

Figures

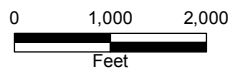
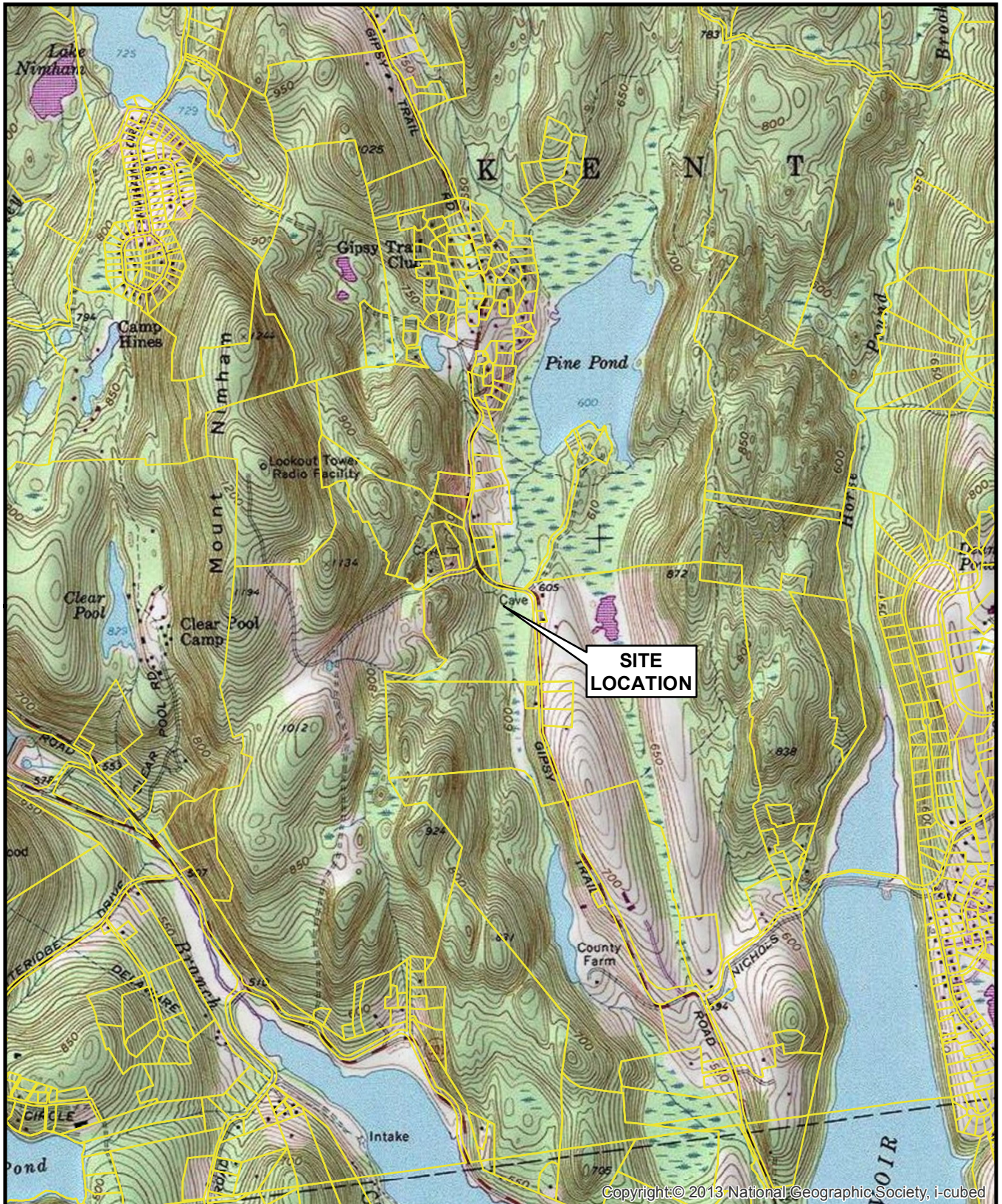


Figure 1 Site Location Map

Nimham Mountain Mines Site
Town of Kent, Putnam County



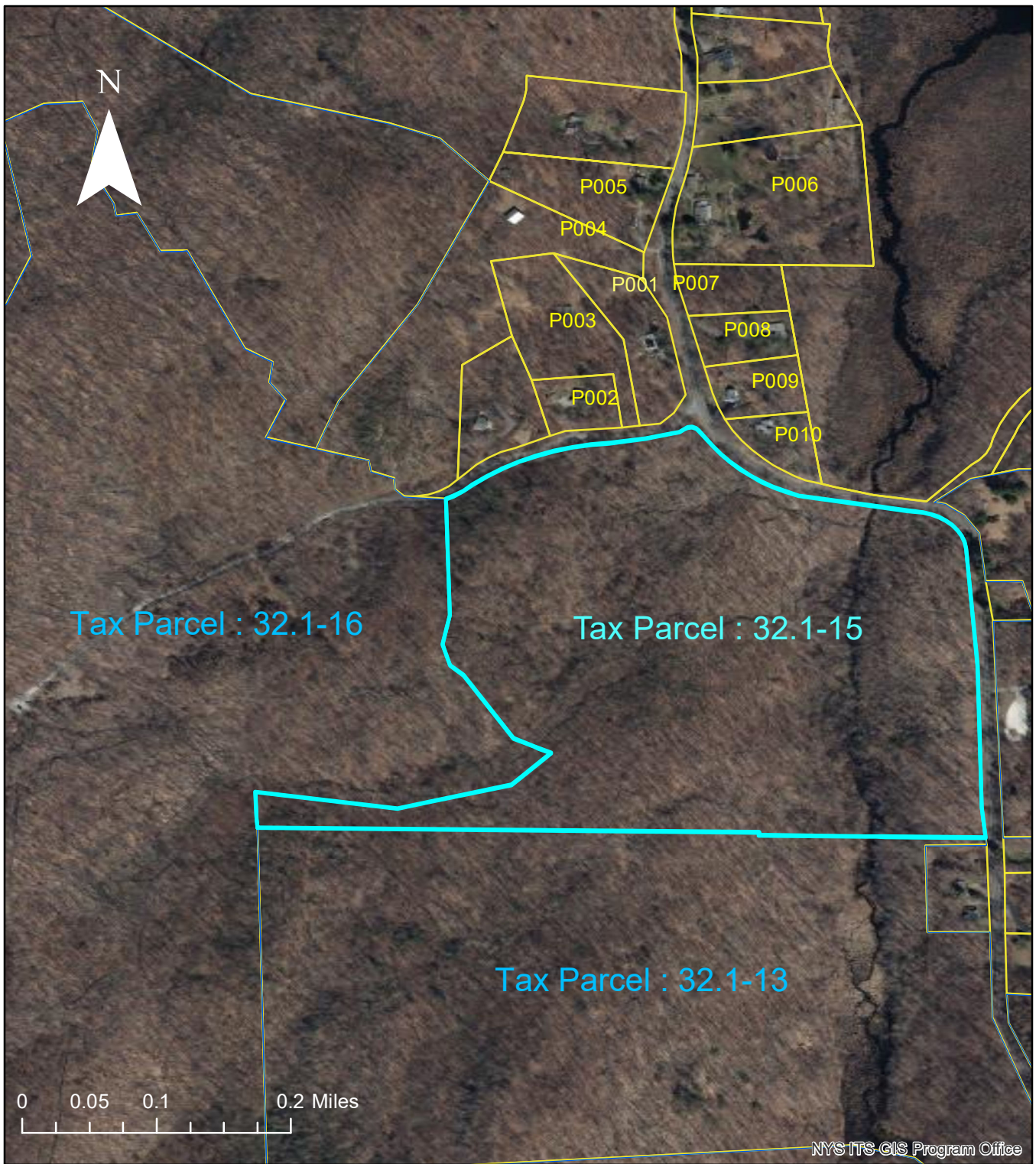


Figure 2:
State MUA Tax Parcel Outline
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

Legend

- State Owned Tax Parcels in NYS
- Tax Parcels - Putnam County
- 2016 Orthoimagery Boundary

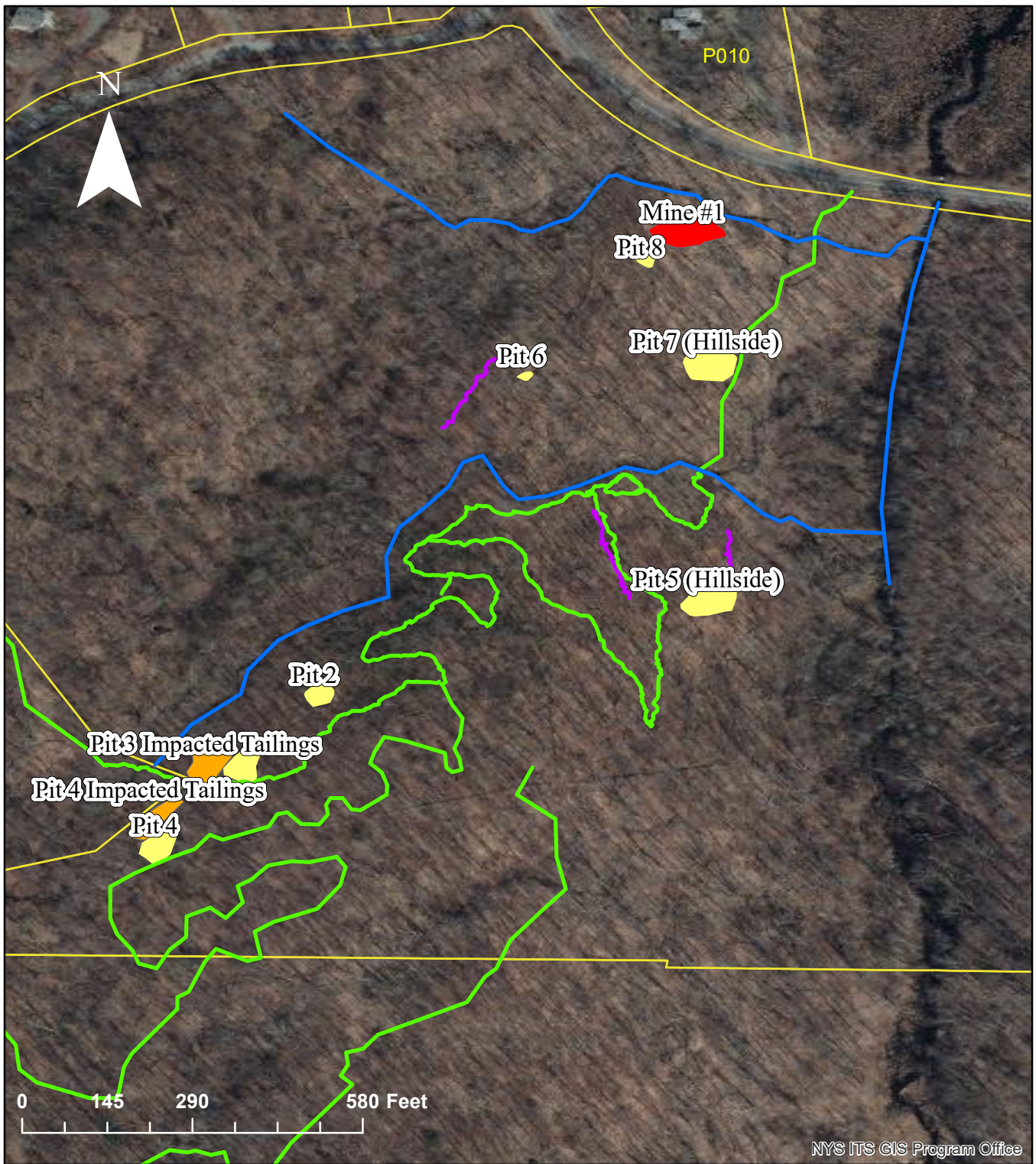


Figure 3:
Mine Pit AOCs
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County



- | MUA Features | |
|--------------|------------------------------------|
| | Ditch |
| | Stream |
| | Trail |
| Comment | |
| | Mine #1 |
| | Pit 2 |
| | Pit 3 (Double Pit) |
| | Pit 3 Impacted Tailings |
| | Pit 4 |
| | Pit 4 Impacted Tailings |
| | Pit 5 (Hillside) |
| | Pit 6 |
| | Pit 7 (Hillside) |
| | Pit 8 |
| | Tax Parcels - Putnam County (2020) |
| | 2016 Orthoimagery Boundary |

NYS ITS GIS Program Office

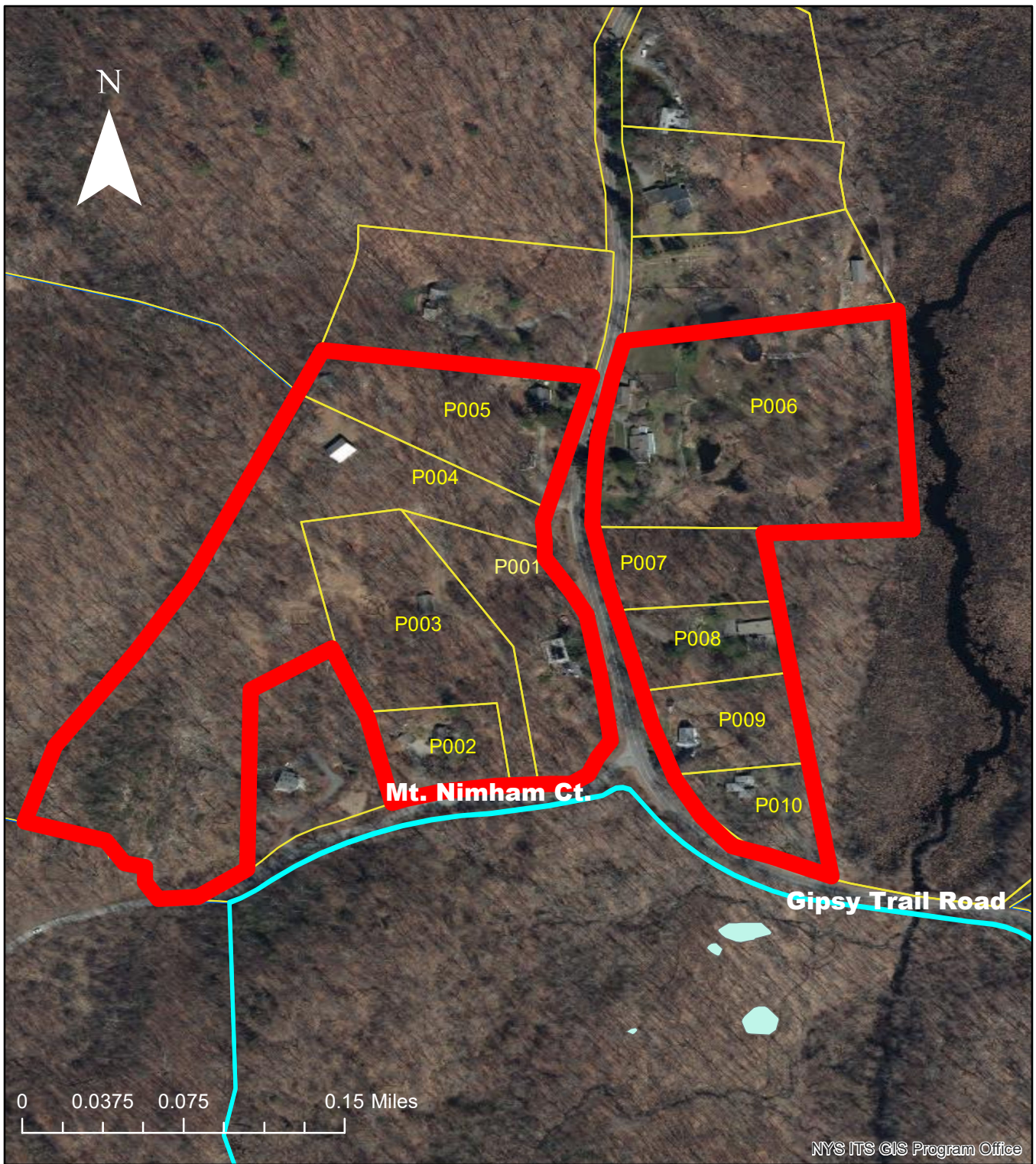


Figure 4:
EPA NPL Site Boundary
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County



Legend

- State Owned Tax Parcels in NYS
- EPA NPL Boundary
- Pit Mine
- Tax Parcels - Putnam County
- 2016 Orthoimagery Boundary

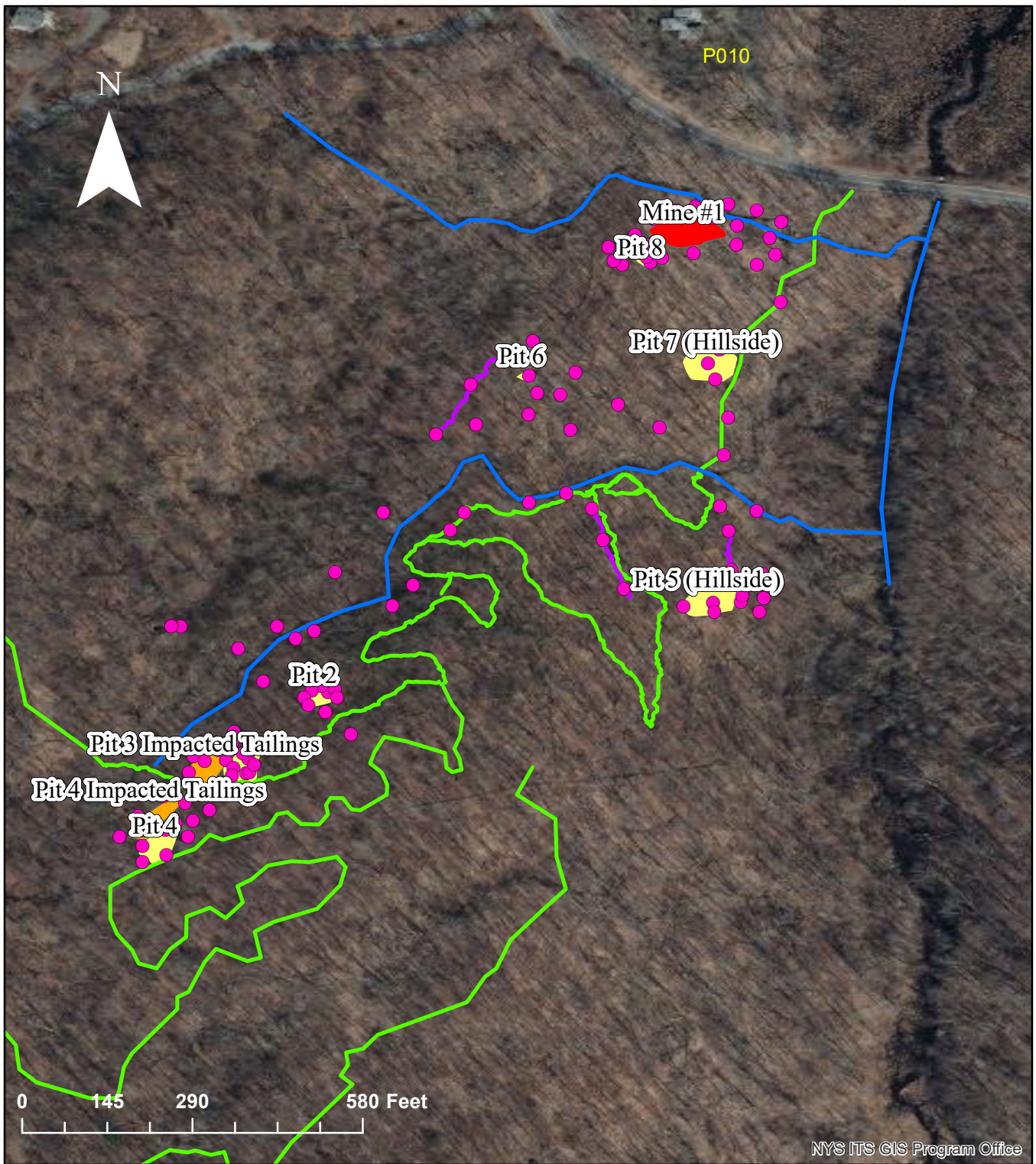

















Figure 5:
XRF Soil Screening
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County



Department of Environmental Conservation

MUA Features	
	Ditch
	Stream
	Trail
	Sample Location

Comment	
	Mine #1
	Pit 2
	Pit 3 (Double Pit)
	Pit 3 Impacted Tailings

	Pit 4
	Pit 4 Impacted Tailings
	Pit 5 (Hillside)
	Pit 6
	Pit 7 (Hillside)
	Pit 8
	2016 Orthoimagery Boundary

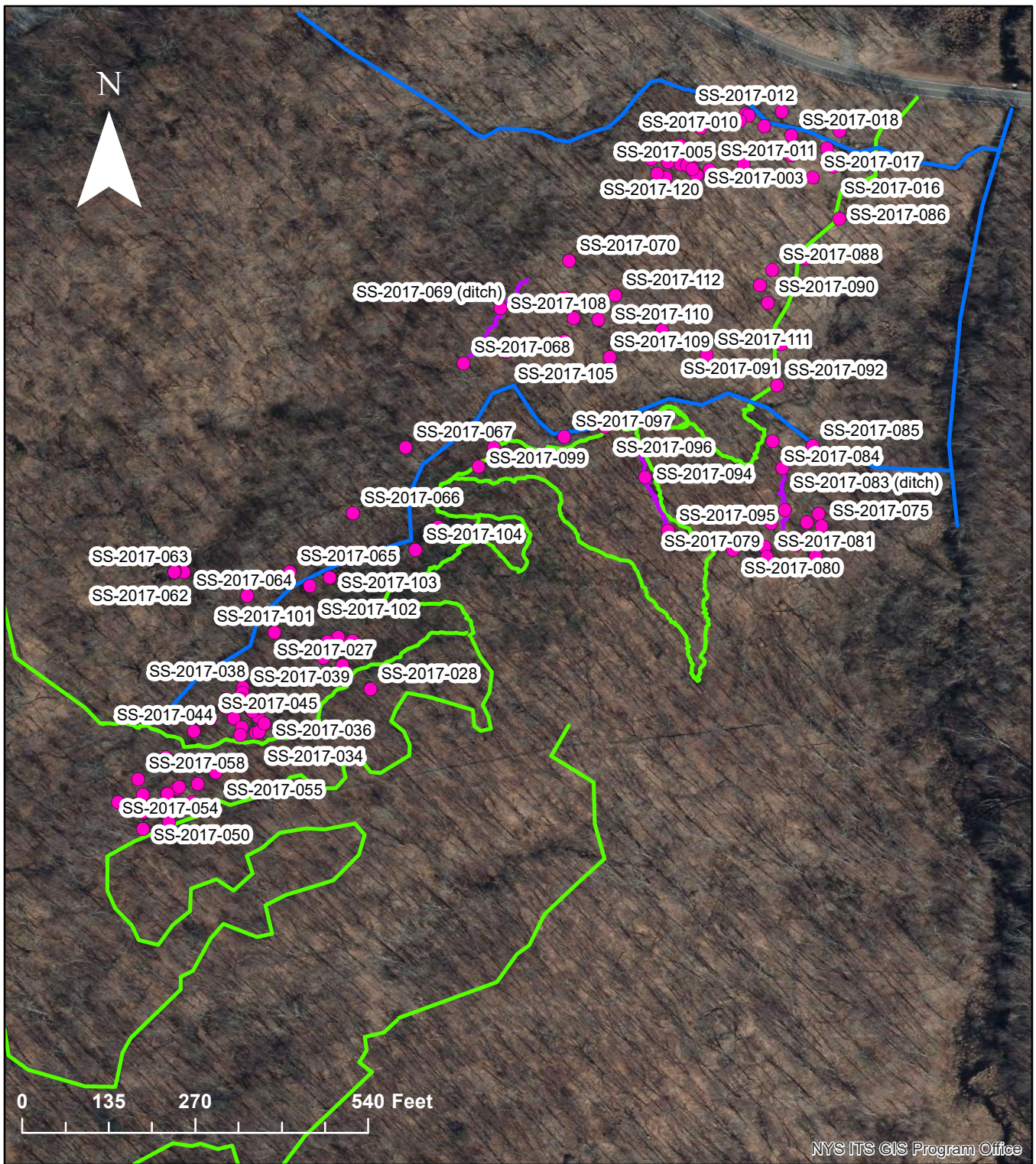
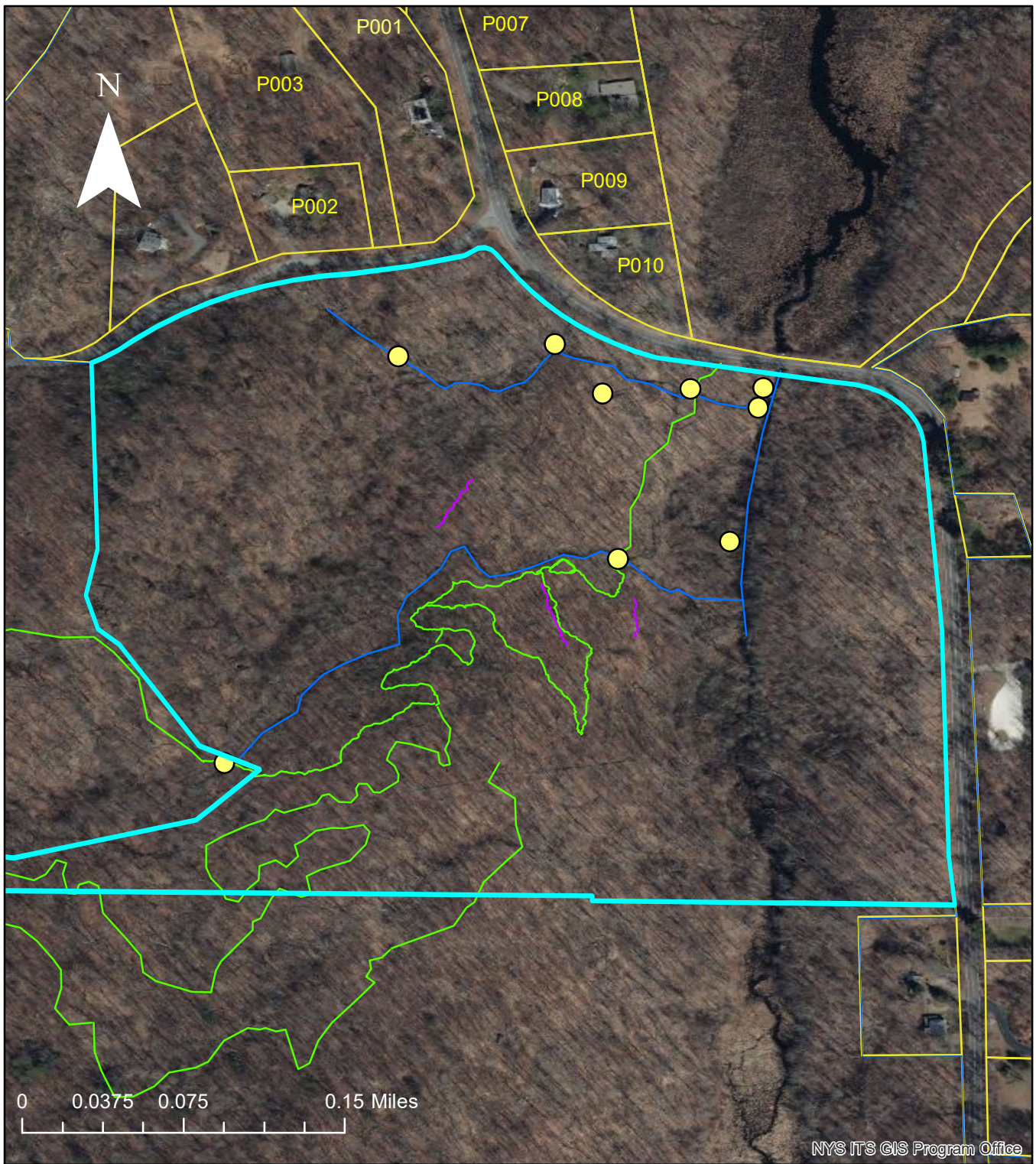


Figure 5a:
XRF Soil Screening
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

- Legend**
- MUA Features**
- Ditch
 - Stream
 - Trail
 - Sample Location
 - 2016 Orthoimagery Boundary



**Figure 6:
Sediment and Surface Water in MUA
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County**



- Legend**
- Sediment & Surface Water Points
 - MUA Features**
 - Ditch
 - Stream
 - Trail
 - State Owned Tax Parcels in NYS
 - Tax Parcels - Putnam County
 - 2016 Orthoimagery Boundary

NYS ITS GIS Program Office

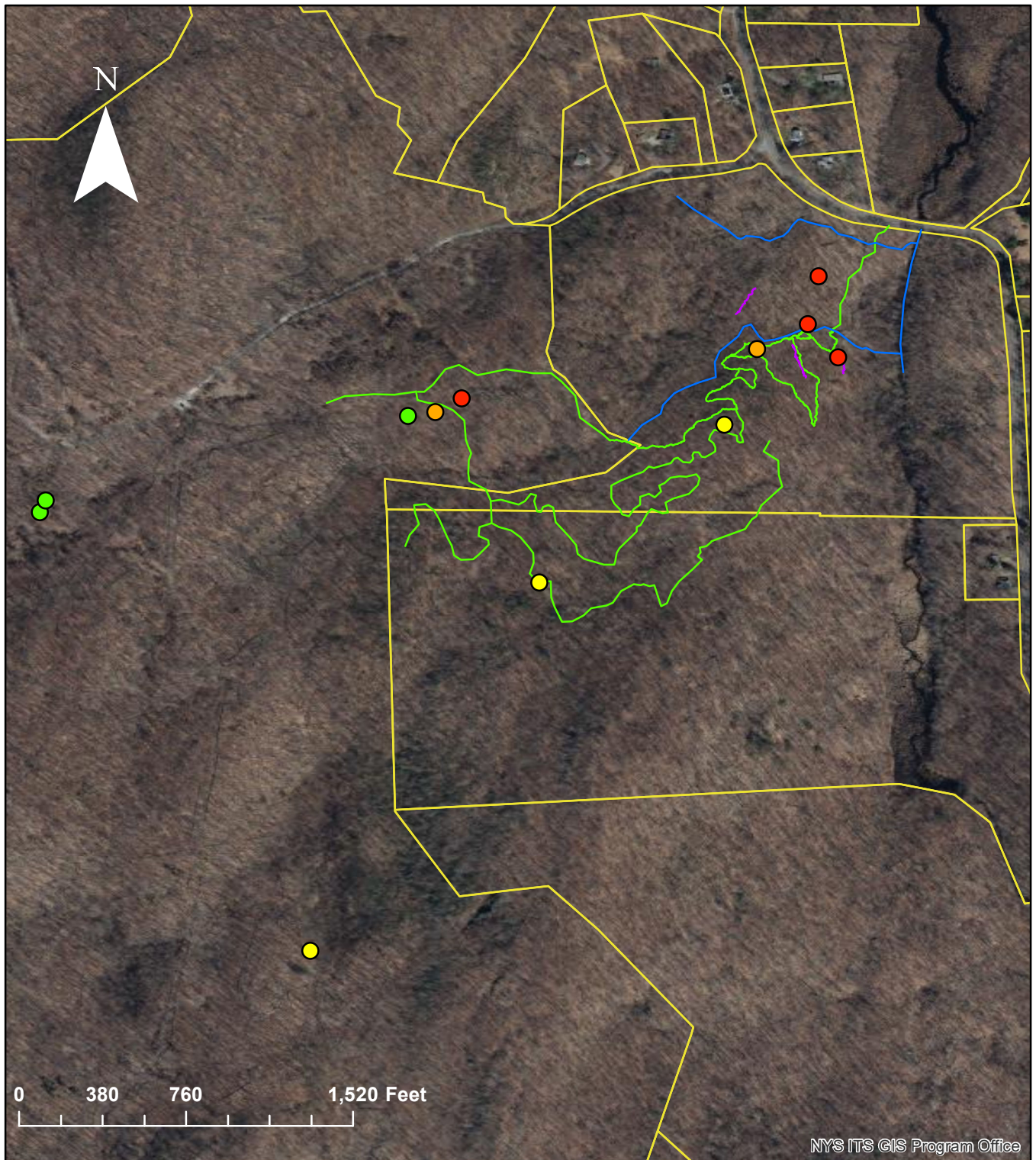


Figure 6a:
ISI Surface Soil Sampling
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County



**Department of
 Environmental
 Conservation**

Legend

Arsenic

- 6 - 15
- 16 - 32
- 33 - 56
- 57 - 112

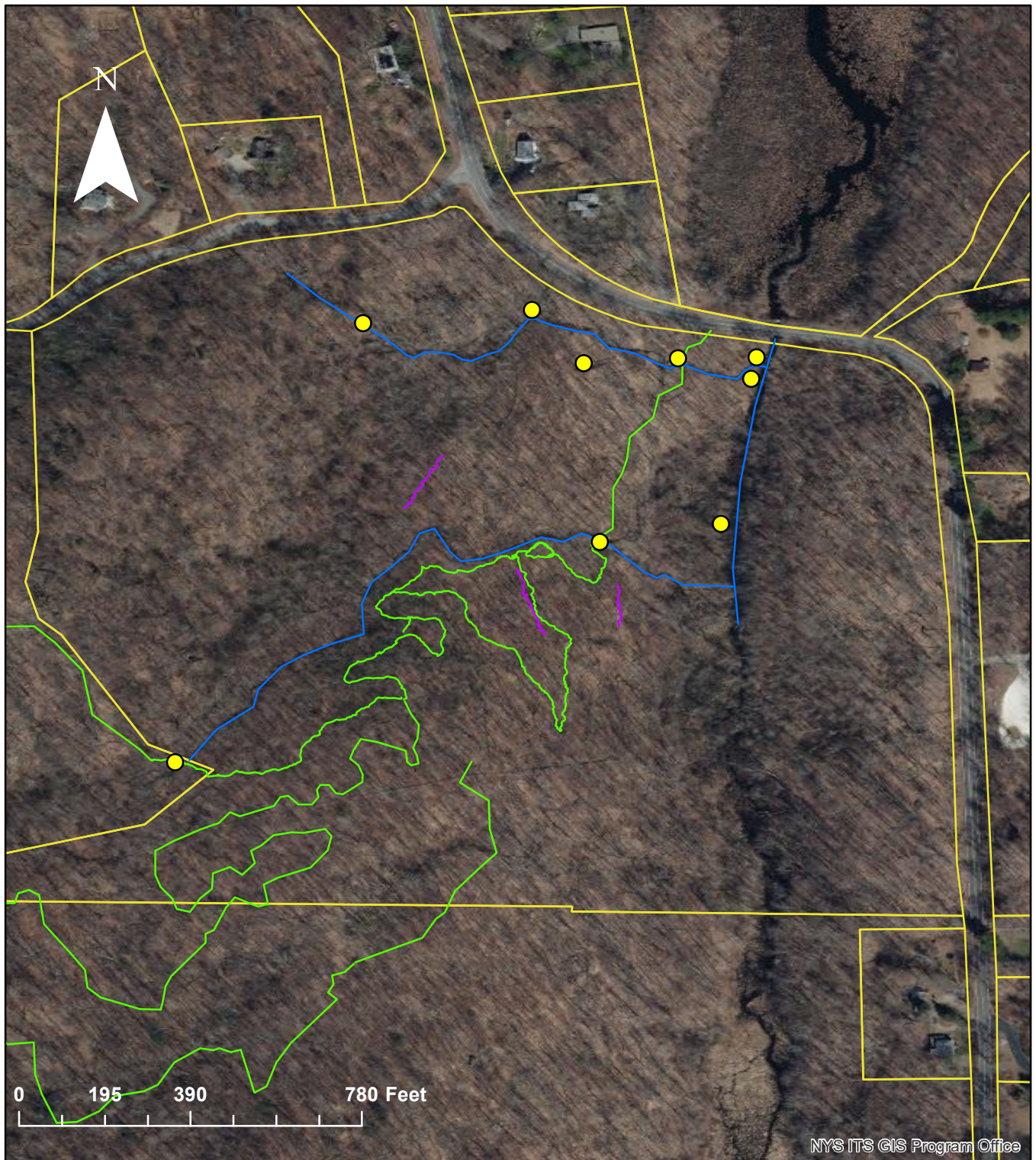
MUA Features

- Ditch
- Stream
- Trail

Tax Parcels - Putnam County (2020)

2016 Orthoimagery Boundary

NYS ITS GIS Program Office



NYS ITS GIS Program Office

Figure 7:
Sediment & Surface Water Sampling
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County



**Department of
 Environmental
 Conservation**

Legend

- Sediment & Surface Water
- MUA Features**
- Ditch
- Stream
- Trail
- Tax Parcels - Putnam County (2020)
- 2016 Orthoimagery Boundary

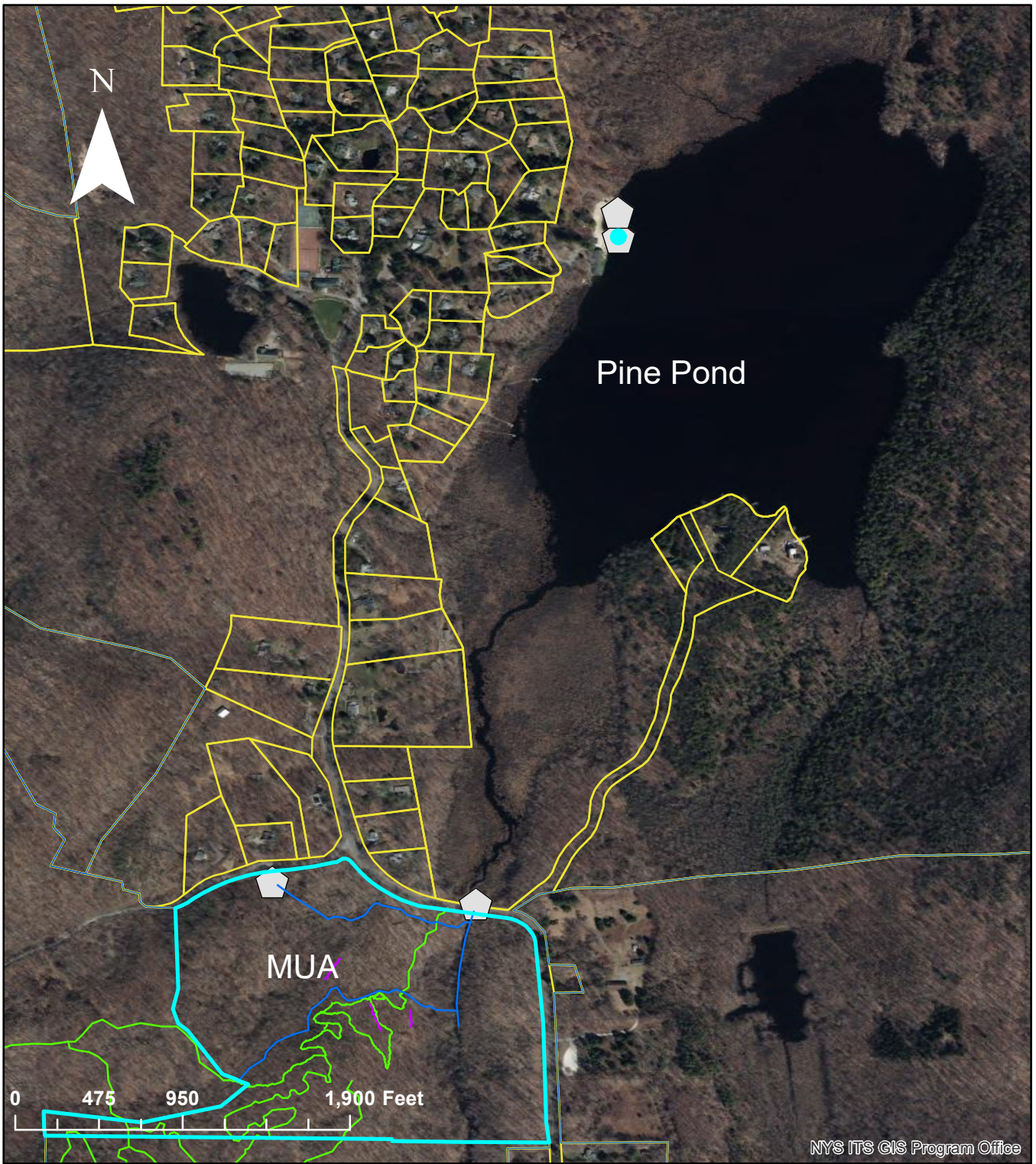


Figure 8:
Pine Pond and MUA
Surface Water Sampling 2018
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

Legend

MUA Features

- Ditch
- Stream
- Trail
- Surface Water Sampling 2018
- State Owned Tax Parcels in NYS
- Tax Parcels - Putnam County (2020)
- 2016 Orthoimagery Boundary





**Department of
 Environmental
 Conservation**



Figure 9:
Veterans Memorial Park
Surface Water Sampling 2018
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

Legend

-  Surface Water Sampling 2018
-  2016 Orthoimagery Boundary



**Department of
 Environmental
 Conservation**

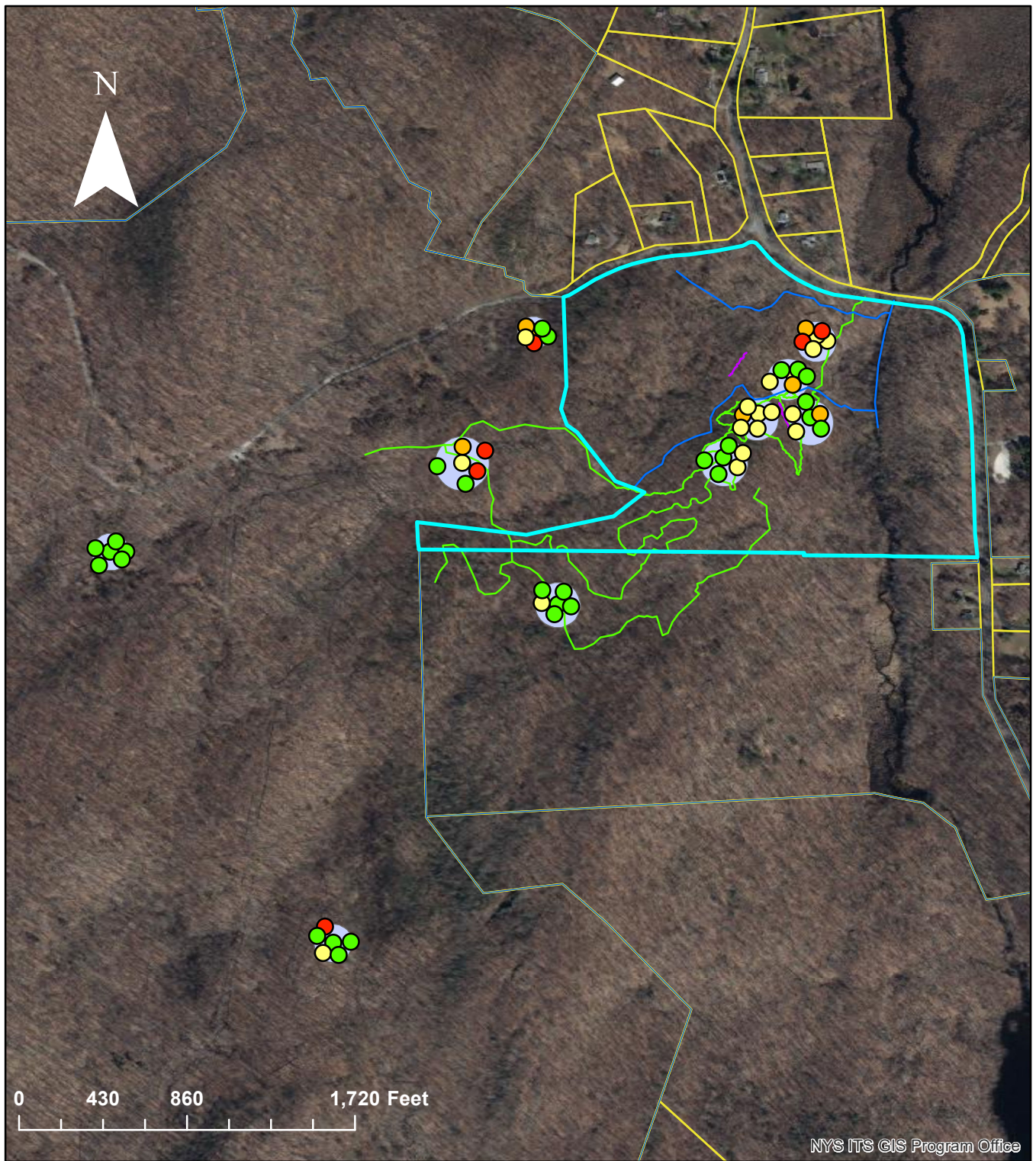


Figure 10:
MUA Background Sampling
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

Legend

- | | |
|---------------------|------------------------------------|
| Arsenic | Background XRF Area Summary |
| 6 - 35 | State Owned Tax Parcels in NYS |
| 36 - 63 | Tax Parcels - Putnam County (2020) |
| 64 - 92 | 2016 Orthoimagery Boundary |
| 93 - 120 | |
| MUA Features | |
| Ditch | |
| Stream | |
| Trail | |

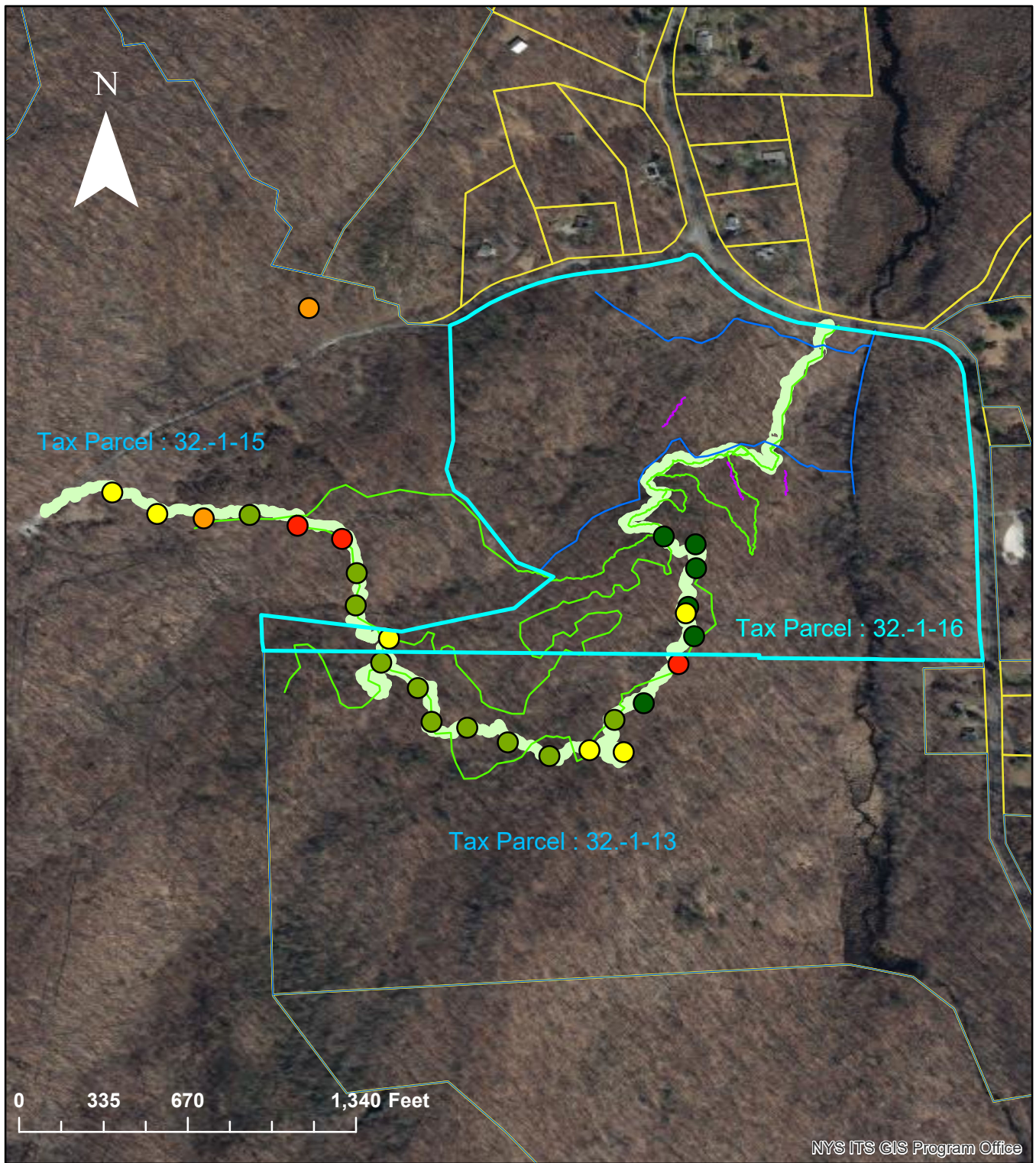
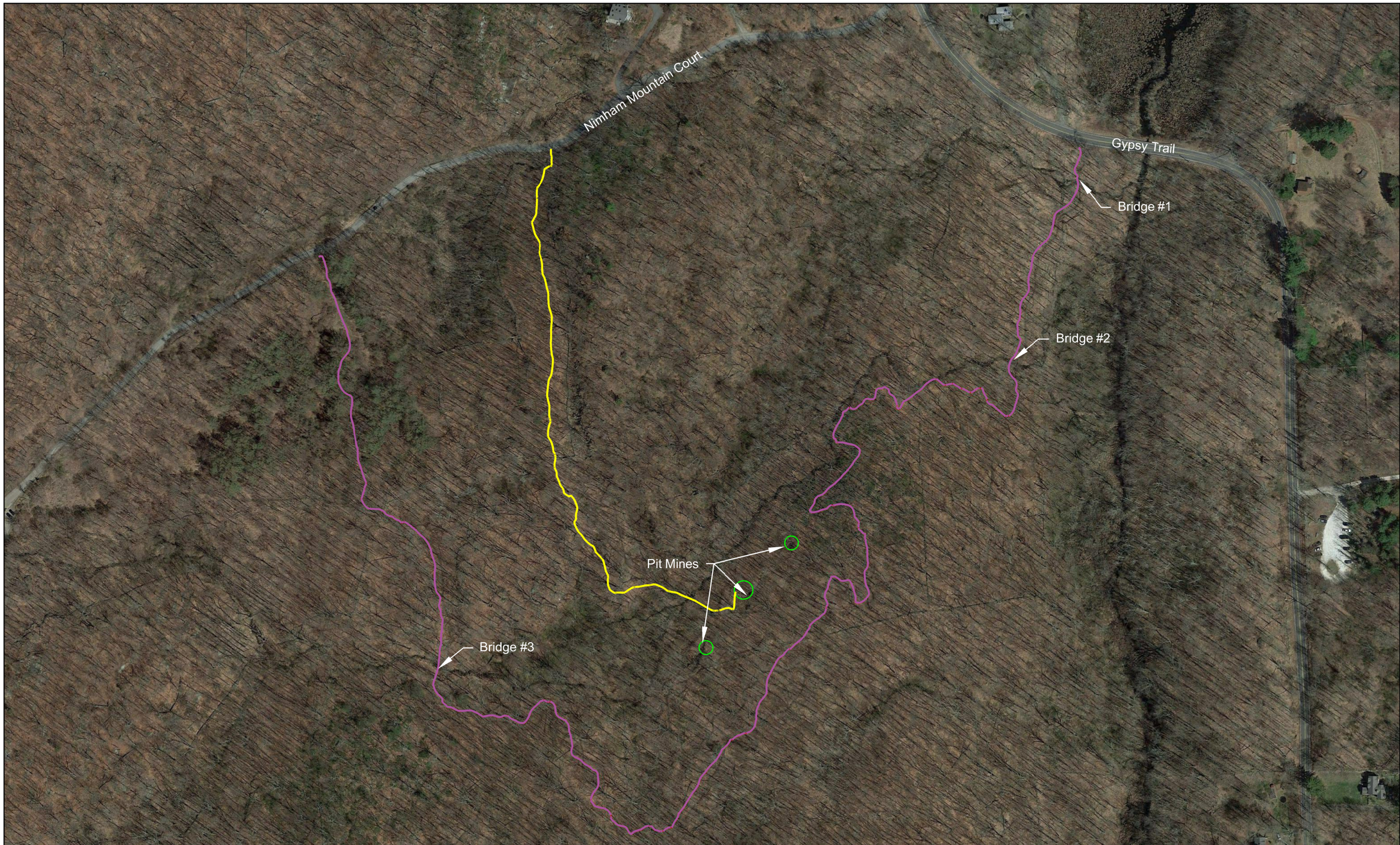
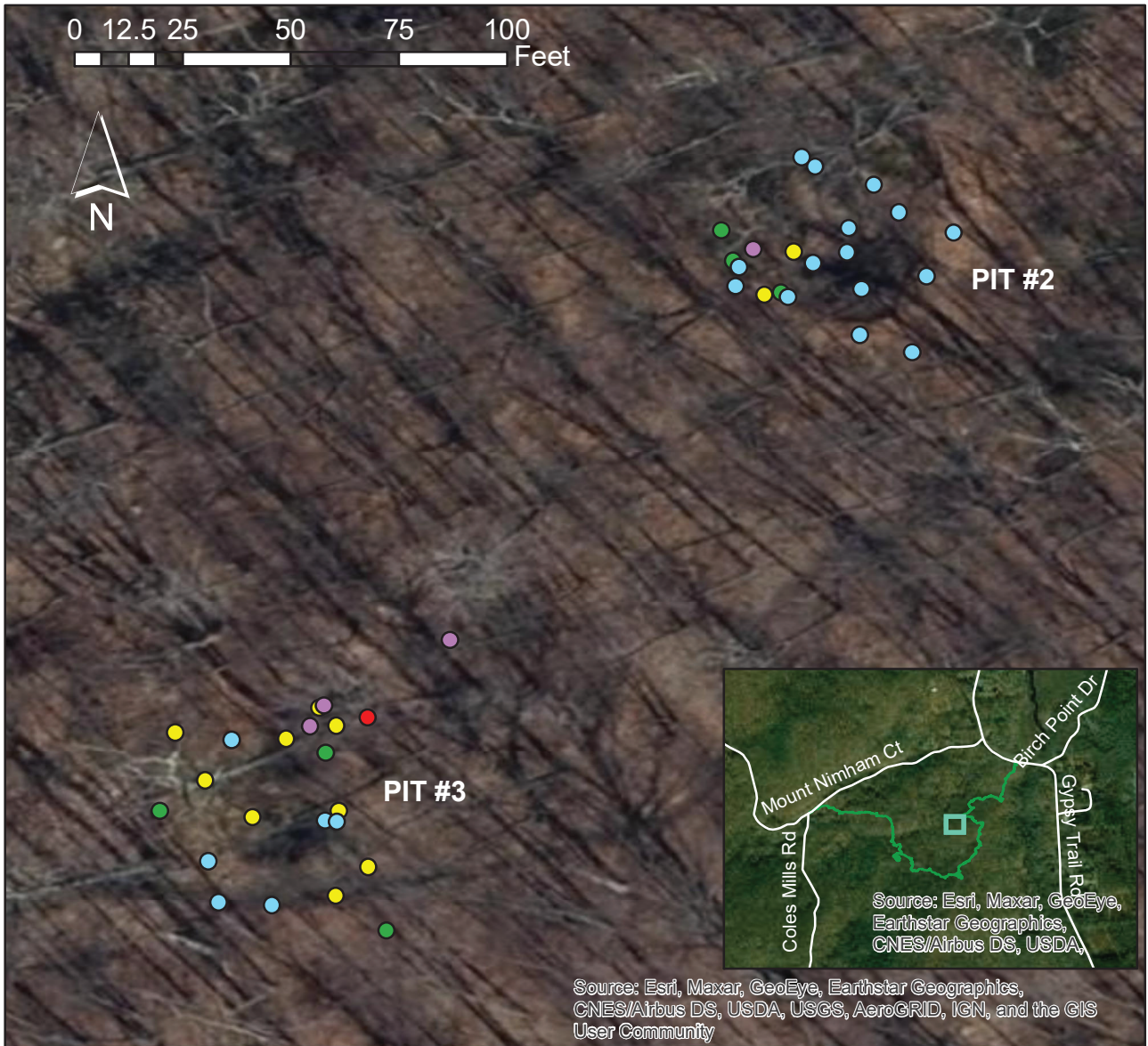


Figure 11:
Ex-situ XRF Trail Sampling 2019
Mt. Nimham Arsenic Mine
Town of Kent, Putnam County

- Legend**
- XRF**
- 9 - 15
 - 16 - 23
 - 24 - 31
 - 32 - 40
 - 41 - 53
- MUA Features**
- Ditch
 - Stream
 - Trail
- 2019 Trail Location
 - State Owned Tax Parcels in NYS
 - Tax Parcels - Putnam County (2020)
 - 2016 Orthoimagery Boundary



XRF Results Pits 2 & 3 Post Fill/Cover



Nimham Arsenic Site #340033 Mt. Nimham Multiple Use Area Kent, Putnam County

Arsenic Concentrations in ppm

- Arsenic
- 0 - 16
 - 16 - 123
 - 124 - 500.000000
 - 501 - 1000
 - 1001 - 8000



Tables

Tables 1-5

TABLE 1 - SURFACE SOIL SAMPLING XRF RESULTS
NIMHAM MOUNTAIN MINES SITE
TOWN OF KENT, PUTNAM COUNTY
APRIL 11 AND 12, 2017

	Arsenic	Sulfur	Nickel	Chromium	Iron		Arsenic	Sulfur	Nickel	Chromium	Iron
SS-2017-001	50	405	43	20	17395	SS-2017-062	14	776	286	1371	36711
SS-2017-002	38	663	50	40	25962	SS-2017-063	16	874	337	1459	46575
SS-2017-003	64	502	71	39	28695	SS-2017-064	30	344	79	633	26473
SS-2017-004	100	501	71	45	37863	SS-2017-065	31	461	90	397	25531
SS-2017-005	32	1048	42	55	45333	SS-2017-066	35	517	207	451	27748
SS-2017-006	28	861	66	38	34760	SS-2017-067	24	609	129	314	24312
SS-2017-007	65	636	38	47	24937	SS-2017-068	45	536	34	27	16310
SS-2017-008	28	840	35	26	14943	SS-2017-069	65	559	93	90	51077
SS-2017-009	519	19391	78	116	243495	SS-2017-070	94	759	104	45	32257
SS-2017-010	86	657	97	615	32054	SS-2017-071	9	674	33	24	16670
SS-2017-011	66	644	90	154	26771	SS-2017-072	27	1038	48	161	74751
SS-2017-012	189	771	247	769	46214	SS-2017-073	30	434	41	151	27904
SS-2017-013	46	962	103	207	22583	SS-2017-074	37	680	36	180	25906
SS-2017-014	14	488	113	80	23945	SS-2017-075	26	517	75	344	24448
SS-2017-015	65	491	86	179	17132	SS-2017-076	32	623	87	337	26872
SS-2017-016	63	841	153	323	25134	SS-2017-077	19	14479	41	46	152263
SS-2017-017	49	840	50	66	23421	SS-2017-078	32	15297	78	60	279998
SS-2017-018	107	596	88	58	44361	SS-2017-079	24	2088	63	45	178198
SS-2017-019	32	522	56	51	26688	SS-2017-080	74	708	55	80	44794
SS-2017-020	60	547	205	697	54152	SS-2017-081	15	635	81	38	77325
SS-2017-021	21	1072	286	223	56950	SS-2017-082	31	936	72	474	82855
SS-2017-022	21	675	204	1054	69878	SS-2017-083	88	570	63	63	32422
SS-2017-023	31	2461	181	106	116838	SS-2017-084	48	681	77	78	31468
SS-2017-024	13	1570	72	64	111264	SS-2017-085	37	526	146	694	35407
SS-2017-025	44	7895	78	49	181070	SS-2017-086	31	682	40	48	22530
SS-2017-026	25	2400	58	55	88991	SS-2017-087	56	1066	70	50	41746
SS-2017-027	31	543	129	285	74382	SS-2017-088	74	455	39	21	23604
SS-2017-028	14	544	87	150	53197	SS-2017-089	91	530	69	25	35079
SS-2017-029	11356	1045	82	161	77105	SS-2017-090	40	643	46	42	25302
SS-2017-030	5703	1104	172	394	65859	SS-2017-091	70	565	61	35	29930
SS-2017-031	10397	997	87	31	68480	SS-2017-092	48	641	83	174	28355
SS-2017-032	165	5811	120	32	140143	SS-2017-093	26	627	32	50	14214
SS-2017-033	109	27009	132	46	236676	SS-2017-094	42	666	39	57	33877
SS-2017-034	169	2260	67	46	63422	SS-2017-095	53	654	42	43	28302
SS-2017-035	159	6538	52	39	93331	SS-2017-096	52	720	103	73	44138
SS-2017-036	30054	1098	750	199	184011	SS-2017-097	61	607	86	37	47124
SS-2017-037	617	10849	215	241	312907	SS-2017-098	52	671	81	45	51526
SS-2017-038	27	514	76	182	24023	SS-2017-099	76	540	113	65	47387
SS-2017-039	87	994	88	1023	35440	SS-2017-100	39	560	56	101	38581
SS-2017-040	318	460	81	397	25836	SS-2017-101	30	447	283	167	33833
SS-2017-041	64	751	112	350	30589	SS-2017-102	173	708	368	1648	68689
SS-2017-042	903	4187	102	23	90532	SS-2017-103	42	523	102	235	9520
SS-2017-043	66	521	77	144	24190	SS-2017-104	23	459	40	35	24778
SS-2017-044	56	1509	57	397	20969	SS-2017-105	22	602	64	72	36061
SS-2017-045	5675	2357	72	33	68297	SS-2017-106	45	1641	44	33	34613
SS-2017-046	3701	3416	116	36	63436	SS-2017-107	8	526	35	12	8805
SS-2017-047	2276	5626	119	70	101659	SS-2017-108	86	938	114	27	17500
SS-2017-048	4089	1600	68	37	111670	SS-2017-109	82	781	99	27	23159
SS-2017-049	787	469	45	219	50391	SS-2017-110	54	501	39	39	30473
SS-2017-050	66	382	53	110	44579	SS-2017-111	38	506	44	38	22583
SS-2017-051	90	509	108	236	47334	SS-2017-112	28	650	54	28	28026
SS-2017-052	3	436	50	89	38213	SS-2017-113	23	974	41	39	35995
SS-2017-053	2911	443	100	37	48862	SS-2017-114	114	2043	41	91	49035
SS-2017-054	248	560	49	50	16965	SS-2017-115	129	681	42	52	48784
SS-2017-055	27	570	105	432	30139	SS-2017-116	60	1019	68	104	58135
SS-2017-056	112	2540	84	113	70032	SS-2017-117	61	1276	36	39	41007
SS-2017-057	31	464	54	54	16534	SS-2017-118	73	1168	44	58	69020
SS-2017-058	58	367	56	19	11375	SS-2017-119	119	687	64	45	48448
SS-2017-059	71	2783	68	118	88359	SS-2017-120	72	769	50	76	35382
SS-2017-060	350	12350	56	86	121605	SS-2017-121	299	774	84	70	79921
SS-2017-061	8	633	378	1377	40884						

Notes:

All results in parts per million (ppm)

Non-Detect for XRF Bold (Detection Limit)

TABLE 2 - SURFACE SOIL SAMPLING ANALYTICAL RESULTS
NIMHAM MOUNTAIN MINES SITE

OF KENT, PUTNAM COUNTY

APRIL 11 AND 12, 2017

	Unres. SCO	Res. SCO	SS 2017-001	SS 2017-009	SS 2017-014	SS 2017-026	SS 2017-029	SS 2017-036	SS 2017-046	SS 2017-046-DUP	SS 2017-054	SS 2017-70	SS 2017-102	SS 2017-105
Arsenic	13	16	110	794	21.6	44.6	12600	41800	5710	13900	493	162	272	28.8
Barium	350	350	68.1	25.2	48.8	59.9	156	554	98.1	111	36.8	180	79.9	33
Cadmium	2.5	2.5	0.38	0.88	0.71	0.52	27.2	95.7	2	ND	0.49	1.1	0.73	0.12
Chromium	30	36	53.4	80.1	21.4	21.5	246	175	71.6	47.1	44.8	39.2	240	32.8
Lead	63	400	50.4	5.1	22.4	151	31.2	14.2	133	102	119	64.4	12.3	10.9
Selenium	3.9	36	2	2.9	ND	34.4	3.4	2.1	7.2	8	3.5	2.6	ND	0.95
Silver	2	36	ND	ND	ND	8.2	ND	ND	1.7	1.8	0.91	ND	ND	ND
Mercury	0.18	0.81	0.15	0.02	0.011	0.16	0.11	0.073	0.38	0.41	0.44	0.25	0.052	0.022

Notes:

All results in parts per million (ppm)

ND - Non-Detect

Exceeds Unrestricted SCO

Exceeds Unrestricted and Residential SCO

**TABLE 3 - SEDIMENT SAMPLING ANALYTICAL RESULTS
NIMHAM MOUNTAIN MINES SITE
TOWN OF KENT, PUTNAM COUNTY
APRIL 11 AND 12, 2017**

	Class A	Class C	SED-2017-01	SED-2017-02	SED-2017-03	SED-2017-04	SED-2017-05	SED-2017-05-DUP	SED-2017-06	SED-2017-07	SED-2017-08
Arsenic	10	33	175	31	134	40.3	27.2	17.4	49.4	9.1	18.6
Barium	NS	NS	208	90.5	53	59.5	61.3	31	128	35.2	71.1
Cadmium	1	5	2	0.43	0.61	0.45	0.59	0.29	1	0.17	0.97
Chromium	43	110	53.2	22.6	42.1	31.4	46.3	42.2	95.4	18.7	53.6
Lead	36	130	23.1	10.9	17.6	15.5	16.8	10.7	15.9	17.8	24.8
Selenium	NS	NS	7.6	ND	0.65	1.3	ND	0.75	1.4	0.7	1.1
Silver	1	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.2	1	0.1	ND	0.013	0.049	0.022	0.014	0.022	0.021	0.079

Notes:

All results in parts per million (ppm)

ND - Non-Detect

Class A & C Standards from Screening and Assessment of Contaminated Sediment (June 24, 2014)

Exceeds Class A Standard

Exceeds Class A & C Standards

**TABLE 4 - SURFACE WATER SAMPLING ANALYTICAL RESULTS
 NIMHAM MOUNTAIN MINES SITE
 TOWN OF KENT, PUTNAM COUNTY
 APRIL 11 AND 12, 2017**

	SW-2017-01	SW-2017-02	SW-2017-03	SW-2017-04	SW-2017-05	SW-2017-05-DUP	SW-2017-06	SW-2017-07	SW-2017-08
Arsenic	ND	0.0058	ND	ND	ND	ND	ND	ND	0.0058
Barium	0.018	0.013	0.014	0.019	0.016	0.016	0.012	0.012	0.024
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	0.0045
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

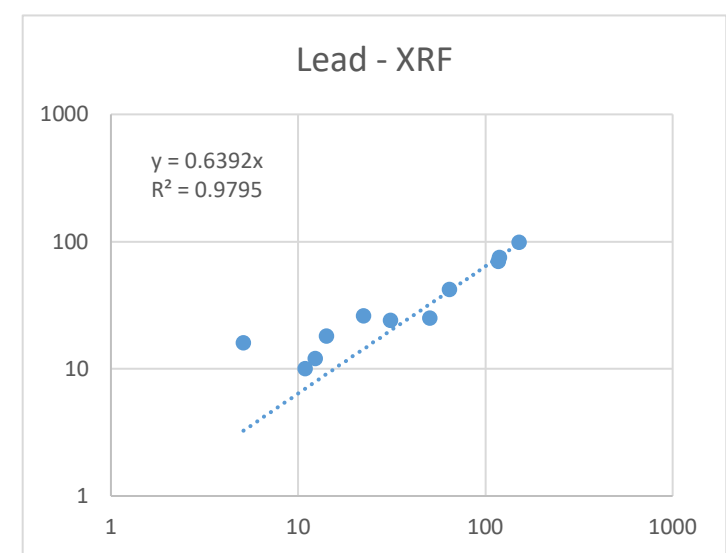
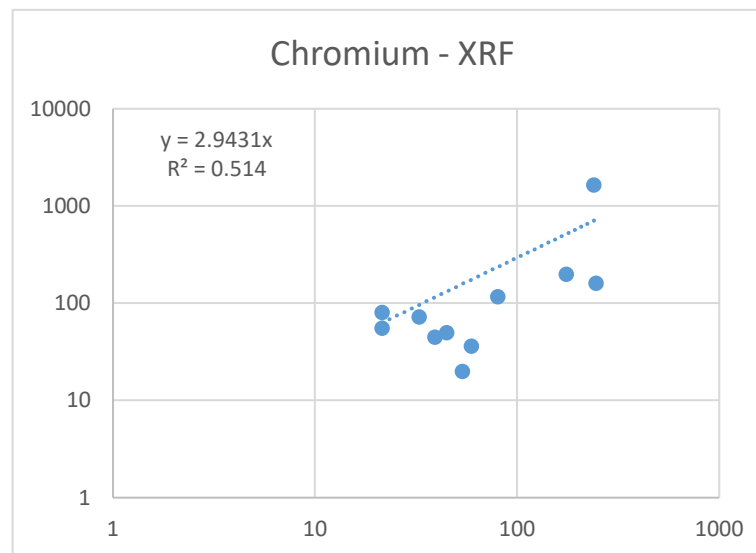
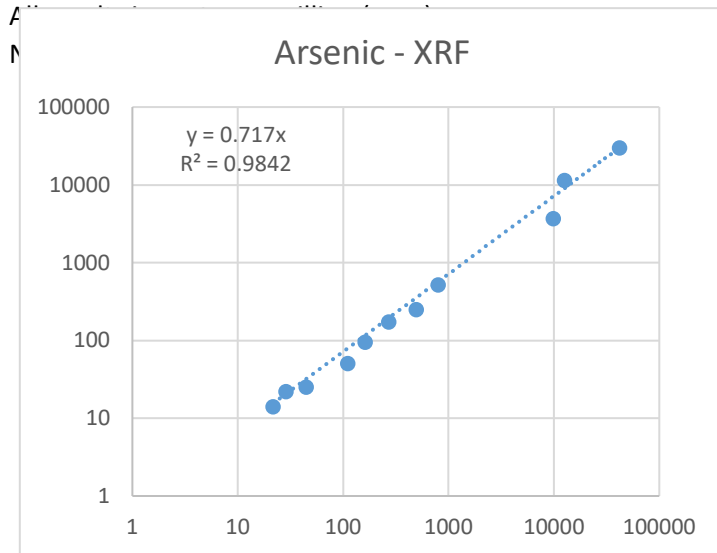
All results in milligrams per liter (mg/L)

ND - Non-Detect

TABLE 5 - SURFACE SOIL COMPARISON OF ANALYTICAL AND XRF RESULTS
NIMHAM MOUNTAIN MINES SITE
TOWN OF KENT, PUTNAM COUNTY
APRIL 11 AND 12, 2017

	SS 2017-001	SS 2017-009	SS 2017-014	SS 2017-026	SS 2017-029	SS 2017-036	SS 2017-046	SS 2017-054	SS 2017-70	SS 2017-102	SS 2017-105
Arsenic - Lab	110	794	21.6	44.6	12600	41800	9805	493	162	272	28.8
Arsenic - XRF	50	519	14	25	11356	30054	3701	248	94	173	22
Chromium - Lab	53.4	80.1	21.4	21.5	246	175	59.35	44.8	39.2	240	32.8
Chromium - XRF	20	116	80	55	161	199	36	50	45	1648	72
Lead - Lab	50.4	5.1	22.4	151	31.2	14.2	117.5	119	64.4	12.3	10.9
Lead - XRF	25	16	26	99	24	18	70	75	42	12	10

Notes:



Appendix A

Site Photos



Photo 1: Mine 1 - Looking West



Photo 5: Pit 2 - Tailings Pile



Photo 6: Pit 3



Photo 9: Pit 4 – Looking Northeast



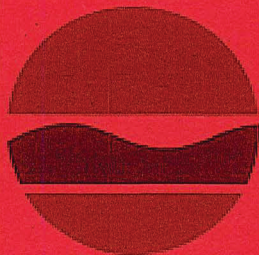
Photo 3: Mine 1 - Tailings Pile Looking Northeast



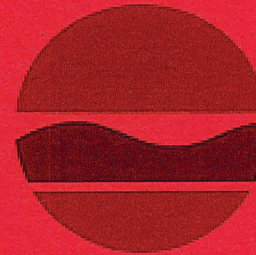
Photo 4: Pit 2



New York State
Department of Environmental Conservation



NOTICE EMERGENCY AUTHORIZATION



The Department of Environmental Conservation (DEC) has authorized, pursuant to the Environmental Conservation Law, work being conducted at this site. For further information regarding the nature and extent of work approved and any Department conditions on it, contact the DEC Division of Environmental Permits at (845) 256-3054.

Authorized Person:

NYS DEC

Effective Date:

4/26/2019

Expiration Date:

5/26/2019

Applicable if checked. No instream work allowed between October 1 and April 30.

Date:

June 7, 2021

Direction:

West

Subject:

Unloading crane mats and fence materials.



Date:

June 8, 2021

Direction:

Southwest

Subject:

Using a Kobelco 140 excavator to carefully take apart a section of rock wall at entrance into the woods.



Date:

June 9, 2021

Direction:

South

Subject:

Creating a path
into the pit mines
and moving crane
mats to assist in
water crossing.



Date:

June 9, 2021

Direction:

North

Subject:

Clearing trees
around
Pit #3 and
beginning to
push in spoils
piles.



Date:
June 9, 2021

Direction:
East

Subject:
Filling Pit #3 with
spoils and trees.



Date:
June 10, 2021

Direction:
Southwest

Subject:
Preparing to
remove trees and
fill Pit #2.



<p><u>Date:</u> June 10, 2021</p>	
<p><u>Direction:</u> Northeast</p>	
<p><u>Subject:</u> Filling Pit #2 with spoils and trees.</p>	

<p><u>Date:</u> June 15, 2021</p>	
<p><u>Direction:</u> NA</p>	
<p><u>Subject:</u> Installing fence posts around backfilled pit mines.</p>	

Date:
June 17, 2021

Direction:
East

Subject:
View of Pit #3
with fence
installed.



Date:
June 17, 2021

Direction:
Southeast

Subject:
View of Pit #2
with fence
installed.



Date:
June 21, 2021

Direction:
West

Subject:
Light stone fill
(rip-rap)
delivered for
swale
construction.



Date:
June 21, 2021

Direction:
Northwest

Subject:
View of
culvert/swale
area excavated
and new 10'
section of 12-
inch dia. Culvert
installed.



<p><u>Date:</u> June 21, 2021</p>	
<p><u>Direction:</u> Northwest</p>	
<p><u>Subject:</u> Installing filter fabric in the swale trench before adding stone fill.</p>	

<p><u>Date:</u> June 22, 2021</p>	
<p><u>Direction:</u> Northwest</p>	
<p><u>Subject:</u> Completed swale. This terminates at the natural creek drainage.</p>	

<p>Date: June 22, 2021</p>	
<p>Direction: East</p>	
<p>Subject: Item #4 material from Peckham Industries for trail cap repairs.</p>	

<p>Date: June 30, 2021</p>	
<p>Direction: Northwest</p>	
<p>Subject: Making repairs and additional thickness to the majority of the trail cap.</p>	

Appendix B

Fact Sheets



Department of
Environmental
Conservation

FACT SHEET

Nimham Arsenic Mine Site, Nimham Mountain Multiple Use Area

Town of Kent, Putnam County

May 2018

Where to Find Information:

Project documents are available at the following location(s) to help the public stay informed.

Kent Public Library

17 Sybil's Crossing
Kent Lakes, NY 10512
Call for hours: (845) 225-8585

NYSDEC, Region 3 Office

21 South Putt Corners Rd
New Paltz, NY 12561
Call in advance: (845) 256-3000

Who to Contact:

Comments and questions are always welcome and should be directed as follows:

Project Related Questions

Kiera Thompson
NYSDEC

Division of Environmental Remediation

625 Broadway, 11th Floor
Albany, NY 12233-7014
(518) 402-9662

kiera.thompson@dec.ny.gov

Public Health questions:

Steven Lawrence
NYSDOH

Empire State Plaza
Corning Tower Room 1787
Albany, NY 12237
(518) 402-7860

bee@health.ny.gov

Multiple Use Area Questions:

Matthew Paul
NYSDEC-Division of Lands & Forests
21 South Putt Corners Rd
New Paltz, NY 12561
(845) 256-3156

**For additional information on Nimham Mtn
Multiple Use Area:**

www.dec.ny.gov/lands/34773.html

Preliminary Actions to Address Exposure

The New York State Department of Environmental Conservation (NYSDEC) will conduct expedited actions within a portion of the state-owned Nimham Mountain Multiple Use Area ("site"). The site, locally known by several names such as Mount Nimham, is located on Gypsy Trail Road in the Town of Kent, Putnam County. Please see Figure 1 for the site location. Documents related to the investigation of arsenic impacts at this site can be found at the location(s) identified on the left-hand side of the next page under "Where to Find Information."

Actions to Address Exposure

Preliminary actions will be performed to reduce potential exposures to contamination at the site. The following actions are planned:

- 1) Signs will be hung informing visitors that arsenic-contaminated soils exist in the area and precautions such as washing hands and clothes/footwear should be taken if contact with soil occurs. Site contact information will also be provided on the signs.
- 2) Trails will be closed and rerouted to keep visitors out of restricted areas containing high levels of contamination. A map showing the closed trails is attached. Signs will be hung to denote restricted areas which contain both contaminated soils and pits that may pose physical hazards.
- 3) Portions of some trails will be covered with gravel to reduce exposures to elevated arsenic present in soils along the trails.

Site Description

The site consists of an approximately 50-acre portion of the Nimham Mountain Multiple Use Area which is located approximately 2.5 miles northwest of the Town of Carmel. The site is mountainous and forested and slopes down approximately 150 feet in elevation from west to east. A stream runs south through the eastern portion of the site from Pine Pond to the north and through a wetland which is fed by two additional tributaries from the west. Several historic mine features exist at the site, including but not limited to a shaft entrance to the main mine (Mine #1) and three additional shaft/pit areas to the west along a trail which follows a ridge. Currently, the site is owned by New York State and is maintained as a Multiple Use Area for recreational use. It is accessible via two trail heads located at Gypsy Trail Road and along Nimham Mountain Court, respectively.

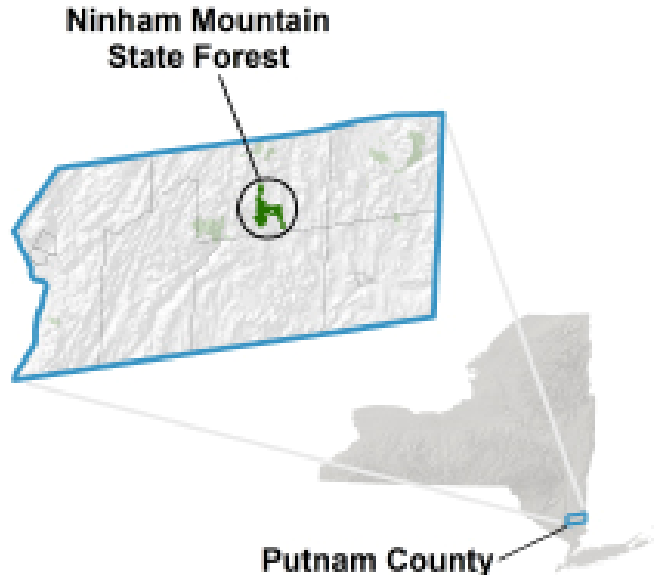


Figure 1: Site Location

Site History

Historic arsenic mining occurred at the site in several phases, starting in the mid-1800s and concluding in the early 1900s. The mine area, also known as Silver Mine and Pine Pond Mine, contained a metal ore called arsenopyrite which was used in the pesticide, glass, and pigment industries. The main mine was accessed by two still-existing shafts, a northern mine shaft located on private property, and a southern mine shaft located at the site (“Mine #1”), see Figure 2 for details. There are many additional features associated with historic mining operations located throughout the site, the most prominent of which are 3 additional pits/shafts used for prospecting, mining, or both (Mines #2, #3 [which has two pits], and #4).

During mining operations, the ore was separated from the waste rock and soils known as tailings. Tailings were disposed in areas surrounding the mine pits/shafts, and contained arsenic which contaminated soils and sediments in areas of the site. Some of the soils at the site which are unaffected by mining operations contain arsenic concentrations above NYSDEC’s soil cleanup objectives (SCOs). The elevated background levels in soils can be attributed to the minerals in the underlying rock which naturally exists at the site.

Previous Investigation Activities at the Site

An *Initial Site Investigation Report* was completed in June 2017 by NYSDEC Division of Environmental Remediation, in consultation with the NYSDEC Division of Lands & Forests and the New York State Department of Health (NYSDOH). The report concluded that arsenic impacts in soils at the site, particularly those near mine pits and shafts, are well above the SCO of 16 parts per million. Limited areas of sediments located near the mine features are also impacted with arsenic. Surface water at the site does not contain arsenic above NYS guidelines. The report recommended additional investigation work to fill data gaps, to assess potential health exposures, and to establish an arsenic background concentration for soils at the site. This additional investigation work is currently underway.

The United States Environmental Protection Agency (USEPA) is currently conducting a soil investigation of the northern mine shaft and private parcels near the site to characterize and delineate the impacts from historic arsenic mining operations not on state land. USEPA and NYSDEC are collaborating and sharing information in order to best understand impacts and to protect human health and the environment in the area.

Next Steps

An updated Unit Management Plan (UMP) is currently being developed for the Nimham Mountain Multiple Use Area. Draft UMP issuance is anticipated to occur in summer 2018. The public will have an opportunity to review and comment on the draft UMP, and a public meeting will be held prior to final UMP issuance.

The ongoing supplemental investigation work to further characterize and delineate arsenic contamination is anticipated to conclude in fall 2018 with the issuance of a *Supplemental Site Investigation Report*. The report will also contain information on site background levels of arsenic in soils, as well as a description of the actions being described here to reduce the potential for exposure to arsenic in soils.

Arsenic in Soil

Exposure to elevated levels of arsenic in soils at the site occurs through direct contact with contaminated soil. Steps to reduce exposure to arsenic in soils at the site:

- 1) Stay on designated trails and out of restricted areas.

- 2) Avoid tracking contaminated soils into car and home. Leave shoes outside the home or at the door.
- 3) Wash hands and face after visiting the site, especially prior to eating.
- 4) Wash clothes which come into contact with soils at the site.
- 5) If any pets visited the site, wash paws or any parts making contact with soils before entering the car or home.
- 6) Do not bring items such as bicycles or other gear used at the site into the car or home.

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Site Fact Sheets by Email

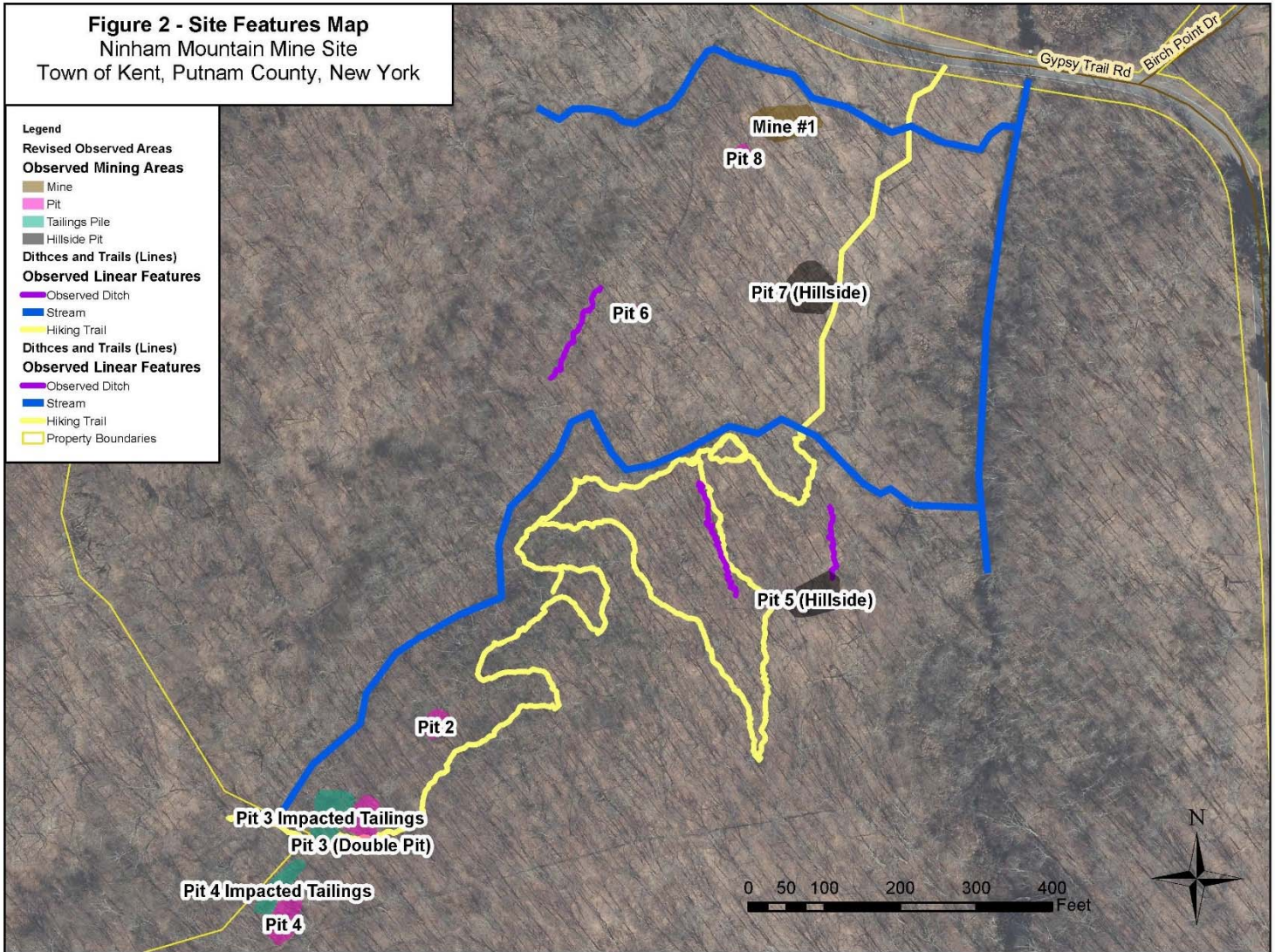
Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page:

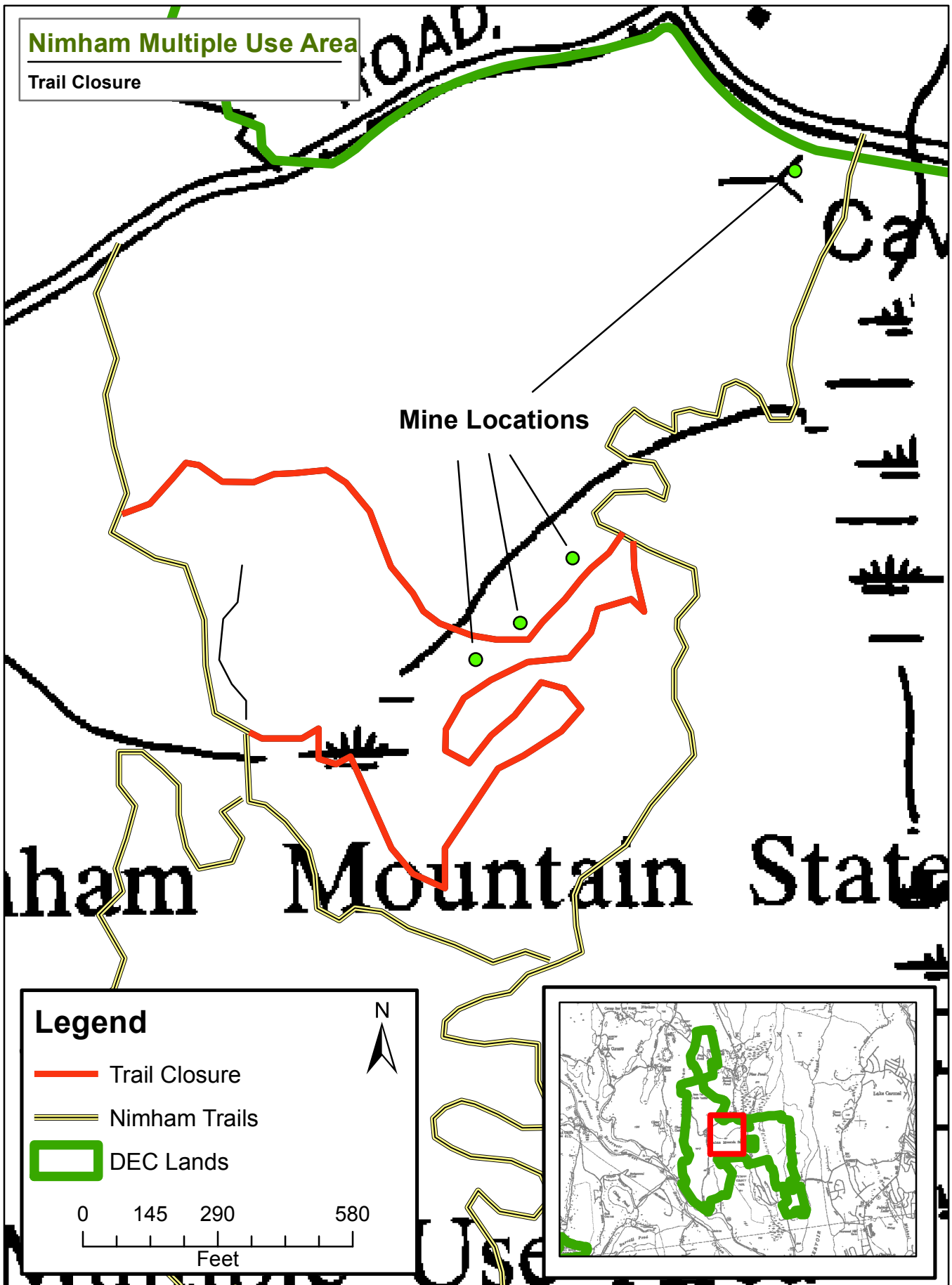
www.dec.ny.gov/chemical/61092.html

It's quick, it's free, and it will help keep you better informed. As a listserv member, you will periodically receive site-related information/ announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.

Figure 2: Site Features Map





GIS is not a substitute for onsite inspection or survey.



FACT SHEET

Nimham Arsenic Mine Site, Nimham Mountain Multiple Use Area

Town of Kent, Putnam County

April 2019

Where to Find Information:

Project documents are available at the following location(s) to help the public stay informed.

Kent Public Library

17 Sybil's Crossing
Kent Lakes, NY 10512
Call for hours: (845) 225-8585

NYSDEC, Region 3 Office

21 South Putt Corners Rd
New Paltz, NY 12561
Call in advance: (845) 256-3000

Who to Contact:

Comments and questions are always welcome and should be directed as follows:

Project Related Questions

Kiera Thompson
NYSDEC

Division of Environmental Remediation

625 Broadway, 11th Floor
Albany, NY 12233-7014
(518) 402-9662

kiera.thompson@dec.ny.gov

Public Health questions:

Stephen Lawrence
NYSDOH

Empire State Plaza
Corning Tower Room 1787
Albany, NY 12237
(518) 402-7860

beej@health.ny.gov

Multiple Use Area Questions:

Matthew Paul

NYSDEC-Division of Lands & Forests

21 South Putt Corners Rd
New Paltz, NY 12561
(845) 256-3156

**For additional information on Nimham Mtn
Multiple Use Area:**

www.dec.ny.gov/lands/34773.html

Actions to Address Exposure to Begin

The New York State Department of Environmental Conservation (NYSDEC) will take preliminary measures to reduce potential exposures within a portion of the state-owned Nimham Mountain Multiple Use Area (MUA). The site, locally known by several names such as Mount Nimham, is located on Gypsy Trail Road in the Town of Kent, Putnam County. Please see Figure 1 for the site location. Documents related to the investigation of arsenic impacts at this site can be found at the location(s) identified on the left-hand side of the next page under "Where to Find Information."

Action to Address Exposure

A preliminary action will be performed to reduce potential exposures to contamination for users of the MUA trails. Portions of trails exhibiting elevated levels of arsenic in surficial soils will be covered with clean material and maintained to eliminate potential exposures. Trail covering actions will include trail improvements such as widening and additional erosion control where necessary. The planned work is expected to begin this Spring.

Site Description

The work area site consists of specific trails in an approximately 50-acre portion of the Nimham Mountain Multiple Use Area which is located approximately 2.5 miles northwest of the Town of Carmel. The site is mountainous and forested and slopes down approximately 150 feet in elevation from west to east. A stream runs south through the eastern portion of the site from Pine Pond to the north and through a wetland which is fed by two additional tributaries from the west. Several historic mine features exist at the site, including but not limited to a shaft entrance to the main mine (Mine #1) and many additional features associated with historic mining operations located throughout the area that are not shown on Figure 2. Currently, the MUA is owned by New York State and is maintained as a Multiple Use Area for recreational use. It is accessible via two trail heads located at Gypsy Trail Road and along Nimham Mountain Court, respectively.

Site History

Historic arsenic mining occurred at the site in several phases, starting in the mid-1800s and concluding in the early 1900s. The mine area, also known as Silver Mine and Pine Pond Mine, contained a metal ore called arsenopyrite which was used in the pesticide, glass, and pigment industries.



Figure 1: Site Location

Site History continued

During mining operations, the ore was separated from the waste rock and soils known as tailings. Tailings were disposed in areas surrounding the mine pits/shafts, and contained arsenic which contaminated soils and sediments in areas of the site. Some of the soils at the site which are unaffected by mining operations naturally contain arsenic concentrations above NYSDEC's soil cleanup objectives (SCOs). The elevated background levels in soils can be attributed to the minerals in the underlying rock which naturally exists at the site.

Previous Investigation Activities at the Site

An *Initial Site Investigation Report* was completed in June 2017 by NYSDEC Division of Environmental Remediation, in consultation with the NYSDEC Division of Lands & Forests and the New York State Department of Health (NYSDOH). The report concluded that arsenic impacts in soils at the site, particularly those near mine pits and shafts, are well above the SCO of 16 parts per million. Limited areas of sediments located near the mine features are also impacted with arsenic. Surface water at the site does not contain arsenic above NYS guidelines. The report recommended additional investigation work to fill data gaps, to assess potential health exposures, and to establish an arsenic background concentration for soils at the site. Some of this additional investigation work has been completed and a report is being developed.

The United States Environmental Protection Agency (USEPA) is currently addressing affected nearby private parcels regarding the impacts from historic arsenic mining operations not on state land. USEPA, NYSDEC and NYSDOH are collaborating and sharing information in order to best understand impacts and to protect human health and the environment in the area.

Previous Actions at the site

In May and June of 2018, the following actions occurred:

- 1) Signs were posted at trailheads informing visitors that arsenic-contaminated soils exist in the area and precautions such as washing hands and clothes/footwear should be taken if contact with soil occurs. Site contact information was also provided on the signs.
- 2) Particular trails were closed and rerouted to keep visitors out of restricted areas containing high levels of contamination. Signs were posted to denote restricted areas which contain both contaminated soils and pits that may pose physical hazards.

Next Steps

An updated Unit Management Plan (UMP) is currently being developed for the Nimham Mountain Multiple Use Area. UMPs assess the natural and physical resources present within a land unit. They also identify opportunities for public use which are consistent with the classifications of these lands and consider the ability of the resources and ecosystems to accommodate such use. Draft UMP issuance is anticipated to occur in 2019. The public will have an opportunity to review and comment on the draft UMP, and a public meeting will be held prior to final UMP issuance.

A supplemental investigation report further characterizing arsenic contamination, particularly that in sediments and surface water, is anticipated to be finalized and released soon. The report will also contain information on site background levels of arsenic in soils, as well as a description of the actions being described here to reduce the potential for exposure to arsenic in soils.

Steps to Reduce Exposure to Arsenic in Soils:

Exposure to elevated levels of arsenic in soils at the site occurs through direct contact with contaminated soil.

- 1) Stay on designated trails and out of restricted areas.

- 2) Avoid tracking contaminated soils into car and home. Leave shoes outside the home or at the door.
- 3) Wash hands and face after visiting the site, especially prior to eating.
- 4) Wash clothes which come into contact with soils at the site.
- 5) If any pets visited the site, wash paws or any parts making contact with soils before entering the car or home.
- 6) Do not bring items such as bicycles or other gear used at the site into the car or home.

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Site Fact Sheets by Email

Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page:

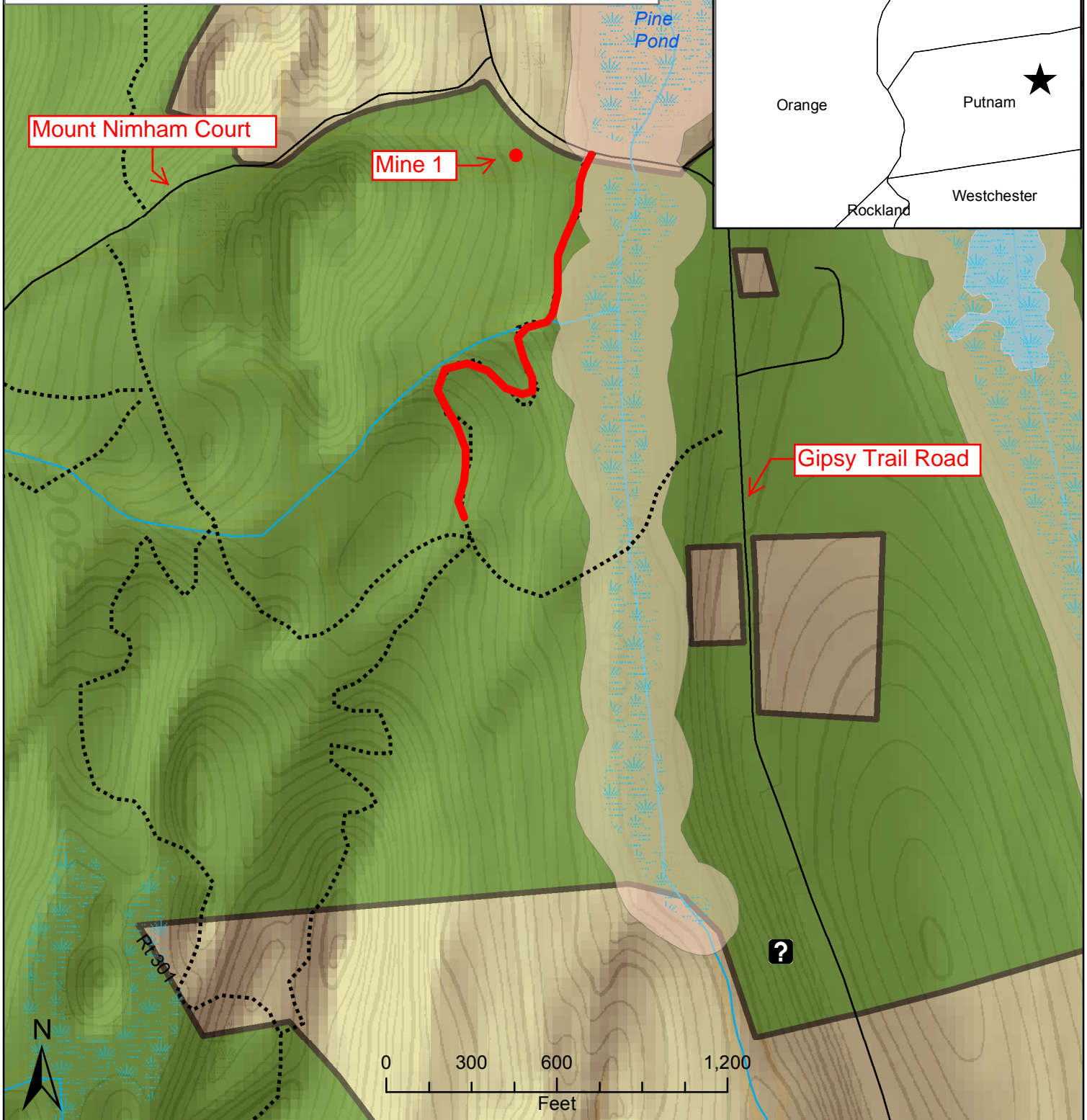
www.dec.ny.gov/chemical/61092.html






It's quick, it's free, and it will help keep you better informed. As a listserv member, you will periodically receive site-related information/ announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.

Nimham Multiple Use Area

Trail Capping Project Area



-  Nimham Multiple Use Area
-  Freshwater Wetland
-  Freshwater Wetland Buffer (100 Ft)
-  Project Area
-  Trail

* GIS is approximate and should not be considered a substitute for on-site inspection or survey. 3/29/19



**Department of
Environmental
Conservation**