Notice of Project Change

UNION POINT

Abington, Rockland, Weymouth, Massachusetts

Submitted By:

LStar Southfield LLC
26 Memorial Grove Avenue
South Weymouth, MA 02190

LStarCommunities

EEA #11085R
February 28, 2017

Epsilon ASSOCIATES INC.

Notice of Project Change

Union Point

Abington, Rockland, Weymouth, Massachusetts

Submitted to:
Executive Office of Energy and Environmental Affairs
MEPA Office
100 Cambridge St., Suite 900 (9th Floor)
Boston MA, 02114

Submitted By:

LStar Southfield LLC
26 Memorial Grove Avenue
South Weymouth, MA 02190

Prepared by:

Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, MA 01754

In Association with:
Arcadis
Dewey Square Group
Howard Stein Hudson
Kleinfelder
VHB

EEA #11085R

February 28, 2017

February 28, 2017

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: Notice of Project Change
Union Point, EEA #11085

Dear Secretary Beaton:

On behalf of LStar Southfield LLC, enclosed please find a Notice of Project Change (NPC) for the Union Point Project in Abington, Rockland, and Weymouth, Massachusetts.

Please notice the NPC in the Environmental Monitor to be published March 8, 2017. The public comment period will extend through March 28, 2017, and the Certificate will issue on April 7, 2017.

By copy of this letter, I am advising recipients of the NPC that written comments may be filed during the comment period, sent to the address above.

Copies of the NPC, including paper copies, may be obtained from Epsilon Associates at 978-897-7100, or via email at lrome@epsilonassociates.com.

Thank you for your attention to this matter.

Sincerely,

EPSILON ASSOCIATES, INC.

Laura E. Rome
Principal

Enclosure

Cc: Circulation List

PRINCIPALS

Theodore A Barten, PE
Margaret B Briggs
Michael E Guski, CCM
Dale T Raczynski, PE
Cindy Schlessinger
Lester B Smith, Jr
Robert D O'Neal, CCM, INCE
Andrew D Magee
Michael D Howard, PWS
Douglas J Kelleher
AJ Jablonowski, PE
Stephen H Slocomb, PE
David E Hewett, LEED AP
Dwight R Dunk. LPD
David C. Klinch, PWS, PMP

Samuel G. Mygatt, LLB
1943-2010

ASSOCIATES

Richard M. Lampeter, INCE
Maria B. Hartnett
Geoffrey Starsiak

3 Mill & Main Place, Suite 250
Maynard, MA 01754
www.epsilonassociates.com

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Notice of Project Change Form

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs ■ MEPA Office

For Office Use Only ***Executive Office of Environmental Affairs***
MEPA Analyst:
Phone: 617-626-

Notice of Project Change

The information requested on this form must be completed to begin MEPA Review of a NPC in accordance with the provisions of the Massachusetts Environmental Policy Act and its implementing regulations (see 301 CMR 11.10(1)).

EEA #11085R		
Project Name: Union Point		
Street Address: 26 Memorial Grove Avenue		
Municipality: Abington, Rockland, and Weymouth	Watershed: Weymouth & Weir, North & South Rivers, and Taunton	
Universal Transverse Mercator Coordinates: 4668175N 339600E	Latitude: 42.20625 Longitude: 70.94510	
Estimated commencement date: 2007	Estimated completion date: 2036	
Project Type: Mixed--use redevelopment	Status of project design: 15 %complete	
Proponent: LStar Southfield LLC		
Street Address: 26 Memorial Grove Avenue		
Municipality: South Weymouth	State: MA	Zip Code: 02190
Name of Contact Person: Laura Rome		
Firm/Agency: Epsilon Associates, Inc.	Street Address: 3 Mill & Main Place, Suite 250	
Municipality: Maynard	State: MA	Zip Code: 01754
Phone: 978-897-7100	Fax: 978-897-0099	E-mail: lrome@epsilonassociates.com

With this Notice of Project Change, are you requesting:

a Single EIR? (see 301 CMR 11.06(8)) ☐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

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

11.03(1)(a)(1) Direct alteration of 50 or more acres of land;
11.03(1)(a)(2) Creation of ten or more acres of impervious area;
11.03(2)(b)(2) Greater than two acres of disturbance of designated priority habitat;
11.03(3)(b)(1)(d) Provided that a permit is required, alteration of 5,000 or more sf of bordering or isolated vegetated wetlands;
11.03(4)(a)(2) New interbasin transfer of water of 1,000,000 or more gallons per day ("gpd");
11.03(4)(b)(3) Construction of one or more New water mains five or more miles in length;
11.03(5)(a)(2) New interbasin transfer of wastewater of 1,000,000 or more gpd;
11.03(5)(b)(1) Construction of a new wastewater treatment and/or disposal facility with a capacity of 100,000 or more gpd;

11.03(5)(b)(4)(a) New discharge or expansion in discharge to a sewer system of 100,000 or more gpd of sewage;
11.03(6)(a)(6) Generation of 3,000 or more new adt; and
11.03(6)(a)(7) Construction of 1,000 or more new parking spaces;

Which State Agency Permits will the project require?
Department of Transportation Access Permit, Street Opening Permit;
Department of Environmental Protection Groundwater Discharge Permit, Sewer Extension and Connection Permit, Water Quality Certification;
Department of Conservation and Recreation Interbasin Transfer Approval; and
Department of Fish and Game Conservation and Management Permit.

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: The Project received financial assistance from the Commonwealth for construction of the Bill Delahunt Parkway.

PROJECT INFORMATION

In 25 words or less, what is the project change? The project change involves . . .

Implementation of an updated master plan for the redevelopment of the South Weymouth Naval Air Station.

See full project change description beginning on page 3.

Date of publication of availability of the ENF in the Environmental Monitor: (Date: July 25, 2000)

Was an EIR required? ☒Yes ☐No; if yes,
was a Draft EIR filed? ☒Yes (Date: October 16, 2006) ☐No
was a Final EIR filed? ☒Yes (Date: May 31, 2007) ☐No
was a Single EIR filed? ☐Yes (Date:) ☒No

Have other NPCs been filed? ☒Yes (Date(s):December 15, 2005, February 29, 2008) ☐No

If this is a NPC solely for lapse of time (see 301 CMR 11.10(2)) proceed directly to **ATTACHMENTS & SIGNATURES**.

PERMITS / FINANCIAL ASSISTANCE / LAND TRANSFER
List or describe all new or modified state permits, financial assistance, or land transfers not previously reviewed: **dd w/ list of State Agency Actions (e.g., Agency Project, Financial Assistance, Land Transfer, List of Permits)** None.

Are you requesting a finding that this project change is insignificant? A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth or other relevant measures of the physical dimensions of the Project of less than 10% over estimates previously reviewed, provided the increase does not meet

or exceed any review thresholds. A change in a Project is also ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded. (see 301 CMR 11.10(6))
☐**Yes** ☒**No; if yes, provide an explanation of this request in the Project Change Description below.**

FOR PROJECTS SUBJECT TO AN EIR

If the project requires the submission of an EIR, are you requesting that a Scope in a previously issued Certificate be rescinded?
☐**Yes** ☒**No; if yes, provide an explanation of this request_____.**

If the project requires the submission of an EIR, are you requesting a change to a Scope in a previously issued Certificate?
☐**Yes** ☒**No; if yes, provide an explanation of this request_____.**

SUMMARY OF PROJECT CHANGE PARAMETERS AND IMPACTS[1]

Summary of Project Size & Environmental Impacts	Previously reviewed	Net Change	Currently Proposed
LAND			
Total site acreage	1,386	76	1,462
Acres of land altered	675	-12	663
Acres of impervious area	350	75	425
Square feet of bordering vegetated wetlands alteration[2]	3,480	7,310	10,790
Square feet of other wetland alteration	9,090	1,568	10,658
Acres of non-water dependent use of tidelands or waterways	0	0	0
STRUCTURES			
Gross square footage	1,500,000 Office/R&D/light industrial Up to 500,000 Retail, hotel, civic, and other uses	6,000,000	8,000,000 Commercial

[1] The full development program is shown in Table 1.6-1.
[2] Additional temporary wetland impacts may result from off-site utility work.

Number of housing units	2,855	1,000	3,855
Maximum height (in feet)	130	-10	120[3]
TRANSPORTATION			
Vehicle trips per day	34,300	45,600	79,900
Parking spaces	8,770-12,200	10,730-31,700	19,500-43,900
WATER/WASTEWATER			
Gallons/day (GPD) of water use	1,400,000	1,300,000	2,700,000
GPD water withdrawal	300,000-500,000	-210,000-410,000	90,000
GPD wastewater generation/ treatment	650,000 - 1,400,000	900,000 - 1,650,00	2,300,000
Length of water/sewer mains (in miles) On-Site water On-Site sewer Off-Site water	 Approx. 6 Approx. 4 6 to 8	 0 2 0 to 7	 Approx. 6 Approx. 6 Approx. 6-15

[3] Maximum building height allowed by zoning without Special Use Permit.

Does the project change involve any new or modified:

1. conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? ☐**Yes** ☒**No**

2. release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction? ☐**Yes** ☒**No**

3. impacts on Rare Species**?** ☐**Yes** ☒**No**

4. demolition of all or part of 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** ☒**No**

5. impact upon an Area of Critical Environmental Concern? ☐**Yes** ☒**No**

If you answered 'Yes' to any of these 5 questions, explain below:

PROJECT CHANGE DESCRIPTION (attach additional pages as necessary). The project change description should include:

(a) a brief description of the project as most recently reviewed

(b) a description of material changes to the project as previously reviewed,

(c) if applicable, the significance of the proposed changes, with specific reference to the factors listed 301 CMR 11.10(6), and

(d) measures that the project is taking to avoid damage to the environment or to minimize and mitigate unavoidable environmental impacts. If the change will involve modification of any previously issued Section 61 Finding, include a draft of the modified Section 61 Finding (or it will be required in a Supplemental EIR).

Union Point[1] is the updated development plan for the former South Weymouth Naval Air Station (the "site"), a tract of approximately 1,462 acres of land located in the towns of Abington, Rockland, and Weymouth (the "Host Communities").

The master plan for the site continues to be a mixed-use, Smart Growth redevelopment of a brownfield site. Union Point is built around a mixed-use Town Center District that combines residential, recreational, entertainment, educational, retail, and office uses in a vibrant, pedestrian-friendly setting. The adjacent Discovery District includes offices, biotech laboratory spaces, and light manufacturing opportunities. The Neighborhood District includes a range of housing options and a large recreation complex to serve Union Point and the Host Communities. Surrounding the developed portions of Union Point there are 1,007 acres of open space. Together, the Town Center, the Discovery District, the Neighborhood District, and 1,007 acres of open space form the "Union Point Project."

This Notice of Project Change ("NPC") presents the results of the year-long re-imagining and refinement of the Union Point Project conducted by the Proponent and with the assistance of the Host Communities, the local redevelopment authority, and valued stakeholders. The Union Point development plan and the rezoning efforts of the Host Communities are summarized as follows:

- Redesign of the Project to relocate residential neighborhoods and the commercial district to more appropriate sites.
- Increase in the number of age-restricted residential units.
- Increase in potential commercial square footage.
- Increased density to further Smart Growth goals.
- Elimination of planned golf course and replacement with additional passive, environmentally protected, and ecologically valuable open space.
- Reconfiguration of open space to make it a more sustainable environmental resource.
- Potential addition of a sports stadium to the Project.
- Consideration of preservation and repurposing of Hangar 2.
- Relocation of the sports and recreation complex to better serve the community.

The narrative that follows the NPC form describes in greater detail the proposed changes to the Project and their potential environmental impacts and identifies preliminary mitigation measures.

1 Union Point was previously reviewed under the name SouthField.

ATTACHMENTS & SIGNATURES

Attachments:

1. Secretary's most recent Certificate on this project – Attachment 1
2. Plan showing most recent previously-reviewed proposed build condition – Attachment 2
3. Plan showing currently proposed build condition – Attachment 3
4. Original U.S.G.S. map or good quality color copy (8-1/2 x 11 inches or larger) indicating the project location and boundaries – Attachment 4
5. List of all agencies and persons to whom the proponent circulated the NPC, in accordance with 301 CMR 11.10(7) – Attachment 5

Signatures:

2-28-2017	Signature of Responsible Officer or Proponent	2/28/17	Signature of person preparing NPC (if different from above)
Steven J. Vining		Laura E. Rome	
Name (print or type)		Name (print or type)	
LStar Southfield LLC		Epsilon Associates, Inc.	
Firm/Agency		Firm/Agency	
26 Memorial Grove Avenue		3 Mill & Main, Suite 250	
Street		Street	
South Weymouth, MA 02190		Maynard, MA 01754	
Municipality/State/Zip		Municipality/State/Zip	
919-256-1981		978-897-7100	
Phone		Phone	

Section 1.0

Proposed Project Change

1.0 PROPOSED PROJECT CHANGE

1.1 Introduction

LStar Southfield LLC (the "Proponent") is proposing the Union Point Project as the updated development plan for the former South Weymouth Naval Air Station, a tract of approximately 1,462 acres of land located in the Host Communities of Abington, Rockland, and Weymouth.

This Notice of Project Change ("NPC") presents the results of the year-long re-imagining and refinement of the Union Point Project by the Proponent with input from the Host Communities, the local redevelopment authority, and interested stakeholders. The Union Point development plan was refined over the course of a year during which the Proponent convened meetings with municipal planners, environmental scientists, and other stakeholders with the goal of incorporating into the plan those features most important to the Host Communities. This successful outreach resulted in a development program that increased commercial development and age-restricted housing, and culminated in unanimous votes by each of the Host Communities to amend their applicable zoning bylaws.

The Union Point development plan and the rezoning efforts of the Host Communities are summarized as follows:

- Redesign of the Project to relocate residential neighborhoods and the commercial district to more appropriate locations.
- Increase in the number of age-restricted residential units.
- Increase in potential commercial square footage.
- Increased density to further Smart Growth goals.
- Elimination of planned golf course and replacement with additional environmentally protected and ecologically valuable open space.
- Reconfiguration of open space to make it a more viable environmental resource.
- Addition of potential sports stadium to the Project.
- Consideration of preservation and repurposing of Hangar 2.
- Relocation of sports and recreation complex to better serve the community.

The Union Point Project lays the groundwork for a live-work-play community founded on LStar's commitment to developing a healthy and diverse environment. The Project incorporates a mix of land uses and compact development that allows Union Point to foster a cohesive sense of place while preserving and enhancing the surrounding environment. Principles which guided the redesign of the Union Point Project include the pursuit of a Smart Growth-based development and adherence to standards of civic responsibility.

The heart of Union Point is the mixed-use Town Center District that combines residential, recreational, entertainment, educational, retail, and office uses in a lively, pedestrian-friendly-setting. This is the nucleus of the Union Point live-work-play ethos, where proximity to amenities and services attracts talented workers and fosters social interaction. The adjacent Discovery District includes offices, biotechnology laboratory spaces, and light manufacturing opportunities. The Neighborhood District includes a range of housing options and a recreation complex to serve Union Point and the Host Communities.

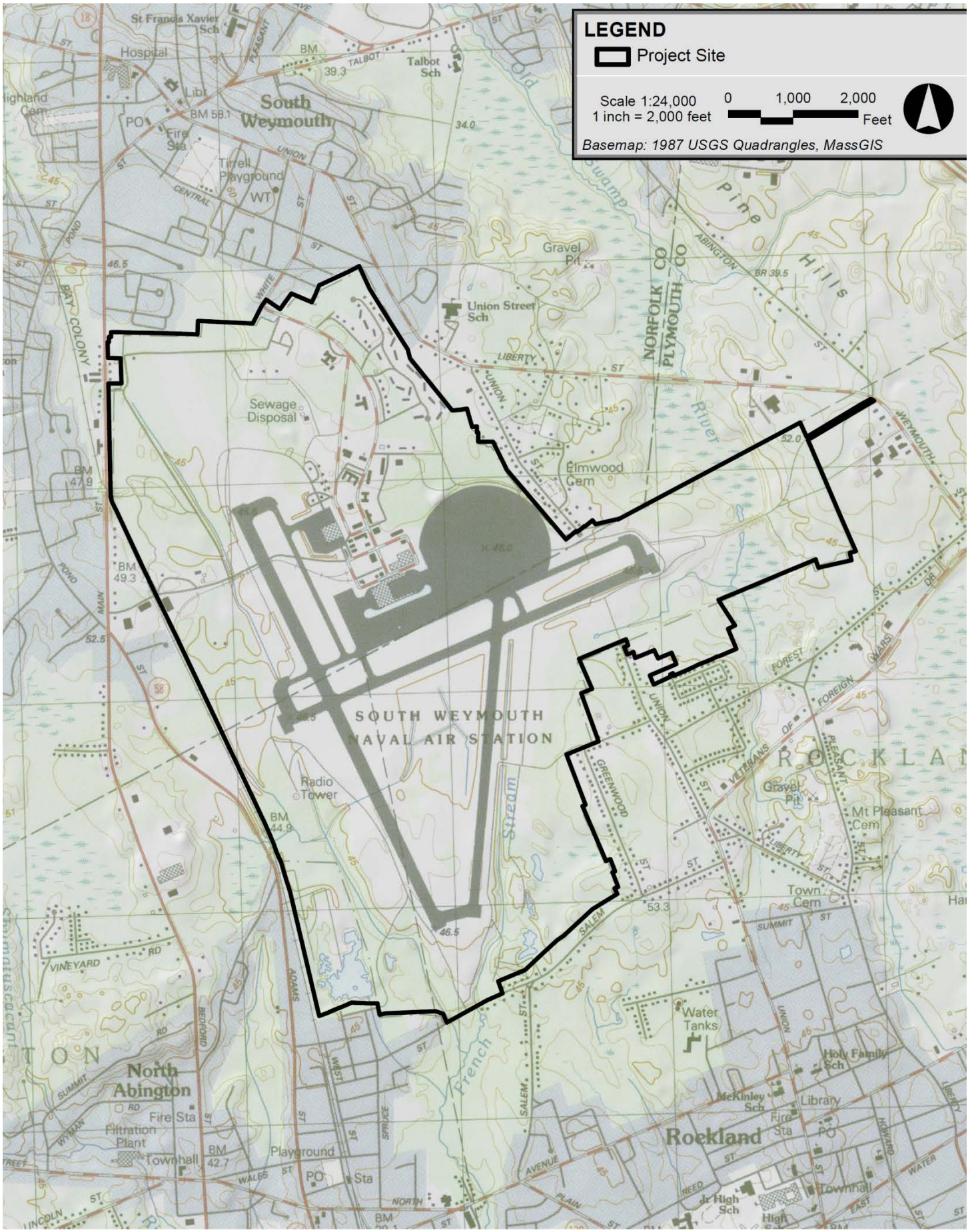
Surrounding the developed portions of Union Point there are more than 1,000 acres of open space. Together, the Town Center District, the Discovery District, the Neighborhood District, and the 1,007 acres of open space form the "Project," which is shown on Figure 1.1-1 (USGS Locus Map) and Figure 1.1-2 (Union Point Master Plan).

Union Point is a community where public spaces are functional and inviting. Both passive and active recreation spaces are found throughout the site and are linked by pedestrian and bike corridors. Because of the thoughtful design of public spaces, Union Point is already experiencing a growth in community gatherings and activities.

Union Point also provides significant benefits to its Host Communities. Residential and commercial development is planned to maximize value to each of the Host Communities while minimizing the demands on municipal services. The Union Point design further lessens the burdens on public services by incorporating live-work-and-play in the same Project.

The framework of environmentally sensitive development stretches throughout the Project. Development guidelines encourage new buildings to incorporate energy- and water-efficient design strategies, which consume less energy and water than comparable conventional development projects. Waste management and recycling programs further reduce Union Point's environmental footprint. Most importantly, Union Point's proximity to existing public transportation facilities, and LStar's commitment to improving and expanding public transportation opportunities will help ensure that Union Point's vitality is bolstered by convenient access to transportation options for residents, workers, and visitors.

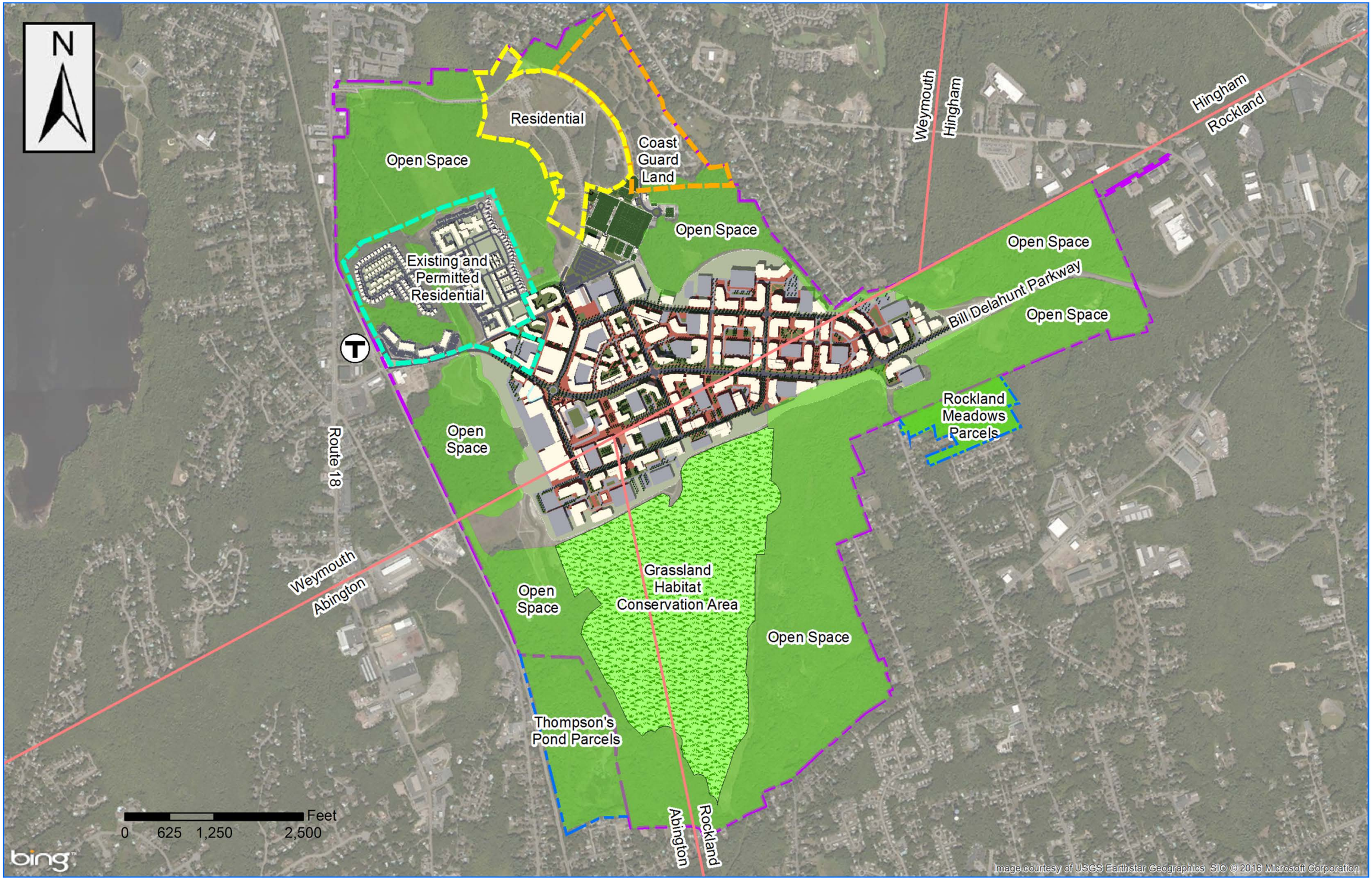
By creating housing and commercial development opportunities that support one another, Union Point is transforming a brownfields site into thriving neighborhoods that seamlessly integrate into the Host Communities of Abington, Rockland, and Weymouth. The range of residential opportunities at Union Point provides high-quality housing choices for a diversity of households. At least ten percent of the residential units will be priced as either affordable or workforce housing. This mix of housing, and its proximity to commercial districts, has the added benefit of creating neighborhoods that will be active during evening hours and on weekends.



Union Point **Abington, Rockland, Weymouth, Massachusetts**

UNION POINT LStarCommunities Epsilon ASSOCIATES INC.

Figure 1.1-1
USGS Locus Map



Union Point **Abington, Rockland, Weymouth, Massachusetts**

UNION POINT LStarCommunities vhb

Figure 1.1-2

Union Point Master Plan

Union Point is, however, anchored by its unparalleled commercial development opportunities located near Town Center District amenities. The proximity of commercial and residential development provides a rare opportunity for businesses relocating to Union Point. Companies representing a range of industries recognize that compact, walkable locations are good for business and are choosing their operating locations accordingly. This is particularly apparent where housing and transportation options are close together, such as at Union Point. Access to labor, improvements in productivity, and robust retail activity are all benefits of Union Point's Smart Growth development program, and as a result LStar is welcoming an exciting range of businesses to Union Point.

With multiple destinations close to one another, creating a walkable and bike-able community is important to LStar. Union Point successfully facilitates multiple forms of transportation through pedestrian and bicycle connectivity and transportation demand management programming. An interconnected network of paths and linkages throughout Union Point enhances quality of life by supporting a physical activity within a pedestrian-scale urban form connected to open space and conservation land protected by LStar.

1.2 Project Update

Economic challenges, particularly the regional and national recession, effectively stopped development of the previously-proposed project. In December 2014, the Proponent's predecessor in interest (the "Predecessor"), then the developer of record, requested to transfer its ownership interest in that project to the Proponent. An agreement was reached between LStar, the Predecessor, and the Southfield Redevelopment Authority ("SRA"), pursuant to which the SRA consented to the transfer of the Predecessor's interests to LStar. That change created the opportunity to re-imagine the Project in light of current circumstances and needs, resulting in the Union Point Project.

While much of the first year of the Project was spent planning and working with impacted constituencies, that is not all that has occurred. Since being named developer of record, LStar has advanced a number of already-approved projects and initiatives at Union Point that fit within its broader vision for the Project. Construction has begun on both the "Brookfield Village" development, consisting of 81 single-family homes and 27 townhouses, and the 200-unit "Transit Village," composed of four free-standing four-story residential structures. The site's underutilized areas have been refurbished and reopened to the broader community. These initiatives include the restoration of public athletic and recreational facilities, facilitation of farmer's markets and food festivals, and the leasing of a former aircraft hangar to major movie studios. Where the community had previously been excluded from the site, they now have been welcomed back to participate in its revitalization. For example, more than five thousand people attended each of the concerts and food truck rodeos held at Union Point the past two summers. Sports teams use the athletic fields and the refurbished gym. Adults and children alike play baseball at the newly created "Little Fenway." In short, the Project has come back to life.

Additionally, the Proponent has made a $1.2 million mitigation payment to the Town of Weymouth. The payment was made ahead of schedule at the request of the Town so that the funds might be available sooner than municipal budgeting rules would otherwise permit. The Proponent has also made a $100,000 payment to the Town of Abington and a $200,000 payment to the Town of Rockland. The resulting progression of development at Union Point has provided a significant flow of new tax revenue to the Host Communities and the Commonwealth.

In no small part, the efforts of the Proponent have ensured Union Point's economic viability and have encouraged continued investment in the Project from both the private sector and the Commonwealth. The Proponent has already demonstrated a commitment to the key goals and objectives of the Project, particularly where residential construction activities have re-commenced. This construction also provides significant financial benefit and job growth stemming from commercial and retail activation of Union Point. It is important to note that these redevelopment activities are underpinned by the Proponent's commitment to preserving open space and wildlife habitat, providing much-needed workforce housing, and assuring that sustainable development principles are pursued to the greatest extent practicable.

1.3 New Development Program

1.3.1 Revised Master Plan

Under the project presented in the 2007 Final Environmental Impact Report ("2007 FEIR project"), residential neighborhoods of mostly single family homes were spread along both sides of the Bill Delahunt Parkway ("Parkway"). These neighborhoods extended far beyond the Village Center, where services and other amenities would have been located. Further, the residential neighborhoods would have been unnecessarily subject to noise and traffic impacts the Parkway.

The 2007 FEIR project concentrated commercial activity in areas away from the Parkway and near existing, off-site, neighborhoods of single family homes. Under the Union Point plan, these uses have been realigned so that commercial uses benefit from their proximity to the Parkway and residential uses are located north of the Town Center District within walking distance of services and amenities. Residential areas are linked to the Town Center District by paths that encourage walking and biking. The development of commercial uses will commence in and adjacent to the Town Center District so that workers will have easy access to the services and housing opportunities found in the Town Center.

Table 1.3-1 Union Point Development Program Comparison to 2007 FEIR Development Program*

Use	2007 FEIR		Notice of Project Change		Change from 2007 FEIR to NPC		Union Point Phase 1		Difference Between 2007 FEIR and Union Point Phase 1	
	Size	Unit	Size	Unit	Size	Unit	Size	Unit	Size	Unit
Residential										
Single-family detached	645	du	355	du						
Apartments/condos	1,234	du	2,000	du						
Townhomes	806	du	500	du						
Age-restricted	170	du	1,000	du						
	2,855		**3,855**	du	**1,000**	du	**2,855**	du		
Commercial										
Life Sciences	950,000	sf	2,800,000	sf	1,850,000	sf	565,000	sf	(385,000)	sf
Hi-tech manufacturing			800,000		800,000		200,000		200,000	
Manufacturing			800,000		800,000					
Office	575,000	sf	2,485,600	sf	1,910,600	sf	575,000	sf	-	sf
Retail	300,000	sf	348,400	sf	48,400	sf	300,000	sf	-	sf
Conference Center			120,000	sf	120,000	sf				
Hotel (rooms: FEIR = 150/NPC = 285)	90,000	sf	171,000	sf	81,000	sf	90,000	sf	-	sf
Stadium (15,000 seats)			270,000	sf	270,000	sf	270,000	sf	270,000	sf
Skating Rink/Hockey	60,000	sf	120,000	sf	60,000	sf	60,000	sf	-	sf
Fitness/Wellness Center	85,000	sf	85,000	sf	-		-		(85,000)	sf
	2,060,000	sf	**8,000,000**	sf	**5,940,000**	sf	**2,060,000**	sf		
Open Space										
Golf Course	204	acres	-	acres	(204)	acres	-	acres	(204)	acres
Recreation and Sports	52	acres	25	acres	(27)	acres	25	acres	(27)	acres
Neighborhood Parks	43	acres	43	acres	-	acres	43	acres	-	acres
General Passive and Active Open Space	708	acres	939	acres	231	acres	939	acres	231	acres
	1,007	**acres**	**1,007**	**acres**	**-**	**acres**	**1,007**	**acres**		

Table 1.3-1 Union Point Development Program Comparison to 2007 FEIR Development Program (Continued)

Use	2007 FEIR		Notice of Project Change		Change from 2007 FEIR to NPC		Union Point Phase 1		Difference Between 2007 FEIR and Union Point Phase 1	
Additional Uses										
Long-term Care Facility			300	beds	300	beds	300	beds	300	beds
Indoor Recreation Field House	200,000	sf	-	sf	(200,000)	sf	-	sf	(200,000)	sf
Wastewater Treatment Facility (potential)	3	acres	3	acres	-	acres	3	acres	-	acres
Multi-Modal Facility	5,000	sf	5,000	sf	-	sf	-	sf	(5,000)	sf
Public School	600	students	600	students	-	students	600	students	-	students
Civic/Community Facility	40,000	sf	40,000	sf	-	sf	40,000	sf	-	sf
Public Works Parcel	2	acres	2	acres	-	acres	2	acres	-	acres
Institutional/Social Services	37,000	sf	37,000	sf	-	sf	37,000	sf	-	sf

* Square footages and unit counts may change based on market conditions.

Increase in Number of Age-Restricted Residential Units

The Host Communities viewed the inclusion of additional age-restricted housing units as a positive element of the Project from many perspectives. First, this is a badly needed resource in the area. Second, age-restricted housing does not consume community resources in the same manner as traditional single-family housing, thus it is not as significant a financial burden on the communities. Finally, age-restricted housing generates less traffic than housing without age restrictions.

Increase in Potential Commercial Square Footage

Under the 2007 FEIR project, the amount of proposed commercial square footage was substantially less and spread over a large area of the site. It is the Proponent's belief that the site should provide the greatest economic benefit to the Host Communities and, while working with the Host Communities, it became clear that the potential of the site would not be realized under the 2007 FEIR project. To maximize the site's redevelopment potential, each of the Host Communities adopted zoning amendments that, in total, increase the potential commercial square footage of the Project from two million square feet ("sf") to eight million sf.

Reconfiguration of Open Space and Habitat Preservation

Under the 2007 FEIR project, areas of preserved grasslands were interspersed between golf holes. While there was significant acreage of preserved grasslands, it was not contiguous and, therefore, not as beneficial to the state-protected species it supports. Under the Union Point master plan, there will be 158.5 acres of contiguous, preserved and restored grassland, 55.5 acres more than were proposed under the 2007 FEIR project.

Elimination of Golf Course

With changes in the regional economy, and specifically within the golf industry, a golf course is no longer viable at Union Point. Eliminating the golf course makes significant acreage available for the creation of an approximately 50-mile network of hiking trails and allows for the preservation of high-quality wildlife habitat.

Addition of Potential Sports Stadium to the Project

Prior redevelopment plans envisioned a large sports and recreation component, however, only recently has it become a possibility that a minor league sports facility might be located at Union Point. With all of the facilities that will be built, along with the existing public transit facility, Union Point is an ideal location for such a use. Further, including an entertainment component is fully compatible with Smart Growth principles of concentrating housing, work, and entertainment.

Preservation and Repurposing of Hangar 2 and Building 82

Previous plans envisioned demolition of all buildings on the site. The Union Point plan is to refurbish Hangar 2 and the adjacent Building 82. Building 82 will be used for offices, and Hangar 2 may be used as a movie sound stage or community building, or be retrofitted for office or retail use. Other buildings are being evaluated for preservation and reuse.

Relocation of Sports and Recreation Complex

Prior redevelopment plans located the sports and recreation facilities at a considerable distance from residential areas. At Union Point, these facilities have been relocated so that they are between the Town Center and the Neighborhood District, allowing easy access from both districts, while simultaneously acting as a buffer between Town Center and Neighborhood District uses.

1.3.2 Union Point Phase 1

To assist reviewers in understanding the Project change, and for the Proponent's own planning purposes, the Proponent has identified a first phase of the Union Point Project, Union Point Phase 1, which is outlined in Table 1.3-1. Union Point Phase 1 is comparable in scale and impact to the full-build project described and analyzed in the 2007 FEIR. For planning and analysis purposes, the Proponent has identified a likely mix of residential and commercial uses to be developed but acknowledges that actual development will be influenced by market forces.

1.3.3 Sustainable Design

While some aspects of the 2007 FEIR project furthered Smart Growth goals, others did not. Specifically, much of the proposed commercial development was designed as a suburban office park, with low-rise buildings, large fields of surface parking, and long distances between buildings and amenities. The Union Point master plan emphasizes concentrating mid-rise buildings around services, housing, and entertainment creating a true live-work-play environment. Union Point provides structured parking for most uses to preserve valuable land and open space while minimizing stormwater and other impacts.

1.3.4 Infrastructure Improvements

1.3.4.1 Water Supply

Long-Term Supply

The full build-out water supply contemplated in the 2007 FEIR project was a direct connection to the Massachusetts Water Resources Authority ("MWRA") water system by way of an eight-mile long dedicated water transmission pipeline beginning at a MWRA water system connection point (M-246) in the City of Quincy. The pipeline was to be

routed along roadways through of the Towns of Braintree and Weymouth and ultimately connect to Union Point. This alternative may no longer be viable.

Therefore, in addition to this route, the Proponent is evaluating routes that begin at a connection point (M-166) located farther north in Quincy. Several alternative pipeline routes running from Quincy through North Weymouth and ending at Union Point are under consideration. Under these alternatives, the pipeline would not connect to the Weymouth water system.

Further, because of changes in background conditions and the complexities inherent in routing and constructing the length of pipeline required for an MWRA connection, the Proponent is also evaluating other potential sources of water supply, including the Aquaria desalination plant in Brockton. These alternatives are discussed in Section 2.11, and the Proponent anticipates evaluating them in more detail in the EIR.

Interim Supply

In concert with the Town of Weymouth, LStar has identified an interim water supply approach. Under that plan, the Town of Weymouth has agreed to increase the amount of water it supplies to Union Point from 245,000 gallons per day (gpd) to 600,000 gpd. This water will come from Weymouth's existing supply and can be accommodated under existing permits. This water will be supplied only to development at Union Point located only the Town of Weymouth.

As an interim water supply for development located at Union Point in the Towns of Abington and Rockland, the two towns have committed to provide up to 250,000 gpd. This water supply will be provided only to development at Union Point located in Abington and Rockland.

These interim supply sources will be used until the long-term supply is available. At that time, the long-term supply will provide water throughout the Union Point project, regardless of the municipality in which development is located.

1.3.4.2 Wastewater Management

The wastewater management program contemplated by the 2007 FEIR project included the construction of an on-site wastewater treatment facility. Wastewater from initial phases of the project was to be directed to the Town of Weymouth sewer system and redirected to the on-site wastewater treatment facility once the facility was operational. An emergency connection to the Weymouth sewer system was to remain in place.

The Proponent is evaluating three wastewater management alternatives for Union Point, as described in Section 2.10. These alternatives are on-site wastewater treatment, conveyance to the MWRA sewage treatment system, or a combination of the two.

1.3.4.3 Transportation

Since the 2007 FEIR project was reviewed, several transportation infrastructure improvement projects have been completed, including upgrades to five intersections along Route 18, the construction of the Bill Delahunt Parkway, widening of Queen Anne's Corner, and intersection improvements at Route 53/Middle Street. Other transportation projects that are currently in either the design or the construction stage include MassDOT's Route 18 widening project, improvements to the Route 3 interchange at Derby Street, and signal and geometric improvements at Route 53/Derby Street/Gardner Street.

The 2007 FEIR project recommended several additional transportation improvements to mitigate impacts related to trips generated by the project. Transportation-related mitigation proposed in the 2007 FEIR project may need to be altered based on the Union Point master plan and the updated regional distribution of trips.

1.3.5 Development to Date

Residential Development

Residential and commercial construction at Union Point began under the 2007 FEIR project. Consistent with that project, the first development constructed was the Highlands Neighborhood, comprising 115 single-family homes, townhomes, and apartments.

The Fairing Way and Eventide projects were built adjacent to the Highlands Neighborhood. Fairing Way is composed of age-restricted independent living apartments, and Eventide has senior housing units, for a total of 221 units. Eventide additionally includes a 40,000 sf nursing facility.

Also near the Highlands Neighborhood, Snowbird is a collection of 26 detached single-family homes.

Consistent with the 2007 FEIR project, the Transit Village, consisting of 200 one- and two-bedroom condominiums, is under construction adjacent to the Massachusetts Bay Transportation Authority ("MBTA") South Weymouth Commuter Rail Station.

The Winterwoods community, comprising 108 single family and townhome units, is under construction. The Commons, which provides an additional 298 rental units, is complete and fully occupied.

The Proponent has sold a site on which 250 market rate apartments with 14,000 sf of ground floor retail space is currently under construction. Consistent with the Union Point master plan, the parking for this project is partially structured. This high density portion of the Project is within walking distance of the MBTA South Weymouth Commuter Rail Station.

Commercial Uses

In addition to the projects identified above, commercial uses are underway consistent with the Union Point master plan. Three major motions pictures – the "Ghostbusters 2" movie, released in 2016, and two movies based on the Boston Marathon bombing events -– and several smaller ones have been filmed at Union Point. Law enforcement agencies also use the former runways for high-speed driving training.

Recreation and Community Activities

Since it purchased the site in 2015, the Proponent has made a significant investment in recreation facilities at Union Point so that the facilities may be enjoyed by residents of the Host Communities. Specifically, the Proponent has refurbished the gymnasium and soccer fields, built a children's play area, a street hockey rink, and a dog park, started construction of the proposed 50-mile trail network, and built Little Fenway, a small-scale Fenway Park replica used for baseball games.

Each summer, the Proponent has hosted six to eight concerts and food truck "rodeos." With attendance in the range of 5,000 to 6,000, these free events have proven to be popular family activities for the neighboring communities.

1.3.6 Bill Delahunt Parkway Construction Status

The Parkway serves as the main thoroughfare connecting Route 18 and Hingham Street/Route 3. The eastern and central segments of the Parkway, completed in 2013, connect Hingham Street in Rockland to Shea Memorial Drive. The segment of the Parkway between Shea Memorial Drive and Trotter Road is under construction and will be open to traffic in 2016.

1.4 Status of MEPA Review

This NPC is filed pursuant to the Massachusetts Environmental Policy Act (MEPA), Massachusetts General Laws Ch. 30, Secs. 61-62I, and implementing regulations at 301 CMR 11.00. The Executive Office of Energy and Environmental Affairs file number for the Project is #11085R.

The Project's MEPA review has proceeded as follows:

- July 17, 2000 – Environmental Notification Form (ENF) for the "SouthField" project filed with the Secretary of Environmental Affairs (the Secretary).

- October 20, 2000 – The Secretary issued a Scope for an Environmental Impact Report (EIR) and the Secretary and South Shore Tri-Town Development Corporation ("SSTTDC"), then a project proponent) agreed to a Special Review Procedure.

- May 2002 – The Corporation filed a Phase I Report requesting a Phase I waiver to develop a portion of the project in advance of the completion of the EIR.

- August 9, 2002 – The Secretary granted the Corporation's Phase I waiver request and challenged the Corporation to create a Smart Growth plan.

- December 15, 2005 – An NPC presenting the "Village Center Master Plan" was filed with the Secretary.

- February 10, 2006 – The Secretary's Certificate on the NPC revised the Scope for the project's EIR and reaffirmed the Phase I waiver with a modified plan.

- October 16, 2006 – A Draft Environmental Impact Report (DEIR) was filed in response to that February 10, 2006 Certificate.

- December 15, 2006 – Certificate on the DEIR issued by the Secretary.

- May 31, 2007 - A Final Environmental Impact Review Report (FEIR) was filed in response to the December 15, 2006 Certificate.

- July 18, 2007 – Certificate on the FEIR issued by the Secretary.

- February 29, 2008 – An NPC presenting changes to interim water supply and wastewater treatment was filed with the Secretary.

- April 11, 2008 – Certificate on the NPC was issued by the Secretary, and is included in Attachment 1.

- August 15 2012 – under this EEA file number, the Massachusetts Department of Transportation (MassDOT) filed a Supplemental Environmental Impact Report (SEIR) for the widening of Route 18.

- September 28, 2012 – Certificate on the SEIR was issued by the Secretary, and is included in Attachment 1.

- June 24, 2015 – Advisory Opinion on the East-West Parkway (now the Bill Delahunt Parkway) was issued by the MEPA Office.

Since the issuance in 2007 of the Certificate on the FEIR, work on the project has proceeded continuously, including the expenditure of funds for final design, property acquisition, marketing, and construction as described in Section 1.3.5.

1.5 Previously Proposed Project

The 2007 FEIR project, the most recent previously-proposed redevelopment plan, was proposed by SSTTDC and LNR South Shore LLC. It, too, was planned as a mixed-use redevelopment of the site. As described in the 2007 FEIR, that project consisted of up to 2,855 residential units, two million sf of commercial/industrial space, an 18-hole golf course, active and passive recreational amenities, and institutional space, including sites for a school and civic/community facilities. It also included infrastructure improvements, most significantly construction of the East-West Parkway, now the Bill Delahunt Parkway, an on-site wastewater treatment facility, public water supply infrastructure, a well for irrigation, stormwater management systems, and a multi-modal transportation center based on the improvements to the existing MBTA South Weymouth Commuter Rail Station. The 2007 FEIR project was proposed for implementation in three phases over a 14-year period, but was not fully constructed. Figure 1.5-1 shows the plan of the 2007 FEIR project as reviewed under MEPA.

Following the Defense Base Realignment and Closure (BRAC) Act Commission's recommendation to close the facility in 1995, and with the issuance of Executive Order 378 by Governor William Weld establishing the South Weymouth Naval Air Station Planning Committee (Planning Committee), reuse planning efforts began in earnest. Representing federal, state, and local interests, as well as the interests of the private sector and organized labor, the Planning Committee developed a reuse and development plan that focused on economic growth and job opportunities connected with potential redevelopment and sought to balance those opportunities with enhanced environmental conditions and recreation facilities.

The Planning Committee additionally developed proposed legislation enabling the creation of a Local Redevelopment Authority (LRA) that would succeed the Planning Committee as the sole entity responsible for pursing the acquisition, control, and redevelopment of the site. The legislation, enacted in 1998 by the Massachusetts General Court as Chapter 310 of the Massachusetts Acts and Resolve of 1998, established the SSTTDC.

The SSTTDC was tasked with the oversight and redevelopment of the site with a goal of maximizing the redevelopment's financial benefits for the three Host Communities. The SSTTDC was responsible for advancing the initial reuse and development plans and executed the original Disposition and Development Agreement (DDA) and subsequent amendments.

Abington, Rockland, Weymouth, Massachusetts

UNION POINT

LStarCommunities

Figure 1.5-1
2007 FEIR Plan

1.6 2014 Legislation

With the Massachusetts General Court's enactment of Chapter 291 of the Acts of 2014 (the "Act"), the SSTTDC was reconstituted in August 2014 as the SRA. The SRA assumed the role of the LRA for the site redevelopment and now serves to reinforce municipal control over land-use and development decisions affecting areas of each of the three towns located within the geographic bounds of the site in a manner consistent with the purposes of the SRA as described in Section 3 of the Act. The SRA is additionally charged with disposing of the property on the site prior to the SRA's termination pursuant to Section 33 of the Act.

Among other legislatively created mandates, it is incumbent upon the SRA to complete certain critical planning, development, and financial tasks. Many of the "prerequisite" activities contemplated by the Act have been completed by the SRA. In furtherance of those tasks, for example, the SRA, in consultation with the Host Communities, developed a Taxation Plan. The Taxation Plan, subsequently approved by the Massachusetts Department of Revenue and Executive Office of Administration and Finance, is intended to ensure the assessment and collection of property and other taxes by each of the Host Communities, and the payment of bonds or notes secured with a pledge of taxes collected within at Union Point. The SRA additionally assumed the SSTTDC's role as bond issuer under a certain Trust Indenture.

As of March 2015, the United States Department of Defense's Office of Economic Adjustment has formally recognized the SRA as the LRA, having assumed LRA responsibilities from SSTTDC for the purpose of implementing the redevelopment plan for the site.

In response to the Act, the Proponent created a development plan that retains many goals of the 2007 FEIR project and that provides significantly greater benefit to the Host Communities. Most importantly, Union Point is focused on creating a high-quality redevelopment by implementing Smart Growth-derived master planning principles that foster an environmentally-sensitive and pedestrian- scale development. The Proponent is expanding on those earlier development goals by providing open space of substantially higher quality and preserving additional high-value habitat for protected species through the elimination of an earlier proposed golf course. The planned acquisition of land abutting the Project site, for conservation purposes, also advances the Proponent's goal of achieving an exceptional level of habitat preservation.

Plan and zoning amendments described in Section 1.7, below, allow the Proponent to provide additional residential units and commercial space in areas of increased density. The increased density enables Union Point to more efficiently meet redevelopment goals and minimize impacts on the environment and surrounding communities.

The Project changes described herein retain the key goals and objectives of the 2007 FEIR project. The refinement of both Smart Growth and Leadership in Energy and Environmental Design for Neighborhood Design (LEED ND) planning principles, now incorporated in the Union Point plan, ensure that the redevelopment will result in a compact and active community that preserves open space, restores and protects habitat, and generates significant financial benefits for the Host Communities and the Commonwealth.

1.7 Zoning Changes

To accommodate the redevelopment plan described in this NPC, zoning bylaws in each of the three Host Communities were amended. The intent of the zoning changes was to allow increased square footage and density in certain areas of the Union Point and to create districts that allow a mix of compatible uses aligned with Union Point's Smart Growth goals.

1.7.1 Abington

On June 6, 2016, the Abington Board of Selectmen's amendments to the Naval Air Station South Weymouth Zoning and Land Use By-Laws, which applied to those portions of the site within the municipal boundary of the Town of Abington, were unanimously adopted at Town Meeting. As with the complementary zoning amendments in the other Host Communities, the Abington zoning amendments (the "Abington Amendments") are intended to maximize the Project's economic benefit to the Town of Abington while minimizing demands on municipal services.

By adopting the updated zoning and thereby creating the Abington Development Overlay District, Abington created two additional Overlay Districts: the Abington Discovery Sub-district and the Abington Town Center Sub-district. The Sub-districts were overlaid on portions of land zoned as "Golf Course/Open Space District" and "Open Space-Corporation District." The Abington Amendment sub-districts are shown on Figure 1.7-1.

The Abington Amendments allow for an additional 1,000,000 sf of commercial development on the site within the Town of Abington. The Project-wide goal of delivering pedestrian-scale development remains a priority in Abington by concentrating commercial development in a manner that preserves open space and enhances the physical characteristics of the development, particularly by siting development near existing infrastructure. As with the other Host Communities, "Building Forms" previously prescribed for certain uses were eliminated in favor of a more practicable table of dimensional standards for uses within the Sub-districts. A broad range of commercial uses are permitted within the sub-districts, an approach that will promote diversity in work and play opportunities that activate the Sub-districts for extended periods during business and evening hours, as well as on weekends. Residential development was intentionally not allowed in portions of the Union Point Project within Abington to reduce financial and other pressures on municipal services.

1.7.2 Rockland

The Rockland Board of Selectmen's amendments to the Naval Air Station South Weymouth Zoning and Land Use By-Laws, which applied to those portions of the site within the municipal boundary of the Town of Rockland, were unanimously adopted at Town Meeting on May 2, 2016. As with the zoning amendments in the other Host Communities, the Rockland zoning amendments (the "Rockland Amendments") are intended to maximize Union Point's economic benefit to the Town of Rockland while minimizing demands on municipal services.

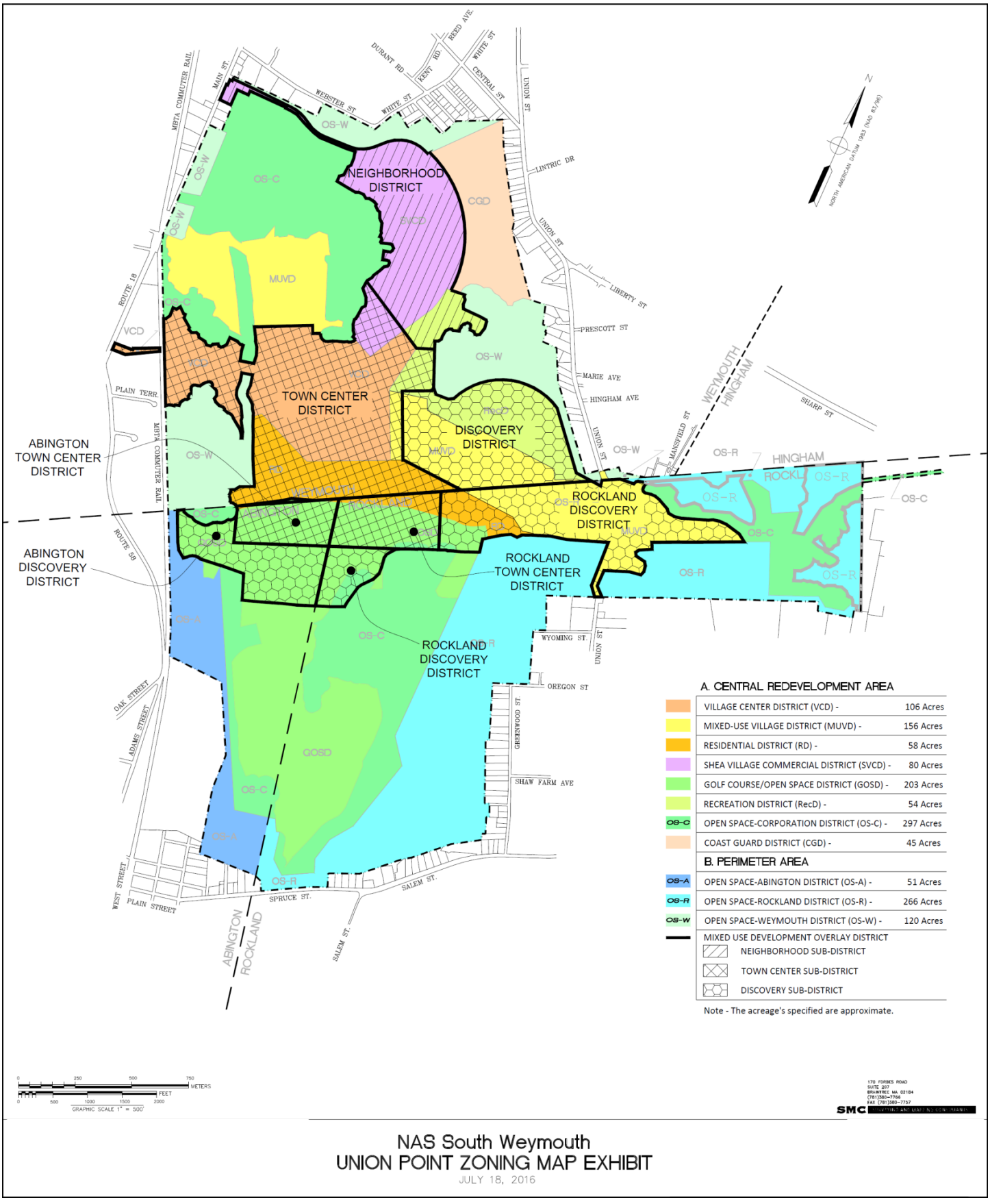
The Rockland Amendments created the Rockland Development Overlay District and its two overlay districts: the Rockland Discovery sub-district and the Rockland Town Center Sub-district. The sub-districts were overlaid on portions of land zoned as "Golf Course/Open Space District" and "Open Space-Corporation District." The Rockland Amendments allow for an additional 2,000,000 sf of commercial development on the site within the Town of Rockland. As with the other Host Communities, "Building Forms" previously prescribed for certain uses were eliminated in favor of a more practicable table of dimensional standards for uses within the Sub-districts. Again, the Union Point master plan guides the development program toward the desired mixed-use development described in this NPC. The Rockland Amendment sub-districts are shown on Figure 1.7-1.

1.7.3 Weymouth

On November 18, 2015, the Town of Weymouth unanimously approved amendments to the Zoning and Land Use By-Laws applied to the portions Union Point located within Weymouth's municipal boundary. The Weymouth zoning amendments (the "Weymouth Amendments") are intended to maximize the Project's economic benefit to the Town while minimizing current and anticipated demands on municipal services.

The Weymouth Amendments were widely supported by local officials and community members. The Weymouth Amendments created a Mixed Use Development Overlay District, comprising three sub-districts: the Neighborhood Sub-District, Town Center Sub-District, and Discovery Sub-District, as shown on Figure 1.7-1.

The overarching intent of the Mixed Use Overlay District is to balance conservation and development goals. This balance is achieved by protecting and enhancing natural and cultural resources while creating significant economic benefits consistent with community goals and design guidelines. Long-term economic growth is fostered by high-quality residential and commercial development within the Mixed Use Overlay District. Pedestrian-scale development remains a priority, as does development that supports a strong and stable business environment. To that end, the density of compatible residential and commercial uses is increased to preserve open space and enhance the desirable physical characteristics of Union Point.



Union Point **Abington, Rockland, Weymouth, Massachusetts**

Figure 1.7-1
Union Point Zoning Map

The Mixed Use Overlay District concentrates development near existing and planned infrastructure to maximize the efficient use of developable land and infrastructure, with a particular focus on enhancing connectivity with the MBTA South Weymouth Commuter Rail Station and the completion of the western-most segment of the William Delahunt Parkway connecting with Trotter Road and, ultimately, to Route 18 in Weymouth.

Zoning and land use bylaws for the site establish that the minimum gross square feet of commercial development on the site will be 900,000 sf. The Weymouth Amendments provide that commercial development on land located in Weymouth may cause the total amount of commercial development on the site to exceed 2,000,000 sf by an additional 1,000,000 sf. Similarly, within the Weymouth municipal boundary, additional units of age restricted housing may be constructed so that the total number of Project-wide housing units may be increased by 1,000.

The Weymouth Amendments also permit the development of concentrated outdoor commercial recreation uses which, by definition, may include stadiums or outdoor entertainment facilities that, for example, show movies or host live performances.

The Weymouth Amendments create the opportunity for development at Union Point to maximize the economic benefit each of the Host Communities and have been widely supported by the Town of Weymouth and the local business community as a mechanism to facilitate the desired development at Union Point.

Section 2.0

Potential Impacts

2.0 POTENTIAL IMPACTS

This section discusses the Union Point Project's potential environmental impacts and compares them to the impacts described in the prior MEPA review.

2.1 Transportation

2.1.1 Proposed Development

Since the review of the 2007 FEIR, the Proponent has revised the development program consistent with zoning changes adopted by the Host Communities. Table 2.1-1 compares the Union Point master plan to the plan studied in the 2007 FEIR.

As shown Table 2.1-1, the proposed number of residential units has increased from 2,855 units to 3,855 units and proposed commercial space has increased from 2,060,000 square feet sf to 8,000,000 sf. A previously proposed golf course, an indoor recreational field house, and a fitness/wellness center have been eliminated from the Project. The indoor skating facility has been expanded and a 15,000 seat stadium is now included in the Union Point Project.

It is anticipated that at full buildout the number of trips to the Project site will increase. However, due to the size of the development and variable market demands, the Project will be developed in phases. As described above, Union Point Phase 1 will be comparable to the full-build of the project described in the 2007 FEIR. The Union Point Phase 1 development program is also shown in Table 2.1-1.

Although the stadium will generate additional trips to the site, these trips are not anticipated to occur during the peak commuter periods. Trips associated with the stadium will likely occur on the weekends and after the evening peak hour. With the elimination of the golf course, indoor recreational field house, and the fitness/wellness center, the number of daily trips generated by Union Point Phase 1 will approximate the estimates included in the 2007 FEIR.

2.1.2 Trip Generation and Trip Distribution

Future traffic volumes for the 2007 FEIR project were estimated based on the Central Transportation Planning Staff (CTPS) regional model. The traffic model represented the region's transportation network with links and nodes to signify roadways and intersections. The model depicted the actual transportation network as closely as possible, including attributes such as capacity and travel speeds along roadway links. With factors in the model including socio-economic projections, CTPS was able to accurately estimate the number of vehicle trips anticipated to be generated by the project and assign vehicle routes based on roadway capacity and travel speeds.

Table 2.1-1 Union Point Development Program Comparison to 2007 FEIR Development Program

Use	2007 FEIR		Notice of Project Change		Change from 2007 FEIR to NPC		Union Point Phase 1		Difference Between 2007 FEIR and Union Point Phase 1	
	Size	Unit	Size	Unit	Size	Unit	Size	Unit	Size	Unit
Residential										
Single-family detached	645	du	355	du						
Apartments/condos	1,234	du	2,000	du						
Townhomes	806	du	500	du						
Age-restricted	170	du	1,000	du						
	2,855		**3,855**	du	**1,000**	du	**2,855**	du		
Commercial										
Life Sciences	950,000	sf	2,800,000	sf	1,850,000	sf	565,000	sf	(385,000)	sf
Hi-tech Manufacturing			800,000		800,000		200,000		200,000	
Manufacturing			800,000		800,000					
Office	575,000	sf	2,485,600	sf	1,910,600	sf	575,000	sf	-	sf
Retail	300,000	sf	348,400	sf	48,400	sf	300,000	sf	-	sf
Conference Center			120,000	sf	120,000	sf				
Hotel (rooms: FEIR = 150/NPC = 285)	90,000	sf	171,000	sf	81,000	sf	90,000	sf	-	sf
Stadium (15,000 seats)			270,000	sf	270,000	sf	270,000	sf	270,000	sf
Skating Rink/Hockey	60,000	sf	120,000	sf	60,000	sf	60,000	sf	-	sf
Fitness/Wellness Center	85,000	sf	85,000	sf	-		-		(85,000)	sf
	2,060,000	sf	**8,000,000**	sf	**5,940,000**	sf	**2,060,000**	sf		
Open Space										
Golf Course	204	acres	-	acres	(204)	acres	-	acres	(204)	acres
Recreation and Sports	52	acres	25	acres	(27)	acres	25	acres	(27)	acres
Neighborhood Parks	43	acres	43	acres	-	acres	43	acres	-	acres
General Passive and Active Open Space	708	acres	939	acres	231	acres	939	acres	231	acres
	1,007	**acres**	**1,007**	**acres**	**-**	**acres**	**1,007**	**acres**		

Table 2.1-1 Union Point Development Program Comparison to 2007 FEIR Development Program (Continued)

Use	2007 FEIR		Notice of Project Change		Change from 2007 FEIR to NPC		Union Point Phase 1		Difference Between 2007 FEIR and Union Point Phase 1	
Additional Uses										
Long-term Care Facility			300	beds	300	beds	300	beds	300	beds
Indoor Recreation Field House	200,000	sf	-	sf	(200,000)	sf	-	sf	(200,000)	sf
Wastewater Treatment Facility (potential)	3	acres	3	acres	-	acres	3	acres	-	acres
Multi-Modal Facility	5,000	sf	5,000	sf	-	sf	-	sf	(5,000)	sf
Public School	600	students	600	students	-	students	600	students	-	students
Civic/Community Facility	40,000	sf	40,000	sf	-	sf	40,000	sf	-	sf
Public Works Parcel	2	acres	2	acres	-	acres	2	acres	-	acres
Institutional/Social Services	37,000	sf	37,000	sf	-	sf	37,000	sf	-	sf

In the 2007 FEIR, the CTPS model forecast approximately 51,200 person trips per day. With an internal capture rate of approximately 16 percent and assumptions made for transit and non-motorized trips, the CTPS model estimated approximately 34,300 vehicle trips per day entering and exiting the site.

For Union Point, the Proponent is working with CTPS to determine the number of new trips that will be generated by the revised master plan and to make trip assignments, including trips on existing and future roadway infrastructure.

Similar to the trip generation and trip distribution information, mode share assumptions will be developed by CTPS. It is anticipated that the mode splits will be similar to those previously reviewed in the 2007 FEIR.

Based on Institute of Transportation Engineers ("ITE") trip generation rates, the Union Point master plan is anticipated to add an additional 75,600 person trips per day. Using the same internal capture rate and mode splits that were assumed in the 2007 FEIR, the number of additional vehicle trips under the Union Point master plan is approximately 45,600 vehicle trips per day. With the vehicle trips estimated in the 2007 FEIR and the additional trips estimated using ITE, the total number of vehicle trips projected to be generated by the Union Point master plan is approximately 79,900 vehicle trips per day.

This vehicle trips estimate above is anticipated to be conservative, as the CTPS model estimates used in the 2007 FEIR were approximately 30 percent below the ITE estimates. It is assumed that with continued coordination with CTPS, the number of vehicles trips generated by the Union Point master plan will be less than 79,900 vehicle trips per day.

2.1.3 Parking

To date, 2,056 parking spaces have been permitted or constructed. The Southfield Zoning Bylaws specify the minimum and maximum number of parking spaces required for the each land use and the Project's parking count is based on the proposed land uses.

Based on the Bylaws, the estimated parking demand for Union Point ranges from 19,500 to 43,900 parking spaces. However, due to the variety of land uses and the mixture of peak parking occupancy time periods, the Proponent will optimize the amount of shared parking to reduce the number of spaces required.

2.1.4 Study Area

In addition to the Host Communities, the study area reviewed in the 2007 FEIR included portions of Braintree, Hingham, Norwell and Whitman and encompassed the 63 intersections listed in Table 2.1-2.

Table 2.1-2 Study Area Intersections

Intersection		Control	Jurisdiction
Abington			
1	Route 18/Route 123	Signal	MassDOT
2	Route 18/Route 139	Signal	MassDOT
3	Route 58/Route 139	Signal	Town
4	Route 58/Summer Street	Signal	Town
5	Route 58/Route 123	Signal	Town
6	Route 58/Central Street	Signal	Town
7	Route 139/Lincoln Street	Unsignalized	Town
8	Route 139/Old Randolph St/Hancock St/Richard Fitts Dr	Unsignalized	Town
Braintree			
9	Grove St & Columbian St	Signal	MassDOT
10	Grove St & Liberty St	Signal	MassDOT
11	Plain St & Grove St	Unsignalized	MassDOT
Hingham			
12	Derby St & Cushing St	Signal	MassDOT
13	Derby St & Industrial Park Commerce Rd	Unsignalized	MassDOT
14	Derby St & Route 3 NB Off-Ramp	Unsignalized	MassDOT
15	Derby St & Route 3 SB Off-Ramp	Unsignalized	MassDOT
16	Route 53 & Farm Hills Lane	Unsignalized	MassDOT
17	Route 53, Gardner St & Derby St	Signal	MassDOT
18	Whiting St & Cushing St	Signal	MassDOT
19	Gardner Street & Route 228	Unsignalized	Town
Norwell			
20	Route 53 & Route 228	Signal	MassDOT
21	Route 53, Grove St & High St	Signal	MassDOT
Rockland			
22	Hingham St & Gardner St	Unsignalized	Town
23	Hingham St & Route 3 NB Ramp	Signal	MassDOT
24	Hingham St & Route 3 SB Ramp	Signal	MassDOT
25	Hingham St & Commerce Rd	Signal	Town
26	North Ave & Union St	Signal	Town
27	Reservoir Park Dr and Hingham St	Signal	Town
28	Reservoir Park Dr and Weymouth St	Signal	Town
29	Route 139 & North Ave & Salem St	Unsignalized	Town
30	Spruce St & Salem St	Unsignalized	Town
31	Union St & Market St	Signal	MassDOT
32	VFW Dr & Union St	Unsignalized	Town

Table 2.1-2 Study Area Intersections (Continued)

Intersection		Control	Jurisdiction
Rockland			
33	Weymouth St & Abington St	Unsignalized	Town
34	Route 123/E Water Street	Unsignalized	Town
35	Hingham Street/Route 123	Signal	Town
36	Pleasant Street/VFW Drive	Unsignalized	Town
37	Hingham Street/Pond Street	Signal	MassDOT
Weymouth			
38	Columbian Street/Pleasant Street/Union Street	Unsignalized	Town
39	Columbian Street/Park Avenue	Unsignalized	MassDOT
40	Park Avenue/Pleasant Street	Signal	MassDOT
41	Ralph Talbot Street/Pine Street	Signal	MassDOT
42	Route 18/Columbian Street	Signal	MassDOT
43	Route 18/Derby Street	Unsignalized	MassDOT
44	Route 18/Park Avenue/Park Avenue West	Signal	MassDOT
45	Route 18/Pond Street/Pleasant Street	Signal	MassDOT
46	Route 18/Route 53	Signal	MassDOT
47	Route 18/Route 58/Pond Street	Signal	MassDOT
48	Route 18/Shea Memorial Drive	Signal	MassDOT
49	Route 18/Trotter Road	Signal	MassDOT
50	Route 18/West Street/Middle St	Signal	MassDOT
51	Route 18/Winter Street	Signal	MassDOT
52	Route 18/Route 3 NB Ramp	Unsignalized	MassDOT
53	Route 18/Route 3 SB Ramp	Unsignalized	MassDOT
54	Union Street/White Street	Unsignalized	Town
56	Pleasant Street/Pine Street	Unsignalized	Town
57	Pond Street/Hollis Street	Signal	Town
58	Forest Street/Randolph Street	Unsignalized	Town
59	Route 53/Middle Street	Signal	MassDOT
60	Columbian Street/Forest Street	Unsignalized	MassDOT
61	Pine Street/Oak Street	Unsignalized	Town
62	Thicket Street/Pond Street	Unsignalized	Town
Whitman			
63	Route 18/Route 14	Signal	MassDOT
64	Route 18/Route 27	Signal	MassDOT

As the trip distribution is further updated to include the Union Point master plan and existing and future roadway infrastructure, it is anticipated that some of these intersections may be removed from and others added to the study area.

2.1.5 Traffic Volumes

Automatic Traffic Recorder (ATR) counts were collected on major arterials and collector roadways that are anticipated to be impacted by the development. 48-hour weekday counts were collected in June 2016, prior to the end of the school year. Table 2.1-3 summarizes the average daily traffic (ADT), percent trucks (%T), the proportion of daily traffic occurring during the peak hour (K-factor), and 85th percentile speeds for the study area corridors. Additional turning movement counts will be conducted at the study area intersections during the peak hours.

Table 2.1-3 Study Area Intersection Volumes

Location	Average Daily Traffic	Percent Trucks	Peak Hour Factor	85th Percentile Speeds
Abington				
Route 18 South of Shaw Avenue	25,491	6.1%	7.0%	41
Route 58 South of Monroe Street	13,749	7.3%	7.8%	39
Route 58 at Weymouth Town Line	11,752	5.4%	8.0%	43
Route 123 at Brockton City Line	14,849	-	7.7%	44
Rockland				
Hingham Street North of Route 123	12,479	-	7.1%	35
Hingham Street North of Commerce Road	21,201	-	7.1%	39
Hingham				
Route 53 West of Route 228	19,790	-	7.2%	41
Weymouth				
Route 18 North of Winter Street	19,656	5.3%	7.2%	37
Route 18 North of Middle Street	44,107	7.3%	6.6%	42
Route 18 North of Park Avenue	36,345	15.6%	6.2%	43
Route 18 North of Pond Street	28,675	12.0%	6.2%	38
Route 18 North of Shea Memorial Drive	30,495	16.5%	6.6%	40
Route 18 at Abington Town Line	24,533	8.3%	7.0%	39
Pond Street South of Hollis Street	12,750	7.4%	9.1%	34
Ralph Talbot Street East of Park Avenue	14,342	-	6.7%	39
Liberty Street at Hingham Town Line	7,072	-	8.3%	43
Abington Street at Hingham Town Line	5,035	-	9.4%	39

2.1.6 Infrastructure Improvements since the 2007 FEIR

Route 18 Intersection Improvements – Independent of the 2007 FEIR project, the need for safety and capacity improvements at five intersections along the Route 18 corridor was identified by the Massachusetts Department of Transportation ("MassDOT"). Two of the five intersections, Route 18/Route 139 and Route 18/Pond Street/Pleasant Street, were reconstructed prior to 2006. The remaining three intersections along Route 18, Route 18/West Street/Middle Street, Route 18/Park Avenue/West Park Avenue, and Route 18/Columbian Street were reconstructed in 2009.

Bill Delahunt Parkway (formerly, East-West Parkway) – The Bill Delahunt Parkway serves as the main thoroughfare connecting Route 18 and Hingham Street/Route 3. The eastern and central segments of the Parkway, completed in 2013, connect Hingham Street to Shea Memorial Drive. The segment between Weymouth Street and the eastern roundabout consists of two eleven foot wide travel lanes and a four foot wide shoulder on each side of the roadway. A ten foot wide shared use path along the north side of the roadway is separated from the Parkway by a grass buffer that varies in width. The central segment of the Parkway, located between the eastern roundabout and Shea Memorial Drive, consists of four eleven foot wide travel lanes, a four foot wide shoulder on each side, a ten foot wide shared use path along the north side, and a six foot wide sidewalk along the south side. Both the shared use path and sidewalk are separated from the Parkway by a grass buffer that varies in width.

The segment of the Parkway between Shea Memorial Drive and Trotter Road is under construction and will be open to traffic in 2016. This section of the Parkway will consist of two eleven foot wide travel lanes with on-street parking on both sides. The design of the roadway will allow flexibility to convert to four eleven foot wide travel lanes with the on-street parking removed should traffic volumes on the Parkway require the additional capacity.

Queen Anne's Corner – Completed in 2008, improvements to Queen Anne's Corner include widening Route 53 (Washington Street) from Queen Anne's Corner to the intersection of High Street/Grove Street to accommodate a two-way left turn lane at that intersection. The improvements also include signal timing changes at the two intersections. A complementary project completed in 2010 provides water, drainage, and signage improvements along Route 228. Additionally, a new signal was installed at Queen Anne's Corner.

Route 53/Middle Street – This project was a component of an unrelated private developer's mitigation package. It included widening the roadway and installing a signal at the intersection. Additional improvements include a new sidewalk, signage, and pavement markings. This project was completed in 2012.

Commuter Rail Bi-Level Trains – The MBTA purchased 75 new bi-level commuter rail cars between 2008 and 2011. The MBTA's commuter rail operator is able to use these cars in the Kingston/Plymouth Corridor to increase capacity.

2.1.7 Planned MassDOT Roadway Projects

Route 18 Corridor Improvements – The proposed Route 18 corridor improvements will expand the roadway cross-section to four lanes between Highland Place in Weymouth and the intersection of Route 18/Route 139 in Abington. The project includes the replacement of the bridge over the MBTA right-of-way. The proposed roadway cross section will include four eleven-and-a-half foot wide travel lanes, two five foot wide shoulders and two five-and-a-half foot wide sidewalks. This project was advertised for construction in September 2016. In addition, several signalized intersections will undergo improvements with upgrades to equipment, additional turn lanes, and continuous pedestrian connections.

Derby Street – This proposed project is intended to address ongoing safety and capacity issues at the Derby Street/Route 3 interchange. Signalization and pedestrian connections have been proposed along this roadway. The project is scheduled to begin construction in 2017.

Route 53/Derby Street/Gardner Street – This proposed project will consist of signal and geometry improvements at the intersection of Derby Street/Route 53 (Whiting Street)/Gardner Street. The geometric improvements include a left-turn lane at the Derby Street approach. This project extends to Cushing Street to provide a westbound left turn lane onto Recreation Park Road. Additional bicycle and pedestrian enhancements are proposed. This project is part of the 2018 MassDOT Transportation Improvement Program (TIP).

2.1.8 Proposed Improvements from Section 61 Findings/FEIR

The following improvements, also contemplated in the 2007 FEIR, have not yet been completed. These improvements are being evaluated within the Union Point development program.

Route 3 Connection – This project will improve the site's connection to Route 3 from Hingham Street. Hingham Street will be reconstructed to provide a consistent four-lane cross-section between Weymouth Street and Route 3.

South Weymouth Commuter Rail Station Improvements – This project is intended to improve the South Weymouth Commuter Rail Station by relocating the station platform, adding parking spaces, providing pedestrian and bicycle connections, and introducing a multimodal center with a pick-up/drop-off area and shuttle bus service. This project also included a new connection to Route 18; however, with the advancement of the Route 18

widening project and potential issues with providing a connection at the proposed location, the Proponent will work with MassDOT and the MBTA on reevaluating other at-grade solutions.

Additional Intersection Improvements – The following intersection improvements were previously recommended:

- Route 58 at Route 139: Construct an exclusive left-turn lane on the Route 58 northbound approach and an exclusive right-turn lane on the Route 58 eastbound approach.

- Pond Street at Derby Street/Hollis Street: Upgrade the existing signal equipment and pavement markings, and implement signal timing and phasing modifications to optimize future operations.

- Columbian Square (Pond Street/Pleasant Street/Union Street): Signalize and construct turn lanes. The Proponent has contributed $450,000 to the Town of Weymouth to advance the design of Columbian Square.

- Columbian Street/Forest Street: Provide a combination of traffic calming and signalization at the intersection.

- Weymouth Street/Sharp Street/Abington Street: Provide a combination of traffic calming, signalization, and turning lanes.

- Columbian Street/Park Avenue West: Signalize the intersection.

2.1.9 Transportation Demand Management

As part of the 2007 FEIR, the Predecessor committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and project-related traffic impacts. A Transportation Management Association (TMA) was proposed to oversee the implementation of TDM measures, including supplying transit information (e.g. schedules, maps, and fare information) to the project's residents and patrons. TDM would be facilitated by the nature of the mixed-use project and its proximity to public transit alternatives.

The Proponent anticipates implementing a number of TDM measures consistent with those identified in the 2007 FEIR. As Project-related transportation impacts are evaluated, TDM measures intended as mitigation may include the following:

- Provision of a clean-fuel, potentially self-driving, on-site transit shuttle between Union Point districts and the South Weymouth Commuter Rail Station.

- Addition of a multi-modal transportation facility based on expansion of the existing South Weymouth Commuter Rail Station, consistent with any future agreements with the MBTA.

- Improvement to the South Weymouth Commuter Rail Station may include:

  - New shuttle and regional bus service;
  - Kiss-and-ride drop-off and pick-up area;
  - New station waiting area;
  - New lighting, pedestrian amenities, bicycle storage facilities, new handicapped parking, and transit oriented retail and residential developments; and,
  - Relocation of South Weymouth Commuter Rail Station parking lot.

- Integration of sidewalks and bike paths into Project-wide road design.

- Office and commercial buildings will provide bike storage and shower facilities, preferred parking for hybrid vehicles, and carpooling and car sharing services.

In accordance with agreements with MassDOT, a traffic monitoring program was initiated after the implementation of signal modifications at Route 18/Trotter Road and the opening of Trotter Road to traffic. The first monitoring study was completed in January 2014, and subsequent studies were completed in February 2014, March 2014, June 2014, and June 2016. As required, those reports were submitted to MassDOT and the SRA for their review. Based on the findings documented in the traffic monitoring program studies, the mode splits have consistently met the TDM trip reduction goal of a 15 percent reduction in vehicle trip generation rates outlined in the 2007 FEIR and draft Section 61 Findings.

2.2 Air Quality

2.2.1 Summary of Studies Presented in EIR

The Draft Environmental Impact Report submitted on October 16, 2006 presented mesoscale and microscale analyses for the then-proposed project, and the Secretary's Certificate on the DEIR did not require that additional air quality analysis be included in the subsequent 2007 FEIR. Following the filing of the DEIR, however, the previously analyzed Parkway alignment was changed and the project's traffic characteristics changed, as well. Because of these changes, the 2007 FEIR presented updated microscale analysis. The project's trip generation characteristics, however, did not change, so it was not necessary to update the mesoscale analysis for the 2007 FEIR.

The analyses showed that there would not be adverse air quality impacts as a result of increased traffic in the area and that increases in emissions resulting from project traffic would be mitigated by the proposed transportation-related mitigation measures.

MICROSCALE ANALYSIS

Introduction

A microscale analysis was conducted to evaluate the potential air quality impacts of carbon monoxide (CO) emissions resulting from traffic flow around the project area. The impacts were added to monitored background values and compared to the federal National Ambient Air Quality Standards (NAAQS), which were developed by the U.S. Environmental Protection Agency ("EPA") to protect human health. The modeling methodology was developed in accordance with MassDEP guidelines. An air quality modeling protocol was submitted to the Massachusetts Department of Environmental Protection ("MassDEP") for review.

The microscale analysis results showed that CO concentrations at the sensitive receptors studied were well under NAAQS thresholds.

Microscale Analysis Methodology

A microscale analysis examines ground-level CO impacts due to traffic queues in the immediate vicinity of a project. The NAAQS standards do not allow ambient CO concentrations to exceed 35 parts per million (ppm) for a one-hour averaging period or 9 ppm for an eight-hour averaging period, more than once per year at any location. Air quality modeling techniques (computer simulation programs) are used to predict CO levels for future conditions.

The microscale analysis was conducted using EPA's MOBILE6.2 and CAL3QHC to estimate CO concentrations at sidewalks and other sensitive locations.

Future build and no-build emissions data calculated from the MOBILE6.2 model, along with traffic data, were input into the CAL3QHC program to determine CO concentrations due to traffic flowing through selected intersections.

CAL3QHC results were then added to monitored background CO values to determine total air quality impacts due to the project. These values were compared to the NAAQS for CO of 35 ppm (1-hour) and 9 ppm (8-hour).

Intersection Selection and Evaluation

Ordinarily, intersections are selected for inclusion in a microscale analysis based on the results of a traffic study. An intersection is selected if it will operate at Level of Service (LOS) D and the project will increase traffic volumes by ten percent or more, or if the intersection will operate at LOS E or F and the project will degrade conditions at the location. In the case of the 2007 FEIR, however, because of the large study area, an initial screening was conducted to identify the worst-operating intersections for the analysis. The screening analysis reviewed intersections where:

- the traffic generated by the project alone was greater than 400 trips per day; and
- the intersection had a LOS of E or F in the build condition.

Through these criteria, the following five intersections were selected:

1. Route 18 at Route 139;
2. Route 18 at Route 58 and Pond Street;
3. Route 18 at Park Avenue and Park Avenue West;
4. Weymouth Street at Abington Street and Sharp Street; and
5. Route 18 at Derby Street.

In the model, approximately 300 receptors were placed along sidewalks and public access ways at each of the five intersections.

Emissions Calculations (MOBILE6.2)

The MOBILE6.2 inputs were based on guidance issued by MassDEP[1]. The then-current version of MOBILE6.2 did not explicitly calculate idle emissions. However, idle emissions were calculated based on a vehicle speed of 2.5 mph (the lowest speed MOBILE6 would model). The resulting emission rate (given in grams per mile) was then multiplied by 2.5 mph to estimate idle emissions (given in grams per hour). Moving emissions were calculated based on the speeds at which free-flowing vehicles traveled through the intersections. Emission estimates were calculated for the future condition 2017.

Impact Calculations (CAL3QHC)

The CAL3QHC model predicts one-hour concentrations using queue-links at intersections based on worst-case meteorological conditions and traffic input data. The one-hour concentrations were scaled by a factor of 0.7 to estimate 8-hour concentrations. The CAL3QHC methodology was based on EPA CO modeling guidance. Signal timings were taken from the traffic modeling outputs. Travel speeds were estimated based on field observations, traffic data, and queue links at the intersections.

Background CO Concentrations

An air quality analysis also requires an estimate of background air quality levels, representing the contribution of all sources in the project area except the specific intersections. There are only a few CO monitors in Massachusetts, and none in Weymouth.

[1] MassDEP: February 12, 2003 memorandum for MOBILE6 inputs for performing indirect source air quality analysis and latest inputs supplied by BRA.

In these cases, MassDEP allows the use of a more "urban" location to conservatively represent background concentrations. Therefore, the then-most recent three years of City of Boston monitored background levels were used to represent future one-hour CO concentration (4.0 ppm) and eight-hour concentration (2.4 ppm) and were added to modeled concentrations for comparison to the NAAQS.

Microscale Analysis Results

The results of the one-hour modeled CO ground-level concentrations were added to MassDEP-supplied background levels for comparison to the NAAQS. These values represented the highest potential concentrations at the intersections, as they are predicted during the simultaneous occurrence of "defined" worst case meteorology.

The highest one-hour concentration predicted in the project area for the future build conditions plus background was 5.8 ppm at the intersections of Route 18 (Main St.) at Park Avenue and Park Avenue West. This value was well below the one-hour NAAQS standard of 35 ppm.

The highest eight-hour concentration predicted in the area of the project for the future build conditions plus background was 3.7 ppm at the same intersections as the one-hour. This value was well below the eight-hour NAAQS standard of 9.0 ppm.

Overall concentrations are projected to be slightly higher in the build condition than in the no-build condition, except at the Route 18/Route 139 intersection, where concentrations are projected to be slightly lower in the build condition than in the no-build condition. Despite those very small differences, all concentrations are projected to be well below the NAAQS.

Conclusion

Using conservative estimates, the CO concentrations at the sensitive receptors near the five intersections studied, plus monitored background values, were well below the NAAQS thresholds for CO.

MESOSCALE ANALYSIS

Introduction

A mesoscale analysis predicts the change in regional ozone precursor emissions due to a project. It is required to ensure that a proposed project will not negatively impact the State Implementation Plan ("SIP"), which tracks how the state intends to maintain compliance with the NAAQS.

The mesoscale analysis assessed total volatile organic compounds (VOCs) associated with motor vehicle emissions related to the 2007 FEIR project. The analysis included both an estimate of the VOC emissions associated with project-related vehicle trips and a comparison of VOC emissions associated with the Build condition and No-build condition. The methodology for the analysis was consistent with MassDEP's mesoscale guidance and that of similar projects.

Methodology

The total vehicle pollutant burden was estimated for the No-build and Build conditions for the future year 2017 and was based on the traffic analysis.

To predict the change in regional emissions due to the project, changes in traffic flow (in vehicle miles traveled[2]) were multiplied by an emission factor (grams per vehicle mile traveled). The average daily vehicle speed was used to estimate emissions for each link.

Intersection Selection

Intersection selection criteria for a mesoscale analysis are typically based on the area where the Project will affect the surrounding intersections and traffic patterns. For this analysis, 66 intersections were included based on the traffic study results.

Emissions Calculations (MOBILE6.2)

For each condition – Build and No-build -- modeled, the EPA MOBILE6.2 computer program was used to estimate motor vehicle emissions of VOC. Emission estimates derived from MOBILE6.2 for VOCs are based on the worse case of either wintertime or summertime conditions. The MOBILE6.2 inputs were selected based on guidance issued by MassDEP[3].

Results and Mitigation

Results of the mesoscale analysis showed an increase in daily VOC emissions for the Build conditions versus the No-build condition. The 2017 Build condition resulted in an increase in daily VOC emissions of 7.8 percent.

The 2007 FEIR included a set of mitigation measures to address the increase in emissions associated with 2017 Build condition, including intersection improvements (such as new turn lanes and new signals) at fourteen intersections, traffic calming measures to discourage trips through sensitive areas, and a traffic monitoring program.

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[2] Vehicle miles traveled (VMT) – the average daily traffic of the approach and departure of each link multiplied by the roadway link length.

[3] MassDEP: February 12, 2003 memorandum for MOBILE6 inputs for performing microscale and mesoscale analysis. Inputs were based on the latest MOBILE6 inputs from MassDEP dated 7/7/2004.

2.2.2 Regulatory Setting

As noted above, the purpose of a mesoscale analysis is to assure that a proposed project will not negatively affect the SIP. A mesoscale analysis is required as a part of a MEPA review when a project will generate more than 3,000 new average daily trips.

For transportation projects receiving federal funding, microscale analysis of the effect on air quality of the increase in traffic generated by the project is required.

2.2.3 Changes to the Project

The Project will result in the generation of a greater number of trips than was previously reviewed under MEPA, as discussed in the Section 2.1 above. Therefore, the Proponent anticipates that updated mesoscale and microscale analyses will be presented in the EIR.

2.2.4 Proposed Air Quality Analysis

The microscale analysis will be prepared in compliance with the technical and policy requirements of the EPA, United States Department of Transportation, and MassDEP. The Proponent anticipates using a screening process, similar to the one used for the previous analysis, to select the intersections that will be analyzed.

The mesoscale analysis will be prepared in accordance with MassDEP's May 1991 Guidelines for Performing Mesoscale Analysis of Indirect Sources, which addresses the required parameters and methodology. The analysis area will correspond to the study area included in the transportation analysis.

Because no stationary sources of emissions are currently proposed, the Proponent does not anticipate including stationary source analyses in the forthcoming EIR. As stationary sources are proposed by individual building owners, those building owners will be responsible for self-certifying or permitting their projects, as required.

2.3 Noise

2.3.1 Summary of the Study Presented in the EIR

For the Draft EIR, noise monitoring was conducted at four locations on Main Street in Weymouth, Abington Street in Hingham, Reservoir Park Drive in Rockland, and Forest Street in Rockland to establish baseline conditions.

Future sound levels for the year 2017 were computed for receptors near locations where the then-proposed Parkway would intersect with existing roadways in Weymouth and Rockland. The receptor locations included sixteen commercial receptors on Weymouth Street, one residential receptor on Abington Street, eleven residential receptors on Forest Street, seven commercial receptors on Route 18, and nine on Clarendon Street.

The U. S. Federal Highway Administration's (FHWA) Traffic Noise Model (TNM) was also used to compute future traffic noise levels. Sound levels were computed for the Build and No-build peak traffic hour conditions, using traffic volumes and speeds provided by Rizzo Associates, the 2007 FEIR project's transportation consultant. Traffic volumes included both heavy and medium trucks.

The study concluded that the Build and No-build conditions would have similar noise levels because there were no receptors near the proposed Parkway alignment and traffic on the Parkway was found to create very little additional noise.

Following the review of the DEIR, changes to the transportation network were proposed. The analysis was revised to reflect these changes and presented in the FEIR. For this study, the same monitoring locations measured for the DEIR were measured again, and one additional location was measured on Main Street in Weymouth.

The study concluded that noise impacts were expected to occur at five residential locations along Route 18 near the junction of the proposed Parkway and Route 18. These impacts were primarily due to the proposed widening of Route 18 at the intersection with the proposed Parkway.

2.3.2 Regulatory Setting

Traffic noise for highway projects, which are either planned by the federal government or built with federal aid are regulated by 23 CFR 772 (July, 1982), as described in the FHWA's "Highway Traffic Noise Analysis and Abatement Policy and Guideline," (June, 1995).

MassDOT's Highway Division regulates traffic noise in the Commonwealth. The noise analysis for the 2007 FEIR project was conducted under "The Massachusetts Highway Department Environmental Division Type I Noise Abatement Guidelines" (February, 2006). These guidelines were updated and are now "Massachusetts Department of Transportation Type I and Type II Noise Abatement Policies and Procedures" (July 13, 2011).

2.3.3 Changes to the Project

The Project will result in the generation of a greater number of vehicle trips than was previously reviewed under MEPA, as discussed in Section 2.1. Proposed changes to the master plan for the Project may affect future noise conditions. Therefore, the Proponent anticipates that an updated noise study will be presented in the EIR.

2.3.4 Changes to Background Conditions

Since the review of the 2007 FEIR, five intersections near the site have been improved to facilitate traffic flow on Route 18. Development unrelated to the Project has also occurred on both the east and west sides of the site. In addition, MassDOT has advanced plans to widen Route 18. These changes will affect the noise environment in both the No-build and Build future conditions.

2.3.5 Proposed Noise Monitoring and Modeling Programs

A noise monitoring program will be implemented to document changes to existing conditions in the vicinity of Union Point and monitoring will be conducted at locations near access points to the site. A TNM will be constructed to compute future sound levels at receptors near the site under Build and No-build conditions. The results under the Build and No-build conditions will be compared to determine whether the Project is likely to meet regulatory standards.

2.4 Wildlife Habitat and Rare Species

2.4.1 Rare Species Protection

The 2007 FEIR outlined the project's comprehensive program to protect state-listed species present on site (Eastern box turtle (*Terrapene carolina carolina*), upland sandpiper (*Bartramia longicauda*), and grasshopper sparrow (*Ammodramus savannarum*)) through habitat protection, construction-period measures, and long-term habitat enhancement. The Natural Heritage and Endangered Species Program (NHESP) issued a Conservation and Management Permit (CMP) (Permit No. 008-125.DFW) on February 12, 2009, and its Section 61 Findings were published in the Environmental Monitor on May 5, 2009. This CMP and its attachments contained specific requirements and protocols for rare species protection during construction and long-term measures.

Since the redevelopment was initiated, the SRA, its predecessor the SSTTDC, the Proponent, and LNR (a former proponent) have successfully implemented the measures described in the 2007 FEIR and required by the CMP to protect eastern box turtle during construction of the Parkway in the eastern portion of the site. The Parkway was constructed with permanent barriers to keep turtles from entering the roadway and with three passageways under the Parkway to allow turtles to safely move between habitat patches. In addition, four turtle nesting habitat areas totaling 11.4 acres were constructed in the eastern portion of the site, and a 6.5-acre turtle nesting habitat area was constructed in the southern portion of the site, on the former Taxiway C.

Rare species habitat has also been protected through permanent conservation restrictions (CRs). An 11.8-acre parcel east of the site, known as the Rocklands Meadows, was acquired by the Proponent, placed under permanent CR, and transferred to the Town of

Rockland. Approximately 85 acres on the east end of the site have been placed under permanent restriction to protect box turtle habitat, and an additional 71 acres of grassland and forest at the south end of the site have also been placed under a CR.

The CMP also required funding for off-site protection and maintenance of grassland habitat used by the grasshopper sparrow. Under the terms of the CMP, the Proponent has made required payments to an escrow account.

2.4.2 Summary of 2007 FEIR

The project described in the 2007 FEIR included an 18-hole golf course on the southern portion of the site. The golf course would have resulted in the permanent loss of 90 acres of grassland habitat that supported a population of grasshopper sparrows, a state-listed species. The golf course was designed as a links-style course to minimize impacts to grassland habitat by maintaining areas of grassland suitable for nesting grassland bird species, interspersed with active play areas (fairways, tees, golf cart paths, clubhouse and parking lot, driving range). The golf course design maximized the visual perception of a large area of contiguous grasslands without trees, although the actual nesting habitat was interspersed with the golf course.

Mitigation measures outlined in the 2007 FEIR for grassland bird habitat included time-of-year restrictions for construction in grassland areas, restoring grassland by removing trees and shrubs, placing permanent CRs on restored and preserved grassland areas, and funding off-site protection and maintenance of grassland habitat used by the grasshopper sparrow in Massachusetts.

The CMP authorized, among other elements of the project, construction of an 18-hole golf course in essentially the same configuration shown in the 2007 FEIR. In compliance with the CMP, a permanent deed restriction was placed on the 280-acre golf course area.

2.4.3 Current Status

The requirement to build a golf course was eliminated by Chapter 291 of the Acts of 2014, as described in Section 1.6, above. The Proponent has prepared a development plan to comport with the legislation, and a golf course will not be built. The CMP and Deed Restriction anticipate such a change. Condition 5 of the CMP states:

> *"Any proposed change which alters the limit of Work on the Property as shown on any plan identified in this Permit, or to the state-listed species conservation plan required by way of this Permit, shall require the Permit Holder to inquire of the Division, in writing, whether the change is significant enough to require the filing of a new Conservation and Management Permit Application, and or require additional long-term Net Benefit for affected State-listed species."*

The Grant of Restriction included as an attachment in the CMP states:

> *"if the golf course restricted area ceases to be operated as a golf course….shall be maintained in perpetuity as natural grassland according to a Division-approved management plan."*

The Proponent has developed a revised plan for the former golf course area that provides superior habitat preservation and enhancement. The Proponent will increase grassland habitat area by 54% (in comparison to the approved CMP) by preserving an additional 18.6 acres of grassland and restoring an additional 37 acres within the CR land, and will improve habitat connectivity by eliminating the imposition of a golf course in the grassland area.

The plan for the former golf course area includes removing 78 acres along the northern boundary from the existing CR. This area would be made available for mixed-use development. With the additional 55.6 acres of preserved and restored grassland, the CR area would provide a single, 158-acre contiguous grassland habitat that is not be fragmented by areas of human use and development. This large grassland preserves all existing grassland within the CR area, restores grassland that has been invaded by shrubs, and converts wooded areas to grassland. By providing substantially more grassland for nesting habitat and by removing human disturbance from the core nesting habitat areas, the proposed grassland plan would provide a substantial benefit to grasshopper sparrows in comparison to both existing conditions and the former golf course plan reviewed in the 2007 FEIR and approved by the CMP.

The Proponent is coordinating with NHESP on the proposed revisions and has submitted a written request that NHESP modify the existing CMP in accordance with the current proposal dated April 4, 2016. NHESP has verbally approved the request and directed the Proponent to prepare the documents required to modify the CMP. All of the other mitigation measures listed in the 2007 FEIR, and all of the requirements of the CMP, would remain in effect.

2.4.4 Next Steps

NHESP has requested that the Proponent prepare a grassland restoration plan that provides a detailed prescription for how each area of forest or shrubland will be converted to grassland. NHESP has also requested that the Proponent provide a modified grant of restriction and a metes-and-bounds plan of the CR area. In addition, NHESP has requested that the Proponent update any of the original CMP attachments that are relevant to the golf course grassland restriction. The Proponent is preparing these materials and anticipates that NHESP will issue a modified CMP in 2016.

Table 2.4-1 Comparison of Golf Course Restriction Plans

Land Condition	Original Golf Course Deed Restriction (acres)	Proposed Grassland Restriction (acres)
Restriction Area	280.5	202.3
Golf Course Fairways	(95.1)	0
Developed Area*	(22.7)	0
Temporary Grassland Impacts	(5.5)	0
Subtotal – Development Areas	(123.3)	0
NET PROTECTED NATURAL AREA	**157.2**	**202.3**
Grassland Preserved	46.0	64.7
Grassland Restored	57.0	93.8
Subtotal - Grasslands	**103.0**	**158.5**

Source: VHB

*Pavement, utilities, parking, club house, training academy, cart paths, pond.

2.5 Wetland Resources

The project proposed in the 2007 FEIR resulted in impacts to wetland resources, and proposed mitigation measures that were to result in an overall net gain in wetland area. The project and associated impacts were authorized under Sections 404 and 401 of the Clean Water Act and under the Massachusetts Wetlands Protection Act ("MWPA").

The Union Point Project is anticipated to include additional work within regulated wetland resource area and their buffer zones. The Project will be designed to meet MassDEP Stormwater Management Standards and no permanent impacts to vegetated wetlands are anticipated due to the Project. There may be temporary impacts to resource areas associated with off-site utility connections and upgrades. On-site wetlands, project permitting history, and the proposed changes to the project, as they relate to regulated wetlands, are described below.

2.5.1 Wetland Resource Identification

Approximately 383 acres of wetland resource area were identified on site and delineated by Rizzo Associates, Inc. between November 1999 and 2001. Review of the wetland resource areas boundaries and re-establishment of wetland flagging has occurred since the original delineation. Figure 2.5-1 provides an overview of wetland areas identified and delineated within the Project area. Wetland field investigations were performed in the spring of 2008 by BSC Group, Inc. (BSC) and Metcalf & Eddy, and again in 2012 by VHB, Inc. Table 2.5-1 presents a summary, by municipality, of wetland acreage on site.

Existing River Basins, Drainage Basins, and Outstanding Resource Waters

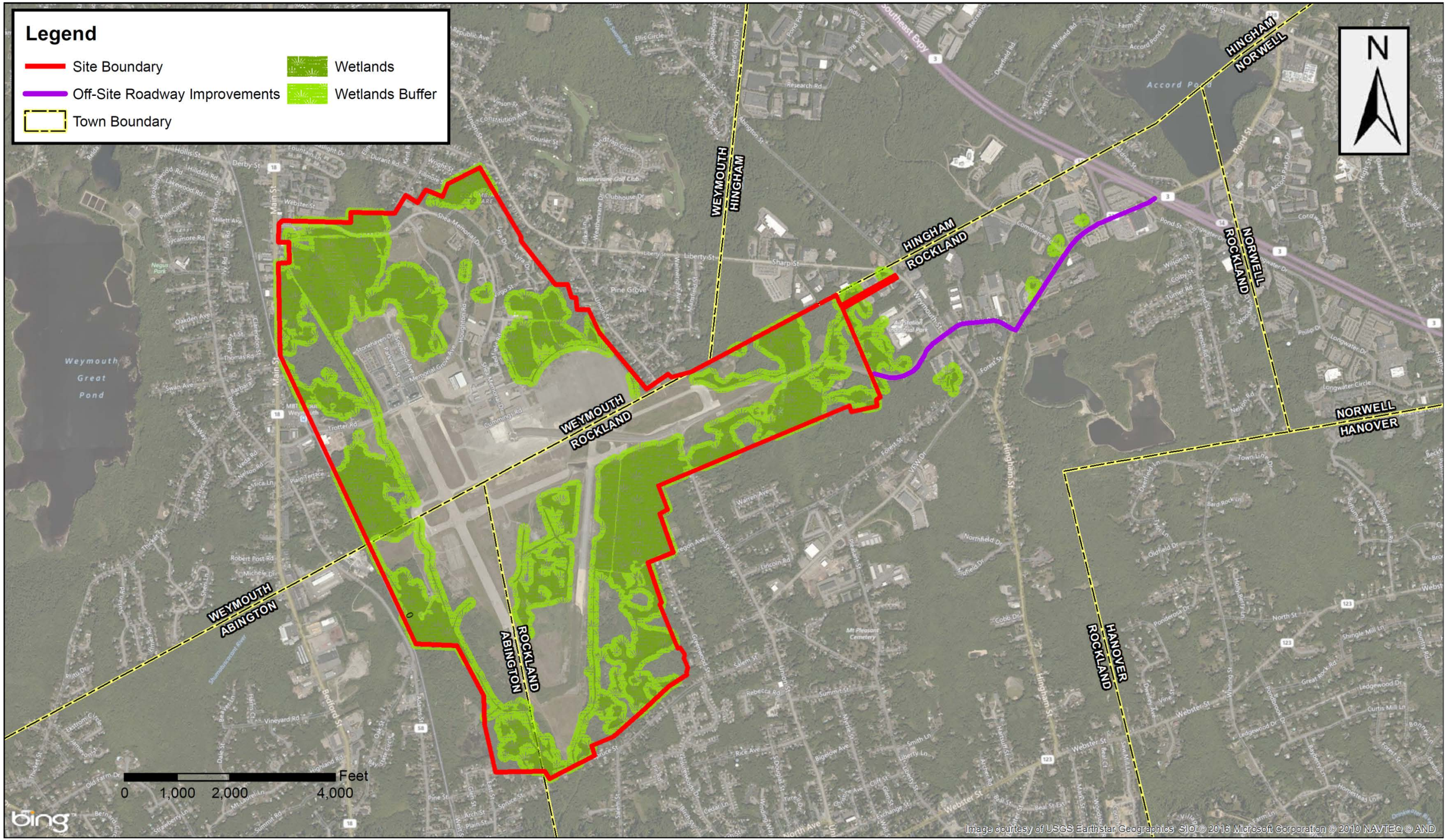
The site is located within two major Massachusetts river basins, the South Coastal (North and South Rivers) and the Boston Harbor (Weymouth and Weir River Basin) River Basins. Figure 2.5-2 shows the location of the major river basins on and in the vicinity of Union Point.

Based upon studies completed to develop a comprehensive master plan for stormwater on the Project site, three major drainage basins on the site have been identified. The major drainage basins are the East Branch French's Stream, the West Branch of French's Stream, and the Old Swamp River, as shown on Figure 2.5-2.

Old Swamp River, located within the Weymouth and Weir River Basins, is listed as an Outstanding Resource Water by the Commonwealth (see, "Designated Outstanding Resource Waters of Massachusetts" (2010)) because it is a tributary to a Whitman's Pond, a public water supply.

On-Site Wetland Resources

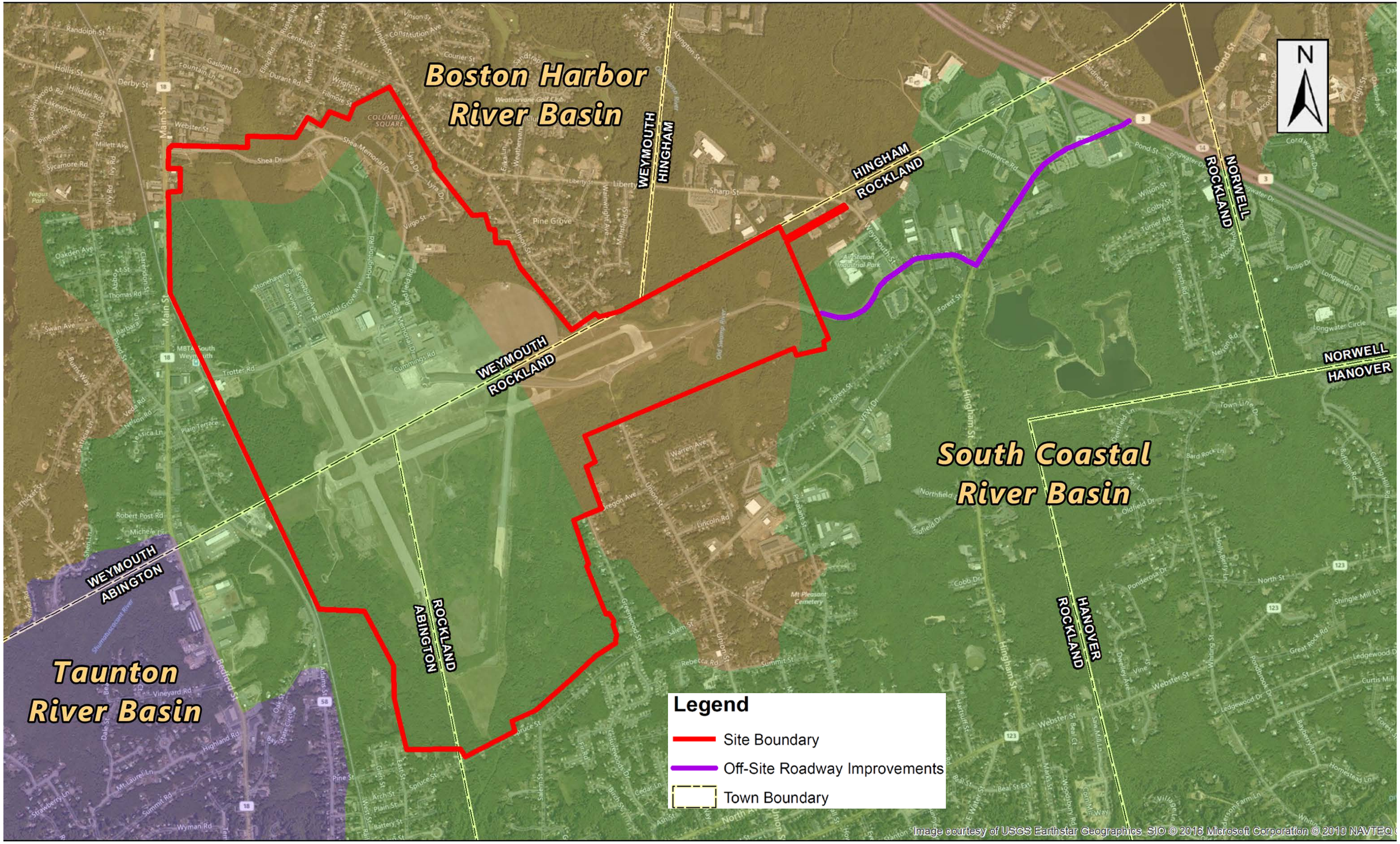
As noted above, approximately 383 acres of wetland resources were identified and delineated on the Project site. All of the Adjacent Vegetated Wetlands, regulated as Waters of the United States under Section 404 of the Clean Water Act (33 U.S.C. § 1251 et seq.), and listed in Table 2.5-1, are also regulated as Bordering Vegetated Wetland (BVW) under the MWPA. Based on coordination with the United States Army Corps of Engineers (USACE) and additional observations made by USACE staff during a site visit conducted on March 24, 2006, it was determined that all of the Isolated Vegetated Wetlands anticipated to be impacted by the Project are subject to regulation under Section 404 of the Clean Water Act.



Union Point **Abington, Rockland, Weymouth, Massachusetts**

UNION POINT LStarCommunities vhb

Figure 2.5-1
Wetlands



Union Point **Abington, Rockland, Weymouth, Massachusetts**

Figure 2.5-2
River Basins

Table 2.5-1 On-Site Existing Wetland Acreages

Municipality	Adjacent Vegetated Wetlands	Isolated Vegetated Wetlands	Total
Abington	31.1	0.1	31.2
Rockland	178.0	1.2	179.2
Weymouth	164.5	8.1	172.6
Total	**373.6**	**9.4**	**383.0**

Source: BSC Group, Inc.

Off-Site Wetland Resources

Off-site roadway improvements were proposed to provide better access to and from Routes 3 and 18. Off-site wetland resource areas were delineated and identified by Wetlands & Wildlife in June, 2005, and confirmed and re-established by BSC in March 2008. Figure 2.5-3 illustrates off-site wetland resources along Hingham Street that may be impacted by proposed off-site roadway improvements. Off-site work may also be necessary to provide utilities and other infrastructure connections to Union Point. Off-site wetland resources will be delineated where necessary and work will be permitted as required. Utility work to support the Project would be permitted as a limited project under the Wetlands Protection Act (310 CMR 10.24(7)(b)).

2.5.2 Wetland Impacts

The project described in the 2007 FEIR anticipated a permanent loss of 12,650 sf of federal jurisdictional vegetated wetland and temporary impacts on 1,300 sf of federal jurisdictional vegetated wetland, including 3,260 sf of state-regulated bordering vegetated wetland. Many of the impacted wetland resource areas were small isolated areas subject only to federal jurisdiction. Other wetland resource areas were part of larger wetland systems, adjacent to intermittent or perennial waterbodies, and subject to both state and federal jurisdiction. The previously reviewed project included 13,950 sf of temporary and permanent impacts to Waters of the United States. Portions of the previously reviewed project were revised to decrease permanent wetland impacts by 2,050 sf. However, wetland boundaries along the eastern side of the West Branch of French's Stream north of Trotter Road have changed since the 2008 delineation and impacts increased as a result from 140 sf of bordering vegetated wetland to 9,330 sf of bordering vegetated wetland at this location. The total wetland impacts associated with the Project are currently calculated as 21,448 sf (5,990 sf of bordering vegetated wetland), as shown in Table 2.5-2.

One of the key infrastructure components of the 2007 FEIR project was the Parkway connection between Route 18 and Hingham Street/Route 3. Under the Union Point master plan, portions of the Parkway have been realigned and moved to the north, significantly reducing impacts on wetland resource areas.

The following is a summary of the environmental mitigation constructed to-date. This mitigation totals 14,305 sf, pursuant to the original USACE authorization:

- Restoration of the Old Swamp River crossing, creating 1,515 sf of wetland;
- Daylighting of approximately 800 linear feet of the West Branch of French's Stream, creating 8,210 sf of wetland; and
- Construction of "Wetland Replication Area 2," creating 4,580 sf of wetland.

Additional work undertaken by the United States Navy ("Navy") includes the capping of the West Gate Landfill, a Superfund site located south of Trotter Road and west of the West Branch of French's Stream.

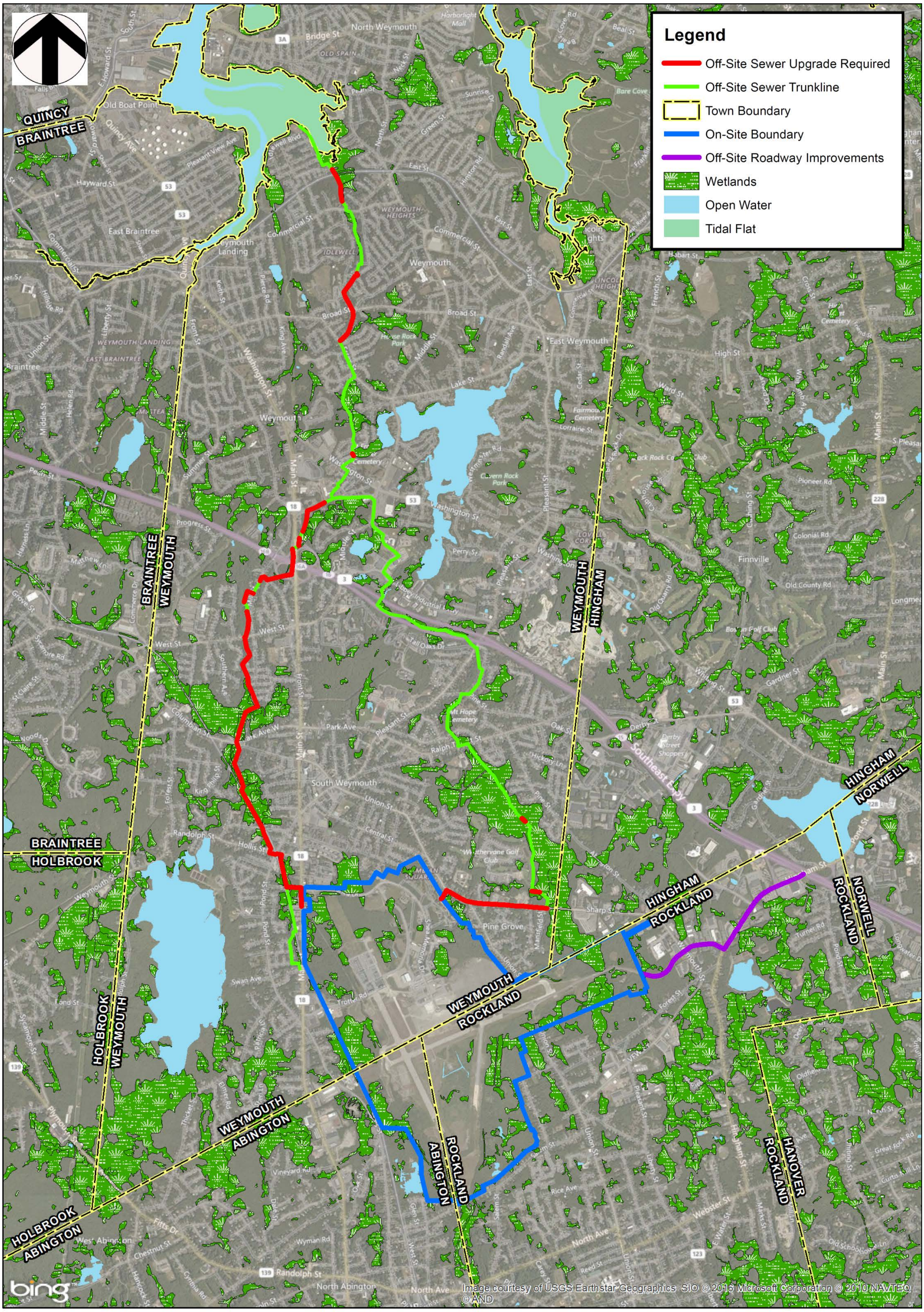
By eliminating the 18-hole golf course the Project avoids approximately 150 sf of wetland impacts.

2.5.3 Wetland Impacts for Work Not Yet Completed

Portions of the 2007 FEIR project that have not been completed and that remain part of the Project include:

- A commercial campus;
- Various residential communities;
- A water reclamation facility;
- Off-site roadway improvements; and
- Supporting infrastructure.

The previously reviewed project identified impacts to wetlands resource areas, as shown in Table 2.5-2, below. These impacts have been permitted by the Corps of Engineers under the Massachusetts General Permit but have not yet been permitted under the Massachusetts Wetland Protection Act. None of the activities conducted to date has resulted in the loss of wetlands.



Union Point **Abington, Rockland, Weymouth, Massachusetts**

UNION POINT LStarCommunities vhb

Figure 2.5-3

Off-Site Wetlands

Table 2.5-2 Total Previously Identified Wetland Impacts

Wetland Impact Area[1]	Wetland Type	Impact Area (square feet)	Jurisdiction
Wetland B	Isolated	2,175	Federal
Wetland C	Isolated	4,350	Federal
Wetland D	Isolated	350f	Federal
Wetland E	Isolated	1,835f	Federal
Wetland P	Isolated	1,486	Federal
Wetland Q	Isolated	462	Federal
Wetland I	Bordering	9,330	State and federal (Limited project)
Wetland M	Bordering	1,460	State and federal (Limited Project)
Total		21,448	

Notes: 1-Refer to Figure 2.5-3 for Wetland Impact Area locations.
Source: VHB

2.5.4 Proposed Changes

Under this NPC, the Proponent proposes to increase the square footage of development, and additional work will likely occur within buffer zones to wetland resources. The Project will meet the 50 foot required setback from vegetated wetlands on site. Additional stormwater controls may be required to support the proposed development program, and the Project will meet the MassDEP stormwater standards.

Off-Site Impacts

Temporary impacts to jurisdictional wetlands located off-site may result from upgrades to utilities needed to support the Project. Upgrades to two existing sewer utility lines, for example, may be necessary to support the proposed Project. The existing sewer lines run underground through several vegetated wetlands in Weymouth. In some locations a 30 foot cut section may be required to remove the existing pipe and lay new pipe sections capable of handling the anticipated volumes from Union Point. Preliminary designs for this work indicate that wetlands may be impacted by the pipe replacement. Additional wetlands impacts may occur during the construction of the water supply systems described in Section 2.11, below. Those impacts will be evaluated once the method for obtaining the Union Point water supply has been confirmed.

Any impacts to wetland resources from off-site utility work associated with the Project will be temporary, and all wetlands will be restored upon completion of work. The anticipated utilities work will be permitted through the Wetlands Protection Act as a limited project under 310 CMR 10.24(7)(b) and under sections 401 and 404 of the Clean Water Act.

2.5.5 Wetland Mitigation

The following section identifies the Project's wetland mitigation commitments and the anticipated long-term benefits gained from those commitments.

- Wetland mitigation areas totaling approximately 53,133 sf of newly created and restored wetlands are intended to compensate for the Project's anticipated loss of approximately 21,448 sf of existing wetland areas. The proposed ratio of mitigation to loss is between 2:1 and 3:1 and will result in a net gain of wetland resources on the site. Approximately 14,305 sf of replacement wetland has already been created, including Wetland Replication Area 2, Old Swamp River, and the daylighting of the West Branch of French's Stream. Approximately 48,553 sf of mitigation area is to be provided by wetland restoration work at Wetland Replication Area 1;

- The construction of Wetland Replication Area 2, east of Old Swamp River, resulted in the creation of 4,580 sf of vegetated wetland;

- Daylighting of approximately 800 linear feet of the West Branch of French's Stream has been completed; returning the stream to a more natural, meandering condition and creating approximately 8,210 sf of adjacent wetland and approximately 1,800 linear feet of bank;

- Removal of the culverts conveying Old Swamp River resulted in the restoration of approximately 2,570 sf of river substrate, 340 linear feet of bank, and creation of 1,515 sf of adjacent wetland; and

- Additional wetland mitigation may be required through the state permitting process for work within buffer zones on site, as well as for off-site work to support the Project.

2.5.6 Wetlands Permitting Status

Massachusetts Wetlands Protection Act

A total of 18 Notices of Intent (NOIs) have been filed to date for activities associated with the Project, including both on-site development and construction of the Delahunt Parkway. The majority of these NOIs have been for work in buffer zones or jurisdictional riverfront areas. The following list identifies the major completed and anticipated MWPA NOI filings for the Project's direct wetland impacts and work within MWPA jurisdictional resource areas.

- Bill Delahunt Parkway crossing of Old Swamp River and WIA-K: NOI filed with SRA Conservation Commission on September 10, 2010; approved on September 27, 2010;

- Bill Delahunt Parkway crossing of Wetland L (WIA-L), NOI filed with Rockland Conservation Commission on September 3, 2010; approved on November 29, 2010;

- Development Roadway: This is the proposed crossing of West Branch French's Stream (WIA-I). An NOI filed with SRA Conservation Commission on June 15, 2015 and approved on July 13, 2015;

- Residential Development: An NOI for the Winterwoods (WIA-D and WIA-E) residential development project was filed with SRA Conservation Commission on June 15, 2015 and approved on July 13, 2015;

- Additional NOIs will be prepared as design progresses for build-out of on-site development and roadway elements; and

- Future NOIs will be prepared to allow the proposed work, including off-site sewer upgrades.

Section 404 and 410

Portions of the 2007 FEIR project were previously authorized under a USACE Programmatic General Permit (Permit Number CE-NAE-R-2006-458) in October 2008. That permit expired in January 2015, and the Proponent submitted a Pre-Construction Notification (PCN) in January of 2016 to obtain coverage under the new Programmatic General Permits for Massachusetts.

Off-site utility work would require additional permitting under the Clean Water Act.

2.6 Open Space Program

The Project will keep 1,007 acres, or nearly 70 percent, of the site as open space – either in its current condition or restored as grassland habitat or landscaped or reshaped as recreational facilities, including playing fields and nature trails.

2.6.1 Summary of the Discussion in the EIRs

The discussion of open space in the DEIR focused on the prior military use of the site. It defined open space as land and its uses that are not occupied by industrial, institutional, office, and residential structures. Open space, thus defined, referred not only to woodland, wetland, parkland, and playing field, but also to sidewalks, lawns, sitting areas, and large areas not regularly occupied by people or machines. In certain areas, open space was a

buffer the site and adjacent neighborhoods. Open space was also used for runways, taxiways, aprons, runway-object-free-areas, and runway safety areas, and for construction of drainage lines and outfalls, including the ditching of the TACAN outfall wetlands and of French's Stream. At various times open space was used for rubble, refuse, and industrial by-product disposal. Then and since, open space has been used as wildlife habitat. Prior to the Navy's closing of the South Weymouth Naval Air Station, none of this open space was open to the public.

The DEIR described three primary types of open space on site:

- Recreational Facilities, which included one soccer field, two tennis courts, one outdoor basketball court, one baseball/softball field, and one outdoor pool (which, at the time of the filing of the DEIR was no longer in use);

- Natural Resources, consisting primarily of upland forests, grasslands and fields and wetlands located along the periphery of the site and on lands that were not developed by the military; and

- Other Open Space Areas, which were used for a variety of purposes, including large areas of managed vegetation peripheral to the airfield runways and taxiways, paved aircraft-related expanses, lawns and landscaped areas proximate to buildings on the site, landscaped roadway margins, and sidewalks and pedestrian paths.

In the 2007 FEIR project, 1,007 acres of the site were proposed to be publicly accessible open space and recreational facilities, including new parks, playing fields, developed recreation areas, a golf course, lawns and landscaped areas, land preserved as wildlife, wetlands protected by state law, and unmanaged forest and shrubland.

2.6.2 Project Changes

Under the Union Point master plan, changes to the locations of development are proposed. These changes include the addition of development areas in portions of Abington and Rockland that were previously proposed to be in golf course use. In part to compensate for those changes, approximately 76 acres of land that will be permanently protected under a conservation restriction is proposed to be added to the Project site.

2.6.3 Proposed Open Space

Consistent with the commitments previously made under MEPA, the Union Point master plan calls for the preservation of at least 1,007 acres of open space. As was proposed for the 2007 FEIR project, Union Point will include approximately 43 acres of public parks, approximately 939 acres of passive and active open space, and 25 acres dedicated to recreation and sports, including eleven new playing fields.

A key change to the Project is the elimination of the golf course, as dictated by the current market for new golf courses and the economic outlook for the sport today. This change allows for the creation of a large, contiguous area of more ecologically valuable wildlife habitat rather than the previously proposed little pockets tucked between golf holes.

Open space on the site includes approximately 50 acres of hiking trails, enhancing the play element of the live-work-play community and encouraging residents and visitors to enjoy the preserved environment.

2.7 Greenhouse Gas Emissions

2.7.1 Previous Review

Prior MEPA filings on the project predate the implementation of the MEPA Greenhouse Gas Emissions Policy and Protocol (GHG Policy). GHG analysis was not conducted for the 2007 FEIR project.

2.7.2 Regulatory Setting

Under the current (2010) GHG Policy, the Secretary reviews NPCs on an individual basis and may require that projects comply with the GHG Policy. Give the scope of the changes currently proposed, the Proponent anticipates that the Secretary will require that the Union Point EIR include GHG analysis.

2.7.3 Proposed Analysis

The Proponent is not proposing to construct buildings at Union Point. Rather, as market conditions allow, the Proponent will sell or lease building sites to others who will develop them.

In the EIR, the Proponent expects to provide energy use and GHG emissions analyses for buildings representative of various anticipated uses, including residential, office, laboratory, hotel, and retail uses. With no building designs in place or in progress, the GHG analysis will be based on typical features of the building types considered. The results of these analyses will then be scaled to reflect the Project at full build-out.

As required by the GHG Policy, the analysis will include two components: stationary sources (buildings) and transportation. For stationary sources, two cases will be considered for each building type: baseline and proposed. The baseline case evaluates a building that meets the minimum requirements of the Massachusetts Building Code. The proposed case includes measures that go beyond the requirements of the Building Code. Rockland and Weymouth are Stretch Code communities, therefore buildings to which the Stretch Code applies will, at a minimum, comply with the Stretch Code.

The analysis will also describe the alternatives that were evaluated, including renewable energy options. The stationary source analysis will consider GHG emissions from direct and indirect sources. Direct emissions are combustion sources within the Project site, such as boilers and generators. Indirect emissions are the emissions from off-site power plants that generate electricity consumed by the Project.

The transportation component of the GHG analysis will be based on the results of the Project's transportation study. It will analyze GHG emissions from mobile sources both with and without proposed transportation-related mitigation measures.

Individual building sites or collections of buildings will likely be sold or ground leased to third-party developers who will design and construct buildings to their specific needs. In most cases, the responsibility for submitting the post-construction self-certifications demonstrating compliance with the commitments made in the MEPA review will be delegated to the third-party developers. The EIR will describe the mechanisms by which the Proponent will inform buyers of their responsibilities under the GHG Policy and influence them to develop sustainable, energy- and GHG-efficient designs.

2.8 Agricultural Soils

2.8.1 Summary of the Discussion Presented in the EIR

In 1990, the U.S Department of Agriculture Soil Conservation Service conducted a soil survey of the site. The survey identified approximately 135 acres on site that contain prime, state, or local importance farmland soils in scattered pockets.

The 2007 FEIR project would have altered approximately 44.6 acres of agricultural soils, none of which was in agricultural use.

To compensate for these impacts, the proponent committed to implement three kinds of mitigation. The first was the designation of space for community gardens for residents on site and the provision of irrigation and fencing to support these gardens. As much as possible, the gardens would comprise agricultural soils that would otherwise be impacted by the Project. Approximately three acres of garden area was proposed (which assumed the creation of 15 foot by 15 foot plots for use by approximately 200 households, and the ability to leave portions of the garden area fallow). The proponent assumed that community gardens would be organized and administered by a voluntary association of residents, but would consult with the Massachusetts Department of Agricultural Resources (DAR) for assistance and suggestions on community gardens.

The second kind of mitigation was the proponent's commitment to work with DAR to solicit interest from local producers on the concept of staging a weekend farmers' market during the growing season at a location to be selected.

The third kind of mitigation allowed the off-site use of the site's agricultural soils, for cases where a conservation-appropriate use was not available on site. The proponent committed to work with DAR to identify local farmers who may be interested in acquiring some of these soils and to make the soils available to them. Prior to the potential impact on these soils, the details of these arrangements were to be determined in consultation with DAR.

2.8.2 Potential Impacts and Proposed Mitigation Measures

The Union Point Project will affect approximately 50.9 acres of state-designated agricultural soils.

To compensate for these impacts, the Proponent will implement the mitigation measures described above and previously reviewed. As more residences are occupied, the Proponent will inform residents of the potential locations of community gardens and, if the residents' association determines that there is interest in having community gardens, the Proponent will provide fencing and irrigation as agreed. It is important to note that the Proponent already hosts weekend farmers' markets at Union Point.

Depending on the Proponent's ability to reuse agricultural soils on site for appropriate purposes, it may become necessary to find off-site users for some portion of the soils. The Proponent will, as previously committed, work with DAR to find such users and will, as noted in the 2007 FEIR, be responsible for the costs of excavation and transportation of agricultural soils within a reasonable distance from the site.

2.9 Stormwater

Since the stormwater analysis was presented in the 2007 FEIR, there have been updates to regulatory guidelines and baseline information relating to stormwater management and modeling. The Proponent is also proposing revisions to the master plan for the redevelopment of the site. The following section discusses these changes.

2.9.1 Prior MEPA Stormwater Modeling Review/Discussion

As part of the prior MEPA review, stormwater runoff hydrologic modeling was conducted for both the existing and proposed conditions. The existing conditions analysis was provided in the DEIR and the proposed conditions (full build-out master plan) analysis was provided in the 2007 FEIR. To maintain consistency with the existing and proposed conditions hydrologic modeling and analysis that was previously reviewed, the Proponent intends to use the existing conditions modeling already developed and incorporate the Union Point development program. The Union Point proposed conditions modeling will update the stormwater analyses as individual projects are approved and constructed. The Proponent intends to refine the interim hydrologic model on an ongoing basis to reflect development impacts as the Project advances toward the full build-out contemplated in the Union Point master plan.

Prior to incorporating updates to the previously reviewed stormwater hydrologic models, the Proponent performed a review of the existing and proposed hydrologic models developed as part of the MEPA review. Since the hydrologic models were developed, updates to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping for the South Weymouth Naval Air Station area and new National Oceanic and Atmospheric Administration (NOAA) rainfall data have been released. In addition to these updated hydrologic modeling input parameters, inconsistencies were identified with the original project's hydrologic models. One such inconsistency was the basis that was developed for the conveyance of stormwater runoff through existing 42-inch and 48-inch stormwater trunk lines that convey stormwater from the wetland area north of Memorial Grove Avenue to an outlet at the TACAN outfall. Because the hydraulic performance of these stormwater trunk lines is a significant controlling element of the overall hydrology of the tributary watersheds, the Proponent will develop an EPA Stormwater Management Model (SWMM) hydrodynamic model for the existing conditions that is consistent with the earlier existing conditions analysis. The EPA SWMM hydrodynamic model takes into account both hydrology and hydraulic parameters which were not accounted for in the original model.

The Proponent's EPA SWMM existing conditions model will establish a more accurate baseline for stormwater runoff on site. The Proponent will also develop a full-build master plan model, consistent with the existing conditions modeling, to determine the Project's impacts and the mitigation required for the Union Point master plan. The Proponent will also develop an interim proposed conditions model so that each phase of the redevelopment can be incorporated into the model as individual phases are designed, approved, and advanced to construction.

This approach will allow for comparison of the interim phased development hydrologic results with the existing conditions hydrologic results. More specifically, the Proponent will be able to confirm that the phased development stormwater design approach will not have unintended negative downstream impacts and that peak rates runoff will not exceed existing conditions rates at any time, as each phase of construction is realized. This approach will also provide the runoff results for the interim phases, allowing for stormwater detention facilities to be constructed at the appropriate time to maintain the existing peak rates of stormwater runoff at the design points during any phase of development.

2.9.2 Project Activity Since the 2007 FEIR

Since the stormwater analyses included in the prior project's DEIR and FEIR were prepared, several site-specific projects have been approved and constructed. Each of these projects includes a stormwater management system designed to mitigate the impacts resulting from the developments. These site-specific projects include the following:

- Phase 1A Definitive Subdivision Plan ("DSP"):

- The "Phase 1A Definitive Subdivision Plan" included the development of approximately 10.5 acres of previously developed area. The DSP included improvements to Memorial Grove Avenue and Parkview Street and the construction of two wet retention basins with sediment forebays, known as the east and west detention basins. Filterra Bioretention systems were also incorporated into the stormwater management system design.

- Pulte Residential Developments – Transit Village & Winterwoods:

  - Pulte Homes of New England, LLC has constructed two residential developments, Transit Village and Winter Woods, since the Certificate on the 2007 FEIR was issued. Transit Village consists of four 50-unit apartment buildings and associated parking, landscape improvements and stormwater management infrastructure. Transit Village includes sub-surface infiltration systems, an infiltration basin, and extended dry detention basins as part of the stormwater management system. Winterwoods consists of 81 single family homes, 27 townhouse units. Stormwater management best management practices to mitigate the impacts from Winterwoods include sub-surface infiltration systems, infiltration basins and a wet basin.

- Bill Delahunt Parkway:

  - The Bill Delahunt Parkway was constructed to connect the site to Weymouth Street in Rockland and to Trotter Road and Route 18 in Weymouth. A total of eight constructed wetlands that provide peak rate attenuation and water quality treatment were constructed as part of the stormwater management systems associated with the Parkway development.

- Market Street (New Main Street):

  - The development of Market Street, formerly known as New Main Street, has been designed and permitted. Market Street consists of approximately 1,930 linear feet of roadway, including utility and stormwater management infrastructure, Market Street will connect the Parkway to Memorial Grove Avenue. The Market Street stormwater management design includes sub-surface infiltration structures to provide for water quality treatment.

2.9.3 Changes in Regulations/Policies since the 2007 FEIR

- Stormwater Management Standards (not Policy) incorporated in 310 CMR 10.00 and 314 CMR 9.00:

  - The stormwater management analyses included in the previous MEPA submittals were developed in 2007. On January 2, 2008, MassDEP released updates to the Stormwater Management Standards and issued a revised Massachusetts

Stormwater Management Handbook. The updates to the Stormwater Management Standards included enhanced groundwater recharge and water quality treatment requirements with an emphasis on the implementation of low impact development techniques to manage stormwater. With the exception of the DSP, which was approved in 2007, all of the phased projects listed herein have been designed or constructed or both to include stormwater management systems that meet current MassDEP Stormwater Management Standards; and,

- Union Point has been designed to meet MassDEP Stormwater Management Standards. Each phase of development moving forward will continue to document compliance with those Stormwater Management Standards.

- Updated USDA NRCS Soils Mapping:

  - The USDA NRCS soils mapping has been updated since the 2007 FEIR stormwater analyses were prepared. The updated soils maps upgraded the Hydrologic Soil Group (HSG) classification mostly for the areas between the impervious runways of the former airfield. When the South Weymouth Naval Air Station was constructed, much of it was filled with sandy material to develop a level airfield. The updated soil mapping reflects the fill material used to develop the airfield. The previous soils mapping, used for the hydrologic model in the 2007 FEIR, identified the soils as HSG "D" while the new mapping identifies the soils as HSG "A" or "B";

  - The updated soils maps, which reflect existing conditions, suggest less stormwater is discharging from the site than was estimated in the 2007 FEIR analysis. Therefore, it is anticipated that the proposed Project will have increased stormwater impacts and will necessitate implementation of additional stormwater infiltration and management than was proposed in the 2007 FEIR: and,

  - As described above, the Proponent will update the existing and proposed conditions stormwater analysis models to reflect the updated soil mapping.

- Published rainfall depth and intensity increases – NOAA Atlas 14:

  - The National Oceanic and Atmospheric Administration (NOAA) released NOAA Atlas 14, Precipitation-Frequency Atlas of the United States, Volume 10 Version 2.0: Northeastern States in November 2015. The precipitation frequency estimates included in NOAA Atlas 14 Volume 10 supersede the estimates from the NOAA Technical Memorandum NWS HYDRO-35, the Weather Bureau Technical Paper No. 40 and the Weather Bureau Technical Paper No. 49. The updated rainfall values and frequencies published in NOAA Atlas 14 will be

used as the basis of rainfall data for the revised Stormwater Models to be developed as part of the Supplemental EIR;

- The higher intensity rainfall values included in the NOAA Atlas 14 will provide for better climate change preparedness as compared to the TP-40 rainfall data that is often utilized for stormwater analyses; and,

- As described above, the Proponent will update the existing and proposed conditions stormwater analysis modeling to reflect the updated rainfall values.

2.9.4 Conformance with the 2007 FEIR Stormwater Master Plan

The 2007 FEIR project included a net increase of 22 acres of impervious area as compared to then-existing conditions. The Union Point Project will result in a net increase of approximately 75 acres of impervious area as compared to the 2007 FEIR existing conditions. The increase in net impervious area is a result of increased density, reduction in the number of single family homes, and expansion of development area. Consistent with the 2007 FEIR stormwater master plan, the increase in impervious area resulting from the Union Point master plan will be mitigated with the implementation of either large regional or distributed stormwater management/detention facilities. These stormwater management/detention facilities will be constructed as specific phases of development are designed and built. The intent of the stormwater master plan design is to use low-impact development techniques to collect, capture, and treat stormwater runoff as close to the source as possible.

Consistent with the 2007 FEIR stormwater analyses, the previously developed design point locations will be maintained. Peak rates of stormwater runoff will be analyzed at these design points to ensure that the proposed peak rates of stormwater runoff are either at or below the existing conditions peak runoff rates. The Project's phase-specific stormwater water quality treatment will be developed and implemented with the specific project phases, similar to the phases described herein.

2.9.5 Conclusion

The Proponent will develop updated hydrodynamic models to reflect the Project and regulatory changes described above, and to develop a more accurate stormwater master plan model that will be continually evaluated as phases of the Project are advanced. The Proponent will document the results of the hydrologic and hydraulic modeling for the existing conditions, current interim conditions, and proposed master plan conditions in the EIR. The proposed Union Point stormwater master plan analysis will confirm that impacts will be mitigated within the proposed development, and peak rates of stormwater runoff discharging from the overall redevelopment site will be equal to or less than the pre-redevelopment existing conditions stormwater runoff rates.

2.10 Wastewater

2.10.1 Wastewater Generation

Upon completion, Union Point will require an estimated average daily supply of up to 2.70 million gallons per day (mgd) of water and will generate an estimated average daily wastewater flow of up to 2.30 mgd. Water demand estimates are based on the full build development program detailed in Table 2.10-1. Estimates for residential water demand are based on 65 gallons per capita per day (gpcd), as described in the 2007 FEIR, and an average of 2.6 persons per dwelling unit. The estimates also include conservation measures required by the Water Resources Commission as conditions for an Interbasin Transfer Agreement (ITA). Estimates of water demand for life sciences uses are based on an assumed average of 525 gallons per day per 1,000 sf (gpd/ksf) of building space. This assumed average rate is lower than rates assumed in the 2007 FEIR and reflects a ratio of administrative office to lab/manufacturing of 1:2. Water demand estimates for other uses are based on MassDEP wastewater generation rates and assume a conversion of 90 percent of water use to sewer flow, i.e. MassDEP sewer generation rates are divided by 0.90 to estimate associated water demand.

Table 2.10-1 Union Point Water Demand and Wastewater Flow Projections

Use	Quantity	Unit	Water Demand (gpd/Unit)	Average Daily Demand (gpd)	Wastewater Flow (gpd/Unit)	Average Daily Flow (gpd)
Residential	3,855	du	169 gpd/du	651,500	152 gpd/du	586,000
Assisted Living/Nursing	300	bed	167 gpd/bed	50,100	150 gpd/bed	45,000
Hotel	285	keys	65 gpd/key	18,500	59 gpd/key	16,800
Conference Center	120	ksf	83 gpd/ksf	10,000	75 gpd/ksf	9,000
Life Sciences	2,800	ksf	480 gpd/ksf	1,344,000	432 gpd/ksf	1,209,600
Hi-tech Manufacturing	500	emp	22 gpd/emp	11,000	20 gpd/emp	10,000
Manufacturing	1,600	emp	22 gpd/emp	35,200	20 gpd/emp	32,000
Office	2,486	ksf	83 gpd/ksf	206,300	75 gpd/ksf	169,400
Retail	212	ksf	56 gpd/ksf	11,900	50 gpd/ksf	10,600
Restaurant	2,400	seats	39 gpd/seat	93,600	35 gpd/seat	42,000
Cinema	2,300	seats	6 gpd/seat	13,800	5 gpd/seat	11,500
Skating/Hockey	1,500	seats	6 gpd/seat	9,000	5 gpd/seat	7,500

Use	Quantity	Unit	Water Demand (gpd/Unit)	Average Daily Demand (gpd)	Wastewater Flow (gpd/Unit)	Average Daily Flow (gpd)
Stadium	15,000	seats	6 gpd/seat	90,000	5 gpd/seat	75,000
Fitness/Wellness Center	360	lockers	22 gpd/locker	7,900	20 gpd/locker	7,200
Swimming Pool	300	persons	11 gpd/cap	3,300	10 gpd/cap	3,000
Public School	600	students	22 gpd/student	13,200	20 gpd/student	12,000
Civic/Community Facility	40	ksf	56 gpd/ksf	2,200	50 gpd/ksf	2,000

Table 2.10-1 Union Point Water Demand and Wastewater Flow Projections (Continued)

Institutional/Social Services	37	ksf	56 gpd/ksf	2,100	50 gpd/ksf	1,900
Irrigation				150,000		
Total Demand/Flow				2,723,900		2,309,600

2.10.2 Treatment and Disposal Alternatives

The Proponent is evaluating the following three wastewater management alternatives:

- All Union Point wastewater conveyed to the Massachusetts Water Resources Authority (MWRA) Deer Island treatment facility for treatment and disposal;
- All wastewater generated at Union Point treated in a new, privately-owned on-site wastewater treatment plant and discharged to groundwater or well, or used for irrigation of industrial uses; and
- Wastewater generated at Union point will conveyed to the MWRA's Deer Island treatment facility for treatment and disposal, and to a new, privately-owned on-site wastewater treatment plant, where it will be treated and discharged to groundwater.

A fourth alternative, under which wastewater generated on site in Weymouth would be conveyed to the MWRA's Deer Island treatment facility for treatment and disposal, and wastewater generated on site in Abington and Rockland would be conveyed to the Rockland wastewater treatment facility for treatment and disposal, is no longer under consideration. The Rockland wastewater treatment facility does not have adequate capacity to accept the anticipated flows from Union Point.

The three alternatives under consideration are described below. The Proponent anticipates providing additional analysis in the EIR.

2.10.2.1 All MWRA Sewer Alternative

Under this alternative, all wastewater generated on site would be conveyed through the Weymouth sewer system through Mill River, Old Swamp River, and Lower Central interceptor sewers to MWRA's Sanitary Drainage Area 4 and ultimately to MWRA's Deer Island Treatment Plant and discharged to Boston Harbor. For the Town of Weymouth, this would not require a change, because Weymouth is already within the MWRA's Sewer Service Area and its wastewater is managed by the MWRA.

The on-site locations within the boundaries of the towns of Abington and Rockland, however, would have to be admitted to the MWRA. To accomplish this would involve meeting the admission criteria and making the payments spelled out in MWRA's Policy #OP.11, "Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area." Requirements for admission to the MWRA system include the following:

1. The admission must be approval by

    a. MassDEP;

    b. Other regulatory bodies, where required;

    c. the MWRA Advisory Board;

    d. the Governor and the General Court;

    e. the DPW Director and Chief Executive Officer in the transporting community (in this case, Town of Weymouth); and

    f. the DPW Director and Chief Executive Officer in the community of origin (in this case, the towns of Abington and Rockland).

2. Evaluations must be conducted to:

    a. Demonstrate that there are no negative impacts on existing MWRA sewer system communities; and

    b. Demonstrate that the capacity of the system as extended will be sufficient to meet ordinary wet weather demands and all feasible actions have been taken to minimize infiltration and inflow.

The admissions process requires additional documentation or verifications, including an alternatives analysis, an approved plan for infiltration and inflow removal, a maintenance plan, and payment of various fees, all as specified in Policy #OP.11.

2.10.2.2 All On-Site Treatment Alternative

Treating wastewater on site was the alternative proposed in the 2007 FEIR. The then-proposed Water Reclamation Facility was sized for an average annual design flow of 650,000 gpd and was expandable to 1,050,000 gpd. Some treated wastewater from the plant was proposed to be reused for seasonal irrigation, including golf course irrigation, and year-round by industrial and biotechnology users. Reclaimed water in excess of reuse needs was proposed to be used to recharge the groundwater through a leaching chamber constructed alongside a culverted section of French's Stream. This culvert was proposed to be removed, the banks restored, and soils replaced with high permeability fill to create a groundwater-surface water recharge system. A vertical confinement system would have been installed to prevent surfacing of reclaimed water in adjacent wetlands. The design included a nine acre leaching area and a ten acre reserve area to provide redundancy.

As noted above, Weymouth is already admitted to the MWRA Sewer Service Area. If there is capacity in the system for Union Point's additional flow from development in Weymouth, treating this flow on site may not be the best use of existing infrastructure. Soils on site may not have sufficient capacity to accommodate Union Point's wastewater flow from Weymouth, in addition to flows from Abington and Rockland, which would have to be managed on site under this alternative.

For Union Point, this alternative has not been advanced as far as it was for the prior project. At full build out, Union Point will generate approximately 2,300,000 gpd of wastewater, more than twice the expanded volume estimated in the 2007 FEIR. The treatment plant and leaching facilities can therefore be expected to require approximately twice as much acreage as the facilities describe in the 2007 FEIR. In addition, the potential flow and nutrient impacts from recharging this quantity of treated wastewater – on wetland resource areas and French's Stream – would have to be analyzed more fully to determine whether this alternative is feasible. This alternative would require a Groundwater Discharge Permit from MassDEP.

Further, a primary goal of the BRAC process, under which Union Point is being developed, is to replace the economic activity that is lost when a defense facility is closed. An alternative that treats and discharges all of Union Point's wastewater on site would require a significant area of developable upland. Using this much upland – potentially as much as 40 acres – for wastewater treatment and disposable would reduce the Project's economic benefits to the Host Communities. These impacts, too, will have to be evaluated more fully.

2.10.2.3 MWRA and On-Site Treatment Alternative

Under this hybrid alternative, portions of wastewater generated at Union Point would continue to be managed by the MWRA, while portions would be treated at a new, privately-owned on-site wastewater treatment plant that discharges to groundwater. The anticipated flows at full build out under the master plan that would be treated on-site would be approximately 830,000 gpd. As was proposed in the 2007 FEIR project, wastewater from the plant could be reused for seasonal irrigation and year-round if suitable industrial users locate at Union Point. Remaining wastewater would be discharged to groundwater.

As with the all-MWRA alternative described above, there would be no change for the Town of Weymouth. The wastewater treatment plant serving the Abington and Rockland portions of Union Point would require a Groundwater Discharge Permit from MassDEP.

2.11 Water

The Proponent is having discussions with the MWRA, and several municipalities, including Braintree, Brockton, Weymouth, Quincy, Abington, and Rockland to develop water supply options for Union Point. The proposed changes to the Union Point development program result in modifications to the estimated water demand, further development of water supply options, and corresponding changes in potential impacts and mitigation measures.

2.11.1 Water Demand

The full build-out water demand for the 2007 FEIR project was estimated at 1.40 million gallons per day (mgd) on an annual average daily basis, although due to the uncertainty of the proposed biotechnology component of the development, the average daily water demand was estimated to be as low as 1.05 mgd. The proposed permanent water supply to serve this demand was the MWRA Water System. The wastewater treatment facility proposed in the 2007 FEIR was to provide approximately 0.40 mgd of reuse water to meet both the biotechnology component water demand and the irrigation demand.

The Proponent is evaluating wastewater management and treatments options, and depending on the wastewater option selected, reclaimed water may be available for commercial and other uses. Based on water demand estimates presented in the 2008 NPC, the project required a water supply of approximately 245,000 gallons per day (gpd), which was to be supplied by the Town of Weymouth until the permanent MWRA water supply connection was established.

Estimates from the Union Point master plan establish a full build-out water demand of approximately 2,717,000 gpd (2.70 mgd) on an average daily basis. The current water demand at Union Point is approximately 49,100 gpd on an average daily basis, based on recent water use data.

The Union Point full build-out water demand is the estimated demand for the development identified in the Union Point master plan. Section 2.10 provides additional details on the methodology used for estimating water demand for Union Point.

2.11.2 Water Supply Stages

The proposed method for obtaining the Union Point water supply has been re-evaluated since the 2007 FEIR was submitted. This section describes two short-term supplies: (1) an Interim Weymouth Supply, which has been modified since the review of the 2007 FEIR, and (2) a new Rockland-Abington Supply. In addition, it presents long-term water supply alternatives, including the alternative proposed in the 2007 FEIR, which may no longer be viable, and several other options that the Proponent is evaluating.

2.11.2.1 Interim Weymouth Supply

Under an agreement signed by the SRA and the Town of Weymouth in November, 2016, up to 600,000 gpd of water will be supplied to Union Point by the Town of Weymouth on an interim basis. This water will be provided only to development at Union Point located in the Town of Weymouth.

2.11.2.2 Interim Abington-Rockland Supply

As an interim water supply for development located at Union Point in the Towns of Abington and Rockland, the Abington-Rockland Joint Water Works has committed to provide up to 250,000 gpd. This water supply will be provided only to development at Union Point located in Abington and Rockland.

2.11.2.3 Full Build-Out Supply Options

The Union Point full build-out water supply option remains, as described in the 2007 FEIR, a direct transmission pipeline from the MWRA water system to Union Point. This full build-out water supply option is necessary to provide the estimated 2.70 mgd average daily demand of full build-out at Union Point. The direct transmission pipeline will be constructed as the Union Point water demand warrants.

The proposed full build-out transmission pipeline route described in the 2007 FEIR was to begin with a connection at MWRA Meter 246 in Willard Street in Quincy on the MWRA Water System's Section 22 and be approximately eight miles in length, running through Quincy, Braintree, and Weymouth and terminating at Union Point. A more direct route within municipal streets was possible, however the route proposed in the 2007 FEIR was selected to minimize traffic impacts. Based on conceptual hydraulic calculations, a 16-inch diameter pipeline with an intermediate booster pump station was proposed.

In the years since the filing of the 2007 FEIR, background conditions in the vicinity of Union Point and in the surrounding and nearby communities have changed. In addition,

the need to construct a larger transmission pipeline to accommodate the currently-proposed full-build development increases both the cost and complexity of the pipeline's construction. For these reasons, the Proponent has identified and is evaluating alternative pipeline routes, in addition to the route studied in the 2007 FEIR, and water sources in addition to the MWRA.

The transmission pipeline routes under evaluation for MWRA water supply alternatives, other than the route studied in the 2007 FEIR, would connect to the MWRA system in Quincy at MWRA Meter 166. In all of these alternatives, the routes run from west to east from Quincy, across the Fore River, into North Weymouth, at which point they diverge and run directly to Union Point, as shown on Figure 2.11-1. The routes follow roadway rights-of-way in some cases, utility rights-of-way in other cases, and, in still other cases, may run cross-country outside of existing rights-of-way.

In addition, the Proponent is evaluating the feasibility of purchasing water for Union Point from the Aquaria Desalination Plant, which serves the City of Brockton. The connection to the Aquaria plant could involve constructing a substantially shorter new transmission pipeline than would a connection to the MWRA water supply system. The Proponent's evaluation will consider, among other factors, the plant's capacity, available supply, and cost to purchase water.

Through its transmission pipeline routing and water supply source analyses, the Proponent is seeking a route that best minimizes environmental, social, and economic impacts in the affected cities and towns and is feasible and practicable to build and a high quality source that is reliable and affordable.

Long Term Supply: Dedicated Pipeline Options to Union Point

M-334
M-166
M-246
Option 1
Option 2
Option 3
Option 4
QUINCY
HINGHAM
WEYMOUTH
BRAINTREE
RANDOLPH
HOLBROOK
ABINGTON
AVON
ROCKLAND
BROCKTON
UNION POINT
Braintree
Weymouth
North Weymouth
Abington
0 0.25 0.5 1 Miles

Legend

- Aquaria Connection
- MWRA Meters
- Union Point

Union Point Abington, Rockland, Weymouth, Massachusetts

UNION POINT | LStarCommunities | KLEINFELDER Bright People. Right Solutions.

Figure 2.11-1
Water System

2.11.3 Potential Impacts

Table 2-11.1, below, summarizes the existing and proposed future water supplies for Union Point and estimated volumes needed.

Table 2-11.1 Union Point Average Daily Water Demand and Existing and Proposed Sources

	Existing Supply (from Weymouth)	Interim Weymouth Supply	Interim Abington-Rockland-Supply	Union Point Full Build —Supply Source to be Determined
Volume (in gallons per day)	245,000	355,000	250,000	2,717,000
Cumulative Supply	245,000	600,000[1]	850,000[2]	2,717,000[2]

[1] Existing Supply plus Interim Weymouth Supply.
[2] Existing Supply plus Interim Weymouth Supply plus Interim Rockland-Abington Supply.
[3] Full-Build Supply replaces Existing and Interim Weymouth supplies and Interim Rockland-Abington Supply.

Union Point Full Build-Out Water Supply Alternative

2007 Alternative

The 2007 FEIR's description of impacts and mitigation measures associated with the supply of water to Union Point was based on the proposed transmission pipeline and intermediate booster pump station, which are unchanged in this NPC, aside from the increase in the transmission pipeline diameter and size of the pumps. The associated impacts identified in the 2007 FEIR are anticipated to remain the same.

MWRA and Aquaria Desalination Alternatives

Other connections to the MWRA or to the Aquaria Desalination Plant are expected to have similar impacts. More specifically, to the extent that the transmission pipeline runs in roadway rights-of-way, impacts to traffic and potentially to wetland resource areas are expected. Traffic would be managed to maintain safety and minimize delays, and impacts to roadways would be mitigated as needed. Wetland impacts and mitigation would be undertaken as required by the Conservation Commission in the affected communities.

On-Site Infrastructure

In addition to the proposed transmission pipeline, the proposed water supply system includes components on the Union Point site, as detailed in the 2007 FEIR. These components consist of a ground level water storage tank, an elevated storage tank with an associated pump station, and an on-site water distribution piping system. These on-site components will be evaluated during the design phase for sizing increases, as necessary, given the increased estimated water demand for Union Point. Otherwise, the on-site water system components remain the same as described in the 2007 FEIR and will be similar for each of the alternatives.

The Union Point master plan has been revised to exclude the previously proposed golf course. The exclusion of the golf course has significantly reduced the estimated irrigation demand for Union Point, therefore a previously proposed golf course irrigation well is no longer a component of the Project. Mitigation measures related to the previously-proposed irrigation well are not included in this NPC.

2.11.4 Mitigation Measures

The following mitigation measures were identified in the 2007 FEIR.

During Project construction and occupancy, water conservation measures may include:

- Use of reclaimed water for irrigation and suitable industrial uses, such as cooling water;
- Low-flow fixtures and appliances;
- Education;
- Landscaping with drought resistant species;
- High efficiency drip irrigation;
- Leak detection surveys;
- Full cost pricing;
- Drought/emergency water plan; and
- Periodic water audits.

The availability of reclaimed water for irrigation and industrial use will depend on the wastewater management alternative selected. Otherwise, the proposed conservation measures are unchanged.

During pipeline construction, wetland, traffic, noise, and air quality impacts will be minimized or mitigated by:

- Constructing the proposed transmission pipeline within existing roadway rights-of-way; and,
- Locating the proposed water storage tanks and pump stations to avoid impacts to wetland resource areas and rare species habitat.

2.11.5 Interbasin Transfer Analysis

Depending on the full-build water supply alternative chosen for Union Point, Interbasin Transfer Analysis, documenting potential impacts on the donor and receiving basins, may be required. The Proponent will coordinate with the Water Resources Commission ("WRC"), as necessary, as the evaluation of potential sources of water progresses.

2.11.6 MEPA and WRC Comments on ITA Application Process

The following provides a summary of the outstanding water supply related items identified in the Certificates on the 2007 FEIR and 2008 NPC and associated comments by government or quasi-government entities as they relate to the Interbasin Transfer Act application process.

- The NPC Certificate identified several items for submittal to MassDEP:
    1. Water Service Agreement with the Town of Weymouth, including responsibilities for water quality sampling (see NPC Certificate, p.2)
    2. Description of billing procedures and responsibilities (see NPC Certificate, p.3)
    3. Operation and Maintenance Procedures: (see NPC Certificate, p.3)
    4. WS 32 Permit application to cover Phase 1A and Phase 1B (see NPC Certificate, p.3)
    5. A copy of the current agreement with the Navy as it pertains to water supply (see NPC Certificate, p.3)

The Proponent continues to coordinate with state and local agencies to document the formal process for establishing the water supply management structure for Union Point, and will continue to do, as applicable, basin on the requirements for the selected water supply alternative.

- The Certificate on the 2007 FEIR identified the following items as paraphrased below:
    1. Will residential areas have access to water from the non-potable well?

       The Union Point master plan no longer includes an on-site irrigation well for the golf course.

2. Release data from both the Quabbin and Wachusett reservoirs must be provided as documentation for the ITA process.

   The MWRA's Donor Basin Analysis, which the Proponent anticipates including in the EIR, provides Quabbin and Wachusett release data.

2.12 Solid Waste

2.12.1 Solid Waste Management – Construction and Demolition

Construction Waste

The Proponent will encourage project developers to reprocess and recycle construction waste. Future development contracts may include specific waste management requirements that ensure construction procedures that provide for the segregation, reprocessing, reuse and recycling of materials, and so that non-recyclable materials are disposed of at approved solid waste facilities. For those materials that cannot be recycled, the Proponent will require that solid waste be transported in covered trucks to an approved solid waste facility, per MassDEP Regulations for Solid Waste Facilities, 310 CMR 16.00.

Potential solid waste streams from construction are expected to include paper, wood, glass, aluminum, and plastics from packing materials; waste lumber; insulation; empty non-hazardous chemical containers; concrete; metal, including steel from welding/cutting operations; and electrical wiring. The Proponent will require that Construction Waste Management Plans are prepared by each project's construction management team. The Proponent will encourage each project developer to recycle and salvage nonhazardous construction and demolition debris to the greatest extent practicable. The construction manager for each project will be encouraged to develop and implement a construction waste management plan that meets or exceeds Leadership in Energy and Environmental Design (LEED) standards. Construction and demolition waste that cannot be recycled will be disposed of at facilities license to accept construction and demolition materials.

Demolition Waste

The 2007 FEIR provided information on the management and disposal of waste generated by demolition activities. As the Union Point Project progresses, and to the greatest extent practicable, asphalt, brick and concrete (ABC) rubble will be recycled for on-site uses, a practice that was encouraged by MassDEP in its review of the project.

As noted above, material that cannot be recycled will be disposed of at a properly licensed facility that accepts construction and demolition materials in compliance with applicable regulations.

ABC materials generated by the demolition of buildings and other infrastructure will be handled in accordance with MassDEP's Solid Waste Regulations. ABC materials will be processed in accordance with MassDEP solid waste regulations, and only acceptable ABC materials will be processed.

2.12.2 Building Demolition and Asbestos Containing Waste Material

Construction projects will comply with MassDEP Air Quality regulations at 310 CMR 7.00. The Proponent will implement measures to alleviate dust, noise and odor nuisance conditions, which may occur during the demolition. For facilities constructed prior to 1980, the Proponent will contact a state licensed asbestos consultant to conduct an asbestos survey of the facility and the facility components prior to conducting demolition or renovation activities. As part of the asbestos survey, samples of building material potentially containing asbestos will be taken to a state certified laboratory for analysis.

In accordance with 310 CMR 7.00 et. seq, the Proponent will hire a state licensed asbestos abatement contractor to remove the asbestos containing materials from a facility or facility component prior to demolition or renovation. Pursuant to 310 CMR 7.15, the Proponent and contractor will be responsible for submitting the proper notification forms to MassDEP and the Massachusetts Department of Labor Standards (MassDLS). The removal of asbestos from the buildings will adhere to the special safeguards contained in the Air Quality Regulations, as required at 310 CMR 7.15.

Pursuant to 310 CMR 19.061(6)(b), the disposal of asbestos containing materials within the Commonwealth must be at solid waste facilities approved by MassDEP to accept asbestos containing waste materials. As suggested by MassDEP guidance materials, for further information regarding the removal, handling and disposal of non-friable asbestos containing materials (i.e. VAT, asbestos cement shingles and asphaltic-asbestos felt and shingles, etc.) the Proponent will refer to the MassDEP, "Policy Concerning Non-Friable Asbestos Containing Materials, Bureau of Waste Prevention Policy # BWP-96-012, Revised December, 2000" and "Asbestos Cement Shingles Guidance Document, February 2006." Per 310 CMR 19.061(6)(b), no asbestos containing material, including Vinyl Asbestos Tile, asphaltic-cement felt or shingles, will be disposed at a solid waste combustion facility.

2.12.3 Solid Waste Management – Commercial Uses

Commercial Waste & Recycling

Union Point will generate solid waste typical of office, retail, hotel, and restaurant uses. Solid waste is expected to include wastepaper, cardboard, glass bottles and food. Recyclable materials management will be implemented through programs developed by building and facilities management groups.

With the exception of wastes typical of commercial uses (e.g., cleaning fluids) or other wastes generated by specialized commercial uses of future tenants, the Union Point Project will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials. Specialized waste management services for future commercial uses will be coordinated by those commercial tenants in accordance with applicable federal, state, and local regulations.

The Proponent will encourage facilities' managers to coordinate waste management services among Union Point projects.

2.12.4 Solid Waste Management – Residential Uses

Residential Waste and Recycling

The Project will generate solid waste typical of residential developments. Solid waste generated by residents will be collected and disposed of off-site by a licensed contractor. The Proponent will implement an aggressive recycling program throughout Union Point, and residents will be encouraged to recycle.

With the exception of household hazardous wastes typical of residential developments (e.g., cleaning fluids), residential development at Union Point will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials. It is anticipated that residential waste collection will be coordinated with contracted service providers to deliver residential recyclable materials to material recovery facilities.

Recycled materials are expected to include newspaper, plastics, glass, cardboard, cans, and bottles. The residential recycling collection program will be implemented to minimize the waste generated by residents that is hauled to and disposed of in landfills, and the recycling program will be developed in accordance with LEED solid waste management standards for the Project. Union Point recycling efforts, for example, may include providing recycling containers either adjacent to or integrated into the design of other receptacles in publically accessible areas, and the availability of a drop-off point, available to all residents, for potentially hazardous household wastes. The Proponent will encourage individual construction projects to also follow LEED standards for solid waste management.

2.13 Hazardous Waste Cleanup

2.13.1 Introduction

The DEIR and FEIR submittals provided information about the status of waste site cleanups at the site. Since that time, the Navy has continued investigation and remedial actions under the oversight of the EPA and MassDEP. The status of some waste sites has changed since the 2007 FEIR submittal, and additional property has been transferred by the Navy.

This section discusses changes to the status of waste sites at the site since the 2007 FEIR. A summary of active waste sites is provided in Table 2.13-1, and the locations of the active sites are shown on Figure 2.13-1.

Table 2.13-1 Active Cleanup Sites at Former South Weymouth Naval Air Station

Site	Site Description	Status	Land Use Controls (In place or in ROD)
Hangar 1 Area of Concern (AOC)	Releases of Per- and Polyfluoroalkyl substances (PFAS) into hangar lean-to's.	Investigation is ongoing.	Use of groundwater for drinking water restricted. Dewatering plans must be approved by US EPA and MassDEP.
RIA 76 – Basewide Solid Waste	Areas of solid waste and/or debris.	Navy is addressing debris as it prepares property for transfer.	No
RIA 111 – Former Hangar 2	Potential releases from floor drains in demolished hangar.	Navy has not completed investigation to determine if remedial actions will be needed.	Remedy has not been selected
Industrial Operations Area (includes the following sites):	Area of former industrial type operations where soil impacts were present in surficial soil.	Record of Decision selected excavation of impacted soil. Navy planning to implement remedy in 2016. EPA has requested additional investigation for PFAS	Not anticipated in ROD
RIA 33 - AIMD Building shop drains Various Removal Actions (VRA) – Bldg. 117	Trace dioxin in soil associated with coal and slag layer under the building foundation.	Included in above.	Not anticipated in ROD
RIA 82 - Power House	Storage of coal and coal ash.	Included in above.	Not anticipated in ROD
AOC 14 – Staining Between Hottensphere and Water Tower	Former drum storage area.	Included in above.	Not anticipated in ROD
AOC 83 - Hazardous Waste Storage Area	Former hazardous waste storage, including transformers.	Included in above.	Not anticipated in ROD

Table 2.13-1 Active Cleanup Sites at Former South Weymouth Naval Air Station (Continued)

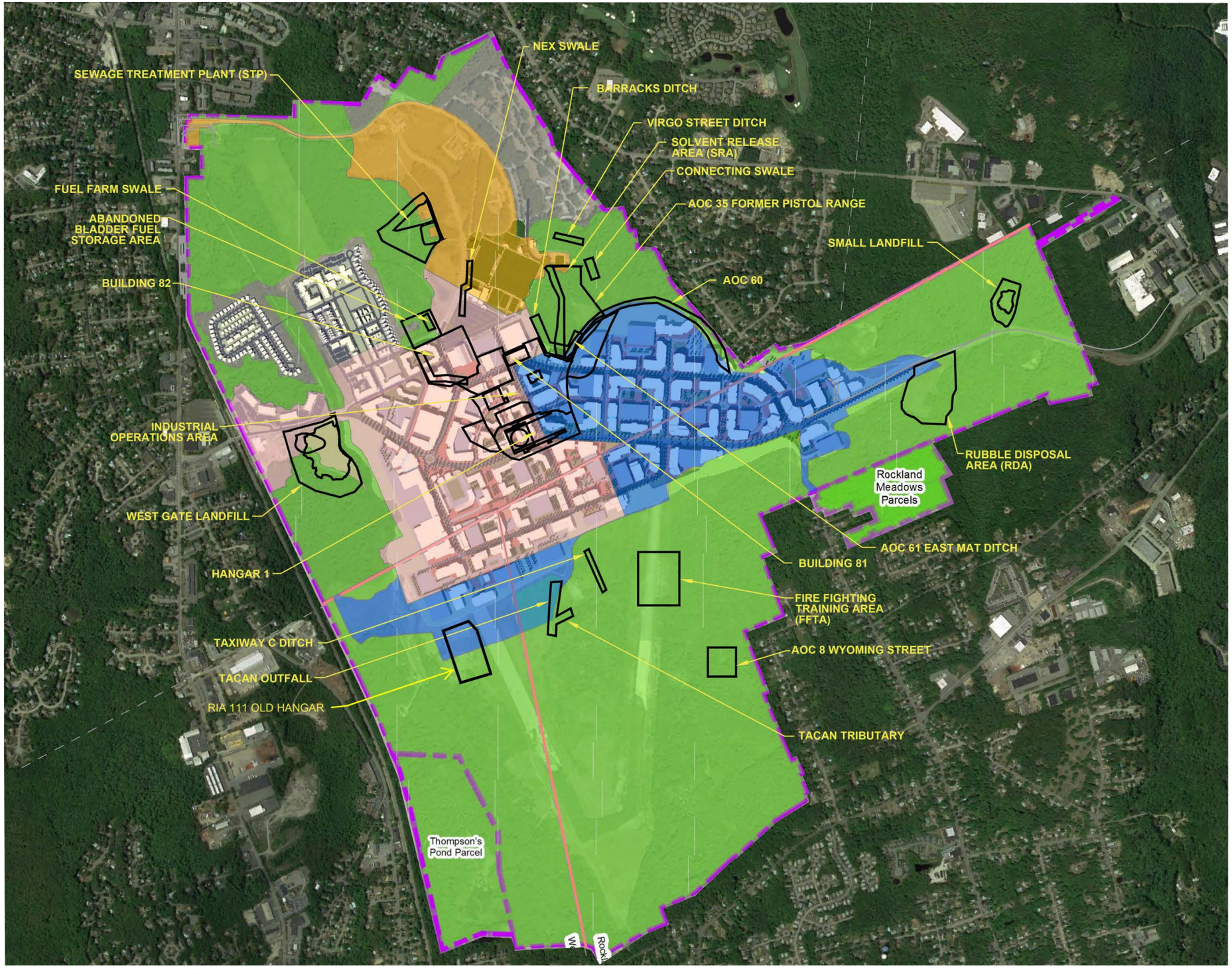
Site	Site Description	Status	Land Use Controls (In place or in ROD)
IR 4 – Fire Fighting Training Area (FFTA) RTN 4-18735	Burning and extinguishing of waste oils and fuels.	On-going groundwater monitoring for PFAS.	Use of groundwater for drinking water restricted.
IR 3 – Small Landfill (SL)	Disposal of construction debris, concrete rubble, and tree stumps.	Cap construction complete; Navy is conducting long term monitoring.	Cap disturbance and groundwater use prohibited
IR 1 – West Gate Landfill (WGL)	Past disposal of domestic and possibly other wastes from the Base.	Cap construction complete; Navy is conducting long term monitoring.	Cap disturbance and groundwater use prohibited
IR 2 - Rubble Disposal Area (RDA)	Disposal of building debris.	Cleanup and cap construction complete; Navy is conducting long term monitoring.	Cap disturbance and groundwater use prohibited
IR 7 – Sewage Treatment Plant (STP)	Possible disposal of chemicals into the sewage treatment system.	Navy completed removal actions per the ROD. EPA has requested additional investigation for PFAS.	Proposed restriction on residential use in a portion of the Site, and restriction on disturbance of impacted soil at depth
IR 9 (Building 81)	Former motor pool. Groundwater impacted with chlorinated solvents.	Remedial design is being prepared.	Groundwater extraction and residential use prohibited
IR 10 (Building 82)	Former hangar and maintenance activities. Identified chlorinated volatile organic compounds in groundwater.	Navy has performed remedial actions for chlorinated volatile organics in groundwater. EPA has requested additional investigation for PFAS.	Groundwater extraction prohibited, construction dewatering requires EPA and MassDEP approval

Table 2.13-1 Active Cleanup Sites at Former South Weymouth Naval Air Station (Continued)

Site	Site Description	Status	Land Use Controls (In place or in ROD)
IR 11 – Solvent Release Area	Chlorinated solvent release from unidentified source.	Navy has initiated remedial actions for chlorinated solvent release. EPA has requested additional investigation for PFAS.	Public benefit conveyance portion of site has restrictions on use of groundwater for drinking water, residential use, construction worker health and safety requirements, and pre-approval of plans for any buildings. Construction dewatering plans must be approved prior to construction activities on entire site.
IR-5 Tile Leach Field	Investigation activities resulted in a no action ROD	EPA has requested additional investigation for PFAS.	Unknown
Abandoned Bladder Tank Fuel Storage Area (OU8)	Remediation of former fuel storage area is complete.	EPA has requested additional investigation for PFAS.	Unknown
Wyoming Street Area (AOC8/ OU16) Building 70	Former Radio Receiver building site was closed.	EPA has requested additional investigation for PFAS.	Unknown
AOC 55B	Area of solid waste debris was investigated and closed	EPA has requested additional investigation for PFAS.	Unknown
AOC 60 East Mat Drainage Ditch (OU20)	Drainage ditch for East Mat was investigated and closed.	EPA has requested additional investigation for PFAS.	Unknown
AOC 61 (OU21) TACAN Outfall and Associated Areas	Drainage outfall and associated drainage swales were investigated and closed	EPA has requested additional investigation for PFAS.	Unknown

2.13.2 Landfills

The Navy operated three landfills on site: the West Gate Landfill, the Rubble Disposal Area, and the Small Landfill. Locations of the landfills are shown on Figure 2.13-1. The Navy has completed the installation of a cap on the Small Landfill pursuant to Corrective Action Design (CAD) approvals from the MassDEP Southeast Region Solid Waste Management Section. Caps on the West Gate Landfill and Rubble Disposal Area were



Legend

- Town Center District
- Neighborhood District
- Discovery District
- Town Boundary
- Open Space
- Union Point Boundary
- Active Investigation or Remedial Site

AOC = Area of Concern

0 1250' 2500'

GRAPHIC SCALE

Figure 2.13-1
Active Sites

constructed in accordance with Remedial Designs approved by EPA and MassDEP under CERCLA. The Navy remains responsible for ongoing monitoring and maintenance of the landfills.

Ownership of the Small Landfill has been transferred to LStar, and the other two landfill parcels will likely be transferred to the Proponent in 2017. All three landfills will require deed restrictions and/or Activity and Use Limitations (AULs) that limit activities on the properties to activities that will not adversely affect the Navy's ongoing monitoring or completed remediation, or result in negative effects on human health or the environment. The Navy is responsible for the long-term maintenance of the landfill caps and for monitoring environmental conditions after the likely transfer of ownership of the landfill parcels.

Any deed restriction or AUL will generally limit future use of the landfills parcels to passive recreation uses or their designation as a wildlife habitat. The AUL for the West Gate Landfill will also allow the placement of a solar electric generating facility. The AUL will require that the EPA and MassDEP approve the design and installation of the solar electric generating facility.

2.13.3 Current Site Status

Seventeen sites identified in the 2007 FEIR have been closed by the Navy since submittal of the 2007 FEIR. Table 2.13-1 lists the sites where remedial actions have not been completed. The Navy is responsible for completing remedial activities at those remaining Sites, and remedial activities are overseen by EPA and MassDEP. Table 2.13-1 includes six sites where remedial actions had been considered complete. However, in July 2016, EPA issued a letter requesting additional investigation of these sites, and most of the remaining active sites, for per- and polyfluoralkyl substances (PFAS).

The PFAS are considered an "emerging" contaminant, and have only recently been identified as a contaminant of concern at military installations and manufacturing facilities. PFAS have been used in a wide range of products, including fire-fighting foam, cleaners, waterproof clothing, stain resistant carpet, leather, paper, paints, and wire insulation. While PFAS impart useful properties, including fire resistance and oil stain, grease and water repellency, they may pose a risk to human health. EPA has established health advisory concentrations for two PFAS compounds in drinking water.

PFAS compounds have been detected in groundwater at the site which were likely components of fire-fighting foam used when the site was an active Navy facility. Since groundwater is not used as a drinking water supply on site, there is no exposure pathway for people on site under normal conditions. The Navy is performing additional investigation of these compounds on site, with oversight from EPA and MassDEP.

2.13.4 Mitigation

The Proponent is working with the Navy, EPA, and MassDEP to develop construction dewatering and soil management plans, as necessary, for work that will be conducted in areas where groundwater impacts may be present. The construction dewatering and soil management plans will ensure proper management of soil and groundwater while the Navy continues their studies and evaluates potential remedies.

2.14 Construction Period

The DEIR included a Construction Management Plan addressing noise, air quality/dust/odor control, pollutant releases, waste generation an disposal, staging areas, lay down areas, erosion and sedimentation control, rodent control, protection of wildlife and rare species, provision of temporary pedestrian facilities, and lighting. Construction of Union Point is proceeding in accordance with this Construction Management Plan.

The Construction Management Plan also addresses traffic management during construction. It covers, among other things, construction truck routes and mitigation measures including off-peak travel times for construction workers, carpooling, park-and-ride facilities, and transit options.

Based on the effectiveness of the Construction Management Plan to date, the Proponent does not intend to make substantive changes to the Plan but, if conditions warrant, will modify the construction practices to address community concerns.

Section 3.0

Preliminary Mitigation Measures

3.0 PRELIMINARY MITIGATION MEASURES

Subject Matter	Impact	Mitigation	Schedule
Transportation	Generation of approximately 79,900 average daily trips.	Improvements to road segments and intersections affected by site-generated traffic and implementation of Traffic Demand Management plan. A traffic monitoring program will be implemented to validate traffic projections.	During occupancy
Air Quality	Increase in regional vehicular emissions (On-site construction impacts are discussed below.)	During occupancy the Project's potential impacts on air quality will be avoided or minimized by construction of the multi-modal transportation facility, implementation of a Traffic Demand Management plan, and other traffic mitigation measures.	During occupancy
Noise	Off-site impacts may occur. (On-site construction impacts are discussed below.)	The Federal Highway Administration's "Highway Traffic Noise Analysis and Abatement Policy and Guidance" and MassDOT require analysis of potential mitigation measures. The Proponent will consult with MassDOT so that noise mitigation for this Project and MassHighway's Route 18 widening project are coordinated.	During occupancy
Water Supply	Consumption of up to 2.7 million gallons per day of water. Off-site wetland crossings and traffic, noise and air quality impacts during pipeline construction.	Off-site pipeline construction will be located largely within roadway rights-of-way as much as possible within or directly adjacent to the paved travel lane. On-site water storage has been located to avoid impacts to wetland resource areas and rare species. Water conservation measures may include use of reclaimed water for irrigation, installation of low-flow fixtures and appliances, education, landscaping with drought resistant species, high efficiency drip irrigation, leak detection surveys, full cost pricing, a drought / emergency water plan, and periodic water audits.	During construction and occupancy
Wastewater	Generation of up to 2.3 million gallons per day of wastewater.	The volume of wastewater requiring disposal will be minimized through the use of low-flow fixtures and appliances.	During occupancy
Wetlands	Parkway alteration of bordering vegetated wetland both on-site and off-site. Development alteration of isolated vegetated wetland.	Wetland impacts have been minimized by narrowing the Parkway from four lanes to two where it crosses wetland resource areas, designing retaining walls instead of side slopes, where feasible, or steeper side slopes, and bridging Old Swamp River. Sections of French's Stream were daylighted and restored to a more natural condition. The proponent has committed to construct compensatory wetlands at a ratio of 2:1 to 3:1 for vegetated wetland altered by the Project.	During construction

Subject Matter	Impact	Mitigation	Schedule
Stormwater	Reduced off-site flooding and improved water quality.	The Project is designed to enhance the site's stormwater characteristics by reducing off-site flooding and improving water quality through on-site detention, infiltration, pre-treatment, low impact development techniques, and an operations and maintenance plan, in compliance with Massachusetts Stormwater Management Standards.	During construction and occupancy
Wildlife Habitat and Rare Species	Direct impacts to grassland, shrubland, and forest. Impacts to upland sandpiper habitat, grasshopper sparrow habitat, eastern box turtle habitat.	The Project will permanently protect wildlife habitat and preserve movement corridors along French's Stream and Old Swamp River. The Parkway has been designed to accommodate wildlife movement and to minimize conflicts between wildlife and automobiles. During construction, mitigation measures will include clearing work sites of state-listed species before the start of construction, preventing state-listed species from entering work areas, installing and maintaining erosion control measures, and limiting construction to certain times of year. Mitigation measures include the restoration of Old Swamp River substrate and the protection of riparian corridors. Impacts to upland sandpiper and grasshopper sparrow habitat will be minimized or mitigated by such measures as restoring grassland on the site, permanently protecting certain grassland areas, prohibiting public access to protected grasslands, and funding off-site protection and maintenance of grassland bird habitat. Eastern box turtles will be protected by measures such as restoring grasslands, installing turtle barriers along portions of the Parkway, and removing culverts in Old Swamp River.	During construction and occupancy
Hazardous Waste Cleanup	None.	None required. The Navy's cleanup activities are ongoing.	
Solid Waste	Generation of municipal solid waste during occupancy. (On-site construction impacts are discussed below).	The Proponent will develop a Comprehensive Waste Management Plan, which will include measures such as composting, curbside pickup of recyclables, municipal solid waste removal, mandatory separation of waste streams by offices and retail businesses, and pricing to encourage waste reduction and recycling.	During occupancy
Open Space Program	Positive impact: Preservation of 1,007 acres of open space, including high quality habitat for state-protected species.	In addition to open space preservation, Union Point includes and open space maintenance plan that requires monitoring for plant pests and disease, upkeep of pathways, maintenance of playing fields under an integrated pest management plan, and keeping recreational equipment in good repair.	During construction and occupancy

Subject Matter	Impact	Mitigation	Schedule
Agricultural Soils	Impacts to approximately 51 acres of prime soils or soils of state or local importance.	Impacts to agricultural soils by building or roadway development will be mitigated by measures such as reuse of soils at a site for community gardens, hosting of a weekend farmers' market, or identifying farmers who may be interested in acquiring these soils.	During construction and occupancy
Sustainable Design	The full range of potential impacts associated with development and occupancy of Union Point.	The Project will be certifiable under the Leadership in Energy and Environmental Design Neighborhood Development program. Union Point calls for concentrating mid-rise buildings around services, housing, and entertainment to create a true live-work-play environment. Long-term plans include structured parking for most uses to preserve valuable land.	During construction and occupancy
Construction	Temporary impacts on traffic, air quality, noise, water quality management and erosion control, wildlife and rare species.	The Proponent's Construction Management Plan minimizes the Project's construction period impacts. The plan addresses issues such as mitigating traffic impacts; maintaining air quality through construction controls, use of ultra-low-sulfur diesel fuel, retrofits of construction diesel engines; managing solid and hazardous waste; minimizing noise; managing stormwater and controlling erosion; and protecting wildlife and rare species. It also includes a proposed operations and maintenance program	During construction

Attachment 1

Secretary's Most Recent Certificates on the Project

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

DEVAL L. PATRICK
GOVERNOR
TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR
IAN A. BOWLES
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
http://www.mass.gov/envir

April 11, 2008

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME	: Naval Air Station Development Project
PROJECT MUNICIPALITY	: Abington, Rockland and Weymouth
PROJECT WATERSHED	: Weymouth and Weir, North and South Rivers, and Taunton
EEA NUMBER	: 11085R
PROJECT PROPONENT	: South Shore Tri-Town Development Corporation (SSTTDC) and LNR South Shore LLC
DATE NOTICED IN MONITOR	: March 12, 2008

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c.30, ss.61-62H) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted on this project and hereby determine that it **does not require** the preparation of a Supplemental Environmental Impact Report (EIR). However, I note that there are outstanding issues to be resolved and my determination is conditional on the proponent's resolution of these issues and submittal of deliverables to the Massachusetts Department of Environmental Protection (MassDEP) as further detailed below.

The proposed project (referred to as *SouthField* in the Notice of Project Change (NPC)) consists of up to 2,855 residential units, 2 million square feet (sf) of commercial/industrial space, an 18-hole golf course, active and passive recreational amenities, and institutional space (including sites for a school and civic/community facilities). The project also involves associated infrastructure development including an on-site wastewater treatment facility, and water supply infrastructure, road construction and other transportation improvements, and a multi-modal transportation center based on expansion of the existing commuter rail station in South Weymouth. The project is proposed for implementation in three phases[1] over a 14-year period.

The proposed project change involves an expansion in the interim water and wastewater service to be provided by the Town of Weymouth. As proposed in the Final EIR (and as noted in the Certificate on the NPC dated February 10, 2006), the Town of Weymouth had previously

[1] Phase I of the project includes a "Phase 1A" portion, which was granted a Phase I Waiver pursuant to the Certificate on the Notice of Project Change, dated February 10, 2006.

committed to provide up to 150,000 gallons per day (gpd) of water and to accept up to 120,000 gpd of wastewater for Phase 1A of the project until completion of the on-site wastewater treatment facility and the water supply connection to the Massachusetts Water Resources Authority (MWRA) system. Phase 1A consists of 500 residential units and 150,000 sf of commercial development. Due to delays in the timeline for completion of the permanent infrastructure, the proponent has proposed that Phase IB (500 residential units and 500,000 sf of commercial development) would also be served by the Weymouth municipal system on an interim basis.

The proposed project change involves an increase of 95,000 gpd (for a total of 245,000 gpd) in the amount of water to be supplied by the Town of Weymouth on an interim basis. The NPC also proposes an increase of 67,000 gpd (for a total flow of 187,000 gpd) in the amount of wastewater to be conveyed to the MWRA sewer system via the Weymouth municipal system. The NPC indicates that the capacity required for Phase 1B will be relinquished upon completion of the permanent water supply and wastewater infrastructure, scheduled for late 2010.

The Town of Weymouth, as indicated in its comment letter, has agreed to accommodate the additional capacity requested. As noted in the comment letter from the MassDEP, the Town of Weymouth's data indicates that it has the capacity to make the necessary commitment. The town's existing water demand is 4.3 million gallons per day (mgd) on average (not 4.0 mgd as indicated in the NPC) and the allowable withdrawal is 5.0 mgd. Therefore, the available capacity is 0.7 mgd.

The FEIR indicated that the South Shore Tri-Town Development Corporation ((SSTTDC), a co-proponent with LNR South Shore LLC) will own and operate the public water system for the project and may own and operate other infrastructure or create a management district for that purpose. Based on comment letters received and consultations with MassDEP, it appears that there are several outstanding issues relating to ownership and responsibilities for operation and maintenance of the water supply infrastructure, including the Phase I system. Phase 1A and 1B constitute a system modification under the Weymouth water supply system and will require a WS 32 Distribution System Modification Permit. Unless new agreements are established between the proponent and the Town of Weymouth, the SSTTDC will become a Public Water System (PWS) once it a) provides water to 15 service connections or b) serves an average of at least 25 individuals daily at least 60 days of the year. If one of these criteria (a or b) is met, the proponent will be required to register as a PWS and demonstrate to MassDEP that it has adequate technical, financial and managerial capacity to operate in compliance with applicable state and federal regulations, guidelines and policy.

As a condition of this Certificate, the proponent must resolve outstanding issues relating to Phase I water supply infrastructure to the satisfaction of MassDEP and submit the required deliverables to MassDEP as further detailed below. At the very latest, the proponent must resolve outstanding issues and submit the deliverables listed below to MassDEP prior to a) providing water to 15 service connections or b) serving an average of at least 25 individuals daily at least 60 days of the year. The deliverables to be submitted are:

1. Water Service Agreement with the Town of Weymouth, including responsibilities for water quality sampling;

2. a description of billing procedures and responsibilities;
3. Operation and Maintenance Procedures;
4. WS 32 permit application to cover Phase 1A and phase 1B (these phases do not include storage tanks, pump stations, or treatment); and
5. a copy of the current agreement with the Navy as it pertains to water supply.

The proponent should coordinate closely with MassDEP to ensure complete and timely permit applications for future phases of the project. Future phases will require a MassDEP determination regarding *Southfield* as a consecutive public water supply, and a new WS32 permit prior to Phase 2 and 3 of the project (these phases will include elevated storage tanks and/or pump stations). I also refer the proponent to comments from the Water Resource Commission (WRC) concerning additional information required for its review under the Interbasin Transfer Act (ITA) of the proposed connection to the to the MWRA Water works system (the preferred alternative for a permanent water supply for the project as proposed in the FEIR).

In the FEIR, the proponent committed to maintain an emergency connection to the Weymouth sewer system after Phase IA flows are tied in to the on-site WWTF. The FEIR Certificate required that the proponent maintain an emergency interconnection for up to the maximum 120,000 gpd of average daily flow as recommended by MassDEP. In its comments on the NPC, MassDEP requested that the proponent maintain an emergency connection with the Town of Weymouth for a total of 187,000 gpd (to include both Phase 1A and Phase 1B flows). I note the MWRA comments regarding discharge from areas outside the service area and potential problems associated with wet-weather flows. The proponent has confirmed that Phase 1A and B flows will be from development within the Town of Weymouth, and not from Abington or Rockland. I direct the proponent to coordinate with MassDEP, MWRA and the Town of Weymouth to ensure that MWRA's concerns are addressed prior to finalizing arrangements for an emergency wastewater connection. As indicated in its comment letter, it is not MWRA's policy to accept emergency wastewater discharges from non-MWRA communities and any extension of the sewer service area must be done in accordance with MWRA policy and the MWRA Enabling Act.

I note the comment letters received regarding Whitman Pond (part of the town of Weymouth's managed water supply system) including resident concerns regarding water levels during drought conditions. Based on consultations with MassDEP and data provided by Weymouth, it appears that the town is operating within its existing Water Management Act registration.

I note MassDEP comments pertaining to water quality, the proposed irrigation well, and French's Stream. The proponent indicates that a 401 Water Quality Certificate (WQC) application for the overall project will be submitted to MassDEP in Spring/Summer of 2008, and that activities proposed for Phase 1 A and 1B do not require a 401 WQC. The proponent should provide additional information during permitting on potential impacts to French's Stream relative to pumping of the irrigation well, plans for day-lighting of French's Stream, and the proposed setbacks between residential areas and the wastewater discharge area, as requested in the comment letter from MassDEP. I encourage the proponent to consider comments from MassDEP, U.S. EPA and others (including comments received on the FEIR) regarding additional

opportunities to increase the amount of daylighted stream, thereby providing additional habitat benefits and reducing flooding concerns.

Based on a review of the information provided by the proponent and consultation with relevant public agencies, I find that the potential impacts of the project change do not warrant preparation of a Supplemental Environmental Impact Report. However, I reserve the right to require further MEPA review if the outstanding water supply issues are not addressed by the proponent in a timely manner.

I remind the proponent of its obligations to file a Project Update document and draft Section 61 Findings for the project. As further detailed in the Certificate on the FEIR (dated July 18, 2007), the proponent shall file a Project Update document with the MEPA Office for the project record and for public informational purposes. The availability of the document will be noticed in the *Environmental Monitor*. As further detailed in the Certificate on the FEIR the proponent should file draft Section 61 Findings for public review and comment prior to state agency action by the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP), Massachusetts Bay Transportation Authority (MBTA) and Executive Office of Transportation (EOT)/MassHighway. The draft Section 61 Findings will be noticed in the *Environmental Monitor* for a 21-day public comment period with comments to be directed to the respective agencies. The respective agencies shall be responsible for approving the Section 61 Findings. State agencies should forward copies of final Section 61 Findings to the MEPA Office.

April 11, 2008
DATE

Ian A. Bowles, Secretary

Comments Received:

3/19/08	Arthur E. Mathews, District 4 Town Councilor
3/20/08	Town of Hingham
3/26/08	Anne Hilbert
3/27/08	Commonwealth of Massachusetts Water Resources Commission
3/27/08	Dominic Galluzzo
3/31/08	Massachusetts Water Resources Authority
3/31/08	Tricia Pries
4/01/08	Town of Weymouth
4/01/08	Water Supply Citizens Advisory Committee
4/01/08	Mary Parsons
4/01/08	Beth Sortin
4/01/08	Department of Environmental Protection, Commissioner's Office
4/01/08	Department of Environmental Protection, Southeast Regional Office

IAB/AE/ae

The Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Richard K. Sullivan, Jr.
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
http://www.mass.gov/envir

September 28, 2012

CERTIFICATE OF THE SECRETARY OF ENERGY & ENVIRONMENTAL AFFAIRS
ON THE
SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME:	Widening of Route 18
PROJECT MUNICIPALITY:	Abington and Weymouth
PROJECT WATERSHED:	South Coastal
EEA NUMBER:	11085R
PROJECT PROPONENT:	Massachusetts Department of Transportation (MassDOT)
DATE NOTICED IN MONITOR:	August 22, 2012

As Secretary of Energy and Environmental Affairs, I hereby determine that the Supplemental Environmental Impact Report (SEIR) submitted on the above project **adequately and properly** complies with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

Project Description

As described in the SEIR, the project consists of the reconstruction of portions of a 4.1-mile segment of Route 18 south of Route 3 in Weymouth and Abington and the replacement of Bridge W-32-013, which carries Route 18 over the Massachusetts Bay Transportation Authority's (MBTA) railroad tracks in Weymouth. The project will widen the roadway from a two-lane rural arterial roadway with variable shoulders and minimal sidewalks to a four-lane undivided arterial roadway with uniform shoulders and sidewalks along both sides of the roadway. It will improve safety and circulation for vehicles, pedestrians and bicyclists. This proposed project will address traffic operations (capacity), intersection upgrades, and signalization as well as improve the roadway surface and curbing conditions. The limits of the project extend from the intersection of Charmada Road/Highland Place and Route 18 in Weymouth at the northerly project limit to a point just north of the intersection of Randolph Street (Route 139)/Route 18 in Abington at the southerly project limit. According to MassDOT, this project will support economic development along Route 18 and in the surrounding area, as

well as the redevelopment of the 1,450-acre former South Weymouth Naval Air Station (SWNAS), EEA # 11085, in Abington, Weymouth and Rockland.

In 2010, MassDOT requested an Advisory Opinion from the MEPA Office asking that the Route 18 Widening Project be allowed to proceed through the MEPA review process by the filing of an SEIR under the SWNAS Redevelopment Project (EEA #11085R). The Special Review Procedure (SRP), previously established for the project (Certificate dated October 11, 2000), required the Draft and Final EIR to fully address the separate and cumulative impacts of both SWNAS redevelopment and the transportation elements of the project, which included the Route 18 Widening. However, only the transportation impacts of the Route 18 Widening were addressed in the Draft and Final EIRs. The environmental impacts of the Route 18 Widening were not specifically analyzed. Therefore, the SEIR would be limited to analyzing the environmental impacts associated with the widening of Route 18 in recognition that the MEPA review of the SWNAS Redevelopment was complete. On February 22, 2010, the MEPA Office determined that the filing of a SEIR under EEA #11085R was the appropriate way to proceed for MEPA review, and this decision was consistent with the SRP. The SEIR should also include a copy of the Environmental Assessment for the Widening of Route 18 that was submitted to the Federal Highway Administration (FHWA) and a copy of its Finding of No Significant Impact (FONSI).

State Permits and Jurisdiction

The project is subject to the preparation of a mandatory EIR pursuant to Sections 301 CMR 11.03(3)(a)(2) and 11.03(6)(a)(1)(b) because it is being undertaken by a State Agency and will require a variance in accordance with the Wetlands Protection Act and will widen an existing roadway by one or more travel lanes for two or more miles. Besides the variance, the project will also require an individual Water Quality Certificate, and Superseding Orders of Conditions in Weymouth and Abington from the Massachusetts Department of Environmental Protection (MassDEP). Since the proposed project is a mix of redevelopment and new development, it may require a variance from MassDEP's Stormwater Management Standards if the new development does not comply with the Standards. The project requires a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and a National Pollutant Discharge Elimination System (NPDES) Permit from the U.S. Environmental Protection Agency (EPA). It will require review through a direct filing with the Natural Heritage and Endangered Species Program (NHESP) for compliance with the Massachusetts Endangered Species Act. In its comment letter of September 5, 2012, the NHESP states that it appears the proposed activity within state-listed rare species habitats would not result in a prohibited "take". Because of the amount of wetland resources to be impacted by the project, both of the Orders of Conditions from the Abington and Weymouth Conservation Commissions must be denied. The project will also require an order of Conditions from the South Shore Tri-Town Development Corporation Conservation Commission for wetland replication areas within the SWNAS.

Because the project is being undertaken by a State Agency, MEPA jurisdiction is broad and extends to all aspects of the project that have the potential to cause Damage to the Environment, as defined in the MEPA regulations.

Review of the SEIR

The SEIR was prepared in accordance with the guidelines contained in Section 11.07 of the MEPA regulations. It included a copy of the Advisory Opinion of February 22, 2010, and the Certificates on the FEIR, the DEIR, the Notice of Project Change (NPC), the Phase I Report, the ENF, and SRP. The SEIR also contained a copy of the Route 18 Widening Environmental Assessment and the FONSI. It was circulated to those who commented on the FEIR, the Citizens Advisory Committee (CAC) members, agencies from which the proponent will potentially seek permits or approvals, and to the municipal officials in Abington, Hingham, Rockland, and Weymouth. A copy of the SEIR was provided for public review at the Abington, Rockland, and Weymouth Public Libraries.

Project Description

The SEIR provided a detailed project description with a summary/history of the project. It included existing and proposed site plans for the widening of Route 18. The SEIR identified the state permits required for the project.

Alternatives Analysis

Since there is no opportunity for a new alignment due to the densely developed nature of the surrounding area, the alternatives analysis was limited to two widening alternatives of four travel lanes and a no-build alternative. For each roadway alternative, the proposed widened roadway links would connect to the already upgraded intersections at Pond Street, Park Avenue, Columbian Street, West/Middle Streets, and Route 139. The traffic capacity analysis of Route 18 indicated a need for an additional travel lane in each direction, but no more than two lanes in either direction were warranted. The alternatives analysis for the build alternatives then focused on construction options available to minimize the impacts of the required four-lane roadway cross section. Each roadway cross section was comprised of a minimum travel lane width of 11.5 feet. The shoulder and sidewalk widths were identified as the roadway section element that would vary for the consideration of the environmental impacts. MassDOT identified three alternatives for the Route 18 Widening:

- Alternative I – the No-Build Alternative. This alternative maintains the existing roadway layout with one to two travel lanes in each direction, with intermittent shoulders and sidewalks. Additional turn lanes have been provided at five intersection locations, including Route 139, Pond/Pleasant Streets, Columbian Street, Park Avenue, and West/ Middle Streets. This alternative does not meet the project purpose, and was rejected by MassDOT.
- Alternative II – Four-Lane Cross section with full width shoulders. This alternative assumes two 11.5-foot wide travel lanes in each direction along the entire corridor with additional turn lanes at key intersections. It will include an 8-foot wide shoulder and a 6.5-foot wide sidewalk provided on each side of the road. The typical total cross section would be approximately 75 feet wide. This alternative meets the project purpose. The

environmental impacts associated with this alternative include more impacts to wetlands, stormwater management, and land use.

- Alternative III – Four-Lane Cross Section with reduced width shoulders. The shoulder widths are reduced to five feet wide and sidewalks are reduced to 5.5 feet wide. The typical cross section would be approximately 67 feet wide. This alternative is the Preferred Alternative because of fewer environmental impacts. It will also utilize steep slopes or retaining walls to minimize wetland impacts where practicable.

As part of the roadway widening project, the existing Route 18 Bridge over the MBTA commuter rail will be replaced. Alternate bridge types and alignments have been investigated by MassDOT for its approval. The preferred bridge replacement option selected by MassDOT is a four-span steel bridge. The existing clearance of approximately 18.67 feet over the track will be maintained. The bridge option must match the adjacent cross sections of Route 18 (four travel lanes, two shoulders, and two sidewalks) and accommodate a pavement widening approach taper for a left turn lane at an intersection south of the bridge. Ten bridge options were evaluated.

Seven bridge options were included in the Bridge Type Study Report (2003). They are 1A, 1B, and 2 through 6. Four of these alternatives would maintain the existing horizontal opening, and three would increase the horizontal opening. All seven of the bridge options require construction of a two-lane temporary bridge located adjacent to the proposed bridge, on either the east or west side, in order to maintain Route 18 traffic. A new alternative, Option 7, was proposed as an option that avoids the need for a temporary bridge. Option 7 was included in the Bridge Type Study Report (May 2007). Option 7 was a curved alignment on Route 18 outside the limits of the existing bridge, which would allow traffic to be maintained on the existing bridge during construction.

In November 2007, after reviewing the seven options included in the July 2003 Report and Option 7 from the May 2007 Report, MassDOT recommended Option 2 from the 2003 Report as the Preferred Option.

In the October 2010 Addenda, the four-span steel option (Option 8) was introduced and evaluated. Subsequent to this submission and as a means to verify that Option 8 was the best available concept, the Single-Span Oversized Bridge (Option 9) was evaluated, but compared unfavorably with Option 8. Therefore, Option 8 was selected as the Preferred Option. Option 8 is a four span steel bridge that includes a temporary bridge on a western alignment. MassDOT's Preferred Alternative for the Route 18 widening is Alternative III with steep slopes or retaining walls where practicable and Bridge Replacement Option 8.

Greenhouse Gas/Air Quality

Since this SWNAS project was submitted prior to the Greenhouse Gas (GHG) Policy, no GHG analysis was required. However, MassDOT provided ambient air quality concentrations and selected background levels for the years 2003, 2004, and 2005. The project area is below all applicable federal and state air quality standards, except for the eight-hour ozone standard. Under the Preferred Alternative, the GHG emissions would decrease compared with the No-Build Alternative because of increased vehicle speeds along the Route 18 corridor. GHG

emissions would likely be lower than present GHG levels in the design year. Additionally, the Preferred Alternative is designed to include sidewalks on both sides of the roadway, bicycle accommodations within the roadway shoulders, and new crosswalks. These changes will improve access to public transit at the South Weymouth commuter rail station and should also reduce GHG emissions and improve local air quality.

Land Use/Right-of-Way (ROW)

The expansion of the Route 18 layout under the Preferred Alternative will require the acquisition of approximately 3.3 acres of strip takings for the reduced shoulder width. In addition to strip takings, MassDOT will also take a 0.42 acre commercial property.

Wetlands

The Preferred Alternative will permanently impact approximately 22,813 sf of Bordering Vegetated Wetlands (BVW), 644 sf of Isolated Vegetated Wetlands (IVW), 28 linear feet of Bank, 1,500 sf of Bordering Land Subject to Flooding (BLSF), and 165 sf of Land under Water (LUW). The Preferred Bridge Option has no permanent wetland impacts. However, temporary wetland resource area impacts (including the bridge) are estimated to be approximately18,795 sf of BVW, 1,710 sf of IVW, 20 linear feet of Bank, 200 sf of LUW, and 1,600 sf of BLSF. The Preferred Bridge Option will impact approximately 9,300 sf of wetlands. MassDOT believes that the wetland resource area impacts can be reduced significantly through the use of retaining walls within the corridor. However, MassDOT will have to evaluate the use of retaining walls to determine their feasibility. Additionally, MassDOT may also utilize steeper slopes where retaining walls are determined to not be feasible. MassDOT has estimated its impacts to wetland resource areas based on a 2:1 side slope, although the actual impacts will be reduced through the use of retaining walls in some locations.

MassDOT will supply potential replication areas at a 2:1 ratio within the SWNAS property. A total of 48,000 sf of BVW replication is proposed in two locations with 34,000 sf along the west side of Calnan Drive in Weymouth and 14,000 sf in Abington along the north side of the West Branch of French's Stream. LUW mitigation will be 365 sf and will be located in Weymouth at the Park Avenue/Route 18 intersection and in Abington near Wetland J. Some of the proposed stormwater mitigation areas will create BLSF, but at this time, MassDOT's design of the stormwater mitigation areas has not been advanced to the point where possible compensation can be estimated. The construction of wetland mitigation areas in Weymouth is also expected to create a significant volume of flood storage.

Because the project will require a variance from the Wetlands Protection Act Regulations (310 CMR 10.05), MassDEP's Commissioner must affirmatively determine that: 1) there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the Wetlands Regulations; 2) mitigation measures are proposed that will allow the project to be conditioned so as to contribute to the protection of the interests identified in the Wetlands Protection Act; and 3) the variance is necessary to accommodate an overriding community, regional, state, or national public interest, or avoid an unconstitutional taking of property without compensation. The SEIR addresses the three main criteria for granting such a Variance.

MassDOT has developed alternatives that have reduced wetlands impacts to the greatest extent possible given its efforts to meet FHWA standards and safety requirements. It is proposing to provide BVW replication at a 2:1 ratio. Finally, the goal of the project is to enhance public safety by improving traffic flow along Route 18.

Future Notices of Intent for the project must include information on the total BVW, IVW, BLSF, LUW, and Bank found along the Route 18 corridor and a stormwater report, indicating whether the regulatory stormwater standards are met. This information should include a table listing each wetland resource area and buffer zone; the work proposed in each area, on a square foot or other basis, including obstruction removal; and listing whether the impacts are permanent or temporary. MassDOT should continue to address comments submitted by MassDEP concerning project alternatives, documentation of an overriding public interest, and mitigation during the variance process.

Stormwater

The existing Route 18 drainage system will be expanded to handle the Preferred Alternative. The impervious area from the proposed project will increase by approximately 9 acres. MassDOT should address the potential discharge of additional stormwater flow to French's Stream and the Old Swamp River prior to finalizing it s drainage plans to address the Town of Rockland concerns regarding the potential for additional flooding in Rockland. MassDOT should demonstrate to Weymouth, Abington, and Rockland officials and MassDEP that the project design will not exacerbate existing drainage problems, nor create new drainage problems. The project should be designed to meet MassDEP Stormwater Guidelines to the maximum extent practicable. During its wetland permitting process, MassDOT should identify any specific areas where the MassDEP Stormwater Guidelines will not be met. MassDOT states that the project will require a variance from the MassDEP Stormwater Management Regulations. The construction of new detention and infiltration basins is problematic in the Route 18 corridor unless additional ROW is taken. Additional ROW takings will be evaluated by MassDOT during permitting, along with the other constraints at outfall locations.

In its comment letter, Weymouth requested that MassDOT address the existing stormwater ponding at the MBTA tracks crossing under Route 18. Weymouth stated that mitigation for flooding impacts should be addressed as close to the affected site where possible to avoid exacerbating the flooding problem. It requested that MassDOT should provide long-term maintenance funds to ensure that stormwater Best Management Practices (BMPs) are inspected and maintained. MassDOT should meet with the Abington Fire Chief to discuss his concerns regarding the placement of a potential stormwater BMPs area at the Abington Fire Station. If this drainage area is built, it may require the Town of Abington to relocate this fire station to address future growth needs.

Priority and Estimated Habitat

In the SEIR, MassDOT identified that the Route 18 corridor is located adjacent to Priority and Estimated Habitat. In its comment letter, the NHESP identified that the project requires review with a direct filing to it for compliance with the Massachusetts Endangered

Species Act. NHESP state that it appears that the proposed project within these habitats would not result in a prohibited "take".

Recreation/Open Space

The SEIR identifies two conservation properties in Weymouth, which are located along the Route 18 corridor. The Preferred Alternative will impact approximately 1,000 sf of one of the conservation parcels, which is valued at approximately $1,300. The Town of Weymouth has requested access and parking improvements to the conservation land on Route 18 as mitigation for this impact (approximately $12,000).

Because approximately 1,000 sf of conservation land is required for this project, MassDOT must comply with the Executive Office of Energy and Environmental Affairs (EEA) Article 97 Land Disposition Policy.

The SEIR identifies that the Preferred Alternative will remove 51 trees over 14-inches in diameter and approximately 2,260 linear feet of stone walls. MassDOT states that it will compensate the property owners for the trees and walls being removed from their property. No replacement plantings or stone walls are provided on the plans with the exception of the retaining walls that are necessary to reduce wetland impacts. Additionally, MassDOT reports that there are several trees being removed from the area of the temporary bridge that can be replaced following its removal. MassDOT will work with the Towns of Weymouth and Abington on locations where trees may be planted within the public right-of-way. In its comment letter, the Town of Weymouth has requested that MassDOT enhance the visual impact of the widening of Route 18 by planting street trees where possible. The Town of Weymouth supports the planting of street trees on municipal property, where intersection corners are available for planting, and where property owners grant permission.

Noise

The SEIR identifies that 124 dwelling units are currently exposed to noise impacts with the loudest-hour noise levels approaching or exceeding the FHWA Noise Abatement Criteria (NAC) for residential land uses of 66 decibels. With the Design Year (2030) "Build" Alternative, traffic noise levels would approach or exceed the applicable NAC at 353 dwelling units, including nearly all first-row homes (those adjacent to Route 18) throughout the project area. Few homes beyond the first row would be impacted by traffic noise related to the project.

Compared to existing conditions, the Design Year "Build" L_{eq} noise levels are expected to be about four to seven decibels higher during the loudest hour of the day. Because noise levels are not expected to increase by ten decibels at any noise-sensitive sites, the noise impact, based on substantial increases in existing noise, will not occur anywhere within the study zone.

MassDOT evaluated noise barriers whenever a noise impact was predicted as a result of the project. Because of the need to maintain driveway access to Route 18, noise barriers would not be feasible for most first-row residences. Safety considerations would require gaps in noise barriers considerably wider than the actual driveways and this factor would not allow noise

barriers to provide sufficient noise reduction to be considered feasible according to MassDOT standards.

One noise barrier location was found to meet MassDOT's standards for feasibility and reasonableness. A fourteen foot tall noise barrier (approximately 429 linear feet long) located between Route 18 and Front Street near the project's northern limit could protect nine homes on the west side of Front Street. In its comment letter, the Town of Weymouth has requested that MassDOT meet with these residents and town officials to discuss the potential construction of a noise barrier. Additionally, MassDOT should address the specific noise impacts from the temporary replacement bridge over the MBTA commuter rail tracks and discuss its findings with the impacted residences and Weymouth officials.

Historic and Archaeological Resources

In the SEIR, MassDOT has determined that the Route 18 Widening will have no effect on properties listed in or eligible for listing in the National Register. On April 10, 2008, the Massachusetts Historical Commission (MHC) agreed with MassDOT's historical determination.

Hazardous Materials

The SEIR reports that the primary impacts with respect to hazardous materials will occur during construction activities, and will consist of potential exposure to oil and hazardous materials during the handling of certain soils and/or groundwater. MassDOT identified 68 Release Tracking Number sites within the project corridor.

Construction Issues

The SEIR identified that utility poles will be relocated five to 10 feet back from their existing location into the proposed sidewalk areas. Between earth excavation for the right-of-way (ROW) (approximately 33,400 cubic yards) and approximately 25,600 cubic yard of borrow material, MassDOT estimates the project will balance out at 3,600 cubic yards of imported material or about 360 one-way truck trips. For the stormwater work, MassDOT estimates 6,300 cubic yards of material will be excavated or about 630 one-way truck trips. For the wetland mitigation work, MassDOT anticipates approximately 8,150 cubic yards or 815 one-way truck trips. For the temporary bridge, MassDOT anticipates that the difference between fill and excavate at 2,450 cubic yards or 245 one-way truck trips. The majority of the excavate generated by construction of the wetland mitigation areas will be stored and beneficially reused on the SWNAS site as backfill for future projects. I recommend that the proponent implement MassDEP's diesel retrofit program on all construction-related equipment and utilize low-sulfur diesel fuel where applicable.

SEIR Mitigation

The SEIR includes separate updated Section 61 Findings for MassDOT. On September 26, 2012, MassDOT provided a draft Section 61 for MassDEP. The draft Section 61 Findings

include a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation, and the identification of MassDOT as responsible for implementing the mitigation.

In the SEIR, the proponent has committed to provide the following mitigation measures:

- Provide appropriate compensation for land takings.
- Mitigate for impacts to wetland resource areas and provide replication areas for BVW at a ratio of 2 to 1.
- Coordinate with NHESP regarding potential impacts to estimated and priority habitat.
- Construct a stormwater management system that complies with MassDEP's stormwater standards, which will include deep sump hooded catch basins, oil/grit separators, sediment forebays, and detention basins.
- Provide sedimentation control techniques such as hay bales, or compost filter tubes and sedimentation fence barriers, catch basin filters and inlet sediment traps, temporary diversion drain pipes and sand bags, and stone check dams. During the growing season, provide slope stabilization erosion control by applying topsoil followed by seeding and mulching as soon as the final grades are achieved. Utilize organic mulching and jute netting to stabilize slopes completed outside of the growing season.
- Provide access and parking improvements to conservation land on Route 18 in Weymouth, approximately $12,000.
- Potentially, construct a noise barrier on Front Street, approximately $440,000.
- Preserve the existing bridge plaque and reinstall it on the new bridge.
- Provide new granite curbing and sidewalks along the Route 18 corridor. Restore all natural surfaces and landscaping.
- Construct a temporary bridge over the MBTA commuter rail tracks. Provide five–foot shoulders to accommodate bicycles.

MassDOT should work closely with the SWNAS developers to ensure that their mitigation improvements at the Route 18/Route 139 intersection are completed in a timely manner as suggested by the Old Colony Planning Council. Comments from MassDEP indicate that additional mitigation measures may be required during project permitting. MassDOT should work closely with the permitting agencies to identify any additional mitigation needed, and should prepare updated draft Section 61 Findings for the agencies as appropriate.

Conclusion

Based upon my review of the SEIR and after consulting with the State permitting agencies, I am satisfied that the SEIR provided sufficient information to allow the state agencies to understand the environmental consequences of the project. Any remaining issues concerning the proposed mitigation measures can be resolved during the permitting processes. The final Section 61 Findings by each of the agencies should be forwarded to the MEPA Office for

publication in the Environmental Monitor, in accordance with 301 CMR 11.12. No further MEPA review is required for the Widening of Route 18.

September 28, 2012
Date

Richard K. Sullivan Jr.

Comments received:

MassWildlife/Natural Heritage & Endangered Species Program, 9/5/12
Abington Fire-Rescue, 9/10/12
Rockland Sewer Commission, 9/19/12
Weymouth Mayor's Office, 9/21/12
Rockland Town Administrator, 9/21/12
Joseph Shea, 9/21/12
Massachusetts Department of Environmental Protection, Southeast Regional Office, 9/21/12
Congress for the New Urbanism New England Chapter, 9/21/12
Rockland Open Space Committee, 9/24/12
Michael Smart, Weymouth Town Council, 9/24/12
Old Colony Planning Council, 9/25/12
Massachusetts Department of Environmental Protection, Southeast Regional Office, 9/25/12
Massachusetts Department of Transportation, 9/26/12

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RKS/WTG

Attachment 2

Most Recent Previously-Reviewed Proposed Build Condition

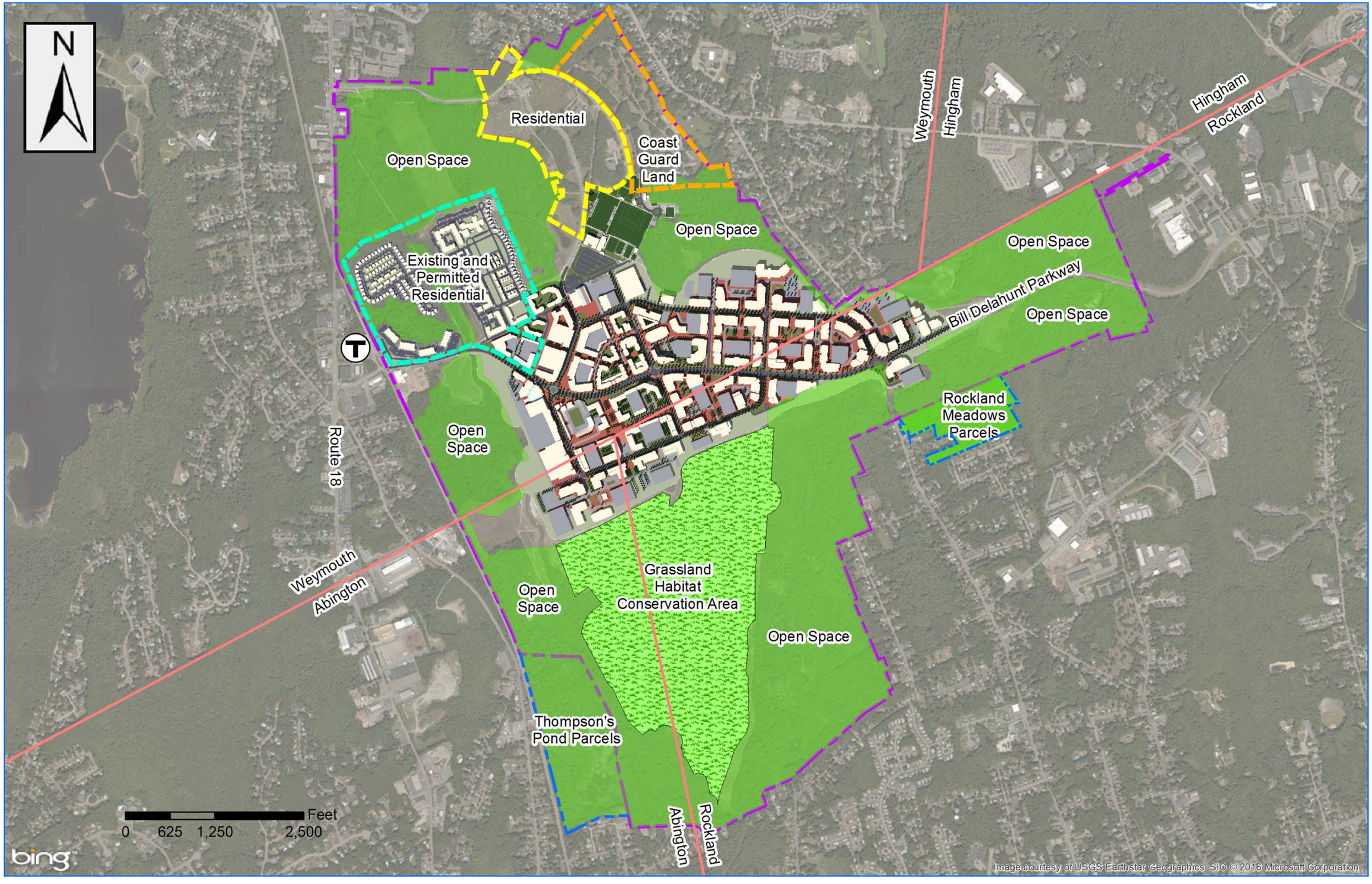
Union Point **Abington, Rockland, Weymouth, Massachusetts**

Attachment 2

Most Recent Previously-Reviewed Proposed Build Condition

Attachment 3

Currently Proposed Build Condition



Union Point **Abington, Rockland, Weymouth, Massachusetts**

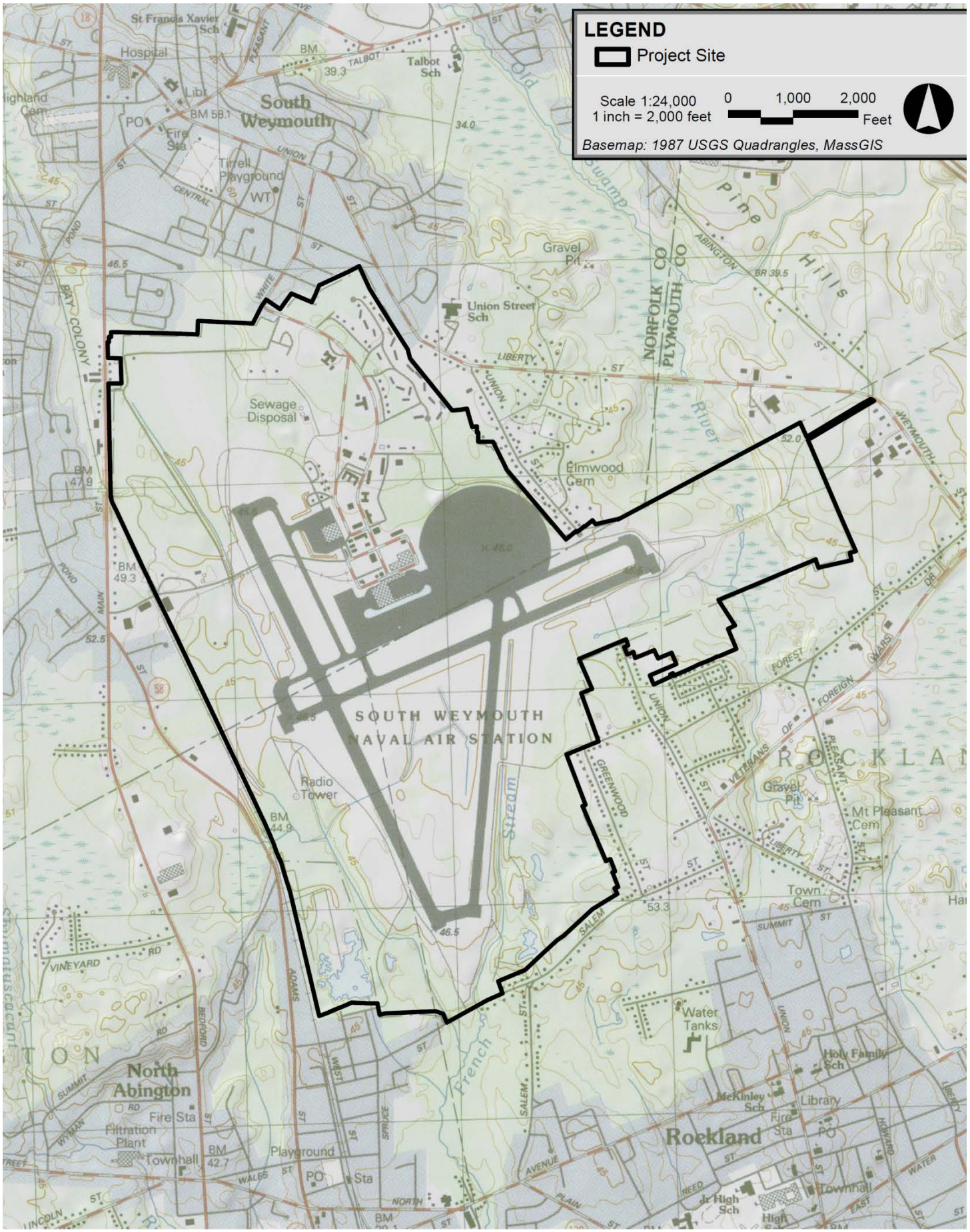
UNION POINT LStarCommunities vhb

Attachment 3

Currently Proposed Build Condition

Attachment 4

U.S.G.S. Locus Map



Union Point **Abington, Rockland, Weymouth, Massachusetts**

UNION POINT LStarCommunities Epsilon ASSOCIATES INC.

Attachment 4
USGS Locus Map

Attachment 5

Circulation List

NPC CIRCULATION LIST

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

U.S Environmental Protection Agency
Attn: Tim Timmerman
Region 1
1 Congress Street, Suite 1100
Boston, MA 02114

Patty Whitmore
US EPA – Region 1
One Congress Street
Suite 1100
Boston, MA 02114

Dept. of Environmental Protection
Attn: MEPA Reviewer
One Winter Street
Boston, MA 02108

Dept. of Environmental Protection
Southeast Regional Office
Attn: MEPA Coordinator
20 Riverside Drive
Lakeville, MA 02347

Dept. of Environmental Protection
Southeast Regional Office
Wastewater Program
20 Riverside Drive
Lakeville, MA 02347

Dept. of Environmental Protection
Southeast Regional Office
Wetlands Program
20 Riverside Drive
Lakeville, MA 02347

Duane Le Vangie
MassDEP
1 Winter Street
Boston, MA 02108

MassDOT
District #5
Attn: MEPA Coordinator
Box 111
1000 County Street
Taunton, MA 02780

David Chaffin
MassDEP
One Winter Street
Boston, MA 02108

Marianne Connolly
MWRA
100 First Ave.
Boston, MA 02129

Linda Hutchins
DCR Office of Water Resources
251 Causeway Street
Suite 700
Boston, MA 02114

MassDOT
Public/Private Development Unit
Attn: Lionel Lucien
10 Park Plaza
Boston, MA 02116

MassDOT
District #4
Attn: MEPA Coordinator
519 Appleton Street
Arlington, MA 02174

Mass. Bay Transportation Authority
Attn: MEPA Coordinator
10 Park Plaza, 6th Floor
Boston, MA 02216

Executive Office of Transportation
Attn: Environmental Reviewer
10 Park Plaza, Room 3510
Boston, MA 02116-3969

Mass. Historical Commission
Archives Building
220 Morrissey Boulevard
Boston, MA 02125

Barbara Hopson
Department of Agricultural Resources
25 West Experiment Station
UMass Amherst, MA 01003

Jon Regosin
Mass. Div. of Fisheries & Wildlife
Route 135
Westborough, MA 01581

Michele Drury
DCR Office of Water Resources
251 Causeway Street, Suite 700
Boston, MA 02114

Richard Hartley
DFW
1 Rabbit Hill Road
Westboro, MA 01581

Diane Madden
MassDOT - Environmental Services
10 Park Plaza, Room 4260
Boston, MA 02116

Office of Transportation Planning
10 Park Plaza, Room 4150
Boston, MA 02116

David Mohler/Steve Woelfel
Office of Transportation Planning
10 Park Plaza, Room 4150
Boston, MA 02116

Stanley Wood/Hasmukh Patel
Highway Design, Projects Div.
10 Park Plaza, Room 6250
Boston, MA 02116

Kevin Walsh
MassDOT - Environmental Services
10 Park Plaza, Room 4260
Boston, MA 02116

Robert Johnson
MassDOT - EMS and Sustainability Unit
10 Park Plaza, Room 4260
Boston, MA 02116

Dept. of Fish and Game
Riverways Program
251 Causeway Street
Boston, MA 02114

Kathleen M. Baskin
Water Resources Commission
100 Cambridge Street
Boston, MA 02114

Neil Boudreau
MassDOT - Traffic Operations
10 Park Plaza, Room 7150
Boston, MA 02116

Sen. Brian A. Joyce
Massachusetts Senate
State House, Room 413A
Boston, MA 02133

Rep. Ronald Mariano
House of Representatives
State House, Room 254
Boston, MA 02133

Sen. Harriette L. Chandler
Massachusetts Senate
State House, Room 312D
Boston, MA 02133

Rep. James M. Murphy
c/o Salvatore E. Tollo
Committee to Elect James Murphy
38 West Lake Drive
Weymouth, MA 02188

Sen. John F. Keenan
Massachusetts Senate
State House Room 413D
Boston, MA 02133

Rep. Geoff Diehl
House of Representatives
State House-Room 130
Boston, MA 02133

Jim Young
Southfield Redevelopment Authority
223 Shea Memorial Dr.
So. Weymouth, MA 02190

Town of Abington
Board of Selectmen
500 Gliniewicz Way
Abington, MA 02351

Town of Abington
Planning and Econ. Development
Attn: Dan Crane
500 Gliniewicz Way
Abington, MA 02351

Town of Abington
Town Manager
500 Gliniewicz Way
Abington, MA 02351

John M. Nuttall, Chief
Abington Fire-Rescue & Emergency
1040 Bedford Street
Abington, MA 02351

Wayne Smith
Chairman Abington Planning Board
500 Gliniewicz Way
Abington, MA 02351

Abington Public Library
600 Gliniewicz Way
Abington, MA 02351

David Majenski
Abington Police Chief
215 Central Street
Abington, MA 02351

Town of Rockland
Planning Board
242 Union Street
Rockland, MA 02370

Town of Rockland
Board of Selectmen
242 Union Street
Rockland, MA 02370

Rockland Public Library
20 Belmont Street
Rockland, MA 02370

Donald J. Cann
Rockland Open Space Committee
Rockland Town Hall
242 Union Street
Rockland, MA 02370

Allan R. Chiocca
Town of Rockland
242 Union Street
Rockland, MA 02370

Rockland Board of Health
Rockland Town Hall
242 Union Street
Rockland, MA 02370

John F. Loughlin
Rockland Sewer Department
242 Union Street
Rockland, MA 02370

Rockland Conservation Commission
Rockland Town Hall
242 Union Street
Rockland, MA 02370

Robert Baker
Town of Rockland
242 Union Street, Planning Bldg.
Rockland, MA 02370

Mayor Robert L. Hedlund
Town of Weymouth
75 Middle Street
Weymouth, MA 02189

Town of Weymouth
City Council
75 Middle Street
Weymouth, MA 02189

Michael T. Molisse
Councilor at Large
100 Windsor Road
South Weymouth, MA 02190

Robert Luongo
City of Weymouth
Planning and Econ. Development
75 Middle Street
Weymouth, MA 02189

Senator Patrick O'Connor
777 Broad Street
Weymouth, MA 02189

Michael Smart, Vice President
District Six Councilor
39 Rhitu Drive
Weymouth, MA 02190

Kenneth J. DiFazio
District Three Councilor
53 Meetinghouse Lane
Weymouth, MA 02189

Robert M. Conlon
Councilor at Large
17 Middle Street
Weymouth, MA 02189

Thomas J. Lacey
District Two Councilor
75 Middle Street
Weymouth, MA 02189

Brian McDonald
Councilor at Large
21 Church Street #16
Weymouth, MA 02189

Michael Molisse
Councilor at Large
100 Windsor Road
Weymouth, MA 02190

Jane Hackett
Councilor at Large
23 Blake Rd
Weymouth, MA 02188

Edward Harrington
District Five Councilor
54 Samoset Street
Weymouth, MA 02190

Rebecca Haugh
District One Councilor
34 Evans St.
Weymouth, MA 02191

Town of Weymouth
Planning and Economic
Development
75 Middle Street
Weymouth, MA 02189

John F. Carey
75 Middle Street
Weymouth, MA 02189

Susan Kay
75 Middle Street
Weymouth, MA 02189

Weymouth Public Library
46 Broad Street
Weymouth, MA 02188

Town of Hingham
Board of Selectmen
210 Central Street
Hingham, MA 02043

Eileen A. McCracken
Town of Hingham
210 Central Street
Hingham, MA 02043-2764

Melissa Santucci Rozzi
Town of Braintree Planning Board
1 JFK Memorial Drive
Braintree, MA 02184-6498

Town of Hingham
210 Central Street
Hingham, MA 02043-2757

Glenn Olsson, Chief
Hingham Police Department
212 Central Street
Hingham, MA 02043

Town of Hingham
Planning and Development
210 Central Street
Hingham, MA 02043

Metropolitan Area Planning
Council
Attn: Marc Draisen
60 Temple Place/6th Floor
Boston, MA 02111

Martin Pillsbury
MAPC
60 Temple Place
Boston, MA 02111

George B. Bailey
Town of Sharon
74 Glendale Road
Sharon, MA 02067

Jonathan Ford
Congress for the New Urbanism
New England Chapter
121 Washington Street
Providence, RI 02903

Brad Campbell
Conservation Law Foundation
62 Summer Street
Boston, MA 02110-1016

Old Colony Planning Council
70 School Street
Brockton, MA 02401

Eric Dykeman
South Shore Chamber of Commerce
36 Miller Stile Road
Quincy, MA 02169

Lexi Dewey, Executive Director
WSCAC
485 Ware Road
Belchertown, MA 01007

Peter Forman
South Shore Chamber of Commerce
36 Miller Stile Rd.
Quincy, MA 02169

Samantha Woods, Exec. Director
North & South Rivers Watershed Assoc.
P.O. Box 43
Norwell, MA 02061

Robert Bergstrom, Exec. Director
CNUNE
31 Saint James Ave., St. 940
Boston, MA 02116

E. Heidi Ricci
Mass. Audubon Society
208 South Great Road
Lincoln, MA 01773

Dorie Stolley
Watershed Action Alliance
110 Winslow Cemetery
Marshfield, MA 02050

Emily Norton
Mass. Sierra Club
10 Milk Street, Suite 417
Boston, MA 02108

Steven Kelsch
The Farm Hills Civic Society
4 Mallard Run
Hingham, MA 02043

Nancy Goodman
Env. League of Mass.
14 Beacon Street, Suite 714
Boston, MA 02108

Karen Grey
Wildlands Trust
PO Box 2282
Duxbury, MA 02331

Denny Swenson
Friends of the Blue Hills
PO Box 416
Milton, MA 02186

Robert Rizzi
Building & Construction Trades Council
P.O. Box 690429
Quincy, MA 02269

John Stark
640 Linwood Street
Abington, MA 02351

Reginald Thomas
Laborer's International Union of N.A.
P.O. Box 690431
Quincy, MA 02269

David A. Hills
36 Thaxter Ave.
Abington, MA 02351-2506

Bruce Hughes
69 Randolph St.
Abington, MA 02351

David Wilmot
10 Arch Street
Abington, MA 02351

Mary E. Monaghan
20 Barry Road
Abington, MA 02351

Jackie Ranous
102 Spruce Street
Abington, MA 02351

M. Jean Smith Kelley
50 Thaxter Avenue
Abington, MA 02351

Henry J. Sirginano, Jr. and Janice Brennan
78 Linwood Street
Abington, MA 02351

Beth V. Sortin
185 Walnut Street
Abington, MA 02351

Joseph Shea
3 Wyman Road
Abington, MA 02351

Mr. Michael Bromberg
373 Forest Street
Rockland, MA 02370

Linda May Ellis
65 Union Street
Rockland, MA 02370

J. E. Ellis
49 Dexter Road
Rockland, MA 02370

Ann L. Harrow
30 Everett Street
Rockland, MA 02370

Lisa Hill
24 Evans Road
Rockland, MA 02370

Robert P. Millette
496 Market Street
Rockland, MA 02370

Adam C. Maki
31 School Street
Rockland, MA 02370-1838

Mary A. Parsons
754 Union Street
Rockland, MA 02370

Charles Kimball
90 Huggins Rd.
Rockland, MA 02370

Lester B. Veno, Jr.
105 Charles Diersch Street
E. Weymouth, MA 02189

Rosella Cicchese
958 Commercial Street
E. Weymouth, MA 02189

Mike Zupkofska
19 Rice Avenue
Rockland, MA 02370

Luther Fulton
1 Wagon Road
E. Weymouth, MA 02189

Barbara Johnson
41 Massasoit Road
N. Weymouth, MA 02191

Robert Coughlin-Wilkinson
20 Carver Street
E. Weymouth, MA 02189

Theresa D. Szymczuk
49 Erika Lane
S. Weymouth, MA 02190-3434

Kristen Brundige and Ron Paipe
8 Barnes Avenue
S. Weymouth, MA 02191

Anne Hilbert
45 Doris Drive
No. Weymouth MA 02191

Elizabeth Cameron
406 Union Street
S. Weymouth, MA 02190-3161

Dorothy A. Cole
398 Pleasant Street
S. Weymouth, MA 02190

Robert L. Callaway
56 Mamie Road
S. Weymouth, MA 02190

Christopher J. Kilbridge
406 Union Street
S. Weymouth, MA 02190-3161

Roslyn Laprise
15 Ranger Circle
S. Weymouth, MA 02190

Al Ferreira
80 Tommy Marks Way
S. Weymouth, MA 02190

David J. Marden
386 Pleasant Street
S. Weymouth, MA 02190

Terrence McAteer
266 Pine Street
S. Weymouth, MA 02190

Shari and Bradley Laprise and
Jonathan Rosengrant
15 Ranger Circle
S. Weymouth, MA 02190

Luis F. Seoane
335 Pleasant Street
S. Weymouth, MA 02190

Richard D. Stard
34 Burton Terrace
S. Weymouth, MA 02190

Robert C. Pirie
41 Russell Road
S. Weymouth, MA 02190

James M. Cunningham
58 Lake Shore Drive
Weymouth, MA 02189

Henry T. Dunker
44 Bradmere Way
Weymouth, MA 02191

Tricia Pries
15 Woodbine Road
Weymouth, MA 02189

Thomas Goodwin
462 Union Street
Weymouth, MA 02189

James Hill
100 Edward Cody Lane
Weymouth, MA 02190

Dominic Galluzzo
86 Candia Street
Weymouth, MA 02189

Mary McElroy
11 Peter Road
Weymouth, MA 02191

Donald E. Pace
675 Pleasant St. – Unit 6
Weymouth, MA 02189

Arthur Matthews
15 Lakeview Rd.
Weymouth, MA 02189

Stephen Howard
Blue Cross Blue Shield of
Massachusetts
401 Park Drive
Boston, MA 02215

William G. Constable
A.W. Perry, Inc.
20 Winthrop Square
Boston, MA 02110

Clapp Memorial Library
P.O. Box 627
Belchertown, MA 01007-0627

Jim Kinch
77 Forest Ave
Cohasset, MA 02025

Leslie Molyneaux
23 Water Street
Hanover, MA 02339

Bigelow Free Public Library
54 Walnut Street
Clinton, MA 01510

Carmen J. Zaccardi
24 Smith Road
Hingham, MA 02043

Peter J. Bishop
18 Winfield Road
Hingham, MA 02043

Joseph Bellantoni
31 Tilden Lane
Hanover, MA 02339

Mary Byram
5 Abington Street
Hingham, MA 02043

Norman J. Cedarstrom
22 Winfield Road
Hingham, MA 02043

Roland A. Bourdon, Jr.
371 Gardner Street
Hingham, MA 02043

Mr. & Mrs. Jack Daly
445 Gardner Street
Hingham, MA 02043

Joseph Fisher
94 Station St.
Hingham, MA 02043

Vicki Chipman
7 Abington Street
Hingham, MA 02043

MaryBeth Hammond
5 Devon Terrace
Hingham, MA 02043

Mr. & Mrs. Lou Ioanilli
17 Accord Pond Drive
Hingham, MA 02043

Betty Gibbons
One Deerfield Road
Hingham, MA 02043

Peter Kerrebrock
256 Gardner Street
Hingham, MA 02043

Judy Kelley
19 Harvest Lane
Hingham, MA 02043

Joseph B. Kearney
41 Abington Street
Hingham, MA 02043

Susan M. Kingston
8 Deerfield Road
Hingham, MA 02043

Eve Lewis
164 Cushing Street
Hingham, MA 02043

Stephanie Shute Kelsch
4 Mallard Run
Hingham, MA 02043

Mary Niles
85 Cushing Street
Hingham, MA 02043

Mr. & Mrs. Philip E. Shute
427 Gardner Street
Hingham, MA 02043

Megan McCallum
16 Sunset Lane
Hingham, MA 02043

Mary Aylward Stewart
Bettmar Associates
164 Cushing Street
Hingham, MA 02043

Harold Thomas, Jr. and
Mary R.Thomas
9 Peter Hobard Drive
Hingham, MA 02043

Cutler Smith
10 Forest Lane
Hingham, MA 02043

Paul Stone
233 Beach Avenue
Hull, MA 02045

Michael Frizzell
42 Mountford Road
Hull, MA 02045

John J. Vozzella
2 Winfield Road
Hingham, MA 02043

William Cotter
8 Spyglass Landing Drive
Marshfield, MA 02050

Bill Clark
116 Ridgewood Rd.
Milton, MA 02186

Ron Millette
60 B Street
Hull, MA 02045

Helen C. Harrow
325 Mount Blue Street
Norwell, MA 02061

Stuart L. Chipman
157 Jason Street, Apt. #5
Pittsfield, MA 01201

Mr. & Mrs. Edward J. Dunford
36 Paradise Drive
Norwell, MA 02061

John Goldrosen
891 Washington Street
Whitman, MA 02382

Stephen R. Follansbee
Follansbee and McLeod, LLP
Ten McGrath Highway
Quincy, MA 02169-5312