

## Request for Determination of Applicability

Supplemental Environmental Program Sentinel  
Monitoring Wells

Raytheon Company

Town of Wayland Property  
Old Sudbury Road, Wayland, Massachusetts

ERM Reference 0095922

10 September 2009

[www.erm.com](http://www.erm.com)

FILE COPY  
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SEP 10 2009

TOWN OF WAYLAND  
BOARD OF HEALTH

**Raytheon**



Raytheon Company

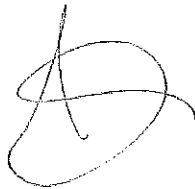
# Request for Determination of Applicability

Supplemental Environmental Program Sentinel Monitoring Wells

Town of Wayland Property  
Old Sudbury Road  
Wayland, Massachusetts

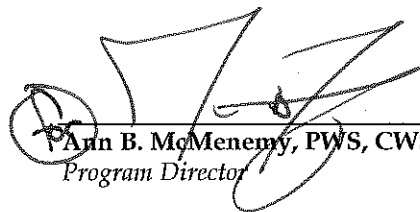
10 September 2009

ERM Reference: 0095922



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



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**Ann B. McMenemy, PWS, CWS**  
*Program Director*

**Environmental Resources Management**  
399 Boylston Street, 6<sup>th</sup> Floor  
Boston, Massachusetts 02116  
T: (617) 646-7800  
F: (617) 267-6447

**WAYLAND WETLANDS AND WATER RESOURCES BYLAW FILING  
MATERIALS**

Chapter 194 Application

Application Submission Requirements Checklist

Project Summary and Waiver Request Statement

Copy of Local Filing Fee

**APPENDIX A - ABUTTER NOTIFICATION MATERIALS**

Affidavit of Service

Abutter Notification

Certified Abutters List

**APPENDIX B - FIGURES**

Figure 1 - Site Locus Map

Figure 2 - Proposed Sentinel Well Locations

**APPENDIX C - 16 JULY 2009 LETTER TO WAYLAND CONSERVATION  
COMMISSION**

*Wayland Wetlands and Water  
Resources Bylaw Filing Materials*



**WAYLAND'S WETLANDS AND WATER RESOURCES BYLAW ("CHAPTER 194")  
APPLICATION SUBMISSION REQUIREMENTS CHECKLIST  
Page 1 of 4**

Upon submittal of any Bylaw application the applicant(s), property owner (if different), and their representative(s) must sign this checklist.

**The following 8 items are necessary for ALL Bylaw applications. No exceptions.**

- Original MA Wetlands Protection Act ("WPA") application, including owner(s) signature, the applicant(s) signature, minimum 1 set of colored plan(s), narrative, etc. NOTE: If a WPA Application is not filed a copy of either a statement as to not applicable (limited generally to buffer zone to bordering land subject to flooding) or a valid Order of Resource Area Determination (ORAD) must be provided with copies.
- Original Chapter 194 Bylaw application, including owner(s) signature, the applicant(s) signature, and minimum 1 set of colored plan(s), narrative, etc.
- 8 copies of the MA Wetlands Protection Act application, including all plans, narratives, etc.
- 8 copies of the Chapter 194 Bylaw application, including all plans, narratives, etc.
- N/A*  A separate check for all applicable Wetlands Act fees. *(no fee for RPA filing)*
- A separate check for all applicable Chapter 194 Bylaw fees.
- A list of the 100' Abutters, certified by the Assessors Office.
- Evidence of Board of Health receipt of application or approval for all applications.
- Project Summary
  - PS 1. A narrative statement describing all of the activities proposed. If work is omitted from the narrative it may not be permitted.
  - PS 2. A narrative summary description of the types of wetland resource areas on or near the site. Omission of resource areas is a basis for denial of the project as being incomplete.
  - PS 3. A narrative discussion how the project has been designed to minimize impacts to resource areas and how any mitigation has been proposed to better protect or enhance the resource areas during and after construction. **The Conservation Commission will evaluate your application looking at a project and the impact on the resource area (e.g. a wetland, pond, vernal pool, riverfront area, etc.) The Commission's priorities for project assessment are avoidance, minimization, and mitigation of impacts to resource area/s in that order. If mitigation is proposed the Commission will require a greater than 1:1 ratio of replication for impact -1:1.5 for wetlands and 1:1.4 for buffer zone. Your summary should clearly include how you have addressed these priorities.**
  - PS 4. A narrative discussion that presents justification, based on factors of technical or economic feasibility, why alternatives that might minimize or completely avoid adverse impact to the Riverfront Area, Floodplain, the Buffer Zone, and/or any other resource area are not being proposed. At a minimum there must be discussion of the alternative for no alteration.

**The following items are required for Site Plans submitted with a Bylaw application; however, if the Applicant considers that the information is not relevant to the scope or scale of the proposed project, a Waiver(s) of requirements must be requested at the time of filing the application (see p. 4) with the Conservation Commission.**

**WAYLAND'S WETLANDS AND WATER RESOURCES BYLAW ("CHAPTER 194")**  
**APPLICATION SUBMISSION REQUIREMENTS CHECKLIST**  
**Page 2 of 4**

**Site Plan Minimum Requirements**

The following shall be included on the Site Plan:

- 1A. Stamp of a Professional Engineer (P.E.) and/or a Professional Land Surveyor (P.L.S.) depending upon proximity to lot lines or project complexity.
- OR**
- 1B. Stamp of a Registered Sanitarian (R.S.) is acceptable for designs of septic systems handling less than 2,000 gallons per day, with incidental site work. Not acceptable for other project designs, determination of lot lines, or non-septic grading.
  
- 2. Grade elevations based on National Geodetic Vertical Datum (NGVD). Grade contours in the area of work shall be provided with at least 1-foot intervals.
- 3. Plan Scale: 1 inch = 10 feet, or 1 inch = 20 feet.
- 4. Wetlands flagging with letters and/or numbers as defined in the field.
- 5. Date that wetlands flagging was done, name of who did the delineation work, and/or source of information used to depict the wetlands. *SEE FIGURE 2.*
- 6. Site Plans must clearly show existing conditions and proposed conditions, utilities, impervious surfaces, limit of lawn, trees greater than 6 inches in diameter, significant land features such as rock outcroppings, all Resource Areas (differentiate each) including Buffer Zone. *Note: It may be more comprehensible to submit two plans: an existing conditions plan and a proposed conditions plan.*
- 7. Site plans must detail the permanent demarcation of the limit of lawn with minimum 30' offset from resource area for new construction, and minimum average 15' offset for existing dwellings.
- 8. Colored lines/areas for Wetland Resource Areas and Critical Site Features with suggested colors:
  - Blue - stream/bank limit of flood plain
  - Green - Limit of lawn and/or tree line
  - Gray - Areas of impervious surface
  - Black - Limit of work on property including construction activity
  - Yellow - riverfront 100ft and 200ft (Need another symbol as well since yellow will not copy.)
  - Red - Wetland resource & 30 ft no-disturb line
  - Brown - area of filling of resource area or buffer zone
- 9. Locations and identifiers for all test pit locations. *NEW LOCATIONS*
- 10. A cross-section of grading and profile for proposed septic systems.
- 11. Locations for temporary stockpiles or storage of soils or demolition debris during construction.
- 12. Access route for construction equipment.
- 13. Location of hay bales and/or silt fence sediment barrier.
- 14. Detail for installation of sediment barrier.
- 15. Location for refueling of equipment. (Outside buffer zone strongly preferred)
- 16. Pre/Post-Construction Lot Coverage Summary for areas within by-law jurisdiction: a) Total lot area; b) total impervious area (**Note: impervious areas shall include, but are not limited to, roofs, decks, walks, and driveways**); c) total landscaped/lawn area; and d) total area altered during construction (including temporary impacts).

**WAYLAND'S WETLANDS AND WATER RESOURCES BYLAW ("CHAPTER 194")**  
**APPLICATION SUBMISSION REQUIREMENTS CHECKLIST**  
Page 3 of 4

**Drainage Requirements - N/A**

The Commission seeks to protect water quality for surface water and groundwater, and to have no increase to the rate or quantity of runoff of storm water from the property.

- 1A. For projects adding less than or equal to 500 square feet of impervious area, a narrative description of specific measures used to provide for infiltration of runoff equivalent to runoff this additional impervious area. Those measures must be clearly depicted on the Site Plan as a specification.

**OR**

- 1B. For projects adding more than 500 square feet of impervious area a set of calculations with:
  - 1B.1 A narrative discussion of the method used, and a statement of all assumptions used in drainage calculations
  - 1B.2 A plan showing drainage catchment areas
  - 1B.3 Supporting calculations stamped by a P.E.
  - 1B.4 Summary tables presenting Pre/Post Construction Storm Water Runoff Rates and Volumes for a 1-inch storm event, a 10-year, and a 100-year storm events. Note: Rainfall of at least 7 inches in 24 hours must be used for 100-year storm event.
- 2. Description whether site is within an urbanized area or Riverfront area (NPDES – Phase II Storm Water). If site is within an urbanized area, as defined by Town of Wayland map, the nearest off-site storm water drainage structures must be identified. Urbanized Areas: Town of Wayland Map entitled: "Urbanized Areas from 2000 United States Census Wayland, Mass." prepared by Wayland GIS, June 20, 2001.
- 3. Narrative description of structural and non-structural best management practice (BMP) (See "Definitions), controls for storm water management with the project **both during phases of construction and for long term site management:**
  - 3a. Evaluation of BMP selection and factors of site suitability including: soils, drainage area, depth to water table, depth to bedrock, slopes and proximity to wells and foundations
  - 3b. Discussion of construction phasing
  - 3c. Relevant site characterization data for design
  - 3d. Water quality calculations for total suspended solids (TSS) removal
  - 3e. Calculated storm water recharge rate
  - 3f. Calculated peak discharge rate
- 4. Maintenance requirements for BMPs must be specified. Operation and Maintenance (O&M) plans for Stormwater shall be submitted with the application describing short-term BMPs (during construction) and long-term BMPs (post-construction) for management of the drainage structures, roadway and/or parking lot (as applicable) including but not limited to sweeping; catch basin cleaning; snow storage and erosion controls, such as hay bales or sediment fences. The drainage components (Best Management Practice – BMP) shall be as described using terminology in the DEP Storm water Technical Handbook, March 1997.
- 5. Aquifer Protection District – If the project is within this area, a narrative description of how the project complies with aquifer protection requirements.

**Soils Information - N/A**

- 1. Septic Systems or Drainage BMPs (where applicable) - Clear statement of how many test pits or borings were conducted for the project planning and engineering evaluations and what number and types of analytical methods may have been applied for soils characterization including visual evaluation, percolation tests, field screening, and laboratory analyses.
- 2. Septic Systems and/or applicable drainage BMP - Copies of all soil data including boring and/or test pit logs.
- 3. Soil auger or test pit logs for delineation of wetland resources on the property.



**WAYLAND'S WETLANDS AND WATER RESOURCES BYLAW ("CHAPTER 194")  
APPLICATION SUBMISSION REQUIREMENTS CHECKLIST  
Page 4 of 4**

**Waivers**

Please submit the original and 8 copies of this page

In the event that Applicant considers certain required information to be, in their opinion, not relevant to the scope or scale of the proposed project Applicant may request a Waiver of the requirements with this application to the Conservation Commission. Indicate all provisions requested for Waiver below designating the specific paragraph number/letter designation.

Site Plan Minimum Requirement Waiver(s)  None  List 1-4, 6, 7, 10-16  
Drainage Requirement Waiver(s)  None  List ALL  
Soils Information Waiver(s)  None  List ALL

If applicable, attach a statement for justification of the requested waivers.

*SEE ATTACHMENT*

**In the event that any requested Waiver is not granted by the Commission or the application is otherwise found to be deficient in providing required information the hearing may at the discretion of the Commission either be closed and denied for the lack of information or continued for a specific timeframe approved by the Commission for the Applicant to submit the required information.**

**The Commission has authorized its Staff personnel to review projects and to not accept project applications under the Bylaw that have apparent deficiencies to meeting the above requirements as a matter of avoiding lost time for the Commission, Applicants and other interested parties at the hearing. Notwithstanding that authority, acceptance of an application by the Staff does not represent a decision that the application is fully complete. In the event that Applicant considers the application fully complete over the objections of Staff the application will be accepted and Staff will report their findings to the Commission during the hearing.**

The property owner, as well as the applicant and/or representative (if different from owner) must sign this checklist and all other applicable applications. The property owner, by signing this checklist and the applications, acknowledges that the Commission and Staff may enter the property to inspect the premises as part of the assessment of the application.

Agreement with Raytheon

Property Owner's Name (Print)

Property Owner's Signature

Date

I certify under penalty of law that this document and all its attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Chip Buckhardt

Applicant's Name (Print)

Chip Buckhardt

Applicant's Signature

9-10-09

Date

**Project Summary and Waiver Request Statement  
Supplement Environmental Program Sentinel Monitoring Wells  
Former Raytheon Facility  
Wayland, Massachusetts**

**Project Summary 1 – Narrative Statement**

The project involves installing three sentinel monitoring wells (referred to as A, B, and C) located collectively on two town parcels (Parcel ID# 18-4, 18-6) between the Former Raytheon Facility at 430 Boston Post Road in Wayland, MA and the Baldwin Pond Wellfield (see Figure 1). A third town parcel (Parcel ID# 18-5) is also listed should any of the proposed wells be relocated and installed on this parcel.

At a hearing on 11 June 2009, the Wayland Conservation Commission (Commission) discussed with Raytheon the possibility of conducting a Supplemental Environmental Program (SEP) in association with the Former Raytheon Facility project (DEP File No. 322-553). Raytheon agreed to conduct a SEP, which includes installing the sentinel monitoring wells on Town of Wayland property. Appendix D contains a letter to the Commission dated 16 July 2009 that outlines this current proposal.

Environmental Resources Management (ERM) and Raytheon have reviewed historical groundwater data and the site conceptual model to define the approximate well locations shown on Figure 2. The actual well locations will be determined in the field based on available access for vehicle-mounted drilling equipment and the utilization of open field/woodland edges. The drilling contractor will select the method of installation; hollow stem auger, or hydraulic rotary drill are the most likely methods. The installation will take approximately 2 days to complete per location.

**Project Summary 2 – Description of Wetland Resource Areas**

The monitoring wells would be installed within upland successional fields/woodland edges to minimize and/or avoid tree clearing. Well B would be located within the 100-foot Buffer Zone of Bordering Vegetated Wetlands (BVW, state and local jurisdiction) and within 100 feet of the 100-year floodplain (local jurisdiction). Figure 2 shows the limits of BVW and the 100-year floodplain on the subject properties. The limits of BVW were established as part of the Master Special Permit Submission dated May 2007 for the Wayland Town Center project, which was previously proposed on or near the subject parcels. The

extent of the 100-year floodplain (Zone AE) is based on FEMA Flood Insurance Rate Maps. Wells A and C are currently proposed outside all state and local wetland resource and buffer zone jurisdictions.

### **Project Summary 3 - Minimization and Mitigation Measures**

Each well installation will require approximately 15' by 15' of workspace. No work is proposed within BVW, Isolated Freshwater Wetlands, 100-year floodplain, or the 200-foot Riverfront Area of the Sudbury River. Only Well B is currently proposed within 100 feet of BVW and the 100-year floodplain. ERM will site each well location in the field and supervise its installation to ensure that Best Management Practices (BMPs) are properly implemented. These BMPs will include:

- Minimizing tree disturbance to the extent possible by utilizing existing paths, open fields, and woodland edges for vehicle access and workspace for the well installation;
- Installing erosion control barriers along the limit of work upgradient of BVW in the Buffer Zone (at a minimum). Staked straw bales with silt fence will be the recommended erosion control barrier;
- Restoring ground conditions to approximate pre-installation conditions. Restoration measures will include raking the impacted area, seeding it with a New England Conservation/Wildlife Seed Mix (or an equivalent), and applying straw mulch to prevent seed washout; and
- Removing Drill cuttings and waste material and debris from the Site for proper disposal.

### **Project Summary 4 - Alternatives**

No specific alternatives to this proposal are proposed. The Commission has offered the Town of Wayland property as an alternative location for Raytheon's SEP. As mentioned, the proposed well locations are based on the review of historical groundwater data and the site conceptual model.

### **Statement on WPA Filing**

No state filing under the Massachusetts Wetlands Protection Act (WPA) is required for this project. The proposed installation of Well B within the 100-foot Buffer Zone of BVW is an exempt activity per 310 CMR 10.02(2)(b)1. These

exempt “minor” activities are temporary in nature, have negligible impacts, and are necessary for planning and design purposes.

### **Waiver Request Statement**

Many of the checklist requirements are not applicable to this type of project, as it does not involve site grading activities or the creation of impervious surfaces.

This application presents a site plan figure, although it does not present elevations since there will be no site grading activities. The drainage checklist requirements are not applicable because the well installation will not alter or impact the drainage capacity of the area.

VENDOR

CHECK NUMBER

ERM. Account Number:

PLEASE DETACH AND RETAIN FOR YOUR RECORDS

INVOICE NUMBER

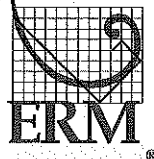
DATE

VOUCHER NO.

AMOUNT

TOTAL:

THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS RED LOGO NEAR SIGNATURE LINE. RED IMAGE DISAPPEARS WITH HEAT.



ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116  
(617) 646-7800



WACHOVIA

3-50  
310

DATE:

September 9, 2009  
NO. 057963

PAY

One Hundred Fifty and <sup>00</sup>/<sub>100</sub>

\$ 150.00

TO THE  
ORDER  
OF

Town of Wayland  
41 Cochituate Road  
Wayland, MA 01778

*Maura A. DeMarco*

AUTHORIZED SIGNATURE

ORIGINAL CHECK IS PRINTED ON CHEMICAL REACTIVE PAPER WHICH CONTAINS A WATERMARK

⑈057963⑈ ⑆031000503⑆ 2000031445506⑈

ERM.

*Appendix A*  
*Abutter Notification Materials*

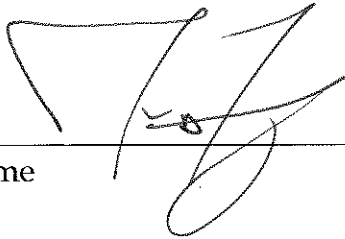
**AFFIDAVIT OF SERVICE**

I, Jason Flattery, hereby certify under pains and penalties of perjury that on 10 September 2009, I mailed a "Notification to Abutters" in compliance with Part 1.A of Wetlands and Water Resources Bylaw Chapter 194, Rules and Regulations (revised 5 June 5, 2008) in connection with the following matter:

A Request for Determination of Applicability was filed under the Town of Wayland Wetlands and Water Resources Bylaw (Chapter 194) on 10 September 2009 for the installation of sentinel monitoring wells at 0 Old Sudbury Road.

The Abutter Notification Letter is attached to this Affidavit of Service.

Name

A handwritten signature in black ink, appearing to read "Jason Flattery", written over a horizontal line.

Date

9/10/2009

**REQUEST FOR DETERMINATION OF APPLICABILITY  
ABUTTER NOTIFICATION LETTER**

DATE: 10 September 2009

**RE: Wayland Conservation Commission Public Hearing**

To Whom It May Concern,

As an abutter of a proposed project, please be advised that a Request for Preliminary Determination under the Wayland Wetlands and Water Resources Bylaw, Chapter 194 Rules and Regulations has been filed with the Town of Wayland Conservation Commission.

**APPLICANT:** Raytheon Company

**PROJECT ADDRESS OR LOCATION:** 0 Old Sudbury Road

**PROJECT DESCRIPTION:** Installation of three sentinel monitoring wells

**APPLICANT'S AGENT:** Environmental Resources Management  
399 Boylston Street  
Boston, MA 02116  
(617) 646-7800

**PUBLIC HEARING:** Wayland Town Building  
41 Cochituate Road  
Wayland, MA 01778

DATE: September 24, 2009

TIME: Contact Commission for start time.

**NOTE:** You may consult a copy of the *Wayland Town Crier* or MetroWest Daily, or contact the Wayland Conservation Commission at 508-358-3669 for information on the Public Hearing.

**NOTE:** Plans and application describing the proposed activity are on file with and can be obtained from the Wayland Conservation Commission at 508-358-3669.

**NOTE:** You also may contact the Department of Environmental Protection, Northeast Regional Office for more information about this application or the Wetlands Protection Act at (978) 694-3200.





Town of Wayland  
41 COCHITUATE ROAD  
WAYLAND MASSACHUSETTS 01778

Www.wayland.ma.us TEL. 508-358-3788

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OFFICE STAFF

Savitri Ramgoolam, Department Assistant

WAYLAND  
BOARD OF ASSESSORS  
Bruce B. Cummings, Chairman  
Susan Rufo, Vice Chairperson  
Jayson Brodie  
Molly Upton  
Zachariah L. Ventress

PLEASE ALLOW 10 BUSINESS DAYS FOR A LIST TO BE CERTIFIED BY ASSESSORS PER MGL CH. 66, S.10  
LISTS ARE CERTIFIED ON A "FIRST COME, FIRST SERVE" BASIS PLEASE PLAN YOUR SUBMISSION ACCORDINGLY

Date of request 9/4/2009 Telephone: 617-447-3459

Person requesting certification (PLEASE PRINT) PHIL LONDON

Signature [Signature]

Mailing Address 399 Boylston St. 6<sup>th</sup> Floor  
Boston, MA 02116

Name of Board or Commission list is being prepared for ERM

Location of Property 0 Old Sudbury Rd. (COW COMMON)

Map Number 18 Parcel 004,005,006

\*\*\*Please check with the Board/Commission for their guidelines, each Board/Commission has its own regulations for their abutters listing.

For use by Assessors

- The attached list has more than three errors - Please submit a corrected list
- The attached list is certified to be a correct listing of abutters for the described application, based on the most recent tax bill

This is to certify that at the time of the last assessment for taxation made by the Town of Wayland, the names and addresses are the assessed owners to these parcels.

Certified By: [Signature] Date: 9/4/09

cc: Con Com.

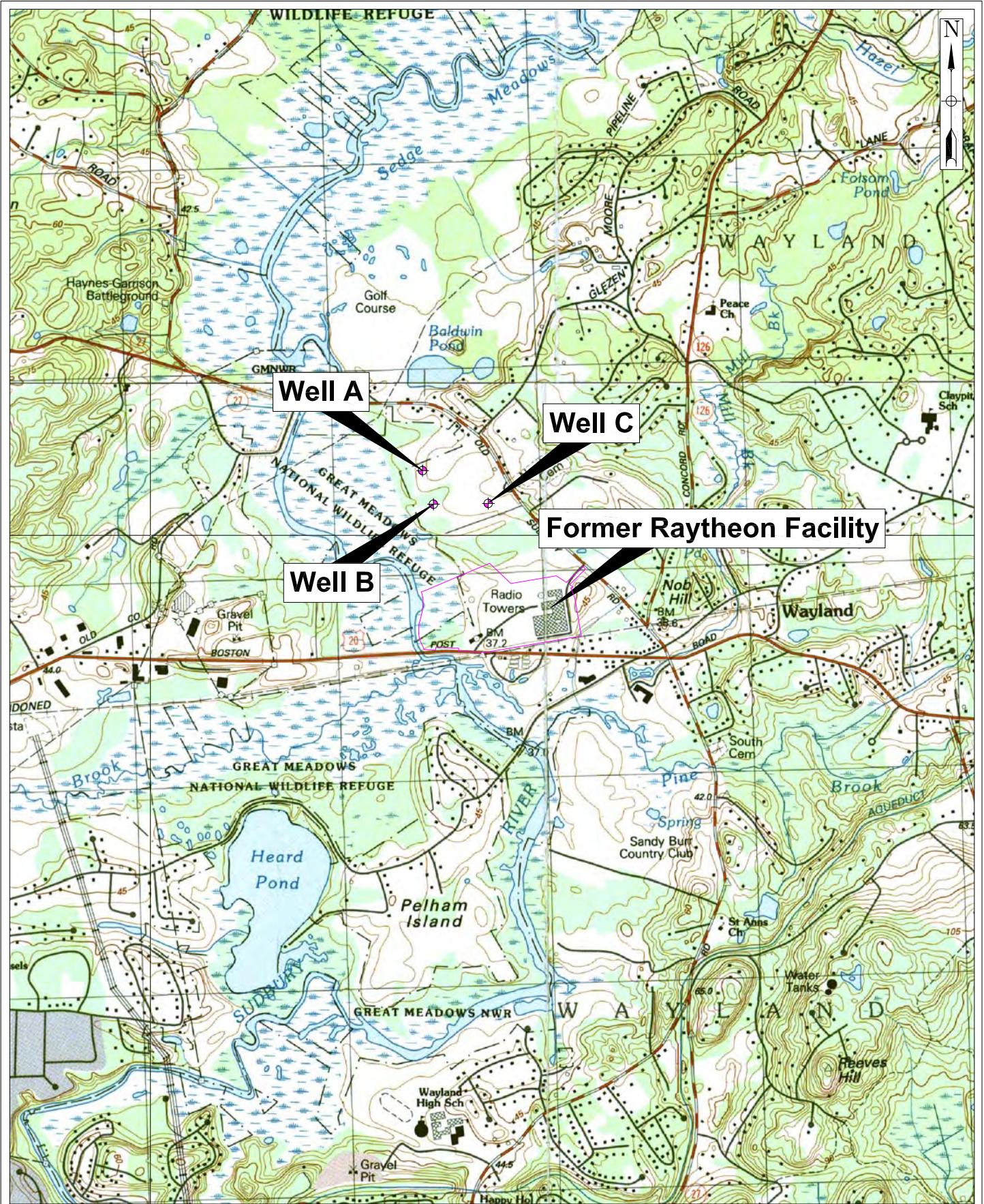
mailed  
9/4/09

ParID	Number Street	Owner 1	Owner 2	Mailing Addr	City	State	Zip
17-005A	0 OLD SUDBURY RD	UNITED STATES OF AMERI	FISH & WILDLIFE SERVICE	300 WESTGATE CENT	HADLEY MA	MA	1035
17-024	0 OLD SUDBURY RD	UNITED STATES OF AMERI	FISH & WILDLIFE SERVICE	300 WESTGATE CENT	HADLEY MA	MA	1035
17-024A	0 OLD SUDBURY RD	UNITED STATES OF AMERI	FISH & WILDLIFE SERVICE	300 WESTGATE CENT	HADLEY MA	MA	1035
17-025	0 OLD SUDBURY RD	UNITED STATES OF AMERI	FISH & WILDLIFE SERVICE	300 WESTGATE CENT	HADLEY MA	MA	1035
17-025A	80 OLD SUDBURY RD	WAYLAND TOWN OF	CONSERVATION COMMISSION	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-002	0 OLD SUDBURY RD	WAYLAND TOWN OF	CONSERVATION COMMISSION	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-003	0 OLD SUDBURY RD	WAYLAND TOWN OF	CONSERVATION COMMISSION	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-004	0 OLD SUDBURY RD	WAYLAND TOWN OF	CONSERVATION COMMISSION	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-005	0 OLD SUDBURY RD	WAYLAND TOWN OF	CONSERVATION COMMISSION	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-006	0 OLD SUDBURY RD	KENNEDY FRANCIS D	REGINA KENNEDY	84 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-007	84 OLD SUDBURY RD	GUNTUPALLI ANIL K	PINNAMANENI SITA T/E	86 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-008	86 OLD SUDBURY RD	REED JAMES C	REED MARY C	83 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-012	83 OLD SUDBURY RD	NORMANDIN FRANK E	NORMANDIN KRISTINE K	79 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-027	79 OLD SUDBURY RD	DAWSON JOHN E JR	DAWSON KRISTEN M	75 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-028	75 OLD SUDBURY RD	HARRIS HUNTER C & MATT	OLD SUDBURY RLTY TRST	73 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-029	73 OLD SUDBURY RD	PALANGI MARY G TRST	PALANGI TRST	71 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-030	71 OLD SUDBURY RD	YOUNG JUDITH ANN	NORTH CEMETERY	67 OLD SUDBURY RD	WAYLAND MA	MA	1778
18-031	67 OLD SUDBURY RD	WAYLAND TOWN OF	LAKEVIEW CEMETERY	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-032	65 OLD SUDBURY RD	WAYLAND TOWN OF	LAKEVIEW CEMETERY	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-032A	65 OLD SUDBURY RD	WAYLAND TOWN OF	LAKEVIEW CEMETERY	41 COCHITUATE RD	WAYLAND MA	MA	1778
18-033	61 OLD SUDBURY RD	COLE DOUGLAS G	COLE NANCY A	61 OLD SUDBURY RD	WAYLAND MA	MA	1778

*SAK*  
9/4/09

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BOARD OF ASSESSORS

*Appendix B*  
*Figures*



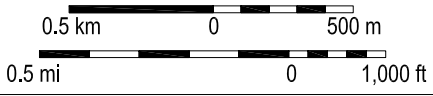
**Well A**

**Well C**

**Well B**

**Former Raytheon Facility**

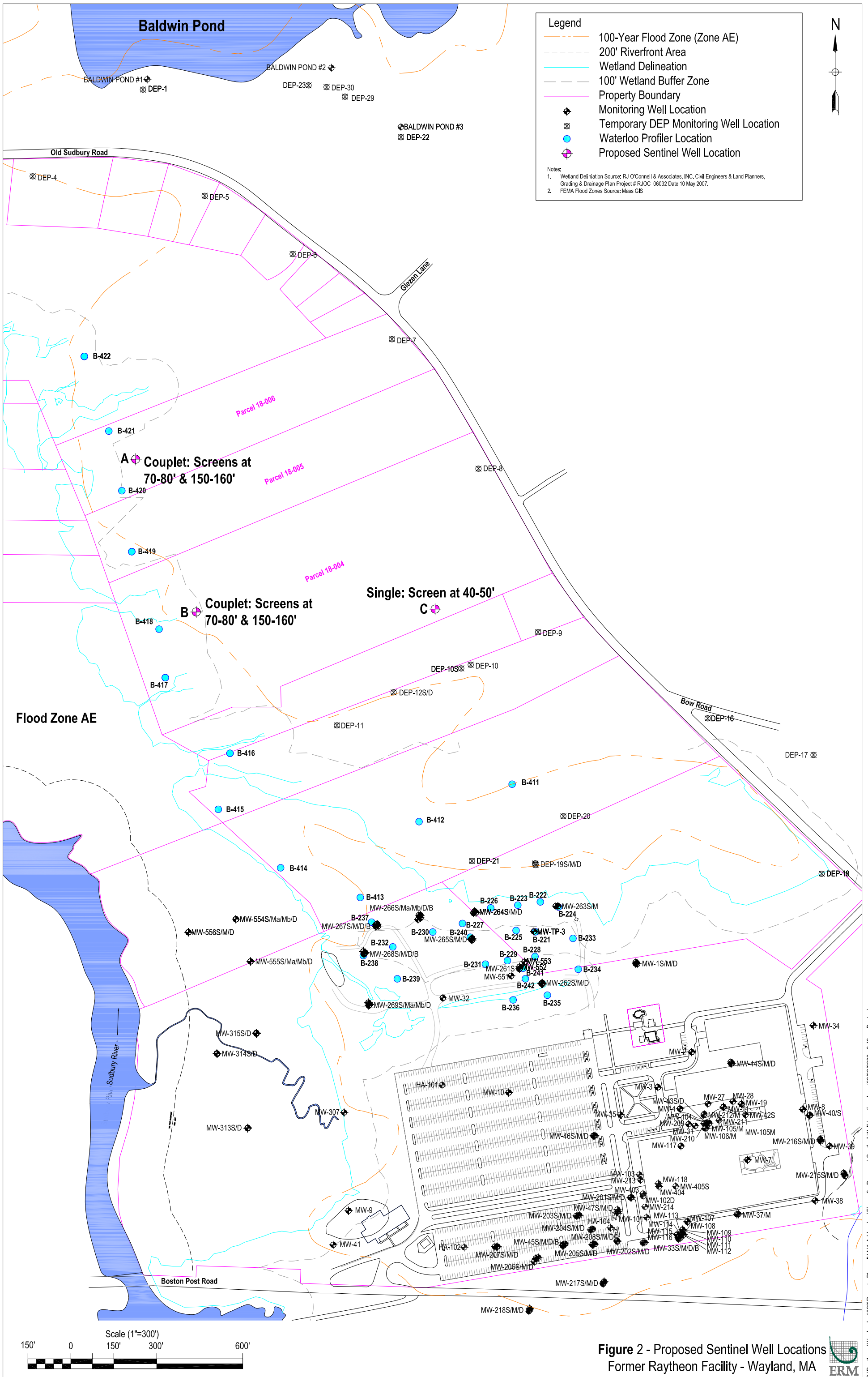
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Legend	
	Subject Property Line
	Proposed Sentinel Monitoring Well Location

**Figure 1 - Site Locus Map**  
**Proposed Installation of Sentinel Wells**  
**Former Raytheon Facility - Wayland, MA**





*Appendix C*  
*16 July 2009 Letter “Monitoring*  
*Well Locations for Supplemental*  
*Environmental Program”*

16 July 2009  
Reference: 0095922.06

Mr. Brian Monahan  
Conservation Commission Agent  
Town of Wayland  
Wayland Town Building  
41 Cochituate Road  
Wayland, MA 01778

Re: Monitoring Well Locations for Supplemental Environmental  
Program  
DEP File No. 322-553  
Former Raytheon Facility  
430 Boston Post Road, Wayland, Massachusetts

Dear Mr. Monahan and Commissioners:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) is submitting this letter to provide a recommendation for the construction and installation of sentinel monitoring wells between the Former Raytheon Facility at 430 Boston Post Road in Wayland, Massachusetts (Site) and the Baldwin Pond Wellfield.

On 11 June 2009, Raytheon and ERM attended a Conservation Commission (Commission) meeting to discuss the Request for Certificate for Compliance (ERM, 30 January 2009) for the Order of Conditions issued 26 September 2003 and amended 10 February 2004, and to request the return of the associated performance bond. At the meeting, the Commission expressed its desire to recommence discussions with Raytheon regarding a Supplemental Environmental Program (SEP) for the work conducted under that Order of Conditions. Raytheon agreed to conduct a SEP and volunteered to install sentinel monitoring wells between the Site and Baldwin Pond Wellfield (SEP alternative offered by the Commission in their letter dated 22 June 2005).

ERM and Raytheon have reviewed historical groundwater data and the site conceptual model to define well locations shown in Figure 1. The following table summarizes well construction details.

### *Well Construction Details*

Well I.D.	General	Screened Interval (feet bgs)
A	Medium (M)	70 - 80
A	Deep (D)	150 - 160
B	Medium (M)	70 - 80
B	Deep (D)	150 - 160
C	Medium (M)	40 - 50

Note: bgs = Below ground surface.

Locations A and B are situated to the east of ERM's 2004 vertical profiling transect. ERM reviewed the historical data to define:

- locations proximal to areas where trace concentrations of cis-1,2-dichloroethene (cDCE; a breakdown product of trichloroethene) were detected; and
- vertical intervals within relatively high permeability zones that represent potential preferential groundwater migration pathways (i.e., deep intervals where cDCE was detected and shallower relatively high permeability intervals at depths comparable with the depth of the Baldwin Pond wells).

Location C is situated north of the Department of Environmental Protection's (Department's) temporary monitoring well DEP-10D. This location was selected based on the historical detection of TCE and cDCE at trace concentrations in DEP-10D.

These sentinel well locations are on Commission owned property. The proposed locations are approximate and may need to be shifted to avoid high-traffic areas, open fields (where they could interfere with haying activities), or inaccessible areas. Location A lies with the 100-foot wetland buffer zone, which is under Commission jurisdiction. Thus, a Request for Determination of Applicability will need to be filed in order to install that monitoring well couplet.



Mr. Monahan  
Reference: 0095922.06  
16 July 2009  
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Environmental  
Resources  
Management

If you have any questions or comments in regard to this submittal please contact the undersigned at (617) 646-7800.

Sincerely,



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

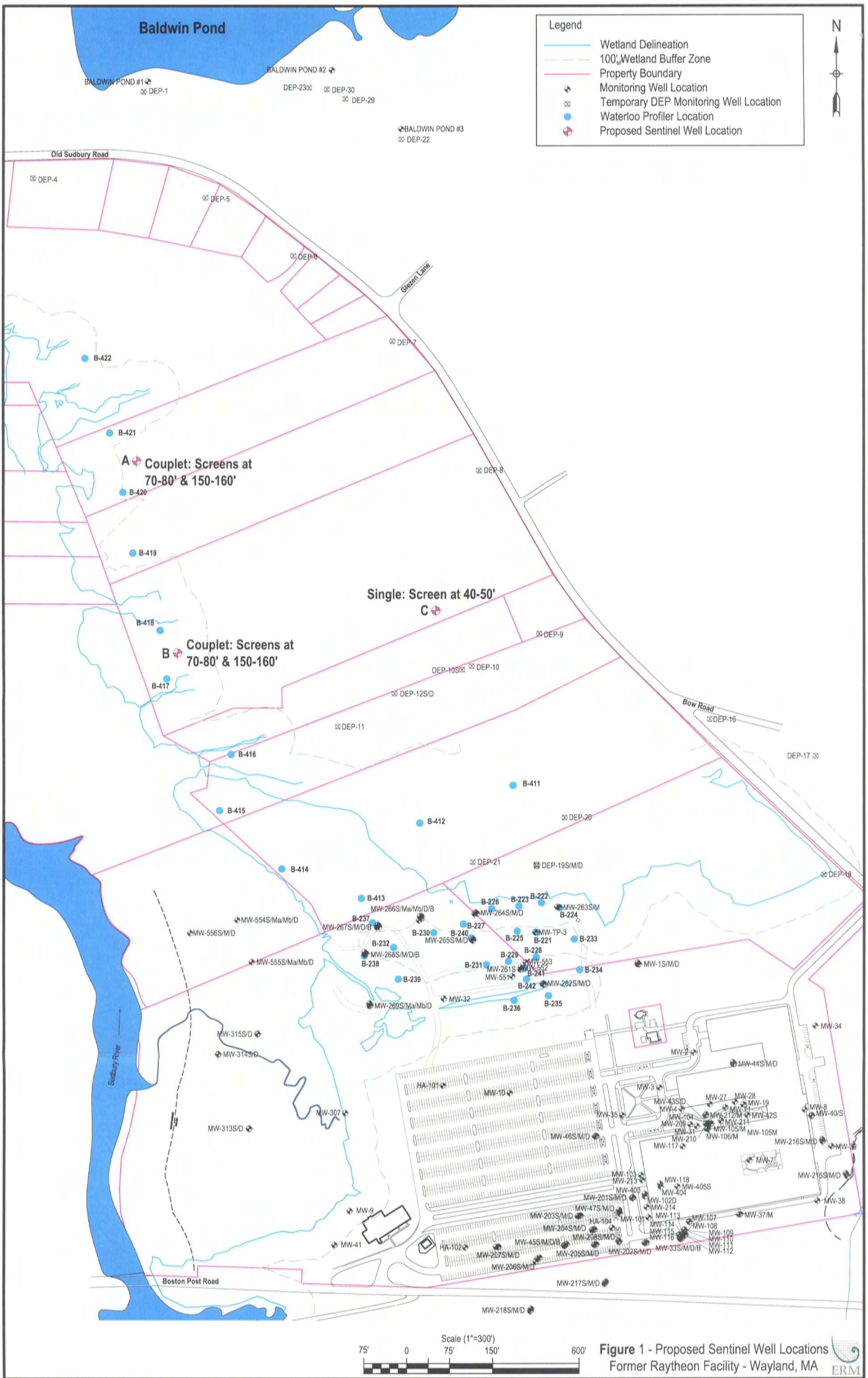


Jason D. Flattery, P.E.  
*Project Manager*

jdf

enclosures: Figure 1 - Proposed Sentinel Well Locations

cc: Louis Burkhardt, Raytheon  
Jonathan Hone, Raytheon  
Ben Gould, CMG Environmental  
Public Repositories



**Legend**

- Wetland Delineation
- 100' Wetland Buffer Zone
- Property Boundary
- ⊕ Monitoring Well Location
- ⊗ Temporary DEP Monitoring Well Location
- Waterloo Profiler Location
- ⊕ Proposed Sentinel Well Location



**A** ⊕ Couplet: Screens at 70-80' & 150-160'

**B** ⊕ Couplet: Screens at 70-80' & 150-160'

**C** ⊕ Single: Screen at 40-50'

**Figure 1 - Proposed Sentinel Well Locations  
Former Raytheon Facility - Wayland, MA**



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