Environmental
Resources
Management

399 Boylston Street, 6th Floor
Boston, MA 02116
(617) 267-8377
(617) 267-6447 (fax)

http://www.erm.com

7 February 2003
Reference: 143.64

Ms. Ellen Roy Herzfelder
Secretary of Environmental Affairs
Attention MEPA Office
251 Causeway Street, Suite 900
Boston, Massachusetts 02114

Subject: Environmental Notification Form and Regulatory Permit Application
Former Raytheon Facility
430 Boston Post Road
Wayland, Massachusetts

Dear Ms. Herzfelder:

Woodlot Alternatives, Inc. (Woodlot) and Environmental Resources Management, Inc. (ERM) are pleased to provide the wetland impact permit applications to your respective agencies. This application includes a Massachusetts Environmental Policy Act certificate, and a supporting document titled, *Regulatory Permit Application for Wetland Impact Permit Applications for the Oils and Hazardous Materials Remediation on the Former Raytheon Property, Wayland, Massachusetts*. The remediation is being pursued through the Massachusetts Contingency Plan, Army Corp of Engineers, Massachusetts Bureau of Resource Protection and Town of Wayland Conservation Commission. As part of this process various wetland related permits are required and we have tried to address all the regulatory requirements in one report since there is a substantial amount of overlap between the regulations. The application report is organized into sections discussed below.

1. Executive Summary: Overview of the project.

2. Ecological Characterization: A summary of the Woodlot studies of the natural communities on the site including an endangered species assessment, flooding characterization, and a wetland functions and values assessment.

3. Hazardous Waste Summary: A summary of the ERM studies on oils and hazardous materials (OHM) found in the wetland soils.

4. Alternatives Analysis: A discussion of the remedial technology options and the process by which the proposed technology was chosen.

5. Proposed Remediation Process: A discussion of the actual remediation activity and how it will be implemented. Site-specific design features and wetland impacts are discussed.

6. Avoidance and Minimization of Impacts: Provides a discussion of aspects of the remediation that will be employed to avoid and reduce temporary wetland impacts. This includes a discussion of the risk-based remediation objectives as required by the Massachusetts Contingency Plan.

7. Restoration Plan: Provides detail of the proposed restoration effort to restore the impacted wetland area.

8. Regulatory Criteria Assessment: This section summarizes the permit review and issuance criteria for the Individual Permit - Army Corps of Engineers and Environmental Protection Agency, Massachusetts Wetland Protection Act, and the Massachusetts Environmental Policy Act. This information should also help address issues related to the State 401 Water Quality Certification. It is provided to help insure that all the regulatory criteria are addressed in this application and the permit reviewers may use this information to help process the applications.

9. Summary: A brief summation of the above information.

10. References: Scientific literature citations.

A number of exhibits and appendices are included which provide more detail on a variety of topics including the alternatives analysis, hazardous waste data, and wildlife and plant surveys. Several exhibits provide support for the restoration plan and the minimization effort and a number of site photos. The application forms and fees are also attached. The input that we received during the pre-application meetings was very helpful and we have made very effort to include those suggestions in our applications. As with any permit application there will likely be additional information, clarification, and modifications that we will need to provide. It will be our pleasure to provide this assistance

and see the applications through to completion. If you wish to visit the site please call and arrange a time through Mr. John Drobinski LSP, PG of ERM at 617-267-8377 as access to the property is restricted.

If you have any questions please do not hesitate to contact any of the project team members.

Sincerely,

Rachel B. Leary
Project Engineer

John C. Drobinski, P.G., LSP
Principal-in-Charge

rbl
enclosures: ENF (2)
Regulatory Permit Application for Wetland Impact Permit Applications for the Oils and Hazardous Materials Remediation on the Former Raytheon Property, Wayland, Massachusetts (2)

cc: Mailing List

Hand-enter Your Transmittal Number → W 034545

Your unique Transmittal Number can be accessed through DEP's web site or by calling the DEP InfoLine as listed on the last page of this document

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

Instructions

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Your check should be made payable to the Commonwealth of Massachusetts. Please mail your check along with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three (3) copies of this form will be needed.

Copy 1 (the original) must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to DEP, P.O. Box 4062, Boston, MA 02211

For DEP Use Only
Permit No._____
Rec'd Date_____
Reviewer_____

A. Application Information

DEP Permit Code (the 7 or 8 character code from first page of permit application instructions):

Name of Permit Category:
401 Water Quality Certification

Type of Project or Activity:
Limited Project

B. Applicant Information (Firm or Individual)

Name of Firm:
Raytheon Company

Or, if party needing this approval is clearly an individual:

Individual's Last Name:	First Name	MI

Street Address
528 Boston Post Road Mail Stop 1880

City/Town	State	Zip Code	Telephone Number
Sudbury	MA	01776	(978) 440-1813 ext.

Contact:
Mr. Edwin P. Madera

e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Name of Facility, Site or Individual
Former Raytheon Facility

DEP Facility Number (if Known)

Street Address
430 Boston Post Road

e-mail address:
(optional)

City/Town	State	Zip Code	Telephone Number
Wayland	MA	01778	( ) ext.

D. Application Prepared by (if different from Section B)

Name of Individual or Firm:
Environmental Resource Management Inc.

Address
399 Boylston Street, 6th Floor

City/Town	State	Zip Code	Telephone Number
Boston	MA	02116	(617) 267-8377 ext.

Contact:
John Drobinski, LSP, PG

LSP Number (21E only)

E. Permit - Project Coordination

Is this project subject to MEPA review? ☒ yes ☐ no

If yes, indicate the project's EOEA file number (assigned when an Environmental Notification Form is submitted to the MEPA unit)

EOEA # Is an Environmental Impact Report Required? ☒ yes ☐ no

Is this application part of a larger project for which two or more DEP permits are being or will be sought? ☐ yes ☒ no

List any other DEP permits that apply to this project:

Permit Category	**Date of Submission** (tentative or actual)	**Transmittal Number** (if application already submitted)
Wetland Protection Act	May 2003	
401 Water Quality Cert	February 2003	

F. Amount Due

Special Provisions:

☐ Fee Exempt* (city, town or municipal housing authority)(state agency if fee is $100 or less)
☐ Hardship Request [payment extensions according to 310 CMR 4.04(3)(c)]
☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10)

*There are no fee exemptions for 21E, regardless of applicant status

Check #:	Dollar Amount: $250.00	Date:

Please make check payable to the Commonwealth of Massachusetts and mail check and one copy of this form to DEP, P.O. Box 4062, Boston, MA 02211

Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.:_____.
MEPA Analyst: _____.
Phone: 617-626-_____

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **Former Raytheon Facility**		
Street: **430 Boston Post Road**		
Municipality: **Wayland**	Watershed: **Concord River**	
Universal Tranverse Mercator Coordinates: **46,92,800 N 3,04,800 E**	Latitude: **42° 22'** Longitude: **71° 22'**	
Estimated commencement date:**July 2003**	Estimated completion date: **November 2003**	
Approximate cost: **$5.2 MM**	Status of project design: **85% Complete** %complete	
Proponent: **Raytheon Company**		
Street: **528 Boston Post Road, Mail Stop 1880**		
Municipality: **Sudbury**	State: **MA**	Zip Code: **01776**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **John Drobinski, LSP, PG**		
Firm/Agency: **Environmental Resource Mgmt**	Street: **399 Boylston St. 6th Floor**	
Municipality: **Boston**	State: **MA**	Zip Code: **02116**
Phone: **617-267-8377**	Fax: **617-267-6447**	E-mail:

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
X Yes ☐ No

Has this project been filed with MEPA before?
☐ Yes (EOEA No._____) **X** No

Has any project on this site been filed with MEPA before?
☐ Yes (EOEA No._____) **X** No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
a Single EIR? (see 301 CMR 11.06(8)) **X** Yes ☐ No
a Special Review Procedure? (see 301CMR 11.09) ☐ Yes ☐ No
a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐ Yes ☐ No
a Phase I Waiver? (see 301 CMR 11.11) ☐ Yes ☐ No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): **Not Applicable**_____

Are you requesting coordinated review with any other federal, state, regional, or local agency?
X Yes (Specify: Town of Wayland, DEP, USCOE, USEPA) ☐ No

List Local or Federal Permits and Approvals:
Applications will be submitted for a Wetlands Protection Act NO, 401 Water Quality Certification, USCOE Individual Permit, USEPA TASCA approval, Mass Contingency Plan approval.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

☐ Land	☐ Rare Species	**X** Wetlands, Waterways, & Tidelands
☐ Water	☐ Wastewater	☐ Transportation
☐ Energy	☐ Air	☐ Solid & Hazardous Waste
☐ ACEC	☐ Regulations	☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				**X** Order of Conditions
Total site acreage	**83 acres plus Hamlen Parcel**			☐ Superseding Order of Conditions
New acres of land altered		**1.5 acres**		Chapter 91 License
Acres of impervious area	**None**	**None**	**None**	**X** 401 Water Quality Certification
Square feet of new bordering vegetated wetlands alteration		**74,740 sq ft**		☐ MHD or MDC Access Permit
Square feet of new other wetland alteration		**None**		☐ Water Management Act Permit
Acres of new non-water dependent use of tidelands or waterways		**None**		☐ New Source Approval
STRUCTURES				☐ DEP or MWRA Sewer Connection/ Extension Permit
Gross square footage	**None**	None	**None**	**X** Other Permits (*including Legislative Approvals*) – Specify: Mass Contingency Plan TSCA: EPA and IP: ACOE
Number of housing units	**None**	**None**	**None**	
Maximum height (in feet)	**None**	**None**	**None**	
TRANSPORTATION				
Vehicle trips per day	**None**	**None**	**None**	
Parking spaces	**None**	**None**	**None**	
WASTEWATER				
Gallons/day (GPD) of water use	**None**	**None**	**None**	
GPD water withdrawal	**None**	**None**	**None**	
GPD wastewater generation/ treatment	**None**	**None**	**None**	
Length of water/sewer mains (in miles)	**None**	**None**	**None**	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) **X** No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation

restriction, or watershed preservation restriction?

☐Yes (Specify_____) **X** No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

X Yes (Specify: Project Area is designated as estimated habitat WH 169) ☐ No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) **X** No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) **X** No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) **X** No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary*.) **Please review the Permit Application Report.**

Project Background

A remedial action plan has been prepared for an 83-acre property formerly occupied by the Raytheon Company, owned by the Wayland Business Center and an adjacent parcel privately owned. Contamination levels of oil and/or hazardous materials have been documented in soil and groundwater on these properties, "the property". The proposed work will remedy an environmental hazard and restore the degraded ecological functions and will have public benefits to human health and the environment. The property is located at 430 Boston Post Road in Wayland, Massachusetts and is adjacent to various conservation lands. Soil and groundwater within the wetland and portions of the site are contaminated with levels of oil and/or hazardous materials. The contaminated area is a wetland system that is part of the Sudbury River floodplain. Target cleanup goals for the wetland soil and sediments and groundwater are based on eliminating a condition of "significant risk" to human health and environment. Wetland soil and sediment removal is estimated to encompass 3,700 cubic yards over approximately 1.5-acres to achieve a permanent solution. Groundwater will require abatement to Massachusetts Maximum Contaminant Levels for drinking water to achieve a permanent solution.

The project has not received any prior Chapter 91 licenses and it does not appear that any have been required. There has not been any historic dredging, filling, or impoundments within the wetlands on the site. Average Annual High Water is estimated to be 110 feet NGVD. The area of excavation lies water ward of the wetland limits and landward of the high water mark elevation.

Wetland Soil and Sediment Remediation

Excavating the remedial area and disposing of the contaminated soil off-site will complete the remediation of the wetland soil/sediments. Excavation will include 3,700 cubic yards over approximately 1.5-acres, down to a depth of approximately 1.5-feet below natural ground. The applicant will implement the appropriate engineering and management components to complete the remediation in the most environmentally safe manner. All necessary regulatory permits will be obtained prior to initiating the

work. The excavated soil will be segregated into stockpiles specific to the waste characteristics and disposal facility receiving requirements. The waste soil will be dewatered and the resulting water treated on or off-site. The waste soil will be transported and disposed of to the appropriate licensed facility. A restoration plan for the excavated wetland area will be implemented and is discussed below.

The applicant will implement best management practices to avoid and minimize adverse impacts to the wetland and adjacent Sudbury River. Many of the specifics are in the design process and will likely be contingent upon agency and public input. The applicant will begin the Massachusetts Environmental Policy Act process and will welcome constructive input.

Wetland Restoration

The floodplain wetlands that are excavated and any incidental wetland impacts will be restored to a viable ecological community. The excavated area will be re-soiled using clean fill that is of a comparable soil structure and composition. The area will be graded to pre-construction contours. The vegetation will include seeding and planting with wetland species of similar composition as the adjacent deep emergent marsh. An ecological characterization was completed to document the vegetative composition and serve as a pre-construction baseline. This information will be used for preparing the replanting plan. Monitoring will include documenting the vegetative composition and water levels with the remediation area on at least a seasonal basis. Monitoring will also focus on any additional re-vegetation activities that may be needed. The presence of invasive species will be monitored and maintenance activities initiated to control these species within the remediation area. Summary reports of the monitoring will be compiled on an annual basis.

For Additional Information please refer to the report prepared by Woodlot Alternatives, Inc and Environmental Resources Management, Inc.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to land (see 301 CMR 11.03(1)
___ Yes **X** No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	**0.0**	**0.0**	**0.0**
Roadways, parking, and other paved areas	**0.0**	**0.0**	**0.0**
Other altered areas (describe)	**0.0**	**0.0**	**0.0**
Undeveloped areas **Total Property 83 ac.**	**1.5**	**0.0**	**1.5**

B. Has any part of the project site been in active agricultural use in the last three years? ___ Yes **X** No; if yes, how many acres of land in agricultural use (with agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use? ___ Yes **X** No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a DEM-approved forest management plan:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes **X** No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? __ Yes **X** No; if yes, does the project involve the release or modification of such restriction? ___ Yes **X** No; if yes, describe: **The portion owned by the Wayland Business Center is under a AUL, but not a conservation easement.**

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes **X** No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ **X** No ; if yes, describe:

H. Describe the project's stormwater impacts and, if applicable, measures that the project will take to comply with the standards found in DEP's Stormwater Management Policy:

The project does not require permanent stormwater management practices or facilities. Temporary stormwater treatment is needed for water that is drained from the excavated soil while the soil is stored at the staging area. A pollution abatement area will be created to temporarily retain the runoff. The excavation process will require some dewatering due to high groundwater table conditions. The water removed from the pit will be the minimum needed to excavate and re-soil the remedial area. The water will be treated through a FURC tank before it is discharged. The project will comply with the DEP stormwater management policy and the proposed activities should not cause any adverse impacts on water resources.

I. Is the project site currently being regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? _**X**Yes No ; if yes, what is the Release Tracking Number (RTN)?

J. If the project site is within the Chicopee or Nashua watershed, is it within the Quabbin, Ware, or Wachusett subwatershed? ___ Yes **X** No; if yes, is the project site subject to regulation under the Watershed Protection Act? ___ Yes ___ No

K. Describe the project's other impacts on land: **The basic project purpose is to remove 3,700 cu yds over 1.5 acres, of contaminated soil from a wetland area. Construction site management activities are needed to protect the excavation area from flooding and to provide construction staging areas to protect the adjacent wetlands. Temporary flood protection may be used around the area of impact and could result in temporary minor impacts to the wetland vegetation and soil. The construction staging areas should be 100-feet landward of the wetland to maintain the requisite setback from the wetland. These areas proposed for the staging areas are already disturbed by nearby development. These areas will be reclaimed after construction is completed.**

III.. Consistency

A. Identify the current municipal comprehensive land use plan and the open space plan and describe the consistency of the project and its impacts with that plan(s):

The project is neither a permanent development nor does it propose any activities that would exceed thresholds of any comprehensive plan.

B. Identify the current Regional Policy Plan of the applicable Regional Planning Agency and describe the consistency of the project and its impacts with that plan:

The project is neither a permanent development nor does it propose any activities that would exceed thresholds of any regional planning policies.

C. Will the project require any approvals under the local zoning by-law or ordinance (i.e. text or map amendment, special permit, or variance)? **X** Yes ___ No; if yes, describe:

The project requires approval of an Order of Conditions by the Town of Wayland Conservation Commission as the project proposes temporary alteration and restoration of 1.5 acres of wetlands, per the Wetlands Protection Act.

D. Will the project require local site plan or project impact review?
___ Yes **X** No; if yes, describe:

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to rare species or habitat (see 301 CMR 11.03(2))? **X** Yes ___ No; if yes, specify, in quantitative terms: **The project will temporarily alter wetland habitat that could be used by state listed wildlife, but will ultimately improve that habitat by remediation of a hazardous waste site and restoring an impacted wetland area.**

B. Does the project require any state permits related to rare species or habitat? ___ Yes **X** No

C. If you answered "No" to both questions A and B, proceed to the Wetlands, Waterways, and Tidelands Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts

Natural Heritage Atlas (attach relevant page)? **X** Yes ___ No. If yes,

1. Which rare species are known to occur within the Priority or Estimated Habitat (contact: Environmental Review, Natural Heritage and Endangered Species Program, Route 135, Westborough, MA 01581, allowing 30 days for receipt of information): **The NHESP designates the site and surrounding areas as WH169. Twelve rare wildlife species, ten birds and two reptiles, could potentially occur in the designated habitat. These include: wood turtle, Blanding's turtle, Cooper's hawk, sharp-shinned hawk, northern harrier, bald eagle, American bittern, least bittern, pied-billed grebe, king rail, common moorhen, and sedge wren.**
2. Have you surveyed the site for rare species? **X** Yes ___ No; if yes, please include the results of your survey. Some of the above listed species are known to occur in the vicinity. **Northern harriers have been observed over the site. River bulrush exists in the immediate area. Neither species should be adversely affected by the project.**
3. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? **X** Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? **X** Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes **X** No; if yes, describe:

C. Will the project alter "significant habitat" as designated by the Massachusetts Division of Fisheries and Wildlife in accordance with M.G.L. c.131A (see also 321 CMR 10.30)? **X** Yes ___ No; if yes, describe: **Portions of the contaminated area have stunted vegetation and the contamination represents a potential ecological threat per the Massachusetts Contingency Plan. The remediation will temporarily impact potential habitat of state listed species, but will remove the contamination threat and restore the habitat to a viable ecological condition.**

D. Describe the project's other impacts on rare species including indirect impacts (for example, stormwater runoff into a wetland known to contain rare species or lighting impacts on rare moth habitat): **Minor impacts to vegetation will occur during the remediation process. These areas will be restored with plantings, seeding, and natural regeneration. The remediation could not proceed without these minor impacts, which will be kept to a minimum.**

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to wetlands, waterways, and tidelands (see 301 CMR 11.03(3))? **X** Yes ___ No; if yes, specify, in quantitative terms: **A total of 1.5 acres of wetlands will be excavated to remove hazardous pollutants within the soil. This area will be restored to a natural ecological system.**

B. Does the project require any state permits (or a local Order of Conditions) related to wetlands, waterways, or tidelands? **X** Yes ___ No; if yes, specify which permit**: A Order of Conditions will be obtained pursuant to the Wetlands Protection Act and issued by the DEP and/or the Wayland Conservation Commission.**

C. If you answered "No" to both questions A and B, proceed to the Water Supply Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands,

Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Describe any wetland resource areas currently existing on the project site and indicate them on the site plan:

The study area contains four natural communities, all of which are wetlands. These include: Low Energy Stream Community (i.e., the Sudbury River), Deep Emergent Marsh Community, Shrub Swamp Community, and Alluvial Red Maple Swamp Community (Exhibit 3 of attached report). The deep emergent marsh and shrub swamp communities, which dominate the site, are underlain by Saco series soils. These soils consist of nearly level, deep (>5 feet), very poorly drained soils that formed in depressions of glacial outwash plains. They contain recent silty alluvium that is high in organic matter. Saco soils have mucky silt loam or silt loam surface soil with moderate permeability over a silt loam or fine sandy loam substratum, also with moderate permeability. These soils are underlain at 40 to 60 inches by stratified sand and gravel with rapid permeability. These soils have a high water table that is near the surface most of the year and are frequently flooded.

Low Energy Stream Community

The Sudbury River and approximately the western half of the drainage swale are both classified as low energy streams (Exhibit 3 of attached report). These areas are characterized by slow-moving water passing over a relatively level landscape. The community is vegetated by common water-purslane (*Ludwigia palustris*), false water-pepper (*Persicaria hydropiperoides*), crisped pondweed (*Potamogeton crispus*), greater-duckweed (*Landoltia polyrrhiza*), lesser duckweed (*Lemna minor*), ribbonleaf pondweed (*Potamogeton epihydrus*), and annual wild rice (*Zizania aquatica*). This aquatic vegetation is primarily found in the shallow areas near shore.

Deep Emergent Marsh Community

Deep emergent marsh, the dominant community in the study area, contains tall emergents rooted in a thick layer of mucky silt (Exhibit 3 of attached report). The community is dominated by several different species growing in patches including hybrid cattail (*Typha ×glauca*), giant bur-reed (*Sparganium eurycarpum*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), reed canarygrass (*Phalaris arundinacea*), water smartweed (*Persicaria amphibia* var*. emersa*), and river bulrush (*Bolboschoenus fluviatilis*). Additionally, soft-stemmed bulrush (*Schoenoplectus tabernaemontanii*), false nettle (*Boehmeria cylindrica*), marsh fern (Thelypteris palustris), swamp candles (*Lysimachia terrestris*), lake-side sedge (*Carex lacustris*), sweet flag (*Acorus calamus*), and dodder (*Cuscuta gronovii*) occur in this community. Buttonbush (*Cephalanthus occidentalis*) is a shrub that occurs occasionally in this community. Overall in the study area deep emergent marsh is estimated to occupy 6.79 acres.

Within the deep emergent marsh community is an area of stunted vegetation (Figure 2 of attached report), which primarily contains cattails growing at an estimated density of 5 stems/ m^2. In other areas where cattails were dominant and not stunted, the average stem density was 50 stems/ m^2. Average stem densities for purple loosestrife, common reed, and reed canarygrass were estimated to be 70, 48, and 226 stems/ m^2, respectively. These density estimates were generated in areas in the marsh dominated by each species outside the area of stunted vegetation.

Shrub Swamp Community

In the study area, the shrub swamp community is dominated by buttonbush (*Cephalanthus*

***occidentalis*) and silky dogwood (*Cornus amomum* var. *amomum*). Interspersed among the shrubs are herbaceous plants common to the deep emergent marsh community. Buttonbush in this area is well established, with densities estimated to be 14 stems/m^2, while silky dogwood densities are 45 stems/ m^2. Buttonbush was growing most frequently adjacent to the drainage swale that crossed the study area before draining into the Sudbury River and along the shore of the Sudbury River. Overall, the shrub swamp community is estimated to occupy 5.45 acres.**

Alluvial Red Maple Swamp Community

Alluvial red maple swamp communities in Massachusetts typically occur along mainstem sections of smaller rivers in eastern Massachusetts. These communities do experience overbank flooding, but are more poorly drained than true floodplain forests (i.e., they are a community transition between floodplain forests and forested swamps). This community is dominated by silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), swamp white oak (*Quercus bicolor*), silky dogwood, winterberry (*Ilex verticillata*), fox grape (*Vitis labrusca*), European buckthorn (*Frangula Alnus*), royal fern (*Osmunda regalis*), sensitive fern (*Onoclea sensibilis*), and cinnamon fern (*Osmunda cinnamomea*). The total extent of alluvial red maple swamp in the study area is estimated to be 2.10 acres.

B. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (in square feet) or Length (in linear feet)
Land Under the Ocean	_____
Designated Port Areas	_____
Coastal Beaches	_____
Coastal Dunes	_____
Barrier Beaches	_____
Coastal Banks	_____
Rocky Intertidal Shores	_____
Salt Marshes	_____
Land Under Salt Ponds	_____
Land Containing Shellfish	_____
Fish Runs	_____
Land Subject to Coastal Storm Flowage	_____
Inland Wetlands	
Bank	_____
Bordering Vegetated Wetlands	**Excavation and restoration of 1.5 acres of deep emergent marsh to remove hazardous waste. The initial impacts are temporary and will ultimately improve the ecological condition of the area.**
Land under Water	_____
Isolated Land Subject to Flooding	_____
Bordering Land Subject to Flooding	_____
Riverfront Area	_____

C. Is any part of the project

1. a limited project? **X** Yes No
2. the construction or alteration of a dam? ___ Yes **X** No; if yes, describe:
3. fill or structure in a velocity zone or regulatory floodway? ___ Yes **X** No
4. dredging or disposal of dredged material? **X** Yes ___ No; if yes, describe the volume of dredged material and the proposed disposal site: **Approximately 3,700 cu yds of OHM contaminated soil will be removed from the remedial area. Disposal will be in an approved and permitted facility contingent upon the composition and concentration**

of the contaminants.

5. a discharge to Outstanding Resource Waters? **X** Yes ___ No

6. subject to a wetlands restriction order? ___ Yes **X** No; if yes, identify the area (in square feet):

D. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? **X** Yes ___ No; if yes, has a Notice of Intent been filed or a local Order of Conditions issued? **X** Yes ___ No; if yes, list the date and DEP file number: **Will be Filed in the near future.** Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a variance from the Wetlands regulations? ___ Yes **X** No **Project is a 21-E Limited Project.**

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? **X** Yes ___ No **Except that the Town of Wayland does not have its own wetland ordinance, therefore all regulatory conditions must be consistent with the Wetlands Protection Act.**

2. alter any federally-protected wetlands not regulated under state or local law? ___ Yes **X** No; if yes, what is the area (in s.f.)?

Wetlands that will be impacted are regulated by both Federal and State regulations.

F. Describe the project's other impacts on wetlands (including new shading of wetland areas or removal of tree canopy from forested wetlands): **All wetland impacts that are proposed as part of this project have been described above and in the attached application materials.**

III. Waterways and Tidelands Impacts and Permits

A. Is any part of the project site waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? __Yes **X** No; if yes, is there a current Chapter 91 license or permit affecting the project site? ___ Yes **X** No; if yes, list the date and number:

B. Does the project require a new or modified license under M.G.L.c.91? ___Yes **X** No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water dependent use?

Current **0.0** Change **0.0** Total **0.0**

C. Is any part of the project

1. a roadway, bridge, or utility line to or on a barrier beach? ___ Yes **X** No; if yes, describe:

2. dredging or disposal of dredged material? **X** Yes ___ No; if yes, volume of dredged material: **3,700 cubic yards to be disposed of off-site.**

3. a solid fill, pile-supported, or bottom-anchored structure in flowed tidelands or other waterways? ___ Yes **X** No; if yes, what is the base area? _____

4. within a Designated Port Area? ___ Yes **X** No

D. Describe the project's other impacts on waterways and tidelands: **The proposed remediation should not have any direct impacts on the Sudbury River, but requires temporary wetland impacts include the excavation of 1.5 acres of deep emergent marsh and the subsequent restoration of that vegetative community. Minor temporary impacts to vegetation could result from the placement of a temporary flood prevention device, but will be restored.**

IV. Consistency:

A. Is the project located within the Coastal Zone? ___ Yes **X** No; if yes, describe the project's consistency with policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes **X** No; if yes,

identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to water supply (see 301 CMR 11.03(4))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to water supply? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Wastewater Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons/day, the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____
Municipal or regional water supply	_____	_____	_____

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source,

1. have you submitted a permit application? ___ Yes ___ No; if yes, attach the application
2. have you conducted a pump test? ___ Yes ___ No; if yes, attach the pump test report

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons/day)? _____Will the project require an increase in that withdrawal?___ Yes ___ No

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___ No. If yes, describe existing and proposed water supply facilities at the project site:

	Existing	Change	Total
Water supply well(s) (capacity, in gpd)	_____	_____	_____
Drinking water treatment plant (capacity, in gpd)	_____	_____	_____
Water mains (length, in miles)	_____	_____	_____

F. If the project involves any interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve

1. new water service by a state agency to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ___ Yes ___ No

H. Describe the project's other impacts (including indirect impacts) on water resources, quality, facilities and services:

III. Consistency -- Describe the project's consistency with water conservation plans or other plans to
D enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to wastewater (see 301 CMR 11.03(5))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to wastewater? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Transportation -- Traffic Generation Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe, in gallons/day, the volume and disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00):

	Existing	Change	Total
Discharge to groundwater (Title 5)	_____	_____	_____
Discharge to groundwater (non-Title 5)	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is there sufficient capacity in the existing collection system to accommodate the project? ___ Yes ___ No; if no, describe where capacity will be found:

C. Is there sufficient existing capacity at the proposed wastewater disposal facility?___ Yes ___ No; if no, describe how capacity will be increased:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No. If yes, describe as follows:

	Existing	Change	Total
Wastewater treatment plant (capacity, in gpd)	_____	_____	_____
Sewer mains (length, in miles)	_____	_____	_____
Title 5 systems (capacity, in gpd)	_____	_____	_____

E. If the project involves any interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

F. Does the project involve new sewer service by an Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (in tons per day):

	Existing	Change	Total
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the project's other impacts (including indirect impacts) on wastewater generation and treatment facilities:

III. Consistency -- Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to wastewater management:

A. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EOEA number for the plan and describe the relationship of the project to the plan

TRANSPORTATION -- TRAFFIC GENERATION SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to traffic generation (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to state-controlled roadways? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Roadways and Other Transportation Facilities Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____

ITE Land Use Code(s):

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

C. Describe how the project will affect transit, pedestrian and bicycle transportation facilities and services:

III. Consistency -- Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

ROADWAYS AND OTHER TRANSPORTATION FACILITIES SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to roadways or other transportation facilities (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to roadways or other transportation facilities? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Energy Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities at the project site:

	Existing	Change	Total
Length (in linear feet) of new or widened roadway	_____	_____	_____
Width (in feet) of new or widened roadway	_____	_____	_____

Other transportation facilities:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____
2. Cutting of living public shade trees (number)? _____
3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to energy (see 301 CMR 11.03(7))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to energy? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Air Quality Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way?___ Yes ___ No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency -- Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to air quality (see 301 CMR 11.03(8))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to air quality? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Solid and Hazardous Waste Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)?___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to solid or hazardous waste (see 301 CMR 11.03(9))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to solid and hazardous waste? ___ Yes **X**

No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Historical and Archaeological Resources Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?

___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency--Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes **X** No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes ___ No; if yes, please describe:

B. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes **X** No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes

ATTACHMENTS:

1. Plan, at an appropriate scale, of existing conditions of the project site and its immediate context, showing all known structures, roadways and parking lots, rail rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.
2. Plan of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).
3. Original U.S.G.S. map or good quality color copy (8-½ x 11 inches or larger) indicating the project location and boundaries
4. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).
5. Other:

Refer to attached Report

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name) (Date)

WAYLAND TOWN CRIER 20 FEBRUARY 2003

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Edwin P. Madera

Date 1/31/03 Signature of Responsible Officer or Proponent

Date

Signature of person preparing ENF (if different from above)

Name **Edwin P. Madera**

Firm/Agency **Raytheon Company**

Street **528 Boston Post Road**
Mail Stop 1880

Municipality/State/Zip **Sudbury, MA 01776**

Phone **978-440-1813**

Name (print or type) **Mark W. Christopher**

Firm/Agency **Woodlot Alternatives, Inc.**

Street **30 Park Ave.**

Municipality/State/Zip **Topsham, ME 04086**

Phone **207-729-1199**

Mail Stop 1880

Municipality/State/Zip **Sudbury, MA 01776**

Phone **978-440-1813**

Street **30 Park Ave.**

Municipality/State/Zip **Topsham, ME 04086**

Phone **207-729-1199**