00
Software	105	135.00	14,175.00
Service - Assembly	105	48.00	5,040.00
Hardware - Ethernet	16	115 <sup>00</sup>	1,840.00
Consumables -	105	15 <sup>00</sup>	1,575.00
Maintenance 1yr	105	135.00	14,175.00
Workplan/Budget Total:			98,650 <sup>00</sup>
To be completed by the New York State Board of Elections			
Electronic Poll Book Grant Funds Available:			\$91,431.55
Contract Amount:			\$91,431.55

2/7/25

JW

K

COUNTY COMMISSIONER SIGNS HERE ↓

Catherine Croft

CATHERINE CROFT 1/27/25

Printed Name

Date

COUNTY COMMISSIONER SIGNS HERE ↓

Kelly Primavera

Kelly Primavera 1/27/25

Printed Name

Date

## **ATTACHMENT D PAYMENT AND REPORTING**

### **A. General Terms and Conditions:**

1. In full consideration of contract performance, the State Agency agrees to pay, and the Contractor agrees to accept a sum not to exceed the amount noted on the Face Page.
2. The State has no obligation to make payment until all required approvals, including the approval of the AG and OSC, if required, have been obtained and the contract is fully executed. Contractor obligations or expenditures that precede the start date of the Contract shall not be reimbursed.
3. Article 11-B of the State Finance Law sets forth certain time frames for the Full Execution of contracts or renewal contracts with not-for-profit organizations and the implementation of any program plan associated with such contract. For purposes of this section, "Full Execution" shall mean that the contract has been signed by all parties thereto and has obtained the approval of the AG and OSC. Any interest to be paid on a missed payment to the Contractor based on a delay in the Full Execution of the Contract shall be governed by Article 11-B of the State Finance Law.
4. Contractor must provide complete and accurate billing invoices to the State in order to receive payment. However, the State may, in its discretion, automatically generate a voucher in accordance with an approved contract payment schedule. The State may require the Contractor to submit billing invoices electronically.
5. The Contractor shall submit documentation to support its claims for payment pursuant to this Contract. All supporting documentation must be completed and provided in a manner satisfactory and acceptable to the State Agency in order for the Contractor to be eligible for payment.
6. Payment for invoices submitted by the Contractor shall be rendered electronically in accordance with OSC's procedures and practices governing electronic payment unless payment by paper check is expressly authorized by the head of the State Agency, in his or her sole discretion after the Contractor establishes extenuating circumstances requiring payment by paper check.
7. If travel expenses are an approved expenditure under the Contract, travel expenses shall be reimbursed at the lesser of the rates set forth in the written standard travel policy of the Contractor, the OSC guidelines, or United States General Services Administration rates. No out-of-state travel costs shall be permitted unless specifically detailed and pre-approved by the State.
8. The State reserves the right to withhold up to fifteen percent (15%) of the total amount of the Contract as security for the faithful completion of services or work, as applicable, under the Contract. This amount may be withheld in whole or in part from any single payment or combination of payments otherwise due under the Contract. In the event that such withheld funds are insufficient to satisfy Contractor's obligations to the State, the State may pursue all available remedies, including the right of setoff and recoupment.

9. All vouchers must be submitted by the Contractor no later than thirty (30) calendar days after the end date of the period for which reimbursement is claimed. In no event shall the amount received by the Contractor exceed the budget amount approved by the State Agency, and, if actual expenditures by the Contractor are less than such sum, the amount payable by the State Agency to the Contractor shall not exceed the amount of actual expenditures.

10. All obligations must be incurred prior to the end date of the contract. The final claim of the contract term shall be submitted to the State Agency up to ninety (90) calendar days after the contract end date to make final expenditures if this contract is State Funded. However, if this contract is funded, in whole or in part, with Federal funds, the Contractor shall have up to sixty (60) calendar days after the contract end date to make expenditures and submit the claim to the State Agency.

11. The State shall not be liable for payments on the Contract if it is made pursuant to a Community Projects Fund appropriation if insufficient monies are available pursuant to Section 99-d of the State Finance Law.

12. The Contractor may be required to submit a Consolidated Fiscal Reporting System ("CFR"). The CFR is a standardized electronic reporting method accepted by State agencies, consisting of schedules which, in different combinations, capture financial information for budgets, quarterly and/or mid-year claims, an annual cost report, and a final claim. The CFR, which must be submitted annually, is both a year-end cost report and a year-end claiming document. For New York City contractors, the due date shall be May 1 of each year; for Upstate and Long Island contractors, the due date shall be November 1 of each year.

#### **B. Advance Payments and Claiming Requirements:**

1. Advance payments, which the State in its sole discretion may make to not-for-profit grant recipients, shall be made and recouped in accordance with State Finance Law Section 179-u for both multiyear and renewal contracts and the provisions of this contract. Federally funded contract advances will be made as set forth by the Federal grant award requirements and applicable Federal regulations and this contract.

2. For simplified renewals, the payment schedule will be modified as part of the renewal process. For subsequent contract years in multi-year contracts, Contractor will be notified of the scheduled advance payments for the upcoming contract year no later than 90 days prior to the commencement of the contract year.

3. Recoupment of any advance payment(s) shall be recovered by crediting the percentage of subsequent claims and such claims shall be reduced until the advance is fully recovered within the Contract Term. Any unexpended advance balance at the end of the Contract Term shall be refunded by the Contractor to the State.

4. All Claim Submissions including Advance Payments, Initial Payments, and Reimbursements shall be made in accordance with the State Agency approved Schedule A: Claiming Requirements below.



## Schedule A: Claiming Requirements

Period : 4/1/2024-3/31/2025			
Claim Number	Claim Type	Claim Period	Due Date
1	Reimbursement	4/1/2024-6/30/2024	7/30/2024
2	Reimbursement	7/1/2024-9/30/2024	10/30/2024
3	Reimbursement	10/1/2024-12/31/2024	1/30/2025
4	Reimbursement	1/1/2025-3/31/2025	4/30/2025

5. Milestone/Performance Reimbursement is based upon the Contractor satisfactorily meeting specified and meaningful events or milestones in performance of duties under this Contract. Requests for such payments be severable or cumulative. A severable event/milestone is independent of accomplishment of any other event. If the event is cumulative, the successful completion of an event or milestone is dependent on the previous completion of another event.

- For non-performance based contracts, the Contractor's costs must be allocated pursuant to a plan that meets the requirements of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) at 2 CFR Part 200. Methods used to determine and assign costs shall conform to generally accepted accounting practices and shall be consistent with the method(s) used by the Contractor to determine costs for other operations or programs. Such accounting standards and practices shall be subject to approval of the State.
- For performance-based milestone contracts, or for the portion of the contract amount paid on a performance basis, the Contractor shall maintain documentation demonstrating that milestones were attained.

6. Fee for Service Reimbursement is based upon a rate established by the Contractor for a service or services rendered. Payment shall be limited to only those fees specifically agreed upon in the Contract and shall be payable in accordance with the State Agency approved Schedule A: Claiming Requirements.

7. Rate Based Reimbursement is based upon an established rate per unit at defined intervals to be paid to the Contractor in accordance with the State Agency approved Schedule A: Claiming Requirements. Payment shall be limited to rate(s) established in the Contract and may be requested no more frequently than monthly.

8. Fifth Quarter Payments occur when there are scheduled payments and an expectation that services will be continued through renewals or subsequent contracts. Fifth quarter payment shall be paid to the Contractor at the conclusion of the final scheduled payment period of the preceding contract period. The State Agency shall generate a voucher in the fourth quarter of the current contract year to pay the scheduled payment for the next contract year.

9. If the Expenditure Based Budget is used in Attachment B-1 and the Expenditure Report is selected below, the Contractor shall submit, not later than the time period listed in the State Agency approved Schedule A: Claiming Requirements above, a detailed expenditure report, by object of expense. This report shall accompany the voucher submitted for such period.



Expenditure Report Required

#### C. Refunds:

1. In the event that the Contractor must refund the State for Contract-related activities, including repayment of an advance or an audit disallowance, the refund must be made payable as set forth by the State Agency, must reference the contract number with its payment, and include a brief explanation of why the refund is being made.

2. If at the end or termination of the Contract there remains any unexpended balance of the monies advanced under the Contract in the possession of the Contractor, the Contractor shall make payment within forty-five (45) calendar days of the end or termination of the Contract. In the event that the Contractor fails to refund such balance the State may pursue all available remedies.

#### D. Progress Reporting Requirements:

If the State Agency determines that Work Plan Based Reporting is required to summarize the progress made on the performance measures established in the Contract, such reporting shall be made online as directed by the State Agency.

If Work Plan Based Reporting is not required, the Contractor shall comply with the following applicable provisions and the Contractor shall provide the State Agency with one or more of the following reports as required by the State Agency:

1. *Narrative/Qualitative Report*: The Contractor shall submit no later than the time period identified in Schedule B: Progress Reporting Requirements, below, a report, in narrative form, summarizing the services rendered during the quarter. This report shall detail how the Contractor has progressed toward attaining the qualitative goals enumerated in the Work Plan. This report should address all goals and objectives of the project and include a discussion of problems encountered and steps taken to solve them.

2. *Statistical/Quantitative Report*: The Contractor shall submit, on a quarterly basis, no later than the time period listed in Schedule B: Progress Reporting Requirements, below, a detailed report analyzing the quantitative aspects of the program plan, as appropriate (e.g., number of meals served, clients transported, patient/client encounters, procedures performed, training sessions conducted, etc.).

3. *Final Report*: The Contractor shall submit a final report as required by the Contract, not later than the time period listed in Schedule B: Progress Reporting Requirements, below, which reports on all aspects of the program and detailing how the use of funds were utilized in achieving the goals set forth in Attachment C (Work Plan).



### Schedule B: Progress Reporting Requirements

[illegible]

### E. Special Payment and Reporting Provisions



#4 IV.

Committee Mtg **Audit & Administration** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – FUND TRANSFER (25T496) – MENTAL HEALTH, SOCIAL SERVICES  
AND YOUTH BUREAU - FUNDS FOR THE CHILD ADVOCACY CENTER  
PARTNERSHIP WITH THE WOMEN’S RESOURCE CENTER**

**WHEREAS, Commissioner of Mental Health, Social Services and Youth  
Bureau requested Fund Transfer (25T496) to the Child Advocacy Center Partnership  
with the Women’s Resource Center; and**

**WHEREAS, the Audit & Administration Committee has reviewed and  
approved said fund transfer; now therefore be it**

**RESOLVED, that the following fund transfer:**

**Increase Estimated Appropriations:**

<b>22071000 54646</b>	<b>Contracts</b>	<b>116,836</b>
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**Decrease Estimated Appropriations:**

<b>10199000 54980</b>	<b>Contracts</b>	<b>116,836</b>
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**2025 Fiscal Impact – 116,836**

**2026 Fiscal Impact – 0 –**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

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Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE

DEPARTMENT OF FINANCE

MEMORANDUM

To: Diane Trabulsy, Legislative Clerk  
From: William J. Carlin, Jr., Commissioner of Finance  
Re: Budgetary Transfer - 25T496  
Date: December 9, 2025

*WJC*

2025 DEC - 9 PM 1:10  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

At the request of the Commissioner of Mental Health, Social Services, and Youth Bureau the following budgetary transfer is requested.

**Increase Estimated Appropriations:**

22071000 54646	Contracts	116,836
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**Decrease Estimated Appropriations:**

10199000 54980	Contingency	116,836
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Fiscal Impact - 2025 - \$ 116,836

Fiscal Impact - 2026 - \$ 0

This Resolution is required to fund the Child Advocacy Center partnership with the Women's Resource Center as per the attached correspondence. Modifications to the 2026 budget will be made under separate cover. Please forward to the appropriate committee.

Approved:

Kevin M. Byrne  
County Executive

25T496

KEVIN BYRNE  
County Executive

SARA SERVADIO  
Commissioner

NICOLLE MCGUIRE  
Deputy Commissioner



**DEPARTMENTS OF MENTAL HEALTH  
SOCIAL SERVICES AND YOUTH BUREAU**

**MEMORANDUM**

December 1, 2025

TO: William Carlin, Commissioner of Finance

FROM:  Kristen Wunner, Fiscal Manager of Department of Mental Health, Social Services, and Youth Bureau

SUBJECT: DSS 2026 Budgetary Amendment

Your approval is requested to amend the 2026 Department of Social Services budget to include expenses other than Personnel Services funded in accordance with the following contract renewal awarded to the Child Advocacy Center for the period of 10/01/2025-09/30/2026 including an additional \$116,836 towards our partnership with the Women's Resource Center. This partnership will expand our forensic interviewing capacity and on-site mental health services with three rotating clinicians, ensuring immediate support and continuity of care. We are respectfully requesting the necessary funding to maintain the mental health services, forensic interviewing capacity, and accreditation standards our children deserve. This investment ensures continuity of care, protects the integrity of investigations, and safeguards our most vulnerable victims during a time of statewide instability.

**Decrease Estimated Revenue:**

22071000	OEOP CRIME VCTM	
446131	CRIME VICTIMS BOARD	\$91,210
	Total Decrease in Estimated Revenues	\$91,210

**Decrease Appropriations:**

22071000	OEOP CRIME VCTM	
54310	OFFICE SUPPLIES	\$2,080
54311	PRINTING AND FORMS	\$1
54410	SUPPLIES AND MAT	\$2,728
54635	CELLPHONES	\$1,870
54675	TRAVEL	\$577
54989	MISCELLANEOUS	\$398
55370	CHRGBK AUTOMOTIVE	\$1,900

**Increase Appropriations:**

22071000	OEOP CRIME VCTM	
52130	COMPUTER EQUIPMENT	\$3,150
52180	OTHER EQUIPMENT	\$12,000
54510	MACHINE MAINTENANCE	\$5,422
54640	EDUCATION AND TRAINING	\$1,423




54646	CONTRACTS	\$8,691
54783	LICENSING AND ACCESSORIES	\$4,494
Total Increase in Appropriations		\$25,626
Fiscal Impact (26)		- 116,836 -
Fiscal Impact (27)		- 0 -

Thank you for your time and consideration of this request.

Attachments:

CHILD ADVOCACY CENTER – OVS GRANT DETAIL  
OVS ANNUAL BUDGET RENEWAL C11348GG 10/1/2025-9/30/2026

cc:  Sara Servadio, Commissioner of Department of Mental Health, Social Services, and Youth Bureau  
Nicolle McGuire, Deputy Commissioner of Social Services and Youth Bureau  
Marla Behler, Program Director Child Advocacy Center

**CHILD ADVOCACY CENTER - OVS GRANT DETAIL**

CONTRACT NUMBER #C11348GG

10/01/2025-09/30/2026

	2025-2026 APPROVED GRANT BUDGET	2025 REMAINING BUDGET	2026 BUDGET	2025 & 2026 TOTAL BUDGET	2026 BUDGETARY AMENDMENT
52130 COMPUTER EQUIPMENT	3,311	161	-	161	3,150
52180 OTHER EQUIPMENT	12,000	-	-	-	12,000
54310 OFFICE SUPPLIES	200	780	1,500	2,280	(2,080)
54311 PRINTING AND FORMS	-	1	-	1	(1)
54410 SUPPLIES AND MAT	-	1,228	1,500	2,728	(2,728)
54510 MACHINE MAINTENANCE	5,422	-	-	-	5,422
54635 CELLPHONES	1,440	910	2,400	3,310	(1,870)
54640 EDUCATION AND TRAINING	5,261	3,838	-	3,838	1,423
54646 CONTRACTS	182,531	48,180	125,660	173,840	8,691
54675 TRAVEL	-	77	500	577	(577)
54783 LICENSING AND ACCESSORIES	4,500	6	-	6	4,494
54989 MISCELLANEOUS	-	98	300	398	(398)
55370 CHRGK AUTOMOTIVE	-	1,900	-	1,900	(1,900)
55870 CHRGK AUTO ALL CTY VEHICLE	200	200	-	200	-
	<u>214,864</u>	<u>57,377</u>	<u>131,860</u>	<u>189,237</u>	<u>25,627</u>

OVS Annual Budget Renewal

(A narrative justification for each category must be attached along with budget pages.)

PROGRAM NAME: CAC of Putnam County  
 CONTRACTOR SFS PAYEE NAME: Putnam County Department of Social Services  
 CONTRACT NUMBER: # C11348CG  
 CONTRACT PERIOD: From: 10/1/2025 To: 9/30/2026

CATEGORY OF EXPENSE	GRANT FUNDS	MATCH FUNDS	MATCH %	TOTAL
<b>1. Personal Services</b>				
a) Salary	\$ 235,893.73	\$ 110,836.14	32.00%	\$ 346,729.87
b) Fringe	\$ 78,114.00	\$ 28,901.00	27.00%	\$ 107,015.00
Subtotal	\$ 314,007.73	\$ 139,737.14	31.00%	\$ 453,744.87
<b>2. Non Personal Services</b>				
a) Contractual Services	\$ 75,617.00	\$ 116,835.70	61.00%	\$ 192,452.70
b) Travel & Training	\$ 5,260.68	-	0.00%	\$ 5,260.68
c) Equipment	\$ 15,311.00	-	0.00%	\$ 15,311.00
d) Space/Property Rent	\$ -	-	#DIV/0!	\$ -
e) Space/Property Own	\$ -	\$ 11,600.00	100.00%	\$ 11,600.00
f) Utilities	\$ -	-	#DIV/0!	\$ -
g) Operating Expenses	\$ 1,840.00	-	0.00%	\$ 1,840.00
Subtotal	\$ 98,028.68	\$ 128,435.70	57.00%	\$ 226,464.38
<b>TOTAL</b>	\$ 412,036.41	\$ 268,172.84	39.00%	\$ 680,209.25



[illegible]

Page 2 of 10, Attachment B-1 – Expenditure Based Budget

Name of Organization: CAC of Putnam County  
 Contract Period: 10/1/2024 - 9/30/2025  
 Contract Number: C11348GG

**2024 ANNUAL FRINGE BENEFIT BUDGET FORM**

**Instructions:**

- A:** To calculate the total fringe figure, itemize the components and budgeted amounts for each fringe benefit category in the spaces below.

COMPONENT	% RATE	ANNUAL OVS FUNDS	ANNUAL MATCH FUNDS	TOTAL
F.I.C.A.	7.65%	\$ -	\$ -	\$ -
Life, Health, Dental		\$ -	\$ -	\$ -
Retirement		\$ -	\$ -	\$ -
Workers' Compensation		\$ -	\$ -	\$ -
Unemployment Insurance		\$ -	\$ -	\$ -
Disability/ Paid Family Leave Ins		\$ -	\$ -	\$ -
Employment Welfare Fund		\$ -	\$ -	\$ -
Other:		\$ -	\$ -	\$ -
Other:		\$ -	\$ -	\$ -
Other:		\$ -	\$ -	\$ -
<b>Total Fringe Benefits</b>	<b>7.65%</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

- B:** If using a federal/county/agency- approved rate: In addition to a fringe-rate letter with the signature of an authorizing official on agency letterhead please complete the line below.

Federal/County/Agency approved Fringe Rate: 34.46415/ 32.64509		\$ 78,114.00	\$ 28,901.00	\$ 107,015.00
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## PERSONAL SERVICES NARRATIVE

### DESCRIBE VOCA-ALLOWABLE ACTIVITIES PERFORMED BY EACH POSITION:

**CAC Senior Bilingual Victim Advocate:** Position provides direct services to clients outlined in our PMT. The position also assists with training and supervision of the victim advocate, student interns and volunteers. Salary is based on position title and grade determined by the Putnam County Personnel Department. The position works a 35-hour work week and 100% of time is dedicated to this contract.

**CAC Victim Advocate:** Position provides direct services to CAC clients outlined in our PMT. Salary is based on position title and grade determined by the Putnam County Personnel Department. Position works a 35-hour work week and 100% of time is dedicated to this project.

**Coordinator, CAC:** Position is responsible for coordinating and conducting forensic interviews, facilitating monthly case review meetings with team members, facilitating forensic interviewing peer review meetings and overseeing outreach initiatives to educate and identify crime victims. Salary is determined by Putnam County Personnel Department. The position works a 35-hour work week and 80% of time is dedicated to this contract. 15% will be funded by alternate sources.

**CAC Program Director (Match)** Position is responsible for the day-to-day management of the program including all administrative functions and staff supervision.

**CAC Office Assistant (Match)** Position is responsible for managing the CAC database, tracking cases and providing administrative support to all CAC staff and MDT members. Additional responsibilities include greeting families, supervising families in the waiting area, surveying clients, generating statistical reports, coordinating meeting schedules. Salary is based on county approved budget.

**Volunteer (Match):** Volunteers assist with case management which includes providing direct services to clients as well as assisting with community outreach and entering cases in our database. Volunteer match is based on \$25.00 per hour x 15 hours per week x 44 weeks



**CAC of Putnam County**

## ATTACHMENT B-1 - EXPENDITURE BASED BUDGET

## NON-PERSONAL SERVICES DETAIL

CONTRACTUAL SERVICES - TYPE/DESCRIPTION	OVS TOTAL	MATCH TOTAL
Putnam Northern Westchester Women's Resource Center	\$ 65,695.00	\$ 116,835.70
Star Witness Signal Scape	\$ 5,422.00	
Guardify Cloud Service	\$ 4,500.00	
TOTAL	\$ 75,617.00	\$ 116,835.70

**NARRATIVE - DESCRIBE SERVICES AND JUSTIFY NEED BELOW:**

PNWWRC: The CAC will subcontract with the Putnam/Northern Westchester Women's Resource Center (PNWWRC) to deliver mental health and outreach services in the most cost-effective way. Through this contract, three clinicians (one bilingual) will be designated to the CAC. These staff will provide evidence-based assessments, develop individualized treatment plans, and deliver evidence-supported therapeutic services for child clients and their families. They may also assist with forensic interviews and conduct outreach to educate the community and help identify victims of crime. Subcontracting these positions avoids the additional expenses associated with COLA and collective bargaining requirements tied to county positions, while ensuring the full scope of services outlined in the application can be delivered. \$65,695 of grant funds is allocated to this contract with the balance of \$116,835.70 being provided by alternative funding sources.

Star Witness Signal Scope: CAC will renew 2-year maintenance contract for Forensic Interview Recording Equipment and Software which provides updates on software releases and patches. Technical support including phone email and remote login for Star Witness Interviewer. Contract is for a two-year period and is due for renewal in September 2026.

**Guardify:** A key part of protecting child survivors is the forensic interview, conducted by trained professionals at Child Advocacy Centers (CACs). These interviews, which are video recorded, contain highly sensitive information and are essential to both justice and healing. Guardify is a secure, cloud-based digital management system that allows CACs to safely store, manage, and share forensic interview videos with the Multidisciplinary Team. It ensures timely access, supports case continuity, and helps ***include contractual agreement(s) with budget submission.***

Contract Number: # C11348GG

Page 4 of 10, Attachment B-1 – Expenditure Based Budget

TRAVEL & TRAINING TYPE/DESCRIPTION	OVS TOTAL	MATCH TOTAL
Staff and team training	\$ 5,260.68	
Travel		
TOTAL	\$ 5,260.68	\$ -

**Training:** Supports OVS-approved training, including the OVS conference, NCA accreditation-required training and other relevant courses. Funds will include training for clinicians in EMDR and the CAC Coordinator's certification as an EMDR Consultant to expand access to this evidence-based treatment for trauma victims.

**Travel:** Supports staff travel expenses necessary to carry out work plan activities, including off-site meetings, outreach events, home visits, court proceedings, client meetings, and other duties required to meet client needs. Examples of covered costs include mileage reimbursement, parking fees, and tolls.

XJ-1-0119

EQUIPMENT - TYPE/DESCRIPTION	QVS TOTAL	MATCH TOTAL
Forensic Interview equipment	\$ 3,311.00	
Air Conditioners	\$ 12,000.00	
TOTAL	\$ 15,311.00	\$ -

\*Tablet: Funds will be used to purchase a tablet for Senior Bilingual Victim Advocate to use when out in the field. Budgeted amount is based on quote provided by IT Department.

•Forensic Interview Equipment: The budgeted amount is based on a quote from StarWitness (vendor for existing equipment) for the Interviewer Dome Camera Kit and Microphone. This equipment will enhance audio quality so that softly spoken responses are clearly captured and improve video coverage while allowing children the freedom to choose their seat without compromising visibility. The upgrade supports a trauma-informed approach by prioritizing the child's comfort while ensuring high-quality documentation, compliance with best practices, and reliable recordings that reduce the need for repeated interviews.

•Air Conditioners: The CAC's current AC system is outdated, inefficient, and noisy, disrupting meetings and making it hard to communicate effectively with clients, impacting the quality of services we provide. During forensic interviews in particular, the noise makes it difficult to clearly hear children's voices, which can interfere with the accuracy and quality of the recorded interviews. Replacing the current units with new inverter window units that sit on the outside will significantly reduce noise, improve air circulation, and create a more comfortable and professional environment for confidential conversations, meetings, and interviews. The amount budgeted is based on a quote provided by the contracted vendor and will cover a percentage of the total cost, in accordance with prorating requirements.

•Furniture: Funds will be used to replace an office chair and to purchase a secure storage unit for the forensic interview computer equipment and monitoring system in the observation room. This will help protect sensitive equipment and ensure that the technology is stored safely and organized when not in use.

Page 6 of 10, Attachment B-1 – Expenditure Based Budget



CAC of Putnam County  
ATTACHMENT B-1 - EXPENDITURE BASED BUDGET  
NON-PERSONAL SERVICES DETAIL

SPACE/PROPERTY OWN TYPE/DESCRIPTION	OVS TOTAL	MATCH TOTAL
		\$ 11,600.00
TOTAL \$	-	\$ 11,600.00
NARRATIVE - DESCRIBE ALLOCATION METHOD USED TO DETERMINE APPLICABLE AMOUNT TO OVS:		
11		

OPERATING EXPENSES - TYPE/DESCRIPTION		OVS TOTAL	MATCH TOTAL
	Cell Phones	\$ 1,440.00	
	Office and Program Supplies	\$ 200.00	
	Vehicle Insurance	\$ 200.00	
	TOTAL	\$ 1,840.00	\$ -

DESCRIBE ALLOCATION METHOD USED TO DETERMINE APPLICABLE AMOUNT TO OVS FOR SHARED COSTS.

**NARRATIVE - DESCRIBE SERVICES AND JUSTIFY NEED BELOW:**

Cell phones will be provided to 3 position proposed in this application (2 victim advocates, and the program coordinator) to carry out their job responsibilities. The budgeted amount is based on annual county rate of 480.00 per phone.

**Office and Program Supplies:** Covers project-specific supplies, including pens, paper, printing materials, forensic interview tools, therapy supplies, and other essentials. Budget is based on past expenditures and the cost of one anatomical doll sets (\$535 each). The annual vehicle insurance cost is based on the County's standard rate of \$200 per vehicle. This vehicle was funded by OVS and is used exclusively for OVS-approved activities. The rate reflects the County's negotiated group policy, which provides comprehensive coverage at a reduced cost through pooled purchasing.

## OVS BUDGET NARRATIVE: 10/1/2025– 9/30/2026

### Personnel

**Coordinator CAC 10/1/2025-12/31/2025:** The full-time position oversees the victim advocacy program, outreach initiatives, and the new mental health program. Responsibilities include facilitating the CAC multidisciplinary team, coordinating and conducting forensic interviews, and providing clinical consultation for contracted therapists to ensure evidence-supported, standardized, trauma-focused mental health services. The salary, classified as a management position, is determined by the Putnam County Personnel Department based on job responsibilities and comparable county positions. Position works a 35-hour workweek, with 85% funded by this contract and 20% covered by alternative funding.

**Coordinator, CAC 1/1/2026-9/30/2026:** This position will receive a COLA increase effective January 1, 2026, in accordance with the bargaining unit contract and county budget

**CAC Senior Bilingual Victim Advocate, 10/1/2025-12/31/2025:** The full-time position provides direct services to clients and assists with training and supervision of the victim advocate, student interns and volunteers. Salary is based on position title and grade determined by the Putnam County Personnel Department, collective bargaining agreements, longevity and approved county budget. Position works a 35-hour workweek and 100% of time is dedicated to this contract.

**CAC Senior Bilingual Victim Advocate 1/1/2026-9/30/2026:** The listed salary reflects an anticipated reclassification increase effective 1/1/2026

**CAC Victim Advocate 10/1/2025-12/31/2025:** The full-time position provides direct services to clients. Salary is based on position title and grade determined by the Putnam County Personnel Department, collective bargaining agreements, longevity and approved county budget. Position works a 35-hour workweek and 100% of time is dedicated to this contract.

**CAC Victim Advocate: 1/1/2026-9/30/2026:** The listed salary reflects an anticipated reclassification increase effective 1/1/2026

**Senior Clerk (Match) 10/1/2025-12/31/2025.** Position is responsible for managing the CAC database, tracking cases, and providing administrative support to all CAC staff and MDT members. Direct service responsibilities include greeting and assisting clients and their caregivers upon arrival, ensuring a welcoming and trauma-informed environment. The Senior Clerk maintains confidentiality of sensitive information, and coordinates communication between clients and team members during their visit. Additional responsibilities include supervising families in the waiting area, surveying clients to assess satisfaction and service needs, generating statistical reports for grant and program reporting, and coordinating team meeting schedules and case reviews.



Salary is based on the position title and grade determined by the Putnam County Personnel Department, collective bargaining agreement, and approved county budget. 75% of this position is used as a Match and documented on OVS functional time records.

**Principal Office Assistant (Match) 1/1/2026-10/30/2026.** The listed salary reflects an anticipated reclassification and title change from Senior Clerk to Principal Office Assistant effective 1/1/2026 and an increase in hours from 30-35 hours per week. 75% will is used as a Match and documented on OVS functional time records.

**Director, CAC (Match) 10/1/2025-12/31/2025** Position is responsible for the overall administration and day-to-day management of the program, including all administrative and fiscal functions associated with the OVS contract. Duties include preparing and submitting quarterly performance and fiscal reports, developing and maintaining detailed contract budgets, ensuring compliance with all OVS guidelines, and maintaining documentation to support allowable costs. The Director oversees OVS-funded staff, monitors service delivery to ensure program goals and objectives are met, and provides direct services to clients as needed to support case coordination and crisis response. The position also provides community training and outreach, represents the program at state, regional, and local coalition initiatives, and ensures that victims' needs and perspectives are represented in collaborative planning efforts.

The salary, classified as a management position, is determined by the Putnam County Personnel Department based on job responsibilities and comparable county positions. 34% of the Director's salary is used as a Match contribution and is documented on OVS functional time records.

**Director, CAC (Match) 1/1/2026-10/30/2026:** This position will receive a COLA increase effective January 1, 2026, in accordance with the bargaining unit contract and county budget 34% is used as a Match and documented on OVS functional time records.

**Volunteer (Match):** Volunteers function as Victim Advocates, providing direct services to clients, including crisis intervention, information and referrals, emotional support, and follow-up to ensure victims remain connected to needed resources. In addition to client services, volunteers assist with community outreach, awareness events, and program reporting activities. Their contributions help expand the reach and capacity of the CAC to meet victim's needs and strengthen community engagement. Match is based on \$30.00 per hour × 15 hours per week × 52 weeks.

**Fringe Rate:**

Federal/County/Agency approved Fringe Rate is 34.46415% for 10/1/2025- 12/31/2025 and 32.64509% for 1/1/2026 – 9/30/2026. Funding will cover 100 % fringe for the victim advocate, senior bilingual advocate, and 85% for the coordinator positions. 34% for Program Director and 75% for Office Manager will be applied to the required Match.

**Contractual:**

**PNWWRC:** The CAC will subcontract with the Putnam/Northern Westchester Women's Resource Center (PNWWRC) to deliver mental health and outreach services in the most cost-

effective way. Through this contract, three clinicians (one bilingual) and a community outreach worker will be designated to the CAC. These staff will provide evidence-based assessments, develop individualized treatment plans, and deliver evidence-supported therapeutic services for child clients and their families. They may also assist with forensic interviews and conduct outreach to educate the community and help identify victims of crime. Subcontracting these positions avoids the additional expenses associated with COLA and collective bargaining requirements tied to county positions, while ensuring the full scope of services outlined in the application can be delivered.

**Clinician 1 – Salary \$80,000 (\$3076.92 per pay period)**

Oct thru Dec 25 75% =  $3076.92 \times 7 \text{ pay periods} = \$21,538.46 \times 75\% = \$16,153.85 + \text{fringe } 22\% (\$3553.85) = \$19707.70$

Jan thru Sept 26 100% =  $3076.92 \times 19 \text{ pay periods} = \$58,461.48 + \text{fringe } 22\% (\$12,861.53) = \$71,323.01$

**Clinician 2 – Salary \$62,500**

Oct 25 thru Sept 26 100% =  $\$62,500 + \text{Fringe } 22\% (\$13750) = \$76,250$

**Clinician 3 – Salary \$62,500**

Oct 25 thru Sept 26 20% =  $\$12,500 + \text{Fringe } 22\% (\$2750) = \$15,250$

**Total for Oct 25 thru Sept 26**

**Salaries = \$149,615.33**

**Fringe = \$32,915.37**

**Total = \$182,530.70**

**\$65,695 of grant funds is allocated to this contract with the balance of \$116,835.70 being provided by alternative funding sources.**

**Star Witness Signal Scape:** CAC will renew 2-year maintenance contract for Forensic Interview Recording Equipment and Software which provides updates on software releases and patches. Technical support including phone email and remote login for Star Witness Interviewer. Contract is for a two-year period and is due for renewal in September 2026.

**Guardify:** A key part of protecting child survivors is the forensic interview, conducted by trained professionals at Child Advocacy Centers (CACs). These interviews, which are video recorded, contain highly sensitive information and are essential to both justice and healing. Guardify is a secure, cloud-based digital management system that allows CACs to safely store, manage, and share forensic interview videos with the Multidisciplinary Team. It ensures timely access, supports case continuity, and helps meet NCA accreditation standards, including secure peer review. The budgeted amount covers the annual license for this customized solution.

### **Training/Travel:**

**Staff and team training:** Budgeted amount supports OVS-approved training, including the OVS conference, NCA accreditation-required training and other relevant courses. Funds will include training for clinicians in EMDR and the CAC Coordinator's certification as an EMDR Consultant to expand access to this evidence-based treatment for trauma victims.

**Travel:** Alternative funding sources will be used to support staff travel expenses necessary to carry out work plan activities, including off-site meetings, outreach events, home visits, court proceedings, client meetings, and other duties required to meet client needs. Examples of covered costs include mileage reimbursement, parking fees, and tolls.

### **Equipment:**

- **Forensic Interview Equipment:** The budgeted amount is based on a quote from StarWitness (vendor for existing equipment) for the Interviewer Dome Camera Kit and Microphone. This equipment will enhance audio quality so that softly spoken responses are clearly captured and improve video coverage while allowing children the freedom to choose their seat without compromising visibility. The upgrade supports a trauma-informed approach by prioritizing the child's comfort while ensuring high-quality documentation, compliance with best practices, and reliable recordings that reduce the need for repeated interviews.
- **Air Conditioners:** The CAC's current AC system is outdated, inefficient, and noisy, disrupting meetings and making it hard to communicate effectively with clients, impacting the quality of services we provide. During forensic interviews in particular, the noise makes it difficult to clearly hear children's voices, which can interfere with the accuracy and quality of the recorded interviews. Replacing the current units with new inverter window units that sit on the outside will significantly reduce noise, improve air circulation, and create a more comfortable and professional environment for confidential conversations, meetings, and interviews. The amount budgeted is based on a quote provided by the contracted vendor and will cover a percentage of the total cost, in accordance with prorating requirements.

### **Operating Expenses:**

- **Cell Phones:** Cell phones are provided to three staff (program coordinator, two victim advocates) for job duties. Budget is based on the county rate of \$480 per phone
- **Vehicle Insurance:** This vehicle was funded by OVS and is used exclusively for OVS-approved activities. The rate reflects the County's negotiated group policy, which provides comprehensive coverage at a reduced cost through pooled purchasing.
- **Office and Program Supplies:** Covers project-specific supplies, including pens, paper, printing materials, forensic interview tools, therapy supplies, and other essentials. The budget is based on past expenditures.



#40.

Committee: **Audit & Administration** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – BUDGETARY AMENDMENT (24A123) – FINANCE – YEAR  
END JOURNAL ENTRY #1**

**WHEREAS, the Commissioner of Finance has requested a budgetary amendment (24A123) for the first Year End Journal Entry for the year ending December 31, 2025; and**

**WHEREAS, further entry(s) will follow as more information becomes available during the year end closing process; and**

**WHEREAS, the Audit & Administration Committee has reviewed and approved said budgetary amendment; now therefore be it**

**RESOLVED, that the following budgetary amendment be made:**

**GENERAL FUND**

<b>Increase Estimated Appropriations:</b>	
<b>SEE ATTACHED SHEET</b>	<b>1,117,509</b>
<b>Decrease Estimated Appropriations:</b>	
<b>SEE ATTACHED SHEET</b>	<b>80,425</b>
<b>Increase Estimated Revenues:</b>	
<b>SEE ATTACHED SHEET</b>	<b>1,037,084</b>

**ROAD FUND**

<b>Decrease Estimated Appropriations:</b>	
<b>SEE ATTACHED SHEET</b>	<b>3,097</b>
<b>Decrease Estimated Revenues:</b>	
<b>SEE ATTACHED SHEET</b>	<b>3,097</b>

**ROAD MACHINERY FUND**

<b>Increase Estimated Appropriations:</b>	
<b>SEE ATTACHED SHEET</b>	<b>1,395</b>
<b>Increase Estimated Revenues:</b>	
<b>SEE ATTACHED SHEET</b>	<b>1,395</b>

**TRANSPORTATION FUND**

<b>Increase Estimated Appropriations:</b>	
<b>SEE ATTACHED SHEET</b>	<b>722</b>
<b>Increase Estimated Revenues:</b>	

_____ Legislator Addonizio
_____ Legislator Birmingham
_____ Legislator Crowley
_____ Legislator Ellner
_____ Legislator Gouldman
_____ Legislator Jonke
_____ Legislator Montgomery
_____ Legislator Russo
_____ Chairwoman Sayegh

SEE ATTACHED SHEET

722

**CAPITAL PROJECTS FUND**

**Increase Estimated Appropriations:**

SEE ATTACHED SHEET

608,381.95

**Increase Estimated Revenues:**

SEE ATTACHED SHEET

614,979.40

**Decrease Estimated Revenues:**

SEE ATTACHED SHEET

6,597.45

**2024 Fiscal Impact – 0 –**

**2025 Fiscal Impact – 0 –**

WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE

*Reso*  
*12-18-25*  
*- Audit*  
*Year End*  
*12-18-25*  
*#40*

DEPARTMENT OF FINANCE

MEMORANDUM

To: Diane Trabulsy, Legislative Clerk

From: William J. Carlin, Jr., Commissioner of Finance *WJC*

Re: Budgetary Amendment - 25A123

Date: December 11, 2025

2025 DEC 11 PM 4:20  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

At the request of the Commissioner of Finance, the following budgetary amendment is required.

**GENERAL FUND:**

**Increase estimated appropriations:**

SEE ATTACHED SHEET 1,117,509.00

**Decrease estimated appropriations:**

SEE ATTACHED SHEET 80,425.00

**Increase estimated revenues:**

SEE ATTACHED SHEET 1,037,084.00

**ROAD FUND:**

**Decrease estimated appropriations:**

SEE ATTACHED SHEET 3,097.00

**Decrease estimated revenues:**

SEE ATTACHED SHEET 3,097.00

**ROAD MACHINERY FUND:**

**Increase estimated appropriations:**

SEE ATTACHED SHEET 1,395.00

**Increase estimated revenues:**

SEE ATTACHED SHEET 1,395.00

**TRANSPORTATION FUND:**

**Increase estimated appropriations:**

SEE ATTACHED SHEET 722.00



**Increase estimated revenues:**

SEE ATTACHED SHEET

722.00

**CAPITAL PROJECTS FUND:**

**Increase estimated appropriations:**

SEE ATTACHED SHEET

608,381.95

**Increase estimated revenues:**

SEE ATTACHED SHEET

614,979.40

**Decrease estimated revenues:**

SEE ATTACHED SHEET

6,597.45

Fiscal Impact - 2025 - \$ 0

Fiscal Impact - 2026 - \$ 0

This Resolution is required to record year end journal entry #1 as per the attached spreadsheet.

Approved:

Kevin M, Byrne  
County Executive

JOHN TULLY  
Director



KEVIN M. BYRNE  
County Executive

PURCHASING

**MEMORANDUM**

Date: December 9, 2025

To: William J, Carlin, Commissioner of Finance

From: John G. Tully, Commissioner of DGS

CC: James Burpoe, Deputy County Executive  
Tom Feighery, Commissioner of DPW  
Alexis Hawley, Assistant Supervisor of Planning and Design

Re: Budgetary Amendment

Attached please find a check in the amount of \$55,400 in connection with a credit owed Putnam County by Atlantic Tomorrow's Office for underutilization of copies made by the County's copier fleet.

I would like to suggest the following budgetary amendment for your consideration:

Increase Estimated Revenues:

**101610000 427701 Unclassified Departmental Rev \$55,400**

Increase Estimated Expenses:

**05 55197000 532318 51509 (23CP18) \$25,000**

To complete the DGS conference room space and renovate the mailroom

**05 55197000 532402 51509 (24CP02) \$20,000**

To offset the cost of a new canopy for the front entrance of the County Office Building

**05 55197000 532317 51509 (23CP17) \$10,400**

To continue the County Executive's initiative to replace aging furniture and furnishing in County Departments

**RIAN RODRIGUEZ, MPH**  
PUBLIC HEALTH DIRECTOR



**KEVIN M. BYRNE**  
PUTNAM COUNTY EXECUTIVE

## MEMORANDUM

**TO:** William Carlin, Commissioner of Finance  
**FROM:** William A. Orr, Jr., Senior Fiscal Manager *WAO*  
**DATE:** December 10, 2025  
**RE:** **Budgetary Amendment**

Please review and approve the Budgetary Amendment for the following Health Department accounts, and upon approval, please forward it to the Legislative Committee.

**Increase Revenue Line:** 10296000-432773 \$476,000  
Preschool – Education and Transportation Handicap Child 3 to 5

**Total Revenue Increase:** \$476,000

**Increase Expense Line:** 10296000-54414 \$800,000  
Preschool – Care at Private Institution

**Decrease Contingency:** (\$324,000)

**Fiscal Impact** (\$324,000)

In 2024 the total expenses for Care at Private Institutions were \$7,400,000. We had originally budgeted \$6,000,000. This was the year we had multiple rate increases and children at schools increased by 15 students: from 105 to 120. At the time of preparing the budget for 2025, we were aware of the increase in children at schools, but not to the extent of the 15 additional children. In 2025 we budgeted \$6,400,000.

After all Budgetary Amendments have been calculated and this Budgetary Amendment approved, our new revised Budget for 2025 will be \$7,300,000. We anticipate spending the entire \$7,300,000. As reference, we spent \$7,400,000 in 2024.

Children attending schools in has leveled off in 2025 as compared to 2024. With the inclusion of the new Early Learning Center (ELC), we have budgeted significantly less in 2026.

There was also a rate change increase of 90,000 for one of the schools.

WAO: mb



FD ORG	OBJECT	PROJECT	DESCRIPTION	INCREASE ESTIMATED APPROPS	DECREASE ESTIMATED APPROPS	INCREASE ESTIMATED REVENUES	DECREASE ESTIMATED REVENUES	COMMENTS
01 10116200	43089H		REF PRIOR YEAR EXPENDITURES - STATE			39,829		ADJUST TO ACTUAL
01 10116200	430211		STATE AID - COURT FACILITIES			33,992		ADJUST TO PROJECTION
01 10198000	54759		SPECIAL DISTRICT TAXES					ADJUST TO ACTUAL MTA TAX ENDED 6/30
01 10132000	54111		INDEPENDENT AUDIT					ADJUST TO ACTUAL
01 10296000	432773		PRESCHOOL ED & TRANSPORTATION 3-5	40,000				ADJUST TO PROJECTION - LETTER ATTACHED
01 10296000	54414		PRESCHOOL CARE AT PRIVATE INSTITUTION	800,000				ADJUST TO PROJECTION - LETTER ATTACHED
01 10990100	59020		TRANSFER TO CAPITAL FUND	55,400				COPIER REFUND - LETTER ATTACHED
01 10008000	58001		NYS RETIREMENT	1,182				ADJUST TO ACTUAL
01 10009000	58001		NYS RETIREMENT	341				ADJUST TO ACTUAL
01 10010000	58001		NYS RETIREMENT	975				ADJUST TO ACTUAL
01 10011000	58001		NYS RETIREMENT	53				ADJUST TO ACTUAL
01 10012000	58001		NYS RETIREMENT	444				ADJUST TO ACTUAL
01 10014000	58001		NYS RETIREMENT	542				ADJUST TO ACTUAL
01 10033000	58001		NYS RETIREMENT	631				ADJUST TO ACTUAL
01 10087000	58001	10184	NYS RETIREMENT	145				ADJUST TO ACTUAL
01 10087000	58001		NYS RETIREMENT	183				ADJUST TO ACTUAL
01 10088000	58001		NYS RETIREMENT	22				ADJUST TO ACTUAL
01 10101000	58001	10233	NYS RETIREMENT	386				ADJUST TO ACTUAL
01 10101000	58001		NYS RETIREMENT	1,695				ADJUST TO ACTUAL
01 10101001	58001		NYS RETIREMENT	2,019				ADJUST TO ACTUAL
01 10102000	58001		NYS RETIREMENT	7,632				ADJUST TO ACTUAL
01 10103000	58001		NYS RETIREMENT	1,174				ADJUST TO ACTUAL
01 10104000	58001		NYS RETIREMENT	2,478				ADJUST TO ACTUAL
01 10105000	58001		NYS RETIREMENT	70				ADJUST TO ACTUAL
01 10106000	58001		NYS RETIREMENT	88				ADJUST TO ACTUAL
01 10107000	58001		NYS RETIREMENT	1,020				ADJUST TO ACTUAL
01 10108000	58001		NYS RETIREMENT	1,174				ADJUST TO ACTUAL
01 10110000	58001		NYS RETIREMENT	395				ADJUST TO ACTUAL
01 10116000	58001		NYS RETIREMENT	234				ADJUST TO ACTUAL
01 10116500	58001		NYS RETIREMENT	6,152				ADJUST TO ACTUAL
01 10118500	58001		NYS RETIREMENT	260				ADJUST TO ACTUAL
01 10120000	58001	10130	NYS RETIREMENT	9				ADJUST TO ACTUAL
01 10120000	58001		NYS RETIREMENT	4,788				ADJUST TO ACTUAL
01 10123000	58001		NYS RETIREMENT	2,317				ADJUST TO ACTUAL
01 10131000	58001		NYS RETIREMENT	3,822				ADJUST TO ACTUAL
01 10132000	58001		NYS RETIREMENT	1,353				ADJUST TO ACTUAL

FD	ORG	OBJECT	PROJECT	DESCRIPTION	INCREASE ESTIMATED APPROPS	DECREASE ESTIMATED APPROPS	INCREASE ESTIMATED REVENUES	DECREASE ESTIMATED REVENUES	COMMENTS
01	10134500	58001		NYS RETIREMENT	1,671				ADJUST TO ACTUAL
01	10135500	58001		NYS RETIREMENT	599				ADJUST TO ACTUAL
01	10141000	58001		NYS RETIREMENT	3,618				ADJUST TO ACTUAL
01	10141100	58001		NYS RETIREMENT	2,685				ADJUST TO ACTUAL
01	10142000	58001		NYS RETIREMENT	3,040				ADJUST TO ACTUAL
01	10143000	58001		NYS RETIREMENT	2,582				ADJUST TO ACTUAL
01	10144000	58001		NYS RETIREMENT	1,147				ADJUST TO ACTUAL
01	10145000	58001		NYS RETIREMENT	2,889				ADJUST TO ACTUAL
01	10146000	58001		NYS RETIREMENT	824				ADJUST TO ACTUAL
01	10149000	58001		NYS RETIREMENT	2,029				ADJUST TO ACTUAL
01	10161000	58001		NYS RETIREMENT	68				ADJUST TO ACTUAL
01	10168000	58001		NYS RETIREMENT	2,879				ADJUST TO ACTUAL
01	10198900	58001		NYS RETIREMENT	75				ADJUST TO ACTUAL
01	10200000	58001		NYS RETIREMENT	16				ADJUST TO ACTUAL
01	10296000	58001		NYS RETIREMENT	472				ADJUST TO ACTUAL
01	10296001	58001		NYS RETIREMENT	79				ADJUST TO ACTUAL
01	10311000	58001		NYS RETIREMENT	7,083				ADJUST TO ACTUAL
01	10314000	58001	10225	NYS RETIREMENT	106				ADJUST TO ACTUAL
01	10314000	58001		NYS RETIREMENT	5,796				ADJUST TO ACTUAL
01	10315000	58001		NYS RETIREMENT	24,061				ADJUST TO ACTUAL
01	10315001	58001	10032	NYS RETIREMENT	414				ADJUST TO ACTUAL
01	10398900	58001		NYS RETIREMENT	917				ADJUST TO ACTUAL
01	10401000	58001		NYS RETIREMENT	2,046				ADJUST TO ACTUAL
01	10405900	58001		NYS RETIREMENT	1,799				ADJUST TO ACTUAL
01	10431000	58001	10227	NYS RETIREMENT	22				ADJUST TO ACTUAL
01	10431000	58001	10211	NYS RETIREMENT	182				ADJUST TO ACTUAL
01	10431000	58001	10206	NYS RETIREMENT	419				ADJUST TO ACTUAL
01	10431000	58001		NYS RETIREMENT	768				ADJUST TO ACTUAL
01	10511100	58001		NYS RETIREMENT	3,746				ADJUST TO ACTUAL
01	10629300	58001		NYS RETIREMENT	460				ADJUST TO ACTUAL
01	10641000	58001		NYS RETIREMENT	234				ADJUST TO ACTUAL
01	10651000	58001		NYS RETIREMENT	582				ADJUST TO ACTUAL
01	10661000	58001		NYS RETIREMENT	696				ADJUST TO ACTUAL
01	10677200	58001		NYS RETIREMENT	5,721				ADJUST TO ACTUAL
01	10677400	58001		NYS RETIREMENT	2,553				ADJUST TO ACTUAL
01	10677500	58001		NYS RETIREMENT	478				ADJUST TO ACTUAL

FD	ORG	OBJECT	PROJECT	DESCRIPTION	INCREASE ESTIMATED APPROPS	DECREASE ESTIMATED APPROPS	INCREASE ESTIMATED REVENUES	DECREASE ESTIMATED REVENUES	COMMENTS
01	10677700	58001		NYS RETIREMENT	1,391				ADJUST TO ACTUAL
01	10677900	58001		NYS RETIREMENT	641				ADJUST TO ACTUAL
01	10711000	58001		NYS RETIREMENT	3,470				ADJUST TO ACTUAL
01	10731000	58001	10114	NYS RETIREMENT	347				ADJUST TO ACTUAL
01	10731000	58001		NYS RETIREMENT	902				ADJUST TO ACTUAL
01	10751000	58001		NYS RETIREMENT	247				ADJUST TO ACTUAL
01	10762000	58001		NYS RETIREMENT	143				ADJUST TO ACTUAL
01	10802000	58001		NYS RETIREMENT	2,238				ADJUST TO ACTUAL
01	10816000	58001		NYS RETIREMENT	183				ADJUST TO ACTUAL
01	10874500	58001		NYS RETIREMENT	219				ADJUST TO ACTUAL
01	11017000	58001		NYS RETIREMENT	740				ADJUST TO ACTUAL
01	11018000	58001		NYS RETIREMENT		395			ADJUST TO ACTUAL
01	11024000	58001		NYS RETIREMENT	34				ADJUST TO ACTUAL
01	11401000	58001		NYS RETIREMENT	3,166				ADJUST TO ACTUAL
01	12022000	58001		NYS RETIREMENT	604				ADJUST TO ACTUAL
01	12023000	58001		NYS RETIREMENT	32				ADJUST TO ACTUAL
01	12401000	58001		NYS RETIREMENT	5,602				ADJUST TO ACTUAL
01	12401002	58001	10050	NYS RETIREMENT	98				ADJUST TO ACTUAL
01	12401003	58001	10056	NYS RETIREMENT	166				ADJUST TO ACTUAL
01	13311000	58001	10211	NYS RETIREMENT	44				ADJUST TO ACTUAL
01	13311000	58001	10218	NYS RETIREMENT	249				ADJUST TO ACTUAL
01	13311000	58001		NYS RETIREMENT	500				ADJUST TO ACTUAL
01	13398900	58001		NYS RETIREMENT	5,427				ADJUST TO ACTUAL
01	14311000	58001	10164	NYS RETIREMENT	219				ADJUST TO ACTUAL
01	14311000	58001		NYS RETIREMENT	6,999				ADJUST TO ACTUAL
01	14398900	58001		NYS RETIREMENT	187				ADJUST TO ACTUAL
01	15311000	58001		NYS RETIREMENT	2,402				ADJUST TO ACTUAL
01	16311000	58001		NYS RETIREMENT	9,748				ADJUST TO ACTUAL
01	17002000	58001		NYS RETIREMENT		3,814			ADJUST TO ACTUAL
01	17003000	58001		NYS RETIREMENT	157				ADJUST TO ACTUAL
01	17004000	58001		NYS RETIREMENT	125				ADJUST TO ACTUAL
01	17311000	58001	10144	NYS RETIREMENT	75				ADJUST TO ACTUAL
01	17311000	58001	10102	NYS RETIREMENT	542				ADJUST TO ACTUAL
01	17311000	58001		NYS RETIREMENT	32,227				ADJUST TO ACTUAL
01	17311002	58001	10021	NYS RETIREMENT		990			ADJUST TO ACTUAL
01	18311000	58001		NYS RETIREMENT		1,814			ADJUST TO ACTUAL



[illegible]

[illegible]

#4p.

Committee: **Audit & Administration** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL – BUDGETARY AMENDMENT (25A124) – MENTAL HEALTH, SOCIAL SERVICES AND YOUTH BUREAU - ADJUST MENTAL HEALTH STATE AID LEVELS**

**WHEREAS, Commissioners of Mental Health, Social Services and Youth Bureau requested Budgetary Amendment (25A124) to adjust the mental Health State Aid levels; and**

**WHEREAS, the Audit & Administration Committee has reviewed and approved said budgetary amendment; now therefore be it**

**RESOLVED, that the following budgetary amendment:**

**Increase Estimated Appropriations:**

<b>10431000 54640 10227</b>	<b>Education &amp; Train -MH LGU LOSS TEAMS</b>	<b>5,000</b>
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**Increase Estimated Revenues:**

<b>10431000 430891 10227</b>	<b>State Aid – MH LGU LOSS TEAMS</b>	<b>5,000</b>
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**2025 Fiscal Impact – 0 -**

**2026 Fiscal Impact – 0 -**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh



WILLIAM J. CARLIN, Jr. CPA  
Commissioner Of Finance



02-Audit  
-YR. 12-18-25  
Reso  
KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE

DEPARTMENT OF FINANCE

MEMORANDUM

To: Diane Trabulsy, Legislative Clerk  
From: William J. Carlin, Jr., Interim Commissioner of Finance *WJC*  
Re: Budgetary Amendment - **25A124**  
Date: December 11, 2025

At the request of the Commissioner of MH, DSS & Youth, the following budgetary amendment is required.

**Increase Estimated Appropriations:**

10431000 54640 10227	Education & Train -MH LGU LOSS TEAMS	5,000
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**Increase Estimated Revenues:**

10431000 430891 10227	State Aid - MH LGU LOSS TEAMS	5,000
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Fiscal Impact - 2025 - \$ 0

Fiscal Impact - 2026 - \$ 0

This Resolution is adjust Mental Health State Aid levels as per the attached correspondence. Please forward to the appropriate committee.

Approved : : \_\_\_\_\_  
Kevin M, Byrne, County Executive

2025 DEC 11 PM 4:19  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

KEVIN BYRNE  
County Executive

SARA SERVADIO  
Commissioner

NICOLLE MCGUIRE  
Deputy Commissioner



DEPARTMENTS OF MENTAL HEALTH  
SOCIAL SERVICES AND YOUTH BUREAU

MEMORANDUM

December 11, 2025

TO: William Carlin, Commissioner of Finance

FROM:  Kristen Wunner, Fiscal Manager of Department of Mental Health, Social Services, and Youth Bureau

SUBJECT: Mental Health 2025 Budgetary Amendment

The Putnam County Suicide Prevention Task Force has received additional grant funding to support existing efforts of a county **LOSS Team** (Local Outreach to Suicide Survivors) to connect suicide loss survivors to suicide loss survivor groups and other healing resources after a loss by suicide occurs. Grants funds will be used to offset expenses related to the **National LOSS Team Conference** attended on October 13 – 15 in Omaha, NE.

Increase Estimated Revenues:

10431000	MH LG	
430891	ST AID	\$5,000
10227	LOSS TEAMS	
	Total Revenue	\$5,000

Increase Appropriations:

10431000	MH LGU	
54640	EDUCATION AND TRAINING	\$5,000
10227	LOSS TEAMS	
	Total Appropriations	\$5,000
	Fiscal Impact (25)	- 0 -
	Fiscal Impact (26)	- 0 -

Thank you for your time and consideration of this request.

Attachments:

Independent Contractor/Consulting Agreement – County of Putnam & NYS Office of Mental Health

cc  Sara Servadio, Commissioner of Department of Mental Health, Social Services, and Youth Bureau  
Marla Behler, Director of Child Advocacy Center

DONALD B. SMITH COUNTY GOVERNMENT CAMPUS ~ BLDG. #2  
110 OLD ROUTE SIX ~ CARMEL, NEW YORK 10512 (845) 808-1500 FAX (845) 225-8635  
MEDICAID UNIT FAX (845) 225-0947  
YOUTH BUREAU (845) 808-1600

<b>For RFMH Use Only:</b>	
<input checked="" type="checkbox"/> New P.O. # 170382	<input type="checkbox"/> Change P.O. # _____
Total to be encumbered: \$5,000	
<b>Category Breakdown:</b>	
Consulting: \$ 5,000	
Travel: \$ _____	
Project Org: 550 OMH	
P/T/A: 1018477/3/28284	
Period of Performance 12/1/2025 to 12/31/2025	

**Independent Contractor/Consulting Agreement  
Resulting from New York State Contracts**

**RESEARCH FOUNDATION FOR MENTAL HYGIENE, INC.  
AND  
INDEPENDENT CONTRACTOR**

MADE by and between the RESEARCH FOUNDATION FOR MENTAL HYGIENE, INC., a nonprofit corporation organized and existing under the laws of the State of New York, with its principal offices located at Riverview Center, 150 Broadway, Suite 301, Menands, New York 12204, hereinafter referred to as the "FOUNDATION," and  
County of Putnam \_\_\_\_\_, having a place  
of business at 40 Glencida Avenue, Carmel, NY 10512, EIN/DUNS (if  
applicable): 146002759 hereinafter referred to as "INDEPENDENT  
CONTRACTOR."

**WITNESSETH:**

**WHEREAS**, the FOUNDATION has been awarded a certain grant from the State of New York, specifically New York State Office of Mental Health ("Sponsor") to carry out a project entitled "NYS Suicide Prevention Resource Center"; Sponsor ID Number: C22653GG (hereinafter the "PROJECT"); and

**WHEREAS**, the FOUNDATION desires the INDEPENDENT CONTRACTOR to perform certain services for the FOUNDATION in connection with the PROJECT; and

**WHEREAS**, INDEPENDENT CONTRACTOR has represented to the FOUNDATION that INDEPENDENT CONTRACTOR is competent, willing and able to perform such services for the FOUNDATION.

**NOW, THEREFORE** in consideration of the premises and the mutual covenants and agreements contained herein it is mutually agreed by and between the respective parties as follows:

1. **Scope of Work**

INDEPENDENT CONTRACTOR agrees to perform, as an independent Contractor, and not as an agent or employee of the FOUNDATION, all of the services set forth in Exhibit A



appended hereto and made a part hereof to the satisfaction of the FOUNDATION's Principal Investigator, Jay Carruthers.

2. **Compensation**

In full and complete consideration of INDEPENDENT CONTRACTOR's performance hereunder, the FOUNDATION agrees to compensate INDEPENDENT CONTRACTOR \$ 5,000 Dollars. The payments should be in accordance with Exhibit B.

3. **Term and Termination**

Unless sooner terminated as provided herein, this Agreement shall continue in full force and effect from 12/1/2025 through 12/31/2025. A final invoice must be submitted within sixty (60) days of the end of this Agreement. It is understood and agreed that the FOUNDATION may terminate this Agreement upon written notice by registered mail addressed to INDEPENDENT CONTRACTOR at the address indicated herein, or such other address as INDEPENDENT CONTRACTOR may designate in writing, whenever the FOUNDATION determines, in its discretion, that such termination would be in the best interests of the FOUNDATION. FOUNDATION may terminate this Agreement immediately if the Grant between Sponsor and FOUNDATION is terminated.

Upon notice of termination, INDEPENDENT CONTRACTOR shall immediately terminate work in progress and turn over to FOUNDATION all products, work in progress, reports and other data and information accumulated during the performance of services under this Agreement.

4. **Rights in Work Product**

INDEPENDENT CONTRACTOR agrees that material produced by INDEPENDENT CONTRACTOR hereunder shall be considered "work for hire" which shall be owned by FOUNDATION. INDEPENDENT CONTRACTOR agrees that INDEPENDENT CONTRACTOR shall not claim or assert any proprietary interest in any of the data or materials required to be produced or delivered by INDEPENDENT CONTRACTOR in the performance of INDEPENDENT CONTRACTOR'S obligation hereunder, and hereby assigns all rights, title and interest in said data and materials to FOUNDATION. INDEPENDENT CONTRACTOR warrants any material produced by INDEPENDENT CONTRACTOR hereunder shall be original except for such portion from copyrighted works as may be included with the permission of the copyright owners thereof and are marked with appropriate copyright notices, that it shall contain no libelous or unlawful statements or materials, and will not infringe upon any copyright, trademark, patent, statutory or other proprietary rights of others, and that INDEPENDENT CONTRACTOR will hold harmless the FOUNDATION from any costs, expenses and damages resulting from any breach of this warranty. INDEPENDENT CONTRACTOR further agrees not to publish, permit to be published, or distribute for public consumption, any information, oral or written, concerning the results or conclusions made pursuant to this Agreement without the prior written consent of the FOUNDATION. Notwithstanding the foregoing, INDEPENDENT CONTRACTOR will retain ownership of intellectual property included in deliverables to the extent that said intellectual property has been independently developed by INDEPENDENT

CONTRACTOR without Research Foundation financial support. With respect to such INDEPENDENT CONTRACTOR owned intellectual property, INDEPENDENT CONTRACTOR hereby grants to Research Foundation and Sponsor a royalty-free, nonexclusive license to use such intellectual property for purposes consistent with the Research Foundation's obligations under the grant or contract which funds this project.

5. **Assignment**

It is understood and agreed that the services to be rendered by INDEPENDENT CONTRACTOR are unique and that INDEPENDENT CONTRACTOR shall not assign, transfer, contract or otherwise dispose of INDEPENDENT CONTRACTOR's rights or duties hereunder, in whole or in part, to any other person, firm or corporation.

6. **Status of Parties**

The nature of the relationship which the INDEPENDENT CONTRACTOR shall have to the FOUNDATION pursuant to this Agreement shall be that of an independent contractor. In connection with its status as an independent contractor, INDEPENDENT CONTRACTOR hereby warrants that it is in compliance with all tax filing and similar requirements imposed on independent contractors, and acknowledges that it is solely responsible for paying income taxes, FICA taxes, and other taxes and assessments which arise from receipt of consulting payments under this Agreement. This Agreement shall not be construed to contain any authority either express or implied, enabling the INDEPENDENT CONTRACTOR to incur any expense or perform any act on behalf of the FOUNDATION.

7. **Entire Agreement**

This Agreement represents the entire Agreement and understanding of the parties hereto and no prior writings, conversations or representations of any nature shall be deemed to vary the provisions hereof. This Agreement may not be amended or extended in any way except by a writing duly executed by both parties hereto.

8. **Compliance with Laws and Regulations: General Obligations**

a) In the performance of the work authorized pursuant to this agreement, INDEPENDENT CONTRACTOR agrees to comply with all applicable laws and regulations, as well as policies of the Sponsor applicable to INDEPENDENT CONTRACTOR's performance hereunder, and the express terms of FOUNDATION's agreement with the Sponsor, which shall be deemed to be inserted herein, and this agreement shall be read and enforced between the parties as though all such provisions were included verbatim herein.

b) The INDEPENDENT CONTRACTOR certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

c) The INDEPENDENT CONTRACTOR agrees to comply with Department of Health and Human Services Regulation, 45 CFR 46, regarding confidential data and research involving human subjects.

d) The INDEPENDENT CONTRACTOR agrees to make any and all data and work products relating to the services set for in Exhibit A reasonably available for inspection and copying.

e) The INDEPENDENT CONTRACTOR agrees not to use the names of FOUNDATION, FOUNDATION Principal Investigator or New York State Office of Mental Health for any purpose without prior written approval of FOUNDATION.

## 9. Confidentiality

a) All of the information disclosed by the FOUNDATION and FOUNDATION's Principal Investigator to INDEPENDENT CONTRACTOR, including the any data provided by the FOUNDATION to the INDEPENDENT CONTRACTOR to be used by INDEPENDENT CONTRACTOR in the performance of the services outlined in Exhibit A, shall be considered "Confidential Information". INDEPENDENT CONTRACTOR agrees to hold in confidence all Confidential Information and agrees that it will not use any information for any purpose other than set forth in this Agreement. INDEPENDENT CONTRACTOR will take all reasonable steps to ensure its security. INDEPENDENT CONTRACTOR may disclose Confidential Information to its own employees assisting in the services under this Agreement, provided that such employees shall have agreed to be bound by the terms of this Agreement or have entered into an agreement of similar scope and obligations to protect the Confidential Information. All Confidential Information must be returned within thirty (30) days after FOUNDATION makes a written request for its return or at the conclusion of this Agreement. The INDEPENDENT CONTRACTOR shall not disclose the Confidential Information to any third party without prior written permission

b) This obligation of confidentiality does not extend to Confidential Information which:

- 1) was known to the INDEPENDENT CONTRACTOR as evidenced by written documentation;
- 2) was or becomes a matter of public information or publicly available through no fault of the INDEPENDENT CONTRACTOR as evidenced by written documentation;
- 3) is acquired from a third party entitled to disclose information to the INDEPENDENT CONTRACTOR as evidenced by written documentation;  
or
- 4) is developed independently by INDEPENDENT CONTRACTOR



c) Except as required by law, regulation, court order, or with prior written permission, the INDEPENDENT CONTRACTOR will not disclose Confidential Information for a period of five (5) years from the end of this Agreement.

d) INDEPENDENT CONTRACTOR shall comply with all applicable laws regarding the confidentiality of subjects' medical records and protected health information.

e) INDEPENDENT CONTRACTOR shall not use or disclose protected health information other than as permitted or required by this Agreement or as required by law.

f) In the event that identifiable health information is disclosed to the INDEPENDENT CONTRACTOR that is not provided for in this Agreement, the INDEPENDENT CONTRACTOR shall notify the FOUNDATION of such disclosure, shall hold in confidence all such information and shall destroy such information upon the request of the FOUNDATION.

#### 10. **Indemnification**

INDEPENDENT CONTRACTOR will indemnify, defend and hold harmless FOUNDATION, the New York State Office of Mental Health, and their respective trustees, directors, officers, agents and employees (collectively "Indemnitees"), against all suits, claims, demands or prosecutions, (hereinafter "Claim") that may be brought or instituted, and all judgments, damages, liabilities, court costs and expenses (including attorney's fees) arising out of INDEPENDENT CONTRACTOR's negligent acts or omissions relating to its performance hereunder or its willful misconduct.

#### 11. **Insurance Requirements**

INDEPENDENT CONTRACTOR shall not commence work under this Agreement until it has obtained, at its own expense, all the insurance required under this Agreement, and within the Scope of Work as provided for in Exhibit A, and such insurance has been approved by FOUNDATION.

a) Workers' Compensation and Employers' Liability Insurance as required by law.

b) Commercial General Liability Insurance with a combined personal injury, bodily injury (including death) and property damage limit of at least \$1,000,000 for each occurrence and \$3,000,000 in the aggregate.

c) Professional Liability Insurance, including Medical Malpractice and Clinician's Liability: if INDEPENDENT CONTRACTOR or any of its employees are providing professional services under this Agreement, Professional Liability in an amount not less than \$1,000,000 for each wrongful act and \$3,000,000 in the aggregate.

12. **Modifications**

This agreement may be changed, amended, modified or extended only by a writing duly executed by the respective parties hereto.

13. **Governing Law**


Regardless of the place of physical execution or performance this agreement shall be construed according to the laws of the State of New York without regard to its conflict of laws provision, and shall be deemed to have been executed in the State of New York.

14. **Order of Precedence**


In the event of any inconsistency between clauses 1-13 of this Agreement, and the attached Exhibit A and B, the inconsistency should be resolved by giving precedence to clauses 1-13.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

**Research Foundation for  
Mental Hygiene, Inc.**

By   
Colleen Corcoran (Dec 10, 2025 13:53:14 EST)

**Independent Contractor**

By   
Sara Servadio (Dec 10, 2025 12:22:37 EST)

Attach: CV  
W9

**Exhibit A**

**SCOPE OF WORK**

See attached



## **Loss Teams 2025 Contract**

Loss Team Project Period: 12/1/25-12/31/2025

### **Attachment A:**

#### **2025 Grant Site Scope of Work- Loss Teams**

**Rationale:** Local Outreach to Suicide Survivors (LOSS) – is an active postvention model. This model involves a team of trained volunteers, called a LOSS Team, that works together to proactively connect suicide loss survivors to supports and resources after a loss by suicide occurs. At least one of these trained volunteers is a survivor of a suicide loss. LOSS Teams support suicide survivors by providing emotional guidance and resources and reducing isolation. This postvention intervention is considered a preventative measure because it helps lower the risk of additional suicides, offering survivors the support they need and preventing further trauma.

**Project Goals:** To support existing efforts of a county LOSS Team to connect suicide loss survivors to suicide loss survivor groups and other healing resources after a loss by suicide occurs.

**Project Period:** 12/1/2025-12/31/2025

#### **Loss Team Grant Site specific activities shall include:**

- Grantee shall assess and identify opportunities to support and/or enhance their existing LOSS team's efforts
  - Opportunities could include:
    - Purchasing of supplies, reading materials for loss survivors etc.
    - Training/professional development
    - Partner engagement activities
    - LOSS Team teambuilding activities/events

**Note:** Funds cannot be used to support personnel costs

#### **Attachment A- Scope of Work**

##### **Deliverables of Agreement to be met by 12/31/2025:**

- Grantee shall submit expenditure plan for allocated funding aimed at supporting/enhancing existing LOSS team efforts to SPCNY Project lead for review and approval by 12/31/2025
  - Expenditure plan shall provide detail summary including what is being purchased, estimated costs and rationale (how this expenditure will support and/or enhance existing efforts)
    - Grantee shall provide proof of purchase with relevant documentation upon request. Purchases may be made through end of the project period ending on 12/31/2025

#### **RATE AND PAYMENT SCHEDULE**

- Payment to grantee shall not exceed \$5,000 to be invoiced by 12/31/2025

- Invoice must be submitted no later than 15 days from invoice due date of 12/31/2025
- Grantee must submit invoice, with an original signature, to the Suicide Prevention Office Operations
  - Invoice should include detail summary of deliverables met by date completed
- Invoice must be marked FINAL.
- **Invoices for Payment:** Upon execution of your contract, invoice should be submitted to the Suicide Prevention Office Operations Manager for processing. Invoice must be submitted no later than 15 days from invoice due date of 12/31/2025.

**Attachment B  
Deliverable Payment Schedule**

**Payment:**

Grantee shall be reimbursed for deliverables as detailed in Attachment A, not to exceed **\$5,000**.

**Invoices:**

Grantee must submit invoice, with an original signature, to the Foundation Principal Investigator detailing completion of each of the deliverables with completion dates (see example below).

**Equity Agreement:**

OMH's Suicide Prevention Center of New York (SPCNY) is deeply committed to promoting equity principles and practices across all initiatives. It is expected that individuals and entities contracting with SPCNY will adhere to this commitment by valuing the experiences of minoritized communities and providing culturally humble and responsive service delivery that is respectful of the diverse beliefs, practices, language, and of all individuals being served.

Invoice must be marked FINAL.

Please see example below:

**EXAMPLE- INVOICE**

<b>Date</b>	<b>Deliverables Completed</b>	
12/31/25	Submitted expenditure plan to SPCNY Project lead for review and approval	\$5,000
Total Invoice		\$5,000

*By signing this report, I certify to the best of my knowledge and belief that the report is true, complete and accurate, and the deliverables were met as stated above. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise.*

**Payment Schedule**

Invoice due by:  
12/31/2025

**Signed invoices should be sent to:**

Robin Dickinson, Operations Manager, at the Suicide Prevention Center of New York  
at [robin.dickinson@omh.ny.gov](mailto:robin.dickinson@omh.ny.gov)

## **Exhibit B**

### **Rate and Payment Schedule**

(ii) Consultant shall be reimbursed for deliverables as detailed in Attachment A:

\$ 5,000.00 total

Independent Contractor must submit invoices, with an original signature, to the Foundation Principal Investigator detailing the dates and hours worked.

All travel must be in accordance with the RFMH Travel Policy.

Final invoices must be marked FINAL.

Invoices shall be sent to:

Robin Dickinson  
robin.dickinson@omh.ny.gov



KEVIN BYRNE  
County Executive

SARA SERVADIO  
Commissioner

NICOLLE MCGUIRE  
Deputy Commissioner



**DEPARTMENTS OF MENTAL HEALTH  
SOCIAL SERVICES AND YOUTH BUREAU**

**LANGUAGE LINE FORM**

DATE: 8/10/25

TIME STARTED: 12:10 am (9:10 PST) TIME ENDED: 12:15 am

TIME STARTED: \_\_\_\_\_ TIME ENDED: \_\_\_\_\_

TIME STARTED: \_\_\_\_\_ TIME ENDED: \_\_\_\_\_

CASE NUMBER: CPS #23189

CIN: \_\_\_\_\_

LANGUAGE: SPANISH

WORKER: Diane Tome

SIGNATURE: Diane Tome

ACCESS CODE USED: 104293

PHONE#: 845.239.0450

EXTENSION: \_\_\_\_\_

NUMBER DIALED: 475.218.7719

**DEPARTMENT USE ONLY**

INVOICE #: 11697319 INT NUMBER: 400550

INV DATE: 08.31.25 INT NUMBER: \_\_\_\_\_

ACCOUNT#: 9020572977 INT NUMBER: \_\_\_\_\_

DEPARTMENT: CPS REFERENCE: CR-0567628634

TOTAL MINUTES: 5 REFERENCE: \_\_\_\_\_

CHARGES: \$3.75 REFERENCE: \_\_\_\_\_

# 49.

Committee Mtg "Rules..."

Resolution # \_\_\_\_\_

Introduced By \_\_\_\_\_

Regular Mtg: Year End Meeting Dec. 18, 2025

Seconded By \_\_\_\_\_

Special Mtg \_\_\_\_\_

**APPROVAL/ APPOINTMENTS AND RE-APPOINTMENTS PUTNAM COUNTY  
BOARD OF ELECTRICAL EXAMINERS**

**RESOLVED**, under Section 145-6(F) of the Putnam County Code that the Putnam County Board of Electrical Examiners hereby appoint new board members, be it further

**RESOLVED**, that:

Carmine Ricci, Village of Cold Spring, Section 145-6(F), as Chairman, for a one (1) year term, said term to expire December 31, 2026.

Carlos DaEira, Village of Brewster, Section 145-6(F), as Vice Chairman, for a one (1) year term, said term to expire December 31, 2026.

**RESOLVED**, under Section 145-6(D) of the Putnam County Code that the Putnam County Board of Electrical Examiners hereby re-appoint board members, be it further

**RESOLVED**, that:

Carlos DaEira, Village of Brewster, Section 145-6(D)(1), as Master Electrician Representative, for a three (3) year term, said term to expire on December 31, 2028.

Thomas Moccio, Town of Carmel, Section 145-6(D)(1), as Master Electrician Representative, for a three (3) year term, said term to expire on December 31, 2028.

Carmine Ricci, Village of Cold Spring, Section 145-6(D)(1), as Master Electrician Representative, for a three (3) year term, said term to expire on December 31, 2028.

**And be it further**

**RESOLVED**, that these re-appointments comply with any requirements to file an Oath of Office pursuant to the New York State Public Officers Law.

Legislator Addonizio \_\_\_\_\_

Legislator Birmingham \_\_\_\_\_

Legislator Crowley \_\_\_\_\_

Legislator Ellner \_\_\_\_\_

Legislator Gouldman \_\_\_\_\_

Legislator Jonke \_\_\_\_\_

Legislator Montgomery \_\_\_\_\_

Legislator Russo \_\_\_\_\_

Chairwoman Sayegh \_\_\_\_\_

William Rossiter  
Chairman

Andrew Pidala  
Vice Chairman

Michael Budzinski, PE  
Director  
Office of Consumer Affairs  
[www.putnamcountyny.gov/consumer-affairs/](http://www.putnamcountyny.gov/consumer-affairs/)



ccAll  
12-18 Rules

Reso

Robert Counihan  
Carlos DaEira  
Ronald Massaro  
Thomas Moccio  
John Morrison  
Carmin Ricci  
Ronald Williams

Joanne Elias, Secretary  
(845) 808-1617, Ext. 46025  
[Joanne.Elias@putnamcountyny.gov](mailto:Joanne.Elias@putnamcountyny.gov)

**PUTNAM COUNTY ELECTRICAL BOARD**  
**Office of Consumer Affairs / Weights & Measures /**  
**Trades Licensing & Registration**

**MEMORANDUM**

**To: Diane Trabulsy**  
**Clerk, Putnam County Legislature**

**From: Joanne Elias**  
**Secretary, Electrical Board**

*Joanne Elias*

**Date: December 9, 2025**

**RE: Appointments to the Electrical Board**

2025 DEC -9 PM 4:01  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

At the November 18, 2025 meeting of the Putnam County Electrical Board, the following nominations were made:

**Chairman and Vice Chairman**

- Mr. Carmine Ricci - Appointment as Chairman  
Term: January 2026 - December 2026  
Vote: All Ayes - Carried Unanimously
- Mr. Carlos DaEira - Appointment as Vice Chairman  
Term: January 2026 - December 2026  
Vote: All Ayes - Carried Unanimously

**Board Member Re-Appointments**

- Mr. Carlos DaEira - Re-appointment as Master Electrician  
Term: 3 Years (2026 - 2028)  
Vote: All Ayes - Carried Unanimously
- Mr. Thomas Moccio - Re-appointment as Master Electrician  
Term: 3 Years (2026 - 2028)  
Vote: All Ayes - Carried Unanimously



- Mr. Carmine Ricci – Re-appointment as Master Electrician  
Term: 3 Years (2026 – 2028)  
Vote: All Ayes – Carried Unanimously

We respectfully request that the Rules Committee place this item on the agenda for its next meeting.

Attached please find letters of intent from Mr. DaEira and Mr. Ricci, and a resume from Mr. Moccio.

Thank you for your consideration.

cc: Michael Budzinski, PE  
Director, Office of Consumer Affairs

#4c.

Committee Mtg "Rules..."

Resolution # \_\_\_\_\_

Introduced By \_\_\_\_\_

Regular Mtg: Year End Meeting Dec. 18, 2025

Seconded By \_\_\_\_\_

Special Mtg \_\_\_\_\_

**APPROVAL/ LOCAL LAW TO AMEND CHAPTER 25, ARTICLE VI, ENTITLED  
"TRANSPORTATION ADVISORY COUNCIL"**

**A LOCAL LAW TO AMEND CHAPTER 25, ARTICLE VI, ENTITLED  
"TRANSPORTATION ADVISORY COUNCIL"**

**Be it enacted by the Legislature of the County of Putnam as follows:**

**<<PUTNAM COUNTY CODE CHAPTER 25>>**

**<<ARTICLE VI>>**

**Section 1.**

**Section 25 of the Putnam County Code is hereby amended to read as follows:**

**§ 25-39. Establishment.**

**There is hereby created and established in the County of Putnam, New York, a Transportation Advisory Council to be known as the "Putnam County Transportation Advisory Council," and said Board shall be and exist for the benefit of the County of Putnam and the inhabitants thereof, and same is hereby established for the accomplishment of any and all purposes provided by law.**

**§ 25-40. Membership and term.**

**A) Membership of the Transportation Advisory Council shall consist of the following:**

**(1) There shall be seven members appointed by the County Executive and confirmed by the Legislature, who reside or are employed in the County of Putnam. One member shall be a representative of the Putnam County business community, one member shall have experience or knowledge in the field of human services or intellectual & developmental disabilities, one member shall be a citizen at large, one member shall be a citizen eligible for Putnam County Paratransit services, one member shall have experience utilizing the PART system as a rider, one member shall have experience or knowledge in the medical services field, and one member shall have experience or knowledge as a transit operator.**

\_\_\_\_\_  
Legislator Addonizio

\_\_\_\_\_  
Legislator Birmingham

\_\_\_\_\_  
Legislator Crowley

\_\_\_\_\_  
Legislator Ellner

\_\_\_\_\_  
Legislator Gouldman

\_\_\_\_\_  
Legislator Jonke

\_\_\_\_\_  
Legislator Montgomery

\_\_\_\_\_  
Legislator Russo

\_\_\_\_\_  
Chairwoman Sayegh

**(2) Ex-officio members shall be the Chairman of the Physical Services Committee, the Commissioner of Planning, Development and Public Transportation or their appointee, the Commissioner of Social Services or their appointee, the Commissioner of Health/ Public Health Director or their appointee, the Director of Tourism or their appointee, the Director of the Office for Senior Resources or their appointee, the Director of the Office of Veterans Affairs or their appointee, and the Putnam County Representative from the MTA Board. Ex-officio members are non-voting members that serve in an advisory capacity.**

**B) All appointed members shall serve at the pleasure of the County Executive during their three-year term of appointment.**

**C) Appointed member vacancies on the Transportation Advisory Council shall be filled in the same manner as the original appointment, except that a vacancy occurring through circumstances other than by expiration of a term shall be filled only for the remainder of said term.**

**D) An appointed member of the Transportation Advisory Council shall serve until his or her successor has been appointed.**

#### **§ 25-41. Chairperson.**

**The Chairperson of the Transportation Advisory Council shall be the Commissioner of Planning, Development and Public Transportation or their appointee.**

#### **§ 25-42. Powers and duties.**

**The powers and duties of the Transportation Advisory Council shall be to:**

**A) Review and make recommendations to the County Executive and Legislature regarding all facets of public transportation, including guidelines, policies and procedures, in order to improve efficiencies, better manage assets, leverage resources and create partnerships to identify savings and improve transportation services.**

**B) Perform duties assigned to the Council in the Putnam County Department of Planning, Development, and Public Transportation's PART System Policy & Procedures Manual.**

**C) Provide annual updates or as requested to the Legislature.**

**D) Make recommendations for infrastructure improvements and other transportation additions to be included in the capital plan to the Commissioner of Planning, Development, and Public Transportation.**

#### **§ 25-43. Meetings.**

**A) The Transportation Advisory Council shall hold regular meetings in accordance with federal and state requirements, and at such other times as its Chairperson**



deems necessary for the efficient discharge of the business of the Transportation Advisory Council. Transportation Advisory Council meetings shall comply with the New York State Open Meetings Law.<sup>[1]</sup>

**[1]**

*Editor's Note: See Public Officers Law, Art. 7, § 100 et seq.*

B) The Transportation Advisory Council shall adopt rules and procedures for its meetings.

C) The Transportation Advisory Council shall maintain minutes of the proceedings of all meetings, memorializing votes taken, questions asked, and comments made with regard to the business before the Transportation Advisory Council.

D) Four members of the Transportation Advisory Council shall constitute a quorum for the transaction of business.

**§ 25-44. Compensation.**

The members of the Transportation Advisory Council shall receive no compensation for their services.

**Section 2.**

This local law shall take effect immediately.

BARBARA BAROSA, AICP  
COMMISSIONER



- Rules - Nov CC: All  
- Rules - Dec 10, 2025  
KEVIN M. BYRNE  
PUTNAM COUNTY EXECUTIVE  
→ Yearbook 12-18-25 Res

Yr. End. #4R

## MEMORANDUM

**TO:** Legislator Daniel G. Birmingham, Chair, Rules, Enactments & Intergovernmental Relations Committee

**FROM:** Barbara Barosa, Commissioner, Department of Planning, Development & Public Transportation

**CC:** Kevin Byrne, County Executive

**DATE:** November 3, 2025

**RE:** Proposed Code Amendments to Transportation Advisory Council

Attached please find a proposed Resolution amending the Putnam County Transportation Advisory Council, located within §25-39 through §25-44 of the Putnam County Code.

The proposed amendments seek to update the council membership, clarify and update its powers and duties, and ensure it will successfully fulfill its responsibilities as outlined in the code. Furthermore, amendments to the membership of the council will assist with recruitment efforts and form a council with a diverse background capable of considering the various needs of residents utilizing the County transit system.

I respectfully request this proposal to be placed on the next Rules Committee agenda for the Legislature's discussion/consideration. This proposal has been reviewed by the Law Department and County Executive's office, who support the suggested changes to the code and welcome the Legislature's discussion and review.

2025 NOV -4 AM 10:35  
LEGISLATURE  
PUTNAM COUNTY  
CARMEL, NY

**A LOCAL LAW TO AMEND CHAPTER 25, ARTICLE VI, ENTITLED  
"TRANSPORTATION ADVISORY COUNCIL"**

Be it enacted by the Legislature of the County of Putnam as follows:

**<<PUTNAM COUNTY CODE CHAPTER 25>>**

**<<ARTICLE VI>>**

**Section 1.**

**Section 25 of the Putnam County Code is hereby amended to read as follows:**

**§ 25-39. Establishment.**

There is hereby created and established in the County of Putnam, New York, a Transportation Advisory Council to be known as the "Putnam County Transportation Advisory Council," and said Board shall be and exist for the benefit of the County of Putnam and the inhabitants thereof, and same is hereby established for the accomplishment of any and all purposes provided by law.

**§ 25-40. Membership and term.**

A) Membership of the Transportation Advisory Council shall consist of the following:

(1) There shall be seven members appointed by the County Executive and confirmed by the Legislature, who reside or are employed in the County of Putnam. One member shall be a representative of the Putnam County business community, one member shall have experience or knowledge in the field of human services or intellectual & developmental disabilities, one member shall be a citizen at large, one member shall be a citizen eligible for Putnam County Paratransit services, one member shall have experience utilizing the PART system as a rider, one member shall have experience or knowledge in the medical services field, and one member shall have experience or knowledge as a transit operator.

(2) Ex-officio members shall be the Chairman of the Physical Services Committee, the Commissioner of Planning, Development and Public Transportation or their appointee, the Commissioner of Social Services or their appointee, the Commissioner of Health/ Public Health Director or their appointee, the Director of Tourism or their appointee, the Director of the Office for Senior Resources or their appointee, and the Director of the Office of Veterans Affairs or their appointee. Ex-officio members are non-voting members that serve in an advisory capacity.

B) All appointed members shall serve at the pleasure of the County Executive during their three-year term of appointment.

C) Appointed member vacancies on the Transportation Advisory Council shall be filled in the same manner as the original appointment, except that a vacancy occurring through circumstances other than by expiration of a term shall be filled only for the remainder of said term.



D) An appointed member of the Transportation Advisory Council shall serve until his or her successor has been appointed.

#### **§ 25-41. Chairperson.**

The Chairperson of the Transportation Advisory Council shall be the Commissioner of Planning, Development and Public Transportation or their appointee.

#### **§ 25-42. Powers and duties.**

The powers and duties of the Transportation Advisory Council shall be to:

A) Review and make recommendations to the County Executive and Legislature regarding all facets of public transportation, including guidelines, policies and procedures, in order to improve efficiencies, better manage assets, leverage resources and create partnerships to identify savings and improve transportation services.

B) Perform duties assigned to the Council in the Putnam County Department of Planning, Development, and Public Transportation's PART System Policy & Procedures Manual.

C) Provide annual updates to the Legislature.

D) Make recommendations for infrastructure improvements and other transportation additions to be included in the capital plan to the Commissioner of Planning, Development, and Public Transportation.

#### **§ 25-43. Meetings.**

A) The Transportation Advisory Council shall hold regular meetings in accordance with federal and state requirements, and at such other times as its Chairperson deems necessary for the efficient discharge of the business of the Transportation Advisory Council. Transportation Advisory Council meetings shall comply with the New York State Open Meetings Law.<sup>11</sup>

<sup>11</sup>

*Editor's Note: See Public Officers Law, Art. 7, § 100 et seq.*

B) The Transportation Advisory Council shall adopt rules and procedures for its meetings.

C) The Transportation Advisory Council shall maintain minutes of the proceedings of all meetings, memorializing votes taken, questions asked, and comments made with regard to the business before the Transportation Advisory Council.

D) Four members of the Transportation Advisory Council shall constitute a quorum for the transaction of business.

#### **§ 25-44. Compensation.**

The members of the Transportation Advisory Council shall receive no compensation for their services.

**Section 2.**

This local law shall take effect immediately.

PUTNAM COUNTY LEGISLATURE

Resolution #165

Introduced by Legislator: Ginny Nacerino on behalf of the Rules, Enactments & Intergovernmental Relations Committee at a Regular Meeting held on August 7, 2013.

page 1

**APPROVAL/LOCAL LAW/AMEND CHAPTER 25/CODE OF PUTNAM COUNTY ENTITLED "COUNCILS AND COMMISSIONS"**

**A Local Law to Amend Chapter 25 of the Code of Putnam County entitled "Councils and Commissions"**

**BE IT ENACTED BY THE LEGISLATURE OF THE COUTY OF PUTNAM, as follows:**

**Section 1.**

**A new Article VI entitled "Transportation Advisory Council" is hereby added to Chapter 25 of the Code of Putnam County to read as follows:**

**Section 25-39. Establishment.**

**There is hereby created and established in the County of Putnam, New York a Transportation Advisory Council to be known as the "Putnam County Transportation Advisory Council", and said Board shall be and exist for the benefit of the County of Putnam and the inhabitants thereof, and same is hereby established for the accomplishment of any and all purposes provided by law.**

**Section 25-40. Membership and term.**

**A) Membership in the Transportation Advisory Council shall consist of the following:**

**(1) There shall be seven (7) members appointed by the County Executive and confirmed by the Legislature, who reside in the County of Putnam. One member shall be a representative of the Putnam County Chambers of Commerce; one member shall be a real estate and/or commerce professional; one member shall be a representative for people with disabilities; one member shall be a representative of the taxi & limousine business; one member shall be a citizen-at-large; one member shall be a citizen with a mental impairment; and one member shall be a citizen with a physical disability.**

**Vote:**

**State Of New York**

ss:

**County of Putnam**

**I hereby certify that the above is a true and exact copy of a resolution passed by the Putnam County Legislature while in session on August 7, 2013.**

**Dated: August 9, 2013**

**Signed:**

**Diane Schonfeld**

**Clerk Of The Legislature Of Putnam County**



PUTNAM COUNTY LEGISLATURE

Resolution #165

Introduced by Legislator: Ginny Nacerino on behalf of the Rules, Enactments & Intergovernmental Relations Committee at a Regular Meeting held on August 7, 2013.

page 2

(2) Ex-officio members shall be the Putnam County Transportation Manager or an appointee of the Commissioner of Planning, Development and Public Transportation, the Chairman of the Physical Services Committee, the Chair of the Economic Development & Energy Committee, the Commissioner of Planning, Development and Public Transportation, the Commissioner of Social Services, the Commissioner of Health, the Director of Tourism, the Director of Office for the Aging, the Director of Consumer Affairs, the Director of the Economic Development Corporation, the Director of the Office of Veterans Affairs.

B) All appointed members shall serve at the pleasure of the County Executive during their three (3) year term of appointment.

C) Appointed member vacancies on the Transportation Advisory Council shall be filled in the same manner as the original appointment, except that a vacancy occurring through circumstances other than by expiration of a term shall be filled only for the remainder of said term.

D) An appointed member of the Transportation Advisory Council shall serve until his or her successor has been appointed.

**Section 25-41. Chairperson.**

The Chairperson of the Transportation Advisory Council shall be the Putnam County Transportation Manager or the appointee of the Commissioner of Planning, Development and Public Transportation.

**Section 25-42. Powers and duties.**

The powers and duties of the Transportation Advisory Council shall be to:

A) Explore opportunities and make recommendations to the County Executive and Legislature exploring all facets of Public Transportation in order to improve efficiencies, better manage assets, leverage resources and create partnerships to save dollars and improve transportation services.

Vote:

State Of New York

ss:

County of Putnam

I hereby certify that the above is a true and exact copy of a resolution passed by the Putnam County Legislature while in session on August 7, 2013.

Dated: August 9, 2013

Signed:

Diane Schonfeld

Clerk Of The Legislature Of Putnam County

PUTNAM COUNTY LEGISLATURE

Resolution #165

Introduced by Legislator: Ginny Nacerino on behalf of the Rules, Enactments & Intergovernmental Relations Committee at a Regular Meeting held on August 7, 2013.

page 3

- B) Provide quarterly updates and make annual presentations to the Legislature.
- C) Make recommendations for a marketing plan, advertising opportunities and promotions to the County Executive and the Legislature, as needed.
- D) Conduct annual comprehensive assessments by reviewing and analyzing routes. The review should include the right sizing of vehicles for needed services and the coordination with all other modes of transportation for optimizing scheduling and connecting services.
- E) Study the Triennial Review conducted by the Federal Transit Authority and make appropriate improvements and recommendations.
- F) Make recommendations for infrastructure improvements and other transportation additions to be included in the capital plan to the Commissioner of Planning, Development, and Public Transportation. These improvements may include rolling inventory, bus shelters, and bus stops.
- G) Make recommendations regarding the creation and contents of a countywide Taxi & Limousine Law.
- H) Coordinate and provide a venue for transportation safety-net hearings related to Paratransit and Putnam Paratransit +, and act on a case-by-case basis to make recommendations for those who need transportation. The Transportation Advisory Council shall also give guidance with regard to guidelines, policies and procedures with regard to Paratransit, Putnam Paratransit + and other special needs transportation services.

**Section 25-43. Meetings.**

- A) The Transportation Advisory Council shall hold meetings at least monthly, and at such other times as its Chairperson deems necessary for the efficient discharge of

Vote:

State Of New York

ss:

County of Putnam

I hereby certify that the above is a true and exact copy of a resolution passed by the Putnam County Legislature while in session on August 7, 2013.

Dated: August 9, 2013

Signed: \_\_\_\_\_

Diane Schonfeld  
Clerk Of The Legislature Of Putnam County

PUTNAM COUNTY LEGISLATURE

Resolution #165

Introduced by Legislator: Ginny Nacerino on behalf of the Rules, Enactments & Intergovernmental Relations Committee at a Regular Meeting held on August 7, 2013.

page 4

the business of the Transportation Advisory Council. Transportation Advisory Council meetings shall comply with the New York State Open Meetings Law.

B) The Transportation Advisory Council shall adopt rules and procedures for its meetings.

C) The Transportation Advisory Council shall maintain minutes of the proceedings of all meetings, memorializing votes taken, questions asked, and comments made with regard to the business before the Transportation Advisory Council.

D) Four (4) members of the Transportation Advisory Council shall constitute a quorum for the transaction of business.

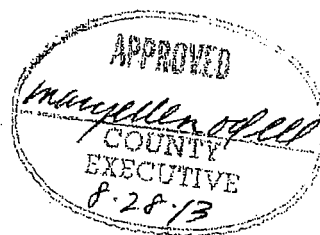
**Section 25-44. Compensation.**

The members of the Transportation Advisory Council shall receive no compensation for their services.

**Section 2.**

This local law shall take effect immediately.

BY POLL VOTE: ALL AYES. LEGISLATOR DICARLO WAS ABSENT. MOTION CARRIES.



Vote:

State Of New York

ss:

County of Putnam

I hereby certify that the above is a true and exact copy of a resolution passed by the Putnam County Legislature while in session on August 7, 2013.

Dated: August 9, 2013

Signed: Diane Schonfeld

Diane Schonfeld  
Clerk Of The Legislature Of Putnam County



#4s.

Committee: "Rules..."

Resolution # \_\_\_\_\_

Introduced By \_\_\_\_\_

Regular Mtg: Year End Meeting Dec. 18, 2025

Seconded By \_\_\_\_\_

Special Mtg \_\_\_\_\_

**AUTHORIZATION FOR INTERMUNICIPAL AGREEMENT WITH WESTCHESTER COUNTY TO EFFECTUATE A MUTUAL AID AND RAPID RESPONSE PLAN FOR THE POLICE DEPARTMENTS OF PARTICIPATING MUNICIPALITIES AND TO DELEGATE TO THE SHERIFF THE POWERS GRANTED TO THE CHIEF EXECUTIVE OFFICER TO REQUEST AND GRANT POLICE ASSISTANCE**

WHEREAS, the police departments of Westchester County, New York have created and entered into a Mutual Aid and Rapid Response Plan (the "Plan") to formalize operational procedures for Law enforcement assistance to participating agencies; and

WHEREAS, each member police agency agrees to make available its police personnel and equipment to the others upon the occurrence of a condition which is beyond the scope of its police resources; and

WHEREAS, the County of Putnam desires to enter into this existing agreement with neighboring municipalities in and outside of Westchester, invitation to entry having been extended by the County of Westchester; and

WHEREAS, entry into such intermunicipal agreement is permitted under Article 5-G of the General Municipal Law; and

WHEREAS, due to prevailing world, national, and local security situations, the ever-increasing flow of intelligence, and actual threats directed against once benign sites and facilities, the parties desire that the Plan be flexible and subject to review and revision as necessary in a timely manner; and

WHEREAS, the Plan is governed by, and liabilities and costs are apportioned pursuant to, the provisions of New York State General Municipal Law Section 209-m, which provides, inter alia, that absent agreement to the contrary, the municipality receiving police aid shall reimburse the municipality providing such aid for any money paid by it for police salaries and other expenses incurred by it including damage to, or loss of, equipment and supplies; and

WHEREAS, the Plan is to be revised as necessary and revisions to the Plan will be approved and implemented by the Westchester County Chiefs of Police Association, and such revisions may include, but are not limited to, updates in protocols and additions of new municipalities and their police departments located

Legislator Addonizio \_\_\_\_\_

Legislator Birmingham \_\_\_\_\_

Legislator Crowley \_\_\_\_\_

Legislator Ellner \_\_\_\_\_

Legislator Gouldman \_\_\_\_\_

Legislator Jonke \_\_\_\_\_

Legislator Montgomery \_\_\_\_\_

Legislator Russo \_\_\_\_\_

Chairwoman Sayegh \_\_\_\_\_

Attached Backup  
is  
**CONFIDENTIAL**

within or outside of the physical boundaries of Westchester County to participate in the Plan; now therefore be it

RESOLVED, that the County of Putnam be and hereby is authorized to enter into an inter-municipal agreement ("IMA") with certain municipal corporations as defined in Article 5-G of the New York State General Municipal Law, located both within and outside of the County of Westchester (collectively the "Participating Municipalities"), in order to effectuate a Mutual Aid and Rapid Response Plan for the police departments of the Participating Municipalities (the "Plan") to carry out the purposes described in Section 209-m of the New York State General Municipal Law; and be it further

RESOLVED, that such IMA and the Plan shall be substantially similar in form and content to the draft items accompanying this Resolution; and be it further

RESOLVED, the term of the IMA will conform with the existing term agreed upon by the municipalities, which is five (5) years commencing on July 31, 2025, and continuing through July 30, 2030; and be it further

RESOLVED, that the County Executive is authorized to execute said IMA on behalf of the County of Putnam; and be it further

RESOLVED, that this Resolution shall take effect immediately.

Attached Backup  
is  
CONFIDENTIAL

#41.

Committee: "Rules...."

Resolution # \_\_\_\_\_

Introduced By \_\_\_\_\_

Regular Mtg: Year End Meeting Dec. 18, 2025

Seconded By \_\_\_\_\_

Special Mtg \_\_\_\_\_

**A LOCAL LAW CHANGING THE CHARTER TO PROVIDE FOR A COUNSEL TO THE MAJORITY OF THE COUNTY LEGISLATURE AND A COUNSEL TO THE MINORITY OF THE COUNTY LEGISLATURE**

**WHEREAS, the Legislature has determined to add Article 2, to the Putnam County Charter and is hereby amended by adding a new Section;**

**NOW THEREFORE, BE IT ENACTED BY THE LEGISLATURE OF THE COUNTY OF PUTNAM AS FOLLOWS:**

**§ 2.11 Counsel to the Majority of the County Legislature and Counsel to the Minority of the County Legislature.**

**Section 1. The Legislature of the County of Putnam, New York hereby makes the following findings and determinations:**

**(a) That the system of checks and balances inherent in the separation of powers of each branch of the government is vitally important to prevent the concentration of power in any one branch of government, thereby protecting individual liberties and preventing one branch of government from having supremacy over another; and**

**(b) that in order for the County Legislature to have the capacity to prepare legislation independent of, as well as in cooperation with, the Executive Branch, the County Legislature hereby finds that given the separate branches of County Government, the County Legislature requires Counsel to the Legislature which is separate from and not dependent upon the approval and resources of the County Executive and Executive Branch; and**

**(c) that the Putnam County Legislature hereby finds and determines that the interests and requirements of legislative responsibility and authority will be better served by the creation of a Counsel to the Majority of the County Legislature ("Majority Counsel") and a Counsel to the Minority of the County Legislature ("Minority Counsel"); and**

**(d) that the Putnam County Legislature hereby determines that the interests and requirements of legislative responsibility and authority will be better served by such Majority Counsel and Minority Counsel providing advice and recommendations to the majority members of the County Legislature and to the**

Legislator Addonizio

Legislator Birmingham

Legislator Crowley

Legislator Ellner

Legislator Gouldman

Legislator Jonke

Legislator Montgomery

Legislator Russo

Chairwoman Sayegh



minority members of the County Legislature, respectively, in the drafting of legislation and otherwise and, as desired, in cooperation and consultation with the County Attorney and the Department of Law, provided that such cooperation shall not create or imply any supervisory authority of the County Attorney over such counsel because the role is internal to the legislature, and advisory in nature and therefore in no way contravenes County Law §501 or Article 8 of the Putnam County Code.

## **Section 2. Establishment.**

Notwithstanding any other provisions of the County Charter, there is hereby established the positions of Counsel to the Majority of the County Legislature and Counsel to the Minority of the County Legislature to be appointed in the manner and have the powers as provided herein, and such positions shall be employees of the County Legislature and not of the Department of Law established under Article 8 of this Charter. Such positions will be selected by simple majority upon a vote of the Majority Party for the Counsel to the Majority, and simple majority upon a vote of the Minority Party for Counsel to the Minority. In the event that there are fewer than three members of the minority party, the selection will be made by the longest serving member of the minority party.

**Section 3.** Article 2, of the Putnam County Charter is hereby amended by adding a new Section to read as follows:

**§ 2.11 Counsel to the Majority of the County Legislature and Counsel to the Minority of the County Legislature.**

(a) The members of the County Legislature enrolled in the political party representing the largest number of County Legislators shall at the Organizational Meeting in January or as soon thereafter as practicable, and annually thereafter, appoint a Counsel to the Majority of the County Legislature. Such Counsel to the Majority shall be chosen by a simple majority upon a vote of the members of the Majority Party in the County Legislature. In the event of a vacancy in the office of Counsel to the Majority of the County Legislature, a replacement may be chosen thereafter by the same procedure.

(b) The members of the County Legislature enrolled in the political party representing the next largest number of County Legislators shall at the Organizational Meeting in January or as soon thereafter as practicable, and annually thereafter, appoint a Counsel to the Minority of the County Legislature by a simple majority vote of the Minority Party. In the event that there are fewer than three members of the minority party, the selection will be made by the longest serving member of the minority party. In the event of a vacancy in the office of Counsel to the Minority of the County Legislature, a replacement may be chosen thereafter by the same procedure.

(c) Powers and duties of each of the Counsel to the Majority and Counsel to the Minority shall include:

- (1) Oversee the preparation of local laws, ordinances, acts and resolutions upon receipt of a request.**
- (2) Research problems related to the function, powers and duties of the County Legislature and its employees.**
- (3) Prepare written reports on the breadth and depth of the function, powers and duties of the County Legislature and its employees.**
- (4) As requested by any Legislator, attend full Legislative meetings, special meetings and committee meetings.**
- (5) Provide advice to the members of the County Legislature on Rules of Order and other procedural questions as they arise or as requested during Legislative meetings.**
- (6) Recommend procedures in connection with the implementation of policy for the County Legislature.**
- (7) Recommend and coordinate appropriate ways to communicate initiatives and policy of the County Legislature through media and other mechanisms.**
- (8) Perform a variety of related activities as required, not inconsistent with Section 501 of the County Law and the provisions of this Charter, and the Putnam County Code.**

**(d) At the time of their appointments, and throughout their time in office, the Counsel to the Majority of the County Legislature and the Counsel to the Minority of the County Legislature shall be duly admitted to practice law in the State of New York.**

**(e) Independence and limitations.**

**The Counsel to the Majority and the Counsel to the Minority shall not be part of, supervised by, or subject to removal by the Department of Law or the County Attorney. Their functions shall be strictly advisory and legislative in nature. They shall not appear as attorneys of record for the County or in any court or administrative proceeding, nor represent the County in litigation or claims.**

**Nothing herein shall affect the authority or responsibilities of the County Attorney under Article 8 of this Charter, including representation of the County and the Legislature in legal proceedings..**

**(f) Equal Compensation.**

**The positions of Counsel to the Majority and Counsel to the Minority shall be compensated at an equal rate, reflecting parity in qualifications, duties, and professional standing, and shall be commensurate with other legal positions in the County. Equal compensation is essential to ensure nonpartisan fairness, prevent political discrimination, and maintain the Legislature's commitment to equality and integrity in public employment.**

**Section 4. Severability.**

**If any provision of this Local Law is held to be illegal or invalid for any reason by court of law, such illegality or invalidity shall not affect the remaining provisions hereof, but such provision shall be fully severable and this Local Law shall be construed and enforced as if such illegal or invalid provision had never been included.**

**Section 5. Pursuant to Section 34(5) of the Municipal Home Rule Law, this Local Law shall take effect sixty (60) days after its final enactment and is subject to permissive referendum.**



#5a.

Committee Mtg **Other Business** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/ TAX COLLECTOR WARRANTS/ ENTER INTO 2025 BOOK OF PROCEEDINGS**

**WHEREAS, Tax Collector Warrants have been received for the Towns of Carmel, Kent, Patterson, Philipstown, Putnam Valley and Southeast and signed by the Chairwoman and the Clerk of the Putnam County Legislature; now therefore be it**

**RESOLVED, that the Tax Collector Warrants for the Towns of Carmel, Kent, Patterson, Philipstown, Putnam Valley and Southeast are hereby entered into the 2025 Book of Proceedings for the Putnam County Legislature.**

\_\_\_\_\_  
Legislator Addonizio  
\_\_\_\_\_  
Legislator Birmingham  
\_\_\_\_\_  
Legislator Crowley  
\_\_\_\_\_  
Legislator Ellner  
\_\_\_\_\_  
Legislator Gouldman  
\_\_\_\_\_  
Legislator Jonke  
\_\_\_\_\_  
Legislator Montgomery  
\_\_\_\_\_  
Legislator Russo  
\_\_\_\_\_  
Chairwoman Sayegh

**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: KATHLEEN S. KRAUS

RECEIVER OF TAXES, **TOWN OF CARMEL**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$63,522,392.38

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR:	\$45,595,139.50
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TO THE COMMISSIONER OF FINANCE:	\$17,927,252.92
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BALANCE OF TAXES COLLECTED:	\$63,522,392.38
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GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

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CLERK, COUNTY LEGISLATURE

**TOWN OF CARMEL TAX WARRANT  
2026 County/Town Tax Bill  
TO KATHLEEN KRAUS -TAX RECEIVER**

TO SUPERVISOR (Town Figures):				
	GENERAL FUND -Pro Rata (Town)		19,197,382.09	
	HIGHWAY FUND		8,353,709.00	27,551,091.09
	PRO-RATA TAX		17,404.91	
	SURPLUS/SHORTAGE (from worksheet - T & L)		(2.90)	27,551,088.19
	SUBTOTAL TO SUPERVISOR		27,568,493.10	
TO DISTRICTS :				
	CARMEL AMBULANCE	AD001	294,700.80	294,700.80
	FIRE PROTECTION # 1	FD001	1,323,439.40	
	FIRE PROTECTION # 2	FD002	2,096,198.82	
	FIRE PROTECTION # 3	FD003	1,021,999.84	4,441,638.06
	CARMEL FIRE # 4	FD004	269,999.93	
	CROTON FALLS FIRE	FD005	136,886.88	406,886.81
	REED LIBRARY	LIBRY	420,660.74	420,660.74
	CARMEL LIGHT	LT001	36,400.31	
	MAHOPAC LIGHT	LT002	70,531.35	
	CROTON FALLS LIGHT	LT003	3,745.07	
	COUNTRY HILL LIGHT	LT004	7,872.00	
	LAKE MCGREGOR LIGHT	LT005	5,850.00	124,398.73
	LAKE CASSE PARK	PK010	140,000.00	
	LAKE MAHOPAC PARK	PK011	54,254.95	
	TEAKETTLE LAKE PARK	PK012	68,575.00	
	LAKE SECOR PARK	PK014	55,800.00	318,629.95
	LONG POND ASSOC. RD.IMPROVE DIST	RD007	102,324.93	102,324.93
	GARBAGE DISTRICT- RESIDENTIAL	RG005	4,659,966.55	
	GARBAGE DIST- CLUSTER	RG006	541,999.54	5,201,966.09
	CARMEL SEWER # 1 O/M	SW001	36,269.77	
	CARMEL SEWER # 2	SW002	1,453,591.11	
	CARMEL SEWER # 3 O/M	SW003	11,234.97	
	CARMEL SEWER # 4A CAP	SW004	31,477.05	
	CARMEL SEWER # 4 O/M	SW007	646,760.07	
	HILL DALE SEWER # 5 CAP	SW008	26,499.93	
	IVY HILL SEWER # 6	SW009	4,785.08	
	IVY HILL SEWER # 6 O/M	SW010	130,467.92	
	HILL DALE SEWER # 5 O/M	SW013	69,734.23	
	CARMEL SEWER # 1A CAP	SW014	65,195.08	
	CARMEL SEWER # 2A CAP	SW015	202,015.00	
	CARMEL SEWER # 3A CAP	SW017	13,372.07	
	CARMEL SEWER # 7 O/M	SW019	145,999.75	
	CARMEL SEWER # 7 CAP	SW020	25,799.88	
	CARMEL SEWER # 8 CAP	SW021	10,982.00	
	CARMEL SEWER # 8 O/M	SW022	253,414.79	
	CARMEL SEWER #1 EXT	SW024	182,744.00	
	SEWER #1 EXT #3 O&M	SW025	42,085.95	3,352,428.65
	CARMEL WATER # 2	WD001	1,432,421.99	
	CARMEL WATER # 3	WD002	198,605.09	
	LAKE BALDWIN WATER	WD003	97,100.00	
	CARMEL WATER # 5	WD012	32,182.99	
	CARMEL WATER # 6	WD013	80,679.95	
	MAHOPAC RIDGE WATER	WD020	456,392.02	
	CARMEL WATER # 9	WD022	156,000.02	
	CARMEL WATER # 7	WD023	64,035.99	
	FAIRVIEW WATER	WD024	30,226.96	
	LAKEVIEW PARK WATER	WD025	124,950.20	
	WATER # 2 EXT CAP	WD028	163,055.72	
	ROLLING GREENS WATER	WD029	110,915.22	
	RED MILLS WATER # 14	WD030	115,500.71	
	MAH BUSINESS WATER	WD033	24,600.00	3,086,666.86
	UNPAID SPRINKLER FEE	SP001	200.00	
	SRPINKER PENALTY	SP011	67.96	
	UNPAID WATER	UW001	199,614.20	
	UNPAID WATER PENALTY	UW011	62,547.63	
	OUT OF DISTRICT PARCEL WATER	OOD01	4,163.79	
	OUT OF DISTRICT PARCEL SEWER	OOD02	9,268.58	
	OUT OF DISTRICT SEWER CAP	OOD03	482.62	
	TOTAL DISTRICTS		18,026,646.40	
	<b>TOTAL TO SUPERVISOR</b>		<b>45,595,139.50</b>	
TO COMMISSIONER OF FINANCE (County Figures) :				
	TOWN SHARE OF COUNTY BUDGET minus County Pro Rata		14,555,247.52	14,565,615.29
	COUNTY PRO-RATA TAX		10,367.77	
	RELEVIED SCHOOL TAX 2025/2026		3,175,016.19	
	RELEVIED SCHOOL TAX 2024/2025 PARTIAL PAYMENTS		186,621.55	3,361,637.74
	SURPLUS/SHORTAGE (from worksheet)		(0.15)	
	<b>TOTAL TO COMMISSIONER OF FINANCE</b>		<b>17,927,252.88</b>	
	TOTAL WARRANT		63,522,392.38	
	<b>TOTAL GENERATED BY RPS TO BE RAISED</b>		<b>63,522,392.38</b>	
	Difference:		-	



**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: STEPHANIE NIX

RECEIVER OF TAXES, **TOWN OF KENT**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$ 27,869,007.45,

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR: \$ 19,632,641.28

TO THE COMMISSIONER OF FINANCE: \$ 8,236,366.17

BALANCE OF TAXES COLLECTED: \$ 27,869,007.45

GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

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CLERK, COUNTY LEGISLATURE

**TOWN OF KENT TAX WARRANT  
2026 County/Town Tax Bill  
TO Stephanie Nix- TAX RECEIVER**

MA-144 reporting

TO SUPERVISOR (Town Figures):			
	GENERAL FUND - Minus Town Pro Rata		9,756,329.73
	HIGHWAY FUND		4,531,802.00
	TOWN PRO-RATA TAX		14,024.27
	KENT LIBRARY - Minus Library Pro Rata)		647,865.59
	KENT LIBRARY PRO RATA TAX		629.41
	T & L SURPLUS/SHORTAGE (from worksheet)		(0.48)
	SUBTOTAL TO SUPERVISOR		14,950,650.52
TO DISTRICTS :			
	LAKE CARMEL FIRE PROTECTION # 1	FD006	999,999.67
	KENT FIRE DISTRICT	FD007	522,774.35
	LAKE CARMEL PARK # 1	PK001	710,178.17
	LAKE TIBET PARK # 2	PK007	25,000.01
	LAKE CARMEL SANITATION # 1	RG001	2,082,311.45
	KENT SEWER DISTRICT	SD001	165,800.04
	KENT WATER # 1	WD015	122,699.85
	KENT WATER # 2	WD027	53,227.22
	UNPAID VIOLATIONS		0.00
	TOTAL DISTRICTS		4,681,990.76
	<b>TOTAL TO SUPERVISOR</b>		<b>19,632,641.28</b>
TO COMMISIONER OF FINANCE (County Figures) :			
	TOWN SHARE OF COUNTY BUDGET Minus County Pro Rata		5,558,669.23
	COUNTY PRO-RATA TAX		6,080.77
	RELEVIED SCHOOL TAX / WHOLLY 2025/2026		2,621,913.35
	RELEVIED SCHOOL TAX / PARTIAL PAYMENT 24/25		49,703.70
	SURPLUS/SHORTAGE (from worksheet)		(0.88)
	<b>TOTAL TO COMMISIONER OF FINANCE</b>		<b>8,236,366.17</b>
	TOTAL WARRANT		27,869,007.45
	<b>TOTAL GENERATED BY RPS TO BE RAISED</b>		<b>27,869,007.45</b>
	Difference:		0.00

14,288,131.73

735,178.18

175,927.07

5,564,750.00

2,671,617.05

**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: MARY DELANOY

RECEIVER OF TAXES, **TOWN OF PATTERSON**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$ 17,216,065.73,

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR:	\$ 11,987,993.32
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TO THE COMMISSIONER OF FINANCE:	\$ 5,228,072.41
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BALANCE OF TAXES COLLECTED:	\$ 17,216,065.73
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GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

---

CLERK, COUNTY LEGISLATURE



**TOWN OF PATTERSON TAX WARRANT**  
**2026 County/Town Tax Bill**  
**TO MARY DELANOY -TAX RECEIVER**

TO SUPERVISOR (Town Figures) :				
	GENERAL FUND - Minus Town Pro Rata		3,035,450.01	
	HIGHWAY FUND		3,416,416.00	6,451,866.01
	Town PRORATA/ OMITTED TAX		5,726.99	6,457,593.00
	PATTERSON LIBRARY - Minus Library Pro Rata	372400	1,076,144.65	
	LIBRARY PRORATA TAX		985.35	1,077,130.00
	T & L SURPLUS/SHORTAGE (from worksheet)		(0.01)	
SUBTOTAL TO SUPERVISOR			7,534,722.99	
TO DISTRICTS :				
	DORSET HOLLOW DRAINAGE DISTRICT	DD005	750.05	
	DEERWOOD DRAINAGE	DD006	1,400.12	2,150.17
	PATTERSON FIRE PROTECTION # 1	FD008	1,994,562.04	1,994,562.04
	PATTERSON LIGHT	LT006	26,623.27	
	PUTNAM LAKE LIGHT	LT007	18,600.18	45,223.45
	PATTERSON PARK	PK002	101,232.10	
	PUT. LAKE PARK	PK003	180,854.82	282,086.92
	QUAIL RIDGE ROAD IMPROVEMENT	RD001	-	
	PUTNAM LAKE SANITATION	RG002	541,947.84	
	PATTERSON GARBAGE	RG003	1,190,023.07	1,731,970.91
	PATTERSON SEWER	SW024	259,134.39	259,134.39
	ALPINE ACRES WATER	WD004	53,091.98	
	FOX RUN WATER	WD031	52,323.34	
	DORSET HOLLOW WATER DIST	WD032	32,308.85	137,724.17
	UNPAID GARBAGE	UG003	418.28	
TOTAL TO DISTRICTS			4,453,270.33	
TOTAL TO SUPERVISOR			11,987,993.32	
TO COMMISSIONER OF FINANCE (County Figures):				
	TOWN SHARE OF COUNTY BUDGET Minus County Pro Rata		3,947,365.48	
	COUNTY PRO-RATA/ OMITTED TAX		3,662.60	3,951,028.08
	RELEVIED SCHOOL TAX WHOLLY 2025/2026		1,239,372.76	
	RELEVIED SCHOOL TAX PARTIAL PAYMENT24/25		37,672.23	1,277,044.99
	SURPLUS/SHORTAGE (from worksheet)		(0.66)	
TOTAL TO COMMISSIONER OF FINANCE			5,228,072.41	
TOTAL WARRANT			17,216,065.73	
TOTAL GENERATED FROM RPS TO BE RAISED			17,216,065.73	
Difference:			-	

**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: TARA PERCACCIOLO

RECEIVER OF TAXES, **TOWN OF PHILIPSTOWN**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$ 19,735,646.16

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR:	\$ 10,090,473.83
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TO THE COMMISSIONER OF FINANCE:	\$ 9,645,172.33
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BALANCE OF TAXES COLLECTED:	\$ 19,735,646.16
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GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

---

CLERK, COUNTY LEGISLATURE

**TOWN OF PHILIPSTOWN TAX WARRANT**  
**2026 County/Town Tax Bill**  
**TO TARA PERCACCILO -TAX COLLECTOR**

NYS Comptroller Report

TO SUPERVISOR (Town Figures):				
	GENERAL FUND TOWNWIDE - Minus T/O & V ProRata		3,914,120.47	7,222,362.00
	GENERAL FUND - OUTSIDE VILLAGE		160,223.00	
	HIGHWAY FUND - OUTSIDE VILLAGE		3,147,208.00	3,307,431.00
	PRO-RATA TAX - T/OUTSIDE & VILLAGE		810.53	
	J L B LIBRARY - Minus T/Outside & V Library Pro Rata		275,971.36	
	LIBRARY PRORATA TAX (T/Outside & Village)		28.64	276,000.00
	T & L SURPLUS/SHORTAGE (from worksheet)		0.50	
SUBTOTAL TO SUPERVISOR :			7,498,362.50	
TO DISTRICTS :				
	CONTINENTAL VILLAGE FIRE PROTECTION # 1	FD009	313,734.94	
	PHILIPSTOWN FIRE PROTECTION # 1	FD011	68,450.01	382,184.95
	NORTH HIGHLAND FIRE	FD012	990,510.79	
	GARRISON FIRE PROTECTION # 1	FD013	814,112.89	1,804,623.68
	CONTINENTAL VILLAGE PARK	PK003	155,753.22	
	CONTINENTAL VILLAGE WATER	WD005	151,594.98	151,594.98
	UNPAID CONTINENTAL VILLAGE WATER	UW004	47,954.50	
	UNPAID GARRISON WATER	UW044	-	47,954.50
	GARRISON WATER	WD029	50,000.00	
TOTAL DISTRICTS			2,592,111.33	
TOTAL TO TOWN SUPERVISOR:			10,090,473.83	
TO COMMISSIONER OF FINANCE(County Figures) :				
	TOWN SHARE OF COUNTY BUDGET - Minus County Pro Rata		7,526,885.38	7,528,195.36
	COUNTY PRO-RATA TAX		1,309.98	
	RELEVIED SCHOOL TAX / WHOLLY 2025/2026		2,021,298.28	
	RELEVIED SCHOOL TAX / PARTIAL PAYMENT 2024/2025		68,354.07	2,116,976.34
	RELEVIED VILLAGES 2024		27,323.99	
COUNTY SURPLUS/SHORTAGE (from worksheet)			0.63	
TOTAL TO COMMISSIONER OF FINANCE:			9,645,172.33	
TOTAL WARRANT:			19,735,646.16	
TOTAL GENERATED BY RPS TO BE RAISED			19,735,646.16	
Difference:			(0.00)	



**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: MICHELLE STEPHENS

RECEIVER OF TAXES, **TOWN OF PUTNAM VALLEY**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$20,021,530.11

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR:	\$12,685,915.77
TO THE COMMISSIONER OF FINANCE:	\$ 7,335,614.34
BALANCE OF TAXES COLLECTED:	\$20,021,530.11

GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

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CLERK, COUNTY LEGISLATURE

**TOWN OF PUTNAM VALLEY TAX WARRANT  
2026 COUNTY/TOWN TAX BILL  
TO Michelle Stephens - Tax Collector**

3688491.21  
Comptroller  
Report

<b>TO SUPERVISOR (Town Figures) :</b>				
	GENERAL FUND - Minus Town Pro Rata		4,210,074.70	4,219,005.00
	HIGHWAY FUND		5,153,150.00	9,363,224.70
	TOWN PRO-RATA TAX		8,930.30	
	TOWN SURPLUS/SHORTAGE (from worksheet)		0.57	
	<b>SUBTOTAL TO SUPERVISOR</b>		<b>9,372,155.57</b>	<b>13,582,229.70</b>
<b>TO DISTRICTS :</b>				
	PUTNAMCHASE DRAINAGE	DD006	1,248.00	
	STRAWBERRY KNOLLS DRAINAGE	DD008	1,447.95	
	EMERALD RIDGE DRAINAGE	DD009	948.00	
	TIMBERLINE DRAINAGE	DD015	948.00	4,591.95
	PUTNAM VALLEY FIRE PROTECTION # 1	FD014	1,186,100.48	1,186,100.48
	LAKE PEEKSKILL IMPROVEMENT	IP001	1,139,450.07	
	ABELE PARK IMPROVEMENT	IP002	75,245.00	
	CAMP LOOKOUT IMPROVEMENT	IP003	68,894.98	
	HILLTOP IMPROVEMENT	IP004	52,380.02	
	ROARING BROOK IMPROVEMENT	IP005	311,699.87	
	WILDWOOD KNOLLS IMPROVEMENT	IP006	62,779.78	
	BROOKDALE GARDENS IMPROVEMENT	IP007	17,600.00	
	GLENMAR GARDENS IMPROVEMENT	IP008	55,415.01	
	LAKE OSCAWANA TIER # 1	IP009	58,512.56	
	LAKE OSCAWANA TIER # 2	IP010	12,032.64	
	LAKE OSCAWANA TIER # 3	IP011	77,232.22	
	LAKE OSCAWANA TIER # 1A	IP012	2,046.46	1,933,288.6
	CONTINENTAL VILLAGE PARK	PK004	18,399.98	
	NORTHVIEW PARK	PK005	10,589.98	
	BARGER POND PARK	PK009	7,575.96	
	PUTNAM ACRES PARK	PK013	1,785.99	38,351.91
	PUTNAM VALLEY SEWER	SW018	113,834.95	113,834.95
	MILL POND WATER	WD030	26,180.14	26,180.14
	UNPAID MILLPOND WATER	UMW05	11,412.16	
	<b>TOTAL DISTRICTS</b>		<b>3,313,760.20</b>	
	<b>TOTAL TO TOWN SUPERVISOR:</b>		<b>12,685,915.77</b>	
<b>TO COMMISSIONER OF FINANCE (County Figures) :</b>				
	TOWN SHARE OF COUNTY BUDGET - Minus County Pro Rata		5,091,943.06	5,097,588.68
	COUNTY PRO-RATA TAX		5,645.62	5,645.62
	RELEVIED SCHOOL TAX / WHOLLY 2025/2026		2,190,527.90	
	RELEVIED SCHOOL TAX / PARTIAL PAYMENT 2024/2025		47,498.48	2,238,026.38
	COUNTY SURPLUS/SHORTAGE (from worksheet)		(0.72)	
	<b>TOTAL TO COMMISSIONER OF FINANCE:</b>		<b>7,335,614.34</b>	
<b>TOTAL WARRANT:</b>			<b>20,021,530.11</b>	
<b>TOTAL GENERATED BY RPS TO BE RAISED:</b>			<b>20,021,530.11</b>	
<b>Difference:</b>			<b>0.00</b>	

**2026 COLLECTOR'S WARRANT**

STATE OF NEW YORK }

SS:

COUNTY OF PUTNAM }

TO: ANNE MARIE MILANO

RECEIVER OF TAXES, **TOWN OF SOUTHEAST**, COUNTY OF PUTNAM

YOU ARE HEREBY CHARGED WITH THE TOTAL AMOUNT OF \$ 25,372,856.57

LEVIED ON THE TAX ROLL, HERETO ANNEXED, AND ARE AUTHORIZED AND DIRECTED TO COLLECT, NOT LATER THAN APRIL 1<sup>ST</sup>, 2026, FROM SEVERAL PERSONS AND CORPORATIONS THEREIN NAMED, THE AMOUNTS LISTED OPPOSITE THEIR RESPECTIVE NAMES, TOGETHER WITH ANY INTEREST THEREON PERSCRIBED BY LAW.

YOU ARE AUTHORIZED TO ENFORCE THE COLLECTION OF ANY TAXES REMAINING UNPAID AFTER THE THIRTY FIRST DAY OF JANUARY, AS PROVIDED IN SECTION 926 OF THE REAL PROPERTY TAX LAW, AND FOR SO DOING THIS SHALL BE YOUR WARRANT.

YOU ARE DIRECTED TO PAY TAXES COLLECTED, NOT LATER THAN ONE WEEK FROM THE DATE OF EXPIRATION OF THIS WARRANT, OR PURSUANT TO SECTION 37(1) OF THE TOWN LAW AS FOLLOWS:

TO THE SUPERVISOR: \$ 14,437,465.85

TO THE COMMISSIONER OF FINANCE: \$ 10,935,390.72

BALANCE OF TAXES COLLECTED: \$ 25,372,856.57

GIVEN UNDER OUR HAND AND SEAL OF THE PUTNAM COUNTY LEGISLATURE THIS 18th DAY OF DECEMBER, 2025.

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CHAIR, COUNTY LEGISLATURE

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CLERK, COUNTY LEGISLATURE



**TOWN OF SOUTHEAST 2026 TAX WARRANT  
TO ANN MARIE MILANO-TAX RECEIVER**

TO SUPERVISOR (Town Figures) :				
	GENERAL-TOWNWIDE - Minus T & V Pro Rata		3,695,853.86	
	GENERAL - OUTSIDE VILLAGE FUND		233,875.00	
	HIGHWAY - TOWNWIDE FUND		1,371,550.00	
	HIGHWAY - OUTSIDE VILLAGE FUND		2,170,900.00	
	PRO-RATA TAX - T/OUTSIDE & VILLAGE		14,436.14	7,486,615.00
	BREWSTER PUBLIC LIBRARY - Minus T/O & V Library Pro Rat		679,978.17	
	LIBRARY PRORATA TAX (T/Outside & Village)		1,021.83	
	SURPLUS/SHORTAGE (from worksheet)		2.63	
SUB TOTAL TO SUPERVISOR			8,167,617.63	
TO DISTRICTS :				
	BREWSTER / SOUTHEAST FIRE	FD015	3,222,509.34	
	CROTON FALLS FIRE	FD016	30,128.98	
	BLACKBERRY LIGHT	LT006		
	SOUTHEAST REFUSE DISTRICT	RG004	2,563,733.71	
	BREWSTER HEIGHTS WATER	WD007		
	STARR RIDGE WATER	WD008		
	BLACKBERRY WATER	WD009		
	FOX HILL WATER	WD010		
	MT. BROOK ACRES WATER	WD011		
	PEACEABLE HILL WATER	WD016		
	SPRING HOUSE ESTATES WATER	WD017		
	HILLCREST WATER - CAP.	WD018		
	HILLCREST WATER - O / M	WD019		
	FOX HILL PARK	PK006		
	BLACKBERRY PARK	PK008		
	BLACKBERRY SEWER	SW005		
	BREWSTER HEIGHTS SEWER # 1 - CAP.	SW011		
	BREWSTER HEIGHTS SEWER # 1 - O / M	SW012		
	UNPAID WATER	UW006	300,517.79	
	UNPAID SEWER	US006	132,006.51	
	UNPAID LIGHT	UL006	1,017.00	
	UNPAID PARK	UP006	19,934.89	453,476.19
TOTAL DISTRICTS			6,269,848.22	
TOTAL TO SUPERVISOR			14,437,465.85	
TO COMMISIONER OF FINANCE (County Figures):				
	TOWN SHARE OF COUNTY BUDGET - Minus County Pro Rata		8,490,697.47	
	COUNTY PRO-RATA TAX		14,436.14	8,505,133.61
	RELEVIED SCHOOL TAX / WHOLLY 2025/2026		2,348,003.01	
	RELEVIED SCHOOL TAX / PARTIAL PAYMENT 24/25		61,352.98	
	RELEVIED VILLAGE 2024		20,900.23	2,430,256.22
SURPLUS/SHORTAGE			0.89	*
TOTAL TO COMMISIONER OF FINANCE			10,935,390.72	
TOTAL WARRANT			25,372,856.57	
TOTAL GENERATED BY RPS TO BE RAISED			25,372,856.57	
Difference			-	

#56.

Committee Mtg **Other Business** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

**APPROVAL/DATE, TIME & PLACE OF ORGANIZATIONAL MEETING / 2026**

**WHEREAS, the Legislative Manual provides for the Putnam County Legislature to set by resolution, the date, time and place of the Organizational Meeting of the Legislature in the preceding December; and**

**WHEREAS, per Section 2.05 of the Putnam County Charter the Legislature shall meet, on the first Tuesday after the first Monday in January of each year or as soon thereafter as practicable; now therefore be it**

**RESOLVED, that the Organizational Meeting of the Putnam County Legislature for 2026 be held on Tuesday, January 6, 2026 at 7:00 P.M. in the Historic Courthouse located in Carmel, New York; and be it further**

**RESOLVED, that the agenda for said meeting also include any items that might normally be included in a regular meeting or special meeting of the Legislature which are necessary for inclusion on said agenda.**

\_\_\_\_\_  
Legislator Addonizio  
\_\_\_\_\_  
Legislator Birmingham  
\_\_\_\_\_  
Legislator Crowley  
\_\_\_\_\_  
Legislator Ellner  
\_\_\_\_\_  
Legislator Gouldman  
\_\_\_\_\_  
Legislator Jonke  
\_\_\_\_\_  
Legislator Montgomery  
\_\_\_\_\_  
Legislator Russo  
\_\_\_\_\_  
Chairwoman Sayegh

#5c.

Committee Mtg **Other Business** Resolution # \_\_\_\_\_  
Introduced By \_\_\_\_\_ Regular Mtg: **Year End Meeting Dec. 18, 2025**  
Seconded By \_\_\_\_\_ Special Mtg \_\_\_\_\_

## **APPOINTMENT/ LEGISLATIVE CLERK**

**RESOLVED**, that Diane Trabulsy be appointed to the position of Legislative Clerk, with all the rights, privileges and duties of the Office as set forth in the Putnam County Charter, as permitted by law for a three-year term period ending December 31, 2028; and be it further

**RESOLVED**, that this appointment comply with any requirements to file an Oath of Office pursuant to the New York State Public Officers Law.

\_\_\_\_\_  
Legislator Addonizio  
\_\_\_\_\_  
Legislator Birmingham  
\_\_\_\_\_  
Legislator Crowley  
\_\_\_\_\_  
Legislator Ellner  
\_\_\_\_\_  
Legislator Gouldman  
\_\_\_\_\_  
Legislator Jonke  
\_\_\_\_\_  
Legislator Montgomery  
\_\_\_\_\_  
Legislator Russo  
\_\_\_\_\_  
Chairwoman Sayegh