Section 7

Wildlife and Fisheries

7. Wildlife and Fisheries

Acorn Engineering, Inc. sent a project description and copy of the development plans to Maine Natural Areas Program (MNAP), US Fish & Wildlife Service and Maine Inland Fisheries and Wildlife (IF&W), on November 10, 2016. A response letter was received from Don Cameron (MNAP) on November 10, 2016 and John Maclaine (IF&W) on December 2, 2016. The letter from Acorn and both response letters are included as parts of this Section.

MNAP did not find any rare botanical features within the project area.

IF&W did not map any Essential or Significant Wildlife Habitats that would be directly affected by the proposed project.

US Fish & Wildlife Service did not map any species would be directly affected by the proposed project.

Additionally, an Ecological Habitat Assessment was conducted by Gino Giumarro (Verdanterra, LLC) on March 13, 2017. The report was received on March 15, 2017 and is included as part of this Section.

A C O R N
ENGINEERING, INC.

Ms. Lisa St. Hilaire, Information Manager
Maine Natural Areas Program
17 Elkins Lane
93 State House Station
Augusta, Maine 04333

November 10, 2016

Mr. John Perry, Environmental Review Coordinator
Inland Fisheries & Wildlife
284 State Street
41 State House Station
Augusta, Maine 04333

Subject: Camelot Farms Subdivision
1700 Westbrook Street, Portland, Maine

Dear Ms. St. Hilaire and Mr. Perry,

Acorn Engineering, Inc. has been retained by Camelot Holdings, LLC to provide civil engineering services for the proposed subdivision project at 1700 Westbrook Street in Portland, Maine. The project proposes to redevelop the existing, small farm with a single-story home and accessory shed and barn structures into a traditional single-family neighborhood within the Stroudwater neighborhood; house lots will range in size between 6,500 sf to 20,000 sf. The property directly abuts the Stroudwater River and consists mostly of cleared farming pastures. The portion of the site adjacent to Westbrook Street is anticipated to be regraded to support a road network and the subdivided lots. Thus, there will be limited tree removal, stumping, and grubbing on-site due to the existing use. The proposed roads are to be paved and built to City standard. The project will require a Zoning Map/Text Amendment and Level III – Site Plan Application.

Per City Ordinance, a portion of the property resides within the Shoreland Overlay Zone in which construction and redevelopment activities are limited within 250 feet of the high-water line; it is proposed that all development associated with subdivision will remain greater than 250 feet from the river. The space is to be used recreationally with a passive, neighborhood trail system and other shared amenities; there is no proposed earthworking and grading to occur within this zone.

The project area is comprised of five separate parcels (Chart, Book, Lot 229-A-2, 246-A-3, 247-A-3, 248-A-9, 256-A-3) with two existing utility easements for the Portland Water District and Portland Pipeline Company that bisect the property. The parcels have been previously subdivided so that there are four single-family sublots facing Westbrook Street.

Acorn Engineering appreciates your assistance with determining if there are any possible special or significant wildlife or fisheries habitats which might be impacted at the site. Please refer to the attached documents to facilitate your review.

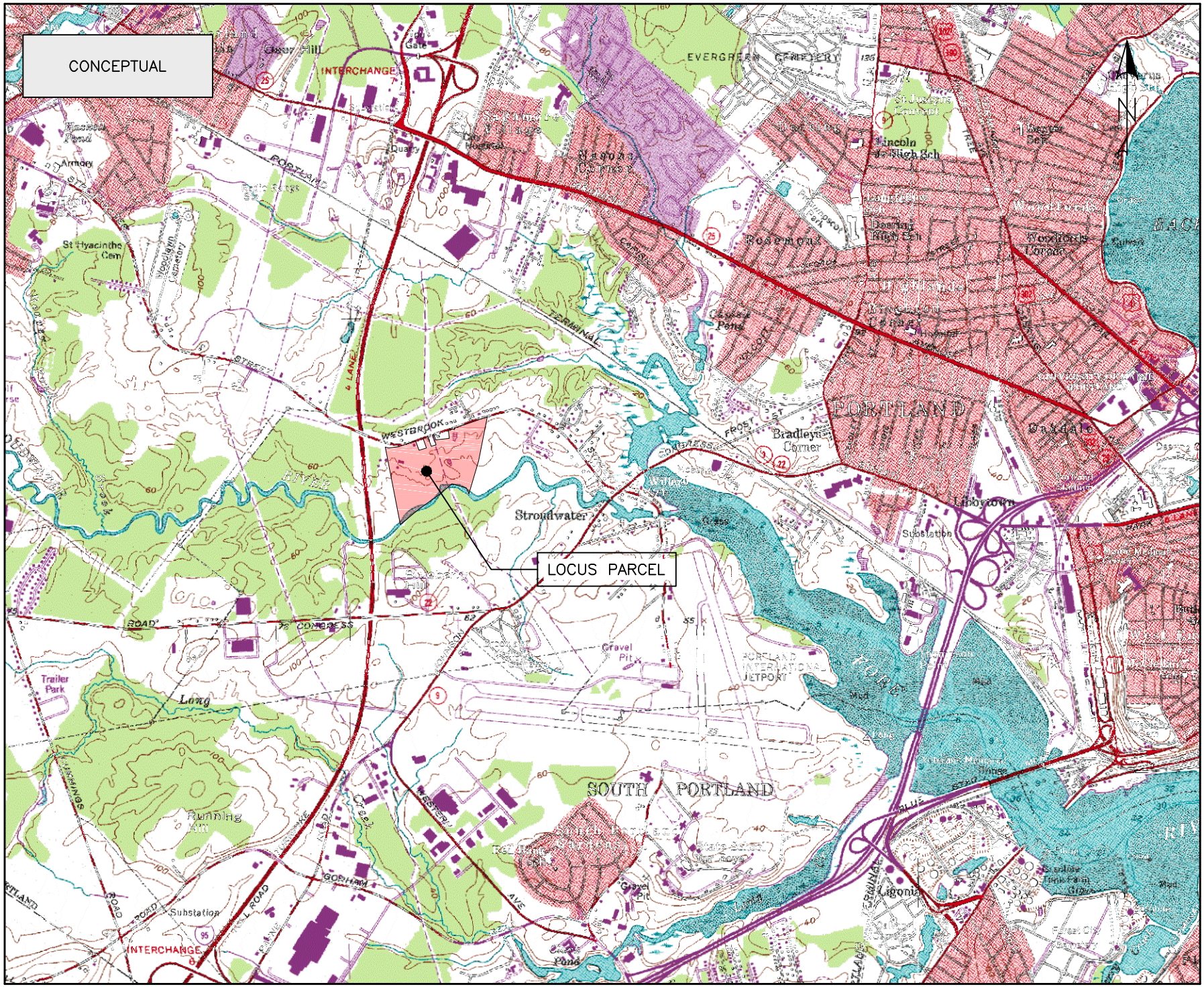
Any response and supporting documents may be mailed to the address below or as a PDF file to odawson@acorn-engineering.com.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102

Attached:

EX-1 Vicinity Map
EX-2 Concept Site Plan



ISSUED FOR	BY DATE
SITE REVIEW	WHS 10/28/16
	REV. DATE

DRAWING NAME: VICINITY MAP

PROJECT NAME: CAMELOT FARMS SUBDIVISION

CLIENT: CAMELOT HOLDINGS, LLC

ACORN ENGINEERING, INC
ACORN ENGINEERING, INC. P.O. BOX 3372
PORTLAND, MAINE 04104 (207) 775-2655

FILE:	CIVIL
JN:	1000
SCALE:	1":2500'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

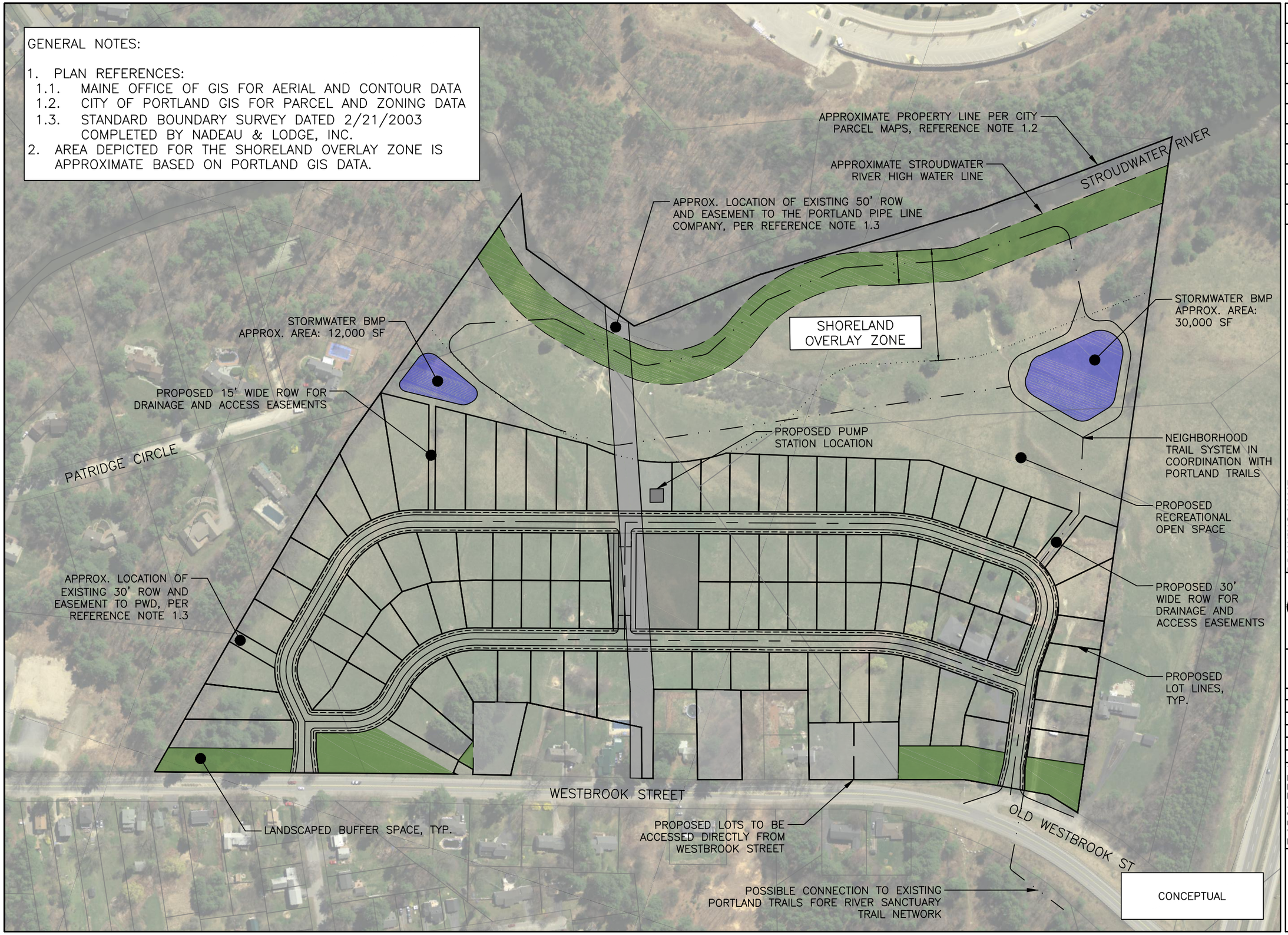
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

DRAWING NO.

EX-1

GENERAL NOTES:

1. PLAN REFERENCES:
   1.1. MAINE OFFICE OF GIS FOR AERIAL AND CONTOUR DATA
   1.2. CITY OF PORTLAND GIS FOR PARCEL AND ZONING DATA
   1.3. STANDARD BOUNDARY SURVEY DATED 2/21/2003 COMPLETED BY NADEAU & LODGE, INC.
2. AREA DEPICTED FOR THE SHORELAND OVERLAY ZONE IS APPROXIMATE BASED ON PORTLAND GIS DATA.



ISSUED FOR	BY / DATE
SITE REVIEW	WHS 10/28/16

REVISION	REV. DATE

DRAWING NAME: CONCEPT SITE PLAN

PROJECT NAME: CAMELOT FARMS SUBDIVISION

CLIENT: CAMELOT HOLDINGS, LLC
PORTLAND, MAINE 04101

ACORN ENGINEERING, INC
158 DANFORTH ST
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	CIVIL
JN:	1000
SCALE:	1"=200'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

DRAWING NO.
EX-2

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

November 10, 2016

Olivia Dawson
Acorn Engineering
PO Box 3372
Portland, ME 04104

Via email: odawson@acorn-engineering.com

Re: Rare and exemplary botanical features in proximity to: Camelot Farms Subdivision, Portland, Maine

Dear Ms. Dawson:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received November 10, 2016 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM

PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Don Cameron | Ecologist | Maine Natural Areas Program
207-287-8041 | don.s.cameron@maine.gov

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Allegheny Vine						
	E	S1	G4	1860-10	9	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
American Sea-blite						
	T	S2	G5	1932-09-12	5	Tidal wetland (non-forested, wetland)
	T	S2	G5	2011-08-15	17	Tidal wetland (non-forested, wetland)
Beach Plum						
	E	S1	G4	1933-05-19	10	Rocky coastal (non-forested, upland)
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Creeping Spike-moss						
	E	S2	G5	1924-08-20	3	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	E	S2	G5	1924-08-21	8	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Dioecious Sedge						
	SC	S3	G4	1936-07-14	7	Non-tidal rivershore (non-forested, seasonally wet),Open wetland, not coastal nor rivershore (non-forested, wetland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Engelmann's Spikerush						
	PE	SH	G4G5Q	1916-08-31	2	Open wetland, not coastal nor rivershore (non-forested, wetland)
Fern-leaved False Foxglove						
	SC	S3	G5	1902-09-02	13	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Great Blue Lobelia						

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	PE	SX	G5	1905-09	3	Forested wetland,Non-tidal rivershore (non-forested, seasonally wet)
Hollow Joe-pye Weed						
	SC	S2	G5?	2014-06-18	24	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	SC	S2	G5?	2007-10-22	18	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Horned Pondweed						
	SC	S2	G5	1913-09-13	9	Tidal wetland (non-forested, wetland)
	SC	S2	G5	1972-06-13	3	Tidal wetland (non-forested, wetland)
Marsh Milkwort						
	PE	SH	G5T4	1903-08-18	1	Dry barrens (partly forested, upland),Open wetland, not coastal nor rivershore (non-forested, wetland)
Missouri Rockcress						
	T	S1	G5?Q	1905-06-11	5	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Mountain Honeysuckle						
	E	S2	G5	2015-07-16	16	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S2	G5	2015-07-07	17	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Parker's Pipewort						
	SC	S3	G3	1924-08-20	8	Tidal wetland (non-forested, wetland)
Pitch Pine Bog						
	<null>	S2	G3G5	2012-07-31	16	Forested wetland,Coastal non-tidal wetland (non-forested, wetland)
Tidal Marsh Estuary Ecosystem						
	<null>	S3	GNR	2011-08-25	8	Tidal wetland (non-forested, wetland)
Variable Sedge						

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	E	S1	G3	1911	8	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S1	G3	1911-06-29	9	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)
Water-plantain Spearwort						
	PE	SH	G4	1862-08	3	Open water (non-forested, wetland)
Wild Leek						
	SC	S3	G5	2006-05-10	19	Hardwood to mixed forest (forest, upland),Forested wetland

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
S3 Rare in Maine (20-100 occurrences).
S4 Apparently secure in Maine.
S5 Demonstrably secure in Maine.
SU Under consideration for assigning rarity status; more information needed on threats or distribution.
SNR Not yet ranked.
SNA Rank not applicable.
S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
G3 Globally rare (20-100 occurrences).
G4 Apparently secure globally.
G5 Demonstrably secure globally.
GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

December 2, 2016

Olivia Dawson
Acorn Engineering, Inc.
158 Danforth Street
Portland, ME 04102

RE: Information Request - Camelot Farms subdivision, Portland

Dear Olivia:

Per your request received November 10, 2016, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Camelot Farms subdivision project* in Portland. For purposes of this review, we are assuming that the development will occur primarily within maintained fields and tree clearing will not be necessary. If tree clearing is ultimately proposed, please contact our Department for further guidance

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be directly affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats that would be directly affected by your project.

Fisheries Habitat

Without details, it is difficult to know what impacts your project may have on the Stroudwater River. That being said, MDIFW makes the following general recommendations as they pertain to work around rivers and streams.

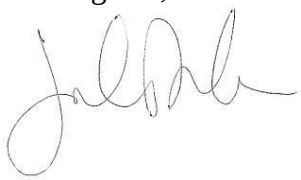
Maintaining buffers along coldwater fisheries is critical to the protection of water temperatures, water quality, and inputs of coarse woody debris necessary to support conditions required by brook trout. We generally recommend that a 100-foot undisturbed vegetated buffer be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work or work within 100 feet of streams occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and

Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,



John Maclaine
Biologist

A C O R N
ENGINEERING, INC.

Dr. Mark McCollough, Ph.D.
Species Recovery & Project Review, Eagle Act
U.S. Fish and Wildlife Service
306 Hatchery Way
East Orland, ME 04431

November 10th, 2016

Subject: Camelot Farms Subdivision
1700 Westbrook Street, Portland, Maine

Dear Dr. McCollough:

Acorn Engineering, Inc. has been retained by Camelot Holdings, LLC to provide civil engineering services for the proposed subdivision project at 1700 Westbrook Street in Portland, Maine. The project proposes to redevelop the existing, small farm with a single-story home and accessory shed and barn structures into a traditional single-family development within the Stroudwater neighborhood; house lots will range in size between 6,500 sf to 20,000 sf. The property directly abuts the Stroudwater River and consists mostly of farming pastures. The portion of the site adjacent to Westbrook Street is proposed to be regraded to support a road network, subdivided lots, and ancillary infrastructure. Thus, there will be limited tree removal, stumping, and grubbing on-site due to the existing use. The proposed roads are to be paved and built to City standard. The project will require a Zoning Map/Text Amendment and Level III – Site Plan Application.

Per City Ordinance, a portion of the property resides within the Shoreland Overlay Zone in which construction and redevelopment activities are limited within 250 feet of the high-water line; it is proposed that all development associated with subdivision will remain greater than 250 feet from the river. The space is to be used recreationally with a passive, neighborhood trail system and other shared amenities; there is no significant earthwork to occur within this zone.

The project area is comprised of five separate parcels (Chart, Book, Lot 229-A-2, 246-A-3, 247-A-3, 248-A-9, 256-A-3) with two existing utility easements for the Portland Water District and Portland Pipeline Company that bisect the property. The parcels have been previously subdivided so that there are four single-family sublots facing Westbrook Street.

Acorn Engineering appreciates your assistance with determining if there are any possible special or significant wildlife or fisheries habitats which might be impacted at the site. Please refer to the attached documents to facilitate your review.

Any response and supporting documents may be mailed to the address below or as a PDF file to odawson@acorn-engineering.com.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102

Attached:

EX-1 Vicinity Map
EX-2 Concept Site Plan

Olivia Dawson

From: Mahaney, Wende <wende_mahaney@fws.gov>
Sent: Monday, November 21, 2016 11:35 AM
To: Olivia Dawson
Cc: McCollough, Mark; William Savage
Subject: Re: Camelot Farms - FWS Preliminary Site Review

Follow Up Flag: Follow up
Flag Status: Completed

Hi Olivia: If this project will involve a Corps permit (or any other Federal agency action), please forward the IPaC species list and species summary table to those Federal agencies rather than our office, as outlined on our office's Web site. It is the Federal agency's responsibility to coordinate with our office when necessary regarding federally listed species. It works better and causes less confusion if the Federal agency gets the information from the consultant and then is in charge of consulting with the Service.

One note I did want to make regarding northern long-eared bats. The species summary table says there will not be "major" tree clearing. Not sure what you mean by that, but any cutting down of even one tree > 3 inches DBH could trigger the need for a Federal agency to consult with the Service under the Endangered Species Act. The Corps of Engineers and other Federal agencies in Maine are pretty well-versed in what triggers consultation for the bat. Just didn't want you to assume that because the project site is mostly fields and the project might only result in a few trees being cut down that there are no concerns regarding bats.

Thank you. Wende

Wende S. Mahaney, C.W.B.
U.S. Fish and Wildlife Service
Maine Fish and Wildlife Complex
P.O. Box A (mailing address)
306 Hatchery Road (physical address)
East Orland, Maine 04431
Telephone: (207) 902-1569 (direct line)
Fax: (207) 902-1588
Cellular Phone: 207-944-2991

On Thu, Nov 17, 2016 at 9:13 AM, Olivia Dawson <odawson@acorn-engineering.com> wrote:

Morning Mark,

Thanks for your feedback. I have completed the steps as outlined in Maine Field Office website and have generated the attached Species Summary Table. Based on the provided examples and the report generated by the IPaC system, I do not believe this project will require additional federal review but I wanted to touch base with you just to make sure.

The only federally listed species identified by the IPaC was the Northern Long-eared Bat but we are proposing to not disturb the existing mature wooded areas within the site and thus not impact potential roosting areas for the bats. The site is also not near any documented Bald Eagle nesting sites per the Bald Eagle Map Tool.

I have contacted John Perry at the Maine Dept. of Inland Fisheries & Wildlife for state input on this project and have already received feedback from Lisa St. Hilaire with the Maine Natural Areas Program. I will also reach out to the Army Corps as well considering the scale and proximity to the shoreline of the project.

Thanks again for your help and I hope to hear from you soon,

- Olivia

C: (585) 797-8780

From: McCollough, Mark [mailto:mark_mccollough@fws.gov]
Sent: Tuesday, November 15, 2016 6:00 PM
To: Olivia Dawson <odawson@acorn-engineering.com>; Wende Mahaney <wende_mahaney@fws.gov>
Subject: Re: Camelot Farms - FWS Preliminary Site Review

Dear Ms. Dawson:

Thank you for sharing your proposed development plans with the U. S. Fish and Wildlife Service. If your project requires Federal permits or uses Federal funds, our office may consult with Federal agencies such as the Army Corps of Engineers to ensure your project does not jeopardize the continued existence of Federally-listed species or critical habitat. You can determine what Federally-listed species may occur in your project area by going to the Species List and Project Reviews tab on our Maine Field Office website: https://www.fws.gov/mainefieldoffice/. Going through the steps outlined on our website, you can develop an official species list. It also may be possible that there are no Federally-listed species on the property.

You should also contact the Maine Department of Inland Fisheries and Wildlife. The old farm fields that you describe could be habitat for the New England cottontail rabbit, a state-listed species. MDIFW will provide further information on surveys that may be needed. New England cottontails have been documented in the vicinity of the Portland jetport.

Please let us know if you have further questions.

Sincerely, Mark McCollough

On Thu, Nov 10, 2016 at 12:33 PM, Olivia Dawson <odawson@acorn-engineering.com> wrote:

Good Afternoon Dr. McCollough,

On behalf of Camelot Farms, LLC, I am reaching out to you with a preliminary project plan and location to be reviewed for special or significant wildlife or fisheries habitats that could be impacted by the proposed development. Attached is a cover letter outlining the project as well as a vicinity map and preliminary site plan to aid in your review.

Please feel free to contact me or the office with any questions or clarifications on the proposed project and/or attached materials.

Thanks in advance for your help,

Olivia Dawson
Engineer

Licensed E.I. in Maine

Licensed E.I.T in New York

Acorn Engineering, Inc

PO Box 3372

Portland, Maine 04104

www.acorn-engineering.com

C: 585.797.8780

B. 207.775.2655

This electronic communication, which includes any files or attachments thereto, contains proprietary or confidential information and may be privileged and otherwise protected under copyright or other applicable intellectual property laws. All information contained in this electronic communication is solely for the use of the individual(s) or entity to which it was addressed. If you are not the intended recipient(s), you are hereby notified that distributing, copying, or in any way disclosing any of the information in this e-mail is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately, and destroy the communication and any files or attachments in their entirety, whether in electronic or hard copy format. Since data stored on electronic media can deteriorate, be translated or modified, Acorn Engineering, Inc., and/or affiliates will not be liable for the completeness, correctness or readability of the electronic data. The electronic data should be verified against the hard copy.

--

PLEASE NOTE THAT OUR OFFICE ADDRESS AND PHONE HAVE CHANGED

Mark McCollough, Ph.D.

Endangered Species Specialist

US Fish and Wildlife Service

Maine Fish and Wildlife Service Complex

Ecological Services

Maine Field Office

P.O. Box A (mailing address)

306 Hatchery Road (physical address)

East Orland, Maine 04431

Telephone: (207) 902-1570

Fax: (207) 902-1588

Cell Phone: 207 944-5709

mark_mccollough@fws.gov

Ecological Habitat Assessment Report

1700 Westbrook Street, Portland Maine

Camelot Holdings, LLC

5 Stone Pony Circle
Saco, ME 04072

Prepared by:

Verdanterra, LLC
47 Richards Lane
Freeport, Maine 04032
www.verdanterra.com

March 15, 2017

Contents

1. Introduction 1
1.1. Regulatory Context 1
1.2. New England Cottontail Habitat Requirements 2
2. Methods 3
3. Results 4
3.1. Rare or Unique Botanical Features Evaluation 5
3.2. Wildlife Habitat Evaluation 8
4. Conclusions and Recommendations 9

Figures

Figure 1. Camelot Farms - Project Location Map
Figure 2. Project Limits of Disturbance – Aerial Background
Figure 3. Project Limits of Disturbance – Topographic Background

Appendices

Appendix A. Verdanterra Resume
Appendix B. Site Visit Photodocumentation
Appendix C. Agency Correspondence

1. Introduction

On March 13, 2017, Verdanterra, LLC (Verdanterra) conducted an ecological assessment for the proposed Camelot Holdings, LLC (Camelot) residential development project at 1700 Westbrook Street, Portland, Maine (Project). On November 10, 2016, Maine Natural Areas Program (MNAP) provided a list of rare plants and natural communities that occur within the vicinity of the project area. MNAP has not documented rare plants or natural communities on the Project parcel. Wetland delineations were completed by Mark Hampton Associates, Inc. on November 21, 2016. Maine Department of Inland Fisheries and Wildlife (MDIFW) indicated that there are no Endangered, Threatened, or Special Concern species that occur on the property on December 2, 2016. This ecological assessment was prepared to evaluate Rare and Exemplary Botanical Features habitat and potential New England cottontail (*Sylvilagus transitionalis*) habitat in the Project Area.

This report describes the objectives, methodology, and results of the ecological assessment. The survey and subsequent report were completed by Gino Giumarro, a Wildlife Biologist Certified by the Wildlife Society. Gino has a Bachelor of Science degree in Wildlife Biology from the University of Massachusetts at Amherst and a Master of Science degree in Natural Resources Planning from the University of Vermont. Mr. Giumarro has been conducting wildlife habitat assessments professionally since 1996. A resume is included in Appendix A.

1.1. Regulatory Context

Endangered and threatened inland fish and wildlife species in Maine are listed either under Maine's Endangered Species Act (MESA; Title 12 M.R.S.A. Sections 7751 to 7759), the U.S. Endangered Species Act (ESA; Title 16 U.S. Code Sections 1531 to 1544), or both. Species listed under MESA receive state protection; species listed under ESA receive federal protection; and species listed under both receive state and federal protection. The presence of endangered or threatened species can have implications on defining other resources status protected under different legislation (e.g. Significant Wildlife Habitat or Wetlands of Special Significance).

The MDIFW holds management responsibility for inland fish and wildlife listed under MESA, and shares responsibility with the U.S. Fish and Wildlife Service (USFWS) for inland fish and wildlife listed under ESA. MDIFW indicated in their December 2, 2016 correspondence (Appendix C) that there are no known locations of Endangered, Threatened, or Special Concern species within the Project area that would be directly affected by your project. Additionally, MDIFW has not mapped any Essential or Significant Wildlife Habitats that would be affected directly by the Project. MDIFW further suggested maintaining buffers along sensitive fisheries. As planned (shown on the Site Plan Drawing Number C-10 – Acorn Engineering – 2/14/2017; Attachment C), the project maintains more than the suggested 100-foot vegetative buffer along the Stoudwater River.

On March 20, 2017, Verdanterra conducted an unofficial Information for Planning and Conservation (IPaC; part of the Environmental Conservation Online System[1]) analysis for the Project to obtain a draft list of potentially occurring federally protected threatened or endangered species and critical habitats managed by the USFWS. The USFWS also implements the regulations of the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. A formal request can be made to the USFWS should further endangered species coordination be required. For instance, Section 7 of the ESA requires Federal agencies (such as the U.S. Army Corps of Engineers for wetland permitting) request from the USFWS information on whether any species which is listed or proposed to be listed may be present

[1] The Environmental Conservation Online System (ECOS) is a gateway web site that provides access to data systems in the U.S. Fish and Wildlife Service (Service) and other government data sources. This central point of access assists Service personnel in managing data and information, and it provides public access to information from numerous Service databases. Available https://ecos.fws.gov/ipac/. Accessed March 20, 2017.

in the area of such proposed action (e.g. filing an application for a Section 404 of the Clean Water Act wetland fill permit).

The report indicated that northern long-eared bat (*Myotis septentrionalis*; threatened) has the potential to occur in the Project Area. There are no critical habitats for protected species in the Project Area, however there are a number of migratory birds of conservation concern protected under the Migratory Bird Treaty Act with the potential to occur in the Project Area. USFWS stresses the importance to avoid and minimize impacts to birds of conservation concern.

A wetland or waterbody permit is considered a federal action by the U.S. Army Corps of Engineers. As a threatened species, impacts to the northern long-eared bat would require a Section 7 Consultation between the U.S. Army Corps of Engineers and the USFWS. Under the Section 4(d) of the Endangered Species Act, the USFWS can issue regulations deemed "necessary and advisable to provide for the conservation of threatened species." It allows the USFWS to promulgate special rules for species listed as threatened (not endangered) that provide flexibility in implementing the Endangered Species Act. Federal actions that cause incidental take that is **not** prohibited under the 4(d) rule may still affect individual northern long-eared bats. Under Section 7 of the Endangered Species Act, a federal agency must consult with the Service if their action may affect a listed species, which includes effects to individuals. However, for the northern long-eared bat 4(d) rule, the USFWS has provided a framework to streamline Section 7 consultations when federal actions may affect the northern long-eared bat, but not cause prohibited take. The incidental take prohibition for known occupied maternity roosts trees applies only during the during the pup season (June 1 through July 31). Including the streamlined 4(d) rule compliance form with any necessary federal permitting is helpful to the permitting agency. This compliance includes the following determinations (among others).

- Does the Project occur within the White-Nosed Syndrome (WNS) zone?
- Is the USFWS aware of hibernacula or maternity roost trees within 0.25 miles of the Project?
- Would the Project cut trees within 150 feet of a known maternity roost tree?

Federal agencies may fulfill their project-specific Section 7 responsibilities by using the USFWS's framework. The notification would include a determination that the action would not cause prohibited incidental take. USFWS concurrence is not required, but the USFWS may advise the agency whether additional information indicates that project-level consultation is required. If the USFWS does not respond within 30 days, the action agency may consider its Section 7 responsibilities fulfilled with respect to the northern long-eared bat.

MNAP searched the Biological and Conservation Data System files and provided a response on November 10, 2016 for information on the presence of rare or unique botanical features documented from the vicinity of the Project. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. According to the information currently in MNAP's Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. There are, however, several of species of plants that are known to occur within 4 miles of the Project. Many of the plant species on this list are known to occur in very particular ecological communities.

1.2. New England Cottontail Habitat Requirements

The New England cottontail was listed as state endangered species in Maine in 2007. In 2010, Maine's New England cottontail population was estimated to be less than 200 rabbits. MDIFW determined the number of New England cottontail in Maine by conducting intensive winter surveys to locate occupied patches of habitat and estimating the number of rabbits per acre based on the size of the habitat patch.

The region-wide decline of New England cottontail has been attributed to habitat loss, and in particular, the loss of old field and shrubby habitat. New England cottontails need dense shrubby habitat to protect them from avian and terrestrial predators. Ideally, this dense cover should be interspersed with some grassy areas when the rabbits can find adequate food. Habitat blocks of at least 25 acres in size (ideally much larger) and close to additional patches of habitat are necessary for the species to survive[2].

New England cottontail depend more upon the structure of the vegetation (its form, height, and density) rather than specific species. In old fields, New England cottontail are commonly associated with juniper (*Juniperus spp.*), blackberry (*Rubus spp.*), spirea (*Spiraea spp*), dogwoods (*Cornus spp*), and a variety of young deciduous tree species (red maple [*Acer rubraum*], birch [*Betula spp.*], and aspen [*Populus spp.*])[2]. Old fields are also where New England cottontail are sometimes associated with exotics such as honeysuckle (*Lonicera spp.*), autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), and Japanese barberry (*Berberis thunbergii*)[2]. On wetter sites, alder (*Alnus spp.*), and willow (*Salix spp.*) are frequent dominants. Barbour and Litvaitis (1993) investigated selection of microhabitats in winter among New England cottontail preferred to use sites with >50,000 stem-cover units/ha (20,234 stem-cover units/acre)[3].

2. Methods

A Certified Wildlife Biologist[4] conducted a flora and fauna ecological assessment at the Project site. Prior to conducting the field survey, Verdanterra ecologists conducted a remote landscape analysis to better understand the ecological and regional context of the Project area. This landscape analysis approach to habitat evaluation considered a wide range of published literature, multi-year aerial photography, and wildlife biologist experience. Ecologists remotely characterized the ecological communities present on and adjacent to the Project area to guide a determination of landscape connectivity, with particular focus on identifying large habitat blocks or connecting corridors of habitat suitable for New England cottontail. The ecological community characterization was conducted in a GIS and considered landforms and land use as determined from aerial photographs, topography, wetlands and waterbodies, soil types, rare natural communities, and proximity of other habitats.

Verdanterra developed a list of habitats required for the rare and unique botanical features reported by MNAP to occur within 4 miles of the Project as well as for the New England cottontail. Remote sensing was used to preliminarily characterize the ecological habitat present in the Project Area. A field survey was conducted to verify these communities and to determine if the microhabitat requirements for individual plants occurs. This information was used to determine the likelihood of occurrence for these species at the Project. While many of the species could not be identified at this time of the year, it was feasible to identify potential habitat for these species. Should suitable habitat be identified for any of the species that were provided by MNAP, targeted species surveys would be recommended for the appropriate growing season phase (flowering or fruiting). Growing season surveys were not conducted. If identified in the field, the location of groups of rare plants identified will be recorded using a GPS (i.e. a GPS location of each individual plant will not be collected) with sub-meter accuracy and a MNAP rare species form will be completed.

Verdanterra ecologists conducted a field survey to support the remote landscape analysis. The on-site habitat assessment was based on a pre-determined list of habitat features developed for the site that are required for the

[2] Litvaitis, J.A., and W.J. Jakubas. 2004. New England Cottontail (Sylvilagus transitionalis) Assessment 2004. Unpublished report. 59pp.
[3] Barbour, M.S., and J.A. Litvaitis. 1993. Niche dimensions of New England cottontails in relation to habitat patch size. Oecologia 95:321-327.
[4] As certified by the Wildlife Society, Bethesda Maryland

species to occur. Ecologists also searched the area for signs of cottontail tracks, browse, or pellets. This list of habitat requirements is based on biologist knowledge, published papers and reports, and comparisons to reference habitats familiar to the ecologist. The quality of habitats was evaluated based on strength of species associations with particular natural communities, landscape position and connectivity, and other ecological metrics (e.g. canopy cover, ground cover, water depth, soils, plant species composition, distance from potential feeding and/or breeding locations, etc.). Natural community delineation and habitat assessment is not intended to determine presence/absence, but rather allow informed decisions to be made during the permitting process.

The wildlife biologist evaluated the overall habitat quality and position in the landscape to develop suggested conservation management strategies that could be implemented to avoid or minimize impacts to listed species. Photographs were taken to aid in the discussion of various habitat attributes or conditions that illustrate the findings of this assessment (Appendix B).

3. Results

A landscape analysis finds that the parcel is predominantly an active cattle pasture bordered to the west by Interstate 95, the south by the Stroudwater River, and mixed residential / forested land use to the north and east. The limits of disturbance of the Project are predominantly active cattle pasture with a south facing aspect that slopes down to the Stroudwater River. An east-west running electric transmission corridor occurs north of the site and an oil pipeline bisects the parcel north to south. Neither of these transmission corridors are significant wildlife pathways considering the barriers provided by Interstate 95, Stroudwater River, and the dense mixed residential / commercial development of Deering, Deer Hill, and Nasons Corners neighborhoods.

The field survey was conducted on March 13, 2017 and confirmed that land use was consistent with current aerial photography. The weather during the survey was sunny, 15° F and a light dusting of snow covered the ground early in the morning. There are several small groves of white pine (*Pinus strobus*) and various maple and oak trees that are part of the landscaping of the existing residential structure, however the majority of the area within the limits of disturbance is herbaceous in nature. There is a forested fence line on the western part of the parcel and several palustrine emergent wetland drainages. The wooded fence line is composed of several white pine, northern red oak (*Quercus rubra*), and black cherry (*Prunus serotina*). The pasture has been maintained through cattle grazing and occasional mowing. Cropped grasses observed include Kentucky bluegrass (*Poa pratensis*), timothy (*Phleum pratense*), and smooth bromegrass (*Bromus inermis*); intermixed with hawksweed (*Hieracium* spp.), Queen Anne's lace (*Daucus carota*), milkweed (*Asclepias syriaca*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and goldendrod (*Solidago spp*). Shrub sprouts in the meadow include raspberry, quaking aspen, and multiflora rose (*Rosa multiflora*). Wetland areas are comprised of cattail (*Typha spp.*), rushes, sedges, common reed (*Phragmites australis*), steeplebush (*Spirea tomentosa*), speckled alder (*Alnus incana*), and American pussy willow (*Salix discolor*). There was evidence of past earth disturbance on site including the pipeline right of way, access roads, and old structure foundations throughout much of the site.

A steep slope occurs at the southern limit of disturbance that has several white pine and black cherry interspersed with shrubs such as multiflora rose, red maple, and hawthorn (*Crataegus spp.*). The shrubs remain in small clusters with little to no vegetation underneath due to cattle grazing. Much of this sideslope will not be within the limits of disturbance.

3.1. Rare or Unique Botanical Features Evaluation

MNAP indicated that there are 22 rare or unique botanical features that occur within 4 miles of the Project. Most of the species on this list (Table 1) are only found in ecological communities not present in the Project Area (e.g. rocky summits, tidal wetlands, dry barrens, forested wetlands, etc.). Habitat requirements for two of these species generally includes open wetland communities. Creeping spike-moss (*Selaginella apoda*; state endangered) and hollow Joe-pye weed (*Eutrochium fistulosum*; state special concern) generally occur in open herbaceous wetlands, roadside ditches, and old fields.

State endangered species creeping spike-moss is at the northern extent of its range and has been historically identified (1924) within 4 miles of the Project and in 10 other southern Maine towns. This plant is unlikely to occur in the Project Area due to the disturbances associated with cattle grazing and occasional vegetation management. State special concern species hollow Joe-pye weed can tolerate occasional disturbances caused by mowing, but generally is not found in highly grazed pastures. The vegetative cover was thin throughout the site and plants from the last growing season can often be found standing or laying over during the winter. No dead stalks were identified that resembled hollow Joe-pye weed.

Areas within the Project Area that are unmaintained (e.g. steep slopes, around trees, fence lines) are dominated by small dense patches of invasive shrubs. While this assessment was conducted outside of the growing season, it is unlikely that rare or unique botanical features occur within the Project Area.

Table 1. Rare and Exemplary Botanical Features within 4 Miles of 1700 Westbrook Street

Common Name	State Status	State Rank	Global Rank	Last Observed	Occurrence Number	Habitat Requirement	Habitat in Project Area?
Allegheny vine	E	S1	G4	10/1860	9	Rocky summits and outcrops (non-forested, upland), Dry barrens (partly forested, upland)	No
American sea-blite	T	S2	G5	9/12/1932	5	Tidal wetland (non-forested, wetland)	No
	T	S2	G5	8/15/2011	17		
beach plum	E	S1	G4	5/19/1933	10	Rocky coastal (non-forested, upland)	No
broad beech fern	SC	S2	G5	8/1872	15	Hardwood to mixed forest (forest, upland)	No
creeping spike-moss	E	S2	G5	8/20/1924	3	Open wetland, not coastal nor rivershore (non-forested, wetland), Old field/roadside (non-forested, wetland or upland)	Potential
	E	S2	G5	8/21/1924	8		
dioecious sedge	SC	S3	G4	7/14/1936	7	Non-tidal rivershore (non-forested, seasonally wet), open wetland, not coastal nor rivershore (non-forested, wetland)	No
ebony spleenwort	SC	S2	G5	6/6/1910	10	Rocky summits and outcrops (non-forested, upland), Hardwood to mixed forest (forest, upland)	No
Engelmann's spikerush	PE	SH	G4G5Q	8/31/1916	2	Open wetland, not coastal nor rivershore (non-forested, wetland); wet sand, peat, mud	No
fern-leaved false foxglove	SC	S3	G5	9/2/1902	13	Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)	No
great blue lobelia	PE	SX	G5	9/1/1905	3	Forested wetland, Non-tidal rivershore (non-forested, seasonally wet)	No
hollow joe-pye weed	SC	S2	G5?	6/18/2014	24	Open wetland, not coastal nor rivershore (non-forested, wetland), old field/roadside (non-forested, wetland or upland)	Potential
	SC	S2	G5?	10/22/2007	18		
horned pondweed	SC	S2	G5	9/13/1913	9	Tidal wetland (non-forested, wetland)	No
	SC	S2	G5	6/13/1972	3		
marsh milkwort	PE	SH	G5T4	8/18/1903	1	Dry barrens (partly forested, upland), Open wetland, not coastal nor rivershore (non-forested, wetland)	No
Missouri rockcress	T	S1	G5?Q	6/11/1905	5	Rocky summits and outcrops (non-forested, upland), Hardwood to mixed forest (forest, upland)	No
mountain honeysuckle	E	S2	G5	7/16/2015	16	Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)	No
	E	S2	G5	7/7/2015	17		
Parker's pipewort	SC	S3	G3	8/20/1924	8	Tidal wetland (non-forested, wetland)	No
pitch pine bog	<null>	S2	G3G5	7/31/2012	16	Forested wetland, coastal non-tidal wetland (non-forested, wetland)	No
tidal marsh estuary ecosystem	<null>	S3	GNR	8/25/2011	8	Tidal wetland (non-forested, wetland)	No
variable sedge	E	S1	G3	3/25/1905	8	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)	No
	E	S1	G3	6/29/1911	9		
Vasey's pondweed	SC	S2	G4	8/4/1901	7	Open water (non-forested, wetland)	No
water-plantain spearwort	PE	SH	G4	8/1862	3	Open water (non-forested, wetland)	No
wild leek	SC	S3	G5	5/10/2006	19	Hardwood to mixed forest (forest, upland), Forested wetland	No

Table 1 Notes

STATE RARITY RANKS

S1	Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
S2	Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
S3	Rare in Maine (20-100 occurrences).
S4	Apparently secure in Maine.
S5	Demonstrably secure in Maine.
SU	Under consideration for assigning rarity status; more information needed on threats or distribution.
SNR	Not yet ranked.
SNA	Rank not applicable.
S#?	Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).
NOTE:	State Rarity Ranks are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1	Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
G2	Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
G3	Globally rare (20-100 occurrences).
G4	Apparently secure globally.
G5	Demonstrably secure globally.
GNR	Not yet ranked.
NOTE:	Global Ranks are determined by NatureServe.

STATE LEGAL STATUS

NOTE:	State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's Endangered and Threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.
E	ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
T	THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC	SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
PE	Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

3.2. Wildlife Habitat Evaluation

A number of wildlife were observed during the field visit (Table 2) typical for the season in this habitat. The light snow provided some opportunity to track on the otherwise frozen ground, but it was not so deep that scat, burrows, trails, or other wildlife signs were not visible. Several regular paths used by coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and striped skunk (*Mephitis mephitis*) were observed. Scat, tracks, and venting frost from a red fox den were observed on the site. A variety of winter resident and early spring migrant birds were observed in the Project Area.

Table 2. Wildlife Observed at 1700 Westbrook Street (3/13/2017)

Common Name	Scientific name
Birds	
downy woodpecker	*Picoides pubescens*
northern cardinal	*Cardinalis cardinalis*
pileated woodpecker	*Dryocopus pileatus*
black-capped chickadee	*Poecile atricapillus*
red-winged blackbird	*Agelaius phoeniceus*
American crow	*Corvus brachyrhynchos*
blue jay	*Cyanocitta cristata*
herring gull	*Larus argentatus*
red-tailed hawk	*Buteo jamaicensis*
American crow	*Corvus brachyrhynchos*
Mammals	
red fox	*Vulpes vulpes*
Eastern coyote	*Canis latrans*
striped skunk	*Mephitis mephitis*

A thorough evaluation of the sideslope dominated by invasive shrubs did not show signs of cottontail use such as scat, tracks, or sign of browse. The multiflora rose, hawthorn, and other shrubs are separated by cattle paths, thereby separating most of the shrubs from each other. The areas under shrubs were free of vegetation due to heavy browse and foot traffic by cattle. The cattle use the area as shelter from the sun, making this area unsuitable for New England cottontail. The patch of shrubby habitat is too small, lacks the proper vegetative structure, lacks the preferred stem density, and is largely unconnected to other areas of suitable New England cottontail habitat.

It is unlikely that the USFWS has hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the Project based on other work conducted by Verdanterra in the area. There was nothing observed in the field visit to suggest otherwise. Therefore, we believe the 4(d) rule for the northern long-eared bat could be applied.

If there is a federal nexus for the project (e.g., federal permits required to construct), no tree clearing should occur on any portion of the Project Area until consultation under Section 7 of the Endangered Species Act, between the USFWS and the federal action agency, is completed. The applicant can prepare the 4(d) notification form and submit it with their wetland permit for use by the U.S. Army Corps during the Section 7 consultation.

4. Conclusions and Recommendations

The results of the landscape analysis and subsequent field assessment found that rare or unique botanical features previously documented in the area by MNAP are unlikely to occur within the limits of disturbance of the Project. Many of the habitats required do not occur on the Project site. The herbaceous wetlands present on site are impacted by decades (at least since 1984) of cattle grazing and occasional vegetation management, making them unsuitable for any of these rare or unique botanical features. No further evaluation of plant or protected natural communities are recommended at the Project.

Several species of wildlife or their signs were observed within the Project area. While several areas of dense shrubs exist on the edges of the limits of disturbance, none of these areas are suitable to support populations of New England cottontail. The islands of invasive shrubs lack the density, aerial coverage, or connectivity to support a population of New England cottontail.

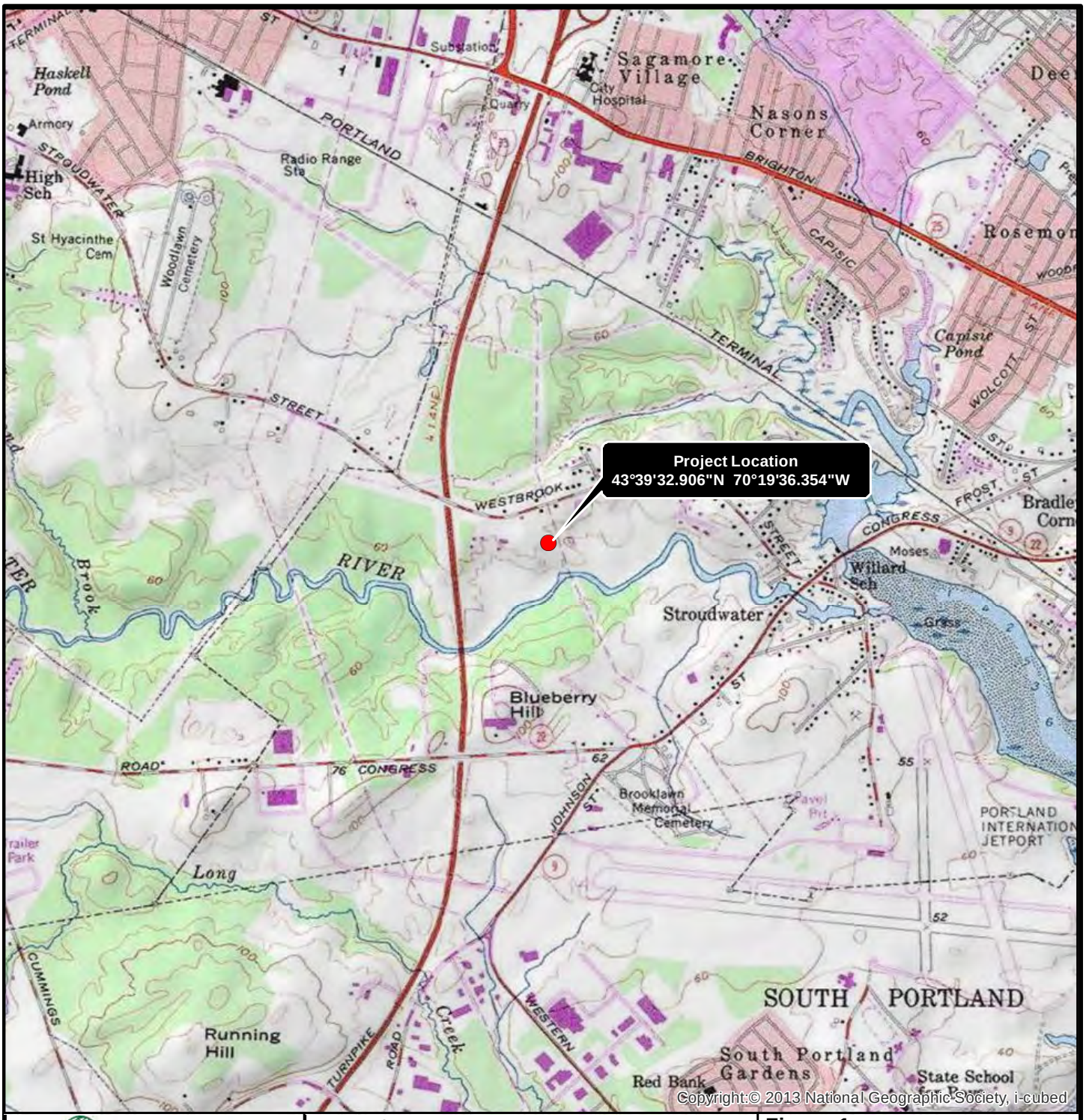
There are trees of size and quality to act as potential northern long-eared bat at the Project, however, any tree cutting required would qualify under the 4(d) rules as incidental take. While there are no specific cutting restrictions for northern long-eared bats, providing this information along with any required federal permits will hopefully speed up the consultation between the U.S. Army Corps of Engineers and the USFWS. Additionally, there are not likely to be significant adverse impacts to birds of conservation concern listed as occurring within Cumberland County, Maine.

Figures

Figure 1. Camelot Farms - Project Location Map

Figure 2. Project Limits of Disturbance – Aerial Background

Figure 3. Project Limits of Disturbance – Topographic Background



VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 17, 2017

REVISION	00
CREATOR	AS 03/16/2017
REVIEWED	GG 03/16/2017

Page 01 of 01

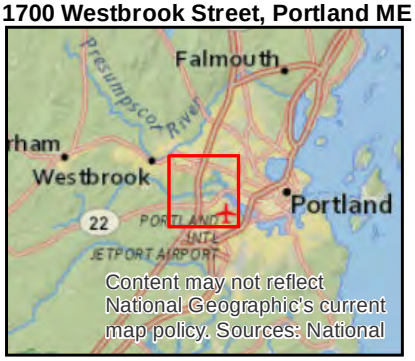
Legend

● Project Location

0 1,000 2,000 Feet

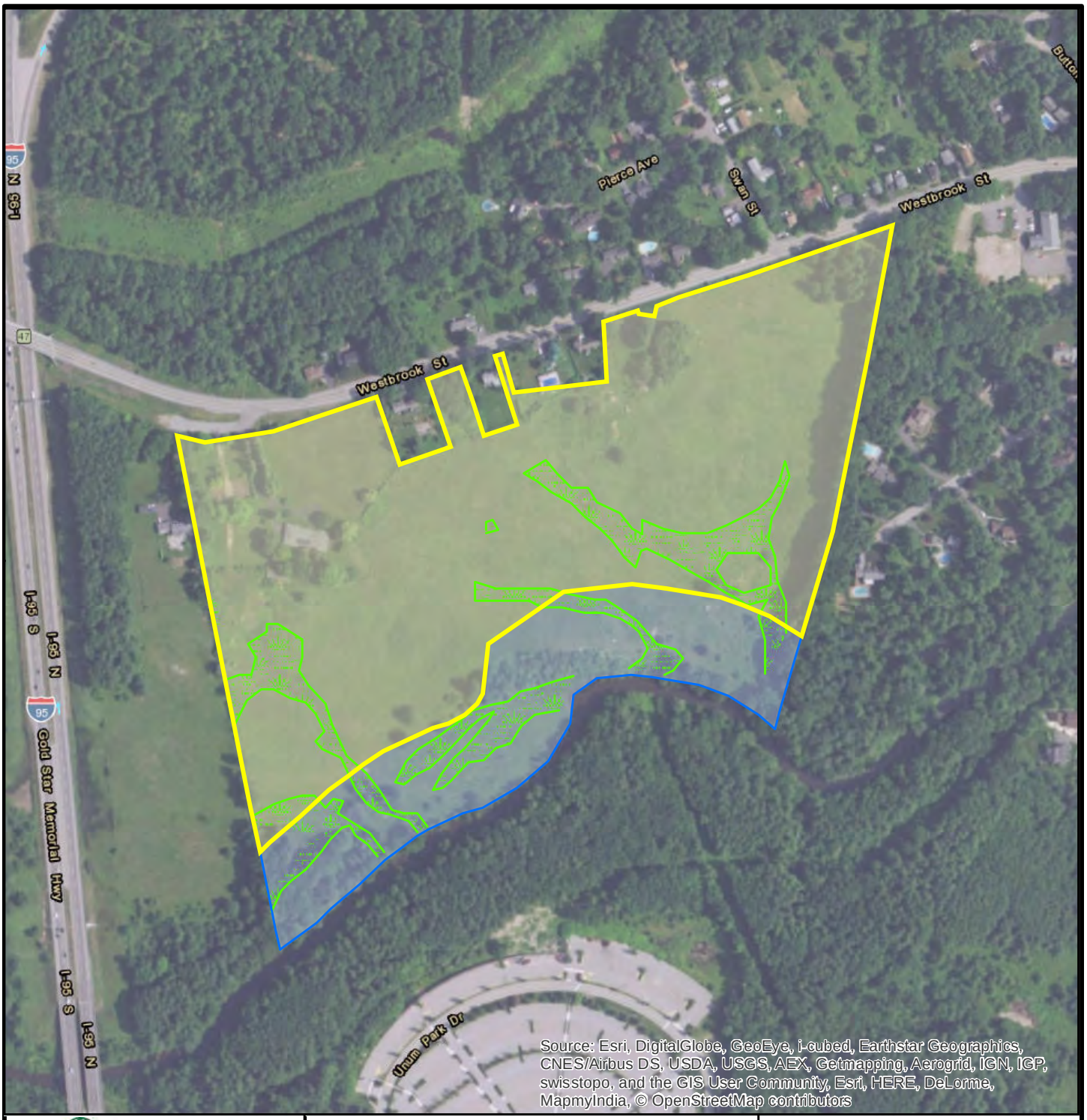
Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 1.
Project Location
Camelot Farms
1700 Westbrook Street, Portland ME



Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.



VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 17, 2017

REVISION	00
CREATOR	AS 03/17/2017
REVIEWED	GG 03/17/2017

Page 01 of 01

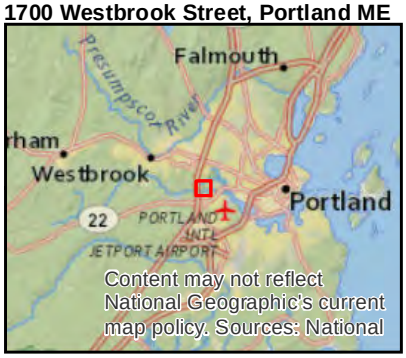
Legend

- Limit of Disturbance
- Shoreland Protection Zone
- Wetland Areas

0 150 300 Feet

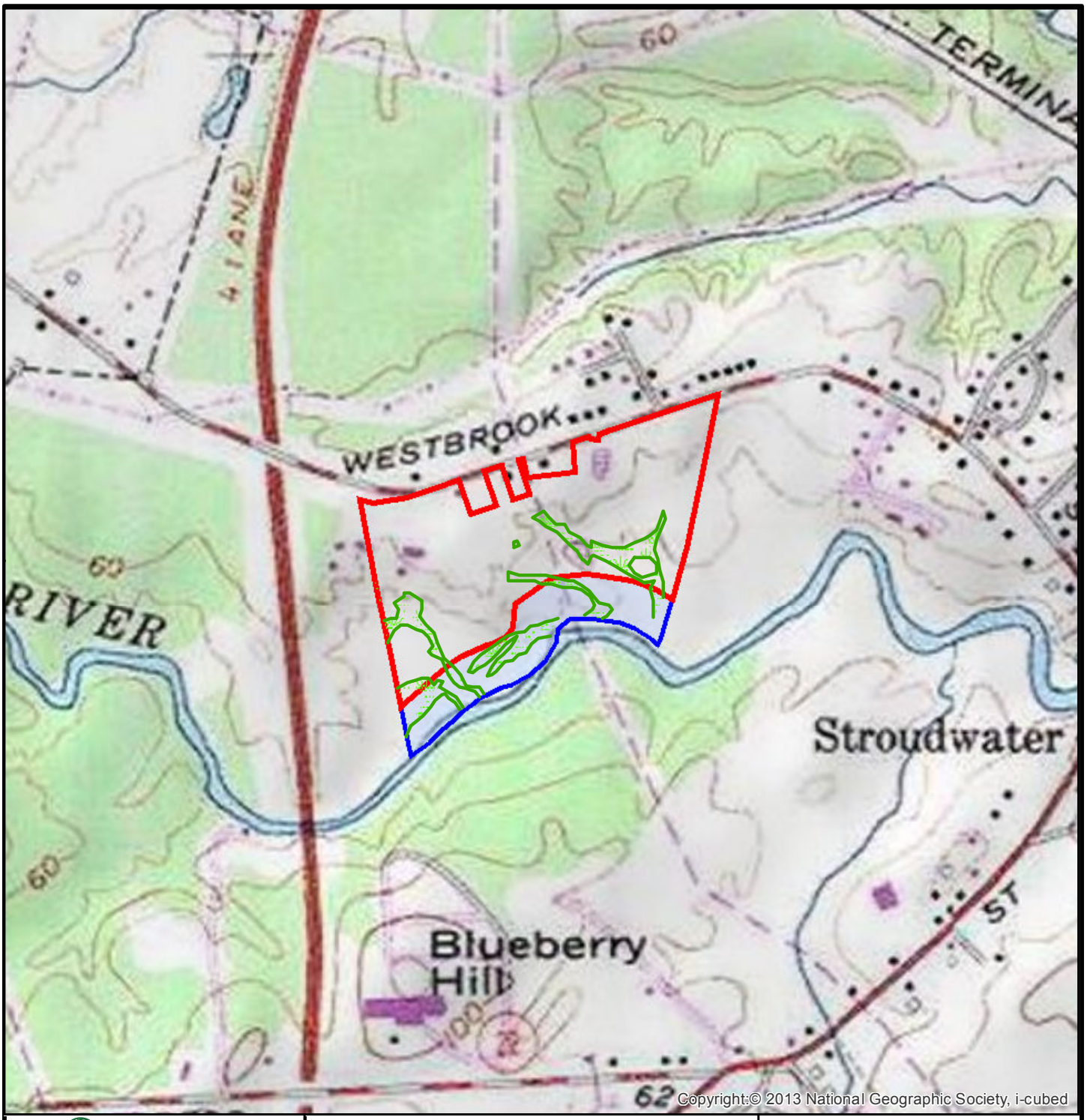
Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 2.
Project Limits of Disturbance (Aerial)
Camelot Farms
1700 Westbrook Street, Portland ME



Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.



VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 27, 2017

REVISION	00
CREATOR	AS 03/17/2017
REVIEWED	GG 03/17/2017

Page 01 of 01

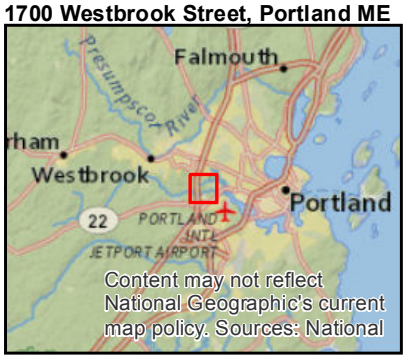
Legend

- Limit of Disturbance
- Shoreland Protection Zone
- Wetland Areas

0 300 600 Feet

Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 3.
Project Limits of Disturbance (Topo)
Camelot Farms
1700 Westbrook Street, Portland ME



Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.

Appendix A. Verdanterra Resume

Gino Giumarro

Director of Ecological Services

Gino is a Certified Wildlife Biologist and Director of Ecological Services that leads our team of biologists who complete natural resources assessment and permitting, pipeline/transmission line assessment and permitting, wind power assessments, regional natural resources planning, wildlife management planning, and permitting. He has specialty expertise with bird and bat surveys, with a focus on rare species surveys and consultations under the Endangered Species Act.

Gino oversees FERC license applications, RTE surveys, ecological community characterizations, biological assessments, Section 7 consultations, Clean Water Act permitting, and document preparation in accordance with the NEPA.

Gino's client experience includes a wide array of federal, state, local, and private clients. He is certified by the US Army Center for Health Promotion and Preventative Medicine in the Evaluation of Environmental Noise and is a Qualified Airport Biologist as recognized by the FAA.

REPRESENTATIVE PROJECT EXPERIENCE

RANGER SOLAR INDUSTRIAL SCALE SOLAR FACILITIES
Project Manager and Lead Ecologist

Gino is the Project Manager and Lead Ecologist for Ranger Solar's development of five utility scale solar facilities throughout New England. Each of the sites were surveyed for vernal pools, wetlands and waterbodies, and rare vernal pool dependent species. Resources were characterized according to applicable state and federal standards and definitions.

NORWOTTUCK RAILTRAIL REHABILITATION PROJECT, MA
Senior Ecologist

Provided oversight natural community, general wildlife, and rare species habitat assessments within the 11- mile rail trail corridor. Evaluated habitat conditions for 19 state-listed rare wildlife and plant species documented by the NHESP and provided impact minimization recommendations to the engineer to comply with MESA. Evaluated current beaver damage to the rail trail corridor and reviewed beaver management planning in accordance with MWPA and MESA performance standards.

EDUCATION

MS, Natural Resources Planning, University of Vermont, Burlington, Vermont

BS, Wildlife Biology, University of Massachusetts, Amherst, Massachusetts

TRAINING

Airport Wildlife Hazard Management Workshop (meets requirements of 14 CFR 139 and FAA Circ 150/5200-36), Embry-Riddle Aeronautical University, Daytona Beach, Florida, 2010

Qualified Airport Wildlife Biologist, Federal Aviation Administration

Certified Wildlife Biologist, The Wildlife Society

SPOTTED TURTLE HABITAT ASSESSMENT AND SURVEYS, MA
Senior Ecologist

Conducted an assessment of suitable habitat conditions and visual surveys for spotted turtles at the site of a proposed major commercial and residential development. Assisted with the development of wildlife crossing structure and exclusion barrier design and placement. Coordinated project planning and mitigation design with local and state agencies in compliance with MESA.

REGIONAL BLANDING'S TURTLE RAPID HABITAT ASSESSMENT, NH
Senior Ecologist

Conducted and managed landscape analysis, habitat assessment, and field survey of Blanding's turtle habitat modeling results in southern and central New Hampshire. Developed regional study plan in coordination with the New Hampshire Fish and Game Department to assess modeling results of 15 sites (>1500 acres). Results evaluated suitable habitat conditions, new observations of Blanding's turtles, and conservation planning and management recommendations.

KINDER MORGAN PARKWAY PIPELINE PROJECT
Principal Scientist

The Parkway Pipeline Project (PWP) proposes to construct a new 136-mile, 16-inch diameter liquid products pipeline originating at Valero Energy Corporation's St. Charles Refinery in Norco, Louisiana and terminating at Kinder Morgan's pipeline terminal in Collins, Mississippi. The purpose of the project is to transport refined petroleum products from Norco to Collins, where these products can be further distributed to the southeastern United States. Mr. Giumarro assisted with permitting and routing studies for this project.

NEXUS GAS TRANSMISSION PROJECT
Project Manager

Gino managed wetland and waterbody surveys and delineations on an approximate 250 mile proposed pipeline corridor crossing portions of Ohio and Michigan. Daily data collection and reporting included USACE wetland data forms, Ohio Rapid Assessment Method (ORAM), stream assessments (HHEI/QHEI), and GPS survey within the proposed pipeline right-of-way.

NATURAL RESOURCE SERVICES
Senior Ecologist and Project Manager

Conducted assessment and surveys of numerous project sites throughout New England to identify suitable habitat conditions for a variety of rare, threatened, and endangered species; or rare communities; wetlands; and vernal pools. Determinations were provided to assist with project planning and permit applications in compliance with applicable local, state, and federal natural resource regulations.

OTHER REPRESENTATVE PROJECTS

Sandpiper Pipeline Project (Minnesota)

Downeast LNG Export Terminal (Maine)

TransCanada Pipeline Groundbed Anode Replacement (Michigan)

Blue Racer Midstream Natrium Residue Pipeline (Ohio/West Virginia)

Blue Racer Midstream Carlisle Dos Looping Project (Ohio)

Access Midstream Rare Bat Surveys (Ohio)

National Park Service Cape Cod NS Hunting EIS (Massachusetts)

Wind Farm Development Surveys and Risk Assessments (New York, New Hampshire, Vermont, Maine, Virginia, West Virginia, and Pennsylvania)

Mount Rushmore National Memorial Air Tour Management Plan Environmental Assessment (South Dakota)

NASA Wallops Island Flight Facility Bat Evaluation, Wallops Island (Virginia)

Appendix B. Site Visit Photodocumentation

Photo 1 – Property access off 1700 Westbrook Street, Portland, Maine

Photo 2 – Wet ditch paralleling Westbrook Street

Photo 3 – Shrub and treeline at the western edge of the limits of disturbance; north to south

Photo 4 – Narrow treeline surrounded by pasture does not connect other dense shrub habitat

Photo 5 – Narrow treeline on the western edge of the limits of distrurbance

Photo 6 – The meadow has thin grass, herb, and raspberry cover; many signs of grazing

Photo 7 – Forested edge near Stroudwater River is free of dense shrub cover

Photo 8 – Open floodplain forest adjacent to Stroudwater River

Photo 9 – Numerous fox tracks were observed

Photo 10 – Small patches of multiflora rose occur in areas that cannot be mowed

Photo 11 – Black cherry, multiflora rose and speckled alder occur along wetland / toe of slope

Photo 12 – Shrubby areas are kept open by cattle grazing

Photo 13 – Cattle paths occur under the canopy and within shrub areas

Photo 14 – Cattle path on sideslope south of Stroudwater River

Photo 15 – Numerous signs of past land uses such as this access road and an oil pipeline

Photo 16 – Fox den

Photo 17 – Thin cover of goldenrod, grasses, thistle, hawksweed; raspberry

Photo 18 – No understory in the small grove of white pine adjacent to Westbrook Street

Photo 19 – Vegetative cover is typical of cattle pastures in southern Maine

Photo 20 – Emergent wetland seep adjacent to a slope has allowed multiflora rose to grow in isolated places in the pasture

Appendix C. Agency Correspondence

1. Site Plan Drawing Number C-10 – Acorn Engineering – 2/14/2017
2. Maine Natural Areas Program Letter – 11/10/2016
3. Maine Division of Inland Fisheries and Wildlife Letter – 12/2/2016
4. United States Fish and Wildlife Service IPaC Analysis – 3/20/2017
5. Maine Historic Preservation Commission Letter – 12/9/2016

R–3
ZONE CHANGE CONCEPT PLAN

GENERAL NOTES:

1. PLAN REFERENCES:
   1.1. MAINE OFFICE OF GIS FOR AERIAL AND CONTOUR DATA
   1.2. CITY OF PORTLAND GIS FOR PARCEL AND ZONING DATA
   1.3. PRELIMINARY BOUNDARY SURVEY DATED 11/16/2016 COMPLETED BY TITCOMB ASSOCIATES.
   1.4. WETLAND DELINEATION BY MARK HAMPTON ASSOCIATES DATED 11/18/2016
2. AREA DEPICTED FOR THE SHORELAND OVERLAY ZONE IS APPROXIMATE BASED ON PORTLAND GIS DATA.
3. IN ANTICIPATION OF BEING BUILT INTO PHASES, TURNAROUND CAPABILITIES WILL BE MAINTAINED IN THE CENTER OF THE DEVELOPMENT. THE TURNAROUND WILL BE A MINIMUM 30' LONG AS MEASURED FROM THE PROPOSED ROW PER TECHNICAL STANDARD AND WILL BE REMOVED AT PROJECT COMPLETION.

SPACE AND BULK STANDARDS

ZONE:	R–1 (EX.)	R–3 (PROP.)
MINIMUM LOT SIZE	15,000 SF	6,500 SF
MINIMUM STREET FRONTAGE	75'	50'
FRONT YARD	25'	25'
REAR YARD – PRINCIPAL	25'	25'
REAR YARD – ACCESSORY	5'	5'
SIDE YARD	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	15'
MAXIMUM LOT COVERAGE	20%	35%
MINIMUM LOT WIDTH*	100'	65'
MAXIMUM BUILDING HEIGHT	35'	35'
MAXIMUM ACCESSORY HEIGHT	18'	18'

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.

LOT SUMMARY

CAMELOT FARMS	91
WESTBROOK STREET	4
OPEN SPACE LOTS	4
TOTAL	99

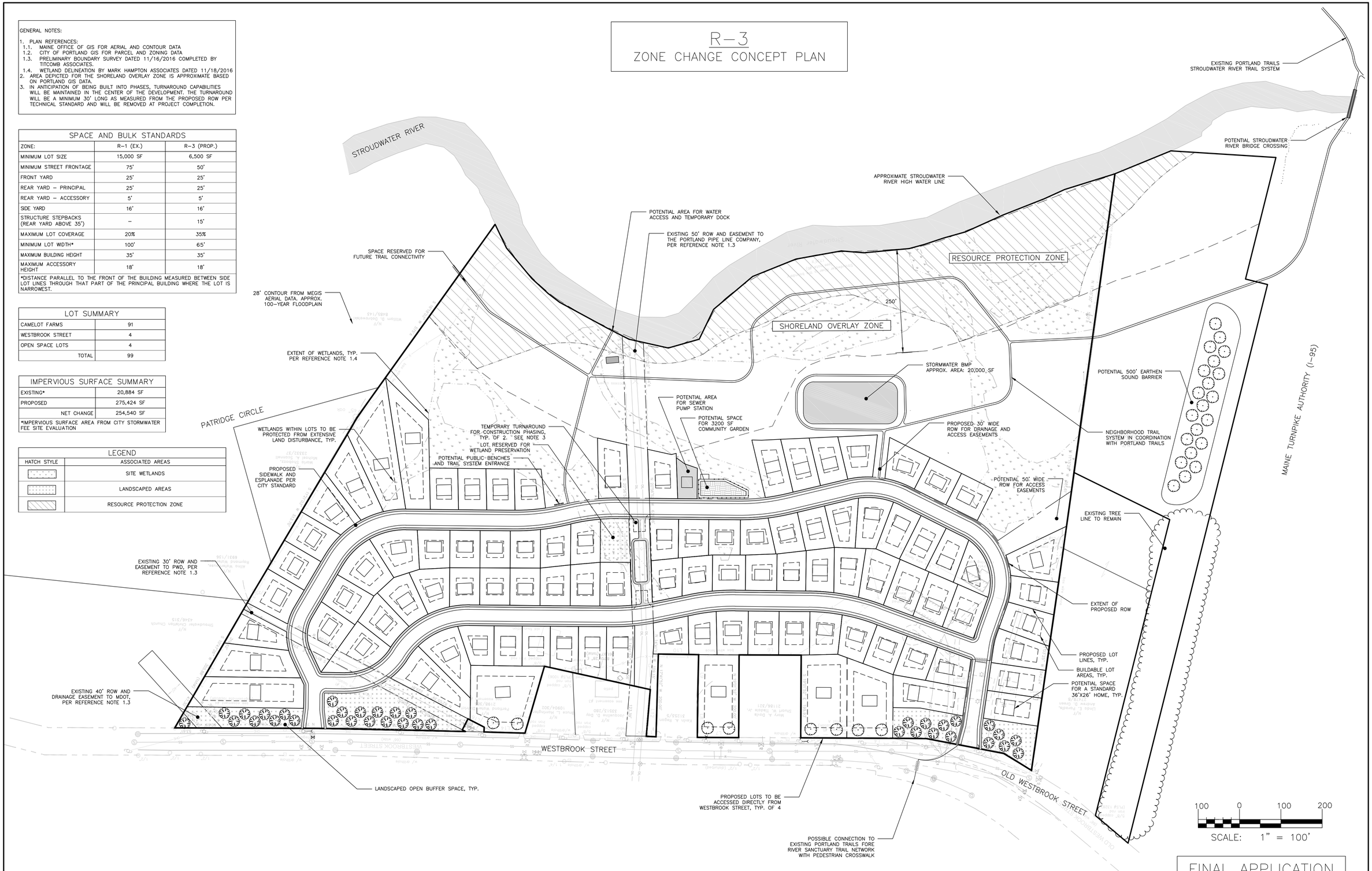
IMPERVIOUS SURFACE SUMMARY

EXISTING*	20,884 SF
PROPOSED	275,424 SF
NET CHANGE	254,540 SF

*IMPERVIOUS SURFACE AREA FROM CITY STORMWATER FEE SITE EVALUATION

LEGEND

HATCH STYLE	ASSOCIATED AREAS
	SITE WETLANDS
	LANDSCAPED AREAS
	RESOURCE PROTECTION ZONE



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRE–APP	WHS 10/27/16
PRELIM APP	WHS 12/9/16
FINAL APP	WHS 2/14/17

DRAWING NAME: SITE PLAN – R–3 CONCEPT

PROJECT NAME: CAMELOT VILLAGE

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT PERMISSION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775–2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM SAVAGE
No. 11416
2-14-17
PROFESSIONAL ENGINEER

DRAWING NO.
C-

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

November 10, 2016

Olivia Dawson
Acorn Engineering
PO Box 3372
Portland, ME 04104

Via email: odawson@acorn-engineering.com

Re: Rare and exemplary botanical features in proximity to: Camelot Farms Subdivision, Portland, Maine

Dear Ms. Dawson:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received November 10, 2016 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM

PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Don Cameron | Ecologist | Maine Natural Areas Program
207-287-8041 | don.s.cameron@maine.gov

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Allegheny Vine						
	E	S1	G4	1860-10	9	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
American Sea-blite						
	T	S2	G5	1932-09-12	5	Tidal wetland (non-forested, wetland)
	T	S2	G5	2011-08-15	17	Tidal wetland (non-forested, wetland)
Beach Plum						
	E	S1	G4	1933-05-19	10	Rocky coastal (non-forested, upland)
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Creeping Spike-moss						
	E	S2	G5	1924-08-20	3	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	E	S2	G5	1924-08-21	8	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Dioecious Sedge						
	SC	S3	G4	1936-07-14	7	Non-tidal rivershore (non-forested, seasonally wet),Open wetland, not coastal nor rivershore (non-forested, wetland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Engelmann's Spikerush						
	PE	SH	G4G5Q	1916-08-31	2	Open wetland, not coastal nor rivershore (non-forested, wetland)
Fern-leaved False Foxglove						
	SC	S3	G5	1902-09-02	13	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Great Blue Lobelia						

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	PE	SX	G5	1905-09	3	Forested wetland,Non-tidal rivershore (non-forested, seasonally wet)
Hollow Joe-pye Weed						
	SC	S2	G5?	2014-06-18	24	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	SC	S2	G5?	2007-10-22	18	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Horned Pondweed						
	SC	S2	G5	1913-09-13	9	Tidal wetland (non-forested, wetland)
	SC	S2	G5	1972-06-13	3	Tidal wetland (non-forested, wetland)
Marsh Milkwort						
	PE	SH	G5T4	1903-08-18	1	Dry barrens (partly forested, upland),Open wetland, not coastal nor rivershore (non-forested, wetland)
Missouri Rockcress						
	T	S1	G5?Q	1905-06-11	5	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Mountain Honeysuckle						
	E	S2	G5	2015-07-16	16	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S2	G5	2015-07-07	17	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Parker's Pipewort						
	SC	S3	G3	1924-08-20	8	Tidal wetland (non-forested, wetland)
Pitch Pine Bog						
	<null>	S2	G3G5	2012-07-31	16	Forested wetland,Coastal non-tidal wetland (non-forested, wetland)
Tidal Marsh Estuary Ecosystem						
	<null>	S3	GNR	2011-08-25	8	Tidal wetland (non-forested, wetland)
Variable Sedge						

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	E	S1	G3	1911	8	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S1	G3	1911-06-29	9	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)
Water-plantain Spearwort						
	PE	SH	G4	1862-08	3	Open water (non-forested, wetland)
Wild Leek						
	SC	S3	G5	2006-05-10	19	Hardwood to mixed forest (forest, upland),Forested wetland

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
S3 Rare in Maine (20-100 occurrences).
S4 Apparently secure in Maine.
S5 Demonstrably secure in Maine.
SU Under consideration for assigning rarity status; more information needed on threats or distribution.
SNR Not yet ranked.
SNA Rank not applicable.
S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
G3 Globally rare (20-100 occurrences).
G4 Apparently secure globally.
G5 Demonstrably secure globally.
GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

December 2, 2016

Olivia Dawson
Acorn Engineering, Inc.
158 Danforth Street
Portland, ME 04102

RE: Information Request - Camelot Farms subdivision, Portland

Dear Olivia:

Per your request received November 10, 2016, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Camelot Farms subdivision project* in Portland. For purposes of this review, we are assuming that the development will occur primarily within maintained fields and tree clearing will not be necessary. If tree clearing is ultimately proposed, please contact our Department for further guidance

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be directly affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats that would be directly affected by your project.

Fisheries Habitat

Without details, it is difficult to know what impacts your project may have on the Stroudwater River. That being said, MDIFW makes the following general recommendations as they pertain to work around rivers and streams.

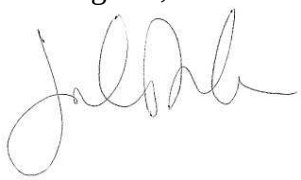
Maintaining buffers along coldwater fisheries is critical to the protection of water temperatures, water quality, and inputs of coarse woody debris necessary to support conditions required by brook trout. We generally recommend that a 100-foot undisturbed vegetated buffer be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work or work within 100 feet of streams occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and

Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,



John Maclaine
Biologist

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

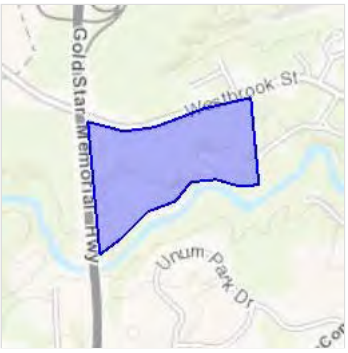
Project information

NAME

Camelot Farms

LOCATION

Cumberland County, Maine



DESCRIPTION

Residential development

Not for consultation

Local office

Maine Ecological Services Field Office

(207) 469-7300
(207) 902-1588

MAILING ADDRESS
P. O. Box A
East Orland, ME 04431

PHYSICAL ADDRESS
306 Hatchery Road
East Orland, ME 04431

http://www.fws.gov/mainefieldoffice/index.html

Endangered species

This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.

Section 7 of the Endangered Species Act **requires** Federal agencies to *"request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action"* for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Review section in IPaC or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by creating a project and making a request from the Regulatory Review section.

Listed species[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis **No critical habitat** has been designated for this species. http://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Not for consultation

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location, not a list of every bird species you may find in this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus http://ecos.fws.gov/ecp/species/6582	On Land: Breeding
American Oystercatcher Haematopus palliatus http://ecos.fws.gov/ecp/species/8935	On Land: Breeding
Bald Eagle Haliaeetus leucocephalus http://ecos.fws.gov/ecp/species/1626	On Land: Year-round
Bay-breasted Warbler Dendroica castanea	On Land: Breeding
Black-billed Cuckoo Coccyzus erythropthalmus http://ecos.fws.gov/ecp/species/9399	On Land: Breeding

Blue-winged Warbler Vermivora pinus	On Land: Breeding
Canada Warbler Wilsonia canadensis	On Land: Breeding
Great Cormorant Phalacrocorax carbo	On Land: Wintering
Hudsonian Godwit Limosa haemastica	At Sea: Migrating
Least Bittern Ixobrychus exilis http://ecos.fws.gov/ecp/species/6175	On Land: Breeding
Nelson's Sparrow Ammodramus nelsoni	On Land: Breeding
Olive-sided Flycatcher Contopus cooperi http://ecos.fws.gov/ecp/species/3914	On Land: Breeding
Peregrine Falcon Falco peregrinus http://ecos.fws.gov/ecp/species/8831	On Land: Breeding
Pied-billed Grebe Podilymbus podiceps	On Land: Breeding
Prairie Warbler Dendroica discolor	On Land: Breeding
Purple Sandpiper Calidris maritima	On Land: Wintering
Saltmarsh Sparrow Ammodramus caudacutus	On Land: Breeding
Short-eared Owl Asio flammeus http://ecos.fws.gov/ecp/species/9295	On Land: Wintering
Snowy Egret Egretta thula	On Land: Breeding
Upland Sandpiper Bartramia longicauda http://ecos.fws.gov/ecp/species/9294	On Land: Breeding
Willow Flycatcher Empidonax traillii http://ecos.fws.gov/ecp/species/3482	On Land: Breeding
Wood Thrush Hylocichla mustelina	On Land: Breeding

Not for consultation

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details

about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Not for Consultation

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Not for consultation

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

December 9, 2016

Olivia Dawson, E.I.
Acorn Engineering, Inc.
P.O. Box 3372
Portland, ME 04104

Project: MHPC# 1678-16 - Camelot Holdings, Inc., 1700 Westbrook Street; redevelop existing farm with single family homes

Town: Portland, ME

Dear Ms. Dawson:

In response to your recent request, I have reviewed the information received November 16, 2016 to initiate consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

In order to complete our review, we are requesting the following information:

1. Submit photos (keyed to a topographic map) of any buildings that are fifty years or older that are on or adjacent to the project site. If no such buildings exist, please indicate this in writing.

2. An archeological Phase I survey for prehistoric archaeological sites is necessary for all land on this project area below the 40 foot contour or within 100 yards of the Stroudwater River. A list of approved archaeologists is enclosed. Please note that we must review the proposal/scope of work for this survey that you choose. Please contact Dr. Arthur Spiess, Senior Archaeologist arthur.spiess@maine.gov with any questions.

Once this information is received, we will forward a response regarding the results of our evaluation.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

Enc.

PHONE: (207) 287-2132

FAX: (207) 287-2335

AGENCY INFORMATION
- About Us
- National Register of Historic Places
- Project Review
  - Architectural & Archaeological Consultants
    - Architectural Consultants
    - Historic Archaeologists
    - Pre-Historic Archaeologists
  - Architectural Survey Guidelines
  - Architectural Survey Forms
  - Archaeological Survey Guidelines
  - Required Materials
  - Topographic Quad Maps
  - Map/Photo Examples
- Tax Incentives
- Grants
- Restoration Resources
- Archaeology
- Architectural Survey
- Certified Local Government (CLG) Program
- Preservation Planning
- Laws & Regulations
- Historic Preservation Easements
- Office of the State Historian
- Biographical Dictionary of Architects in Maine

Prehistoric Archaeologists

Prehistoric Archeologists Approved List: Review and Compliance Consulting/Contracting (Active)

LEVEL I

Mr. Michael Brigham
P.O. Box 274
New Vineyard, ME 04956-0274
Email: brigham@nearchaeology.com

James A Clark
TRC/Northeast Cultural Resources
71 Oak Street
Ellsworth, ME 04605
Phone: 207-667-4055
Email: clark.ja@gmail.com

Ms Edna Feighner
5 Thomas Street, Apt 3
Concord, NH 03301
Phone: 603-228-8091
Email: Edna.Feighner@dcr.nh.gov

Ms. Sarah Haugh
Tetra Tech
451 Presumpscot Street
Portland, ME 04103
Phone: 207-879-9496 x238
Email: sarah.haugh@tetratech.com

Mark Penney
The Louis Berger Group Inc.
20 Corporate Woods Blvd.
Albany, NY 12211-2370
Phone: 518-432-9545
Email: mpenney@louisberger.com

Mary Lynne Rainey
RGA Cultural Resource Consultants
1376 Kingstown Road
Wakefield, RI 02879
Phone: 401-487-1636
Email: marylynne.rainey@verizon.net

Jacob Tumelaire
Independent Archaeological Consulting
801 Islington Street
Suite 31
Portsmouth, NH 03801
Phone: 603-430-2970
Email: jtumelaire@iac-llc.net

Mr. Brian Valimont
New England Archaeology Co. LLC
128R Main Street
Plaistow, NH 03865
Phone: 603-560-8720
Email: Newarch1@comcast.net

LEVEL II

Geraldine Baldwin
4 Dickson Lane
Bedford Corners, NY 10549
Phone: 914-271-0897
Email: GeraldineBaldwin@aol.com

Robert N. Bartone
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, ME 04938
Phone: 207-860-4032
Fax: 207-860-4031
Email: bartone@nearchaeology.com

Dr. William R. Belcher
U.S. Army CILHI
310 Worchester Avenue, Bldg 45
Hickam AFB, HI 96853-5530
Email: wbelcher@msn.com

Dr. Bruce J. Bourque
Maine State Museum
83 State House Station
Augusta, ME 04333-0083
Phone: 207-287-3909
Email: bbourque@abacus.bates.edu

Dr. Victoria Bunker
P.O. Box 16
New Durham, NH 03809-0016
Phone: 603-776-4306
Email: vbi@worldpath.net

Dr. Ellen Cowie
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, ME 04938
Phone: 207-860-4032
Fax: 207-860-4031
Email: cowie@nearchaeology.com

Dr. Christopher Donta
HRA Gray and Pape, LLC
60 Valley Street., Suite 103
Providence, RI 02909
Phone: 401-279-990
Email: cdonta@graypape.com

Dr. Dianna Doucette
Public Archaeology Laboratory
26 Main Street
Pawtucket, RI 02860
Phone: 401-728-8780
Email: ddoucette@palinc.com

Dr. Stuart A. Eldridge
Power Engineers, Inc.
303 US Route 1, Suite 2A
Freeport, ME 04032
Phone: 207-869-1261
Email: Stuart.Eldridge@powereng.com
Website: http://www.powereng.com

Jacob Freedman
SEARCH, Inc.
55 Melville Avenue
Boston, MA 02124
Phone: 207-266-7709
Email: jacob@searchinc.com

Website: www.searchinc.com

Dr. Robert Goodby
Monadnock Archaeological Consulting
16 Fox Hill Road
Stoddard, NH 03464
Phone: 603-446-2366
Email: rgoodby@monadarch.com
Website: http://www.monadarch.com

Dr. Nathan Hamilton
Department of Geography & Anthropology
University of Southern Maine
Gorham, ME 04038
Phone: 207-780-5324
Email: casco@usm.maine.edu

Karen Mack
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth, ME 04605
Phone: 207-667-4055
Fax: 207-667-0485
Email: kemack@trcsolutions.com

Edward Moore
TRC/Northeast Cultural Resources
71 Oak Street
Ellsworth, ME 04605
Fax: 207-667-0485

David Putnam
47 Hilltop Road
Chapman, ME 04757
Phone: 207-762-6078
Email: putnamd@umpi.edu

Dr. Richard Will
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth, ME 04605
Phone: 207-667-4055
Fax: 207-667-0485
Email: rwill@trcsolutions.com

Copyright © 2006 All rights reserved.