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5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com

Via Email

May 28, 2019
File No. 04.0190892.00

City of Portsmouth
Attn: Peter Britz, Planning Department
1 Junkins Avenue, 3rd Floor
Portsmouth, New Hampshire 03801

Re: Request for Conservation Commission Work Session
City of Portsmouth Proposed Athletic Fields
680 Peverly Hill Road (Tax Map 254, Lot 8)
Portsmouth, New Hampshire

Dear Mr. Britz:

GZA GeoEnvironmental, Inc. (GZA) is submitting this letter to request a pre-application work session with the City of Portsmouth Conservation Commission on June 12, 2019. The project team (CMA Engineers, Inc., City of Portsmouth, and GZA) will provide an overview of the proposed Portsmouth Multipurpose Recreation Fields project including a description of the proposed wetland mitigation for the project.

The City of Portsmouth is proposing to construct three athletic fields and associated parking on previously developed portions of Tax Map 254, Lot 8. In addition, the City is in the process of designing a new transfer station and related upgrades. The Site is an old quarry and was extensively re-graded as part of gravel pit reclamation in the 90's.

Before prioritizing this Site, the City completed an extensive recreational needs assessment (see Comprehensive Recreation Needs Study dated 5/17/10 prepared by The Architectural Team, Inc., Ballard*King & Associates Ltd., Barker Rinker Seacat Architecture, and Copley Wolff Design Group). This assessment determined there is a "great need for additional field stock, preferably at a single multi-field complex, and that the limited availability of large sized parcels of land flat and dry enough for redevelopment into recreation fields was going to be the significant challenge to expanding the City of Portsmouth's field supply." The assessment further identified five primary sites that have potential to support required fields (see attached Off-Site Alternatives Analysis). Of these five sites, two were opposed by abutters and the other sites have site constraints including remoteness and/or limiting topography. In addition, some of the sites are not municipally-owned (see "pros" and "cons" on the Off-site Alternatives Analysis). The proposed site is the preferred alternative, is owned by the City of Portsmouth, addresses the City's recreational needs, and avoids and minimizes impacts to wetlands.

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The team completed a field walk with the New Hampshire Department of Environmental Services (NHDES) on March 29, 2019 and a pre-application meeting with the NHDES, U.S. Army Corps of Engineers, United States Environmental Protection Agency, and New Hampshire Natural Heritage Bureau on April 30th, 2019. Since the original concept was developed, the proposed wetland impacts have been reduced from approximately 83,929 square feet to 56,150 square feet. In addition, impacts have been minimized and avoided in Wetland 1, the highest value wetland system on Site (see Existing Conditions Overview). Impacts are proposed to previous man-made sedimentation ponds, ditches and treatment swales.

The project is proposing wetland mitigation for unavoidable impacts to man-made wetlands, including land preservation (see Lois Street Mitigation Site) and an in-lieu fee. The Lois Street area totals approximately 2.84 acres, and contains approximately 0.69 acres of wetland. This parcel serves to protect the upper watershed of Sagamore Creek. The Team would like to meet with the Conservation Commission to discuss the proposed mitigation approach and solicit feedback.

Attached are materials the project team intends to present to the Commission.

Please contact us the undersigned if you have any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Tracy L. Tarr, CWS, CWB, CESSWI
Senior Project Manager

James Long, CWS, CSS
Consultant / Reviewer

Deborah M. Zarta Gier, CNRP
Principal

TLT/DMZ/JL
p:\04jobs\0190800s\04.0190892.00\work\des pre-application materials for 053019\portsmouth con com pre app\04.01908923.00 concom work session request.docx

Attachments:
Figure 1 – Site Locus
Figure 2 – Wildlife Action Plan Overlay
Figure 3 – Existing Conditions Overview Map
Figure 4 – Proposed Conditions Map
Figure 5 – Lois Mitigation Site Plan
Appendix A – NHB Report and Correspondence
Appendix B – Site Photo Log
Appendix C – Lois Mitigation Site Photo log

Figure 1 – Site Locus

© 2019 - GZA GeoEnvironmental, Inc. P:\04.Jobs\0190800s\04.0190892.00\Figures\MXD\FIGURE 1 - SITE LOCUS.mxd, 5/14/2019, 3:16:13 PM, lindsey.white

SITE

APPROXIMATE SITE BOUNDARY

N

0 1,200 2,400 4,800 Feet

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PROPOSED PORTSMOUTH ATHLETIC FIELDS
PORTSMOUTH
NEW HAMPSHIRE

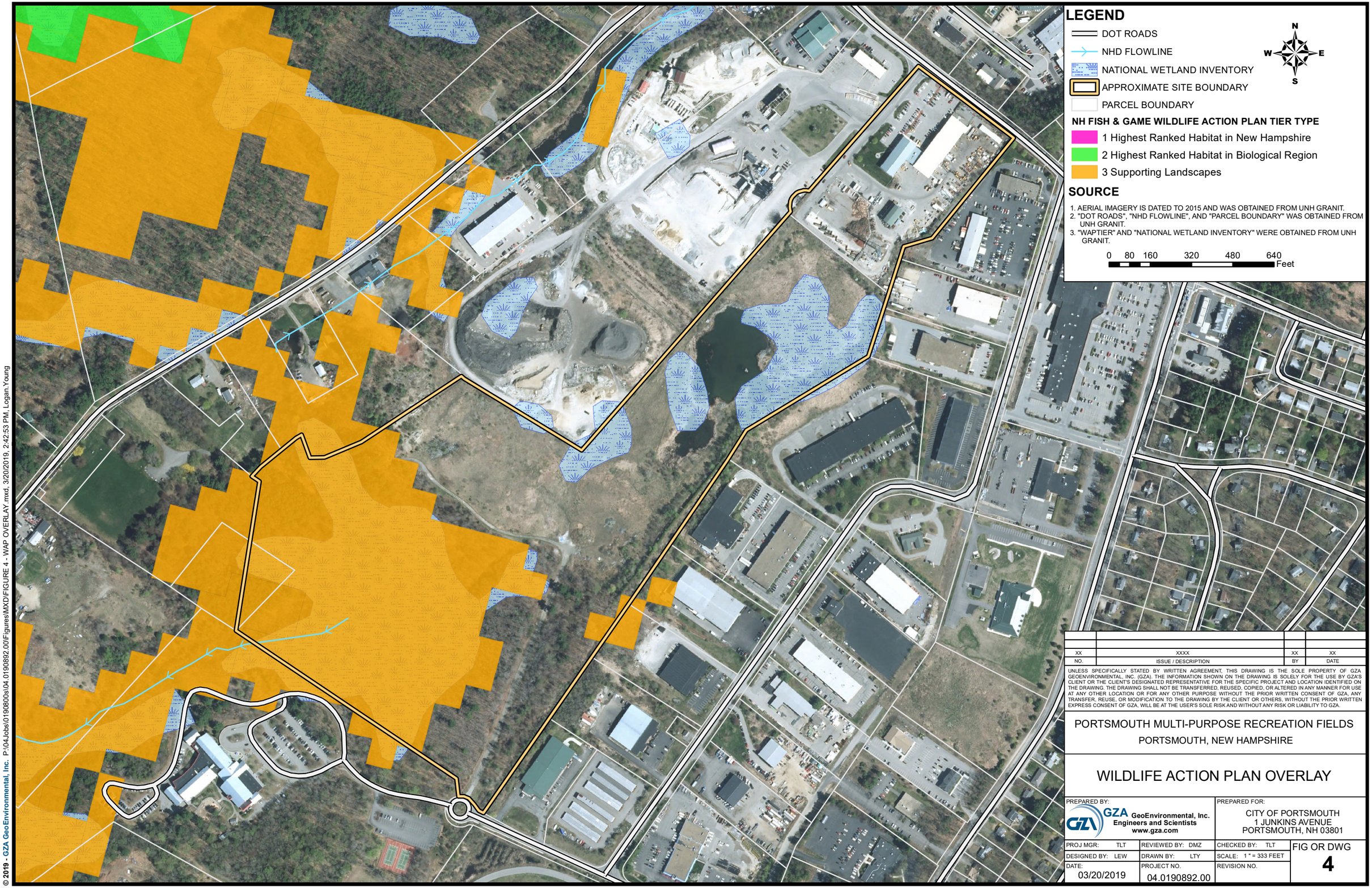
LOCUS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
CITY OF PORTSMOUTH
1 JUNKINS AVENUE
PORTSMOUTH, NH 03801

PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG 1
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 2,000 FEET	
DATE: 05/14/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Figure 2 – Wildlife Action Plan Overlay



XX	XXXX	XX	XX
NO.	ISSUE / DESCRIPTION	BY	DATE

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PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

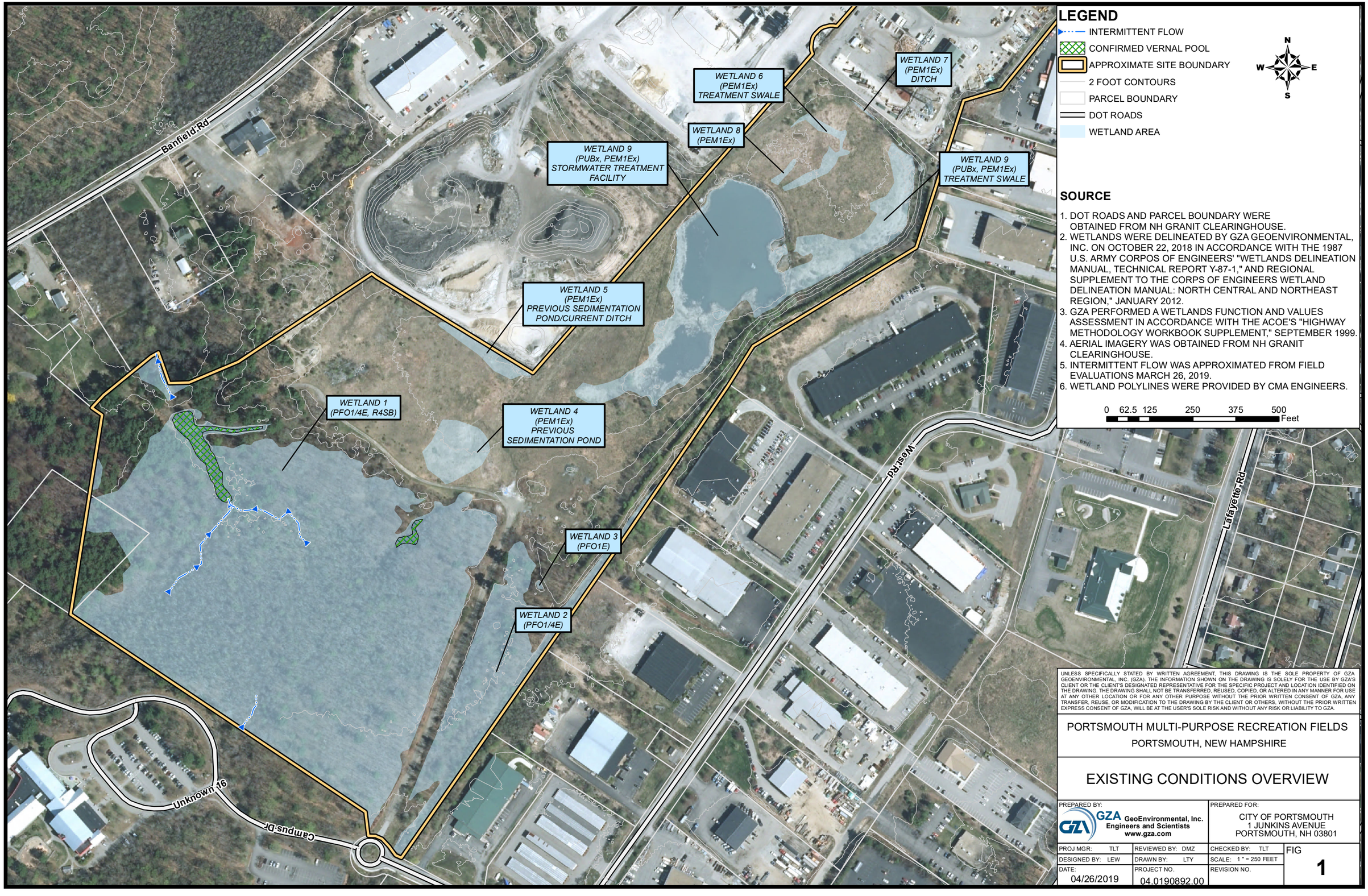
PORTSMOUTH, NEW HAMPSHIRE

WILDLIFE ACTION PLAN OVERLAY

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG OR DWG 4
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 333 FEET	
DATE: 03/20/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

© 2019 - GZA GeoEnvironmental, Inc. P:\04.Jobs\0190800s\04.0190892.00\Figures\MXD\FIGURE 4 - WAP OVERLAY.mxd, 3/20/2019, 2:42:53 PM, Logan.Young

Figure 3 – Existing Conditions Overview Map



LEGEND

- INTERMITTENT FLOW
- CONFIRMED VERNAL POOL
- APPROXIMATE SITE BOUNDARY
- 2 FOOT CONTOURS
- PARCEL BOUNDARY
- DOT ROADS
- WETLAND AREA

N W E S

SOURCE

1. DOT ROADS AND PARCEL BOUNDARY WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
2. WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. ON OCTOBER 22, 2018 IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPOS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012.
3. GZA PERFORMED A WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
4. AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE.
5. INTERMITTENT FLOW WAS APPROXIMATED FROM FIELD EVALUATIONS MARCH 26, 2019.
6. WETLAND POLYLINES WERE PROVIDED BY CMA ENGINEERS.

0 62.5 125 250 375 500 Feet

© 2019 - GZA GeoEnvironmental, Inc. P:\04Jobs\0190800s\04.0190892.00\Figures\MXD\Aerial and Wetland Plans ANNOTATED.mxd, 4/26/2019, 3:54:08 PM, lindsey.white

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PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

PORTSMOUTH, NEW HAMPSHIRE

EXISTING CONDITIONS OVERVIEW

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG 1
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 250 FEET	
DATE: 04/26/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Figure 4 – Proposed Conditions Map

Seacoast Community School

Pike Industries

Portsmouth Public Works

100' WETLAND BUFFER

WETLAND EDGE

PROPOSED ATHLETIC FIELDS

10,489 SF

24,699 SF

5988 SF

PROPOSED WIDENED GRAVEL DPW ACCESS DRIVE

PRETREATMENT BMP

STORMWATER BMP

PROPOSED PARKING

PROPOSED WIDENED GRAVEL ACCESS DRIVE & PARKING

100' WETLAND BUFFER

9610 SF

1620 SF

PROPOSED TRANSFER STATION

497 SF

DPW OPERATIONS AND SNOW STORAGE AREA

PRETREATMENT BMP

3247 SF

STORMWATER BMP

CAMPUS DRIVE

CAMPUS

Wetland Impact Areas:

Total Area:	56,150 SF

Portsmouth Multi-purpose Recreation Fields

Reduced Wetlands Impact Layout

(Post Wetland Delineation)

May 2019

0 100 200

Proposed Stormwater BMP

Wetlands

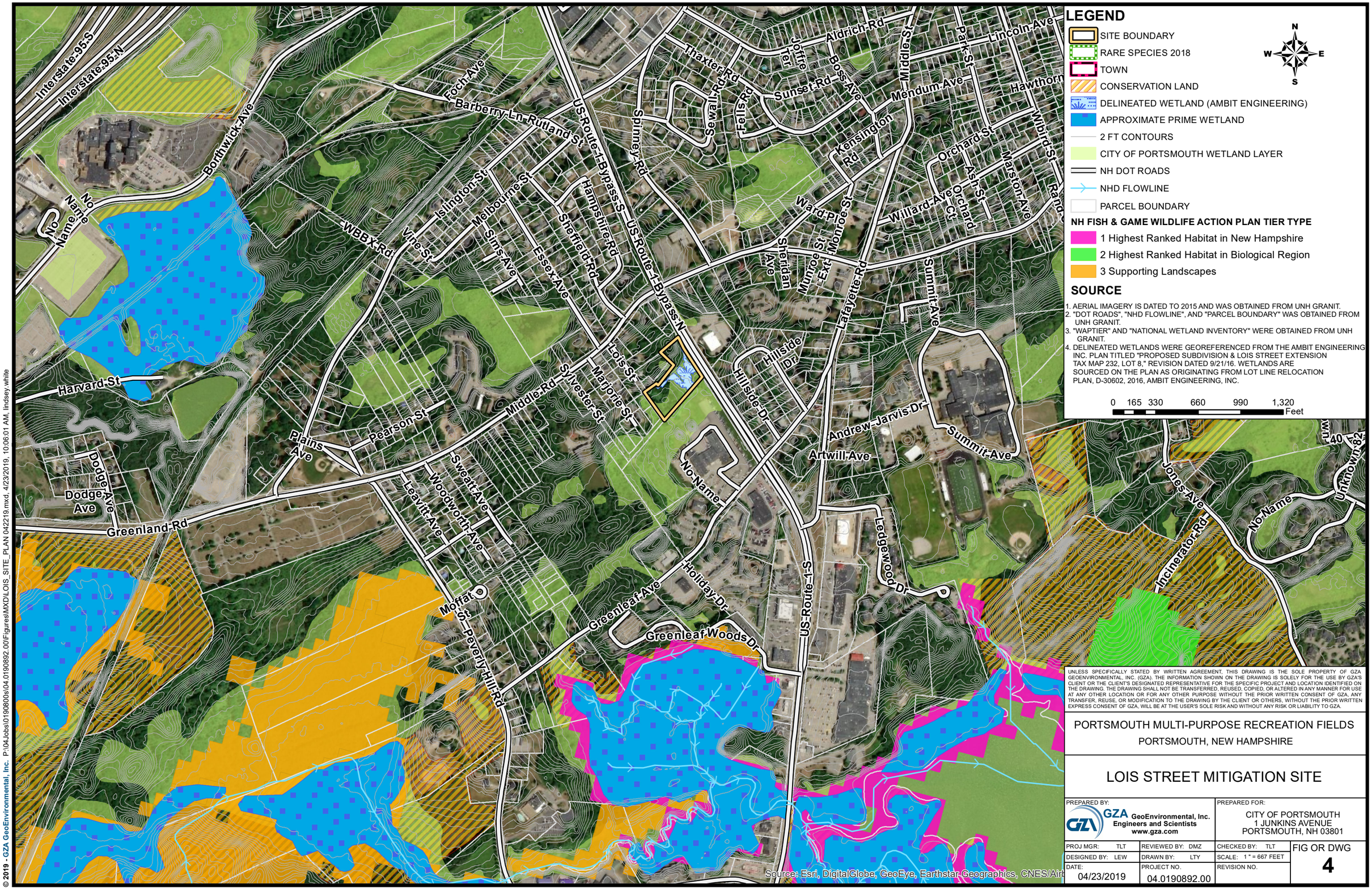
100' Wetlands Buffer

Impact Area

CMA ENGINEERS

Weston & Sampson

Figure 5 – Lois Mitigation Site Plan



LEGEND

- SITE BOUNDARY
- RARE SPECIES 2018
- TOWN
- CONSERVATION LAND
- DELINEATED WETLAND (AMBIT ENGINEERING)
- APPROXIMATE PRIME WETLAND
- 2 FT CONTOURS
- CITY OF PORTSMOUTH WETLAND LAYER
- NH DOT ROADS
- NHD FLOWLINE
- PARCEL BOUNDARY

NH FISH & GAME WILDLIFE ACTION PLAN TIER TYPE

- 1 Highest Ranked Habitat in New Hampshire
- 2 Highest Ranked Habitat in Biological Region
- 3 Supporting Landscapes

N W E S

SOURCE

1. AERIAL IMAGERY IS DATED TO 2015 AND WAS OBTAINED FROM UNH GRANIT.
2. "DOT ROADS", "NHD FLOWLINE", AND "PARCEL BOUNDARY" WAS OBTAINED FROM UNH GRANIT.
3. "WAPTIER" AND "NATIONAL WETLAND INVENTORY" WERE OBTAINED FROM UNH GRANIT.
4. DELINEATED WETLANDS WERE GEOREFERENCED FROM THE AMBIT ENGINEERING INC. PLAN TITLED "PROPOSED SUBDIVISION & LOIS STREET EXTENSION TAX MAP 232, LOT 8," REVISION DATED 9/21/16. WETLANDS ARE SOURCED ON THE PLAN AS ORIGINATING FROM LOT LINE RELOCATION PLAN, D-30602, 2016, AMBIT ENGINEERING, INC.

0 165 330 660 990 1,320 Feet

© 2019 - GZA GeoEnvironmental, Inc. P:\04Jobs\0190800s\04.0190892.00\Figures\MXD\LOIS_SITE_PLAN 042219.mxd, 4/23/2019, 10:06:01 AM, lindsey.white

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PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

PORTSMOUTH, NEW HAMPSHIRE

LOIS STREET MITIGATION SITE

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG OR DWG 4
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 667 FEET	
DATE: 04/23/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Appendix A – NHB Report and Correspondence

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: Amy Lamb, NH Natural Heritage Bureau
Date: 4/17/2019 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB19-1128 Town: Portsmouth Location: Tax Maps: 254, Lot 8
Description: The City of Portsmouth is seeking to permit the construction of three athletic fields and associated infrastructure on the approximately 60-acre property. In addition, the City is proposing upgrades associated with the on-site Public Works facility and storm water system.

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: There is a stream mapped on the subject property which may drain into an exemplary drainage marsh – shrub swamp system (refer to map below). Please provide NHB with more information about this stream, as well as information about how stormwater will be handled onsite, whether the fields will be artificial or vegetative turf, and any proposed management regimes that will reduce impacts to adjacent wetlands.

Natural Community	State[1]	Federal	Notes
Drainage marsh - shrub swamp system	--	--	Threats to this community include changes to the wetland's hydrology either through damming or increasing drainage. Significant increases in nutrients and pollutants from stormwater runoff could also have a deleterious effect on the wetland.

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

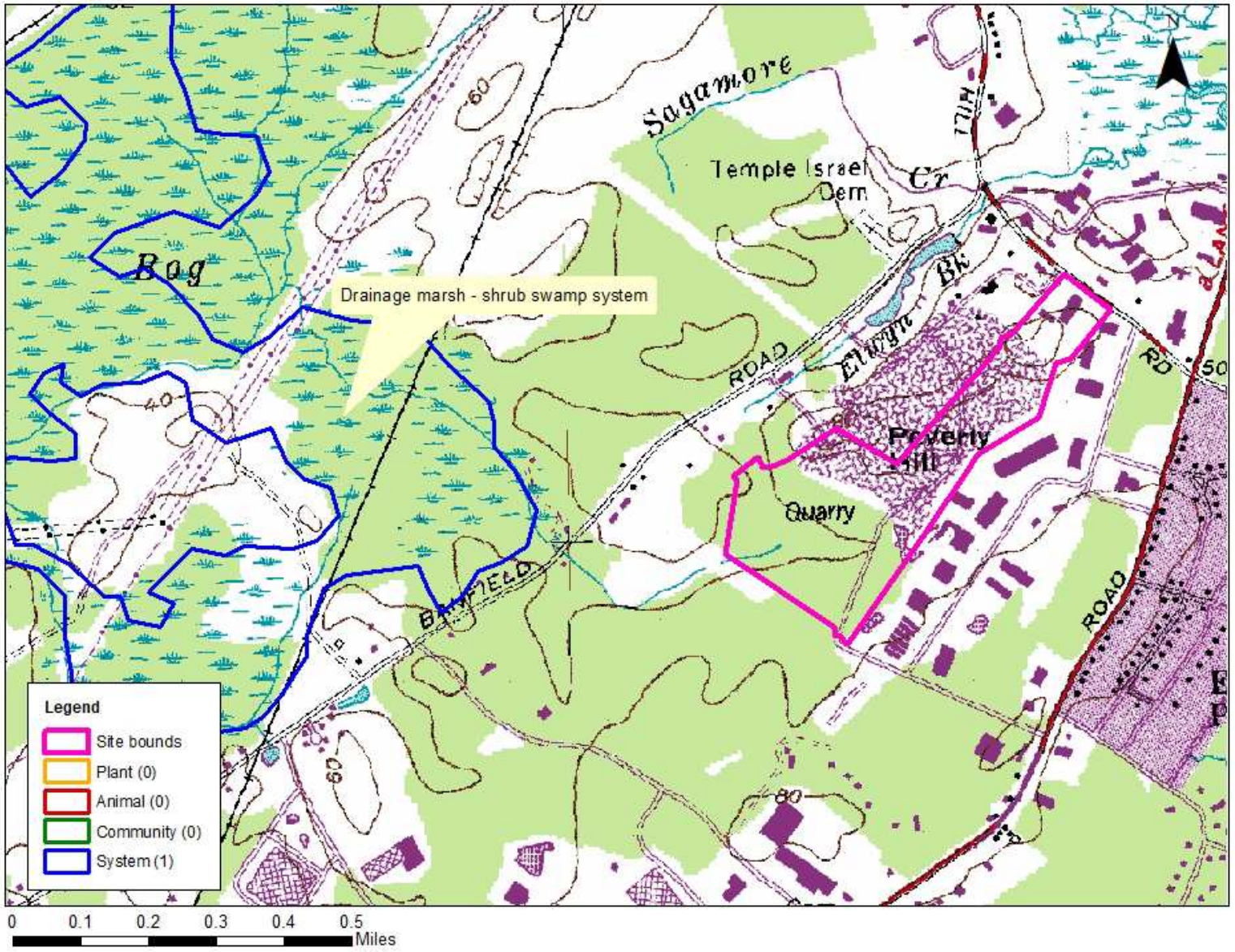
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB19-1128



New Hampshire Natural Heritage Bureau - System Record

Drainage marsh - shrub swamp system

Legal Status	Conservation Status
Federal: Not listed	Global: Not ranked (need more information)
State: Not listed	State: Demonstrably widespread, abundant, and secure

Description at this Location

Conservation Rank: Good quality, condition and landscape context ('B' on a scale of A-D).

Comments on Rank: Despite the compromised condition and context ranks, this is an exemplary system because it is a very large, diverse emergent marsh system with coastal plain affinities.

Detailed Description: 2009: Emergent marsh, seepage marsh, meadow marsh, and shrub thicket communities cover most of Great Bog, a broad, coastal plain basin with very poorly drained marine sediment soil and moderate to deep mucky peat soils (over marine sediments). Sedges and/or cattails dominate the marsh communities, which occupy most of the treeless or sparsely wooded areas of the larger wetland. Shrub thickets are also common but occupy a minority of the system. These various communities cover large areas individually, but also occur together in more complex, fine-scaled mosaics in places. Herbaceous seepage marsh and cattail marsh are apparently the most extensive communities. Herbaceous seepage marshes, described from earlier visits and dominated by *Carex lacustris* (lake sedge), occupy large areas in the western part of Great Bog on Maybid silt loam soil, and possibly occur elsewhere. *Typha latifolia* (common cattail) dominate the cattail marshes in most areas on deeper mucks, but some are dominated by *Typha angustifolia* (narrow-leaved cattail), including the south-central portion of the wetland (south of the upland island in the middle of the wetland). *Carex stricta* (tussock sedge) dominates areas of ***tall graminoid meadow marsh*** and ***mixed tall graminoid - scrub-shrub marsh***, along with various other sedges, grasses, forbs, and medium-height to tall shrubs. Shrub thickets include ***alder - dogwood - arrowwood alluvial thicket*** and ***highbush blueberry - winterberry shrub thicket***. *Ilex verticillata* (winterberry), *Vaccinium corymbosum* (highbush blueberry), *Clethra alnifolia* (sweet pepperbush), *Alnus incana* ssp. *rugosa* (speckled alder) are abundant. *Lyonia ligustrina* (male berry) and *Toxicodendron vernix* (poison sumac) are occasional. Small to large colonies of *Phragmites australis* (common reed) occupy portions of the wetland, including the eastern lobe adjacent to Banefield Rd., which was sprayed with herbicide in September 2009. The marsh and shrub communities extend to the upland margin around most of the periphery, but transition to various swamp communities along the northeast side and discontinuously elsewhere.

General Area: 2009: Great Bog is set in low-relief coastal terrain, surrounded by both dry and mesic Appalachian oak - hickory forests, as well as swamps along subtle drainages that feed into the wetland. A complex mosaic of parent materials in the surrounding landscape include shallow ablation till, outwash sediments, and silt and clay soils of marine origin. Upland forests and swamps occur on the largely undeveloped northeast side. Roads, parking lots, and other residential and industrial development are common close to the wetland in other border areas. Invasive exotic shrubs are common in the upland areas immediately adjacent to the wetland, including vast forest thickets of *Frangula alnus* (alder-buckthorn) on the upland island in the central part of the wetland, through which the powerline corridor runs. These are perhaps the most extensive, old, and impenetrable thickets of alder-buckthorn this surveyor has seen, covering dozens of acres. Eighty percent or more cover of alder-buckthorn was common, with very little or no other vegetation in the understory. Other portions of this upland island were more open old fields with remnant orchard trees. Numerous other invasives are present, including *Rosa multiflora* (multiflora rose), *Berberis thunbergii* (Japanese barberry), and *Celastrus orbiculatus* (Asian bittersweet).

General Comments:

Management Comments:

Location

CONFIDENTIAL – NH Dept. of Environmental Services review

Survey Site Name: Great Bog
Managed By: Portsmouth I, City of

County: Rockingham
Town(s): Portsmouth
Size: 349.3 acres Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2009: Accessed site from railroad tracks that cross Banefield Rd.

Dates documented

First reported: 2009-09-29 Last reported: 2009-09-29

CONFIDENTIAL – NH Dept. of Environmental Services review

Tracy Tarr

From: Lamb, Amy <Amy.Lamb@dncr.nh.gov>
Sent: Monday, April 22, 2019 3:08 PM
To: Tracy Tarr
Subject: RE: NHB19-1128 shapefile

Hello Tracy,

Thank you for sending this information. Since there will be no drainage directed toward the exemplary **drainage marsh – shrub swamp system**, and no direct impacts to the headwater wetland on the west side of the site, which may feed the **drainage marsh –shrub swamp system**, I do not have concerns about the project impacting this resource.

A general environmental consideration I am curious about is the choice of synthetic field versus natural turf. I am aware that there is a body of literature exploring off-gas and leachate concerns with the ground tire material used in the artificial turf product, but I have not spent enough time reviewing the research to feel informed on the subject. I was wondering if there was any analysis of the two alternatives for this site that examined runoff potential of natural turf versus leachate/off-gas concerns with the artificial product. Do the settling ponds have any special measures in place to remove contaminants? Since this area eventually drains toward Sagamore Creek, I was wondering if these considerations were part of the decision-making process.

Thanks very much,
Amy

Amy Lamb
Ecological Information Specialist
(603) 271-2834
amy.lamb@dncr.nh.gov

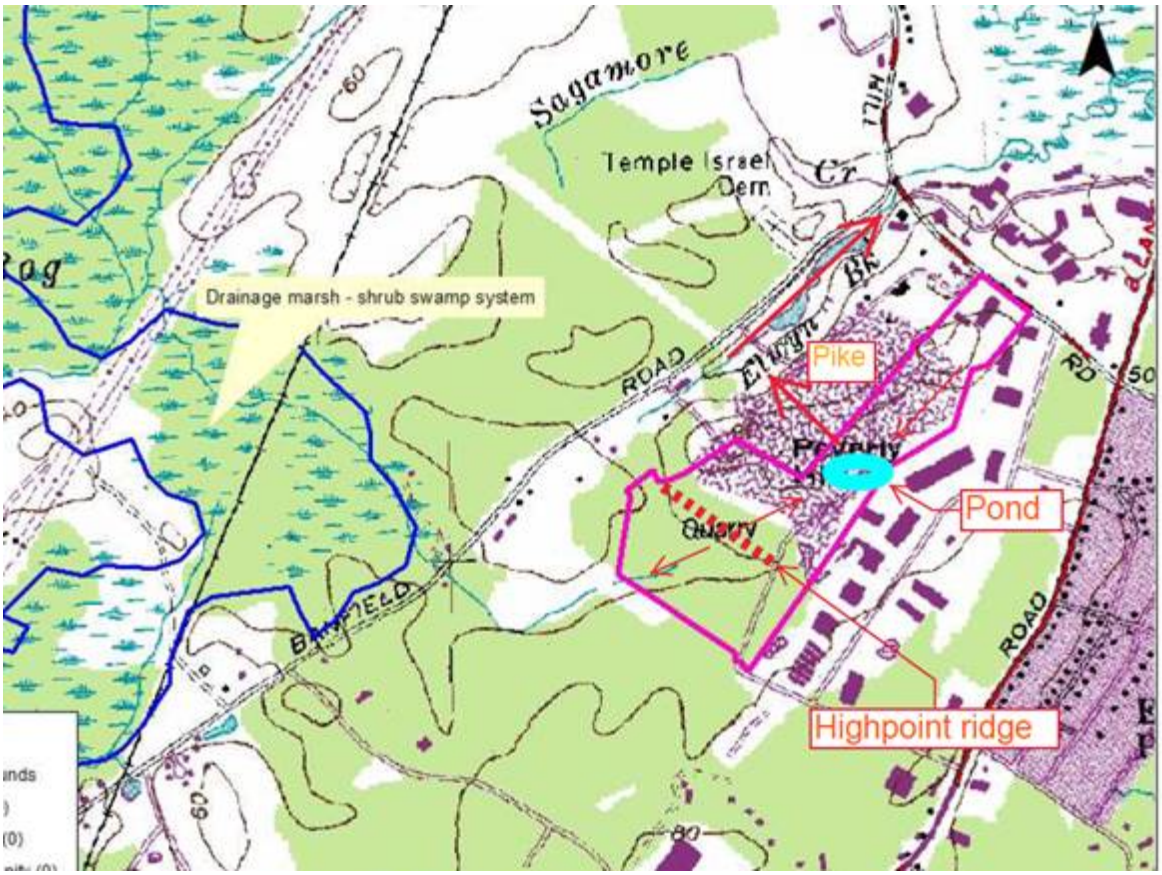
NH Natural Heritage Bureau
DNCR - Forests & Lands
172 Pembroke Rd
Concord, NH 03301

From: Tracy Tarr [mailto:Tracy.Tarr@gza.com]
Sent: Friday, April 19, 2019 8:46 AM
To: Lamb, Amy
Subject: RE: NHB19-1128 shapefile

Thanks Amy! I believe I have all good news.

1. The proposed fields are synthetic and will not require fertilization.
2. Under existing conditions, the areas of proposed development drain to the existing detention pond, then through Pike's property. The drainage patterns in the proposed conditions will be the same (see attached plan and USGS sketch below from CMA). The fields will have underdrains that discharge to the existing detention pond. The remaining developed areas will drain to BMP's, then to the detention pond, through Pike's property to the existing settling ponds, eventually draining toward Sagamore Creek after treatment.

3. Our wetland delineation team did not observe a stream channel where it is depicted on the USGS, so I reviewed the area myself a few weeks ago. The area lacks a channel but is certainly a headwater wetland. Fortunately, the proposed developed areas do not drain toward this wetland.



Of course, please feel free to let me know if you need anything else.

Thank you!

Tracy

Tracy L. Tarr, CWS, CWB, CESSWI
Senior Project Manager
GZA GeoEnvironmental, Inc.
5 Commerce Park North | Bedford, NH 03110

o: 603.232.8739 | c: 603.235.6992 | tracy.tarr@gza.com | www.gza.com | LinkedIn

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From: Lamb, Amy <Amy.Lamb@dncr.nh.gov>
Sent: Thursday, April 18, 2019 9:48 AM
To: Tracy Tarr <Tracy.Tarr@gza.com>
Subject: RE: NHB19-1128 shapefile

Thanks Tracy! I included some additional comments and information requests in the letter we sent out yesterday. It was sent automatically to Lindsey since she submitted the request, but I've attached it in case she hasn't forwarded it to you.

Amy Lamb
Ecological Information Specialist
(603) 271-2834
amy.lamb@dncr.nh.gov

NH Natural Heritage Bureau
DNCR - Forests & Lands
172 Pembroke Rd
Concord, NH 03301

From: Tracy Tarr [mailto:Tracy.Tarr@gza.com]
Sent: Wednesday, April 17, 2019 1:32 PM
To: Lamb, Amy; Tuttle, Kim
Subject: NHB19-1128 shapefile

Hi Amy,

Thanks for coordinating with Lindsey for the Portsmouth Athletic Fields project. I'll take over coordination from here, to get you what you need. As requested, attached is a current draft concept that we will be presented at the pre-application meeting (1119 Ports Athletic Field Concept Plan). At Stefanie Giallongo's recommendation, per our site walk, CMA has included anticipated impacts for a future proposed transfer station at the existing public works (see right, northeastern edge of the Site). Please note that the majority of the proposed wetland impact areas are located in old human-created sedimentation ponds and ditches as referenced in previously approved AoT plans. The site has an interesting history that we will discuss at the pre-application meeting. Many of the wetlands were created from an old quarry operation. Wetland 4 was actually approved to be filled as part of quarry reclamation in the 90s.

There are no proposed impacts to Wetlands 1 and 2, which are the highest value wetland on-Site, which is a nice attribute of the plan. Wetlands 1, 2 and 3 have potential to contain vernal pools. Although there are no proposed impacts to these wetlands, and the site is previously cleared (i.e. the uplands where the fields/transfer station are proposed do not contain overwintering habitat for vernal pool species), we will be completing a vernal pool assessment next week in advance of the meeting. (I only mention this in case there are any turtle hits in the areas.)

Thank you in advance for your feedback. We have photos of the site if they are helpful.

Tracy

Tracy L. Tarr, CWS, CWB, CESSWI
Senior Project Manager
GZA GeoEnvironmental, Inc.
5 Commerce Park North | Bedford, NH 03110

o: 603.232.8739 | c: 603.235.6992 | tracy.tarr@gza.com | www.gza.com | LinkedIn

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From: Lamb, Amy <Amy.Lamb@dncr.nh.gov>
Sent: Wednesday, April 17, 2019 11:46 AM

To: Lindsey White <Lindsey.White@gza.com>
Cc: Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>
Subject: RE: NHB19-1128 shapefile

Thanks Lindsey –

We are reviewing this project today. We'll need a site plan, preferable overlaid on an aerial photo background, further detailing proposed impacts.

Amy Lamb
Ecological Information Specialist
(603) 271-2834
amy.lamb@dncr.nh.gov

NH Natural Heritage Bureau
DNCR - Forests & Lands
172 Pembroke Rd
Concord, NH 03301

From: Lindsey White [mailto:Lindsey.White@gza.com]
Sent: Wednesday, April 10, 2019 2:33 PM
To: Lamb, Amy
Subject: FW: NHB19-1128 shapefile

Good Afternoon Amy,

Please see shapefiles attached for proposed impact areas associated with the City of Portsmouth proposed athletic fields, in Portsmouth, NH.

NHB19-1128

Thank you,
Lindsey

Lindsey E. White
Assistant Project Manager
GZA | 5 Commerce Park North | Bedford, NH 03110
o: 603.232.8753 | c: 603.770.5752 | lindsey.white@gza.com | www.gza.com | LinkedIn

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Appendix B – Site Photo Log

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 1: Overall view of the Site looking northeasterly from the Campus Drive access Road. The Site is an old quarry.

Photograph No. 2: The Site is actively used as part of the existing Portsmouth Public Works facility (visible in background of photo). The City is proposing to construct athletic fields, stormwater treatment, and upgrades to the existing Public Works facility on the Site.

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 3: Wetland 1 forms the headwaters to Pickering Brook and supports the highest functions and values on the Site. The initial design for the project was amended to avoid impacts to this wetland.

Photograph No. 4: View of barred owl observed on the edge of Wetland 1.

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 5: View of potential vernal pool in Wetland 1. GZA is completing a spring vernal pool assessment. No impacts are proposed to potential vernal pools.

Photograph No. 6: View northeasterly toward Wetland 2 and 3 from the existing gravel road from Campus Drive. No impacts are proposed in Wetlands 2 or 3.

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 7: View of Wetland 4. Wetland 4 is a previous sedimentation pond that was filled as part of gravel pit reclamation. Final reclamation is required in this area to construct the proposed athletic fields.

Photograph No. 8: View of Wetland 5. Wetland 5 is a previous sedimentation pond that was re-graded as a ditch as part of previous gravel pit reclamation. Additional grading is required to properly construct the athletic fields.

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 9: View of Wetland 6 and 8, which are man-made treatment swales. These areas are proposed to be filled for a proposed transfer station and other Public Works upgrades.

Photograph No. 10: View of Wetland 7, which is a man-made ditch. The ditch is proposed to be filled as part of site upgrades.

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields
Portsmouth, New Hampshire

Photos Taken: March 2019/October 2018

Photograph No. 11: View looking southerly at the treatment swale portion of Wetland 9. This area is proposed to be reconfigured as a regional stormwater best management practice.

Photograph No. 12: View of Wetland 9 looking northeasterly at the existing Stormwater Treatment pond, which is proposed to continue to be operated as a regional stormwater feature.

Appendix C – Lois Mitigation Site Photo Log

PHOTO LOG
Portsmouth Multi-Purpose Recreation Fields - Lois Street Mitigation Site
Portsmouth, New Hampshire

Photos Taken: April 2019

Photograph No. 1: View looking easterly from Lois Street.

Photograph No. 2: View towards Wetland 1 on the Lois Street parcel.