CITY COUNCIL MEETING

MUNICIPAL COMPLEX, EILEEN DONDERO FOLEY COUNCIL CHAMBERS, PORTSMOUTH, NH
DATE: MONDAY, AUGUST 20, 2018 TIME: 6:15PM

- **6:00PM – NON-PUBLIC SESSION RE: SUPERINTENDENT OF SCHOOLS STEPHEN ZADRAVEC CONTRACT & POLICE CHIEF ROBERT MERNER'S CONTRACT IN ACCORDANCE WITH RSA 91-A:2, I (a)**

- **6:15PM – PUBLIC DIALOGUE SESSION**

I. CALL TO ORDER
II. ROLL CALL
III. INVOCATION
IV. PLEDGE OF ALLEGIANCE

PRESENTATIONS

1. Letter of Recognition by Mayor Blalock

V. ACCEPTANCE OF MINUTES *(There are no minutes on for acceptance this evening)*

VI. PUBLIC DIALOGUE SUMMARY

VII. PUBLIC HEARINGS & VOTES ON ORDINANCES AND/OR RESOLUTIONS

A. **First Reading of Ordinance**

First Reading of Ordinance amending Chapter 9, Article VIII – Boarding or Rooming Houses, Sections 9.801 – Section 9.805

B. **Proposed Public Hearing of Resolution**

Establish a Public Hearing Re: Exemption for Solar Energy Systems

C. **Public Hearing – Foundry Place Garage Designation**

ORDINANCE AMENDING CHAPTER 7, ARTICLE IV, SECTION 7.402 REGARDING THE FOUNDRY PLACE GARAGE DESIGNATION

- **PRESENTATION**
- **CITY COUNCIL QUESTIONS**
- **PUBLIC HEARING SPEAKERS**
- **ADDITIONAL COUNCIL QUESTIONS AND DELIBERATIONS**

D. **Third and Final Reading of Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Rezoning, 105 Bartlett Street**

Part 1.A. – Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Re-Zoning of 105 Bartlett Street: (Proposed Character District 4-W)

- Amendments to Article 4, Section 10.440 Table of Uses;

- Amendment to the Character-Based Zoning Building Placement Section 10.5A42;
- Amendments to the Character-Based Zoning Incentive Overlay Distriction Section 10.5A46;
- Amendments to the Character-Based Zoning Regulation Plan Maps (Maps 10.5A21A) to change Tax Map 157 Lots 1 and 2 from Office Research (OR) to Character District 4 West End (CD4-W) and a Portion of Tax Map 164 Lot 4 from OR and Transportation Corridor (TC) TO CD4-W
- Amendments to the Character-Based Zoning Regulation Plan Maps (Maps 10.5A21B) to extend the West End Overlay District and Add New Building Height Standards for Tax Map 157 Lots 1 and 2 and a Portion of Tax Map 164 Lot 4;
- Amendment to Article 15 Definitions Section 10.1530

E. **Third and Final Reading of Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Rezoning, 105 Bartlett Street**

Part 1.B. – Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Re-Zoning of 105 Bartlett Street (Proposed Character District 4-L1)

- Amendments to the Character-Based Zoning Building Placement Section 10.5A42;
- Amendments to the Character-Based Zoning Incentive Overlay District Section 10.5A46;
- Amendments to the Character-Based Zoning Regulation Plan Maps (Maps 10.5A21A) to change a Portion of Tax Map 164 Lot 4 OR and Transportation Corridor (TC) to CD4-L1; and
- Amendments to the Character-Based Zoning Regulation Plan Maps (Maps 10.5A21B) to Extend the West End Overlay District and Add New Building Height Standards for a Portion of Tax Map 164 Lot 4

F. **Third and Final Reading of Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Rezoning, 105 Bartlett Street**

Part II. – Ordinance amending Chapter 10 – Zoning Ordinance – Petition for Re-Zoning of 105 Bartlett Street (Housekeeping)

- Amendments to Character-Based Zoning Development Standards Section 10.5A41;
- Amendments to Character-Based Zoning Building Form and Facades Section 10.5A43;
- Amendments to Character-Based Zoning Community Spaces Section 10.5A45

G. **Third and Final Reading of Ordinance amending Chapter 7 - Parking Omnibus**

Ordinance amending Chapter 7 – Parking Omnibus

VIII. APPROVAL OF GRANTS/DONATIONS

(There are no items under this section of the agenda)

IX. CONSENT AGENDA

(ANTICIPATED ACTION - MOVE TO ADOPT CONSENT AGENDA)

A. Letter from Melissa Walden, American Lung Association, requesting permission to hold the 10th annual American Lung Association Cycle the Seacoast Ride on Sunday, May 5, 2019 ***(Anticipated action – move to refer to the City Manager with power)***

X. PRESENTATION & CONSIDERATION OF WRITTEN COMMUNICATIONS & PETITIONS

A. Email Correspondence ***(Proposed motion – move to accept and place on file)***

B. Letter from Attorney Justin Richardson regarding Planning Board Membership

XI. REPORTS AND COMMUNICATIONS FROM CITY OFFICIALS

A. CITY MANAGER

City Manager's Items Which Require Action:

1. Portsmouth Historical Society Portsmouth400 Grant Request (Presentation)
2. Report Back Re: Osprey Landing Water Tank Release of Land
3. Rockingham Avenue Subdivision Easements
4. Islington Common LLC Water Access Easement
5. 15 Thornton Street Subdivision Easements
6. 299 Vaughan Street Temporary Construction Licenses
7. Proposed Tax Exemptions for Wind-Power and Woodheating

City Manager's Informational Items:

1. Events Listing
2. McIntyre Update
3. Berry's Brook Update Re: PFAS

B. MAYOR BLALOCK

1. Adoption of Policy Re: Planning Board Residency Requirement
2. Appointments to be Considered:
    - Shari Donnermeyer reappointment to the Parking, Traffic & Safety Committee
3. Appointments to be Voted:
    - Ralph DiBernardo appointment as a Regular member to the Parking, Traffic & Safety Committee
    - Stephen T. Pesci appointment as Alternate member to the Parking, Traffic & Safety Committee
    - Mary Lou McElwain reappointment to the Parking, Traffic & Safety Committee

- Harold Whitehouse reappointment to the Parking, Traffic & Safety Committee
- J. Stephen McCarthy reappointment to the Building Code Board of Appeals

C. COUNCILOR ROBERTS

1. Parking, Traffic & Safety Action Sheet and Minutes of the August 2, 2018 meeting ***(Sample motion – move to accept and approve the action sheet and minutes of the August 2, 2018 Parking, Traffic & Safety meeting)***

D. COUNCILOR DWYER

1. *Request to have Planning Director Juliet Walker make a presentation at the September 4th City Council meeting regarding a transitional zoning option in the Bartlett Street area

E. COUNCILOR DENTON

1. Piscataqua Region Estuaries Partnership: Discussion: Would it be beneficial for the City Council to have a Work Session where the Piscataqua Region Estuaries Partnership (PREP) presents findings from, and answers questions regarding, their 2018 State of Our Estuaries Report?

XII. MISCELLANEOUS/UNFINISHED BUSINESS

XIII. ADJOURNMENT

KELLI L. BARNABY, MMC, CMC, CNHMC
CITY CLERK

** Indicates verbal report*

Article VIII: BOARDING OR ROOMING HOUSES (Adopted 09-17-2007)

Section 9.801: DEFINITION

The term Boarding House or Rooming House shall apply to any residential structure in which more than 3 rooms are rented, leased or otherwise made available to tenants where such rooms do not contain separate bathroom facilities.

Section 9.802: PERMIT REQUIRED

Commencing January 1, 2008 every Boarding House and Rooming House in the City shall operate only on the issuance of a Boarding House permit issued by the City Council. Each such permit issued by the City Council shall be for a one year period commencing from the date of issuance and must be renewed annually by the owner of the property on which the Boarding House is located by application to the City Council. The Boarding House permit shall not be transferable.

Section 9.803: TERMS AND CONDITIONS

The terms and conditions under which the holder of any such Boarding House permit shall operate are as follows:

A. The permit holder must maintain compliance with all City and State laws regarding such facilities including but not limited to the zoning ordinance, fire code and health regulations of the City.

B. There must be posted at all times at the front entrance of the facility a sign indicating 24 hour, seven days a week, valid and effective contact information for the management of the facility.

C. The permit holder must maintain the facility in such a manner so as not to cause unreasonable interference with the use and occupancy of other properties in the vicinity of the facility.

D. The permit shall not allow any more rooms to be rented, leased or made available, or persons to occupy the Rooming or Boarding House than are authorized by the Portsmouth Zoning Ordinance.

Section 9.804: PERMIT RENEWAL

Prior to renewing the Boarding House permit for any facility, the City may conduct such investigations as it deems appropriate to determine compliance with this ordinance. Failure of the owner of the facility to comply with the provision of this ordinance shall be cause for non-renewal of the permit.

Section 9.805: ENFORCEMENT

The provisions of this ordinance may be enforced by the municipal administration utilizing any or all of the following:

A. Suspension, revocation or termination of the Boarding House or Rooming House permit.

B. By filing an appropriate action in a court of competent jurisdiction seeking specific performance by the permittee or property owner of the terms of this ordinance.

C. By the filing of a complaint in the Portsmouth District Court against the permittee seeking such penalties as may be allowed under state law in the case of conviction of a violation level offense.

The City Clerk shall properly alphabetize and/or re-number the ordinance as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

This ordinance shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY COUNCIL:

_____
Kelli L. Barnaby, City Clerk

THE CITY OF PORTSMOUTH
TWO THOUSAND EIGHTEEN
PORTSMOUTH, NEW HAMPSHIRE

SOLAR POWER TAX EXEMPTION

RESOLUTION #

BE IT RESOLVED:

THAT Pursuant to RSA 72:27-a and RSA 72:61-62, the City modifies the solar tax exemption adopted on November 21, 2011 so that as of April 1, 2018 the exemption shall be as follows:

If qualified, for persons owning real property equipped with a solar energy system as defined in RSA 72:61, the City shall exempt from taxes an amount equal to the assessed value of the solar energy system.

BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY THE CITY COUNCIL
_____, 2018

_____
Kelli L. Barnaby, City Clerk

City of Portsmouth
Assessor's Office

Memo

To: John P. Bohenko, City Manager

From: Rosann Lentz, City Assessor

cc: Judith Belanger, Finance Director

Date: April 30, 2018

Re: Report Back on Solar, Wood Heating and Wind Powered Exemptions

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Below is the report back on the above referenced exemptions per Councilor Denton's request.

RSA 72:62 Exemption for Solar Energy Systems - On November 21, 2011, the Portsmouth City Council re-adopted the following elements for the Solar Energy System Exemption due to the prior exemption adopted in 1977 being out of date.

1. Exemption from assessed value of property (rather than tax).
2. Solar equipment costs are documented.
3. 5 year term.
4. Cap of $25,000 per year off assessed value of property.
5. Applies to April 1, 2011 tax year and subsequent year.
6. Expires upon sale of property.

For FY 2018/TY 2017, there was one solar exemption granted and for FY 2019/TY 2018 14 additional request for the solar exemption have been filed with the assessor's office.

RSA 72:70 Exemption for Wood Heating Energy Systems

Currently, the City has not adopted the wood energy heating system exemption and the City Assessor has none identified.

RSA 72:65 Exemption for Wind-Powered Energy Systems

Currently, the City has not adopted the wind-powered exemption and the City Assessor has none identified.

I have attached for your information a Town/City Comparison completed by the NH Department of Revenue Administration indicting what other communities grant for these exemptions.

MUNICIPALITIES WITH A SOLAR EXEMPTION

TOTAL NUMBER OF MUNICIPALITIES 135

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Allenstown	2016	12	See note	100% of Assessed Value
Alstead	2015	21	See note	100% of Assessed Value
Alton	1978	1	See note	1/2 the Cost of Installation
Amherst	1976	20	See note	Based on Cost of Equipment.
Andover	2013	20	See note	100% of Assessed Value
Atkinson	2009	22	See note	Exemption amount based on Cost of Equipment and Installation
Barrington	2001	28	$5,000	
Bedford	3/11/80	Town council	See note	Installation plus replacement cost
Belmont	2012	13	See note	100% of assessed value
Berlin	2012	35	See note	100% Assessed Value
Bethlehem	2011	25	See note	100% of assessed value up to $25,000
Boscawen	2011	11	See note	100% of System's Assessed Value
Bow	2016	19	See note	100% of cost of equipment & installation of system
Bradford	2014	24	See note	100% of Assessed Value
Brookline	2016	16	See note	100% of Assessed Value
Campton	2010	26	See note	100% of improvement
Canaan	1983	2	$50	

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Candia	2013	32	Note	100% of Assessed Value
Canterbury	1984	2	See note	100% of equalized assessed value up to $5,000
Carroll	2017	28	See note	100% of Assessed Value.
Center Harbor	1978	1-B	See note	Exemption equal to Assessed Value of Energy System
Chester	1979	18	See note	Exemption equals 20% of base cost of system
Chesterfield	2011	30	See Note	100% up to $20,000
Chichester	2010	17	See note	Full Assessed Value of Improvement and /or Equipment
Colebrook	2008	22	See note	100% of Assessed Value
Columbia	1977	14	See note	100% of Installation Cost
Conway	1981	8	See note	Exemption equals 100% Cost of System
Danville	2016	20	See note	100% of Assessed Value
Deering	2009	9	See note	100% of Assessed Value
Derry	2010	20	See note	100% of Assessed Value
Dorchester	2017	2	See note	100% of Assessed Value of Qualifying Equipment
Dublin	1978	2	See note	50% of Cost of System up to $8,000
Dummer	2010	19	See note	Exemption shall equal the amount the value of the property is increased by the installation of such a system
Durham	2002	Town Council	See note	Cost of Equipment & Installation
East Kingston	1981	14	See note	Cost of the system

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Effingham	1981	16	See note	Exemption equals Assessed Value of System
Enfield	2008	16	See note	100% of assessed value of qualifying system
Epsom	2016	15	See note	100% of Assessed Value
Exeter	2014	24	See note	100% of Assessed Value
Farmington	1983	4	$5,000	
Fitzwilliam	1981	2	See note	100% of Assessed Value
Francestown	2016	21	See note	100% of Assessed Value, if any.
Franconia	2010	18	See note	Exemption equals 100% of assessed value of qualifying equipment up to $20,000
Fremont	2009	27	See note	100% of Assessed Value
Gilmanton	2009	19	See note	100% of the Full Assessed Value of the System
Goffstown	2015	14	See Note	100% Assessed Value
Goshen	2008	21	See note	Cost of System
Grafton	2012	22	See note	100% of Assessed Value
Grantham	2016	5	See note	100% of Assessed Value
Greenfield	2008	2	See note	Full Assessed Value of System
Hampton Falls	2014	21	See note	100% of cost of assessed value.
Harrisville	2009	17	See note	Exemption equals Up to $20,000
Henniker	2017	24	See note	100% of Assessed Value

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Hillsborough	2011	21	See note	Exemption equals 100% of Assessed Value of qualifying system up to $30,000
Holderness	1976	N/A	See note	Exemption equals Actual Cost of Improvement/System
Hollis	1979	n/a	See note	Exemption equals Up to $5,000
Hopkinton	1976	4	See note	Exemption equals Value of System up to $5,000
Hudson	2015	306-6	0	Ordiance per Jim Michaud 10/17/17.
Jaffrey	1979	27	See note	Exemption equals Up to $10,000 of Assessed Value based on receipts for cost incurred to establish system
Keene	2017	R-18	See note	An amount equal to the assessed value up to $30,000
Kensington	2013	16	See note	100% Assessed Value of qualified equipment
Kingston	2001	601	$5,000	
Lancaster	1979	16	See note	Exemption equals Cost of Equipment
Langdon	2011	22	See note	100% of Assessed Value
Lebanon	2013	City council	See note	equal to any increase in incremental assessed value of the entire property attributable to the qualifying equipment under these statutes that is in excess of the property's assessed value...
Lee	2016	5	See note	100% of Assessed Value, if any.
Lincoln	2015	44	See note	Assessed Value of the system
Londonderry	2007	5	Up to $5,000	
Lyman	2017	11	See note	100% of assessed value
Lyme	2008	20	See note	Exemption is "...equal to any increase in the assessed valuation that results from the installation of the system

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Madbury	2014	18	See note	100% of Assessed Value
Madison	2016	11	See note	100% of Assessed Value
Marlborough	2012	13	See note	100% of Assessed Value
Marlow	2013	16	See note	100% Cost of System
Mason	2015	18	See note	100% Assessed Value.
Meredith	2009	7	$20,000	Cost of Installation
Milford	2016	24	See note	100% of Assessed Value; not to exceed $10,000.
Mont Vernon	1980	3	See note	Exemption equals Value of equipment added to property
Nashua	2016	0-16-002	See note	Exemption equals Assessed Value
Nelson	2016	31	See note	100% of Assessed Value
New Boston	2008	17	See note	Exemption equals Full Assessed Value of Improvements
New Durham	1980	1	See note	Exemption equals 100% of Assessed Value of Improvement and/or Equipment
New Ipswich	2017	22	See note	Up to $25,000 of Assessed Value
Newbury	2010	12	$5,000	Up to $5,000
Newfields	2015	7	See note	100% of Assessed Value
Newmarket	2006	3	See note	Exemption equals 100% of Cost of System and Installation
Newport	2010	11	See note	Equal to 100% of Value of System
Newton	2017	11	See note	$1 of assessed value. Verified from town ballot. N
North Hampton	1979	9	$1,000 per	

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Northwood	1977	7	See note	Exemption equals 75% of Cost
Ossipee	1981	2	See note	Cost of System up to $1,000
Pelham	1982	2	$10,000	Exemption equals 100% of Cost of System up to $10,000
Pembroke	2015	13	See note	100% of the assessed value of qualifying equipment.
Piermont	2012	18	$10,000	Exemption equals 100% up to $10,000
Pittsfield	2016	31	See note	100% of Assessed Value
Plainfield	2008	9	See note	Exemption equals 100% of Value up to $50,000
Plaistow	2016	16	See note	100% of Assessed Value
Plymouth	2010	14	See note	100% -cost not added to the assessed value
Portsmouth	2011	R15-2001	See note	Based on cost of equipment up to $25,000 per year for 5 years. If property sells within the 5 yrs. The exemption is lost.
Randolph	2003	5	$1,500	
Raymond	1982	2	$2,100	Exemption $2,100 each
Richmond	2017	6	See note	100% of assessed value
Rindge	1982	22	See note	Exemption equals Base on Cost
Rochester	2006	Resl	See note	100% of Assessed Value
Roxbury	2009	23	See note	Exemption equals Up to $10,000
Rumney	1982	2	See note	Exemption equals 100% of Cost of System
Rye	2013	18	$35,000	

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Salisbury	2016	14	See note	100% of Assessed Value
Sanbornton	1983	1	See note	Exemption equals 100% of Cost to Install and Purchase Equipment
Sandwich	1979	3	$5,000	
Shelburne	2017	5	See note	100% of Assessed Value
South Hampton	2016	16	0	100% of Assessed Value
Springfield	2010	13	See note	100% of assessed value up to $50K
Stoddard	2017	12	See note	100% UP TO $15,000
Stratham	2008	7	See note	Exemption equals Up to $20,000
Sugar Hill	2015	19	See note	100% Assessed Value up to $20,000
Sunapee	2012	21	See note	100% & not assessed per town.
Surry	1977	6	See note	Exemption equals Amount per Assessor
Sutton	2017	16	See note	100% of Assessed Value
Swanzey	1977	45	See note	Exemption equals Up to $5,000
Tamworth	2012	2	See note	100% of assessed value of equipment
Temple	2007	18	See note	Exemption equals increased assessed property value; if no increase to assessment; no exemption granted
Troy	2015	31	See note	100% of Assessed Value
Unity	2009	19	See note	100% of Assessed Value of qualifying equipment under these statutes or to a maximum of $20,000
Wakefield	2017	18	See note	100% of Assessed Value.

MUNICIPALITY	ADOPTION YEAR	WA# / RES # / ORD #	SOLAR EXEMPTION AMOUNT	NOTES
Warner	2008	25	See note	Exemption equals 100% of Assessed Value up to $35,000
Washington	1997	21	See note	Exemption equals 100% up to $5,000 for cost of improvements
Weare	2008	38	See note	100% of Assessed Value
Webster	2012	19	See note	100% of increase in assessed value
Wentworth	2007	21	See note	100% of Assessed Value
Whitefield	2016	26	See note	100% of Assessed Value not to exceed $50k
Wilton	2016	20	See note	100% of Assessed Value
Winchester	2008	25	See note	Exemption equals 100% of Value
Windham	2011	14	See note	Equals Increase in Property Value
Wolfeboro	2010	34	$10,000	

MUNICIPALITY	ADOPTION YEAR	WA # / RES # / ORD #	WOOD-HTG EXEMPTION AMOUNT	NOTES
Lebanon	2013	City council	See note	equal to any increase in incremental assessed value of the entire property attributable to the qualifying equipment under these statutes that is in excess of the property's assessed value...
Madison	2016	11	See note	100% of Assessed Value
Marlborough	2012	13	See note	100% of Assessed Value
Marlow	2013	18	See note	Increase difference in Assessment is exemption amount
Newbury	2010	12	$5,000	Up to $5,000
Newmarket	2006	2	See note	Exemption equals 100% of Cost of System and Installation
Northwood	1985	2	See note	Exemption equals 75% of Cost
Pelham	1982	4	$3,000	Exemption equals 100% of Cost of System up to $3,000
Plaistow	1981	15	$4,900	Exemption equals $4,900 per person; based on square footage of house. 5/26/17 LM VM w/town to verify. N
Plymouth	2010	14	See note	100% -cost not added to the assessed value
Randolph	2003	7	$1,500	
Richmond	2008	49	See note	Cost of system
Sanbornton	1983	3	See note	Exemption equals 100% of Cost to Install and Purchase Equipment
Sandwich	1982	10	$5,000	
Sugar Hill	2015	18	See note	100% Assessed Value up to $20,000
Tamworth	1980	1D	$500	
Temple	2007	17	See note	Exemption equals increased assessed property value; if no increase to assessment; no exemption granted
Unity	2009	19	See note	100% of Assessed Value of qualifying equipment under these statutes or to a maximum of $20,000
Wakefield	1983	2	$1,000	
Washington	1997	21	See note	Exemption equals Hot Air equals $2,000 / Hot Water equals $3,000

MUNICIPALITY	ADOPTION YEAR	WA # / RES # / ORD #	WOOD-HTG EXEMPTION AMOUNT	NOTES
Winchester	2008	25	See note	Exemption equals 100% of Value
Windham	2011	16	See note	Equals Increase in Property Value

MUNICIPALITIES WITH A WIND-POWERED EXEMPTION

TOTAL NUMBER OF MUNICIPALITIES: 68

MUNICIPALITIES	ADOPTION YEAR	WA # / RES # / ORD #	WIND-POWERED EXEMPTION AMOUNT	NOTES
Alstead	2015	22	See note	100% of Assessed Value
Andover	2013	20	See note	100% of Assessed Value
Atkinson	2009	23	See note	Exemption amount based on Cost of Equipment and Installation
Barrington	1981	16	$5,000	
Bedford	3/11/80	Town council	See note	Installation plus replacement cost
Berlin	1986	City council	$3,000	Date passed by city council 9/26/86, per Bryan on 5/25/17.
Bethlehem	2011	25	See note	100% of assessed value up to $25,000
Boscawen	2011	11	See note	100% of System's Assessed Value
Bradford	2010	28	See note	100% of assessed value up to $35,000
Campton	2010	26	See note	100% of improvement
Center Harbor	1978	1-C	See note	Exemption equal to Assessed Value of Energy System
Chester	1979	18	See note	Exemption equals 20% of base cost of system
Colebrook	2008	21	See note	100% of Assessed Value
Columbia	1977	13	See note	100% of Installation Cost
Conway	1981	9	See note	Exemption equals 100% Cost of System
Derry	2010	18	See note	100% of Assessed Value
Dummer	2010	19	See note	Exemption shall equal the amount the value of the property is increased by the installation of such a system
Effingham	1981	16	See note	Exemption equals Assessed Value of System
Enfield	2008	17	See note	100% of assessed value of qualifying system

MUNICIPALITIES	ADOPTION YEAR	WA # / RES # / ORD #	WIND-POWERED EXEMPTION AMOUNT	NOTES
Epsom	2016	14	See note	100% of Assessed Value
Franconia	2010	18	See note	Exemption equals 100% of assessed value of qualifying equipment up to $20,000
Fremont	2009	28	See note	100% of Assessed Value
Gilmanton	2009	20	See note	100% of the Full Assessed Value of the System
Goshen	2008	22	See note	Cost of System
Grafton	2012	21	See note	100% of Assessed Value
Grantham	2016	6	See note	100% of Assessed Value
Greenfield	2008	2	See note	Full Assessed Value of System
Hampton Falls	2014	22	See note	100% of cost of assessed value.
Harrisville	2009	17	See note	Exemption equals Up to $20,000
Henniker	1982	Ballot vote	See note	Exemption equals 50% of the Cost of the System up to $10,000
Hillsborough	2011	22	See note	Exemption equals 100% of Assessed Value of qualifying system up to $30,000
Hollis	2000	n/a	See note	Exemption equals Up to $5,000
Keene	2017	R-18	See note	An amount equal to the cost, including installation, up to $10,000
Kensington	2013	14	See note	100% Assessed Value of qualified equipment
Kingston	1980	42	$150	
Langdon	2011	23	See note	100% of Assessed Value
Lebanon	2013	City council	See note	equal to any increase in incremental assessed value of the entire property attributable to the qualifying equipment under these statutes that is in excess of the property's assessed value...
Londonderry	2007	5	Up to $5,000	

MUNICIPALITIES	ADOPTION YEAR	WA # / RES # / ORD #	WIND-POWERED EXEMPTION AMOUNT	NOTES
Madison	2016	11	See note	100% of Assessed Value
Marlborough	2012	13	See note	100% of Assessed Value
Marlow	2013	17	See note	100% Cost of System
Mason	1981	Ballot vote	See note	Exemption equals Amount to be determined by Selectmen
Meredith	2009	8	$20,000	Cost of Installation
Mont Vernon	1980	2	See note	Exemption equals Value of equipment added to property
New Boston	2008	16	See note	Exemption equals Full Assessed Value of Improvements
Newbury	2010	12	$5,000	Up to $5,000
Newmarket	2006	4	See note	Exemption equals 100% of Cost of System and Installation
Newport	2010	12	See note	Equal to 100% of Value of System
Northwood	1978	4	See note	Exemption equals 75% of Cost
Piermont	2012	19	$10,000	Exemption equals 100% up to $10,000
Plainfield	2008	9	See note	Exemption equals 100% of Value up to $50,000
Plymouth	2010	14	See note	100% -cost not added to the assessed value
Randolph	2003	6	$1,500	
Richmond	2017	7	See note	100% of assessed value
Rochester	2006	Resl	See note	100% of Assessed Value
Roxbury	2009	23	See note	Exemption equals Up to $10,000
Sanbornton	2008	16	See note	
Sandwich	1979	4	$5,000	

MUNICIPALITIES	ADOPTION YEAR	WA # / RES # / ORD #	WIND-POWERED EXEMPTION AMOUNT	NOTES
Springfield	2010	13	See note	100% of assessed value up to $50K
Stratham	2008	7	See note	Exemption equals Up to $20,000
Tamworth	1980	1C	$500	
Temple	2007	19	See note	Exemption equals increased assessed property value; if no increase to assessment; no exemption granted
Unity	2009	19	See note	100% of Assessed Value of qualifying equipment under these statutes or to a maximum of $20,000
Warner	2008	24	See note	Exemption equals 100% of Assessed Value up to $35,000
Washington	1997	21	See note	Exemption equals 100% up to $5,000 for cost of improvements
Winchester	2008	25	See note	Exemption equals 100% of Value
Windham	2011	15	See note	Equals Increase in Property Value
Wolfeboro	2008	31	$5,000	

LEGAL NOTICE

NOTICE IS HEREBY GIVEN that a Public Hearing will be held by the Portsmouth City Council on Monday, August 20, 2018 at 7:00 p.m., Eileen Dondero Foley Council Chambers, Municipal Complex, 1 Junkins Avenue, Portsmouth, NH, on a proposed Ordinance amending Chapter 7, Article IV, Section 7.402 regarding the Foundry Place Garage Designation. The complete Ordinance is available for review in the Office of the City Clerk and Portsmouth Public Library, during regular business hours.

KELLI L. BARNABY, MMC/CMC/CNHMC
CITY CLERK

LEGAL NOTICE

NOTICE IS HEREBY GIVEN that a Public Hearing will be held by the Portsmouth City Council on Monday, August 20, 2018 at 7:00 p.m., Eileen Dondero Foley Council Chambers, Municipal Complex, 1 Junkins Avenue, Portsmouth, NH, on a proposed Ordinance amending Chapter 7, Article IV, Section 7.402 regarding the Foundry Place Garage Designation. The complete Ordinance is available for review in the Office of the City Clerk and Portsmouth Public Library, during regular business hours.

KELLI L. BARNABY, MMC/CMC/CNHMC
CITY CLERK

PM0037903

ORDINANCE #
THE CITY OF PORTSMOUTH ORDAINS

That Chapter 7, Article IV, Off Street Parking Areas of the Ordinances of the City of Portsmouth be amended as follows (deletions from existing language ~~stricken~~; additions to existing language **bolded**; remaining language unchanged from existing):

Section 7.402: AREAS ESTABLISHED, DESIGNATED, AND DESCRIBED:

L. **Foundry Place Off-Street Parking Area**

The Municipal Parking Garage located at 100 Foundry Place shall be known as the Foundry Place Parking Garage. The area within the garage shall be designated for off-street parking and shall be striped for that purpose to include parking spaces for handicapped access and electric vehicle charging stations. Fees for parking in the Foundry Place Parking Garage to be determined in accordance with Chapter 1, Article XVI, or as may be adopted by vote of the City Council.

Any vehicle remaining in the garage after seven (7) days will be subject to towing or immobilization at the owner's expense. Fees to be determined in accordance with Chapter 1, Article XVI.

The City Clerk shall properly alphabetize and/or re-number the ordinance as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

This ordinance shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY COUNCIL:

_____
Kelli L. Barnaby, City Clerk

Proposed 105 Bartlett St Zoning Amendments Part 1a

ORDINANCE #

THE CITY OF PORTSMOUTH ORDAINS

That the Ordinances of the City of Portsmouth, Chapter 10 – Zoning Ordinance, be amended as follows**:**

A. Amend Article 4 Zoning Districts and Use Regulations – Section 10.440 Table of Uses – Residential, Mixed Residential, Business, and Industrial Districts, as follows:

(1) Change Use #3.512 Indoor performance facility with occupancy less than 500 to be allowed by Special Exception (S) in the Business (B) and Character 4W (CD4-W) Districts.

(2) Under use category 19 (Accessory Uses) Insert new use #19.50 as follows:

"19.50 Outdoor dining or drinking area, as accessory to a permitted principal use" as permitted (P) in CD5, CD4, GB, G1, and G2 and allowed by conditional use permit (CUP) in CD4-L2, B, and CD4-W. In all other districts this use would be prohibited.

B. Amend Article 5A Character Based Zoning – Section 10.5A42 Building Placement by inserting a new section as follows:

10.5A42.40 North Mill Pond Public View Corridors
All new buildings or structures located within 400' of the North Mill Pond shall be located in such a way as to maintain existing public views with a terminal vista of the North Mill Pond from the intersecting street of Dover Street. Except for existing obstructions, the public view corridor shall be maintained for a minimum width of the existing public right-of-way of the nearest intersecting street as listed above.

C. Amend the Table in Section 10.5A46.10 Incentives to Development Standards as follows (deletions to existing language ~~striken;~~ additions to existing language **bolded**; remaining language unchanged from existing):

DEVELOPMENT STANDARDS	INCENTIVES	
	North End Incentive Overlay District	West End Incentive Overlay District
Maximum building coverage	No Change	80%
Maximum building footprint	30,000 sf	30,000 sf**[1]**
Minimum lot area	No Change	2,000 sf
Minimum lot area per dwelling unit	No Change	No minimum

DEVELOPMENT STANDARDS	INCENTIVES	
	North End Incentive Overlay District	West End Incentive Overlay District
Maximum building height	Plus 1 story up to 10 ft~~1~~**2**	Plus 1 story up to 10 ft ~~1,~~**2,3**
Minimum ground story height	**No Change**	**9 feet**
Minimum off-street parking	**No Change** ~~Residential:~~ ~~1 space per dwelling unit~~ ~~0.5 space per micro-unit~~	~~Residential:~~ ~~1 space per dwelling unit~~ ~~0.5 space per micro-unit~~ Non-residential: 25% reduction from underlying standard
Ground story parking	**Permitted with a liner building[4]**	**Permitted with a liner building[4]**

[1] For properties located within 200 feet of the North Mill Pond in the CD4-W District, the maximum building footprint shall be 20,000 sq. ft.

~~1~~**2** In order to receive the building height incentive, the sidewalk width in front of any façade shall be at least 10 feet plus two feet for each story of building height above three stories. Any property area needed to comply with this requirement shall count as open space as ~~listed~~**required** in Figures 10.5A41.10A-D (Development Standards) **and** as community space; even if less than 15 feet in width.

~~2~~**3** For parcels over 80,000 sq. ft. in area that are located south of Islington Street, up to two stories or 20 feet may be added to the maximum building height provided both requirements listed under Section 10.5A46.22 (1) and (2) are met.

[4] If ground story parking is proposed, at least 50% of the ground story facing a street shall include a liner building.

D. Amend Section 10.5A46.20 Requirements to Receive Incentives to the Development Standards as follows (deletions to existing language ~~striken;~~ additions to existing language **bolded**; remaining language unchanged from existing):

10.5A46.21 For a lot located adjacent to, or within 100 feet of, North Mill Pond, Hodgson Brook or the Piscataqua River, the development shall ~~include a~~**provide** community space ~~consisting of~~**equal to 20% of the lot area that includes** a continuous public greenway at least 20 feet in width **with a multi-use path and** that is parallel to **and located within 50 feet of** the waterfront ~~for the entire length of the rear or side lot line~~. **Trail connections to abutting streets and sidewalks shall be provided and there shall be no buildings between the waterfront and the greenway**

unless otherwise approved by the Planning Board. The greenway shall include legal and physical access to abutting lots or public ways. When access is not available due to current conditions on an abutting lot, provisions shall be made for future access in a location determined by the Planning Board.

E. Amend Article 15 – Definitions, Section 10.1530 – Terms of General Applicability, as follows:

(1) In the definition of building block length revised as follows (deletions to existing language ~~striken;~~ additions to existing language **bolded**; remaining language unchanged from existing):

Measured along a street ~~or~~, public way, **or public greenway**, the building block length shall be the total length of a continuous building façade regardless of fire separation, common walls, or property lines. Individual building blocks shall be separated by open space or community space areas of at least 15 feet in width.

F. Amend Map 10.5A21A Character Districts and Civic Districts as set forth in document titled "Proposed Amendment for 105 Bartlett St Part 1A Zoning Map 10.5A21A Character Districts and Civic Districts" dated 7-27-18.

G. Amend Map 10.5A21B Building Height Standards as set forth in document titled "Proposed Amendment for 105 Bartlett St Part 1A Zoning Map 10.5A21B Building Height Standards" dated 7-27-18.

The City Clerk shall properly alphabetize and/or re-number the ordinances as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

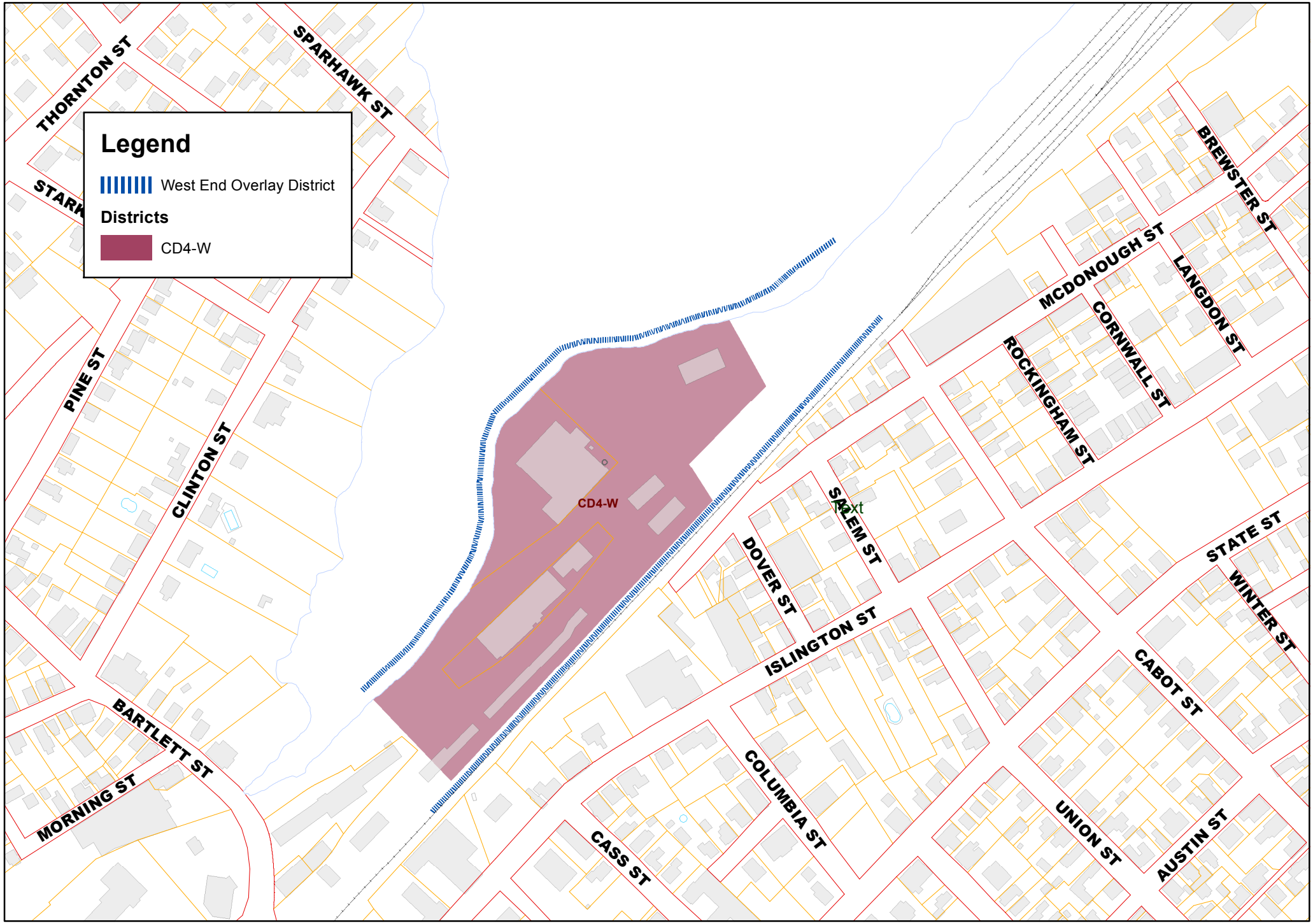
This ordinance shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

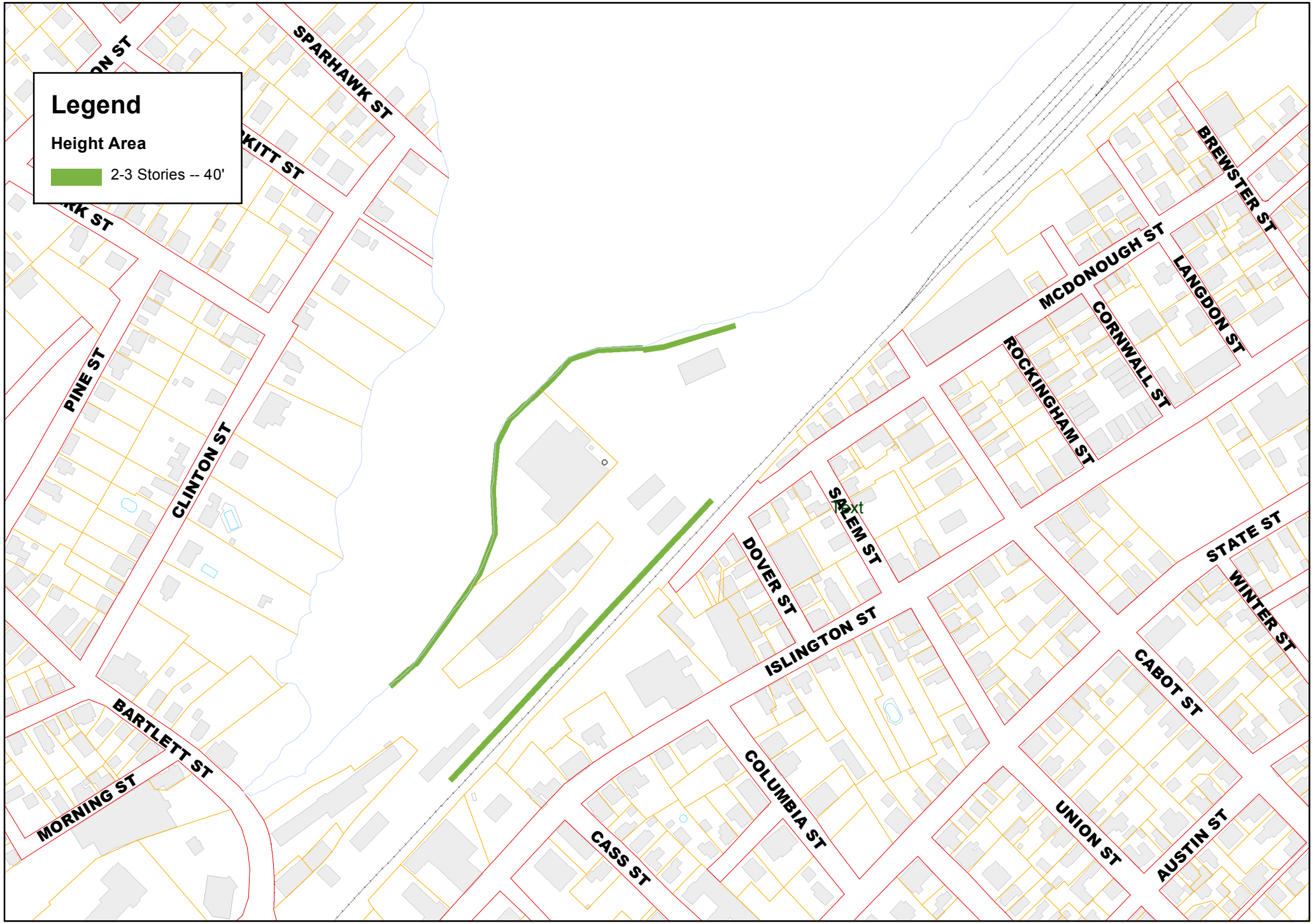
ADOPTED BY COUNCIL:

_____
Kelli L. Barnaby, City Clerk



Proposed Amendment for 105 Bartlett Street Part 1A
Zoning Map 10.5A21A Character Districts and Civic Districts

Portsmouth Planning Department Revised 07-27-2018



Proposed Amendment for 105 Bartlett Street Part 1A
Zoning Map 10.5A21B Building Height Standards

Portsmouth Planning Department Revised 07-27-2018

P = Permitted S = Special Exception CU = Conditional Use Permit N = Prohibited

Use	R	SRA SRB	GRA GRB	GRC (A)	GA/ MH	MRO CD4-L1	CD4-L2	MRB	CD5 CD4	GB	G1	G2	B CD4-W	WB	OR	I	WI	Supplemental Regulations
3. Educational, Religious, Charitable, Cultural and Public Uses																		
3.10 Place of assembly																		
3.11 Religious	S	S	S	N	N	S	S	S	S	S	S	S	S	N	N	N	N	
3.12 Other nonprofit	N	N	N	N	N	S	S	S	S	S	S	S	S	N	N	N	N	
3.20 School																		
3.21 Primary or secondary	N	N	N	N	N	S	S	P	P	P	S	S	P	P	N	N	N	
3.30 Post-secondary	N	N	N	N	N	S	S	P	P	P	S	S	P	N	P	P	N	
3.30 Historic preservation building	S	S	S	S	S	P	P	P	P	P	P	P	P	N	P	N	N	10.821 (Historic Preservation Buildings and Museums)
3.40 Museum	N	N	N	N	N	P	P	N	P	P	S	S	P	N	P	N	N	10.821 (Historic Preservation Buildings and Museums)
3.50 Performance facility																		
3.51 Indoor performance facility																		10.592 (location)
3.511 Occupancy up to 500 persons	N	N	N	N	N	N	N	N	P	P	S	S	~~P~~S	N	N	N	N	10.860 (hours of operation)
3.512 Occupancy more than 500	N	N	N	N	N	N	N	N	S	P	N	N	N	N	N	N	N	
3.52 Outdoor performance facility																		10.592 (location)
3.521 Occupancy up to 500 persons	N	N	N	N	N	N	N	N	S	S	S	S	N	N	N	N	N	10.822 (yards)
3.522 Occupancy more than 500	N	N	N	N	N	N	N	N	S	S	N	N	N	N	N	N	N	10.860 (hours of operation)

P = Permitted S = Special Exception CU = Conditional Use Permit N = Prohibited

Use	R	SRA SRB	GRA GRB	GRC (A)	GA/ MH	MRO CD4-L1	CD4-L2	MRB	CD5 CD4	GB	G1	G2	B CD4-W	WB	OR	I	WI	Supplemental Regulations
19.40 Drive-through facility, as accessory use to a permitted principal use	N	N	N	N	N	N	N	N	N	CU	CU	N	CU	N	CU	N	N	10.835 (accessory drive-through uses)
19.50 Outdoor dining or drinking area, as accessory to a permitted principal use	N	N	N	N	N	N	CU	N	P	P	P	P	CU	N	N	N	N	
20. Accessory Storage																		
20.10 Indoor storage of motor vehicles or boats as an accessory use	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
20.20 Outdoor storage of registered motor vehicles owned by residents of the premises or business. Such vehicles may include only one commercial vehicle, which shall be limited to no more than 2 axles and 6 wheels.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
20.30 Outdoor storage for not more than 9 consecutive months of boats owned by residents of the property:																		
20.31 Not more than one motorboat or sailboat longer than 12 feet	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
20.32 Any number of (a) motorboats or sailboats up to 12 feet in length, or (b) hand-powered craft (canoes and kayaks) without restriction as to length	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	

10.5A42 Building Placement

10.5A42.10 Yards

10.5A42.11 Yards shall be as required in Figures 10.5A41.10A-D (Development Standards).

10.5A42.12 Yards may be increased above the maximum permitted for truncated corners or other subtractive massing techniques, alleys, vehicular accessways, increased sidewalk width or community spaces.

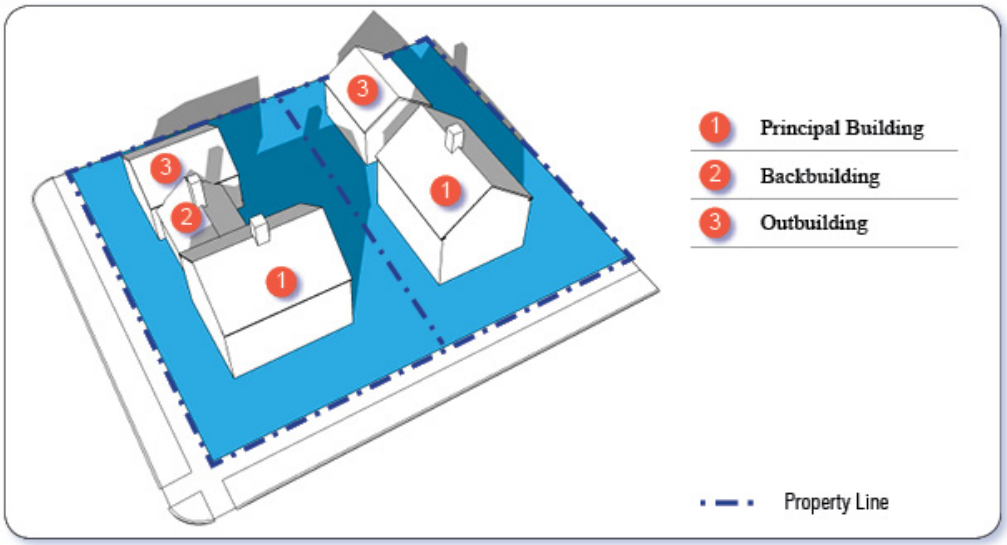
10.5A42.20 Façade Alignment

The façade facing the principal front yard shall be parallel to the front lot line. Where the front lot line is curved, the façade shall be parallel to a straight line connecting the points of intersection of the front lot line and the side lot lines.

10.5A42.30 Outbuildings and Backbuildings

A detached outbuilding, or an outbuilding attached to a principal building with a backbuilding, may be built on each lot to the rear of the principal building, as illustrated generally in Figure 10.5A42.10 (Principal Building/Backbuilding/ Outbuilding).

FIGURE 10.5A42.10 PRINCIPAL BUILDING/BACKBUILDING/ OUTBUILDING



10.5A42.40 North Mill Pond Public View Corridors

All new buildings or structures located within 400' of the North Mill Pond shall be located in such a way as to maintain existing public views with a terminal vista of the North Mill Pond from the intersecting street of Dover Street. Except for existing obstructions, the public view corridor shall be maintained for a minimum width of the existing public right-of-way of the nearest intersecting street as listed above.

10.5A46 Incentive Overlay Districts

The Incentive Overlay Districts are designated on Map 10.5A21B. In such areas, certain specified development standards may be modified as set forth in Section 10.5A46.10 below, if the development provides community space or workforce housing in accordance with Section 10.5A46.20, as applicable:

10.5A46.10 Incentives to Development Standards

DEVELOPMENT STANDARDS	INCENTIVES	
	North End Incentive Overlay District	West End Incentive Overlay District
Maximum building coverage	No Change	80%
Maximum building footprint	30,000 sf	30,000 sf[1]
Minimum lot area	No Change	2,000 sf
Minimum lot area per dwelling unit	No Change	No minimum
Maximum building height	Plus 1 story up to 10 ft[~~1~~2]	Plus 1 story up to 10 ft[~~1~~,2,3]
Minimum ground story height	No Change	9 feet
Minimum off-street parking	No Change ~~Residential:~~ ~~1 space per dwelling unit~~ ~~0.5 space per micro-unit~~	~~Residential:~~ ~~1 space per dwelling unit~~ ~~0.5 space per micro-unit~~ Non-residential: 25% reduction from underlying standard
Ground story parking	Permitted with a liner building[4]	Permitted with a liner building[4]

[1] For properties located within 200 feet of the North Mill Pond in the CD4-W District, the maximum building footprint shall be 20,000 sq. ft.

[~~1~~2] In order to receive the building height incentive, the sidewalk width in front of any façade shall be at least 10 feet plus two feet for each story of building height above three stories. Any property area needed to comply with this requirement shall count as open space as ~~listed~~ required in Figures 10.5A41.10A-D (Development Standards) and as community space; even if less than 15 feet in width.

[~~2~~3] For parcels over 80,000 sq. ft. in area that are located south of Islington Street, up to two stories or 20 feet may be added to the maximum building height provided both requirements listed under Section 10.5A46.22 (1) and (2) are met.

[4] If ground story parking is proposed, at least 50% of the ground story facing a street shall include a liner building.

10.5A46.20 Requirements to Receive Incentives to the Development Standards

10.5A46.21 For a lot located adjacent to, or within 100 feet of, North Mill Pond, Hodgson Brook or the Piscataqua River, the development shall ~~include~~ aprovide community space ~~consisting of~~equal to 20% of the lot area that includes a continuous public greenway at least 20 feet in width with a multi-use path and that is parallel and located within 50 feet of~~to~~ the waterfront ~~for the entire length of the rear or side lot line~~. Trail connections to abutting street(s) and sidewalks shall be provided and t~~T~~here shall be no buildings between the waterfront and the greenway unless otherwise approved by the Planning Board. The greenway shall include legal and physical access to abutting lots or public ways. When access is not available due to current conditions on an abutting lot, provisions shall be made for future access in a location determined by the Planning Board.

10.5A46.22 For a lot that is more than 100 feet from North Mill Pond, Hodgson Brook or the Piscataqua River, the development shall include either a community space or workforce housing as specified below:

(1) Community space option – All of the following criteria shall be met:

(a) The community space shall be a community space type that is permitted within the applicable Character district.
(b) The community space shall constitute at least 20% of the gross area of the lot and shall not have any dimension less than 15 feet.
(c) The community space shall adjoin the public sidewalk and shall be open on one or more sides to the sidewalk.
(d) The community space shall include trees and other landscaping to provide shade and reduce noise, and pedestrian amenities such as overlooks, benches, lighting and other street furniture.
(e) The community space shall be located on or adjacent to the same lot as the development, except as provided in (f) below.
(f) The Planning Board may grant a conditional use permit to allow a proposed community space to be located on a different lot than the development if it finds that all of the following criteria will be met:
    (i) An appropriate community space cannot feasibly be provided on the same lot as the development.
    (ii) The proposed community space is within the same Incentive Overlay District as the development.
    (iii) The proposed community space is suited to the scale, density, uses and character of the surrounding properties.

(2) Workforce housing option – One or more of the following criteria shall be met:

(a) At least 30% of the dwelling units within a building, but no less than three units, shall be workforce housing units for sale

Building

Any structure having a roof supported by columns or walls and intended for the shelter, housing or enclosure of persons, animals or chattel. Each portion of a building separated either horizontally or vertically from other portions by a fire wall shall be considered as a separate structure. (See also: structure.)

Building block length

Measured along a street ~~or,~~ public way, or public greenway, the building block length shall be the total length of a continuous building façade regardless of fire separation, common walls, or property lines. Individual building blocks shall be separated by open space or community space areas of at least 15 feet in width.

Building Code

The International Building Code and/or the International Residential Code, as applicable to the particular structure type.

International Building Code (IBC)

The International Building Code, published by the International Code Council, Inc., as adopted with amendments, additions and deletions as Chapter 12, Part I, of the Ordinances of the City of Portsmouth, and as amended from time to time by the City.

International Residential Code (IRC)

The International Residential Code, published by the International Code Council, Inc., as adopted with amendments, additions and deletions as Chapter 12, Part II, of the Ordinances of the City of Portsmouth, and as amended from time to time by the City.

Building coverage

The aggregate horizontal area or percentage (depending on context) of a lot or development site covered by all buildings and structures on the lot, excluding

(a) gutters, cornices and eaves projecting not more than 30 inches from a vertical wall, and
(b) structures less than 18 inches above ground level (such as decks and patios);
(c) balconies, bay windows or awnings projecting not more than 2 feet from a vertical wall, not exceeding 4 feet in width, and cumulatively not exceeding 50% of the width of the building face;
(d) fences; and
(e) mechanical system (i.e. HVAC, power generator, etc.) that is less than 36 inches above the ground level with a mounting pad not exceeding 10 square feet.

Building footprint

The total area at or above 18 inches in elevation as measured from the outside walls at the grade plane of a detached building, or of two or more buildings separated only by fire walls, common walls or property lines.

Proposed 105 Bartlett St Zoning Amendments Part 1B

ORDINANCE #

THE CITY OF PORTSMOUTH ORDAINS

That the Ordinances of the City of Portsmouth, Chapter 10 – Zoning Ordinance, be amended as follows**:**

A. Amend the Table in Section 10.5A46.10 Incentives to Development Standards as follows (deletions to existing language ~~striken;~~ additions to existing language **bolded**; remaining language unchanged from existing):

DEVELOPMENT STANDARDS	INCENTIVES	
	North End Incentive Overlay District	West End Incentive Overlay District
Maximum building coverage	No Change	80%
Maximum building footprint	30,000 sf	30,000 sf[1,2]
Maximum building block length	**No Change**	**No Change[3]**
Minimum lot area	No Change	2,000 sf
Minimum lot area per dwelling unit	No Change	No minimum
Maximum building height	Plus 1 story up to 10 ft[4 ~~-2~~]	Plus 1 story up to 10 ft[4,5 ~~-2,3~~]
Minimum ground story height	No Change	9 feet
Minimum off-street parking	No Change	Non-residential: 25% reduction from underlying standard
Ground story parking	Permitted with a liner building[4 ~~-6~~]	Permitted with a liner building[4 ~~-6~~]

[1] **In CD4-L1 and CD4-L2 the maximum building footprint shall be 3,500 SF. Where the building footprint exceeds 2,500 SF, individual building blocks shall be separated by open space, community space, or surface parking areas of at least 30 feet in width. Parking areas located between buildings are not required to be set back from the building façade.**

[2]For properties located within 200 feet of the North Mill Pond in the CD4-W District, the maximum building footprint shall be 20,000 sq. ft.

[3] In CD4-L1 and CD4-L2 the maximum building block length shall be 100 feet.

~~2,~~ **4** In order to receive the building height incentive, the sidewalk width in front of any façade shall be at least 10 feet plus two feet for each story of building height

above three stories. Any property area needed to comply with this requirement shall count as open space as required in Figures 10.5A41.10A-D (Development Standards) and as community space; even if less than 15 feet in width.

~~2~~ **5** For parcels over 80,000 sq. ft. in area that are located south of Islington Street, up to two stories or 20 feet may be added to the maximum building height provided both requirements listed under Section 10.5A46.22 (1) and (2) are met.

~~4~~ **6** If ground floor parking is proposed, at least 50% of the ground story facing a street shall include a liner building.

B. Amend Article 5A Character Based Zoning – 10.5A42.40 North Mill Pond Public View Corridors as follows (deletions to existing language ~~striken;~~ additions to existing language **bolded**; remaining language unchanged from existing):

All new buildings or structures located within 400' of the North Mill Pond shall be located in such a way as to maintain existing public views with a terminal vista of the North Mill Pond from the intersecting street**s** of Dover Street, **Cabot Street, Cornwall Street and Langdon Street**. Except for existing obstructions, the public view corridor shall be maintained for a minimum width of the existing public right-of-way of the nearest intersecting street as listed above.

C. Amend Map 10.5A21A Character Districts and Civic Districts as set forth in document titled "Proposed Amendment for 105 Bartlett St Part 1B Zoning Map 10.5A21A Character Districts and Civic Districts" revised 7-27-18.

D. Amend Map 10.5A21B Building Height Standards as set forth in document titled "Proposed Amendment for 105 Bartlett St Part 1B Zoning Map 10.5A21B Building Height Standards" revised 7-27-18

The City Clerk shall properly alphabetize and/or re-number the ordinances as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

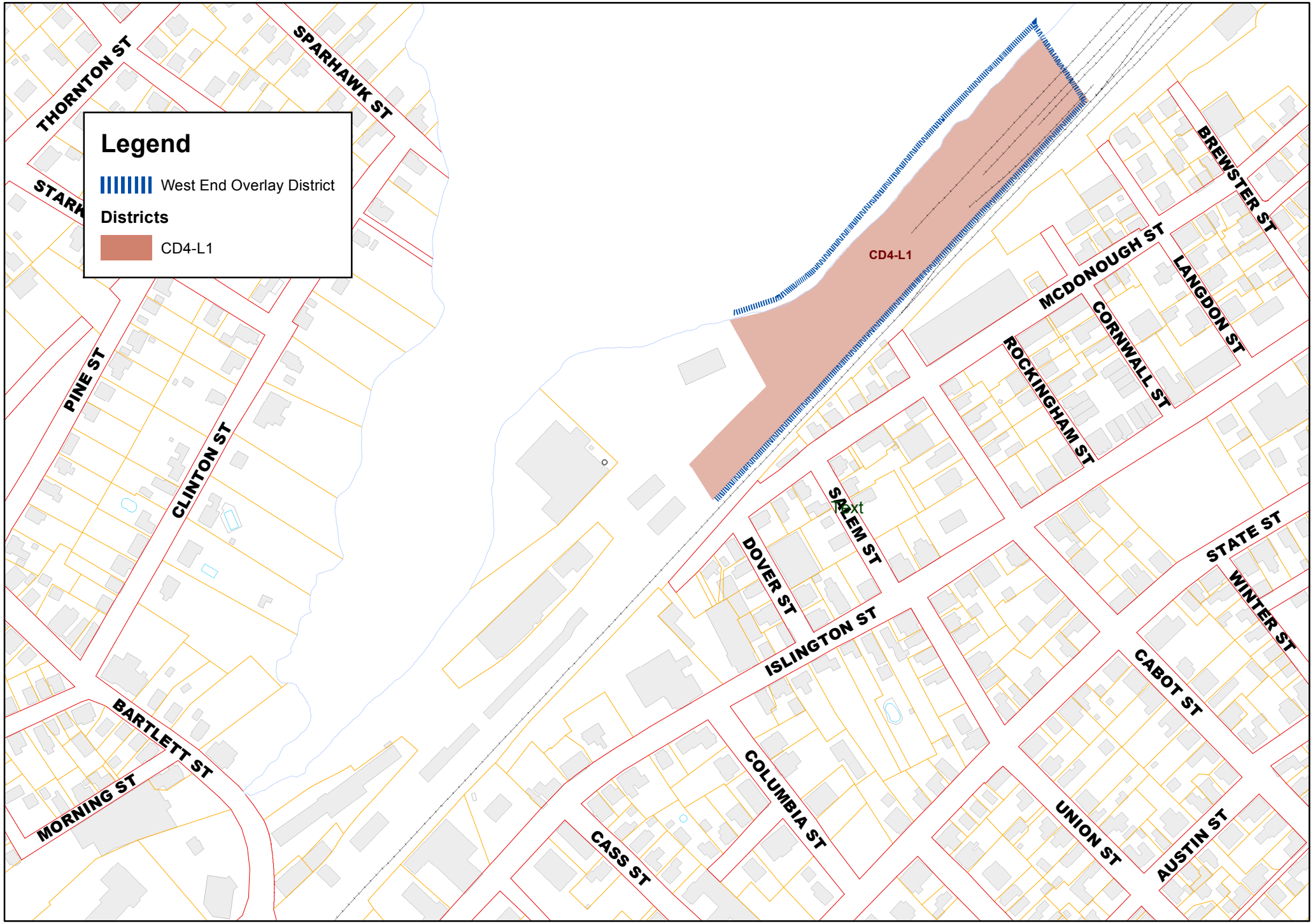
This ordinance shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

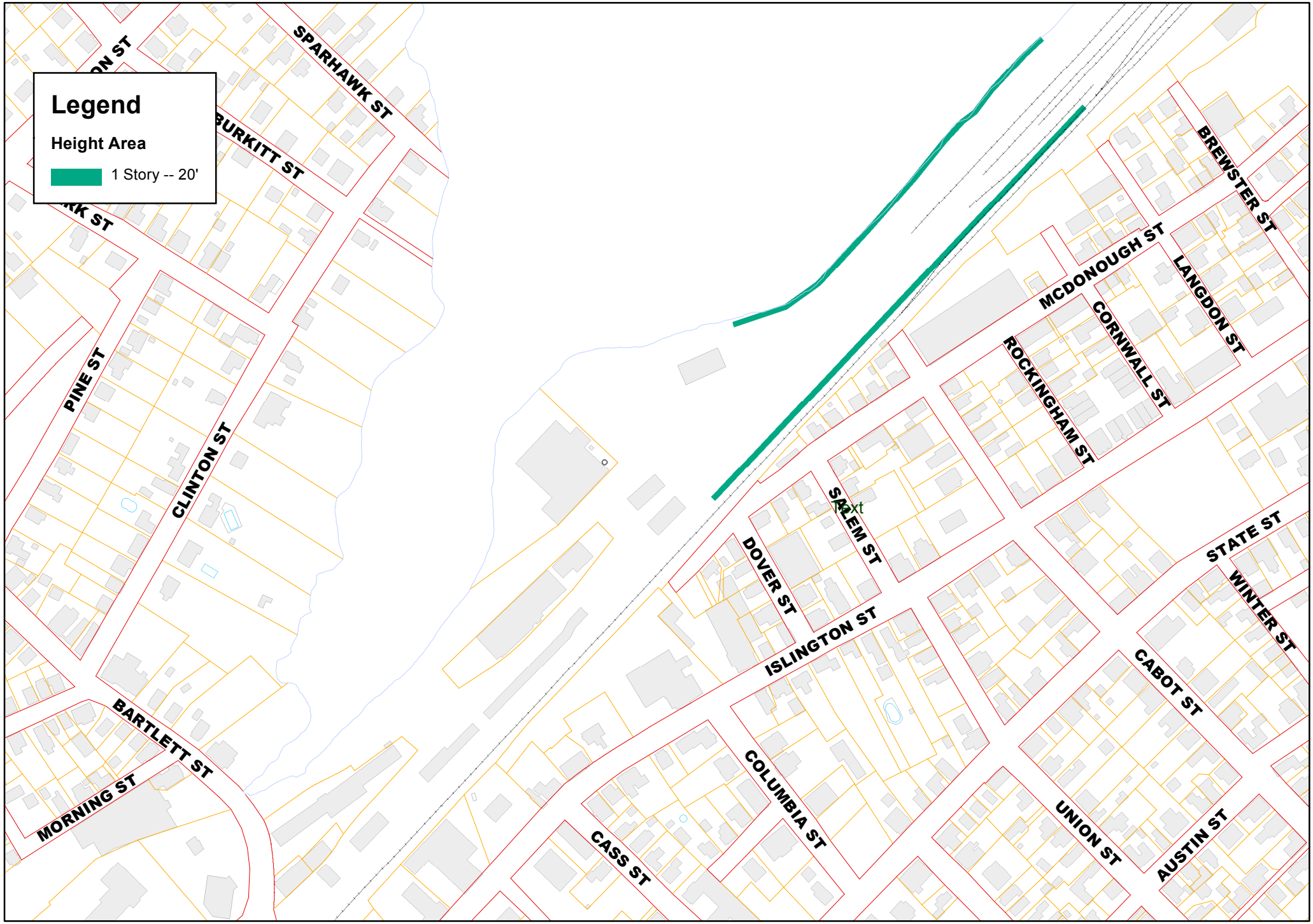
ADOPTED BY COUNCIL:

_____
Kelli L. Barnaby, City Clerk



Proposed Amendment for 105 Bartlett Street Part 1B
Zoning Map 10.5A21A Character Districts and Civic Districts

Portsmouth Planning Department Revised 07-27-2018



Proposed Amendment for 105 Bartlett Street Part 1B
Zoning Map 10.5A21B Building Height Standards

Portsmouth Planning Department Revised 07-27-2018

10.5A42 Building Placement

10.5A42.10 Yards

10.5A42.11 Yards shall be as required in Figures 10.5A41.10A-D (Development Standards).

10.5A42.12 Yards may be increased above the maximum permitted for truncated corners or other subtractive massing techniques, alleys, vehicular accessways, increased sidewalk width or community spaces.

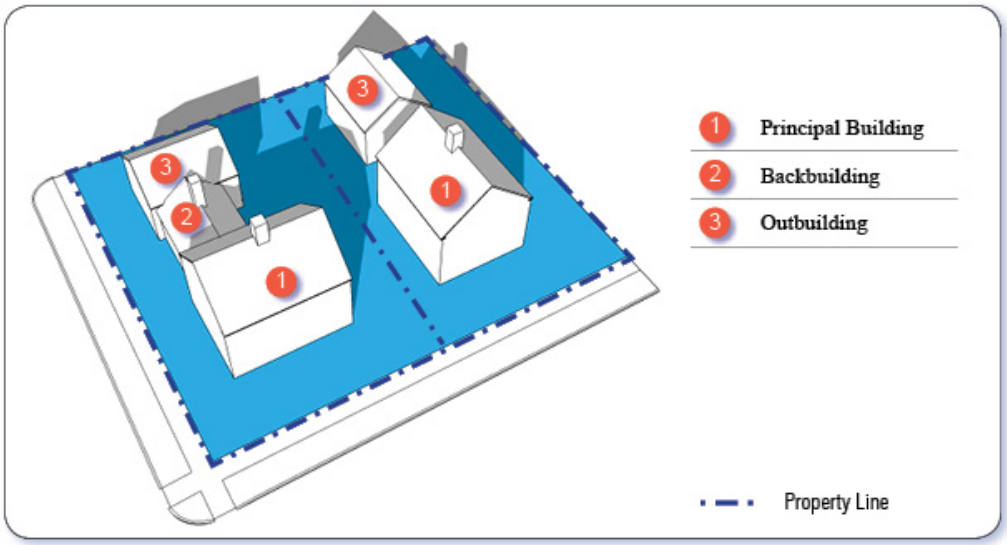
10.5A42.20 Façade Alignment

The façade facing the principal front yard shall be parallel to the front lot line. Where the front lot line is curved, the façade shall be parallel to a straight line connecting the points of intersection of the front lot line and the side lot lines.

10.5A42.30 Outbuildings and Backbuildings

A detached outbuilding, or an outbuilding attached to a principal building with a backbuilding, may be built on each lot to the rear of the principal building, as illustrated generally in Figure 10.5A42.10 (Principal Building/Backbuilding/ Outbuilding).

FIGURE 10.5A42.10 PRINCIPAL BUILDING/BACKBUILDING/ OUTBUILDING



10.5A42.40 North Mill Pond Public View Corridors

All new buildings or structures located within 400' of the North Mill Pond shall be located in such a way as to maintain existing public views with a terminal vista of the North Mill Pond from the intersecting street of Dover Street, Cabot Street, Cornwall Street, and Langdon Street. Except for existing obstructions, the public view corridor shall be maintained for a minimum width of the existing public right-of-way of the nearest intersecting street as listed above.

10.5A46 Incentive Overlay Districts

The Incentive Overlay Districts are designated on Map 10.5A21B. In such areas, certain specified development standards may be modified as set forth in Section 10.5A46.10 below, if the development provides community space or workforce housing in accordance with Section 10.5A46.20, as applicable:

10.5A46.10 Incentives to Development Standards

DEVELOPMENT STANDARDS	INCENTIVES	
	North End Incentive Overlay District	West End Incentive Overlay District
Maximum building coverage	No Change	80%
Maximum building footprint	30,000 sf	30,000 sf[1,2]
Maximum building block length	No Change	No Change [3]
Minimum lot area	No Change	2,000 sf
Minimum lot area per dwelling unit	No Change	No minimum
Maximum building height	Plus 1 story up to 10 ft[~~2~~4]	Plus 1 story up to 10 ft[~~2,3~~4,5]
Minimum ground story height	No Change	9 feet
Minimum off-street parking	No Change	Non-residential: 25% reduction from underlying standard
Ground story parking	Permitted with a liner building[~~4~~ 5]	Permitted with a liner building[~~4~~ 5]

[1] In CD4-L1 and CD4-L2 the maximum building footprint shall be 3,500 SF. Where the building footprint exceeds 2,500 SF, individual building blocks shall be separated by open space, community space, or surface parking areas of at least 30 feet in width. Parking areas located between buildings are not required to be set back from the building façade.

[~~1~~2] For properties located within 200 feet of the North Mill Pond in the CD4-W District, the maximum building footprint shall be 20,000 sq. ft.

[~~-~~3] In CD4-L1 and CD4-L2 the maximum building block length shall be 100 feet.

[~~2~~4] In order to receive the building height incentive, the sidewalk width in front of any façade shall be at least 10 feet plus two feet for each story of building height above three stories. Any property area needed to comply with this requirement shall count as

open space as required in Figures 10.5A41.10A-D (Development Standards) and as community space; even if less than 15 feet in width.

~~35~~ For parcels over 80,000 sq. ft. in area that are located south of Islington Street, up to two stories or 20 feet may be added to the maximum building height provided both requirements listed under Section 10.5A46.22 (1) and (2) are met.

~~46~~ If ground story parking is proposed, at least 50% of the ground story facing a street shall include a liner building.

10.5A46.20 Requirements to Receive Incentives to the Development Standards

10.5A46.21 For a lot located adjacent to, or within 100 feet of, North Mill Pond, Hodgson Brook or the Piscataqua River, the development shall provide community space equal to 20% of the lot area that includes a continuous public greenway at least 20 feet in width with a multi-use path and that is parallel and located within 50 feet of the waterfront. Trail connections to abutting street(s) and sidewalks shall be provided and there shall be no buildings between the waterfront and the greenway unless otherwise approved by the Planning Board. The greenway shall include legal and physical access to abutting lots or public ways. When access is not available due to current conditions on an abutting lot, provisions shall be made for future access in a location determined by the Planning Board.

10.5A46.22 For a lot that is more than 100 feet from North Mill Pond, Hodgson Brook or the Piscataqua River, the development shall include either a community space or workforce housing as specified below:

(1) Community space option – All of the following criteria shall be met:

(a) The community space shall be a community space type that is permitted within the applicable Character district.
(b) The community space shall constitute at least 20% of the gross area of the lot and shall not have any dimension less than 15 feet.
(c) The community space shall adjoin the public sidewalk and shall be open on one or more sides to the sidewalk.
(d) The community space shall include trees and other landscaping to provide shade and reduce noise, and pedestrian amenities such as overlooks, benches, lighting and other street furniture.
(e) The community space shall be located on or adjacent to the same lot as the development, except as provided in (f) below.
(f) The Planning Board may grant a conditional use permit to allow a proposed community space to be located on a different lot than the development if it finds that all of the following criteria will be met:
    (i) An appropriate community space cannot feasibly be provided on the same lot as the development.

ORDINANCE #

THE CITY OF PORTSMOUTH ORDAINS

That the Ordinances of the City of Portsmouth, Chapter 10 – Zoning Ordinance, be amended as follows**:**

A. Amend Article 5A Character-Based Zoning – Figure 10.5A41.10A Development Standards, as follows:

(1) Amend the table of building and facade types for Character District 4 – Limited (CD4-L1/CD4-L2) as follows (additions to existing language **bolded**; remaining language unchanged from existing):

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	permitted*
Duplex	permitted*
Rowhouse	permitted*
Apartment building	permitted*
Live/work building	permitted**
Small commercial building	CD4-L1: not permitted CD4-L2: permitted
Large commercial building	not permitted
Cottage	**not permitted**
Paired House	**permitted***
Gateway Townhouse	**not permitted**
Mixed-Use Building	**permitted****
Flex Space Building	**permitted**
Community Building	**permitted**

*Not permitted in the Downtown Overlay District

**Residential uses are not permitted on the ground floor in the Downtown Overlay District

FAÇADE TYPES

Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	permitted
Stoop	permitted*
Step	only permitted where indicated on Map 10.5A21C
Shopfront	CD4-L1: only permitted where indicated on Map 10.5A21C CD4-L2: permitted

Officefront	only permitted where indicated on Map 10.5A21C
Forecourt	permitted*
Recessed-entry	permitted
Dooryard	**permitted**
Terrace	**not permitted**
Gallery	**not permitted**
Arcade	**not permitted**

*Not permitted in the Downtown Overlay District

(3) Amend the table of building and facade types for Character District 4 – West End (CD4-W) as follows (additions to existing language **bolded**; remaining language unchanged from existing):

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	permitted
Apartment building	permitted
Live/work building	permitted*
Small commercial building	permitted
Large commercial building	permitted
Cottage	**not permitted**
Paired House	**not permitted**
Gateway Townhouse	**not permitted**
Mixed-Use Building	**permitted***
Flex Space Building	**permitted**
Community Building	**permitted**

*Residential uses are not permitted on the ground floor

FAÇADE TYPES

Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	**permitted**
Terrace	**not permitted**
Gallery	**permitted**

Arcade	**permitted**

(4) Amend the table of building and facade types for Character District 4 (CD4) as follows (additions to existing language **bolded**; remaining language unchanged from existing):

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	permitted*
Apartment building	permitted*
Live/work building	permitted**
Small commercial building	permitted
Large commercial building	permitted
Cottage	**not permitted**
Paired House	**not permitted**
Gateway Townhouses	**not permitted**
Mixed-Use Building	**permitted****
Flex Space Building	**permitted**
Community Building	**permitted**

*Not permitted in the Downtown Overlay District

**Residential uses are not permitted on the ground floor in the Downtown Overlay District

FAÇADE TYPES

Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	**permitted**
Terrace	**not permitted**
Gallery	**permitted**
Arcade	**permitted**

(5) Amend the table of building and facade types for Character District 5 (CD5) as follows (additions to existing language **bolded**; remaining language unchanged from existing):

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	not permitted
Apartment building	not permitted
Live/work building	permitted*
Small commercial building	permitted
Large commercial building	permitted
Cottage	**not permitted**
Paired House	**not permitted**
Gateway Townhouse	**not permitted**
Mixed-Use Building	**permitted***
Flex Space Building	**permitted**
Community Building	**permitted**

*Residential uses are not permitted on the ground floor in the Downtown Overlay District

FAÇADE TYPES

Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	**not permitted**
Terrace	**not permitted**
Gallery	**permitted**
Arcade	**permitted**

B. Amend Article 5A Character-Based Zoning – Figure 10.5A43.10 Façade Types, as follows:

(1) In the definition of Dooryard, add the following under permitted districts:

CD4-L1, CD4-L2, CD4-W, CD4. This façade type is not permitted in the Downtown Overlay District.

(2) In the definition of Terrace, add CD4-W to permitted districts.

(3) In the definition of Gallery, add CD4-W to permitted districts.

(4) In the definition of Arcade, add CD4-W, CD4, and CD5 to permitted districts.

C. Amend Article 5A Character-Based Zoning – Figure 10.5A43.60 Building Types, as follows:

(1) Amend the definition of Duplex as follows (additions to existing language **bolded**; remaining language unchanged from existing):

A residential building with two vertically-separated units with separate entrances. The building may have yards**/setbacks** on all sides, or it may be divided along the party wall by a lot line where permitted by the standards of the Character district.

(2) Amend the definition of Rowhouse as follows (deletions from existing language ~~striken~~; additions to existing language **bolded**; remaining language unchanged from existing):

A building that may occupy the full width of the lot and shares a party wall with one or more buildings of the same type, with a minimal ~~front yard~~ **yard/setback along the front of the lot or development site.**

(3) Amend the definition of Apartment Building as follows (additions to existing language **bolded**; remaining language unchanged from existing):

A building **designed for residential use** that has the appearance of a multifamily dwelling, with yards/**setbacks** on all sides.

(4) Amend the definition of Small Commercial Building as follows (deletions from existing language ~~striken~~; additions to existing language **bolded**; remaining language unchanged from existing):

A building **designed for non-residential use** with a shopfront or officefront façade type and minimal or no yard/setback along the front of the lot or development site ~~front yard~~, and that is no more than 3 stories in height.

(5) Amend the definition of Large Commercial Building as follows (deletions from existing language ~~striken~~; additions to existing language **bolded**; remaining language unchanged from existing):

A building with a shopfront or officefront façade type and minimal or no **yard/setback along the front of the lot or development site** ~~front yard~~, and that is 4 or more stories in height.

(6) Amend the definition of Paired House as follows (deletions from existing language ~~striken~~; additions to existing language **bolded**; remaining language unchanged from existing):

A ~~residential~~ building **designed for residential use** ~~type~~ with narrow massing and horizontally attached or semi-attached dwelling units generally perpendicular to the **front of the lot or development site** ~~front lot line~~. These buildings contain up to 3 dwelling units and are often designed to resemble large farmhouses with attached carriage houses.

Permitted districts: G1, G2, **CD4-L1, CD4-L2**
This building type is not permitted in the Downtown Overlay District.

(7) In the definition of Mixed Use Building, add CD4, CD4-W, and CD5.

(8) In the definition of Flex Space / Fabrication Building, add CD4-W.

(9) In the definition of Community Building, delete G1, G2 under permitted districts and add All Districts.

D. Amend Article 5A Character-Based Zoning – Figure 10.5A45.10 Community Spaces, as follows:

(1) Add Permitted Districts: All Districts to the definitions of all community space types except Outdoor Dining Café.

(2) Amend the definition of Wide Pedestrian Sidewalk by inserting “a minimum of 10’ in width unless otherwise defined by the Ordinance” after sidewalk in the first sentence.

(3) Amend the definition of Outdoor Dining Café as follows (deletions from existing language ~~striken~~; additions to existing language **bolded**; remaining language unchanged from existing):
An ~~O~~outdoor dining cafe~~s~~ community space ~~are~~ is permitted as an ancillary activity of a ~~any restaurant, pub, or other~~ food and drink establishment **where the principal use is otherwise allowed in the district.** ~~The operator of the outdoor dining cafe may be granted permission from the City for locations on the public sidewalk.~~ **The area must provide deeded public access to qualify as Community Space in the Character Districts.**

(4) Amend Permitted Districts for Outdoor Dining Café to include CD4-L2, CD4, CD4-W, CD-5.

(5) Amend the definition of Courtyard by inserting “a landscaped park” after “enclosed”.

The City Clerk shall properly alphabetize and/or re-number the ordinances as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

This ordinance shall take effect upon its passage.

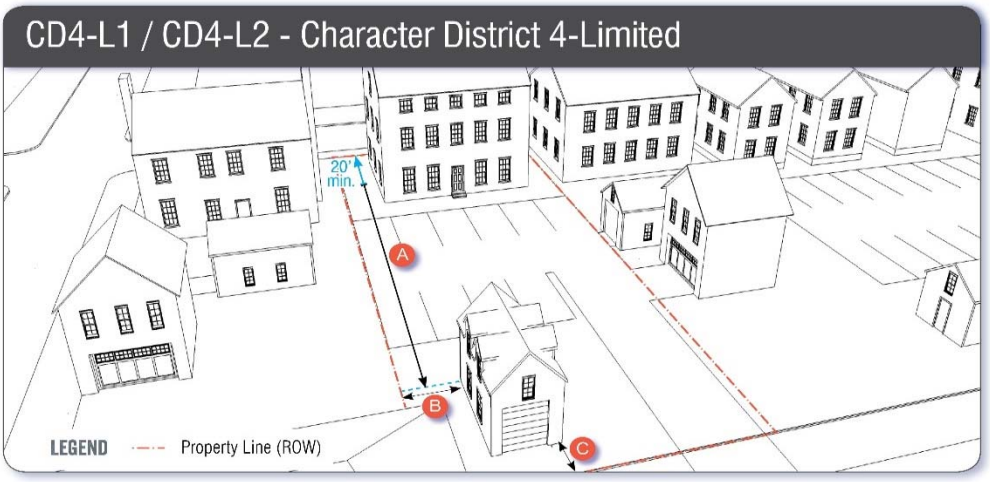
APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY COUNCIL:

_____
Kelli L. Barnaby, City Clerk

FIGURE 10.5A41.10A DEVELOPMENT STANDARDS CHARACTER DISTRICT 4—LIMITED (CD4-L1/CD4-L2)



BUILDING PLACEMENT — OUTBUILDING

Minimum front yard	20 ft behind a façade of a principal building (A)
Minimum side yard	3 ft (B)
Minimum rear yard	3 ft (C)

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	permitted*
Duplex	permitted*
Rowhouse	permitted*
Apartment building	permitted*
Live/work building	permitted**
Small commercial building	CD4-L1: not permitted CD4-L2: permitted
Large commercial building	not permitted
Cottage	not permitted
Paired House	permitted*
Gateway Townhouse	not permitted
Mixed-Use Building	permitted**
Flex Space Building	permitted
Community Building	Permitted

*Not permitted in the Downtown Overlay District
**Residential uses are not permitted on the ground floor in the Downtown Overlay District

BUILDING & LOT USE

See Sections 10.5A30 and 10.440

FAÇADE TYPES

See Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	permitted
Stoop	permitted*
Step	only permitted where indicated on Map 10.5A21C
Shopfront	CD4-L1: only permitted where indicated on Map 10.5A21C CD4-L2: permitted
Officefront	only permitted where indicated on Map 10.5A21C
Forecourt	permitted*
Recessed-entry	permitted
Dooryard	permitted
Terrace	not permitted
Gallery	not permitted
Arcade	not permitted

*Not permitted in the Downtown Overlay District

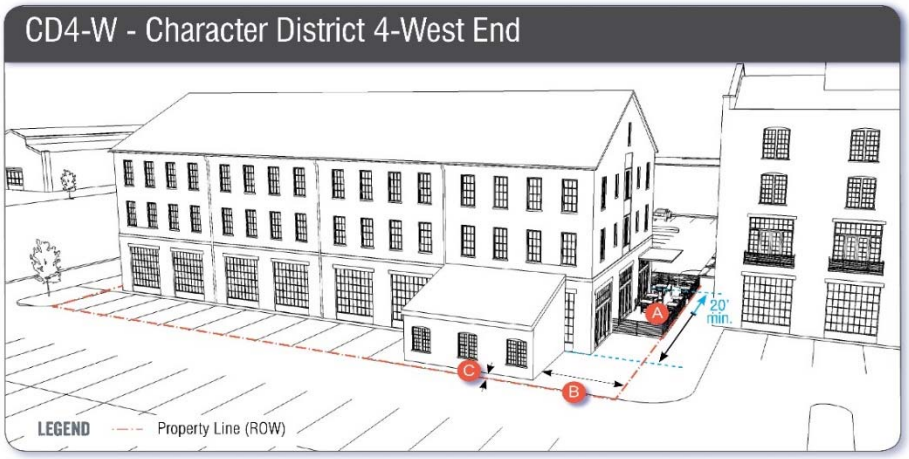
PARKING

See Section 10.5A44.30

COMMUNITY SPACE

See Section 10.5A45

FIGURE 10.5A41.10B DEVELOPMENT STANDARDS CHARACTER DISTRICT 4—WEST END (CD4-W)



BUILDING PLACEMENT — OUTBUILDING

Minimum front yard	20 ft behind a façade of a principal building (A)
Minimum side yard	0 ft (B)
Minimum rear yard	3 ft (C)

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	permitted
Apartment building	permitted
Live/work building	permitted*
Small commercial building	permitted
Large commercial building	permitted
Cottage	not permitted
Paired House	not permitted
Gateway Townhouses	not permitted
Mixed-Use Building	permitted*
Flex Space Building	permitted
Community Building	Permitted

*Residential uses are not permitted on the ground floor

BUILDING & LOT USE

See Sections 10.5A30 and 10.440

FAÇADE TYPES

See Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	permitted
Terrace	not permitted
Gallery	permitted
Arcade	permitted

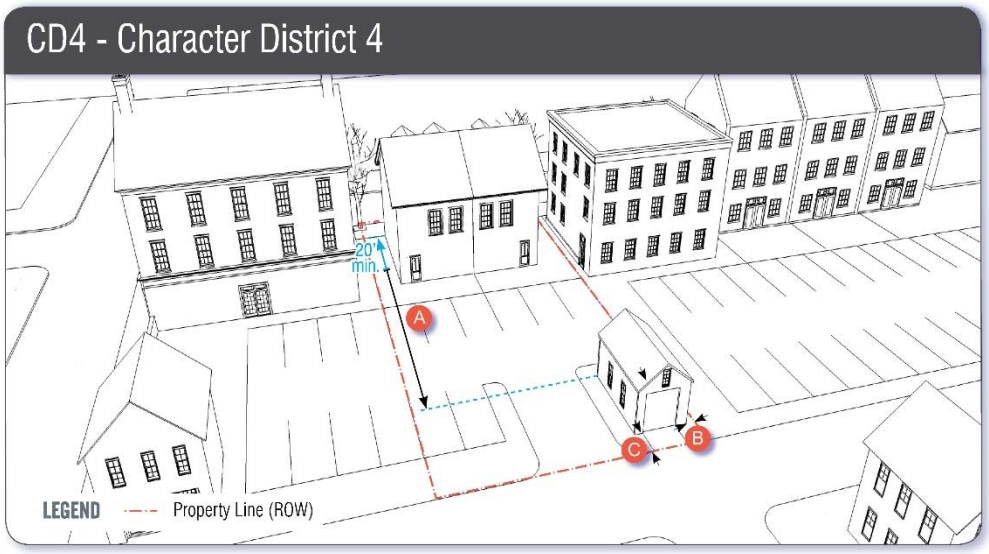
PARKING

See Section 10.5A44.30

COMMUNITY SPACE

See Section 10.5A45

FIGURE 10.5A41.10C DEVELOPMENT STANDARDS CHARACTER DISTRICT 4 (CD4)



BUILDING PLACEMENT – OUTBUILDING

Minimum front yard	20 ft behind a façade of a principal building (A)
Minimum side yard	0 ft (B)
Minimum rear yard	3 ft (C)

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	permitted*
Apartment building	permitted*
Live/work building	permitted**
Small commercial building	permitted
Large commercial building	permitted
Cottage	not permitted
Paired House	not permitted
Gateway Townhouses	not permitted
Mixed-Use Building	permitted**
Flex Space Building	permitted
Community Building	permitted

*Not permitted in the Downtown Overlay District
**Residential uses are not permitted on the ground floor in the Downtown Overlay District

BUILDING & LOT USE

See Sections 10.5A30 and 10.440

FAÇADE TYPES

See Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	permitted
Terrace	not permitted
Gallery	permitted
Arcade	permitted

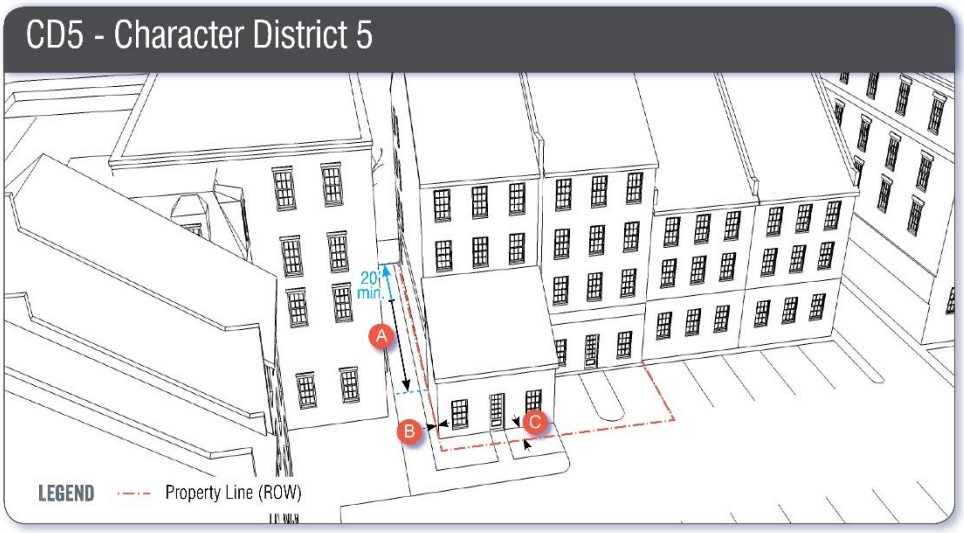
PARKING

See Section 10.5A44.30

COMMUNITY SPACE

See Section 10.5A45

FIGURE 10.5A41.10D DEVELOPMENT STANDARDS CHARACTER DISTRICT 5 (CD5)



BUILDING PLACEMENT – OUTBUILDING

Minimum front yard	20 ft behind a façade of a principal building (A)
Minimum side yard	0 ft (B)
Minimum rear yard	3 ft (C)

BUILDING TYPES

See Figure 10.5A43.60 for building type definitions	
House	not permitted
Duplex	not permitted
Rowhouse	not permitted
Apartment building	not permitted
Live/work building	permitted*
Small commercial building	permitted
Large commercial building	permitted
Cottage	not permitted
Paired House	not permitted
Gateway Townhouses	not permitted
Mixed-Use Building	permitted*
Flex Space Building	permitted
Community Building	permitted

*Residential uses are not permitted on the ground floor in the Downtown Overlay District

BUILDING & LOT USE

See Sections 10.5A30 and 10.440

FAÇADE TYPES

See Figure 10.5A43.10 for façade type definitions	
Except where required façade types are indicated on Map 10.5A21C, the below standards apply:	
Porch	not permitted
Stoop	permitted
Step	permitted
Shopfront	permitted
Officefront	permitted
Forecourt	not permitted
Recessed-entry	permitted
Dooryard	not permitted
Terrace	not permitted
Gallery	permitted
Arcade	permitted

PARKING

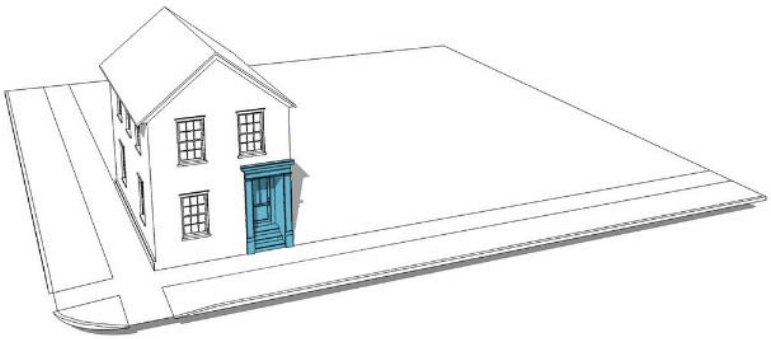
See Section 10.5A44.30

COMMUNITY SPACE

See Section 10.5A45

FIGURE 10.5A43.10 FAÇADE TYPES (CONTINUED)

Recessed-Entry



The façade is aligned close to the front lot line and the primary building entrance is recessed within the façade.

This type is conventional for residential use.

Permitted districts: CD4-L1, CD4-L2, CD4, CD4-W, CD5, G1, G2

Dooryard

The building facade is aligned close to the street line, and the frontage is defined by a low wall, decorative fence or hedge providing a strong spatial definition from the public sidewalk. The result is a small semi-private yard containing the principal entrance. The yard may be slightly raised, sunken, or at-grade, and may be planted or landscaped. A paved walkway from the sidewalk to the front door is required. This type is commonly associated with ground floor residential use.

Permitted districts: G1, G2, CD4-L1, CD4-L2, CD4-W, CD4.
This façade type is not permitted in the Downtown Overlay District.

FIGURE 10.5A43.10 FAÇADE TYPES (CONTINUED)

Terrace

Building facade is at or near the street line with an elevated terrace that may encroach into the front yard or setback providing level or terraced public circulation along the façade. This type can be used to provide at-grade access while accommodating a grade change along a street line. Frequent steps up to the terrace are necessary to avide dead walls and maximize access. This type is required to be used in conjunction with other facade types to define individual or shared entries facing the street.

Permitted districts: G1, G2, CD4-W

Gallery

The building facade is set back from the street line with an attached one or two story cantilevered shed or a lightweight colonnade that is built to the street line. This type is intended for buildings with ground floor commercial, hospitality or retail uses. This facade type is required to be used in conjunction with other types to define individual or shared first floor entries facing the street.

Permitted districts: G1, G2, CD4-W

FIGURE 10.5A43.10 FAÇADE TYPES (CONTINUED)

Arcade

Only the ground floor level of the building facade is set back from the street line. The building facade for the upper floors is at the street line and is supported by a colonnade with habitable space above. This façade type is intended for buildings with ground floor commercial, hospitality or retail uses. This type is required to be used in conjunction with other facade types to define individual or shared first floor entries facing the street.

Permitted districts: G1, G2, CD4-W, CD4, CD5

FIGURE 10.5A43.60 BUILDING TYPES

House

A residential building that has the appearance of a single-family dwelling, with yards on all sides.

Permitted districts:
CD4-L1, CD4-L2
This building type is not permitted in the Downtown Overlay District.

Duplex

A residential building with two vertically-separated units with separate entrances. The building may have yards/setbacks on all sides, or it may be divided along the party wall by a lot line where permitted by the standards of the Character district.

Permitted districts:
CD4-L1, CD4-L2
This building type is not permitted in the Downtown Overlay District.

Rowhouse

A building that may occupy the full width of the lot and shares a party wall with one or more buildings of the same type, with a minimal ~~front yard~~ yard/setback along the front of the lot or development site.

Permitted districts:
CD4, CD4-W, CD4-L1, CD4-L2
This building type is not permitted in the Downtown Overlay District.

FIGURE 10.5A43.60 BUILDING TYPES (CONTINUED)

Apartment Building

A building designed for residential use that has the appearance of a multifamily dwelling, with yards/setbacks on all sides.

Permitted districts:
CD4, CD4-W, CD4-L1, CD4-L2, G1, G2
This building type is not permitted in the Downtown Overlay District.

Live / Work Building

A building designed to accommodate a ground floor commercial use and a residential use above or beside.

Permitted districts:
CD5, CD4, CD4-W, CD4-L1, CD4-L2, G1, G2
Residential uses are not permitted on the ground floor in the Downtown Overlay District.

Small Commercial Building

A building designed for non-residential use with a shopfront or officefront façade type and minimal or no yard/setback along the front of the lot or development site~~front yard~~, and that is no more than 3 stories in height.

FIGURE 10.5A43.60 BUILDING TYPES (CONTINUED)

Large Commercial Building

A building with a shopfront or officefront façade type and minimal or no yard/setback along the front of the lot or development site~~front yard~~, and that is 4 or more stories in height.

Permitted districts:
CD5, CD4, CD4-W, G1, G2

Cottage

A small detached single family dwelling with narrow massing.

Permitted districts: G1, G2

Paired House

A ~~residential~~ building designed for residential use~~type~~ with narrow massing and horizontally attached or semi-attached dwelling units generally perpendicular to the front of the lot or development site~~front lot line~~. These buildings contain up to 3 dwelling units and are often designed to resemble large farmhouses with attached carriage houses.

Permitted districts: G1, G2, CD4-L1, CD4-L2
This building type is not permitted in the Downtown Overlay District.

FIGURE 10.5A43.60 BUILDING TYPES (CONTINUED)

Gateway Townhouse

These small footprint attached single family residential buildings have narrow massing and may be located on individual or common lots. Each unit is separated horizontally by a common wall and groups of buildings may be separated by a common driveway or community space.

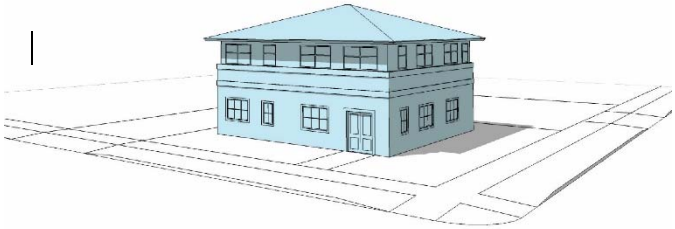
Permitted districts: G1, G2

Mixed Use Building

A variable footprint building type that typically accommodates a variety of ground floor commercial uses and upper residential and office uses at the scale that compliments the historic character of the neighborhood.

Permitted districts: G1, G2, CD4, CD4-W, CD5

Flex Space / Fabrication Building

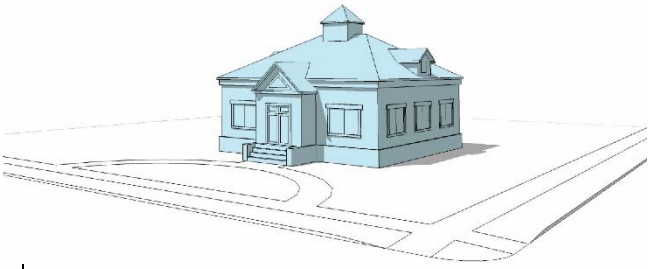


A building located and designed to accommodate a small footprint for fabrication and light industrial uses. Flex buildings are also used to provide affordable space to small and creative business enterprises.

Permitted districts: G1, G2, CD-4W

FIGURE 10.5A43.60 BUILDING TYPES (CONTINUED)

Community Building



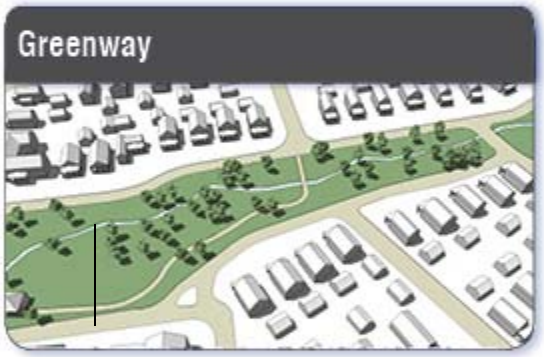
A building located and designed to accommodate public or civic uses such as a neighborhood center and similar public gathering facilities and spaces. Community Buildings may be privately owned and operated as an accessory building and amenity for a residential and mixed use developments.

Permitted districts: ~~G1,~~ ~~G2~~All Districts

FIGURE 10.5A45.10 COMMUNITY SPACES

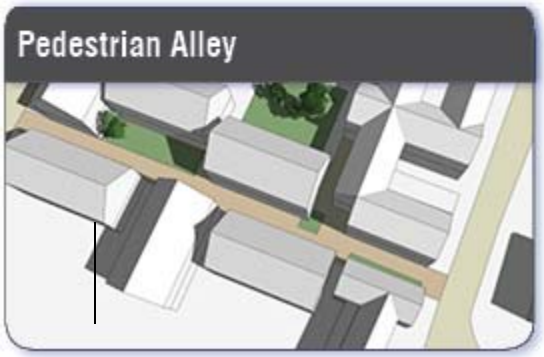
An area of natural, semi-natural, or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats. A park may consist of grassy areas, trees and other natural or planted landscape features, and may also contain walking paths and trails, monuments, fountains, playground equipment, benches, picnic tables and similar amenities.

Permitted Districts: All Districts



A linear community space that may follow natural corridors providing unstructured and limited amounts of structured recreation. A greenway may be spatially defined by landscaping rather than buildings. Its landscape shall consist of paths and trails, waterbodies, and trees, naturalistically disposed.

Permitted Districts: All Districts



A paved/brick pedestrian connector between buildings. Pedestrian alleys provide shortcuts through long blocks and connect community spaces and parking areas with streets. Pedestrian alleys may be covered by a roof and/or lined by shopfronts. The minimum width shall be 15 feet.

Permitted Districts: All Districts

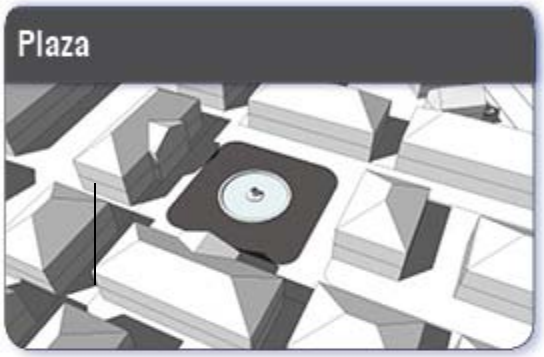
A wide pedestrian sidewalk (a minimum of 10' in width unless otherwise defined by the Ordinance) located between the building façade and the public right of way. Wide pedestrian sidewalks provide space between the façade and the curbline for comfortable pedestrian movement, street trees and street furniture.

Permitted Districts: All Districts

FIGURE 10.5A45.10 COMMUNITY SPACES (CONTINUED)

A community space available for unstructured recreation and community purposes. A square is spatially defined by buildings. Its landscape shall consist of paths, ground cover and trees, formally disposed. Squares shall be located at the intersection of important streets. The minimum size shall be 1/8 acre.

Permitted Districts: All Districts



A community space available for community purposes and commercial activities. A plaza should be spatially defined by buildings. Its landscape should consist primarily of pavement. Trees are optional. Plazas should be located at the intersection of important streets. The minimum size shall be 1/8 acre.

Permitted Districts: All Districts

A community space available for informal activities in close proximity to neighborhood residences. A pocket park is spatially defined by buildings. Its landscape shall consist of paths, lawns and trees, formally disposed. The minimum size shall be 500 sq. ft.

Permitted Districts: All Districts

A community space designed and equipped for the recreation of children. A playground should be fenced and may include an open shelter. Playgrounds shall be interspersed within residential areas and may be placed within a block. Playgrounds may be included within parks and greens. The minimum size shall be 500 sq. ft.

Permitted Districts: All Districts

FIGURE 10.5A45.10 COMMUNITY SPACES (CONTINUED)

Recreation Field or Court

A publicly accessible open space designed and equipped for active recreation and organized sports. Playing fields and courts may include grass, artificial turf, clay, dirt, stone dust, concrete, asphalt, ice or other pervious or impervious materials to support various sporting events.

Permitted districts: ~~G1, G2~~All Districts

Common or Green

A space for active and passive recreation and gathering purposes. A common or green is a free-standing site with thoroughfares on all sides and landscape consisting of naturally disposed lawns, paths, and trees.

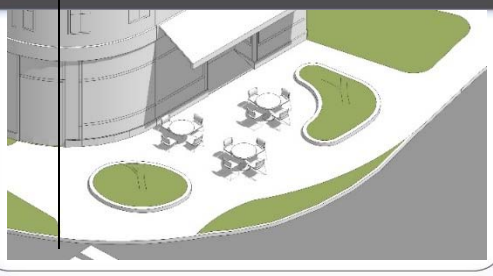
Permitted districts: ~~G1, G2~~All Districts

Community Garden or Farm

A space designed as individual garden plots available to residents for urban agriculture purposes, including storage facilities for necessary equipment. Community gardens may be freestanding or incorporated as a subordinate feature of a community park, neighborhood park, or pocket park.

Permitted districts: ~~G1, G2~~All Districts

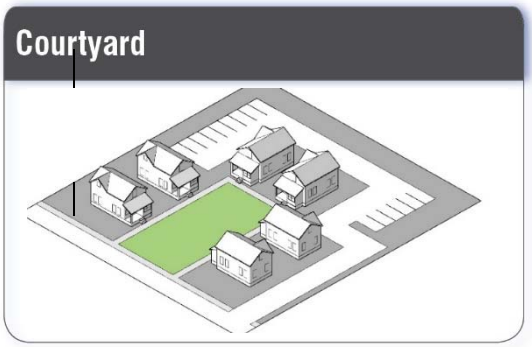
Outdoor Dining Cafe



An ~~O~~outdoor dining cafe~~s~~ community space ~~are~~ is permitted as an ancillary activity of a~~ny restaurant, pub, or other~~ food and drink establishment where the principal use is otherwise allowed in the district. ~~The operator of the outdoor dining cafe may be granted permission from the City for locations on the public sidewalk.~~ The area must provide deeded public access to qualify as Community Space in the Character Districts.

Permitted districts: G1, G2, CD4-L2, CD4, CD4-W, CD-5.

FIGURE 10.5A45.10 COMMUNITY SPACES (CONTINUED)



A courtyard or court is an enclosed and landscaped park area, often surrounded by a building or complex that is open to the sky.

Permitted districts: ~~G1, G2~~All Districts

ORDINANCE #

THE CITY OF PORTSMOUTH ORDAINS

That Chapter 7, VEHICLES, TRAFFIC and PARKING of the ordinances of the City of Portsmouth be amended as follows by deletions from existing language stricken and highlighted in **red**; additions to existing language bolded and highlighted in **red**, remaining language unchanged from existing:

[Explanatory note not part of ordinance. The following amendments to the parking ordinance were either implemented by the Parking and Traffic Safety Committee on a trial basis last year or are part of ongoing improvements to the parking ordinance and are forwarded to the City Council for approval. Each ordinance change is shown on diagrams attached hereto.]

A. Amend: Chapter 7, Article I – PARKING METERS, Section 7.105: Parking

Section 7.105: PARKING:

A. When any vehicle shall be parked in a parking meter zone the owner or operator of said vehicle shall park within the area designated by the curb or street marking lines as indicated for parallel or diagonal parking and upon entering said parking space shall immediately deposit in said meter the required meter fee or purchase the time requested through a central meter, in vehicle meter, coupon or other metering device including mobile phone applications, and display proof of purchase on the vehicle's interior dashboard, or other approved means of display, including meter devices defined in Section 7.101. It shall be unlawful for any person parking any vehicle or permitting any vehicle registered in his name to be parked within any designated area where parking meters are installed, to fail or neglect to pay for parking as required. Said parking space may then be used by such vehicle during the legal parking limit provided by the Ordinance of the City and said vehicle shall be considered as unlawfully parking if it remains in said space beyond the legal parking limit and/or when said parking meter displays a signal showing such illegal parking. **A vehicle shall also be considered as unlawfully parking if said vehicle fails to move at least 500 feet from the original parking space after the legal parking limit has expired**. It shall be unlawful for any person to cause or permit any vehicle registered in his name to be parked unlawfully as set out in this section.

B. Amend: Chapter 7, Article I – PARKING METERS, Section 7.106: Unlawful Extension

Section 7.106: UNLAWFUL EXTENSION

It shall be unlawful for any person to deposit or cause to be deposited in a parking meter

~~one or more twenty-five ($.25) cent coins and/or~~ **any additional** ~~combination~~ **payment** for the purpose of extending the parking time beyond the maximum time fixed by the Ordinances of the City of Portsmouth

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C. Amend: Chapter 7, Article III – TRAFFIC ORDINANCE, Section 7.326: Limited Parking – Fifteen Minutes

Section 7.326: LIMITED PARKING – FIFTEEN MINUTES:

A. No person having control or custody of any vehicle shall cause the same to stop or park for longer than 15 minutes at any time between 9:00 a.m. and 8:00 p.m., Monday through Saturday, and between 12:00 p.m. and 8:00 p.m. Sunday, Holidays not included, on the following streets and locations:

5. Deer Street: One space on the northerly side of the street, beginning 13 feet west of the extension of the westerly curbline of High Street, and running 20 feet in an easterly direction.

D. Amend: Chapter 7, Article III – TRAFFIC ORDINANCE, Section 7.330: No Parking

Section 7.330: NO PARKING:

A. Unless otherwise designated by ordinance, parking shall be prohibited at all times in the following described streets and locations:

3. ~~Alumni Drive~~ **Andrew Jarvis Drive**: southerly side.

35. Dennett Street:
a. northerly side, ~~from Maplewood Avenue to Myrtle Avenue~~ **beginning at the westerly pavement edge of Hunters Hill Avenue and running 60 feet in a westerly direction.**
b. both sides from Myrtle to Maplewood Avenue.

67. Langdon Street:
a. easterly side from McDonough Street to Islington Street.
b. entire westerly side, north of McDonough Street.

77. Mechanic Street:
a. southerly side, from Marcy Street to the Peirce Island Bridge
b. northerly side of Marcy Street to the Peirce Island bridge between the hours of 11 P.M. to 6 A.M.
c. westerly side, from Peirce Island Road to ~~a point 86 feet north of~~ Gates Street.

d. easterly side, beginning at the extension of the northerly curbline of Gates Street and running a distance of 27 feet in a northerly direction.
e. westerly side, between Gardner Street and Hunking Street.

104. Raynes Avenue, southerly side, beginning at a point 192 feet east of the easterly curbline of Maplewood Avenue and running easterly to the end of Raynes Avenue.

126. Thaxter Road, both northerly and southerly sides, beginning at the easterly curbline of Islington Street and running easterly for a distance of 60 feet.

127. Vaughan Street:

a. northerly side of Vaughan Street**, beginning 303 feet west of the easterly curbline of Green Street, running 20 feet in a westerly direction.** ~~from the northwest corner of the building at 299 Vaughan Street easterly 20 feet.~~

b. southerly side of Vaughan Street, beginning 345 feet west of the extension of the easterly curbline of Green Street, running westerly to the end of Vaughn Street.

c. northerly side of Vaughan Street, beginning 150 feet east of the easterly curbline of Maplewood Avenue, running 44 feet in an easterly direction along the curve of Vaughan Street.

129. Washington Street:

a. westerly side, from State Street to a point ~~300~~ **340** feet south of the intersection of Court Street.

B. No Parking - School Zones

Parking shall be prohibited within the following areas:

~~l. Austin Street: both northerly and southerly sides beginning at the intersection of Winter Street and proceeding in a general easterly direction a distance of approximately 176 feet, between the hours of 7:00 a.m. – 4:00 p.m. on days when school is in session.~~

E. Amend: Chapter 7, Article III – TRAFFIC ORDINANCE, Section 7.346: No Through Traffic

Section 7.346: NO THROUGH TRAFFIC:

No person shall operate any vehicle on the following streets or ways unless that vehicle has a point of origin or a point of destination on that street or way, except that emergency vehicles may operate in emergency situations during the necessary performance of public duties:

~~1. Austin Street, between Winter Street and Summer Street, during the hours of 7:30 a.m. to 3:30 p.m. when school is in session;~~

F. **Amend:** Chapter 7, Article IV – OFF STREET PARKING AREAS, Section 7.402: Areas Established, Designated, and Described

Section 7.402: AREAS ESTABLISHED, DESIGNATED, AND DESCRIBED:

A. Bridge Street Off-Street Parking Area

The following area, to be known as the Bridge Street Off-Street Parking Area, is hereby established for the off-street parking of motor vehicles. Said area is more particularly bounded and described as follows:

Beginning at a point at the intersection of ~~the new~~ Maplewood Avenue~~, so-called,~~ and Islington Street, thence running in a generally northerly direction along said Maplewood Avenue to the intersection of Hanover Street; thence turning at a right angle and running in a westerly direction along said Hanover Street to Bridge Street; thence turning at a right angle and running in a generally southerly direction along said Bridge Street to the intersection of Islington Street; thence turning at a right angle and running in a generally easterly direction along said Islington Street to point of beginning.

All of said area in the Bridge Street Off-Street Parking Lot is designated as a parking meter zone. All off-street area within the Bridge Street Off-Street Parking Lot is hereby designated as a ~~two~~**four**-hour parking zone ~~except as follows~~:

~~1. All spaces located anywhere in the lot westerly of the 15th space on the Bridge Street side of the lot, counted from Islington Street which shall be designated and marked "four hour maximum parking limit."~~

G. **Amend:** Chapter 7, Article IVA – BUS STOPS~~,~~ **AND** TAXICAB STANDS ~~& HORSE DRAWN CARRIAGES~~, Section 7A.405: School Bus Loading/Unloading Zone

~~**Section 7A.405: SCHOOL BUS LOADING/UNLOADING ZONE:**~~

~~A. Marcy Street: In front of Children's Museum from 9:30 a.m. to 1:00 p.m. Monday through Friday only.~~

H. **Amend:** Chapter 7, Article IVA – BUS STOPS~~,~~ **AND** TAXICAB STANDS ~~& HORSE DRAWN CARRIAGES~~, Section 7A.406: Horse Drawn Carriages

~~**Section 7A.406: HORSE DRAWN CARRIAGES**~~

~~There is hereby established an area comprised of two parking spaces on the westerly side of Pleasant Street directly adjacent to Congress Street to be marked "Reserved for Horse and Carriage", Monday through Friday, 6 p.m. to 10 p.m., Saturday and Sunday, 12 p.m. to 10 p.m. In addition to any other penalty provided by law, vehicles parking in that location in contravention of this limitation shall be subject to towing by the City with the costs to be borne by the owner of the vehicle.~~

I. **Amend:** Chapter 7, Article X – TOWING, Section 7.1001: Tow Zones

Section 7.1001: TOW ZONES

A. The following areas are designated as tow zones:

l. ~~Alumni~~ **Andrew Jarvis** Drive (southerly side)

J. **Amend:** Chapter 7, Article X – TOWING, Section 7.1004: Towing Or Immobilization Of Motor Vehicles For Non-Payment Of Parking Fines

Section 7.1004: TOWING OR IMMOBILIZATION OF MOTOR VEHICLES FOR NON-PAYMENT OF PARKING FINES

3. ILLEGALLY PARKED: The term "illegally parked" as used in this particular section and all other sections concerning PARKING in the Ordinances of the City of Portsmouth shall mean:

Any motor vehicle which is parked beyond the time limit for which money has been deposited in the metered space occupied by that particular motor vehicle, any vehicle parked beyond the time limit permitted in a restricted time free parking area, any vehicle parked beyond the time permitted at a restricted time-metered parking space, any vehicle parked in a designated no-parking zone, and any vehicle although legally parked, which on that particular date and time, has accumulated five or more unpaid parking violations or which has accumulated unpaid parking violations in an amount in excess of $~~75~~ **one hundred twenty-five dollars ($125.00)** on any or all vehicles at any time registered to the owner of said vehicle as shown on the records maintained by the Parking Clerk.

4. NOTICE: At any time subsequent to the accumulation of unpaid parking fines in excess of one hundred twenty-five dollars ($125.00) on any or all vehicles at the time registered to the owner of any vehicle on the records maintained by the Parking Clerk, the Parking Clerk may send a Notice by certified mail to the registered owner of said vehicle or vehicles at the address on the registration.

6. TOW OR IMMOBILIZATION LIST: The Parking Clerk shall maintain a list of vehicles which are subject to being towed and held in storage or immobilized by a mechanical device pending final resolution of unpaid parking violations. Contained on this list shall be all motor vehicles for which the notice specified in Article ~~D~~ **4** above was provided. Motor Vehicles shall not be placed on the said list in the event that the Parking Clerk, after hearing, orders otherwise, or in the event that the fine is paid in full for all of the violations contained in the notice mailed.

7. TOWING/STORAGE OR IMMOBILIZATION: Upon the determination that any vehicle which is listed on the Tow or Immobilization List pursuant to Article ~~E~~ **6** above is parked on any public way or in any municipal parking lot, the car may be immobilized or may be towed and stored.

8. RELEASE OF TOWED OR IMMOBILIZED VEHICLES; REMOVAL FROM LIST: Motor Vehicles may be removed from the Tow or Immobilization List, released from storage after towing or may have immobilization devices removed in the following manner:

(1) By order of the Parking Clerk after hearing;

(2) By payment in full of all parking fines attributable, arising out of the violations contained in the notice issued pursuant to Article ~~D~~ **4** above;

(3) By posting a cash bond with the Parking Clerk in any amount sufficient to make payment in full of all parking fines arising out of the violations contained in the notice issued pursuant to Article ~~D~~ **4** above to allow a judicial determination of the violations pursuant to State law;

K. Amend: Chapter 7, Article XVIII – ELECTRIC VEHICLE CHARGING STATIONS AND ELECTRIC VEHICLE PARKING SPACES REGULATIONS, Section 7.1801 – 7.1804

ARTICLE XVIII: ELECTRIC VEHICLE CHARGING STATION AND ELECTRIC VEHICLE PARKING SPACES REGULATIONS

Section 7.1801: DEFINITION

"Electric Vehicle" shall mean a vehicle which uses one or more electric motors for propulsion.
"Electric Vehicle Charging Station" shall mean infrastructure that supplies electric energy for recharging Electric Vehicles.
"Electric Vehicle Charging Station Parking Space" shall mean parking spaces adjacent to Electric Vehicle Charging Stations that are signed as designated for the exclusive use of Actively Charging Electric Vehicles.

Section 7.1802 LOCATION OF ELECTRIC CHARGING STATIONS AND ELECTRIC CHARGING STATION PARKING SPACES

Electric Vehicle Charging Stations will be located in the High Hanover Parking Garage, the Foundry Parking Garage and the City Hall Lower Lot. Signage for Electric Vehicle Charging

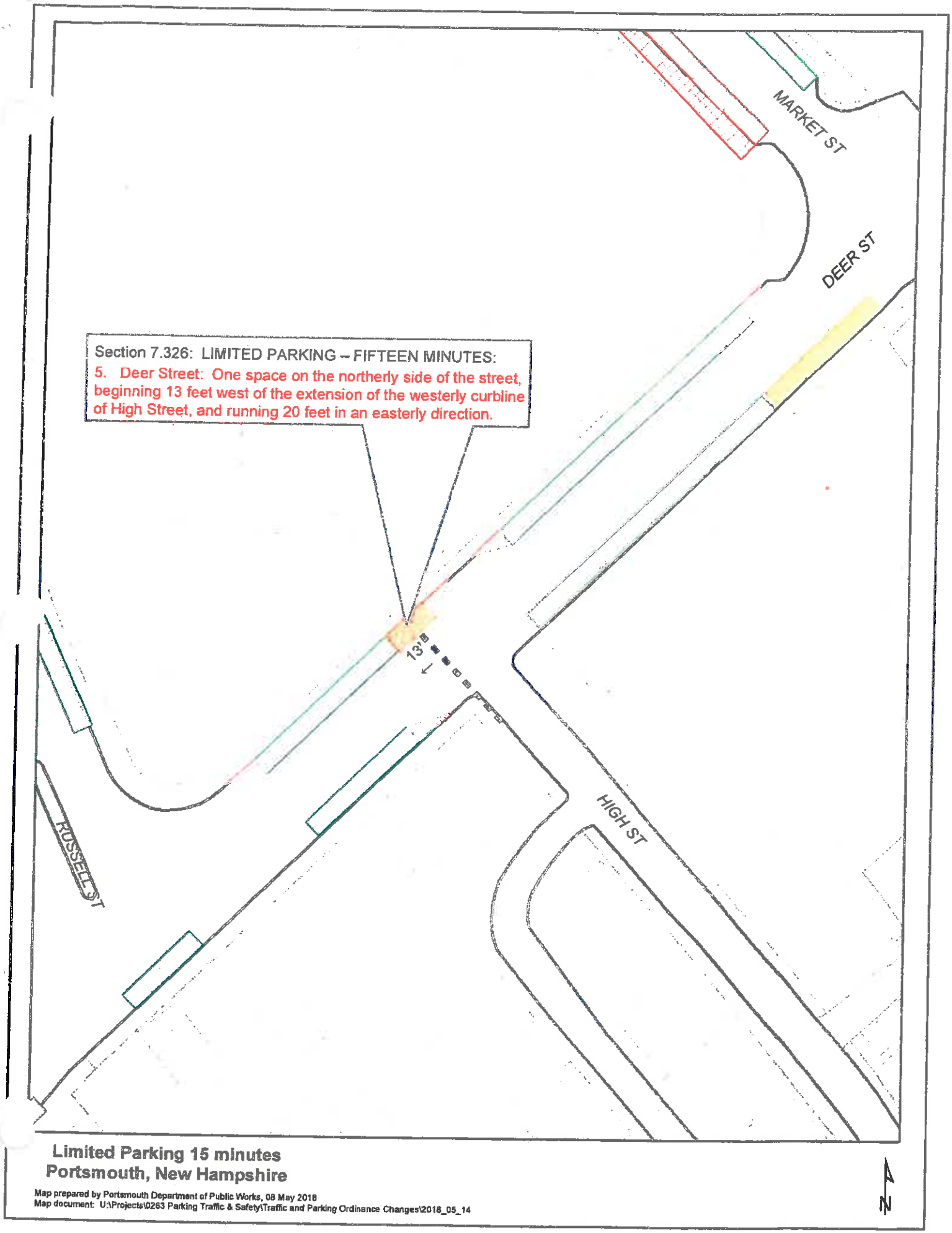
stations will be highly visible in color and use similar markings as No Parking, No Standing, and Loading Zone signage.

Section 7.1803 USE OF ELECTRIC CHARGING STATIONS AND ELECTRIC CHARGING STATION PARKING SPACES

A person with an Electric Vehicle may use an Electric Vehicle Charging Stations. ~~when the Electric Vehicle is actively charging for a period of time not to exceed 4 hours while parked in an Electric Vehicle Charging Station Parking Space.~~ The cost of electricity will be a component of the parking fees charged and those components may change to reflect priorities and programs that encourage Electric Vehicle adoption. These parking fees associated with charging will be paid using mobile device technology. These parking fees shall be established by City's Fee Committee. No Electric Vehicle that is not actively charging will remain at an Electric Vehicle Charging Station Parking Space for more than thirty minutes.

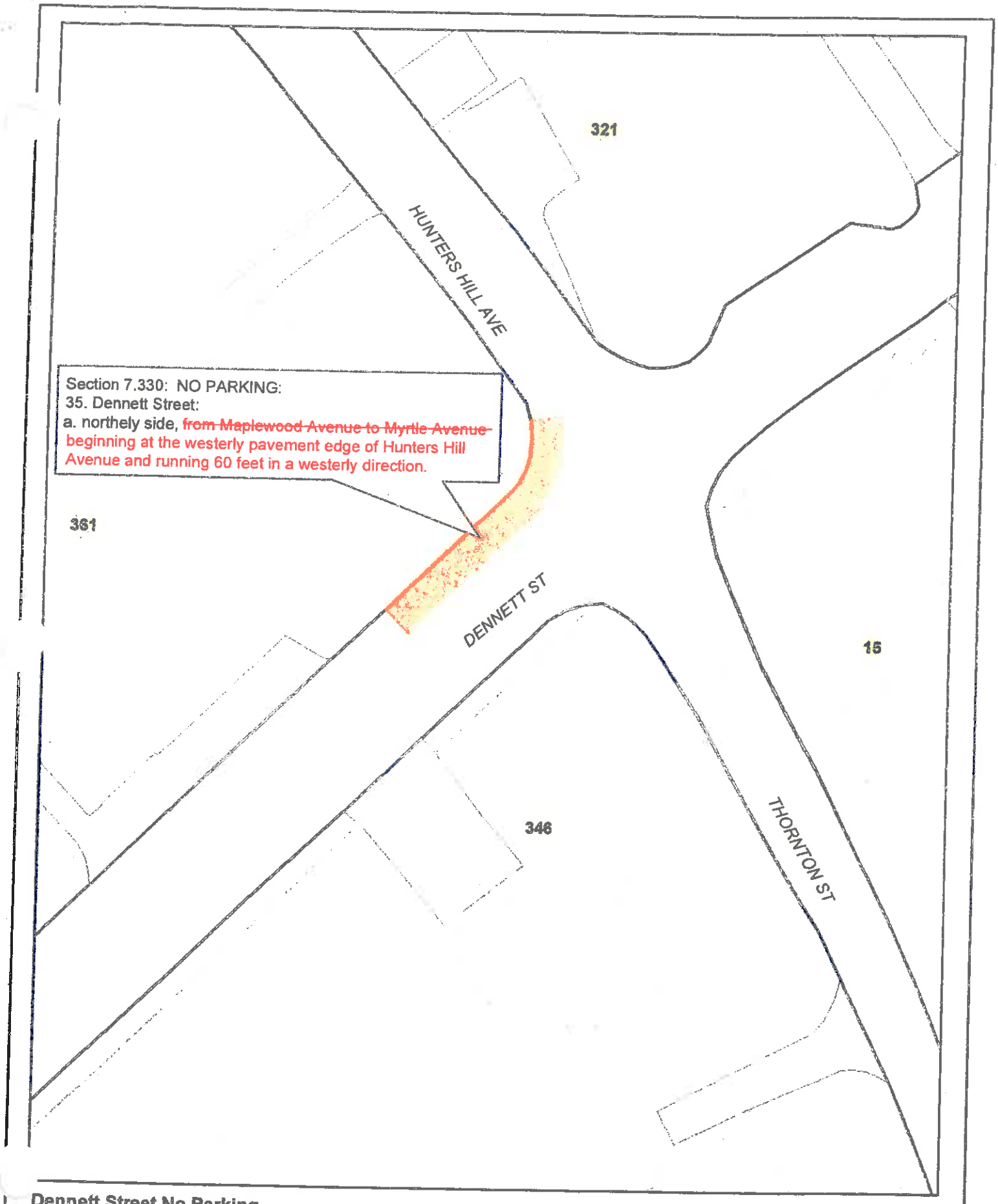
Section 7.1804 PENALTY

Any person who violates the provisions of Article XVIII shall be guilty of a violation and subject to a fine of $25. The Chief of Police or the Department of Public Works shall be authorized to remove, cause to be removed, or to be towed to a garage, any vehicle found in violation of the above named Article, said towing and removing to be at the owner's expense.



Limited Parking 15 minutes
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_14



Dennett Street No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_14

0 10 20 40 Feet

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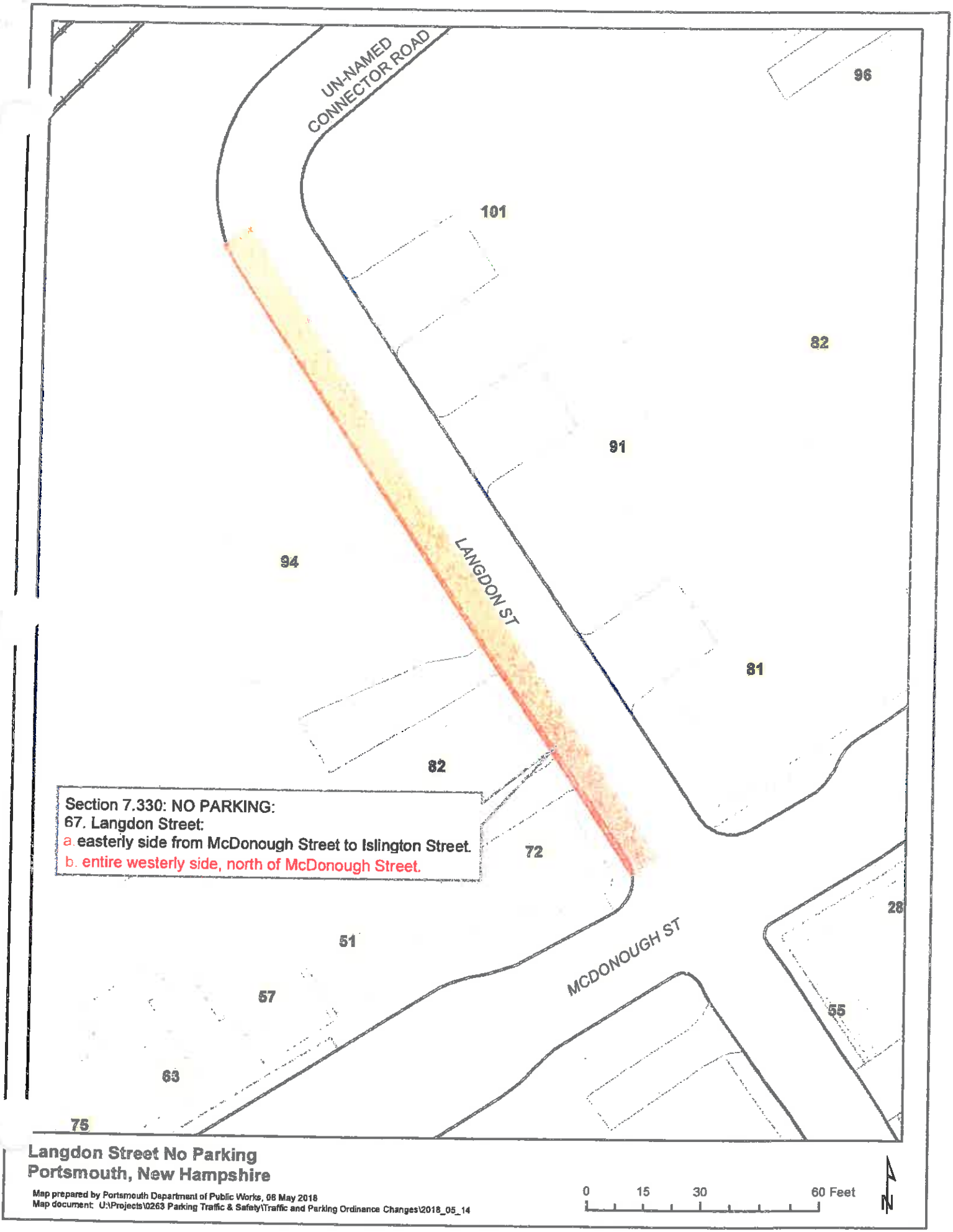
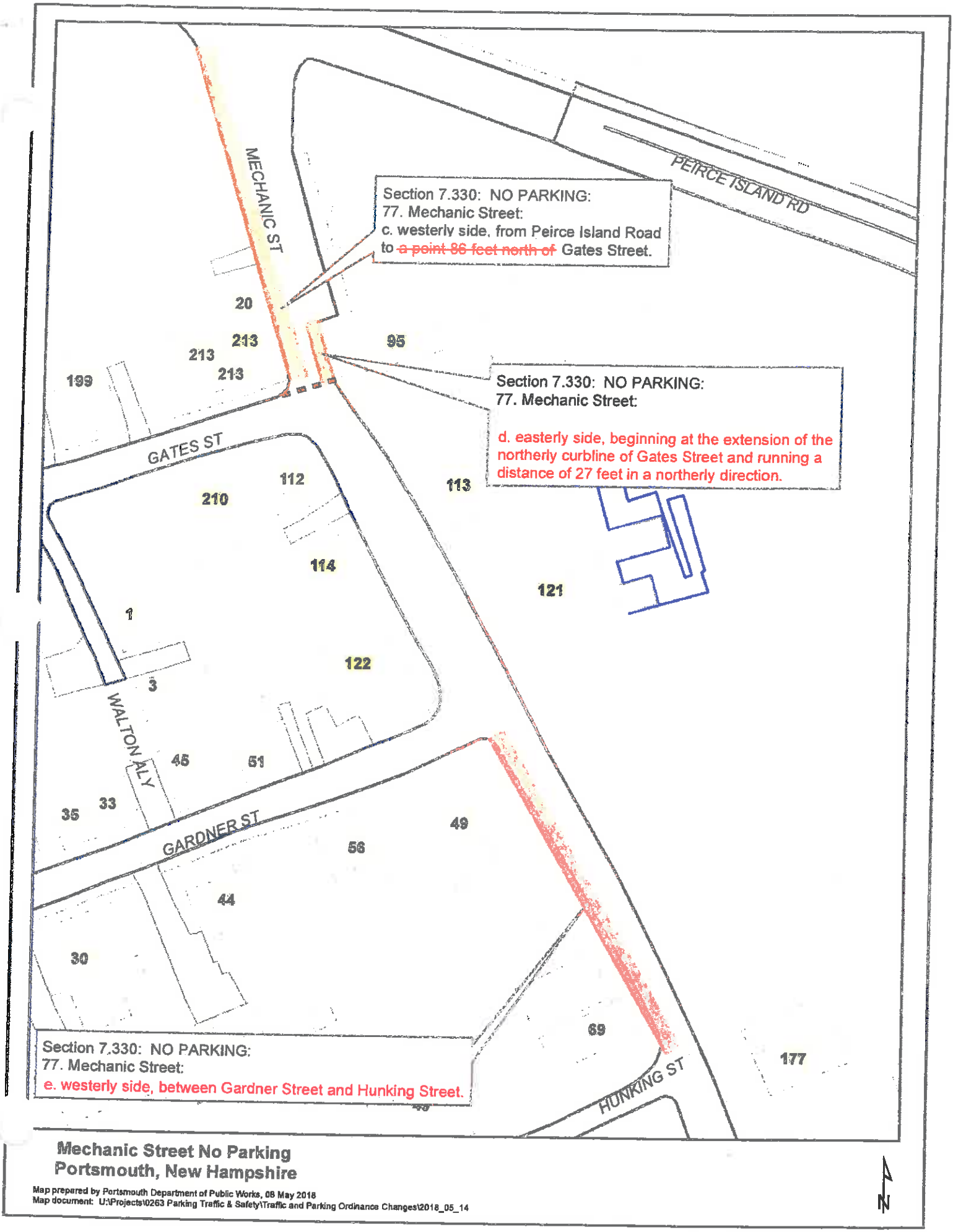


Langdon Street No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_14

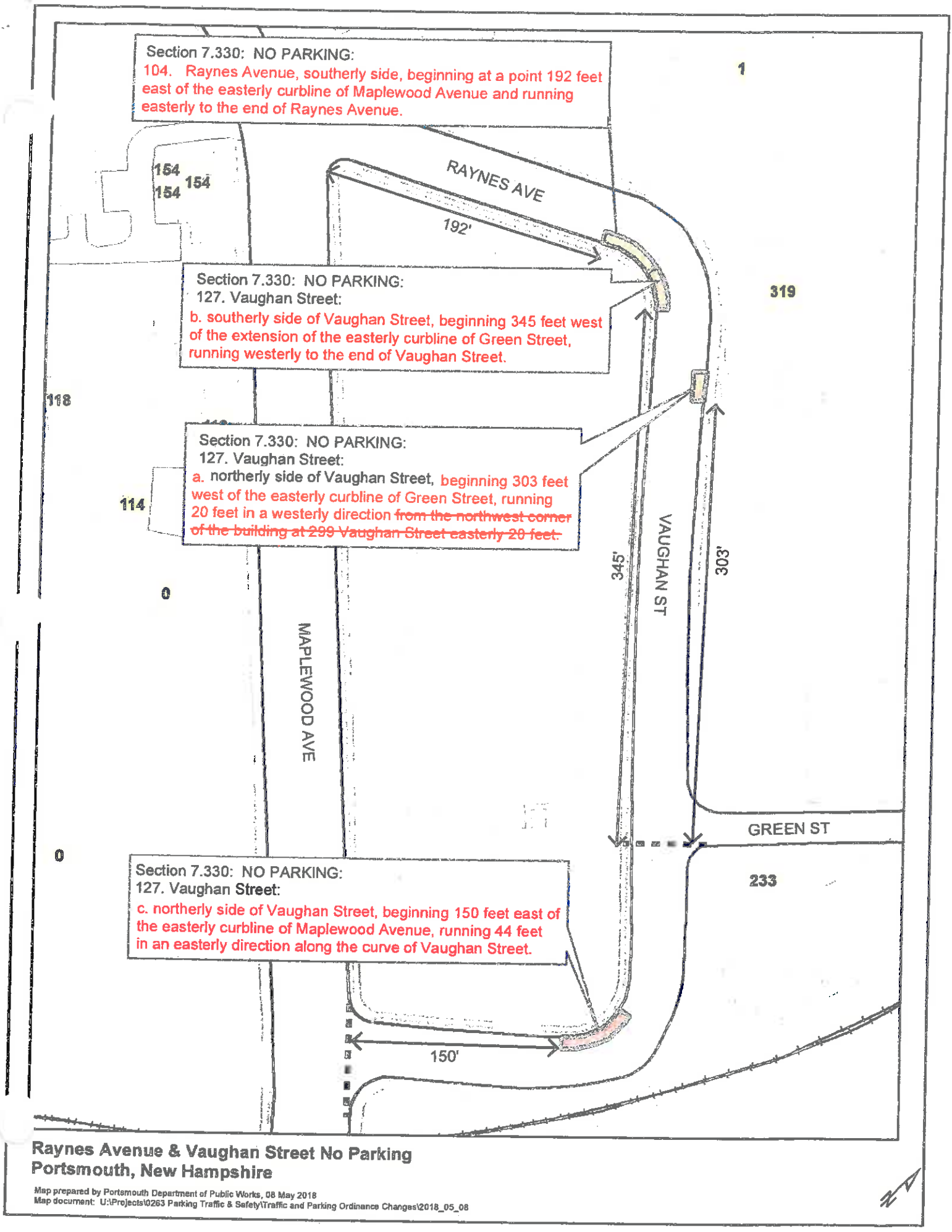
0 15 30 60 Feet

N



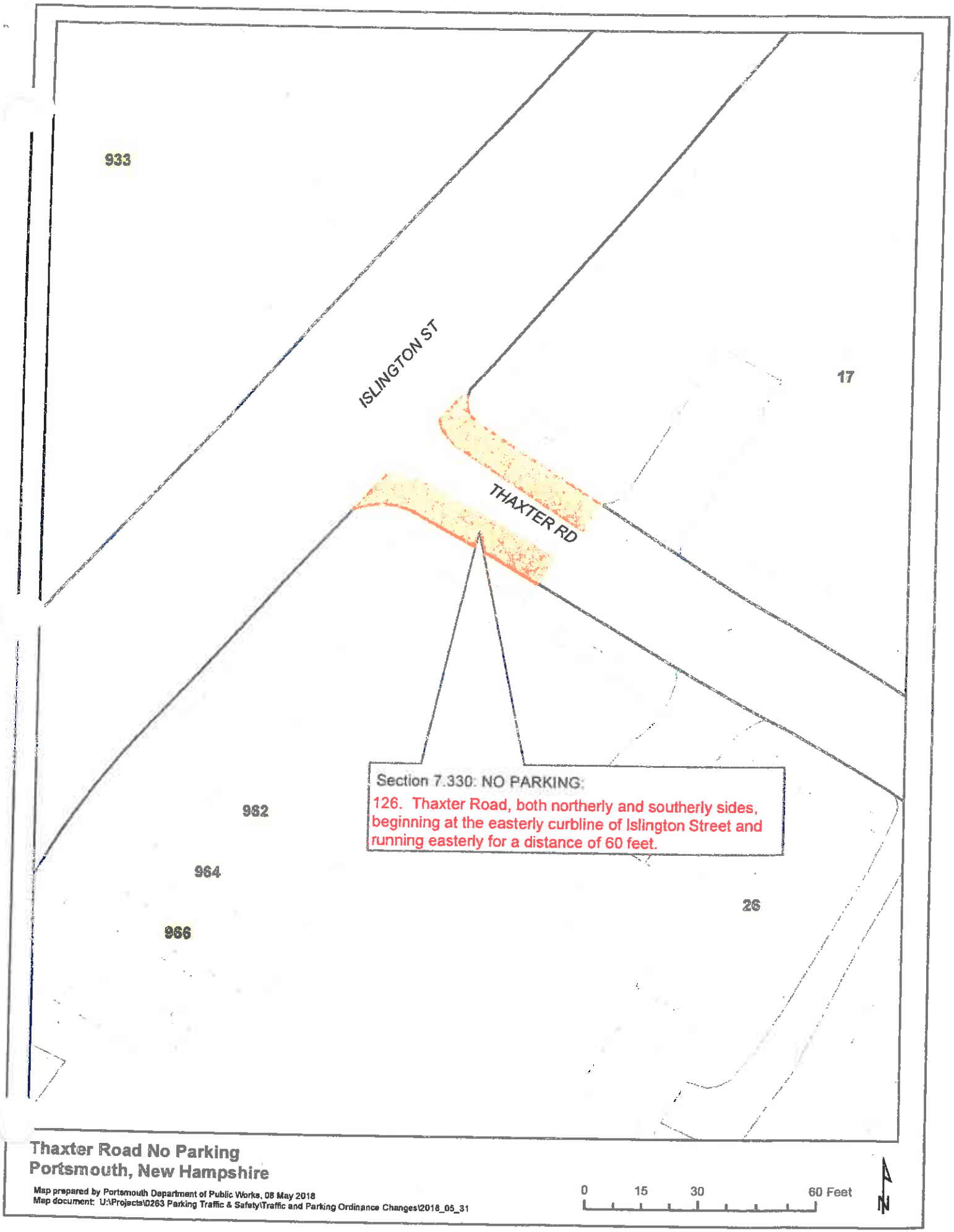
Mechanic Street No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_14



Raynes Avenue & Vaughan Street No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_08



Thaxter Road No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_31

0 15 30 60 Feet

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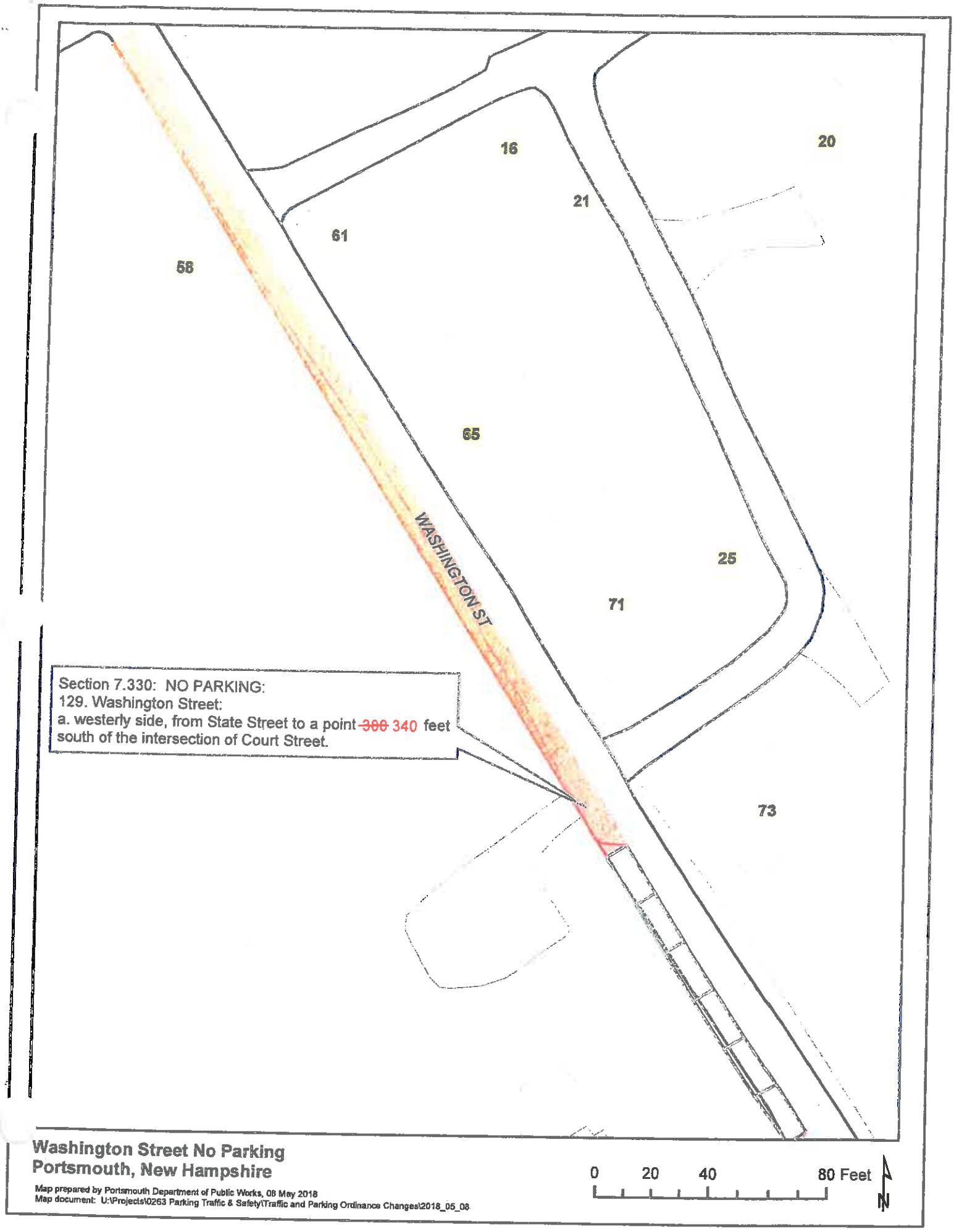
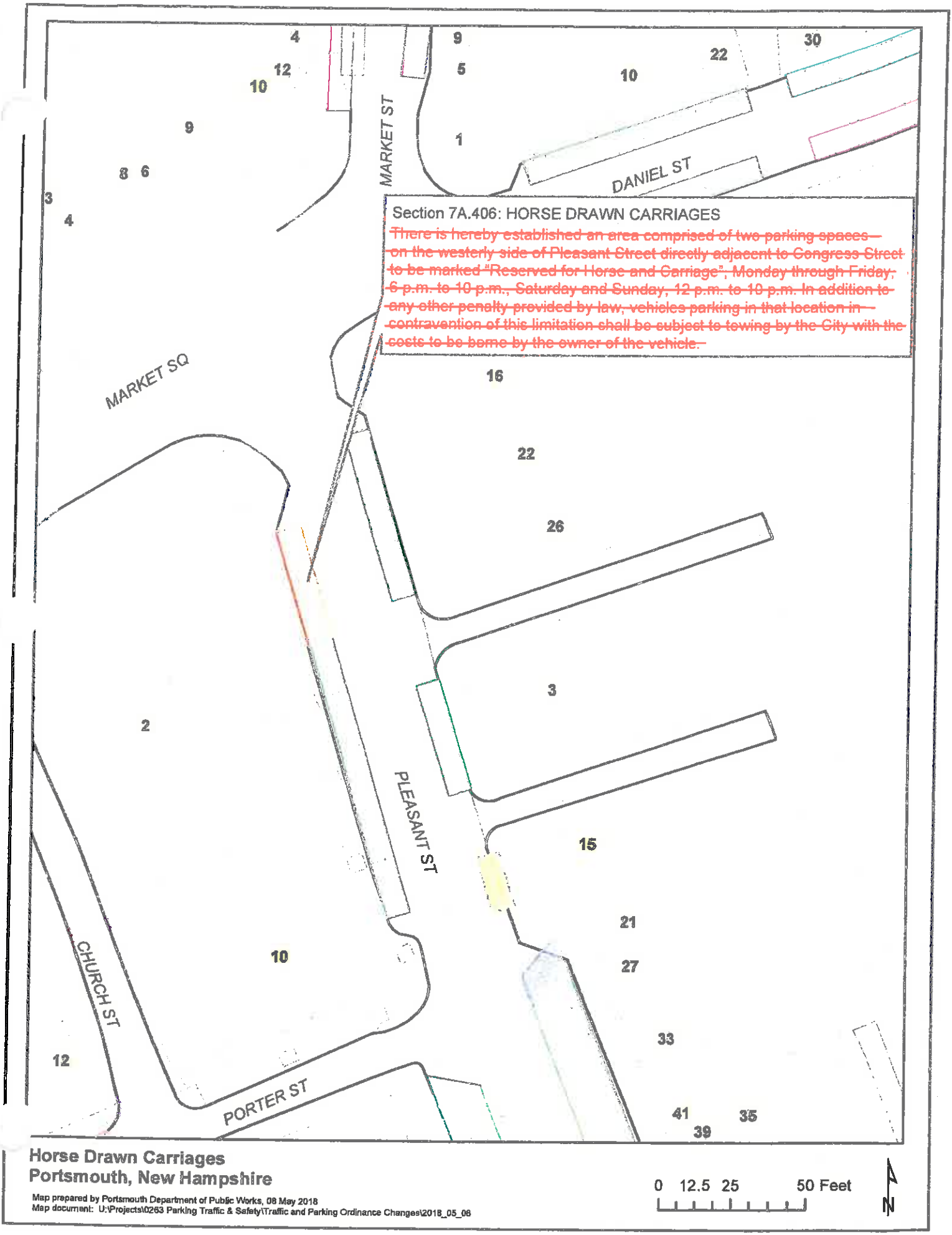


Washington Street No Parking
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_08

0 20 40 80 Feet

N



Section 7A.406: HORSE DRAWN CARRIAGES

~~There is hereby established an area comprised of two parking spaces on the westerly side of Pleasant Street directly adjacent to Congress Street to be marked "Reserved for Horse and Carriage", Monday through Friday, 6 p.m. to 10 p.m., Saturday and Sunday, 12 p.m. to 10 p.m. In addition to any other penalty provided by law, vehicles parking in that location in contravention of this limitation shall be subject to towing by the City with the costs to be borne by the owner of the vehicle.~~

Horse Drawn Carriages
Portsmouth, New Hampshire

Map prepared by Portsmouth Department of Public Works, 08 May 2018
Map document: U:\Projects\0263 Parking Traffic & Safety\Traffic and Parking Ordinance Changes\2018_05_08

0 12.5 25 50 Feet

N

AMERICAN LUNG ASSOCIATION.

August 8, 2018

City of Portsmouth
Attn: John Bohenko
1 Junkins Avenue
Portsmouth NH 03801

Dear Mr. Bohenko:

The 10th annual American Lung Association Cycle the Seacoast ride is scheduled for Sunday, May 5th, 2019. With nearly 400 cyclists expected we are looking forward to a very exciting day.

The first riders will be leaving Redhook Brewery at 7:00 a.m. and the last rider will be in around 3:30 p.m. I have included the turn by turn route that goes through Portsmouth. We plan to maintain the same route as in year's past but will update you with a final version as soon as it has been completed. We will be supplying our own safety and first aid volunteers with the assistance of the Port City Amateur Radio Club. Also enclosed is a copy of our $250,000 insurance coverage from the Novick Group where you are listed as an additional insured.

If you need anything else from me, please do not hesitate to let me know. Please let me know if you have any suggestions for police support along the route. We look forward to another safe and successful year. Thank you.

Sincerely,

Melissa Walden
Associate of Development
American Lung Association
207-624-0306

Cycle The Seacoast - Sunday, May 7, 2016		Orange Signs - 25 mi. route	
Segment distance	**Directions**	**Notes**	**City/Town**
	Start - Redhook Brewery		Portsmouth
0.1	Left onto Corporate Drive	Yellow - common route	Portsmouth
1.1	Left on Ashland Rd	**RM**	Portsmouth
0.2	2 signs for cycle path - each end		Portsmouth
0.3	Right to stay on Ashland Rd		Portsmouth
0.3	Right onto Rockingham Ave		Portsmouth
0.1	Right onto Woodbury Ave		Portsmouth
0.2	Left onto Dennett St		Portsmouth
0.7	Right onto Maplewood Ave		Portsmouth
0.3	Continue onto Middle St		Portsmouth
0.2	Left onto State St		Portsmouth
0.5	Right onto Marcy St		Portsmouth
0.3	Left to stay on Marcy St		Portsmouth
0.0	Bear Left at triangle		Portsmouth
0.5	Continue into New Castle Ave		Portsmouth
2.8	CAUTION - METAL GRATE BRIDGE Wentworth Bridge	**New Castle Police 7-11**	New Castle
1.1	Left @ **T** onto Sagamore, Route 1A	**Portsmouth Police 7:30-11:30** **RM - 7:00-11:00**	Portsmouth
0.5	Circle - 3rd exit onto 1A/Pioneer Rd	**Rye Police 7-3**	Rye
1.8	Pass Odiorne State Park		Rye
0.6	**Rest Stop - Pebble Cove Motel**		Rye
3.1	CAUTION - HAIRPIN TURN!		Rye
0.6	Right onto Harbor Rd	**RM - 7:30 - 10:30 AM** **Also need 50 and 100 mi straight signs here**	Rye
0.2	Right onto Locke Rd		Rye
0.6	Right onto Central Rd		Rye

0.6	Right onto Washington Rd at Stop Sign 50 and 100 milers rejoin		Rye
0.1	**REST STOP - Tate & Foss Real Estate**		Rye
0.1	Left onto Lang Rd		Rye
1.3	Left behind Service Credit Union	**RM**	Portsmouth
0.2	Right onto Longmeadow Rd		Portsmouth
0.0	Cross Route 1 onto Ocean Rd	**Portsmouth Police 11:30-3:30**	Portsmouth
1.9	Cross Route 33 Stay on Ocean Rd	**Greenland Police - 12:00-4:00**	Greenland
0.3	Right onto Portsmouth Ave		Greenland
0.0	Cross Railroad Tracks		Greenland
1.0	Left onto Bike Path		Portsmouth
1.6	Exit Bike Path Right onto Corporate		Portsmouth
1.6	Right onto Redhook Way		Portsmouth

CITY COUNCIL E-MAILS

August 7, 2018 – August 16, 2018 (9:00 a.m.)

AUGUST 20, 2018 CITY COUNCIL MEETING

Updated 08/20/2018 through 2:00 p.m.

New content begins Page 3

Below is the result of your feedback form. It was submitted by Elizabeth Bratter (qatoday@yahoo.com) on Thursday, August 9, 2018 at 07:17:30

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address: 159 McDonough St

comments: Dear Mayor and City Councilors,
I asked the Planning Department whether there was something between CD4-W footprints and uses and CD4-L2 or L1 footprints and uses. Its a big jump from 2500 SF to 20,000 SF. I was told there is none. I felt this is a huge hole in our zoning! This type of transition zoning can NOT be added randomly, although greatly needed. It has to fit into a proposed project in the character district.
This transitional zoning would fit perfectly for Lots 3, 4 and part of Lot 5 at 105 Bartlett St. It would allow them to rebuild the Ricci Hardward Store in the same or a slightly bigger footprint if they chose to and still allow them to achieve close to the 120 condos requested.
This is a BIG opportunity for the city of correct something in the CD zoning-the fact that there is NO transitional zoning to protect lesser neighborhoods from very large commercial project. Take a minute to compare what is allowed and the sized of CD4-W and CD4-L2/L1. The difference is stunning.
PLEASE ASK the Planning Department to develop and include a transitional zoning between CD4-W and CD4-L2/L1 as part of the 105 Bartlett St. It will be very valuable for the 105 Bartlett St as well as to many upcoming projects may need such a zoning option for the future.
Thank you for your consideration. Please don't give up on this opportunity. Zoning changes don't happen too often and this is a chance to correct something that was most likely missed when developing the CD districts.
Respectfully, Elizabeth

includeInRecords: on
Engage: Submit

Below is the result of your feedback form. It was submitted by Elizabeth Bratter (qatoday@yahoo.com) on Thursday, August 9, 2018 at 11:20:32

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address: 159 McDonough St

comments: Dear Mayor and City Councilors,
I would like to ask you to consider splitting the approval of 105 Bartlett St into the section proposed to be zoned CD4-L1 as one part and the area proposed to be zoned CD4-W as another section.
I would like to see the area proposed to be zoned CD4-L1 to pass and move forward so the developer can start working on the permits and Site Review for that particular area.
The area proposed to be CD4-W I would like to see put on hold until a transitional solution can be discussed with the Planning Department and open for public comment. I had asked about transitional zoning while Juliet Walker was on vacation and Nick Cracknell stated he wasn't sure and I should wait until Juliet returned from her vacation. I asked her about it immediately and she had to do some research. She got back to me yesterday. In order for it to be able to go through as a "house keeping" type item my understanding is it

would need to be appropriate for a specific project. It is exactly what 105 Bartlett St needs to protect the abutting neighborhoods and still allow for the condos and opportunity to rebuild on Lots 3 and 4.
I am leaving on vacation and am hoping that those of you who considered that there is not transition between CD4-W and CD4-L2/L1 please assist in moving this area to a later meeting to give the Planning Department, abutters and the developer time to understand if this process is possible. I realize the develop wants to get started. I've seen getting approvals for much smaller projects take longer than this rezoning has. Please consider the opportunity having a transitional option will be for all neighborhoods in the city.
I look forward to seeing what happens while I'm gone. Thank you for considering this option! We really need it.
Respectfully, Elizabeth

includeInRecords: on
Engage: Submit

Below is the result of your feedback form. It was submitted by Sally Minkow (sally.minkow@gmail.com) on Sunday, August 12, 2018 at 09:05:23

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address: 18 McDonough Street

comments: I am writing as a concerned resident of the West End regarding the proposed new construction projects.
As a new member of the community, I am especially concerned about what drew me to this area in the first place, which was the quiet and still characteristic of "old" Portsmouth qualities of this neighborhood. It is a treasure that should be preserved.
The traffic and parking are already challenging.. Adding more housing units and commercial space can impact property values and quality of life throughout our community.
Please preserve our neighborhood.
Thank you for your consideration.
Best,
Sally Minkow
18 McDonough Street

includeInRecords: on
Engage: Submit

Below is the result of your feedback form. It was submitted by Christine L Groleau (cgroleau@comcast.net) on Thursday, August 16, 2018 at 07:58:16

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address: 30 Oakwood Dr

comments: Dear Councilors,
I respectfully request you consider the loss of +/- 20 public parking spaces in the the lot that is being considered for the new PHA building. As we all know, parking is difficult in Portsmouth. To call that lot "underutilized" is unfair and inaccurate. I have tried to find parking in that lot many times with no luck. Losing +/- 20 spots in the heart of downtown is detrimental to our dire parking situation. Despite the addition of the new parking garage, the location across town is not convenient to the businesses on or near Court Street. In addition, building living units without adequate parking for all of the tenants will only increase the parking dilemma on this side of town. I believe that parking was part of the original plan for the building, but it was eliminated. I ask that you please reconsider incorporating adequate parking into this plan, including incorporating at least +/- 20 spots for public parking.

Sincerely,
Christine Groleau
includeInRecords: on
Engage: Submit

NEW CONTENT BEGINS:

Below is the result of your feedback form. It was submitted by James Beal (jbealfoto@hotmail.com) on Monday, August 20, 2018 at 07:02:35

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address: 286 Cabot St.

comments: Dear Major and City Councilors
Re: 105 Bartlett st rezoning application

Aug 20th, 2018

I am writing in regard to the amended versions that the planning department has put froth for the rezoning of 105 Bartlett st and especially Lot 5 which has had so much input from both eh neighbors and the push back from the developers in regard to land cost and need for density.

As a abutter in the McDonough corridor, we have all asked that the developer follow the master plan of 2025 and create new housing that blends with the existing housing that has existed since the early 1840's in that area.

I applaud all parties and the council for allowing the public dialogue to work to insure that this new evelopment is a benefit to all the public.

However here are some of my concerns still:
This housing will not benefit service working individuals or families who earn less then $50 per hour due to the $650-700per sq foot cost of said units.
Due to the above, service people now and in the future will add to the traffic concerns and parking concerns since they cannot afford any of this new housing.
Without a "transitional zoning amendment" being added, neighborhoods will find residential suing of 2 stories edged by non human high density 5 + story buildings which will ruin the architectural integrity of our historic town.
Greenways are not a 100% due to the numerous requirements needed from state and govt due to shorelines and wetland setbacks.
Traffic density concerns as more and more high density projects crowd the downtown urban area.

I currently feel I can support the amendments that were recommended by the planning board for Lot 5 and if all amendments are included in the next reading I concurred with a procedure to vote.
I do feel that some house cleaning and a Transitional zoning to step up the building heights in lot 4 would build a better neighborhood for the long term future here and in other parts of the city moving forward.

Sincerely;
James Beal
286 Cabot St
Portsmouth, NH
resident since 1999

includeInRecords: on
Engage: Submit

Justin C. Richardson
586 Woodbury Avenue
Portsmouth, N.H. 03801
jcrlaw@gmail.com
(603) 591-1241

August 12, 2018

Via Email Only
Jack Blalock, Mayor
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

Re: Planning Board Membership

Dear Mayor Blalock:

I write as a Portsmouth resident who is also a municipal lawyer to express my confidence in the opinion provided by City Attorney Bob Sullivan to the Portsmouth City Council concerning *ex officio* members of the Planning Board. Without repeating his conclusions, I wanted to share with you my own perspective in light of some of the over-the-top criticisms published recently in the press and in online discussion groups.

When it was first published, I carefully read the points made in Bob Sullivan's opinion. I reviewed all of his citations and conclusions. I researched based on my own knowledge and experience both as a lawyer and as former *ex officio* representative of the Planning Board on the Newington Zoning Board of Adjustment. I looked for any inconsistencies with the laws governing municipal zoning, elections, Town and City Charters and the duties and qualifications of persons holding municipal offices. I found no evidence to suggest that Bob Sullivan's opinion is incorrect.

Perhaps naively, I responded to what I saw as unfair criticism in online forums. My goal was to help people understand that, while other methods of selecting Planning Board members were possible, Bob Sullivan had correctly advised that the City's 1994 ordinance was lawful under RSA 673:2, I-a (c). Unfortunately, I soon discovered that the most vocal opponents of this conclusion seem unable to read the law objectively. Instead, they see it as a tool to force political change, even if it means asking for a second opinion from State officials that might take away the City Council's power to determine the "method of appointment or election" of its Planning Board under RSA 673:2, I-a (c).

I urge City Officials to be extremely cautious about asking state officials who may have little or no experience in municipal government, to second guess Bob Sullivan's opinion. First,

there is no need to do so because if the City Council does not like the existing method of selecting members to serve on its Planning Board, it is free to change its ordinance at any time under RSA 673:2, I-a. Second, the recent rulings over whether Town moderators may postpone municipal elections show that there can be significant risks asking state officials to weigh in on questions of municipal government. In many cases, these officials may have limited experience in municipal government or even other political motives. Of course, I do not believe that a second opinion is needed. However, if the City Council would like one, I suggest that it turn to the N.H. Municipal Association or an independent member of the municipal bar for an unbiased opinion.

In terms of my own personal view, I find support in New Hampshire's election laws which provide that a "vacancy" occurs when an *elected official* "ceases to have domicile in the state or the district from which he or she was elected." RSA 652:12, I. The key point is that residency is required to be elected (or appointed) as a regular member for a term of years. However, *ex officio* members are frequently administrative officials, such as the director of public works in many communities, or, in our case, the city manager or designee who is not required to be a resident. *See* RSA 49-C:17 ("The city manager shall be chosen solely on the basis of executive and administrative qualifications, but need not be a resident of the city or the state at the time of appointment."). When the Legislature *repeatedly* allowed municipalities to establish *ex officio* membership for administrative officials in RSA 673:2,[1] it knew that many of these officials would not be residents and it specifically did not require them to be residents.

This leads to a second point that supports Bob Sullivan's opinion. In each of the cases where the Legislature very clearly authorized *ex officio* administrative officials to be appointed, RSA 673:2 omits any reference to a residency requirement while specifying at the same time in the same sections that regular members must be residents. For example, in the case of Towns, RSA 673:2, II provides:

> II. In [Town's with a Town meeting form of government], the planning board shall consist of 5 or 7 members as determined by the local legislative body. The membership shall be filled by one of the following procedures:
>
> (a) The selectmen shall designate one selectman ***or administrative official*** of the town as an *ex officio* member and appoint ***4 or 6 other persons who are residents of the town***, as appropriate;

Similarly, in the case of Village Districts, RSA 673:2, III provides:

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[1] *See e.g.* RSA 673:2, I (a)(2) ("[a]n administrative official of the city selected by the mayor, who shall be an ex officio member;"); RSA 673:2, I-b (a) ("[a] member of the town council or administrative official of the town selected by the town council, who shall be an ex officio member;"); RSA 673:2, II (a) ("[t]he selectmen shall designate one selectman or administrative official of the town as an ex officio member"); RSA 673:2, III (a) ("[d]esignate one district commissioner or administrative official of the district as an ex officio member;"); RSA 673:2, IV (c) ("[a]n administrative official of the county selected by the chairperson of the board of county commissioners shall be an ex officio member.").

> In village districts, the planning board shall consist of either 5 or 7 members as determined by the village district meeting. The district commissioners shall:
>
> (a) Designate one district commissioner ***or administrative official*** of the district as an ex officio member; and
>
> (b) ***Appoint 4 or 6 other persons who are residents of the village district***, as appropriate.

Reading RSA 673:2 as a whole, it is clear that the Legislature distinguished between *ex officio* administrative officials, who are not required to be residents, and "other persons" who are specifically required to be residents. The Legislature knew that administrative officials frequently live outside of the districts they serve and it clearly wrote RSA 673:2 to give municipalities the option to create *ex officio* positions for administrative officials if the legislative body deemed it appropriate.

Opponents argue that the general language in RSA 673:1 controls over the specific language in RSA 673:2 which refers to members being residents in some instances but never in the case of *ex officio* members. However, "[i]t is a well settled rule of statutory construction that in the case of conflicting statutory provisions, the specific statute controls over the general statute." *Appeal of Plantier*, 126 N.H. 500, 510 (1985). As a result, the specific provisions of RSA 673:2 allowing *ex officio* administrative officials who may be non-residents controls over the general language in RSA 673:1.

I hope that this letter helps you and the City Council reach a better understanding if the issues involved. As always, I would like to thank you and all of the members of the City Council, including those who may share differing views, for all that you do to promote the best interests of the City of Portsmouth.

Best regards,

Justin C. Richardson
jcrlaw@gmail.com

CITY OF PORTSMOUTH
PORTSMOUTH, NH 03801

Office of the City Manager

Date: August 16, 2018

To: Honorable Mayor Jack Blalock and City Council Members

From: John P. Bohenko, City Manager

Re: City Manager's Comments on August 20, 2018 City Council Agenda

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6:00 p.m. - *Non-Public Session Re: School Superintendent Stephen Zadravec Contract and Police Chief Robert Merner's Contract in accordance with RSA 91-A:2,I (a)*

6:15 p.m. - ***Public Dialogue Session***

Presentation:

1. **Letter of Recognition.** Mayor Blalock will present a letter of recognition.

Public Hearings & Votes on Ordinances and/or Resolutions:

1. **First Reading of Boarding House Ordinance.** Attached is a proposed Ordinance amending Chapter 9, Article VIII: Boarding or Rooming Houses. The amendment adds the terminology "and Rooming House" and adds the following Term and Condition:

   D. The permit shall not allow any more rooms to be rented, leased or made available, persons to occupy the Rooming or Boarding House than are authorized by the Portsmouth Zoning Ordinance.

   I recommend the City Council move to pass first reading and schedule a public hearing and second reading of the proposed amendment to the Boarding House Ordinance at the September 4, 2018 City Council meeting, as presented.

2. **Proposed Public Hearing Re: Exemption for Solar Energy Systems.** As you are aware, Councilor Denton requested a report back regarding an exemption for Solar Energy Systems. Attached is the report back from City Assessor Rosann Lentz which was provided to the City Council on April 30, 2018 and in the August 6, 2018 City Council packet. Councilor Denton has requested the attached Resolution for Solar Energy Systems be reviewed by the City Council and be brought forward for action at the September 4, 2018 City Council meeting.

In order to include solar energy systems that were put in place prior to 201l and to grant the exemption for more than 5 years, the staff has recommend the modification of the current solar exemption as follows:

> If qualified, for persons owning real property equipped with a solar energy system as defined in RSA 72:61, the City shall exempt from taxes an amount equal to the assessed value of the solar energy system.

City Assessor Rosann Lentz has advised this tax exemption will be made available for the April 1, 2018 tax year if adopted.

I am requesting that the City Council allow me to bring back for a public hearing the proposed Resolution at the September 4, 2018 City Council meeting, as presented.

3. **Public Hearing/Second Reading of Proposed Ordinance amending Chapter 7, Article IV, Section 7.402 regarding Foundry Place Garage Designation.** At the August 6, 2018 City Council meeting, the Council voted to pass first reading of a proposed Ordinance amending Chapter 7, Article IV, Section 7.402 regarding the Foundry Place Garage Designation, and schedule second reading and a public hearing for August 20, 2018. With the Foundry Place Garage scheduled to open in October, the aforementioned Ordinance needs to be amended in order to add the Foundry Place Parking Garage to the list of Off-Street Parking Areas in the City's Ordinance. The City Attorney's Office and the Public Works Department have reviewed and approved the amendment.

I recommend the City Council move to pass second reading and schedule third and final reading of the proposed Ordinance at the September 4, 2018 City Council meeting, as presented.

4. **Third and Final Reading on Ordinances Amending Chapter 10 – Zoning Ordinance – Petition for Rezoning, 105 Bartlett Street.** At the August 6, 2018 City Council meeting, the Council voted to pass second reading of the proposed 105 Bartlett Street zoning incorporated recommended revisions from the Planning Department staff and schedule a third reading for August 20, 2018. See attached Ordinances.

The 105 Bartlett Street zoning amendments consist of three parts:

- Part 1A: Proposed Zoning Ordinance Amendments for the portion of the property proposed as Character District 4-W

- Part 1B: Proposed Zoning Ordinance Amendments for the portion of the property proposed as Character District 4-L1
- Part 2: Proposed Zoning Ordinance Amendments addressing primarily housekeeping revisions to update and clarify building and façade types in Article 5A

I recommend the City Council move to pass third and final reading of the proposed amendments Part 1A, 1B, and 2 as presented (should be done as three separate votes on each Part).

5. **Third and Final Reading of Ordinance Amending Chapter 7 - Parking Omnibus.** At the August 6, 2018 City Council meeting, the Council voted to pass second reading of the attached proposed annual omnibus set of ordinances recommended by the Parking and Traffic Safety Committee, and schedule a third and final reading at the August 20, 2018 City Council meeting. In addition, at the August 6, 2018 City Council meeting, the Council voted to amend Item K. Chapter 7, Article XVIII – Electric Vehicle Charging Stations and Electric Vehicle Parking Spaces Regulations, Section 7.1802 – 7.1803, as presented by Councilor Denton.

I recommend the City Council move to pass third and final reading on the proposed Parking Omnibus Ordinance, as presented.

City Manager's Items Which Require Action:

1. **Portsmouth Historical Society Portsmouth400 Grant Request (Presentation).** In January 2017, in preparation for the City's 400 anniversary, the City entered into an agreement with the Portsmouth Historical Society (PHS) for creation of *Portsmouth400*, an inclusive celebration of 400 years on the New Hampshire Seacoast 1623-2023. The Agreement includes a scope of work, fundraising goals necessary to accomplish the *Portsmouth400* objective as well as a schedule for progress reports to the City Council. At the August 20th City Council meeting, Susan Labrie, Director of *Portsmout400*, will report on achievements and fundraising from January-June 2018, goals for the period July-December 2018 and future fundraising benchmarks including a request for continued financial support from the City. PHS is requesting continued support up to $25,000 for the first half of FY19 with the City contributing $1.00 for every $2.00 raised by PHS and the same for the second half of FY19 for a total of up to $50,000.

Attached in the City Council packet are the following documents:

1. *The Portsmouth400 Agreement*
2. *A request for continued support from the City through December 2018 and the formula for continued support through July 2019.*
3. *Portsmouth400 Achievements January 1- June 30, 2018*
4. *Portsmouth400 Goals July 1-December 31, 2018*
5. *Early Adopter Program*
6. *Summary of Donations/Pledges January 1- June 30, 2018*

I recommend the City Council move to approve a grant request by Portsmouth Historical Society – Portsmouth400 of up to $25,000 for the first half of FY19 with the City contributing $1.00 for every $2.00 raised by PHS and the same for the second half of FY19 for a total of up to $50,000.

2. **Report Back Re: Osprey Landing Water Tank Release of Land.** As you may recall from the meeting of July 9, 2018, the Spinnaker Point Condominium Association is interested in acquiring the 65 by 60 foot parcel which formally held the Osprey Landing Water Tank. That tank has been decommissioned and the property is no longer needed for the water system.

   The City Council referred this matter to the Planning Board for its recommendation. At the July 19, 2018 meeting, the Planning Board voted to recommend that the City Council release this land to the Spinnaker Point Condominium Association. Attached are a copy of a letter from Spinnaker Point Condominium, Osprey Tank Deeds, and a map indicating the location of the Osprey Landing Tank property. I recommend that the City Council divest itself of the property conditioned upon the successful negotiation with the Spinnaker Point Condominium Association of all transfer documents satisfactory to the legal department.

   I recommend the City Council move to authorize the City Manager negotiate the transfer of the property to Spinnaker Point Condominium Association and to execute all necessary documents to effectuate that transfer.

3. **Rockingham Avenue Subdivision Easements.** On April 20, 2018, the Planning Board approved an application from Jim Bouzianis of Seacoast Development, LLC, requesting Subdivision Approval for a property located on Rockingham Avenue. The application proposed to subdivide the property into 3 residential lots.

   As approved, the Subdivision includes: 1) a stormwater drainage easement along the Rockingham Avenue side of all three lots; 2) a stormwater drainage easement along the rear of all three lots paralleling the bike path; 3) a stormwater drainage and wetland restoration easement along the western side of Lot 2. See attached plan.

   All of the easements provide the City the right to direct stormwater across the easement areas and to construct and maintain drainage structures for collection and discharge of stormwater in these areas. Furthermore, the easement on Lot 2, also provides for the ability to retain and restore wetland plants and soils in the easement area. All of the foregoing has been approved by the Planning Board and is recommended by the Planning and Legal Departments.

   If the City Council is in agreement with the recommendation, an appropriate motion would be:

   Move that the City Manager be authorized to negotiate, execute, deliver and record the deeds regarding the Rockingham Ave Subdivision as presented.

4. **Islington Commons LLC Water Access Easement.** On June 21, 2018, the Planning Board approved an application from Islington Commons, LLC, requesting Site Plan Approval for a property located at 410, 420, 430 Islington St. The application proposed to remodel 4 existing residential buildings and build 11 new residential units. As approved, the Site Plan includes a water service access easement to provide municipal access to the City for the purpose of accessing water infrastructure for routine service. See attached Access Easement Deed.

   All of the foregoing has been approved by the Planning Board and is recommended by the Planning and Legal Departments.

   If the City Council is in agreement with the recommendation, an appropriate motion would be:

   Move that the City Manager be authorized to negotiate, execute, deliver and record the deeds regarding the Islington Commons property as presented.

5. **15 Thornton Street Subdivision Easements.** On June 21, 2018, the Planning Board approved an application from the Guilberts requesting Subdivision Approval for a property located 15 Thornton St. The application proposed to subdivide the property into 2 residential lots.

   As approved, the Subdivision includes to easements to benefit the City: 1) a sidewalk easement and 2) a sight line easement. Both of which are located at the intersection of Dennett Street and Thornton Street on Proposed Lot 1. See attached Sidewalk Easement Deed.

   The purpose of the sight line easement is to ensure that no structure, plantings, or other obstructions are placed on the property that would obstruct sight lines for drivers turning from Thornton Street onto Dennett Street. The sidewalk easement provides for the City to install and maintain a public sidewalk on a portion of the owner's property. All of the foregoing were approved by the Planning Board and were reviewed and approved by the Planning and Legal Departments. Both of these deeds have already been recorded.

   If the City Council is in agreement with the recommendation, an appropriate motion would be:

   Move to ratify the acceptance and recording of the easement deeds and plan related to the 15 Thornton Street Subdivision.

6. **299 Vaughan Street Temporary Construction Licenses.** On June 15, 2017, the Planning Board granted site plan review, wetlands conditional use, and subdivision approvals for Vaughan Street Hotel LLC (formerly 299 Vaughan Street LLC) to construct a five-story, 143-room hotel with additional ground-floor retail uses on properties currently occupied by a municipal parking lot and an auto parts business.

The Construction Mitigation and Management Plan (CMMP), signed in April 2018, identified a number of temporary construction licenses for project-related work that will require the encumbrance of the City property along Green Street and Vaughan Street for different periods of time during of the project's construction. These licenses require approval by the City Council. In addition, the licenses are subject to the "License Fee for Encumbrance of City Property" policy, which was adopted by the City Council on April 16, 2018.

Although the CMMP identifies multiple licenses required for this project, the license request in front of the City Council for this meeting is only for the initial Phase of the construction project. On June 18, 2018, the City Council approved a license for this phase, but due to unforeseen delays in construction, the developer is requesting to revise the previously approved license agreement.

The new License Areas are show on the attached plan labeled "License Exhibit" and dated June 4, 2018. License Area 1 is shown with green hatch markings and is located behind the development site on the land deeded to the City for the construction of the Community Park along the North Mill Pond. This area will be used for construction staging and laydown of construction materials. The duration of the license for Area 1 is July 1, 2018 to August 1, 2019.

License Area 2 is shown with blue hatch markings and includes the sidewalk and parking area immediately in front of the development site on Vaughan Street as well as two existing parking spaces on the bend in the road on Vaughan Street (labeled 6 and 7 on the plan). This area will be used for construction of site drainage, hotel water connections, and gas service connection. The proposed revised duration of the license for Area 2 is September 11, 2018 to January 30, 2019 (142 days).

The total fee for the temporary license was calculated based on the $0.15 per square foot per day as defined in the City Council policy. The policy also allows the City Manager to waive the license fees for parking in unmetered spaces if the applicant can provide equivalent public parking in the immediate vicinity of the licensed area. The developer is proposing to provide four (4) temporary parking spaces at the 111 Maplewood Avenue property, labeled as T6 to T9 on the license plan provided. In addition, the developer is proposing to provide 10 daily parking passes for covered spaces in the Portwalk Place parking garage.

Each space is 160 square feet, which calculates to $24 per space per day. For the 4 uncovered spaces, 142 days, the total credit is $13,632. As the 10 covered parking spaces are generally higher value to the City and the users than an unmetered on-street space, City staff are proposing a credit of $36 per day per space. For the 10 covered spaces, 102 weekdays, the total credit is $51,120. As a result, the license fee has been reduced from $87,650 to $22,898. Attached is an Amendment to the License Agreement.

All of the foregoing has been reviewed by the Planning and Legal Departments and is recommended for approval.

If the City Council is in agreement with the recommendation, an appropriate motion would be:

Move that the City Manager be authorized to execute and accept the revised temporary construction license regarding 299 Vaughan Street as submitted.

7. **Proposed Tax Exemptions for Wind-power and Woodheating.** Councilor Denton has requested the attached two Resolutions for Wind-power and Woodheating Tax Exemptions be reviewed by the City Council and be brought forward for action at the September 4, 2018 City Council meeting. For your information, City Assessor Rosann Lentz has advised that these two tax exemptions will be made available for the April 1, 2019 tax year if adopted.

   I am requesting that the City Council allow me to bring back for a public hearing the two aforementioned proposed Resolutions at the September 4, 2018 City Council meeting.

Informational Items:

1. **Events Listing.** For your information, attached is a copy of the updated Events Listing showing events from this date forward through 2018. In addition, this can be found on the City's website.

2. **McIntyre Update.** Attached is a memorandum from Deputy City Manager Nancy Colbert Puff giving an update regarding the recent progress concerning the McIntyre project.

3. **Berry's Brook Update Re: PFAS.** As you will recall, much of the attention has been directed to PFAS detections in the headwaters of Berry's Brook which is at the toe of the Coakley Landfill superfund cap. Attached is a copy of a letter that has been sent to the regulatory agencies with regard to those detections. The letter indicates that the Coakley Landfill Group and its contractors have tentatively identified the source of that PFAS.

   As your review of the letter will indicate, it appears that the source of the detections in the headwaters of Berry's Brook appears to be **above** the landfill cap, not from the refuse material collected **below** the cap.

   It is too early to completely understand the import of this development. There are seven (7) multimedia layers of different materials located above the actual refuse contained in the landfill. It is likely that the source of the high PFAS readings comes from somewhere within those layers. Further monitoring and analysis will be required to more precisely indicate the source. Proposed follow-up investigative work is found within the attached letter. Once the source is located then an appropriate response can be determined. Further information will be provided as it is developed.

   City Attorney Robert Sullivan will be available to answer any questions regarding this matter.

Portsmouth400 Agreement

The City of Portsmouth (City), a municipal corporation with a principal place of business at One Junkins Avenue, Portsmouth, County of Rockingham and State of New Hampshire, and Portsmouth Historical Society (PHS), a charitable nonprofit with a principal place of business at 10 Middle Street, Portsmouth, County of Rockingham and State of New Hampshire, enter into this agreement for the purposes contained herein:

Whereas The year 2023 will mark the 400th Anniversary of the settlement of Portsmouth, New Hampshire and surrounding area;

Whereas PHS, founded in 1917, is a tax-exempt 501(c)3 charitable nonprofit devoted to introducing, interpreting and stimulating the study of Portsmouth history;

Whereas The City is a municipal corporation, which through the Portsmouth City Council has formally approved a working relationship with PHS to be the convener for the 400th Anniversary (Portsmouth400);

Whereas PHS seeks financial support from the City and initiation of an annual grant to manage the ongoing Portsmouth400 program from 2017 through 2023;

Whereas a Director of Portsmouth400 will be recruited and a Steering Committee of seven members in addition to a chair and co-chair shall be convened to oversee the program.

Now therefore, the City and PHS agree as follows:

A. City Responsibilities: The City Shall:

1. **Recognize** and support PHS as the convener of the Portsmouth400 Program.

2. **Provide** PHS with an initial $100,000 grant to support the development, management, and execution of the Portsmouth400 Program consistent with PHS's responsibilities listed herein. Going forward, an annual grant may be paid by the City to PHS in FY19 through FY24 as approved in the City's annual budget by the City Council.

3. **Meet**, through the City Manager or designee, with PHS on a quarterly basis to discuss Portsmouth400.

B. PHS Responsibilities: PHS Shall:

1. **Create** Portsmouth400, an inclusive celebration of 400 years on the New Hampshire Seacoast 1623-2023, of both the diverse and living history of Portsmouth before the first European settlers arrived, and our future; layering in programs each year up to and beyond 2023.

2. **Foster** a shared sense of ownership/stewardship - The 400th belongs to everyone in Portsmouth. Encourage everyone to join the dialogue, contribute ideas: "what I want for the 400th."

3. **Identify** key themes to spotlight: art, community, history, sustainability, diversity, economic vitality, civic life and volunteerism, accessibility.

4. **Engage** our community about the importance of civic life and our history.

5. **Ensure** we pass the torch to the next generation so they become the stewards of Portsmouth and its history.

6. **Focus** first on Portsmouth while regional and state partnerships and celebrations can be an aspect but are not the focus.

7. **Establish** goals - a city where residents enjoy living, feel involved, have a sense of pride and confidence in the future; deep, vibrant celebration of the culture and heritage of Portsmouth; Portsmouth becomes bold model for sustainable growth and for seamless interplay of arts, humanities, preservation and maritime culture.

8. **Employ** the 400th as a deadline to accomplish/highlight many City goals: Master Plan; Prescott Park; City Gateways; Wayfinding & Parking; Bicycle & Walking Paths.

9. **Act** as convener/clearinghouse for all who want to produce activities, demonstrations, lectures, tours, events.

10. **Create** a structure to manage the project using a multi-member representative Steering Committee for oversight, planning, organization, implementation of vision; a PHS staff position – day to day execution; and involvement of City Committees, experts, advisory council of elders, individuals, nonprofits and corporations.

11. **Craft** a funding/marketing plan for alliance of all participants.

12. **Recruit** and employ a Director of Portsmouth400 who shall be:

    - deeply involved in fundraising, accounting, volunteer management, event planning, operations, and marketing in the ongoing Portsmouth400 program (carrying from now through 2023);
    - developing communications strategies and conducting National and International outreach efforts;
    - developing new initiatives to support the strategic direction of the program while managing available budgets;
    - writing website content, social media posts and articles;
    - tracking statistics and making presentations to the Portsmouth City Council, who will be providing PHS the annual grant set forth herein;
    - the point of contact for Portsmouth400, responding to both media and community members pitching ideas to include in the program and want to participate;
    - coordinating activities with City of Portsmouth staff; and
    - acting as liaison to the Portsmouth400 Steering Committee, offering logistical and creative input on the organization of ongoing and developing programs.

13. **Designate** both the Executive Director of PHS, or her designee, and the City Manager, or his designee, as ex officio members of the Portsmouth400 Steering

Committee, of which the Mayor and another Mayor-appointed City Councilor will be a member of.

14. **Meet** regularly with City Manager or designee to keep City apprised of progress and provide the City a financial statement on an annual basis including a summary of revenues raised and expenditures.

15. **Provide** City Council with quarterly updates on the program's development, with more frequent presentations as 2023 approaches.

C. Miscellaneous:

1. This Agreement may be amended, waived, or discharged only by an instrument in writing signed by the parties hereto.

2. This Agreement shall be deemed to have been entered into in the State of New Hampshire and shall be construed in accordance with the laws of the State of New Hampshire.

3. Either party may terminate this Agreement without cause upon six (6) months written notice to the other party.

4. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties and supersedes all prior agreements and understandings relating hereto.

5. Any notice by a party hereto to the other party to this Agreement shall be provided as follows:

To City of Portsmouth	To PHS
Attn: City Manager	Attn: Executive Director
City of Portsmouth	Portsmouth Historical Society
1 Junkins Ave.	10 Middle St.
Portsmouth, NH 03801	Portsmouth, NH 03801

Executed this 9th day of January, 2018.

The City of Portsmouth, ~~New Hampshire~~

John Bohenko, City Manager

The Portsmouth Historical Society

Kathleen Soldati, Executive Director

Portsmouth Historical Society

Portsmouth400

10 Middle Street, Portsmouth, New Hampshire 03801
603-436-8433 www.portsmouthhistory.org

Request for Grant
Portsmouth400 Trust
August 8, 2018

John Bohenko
City Manager
City Hall
Portsmouth, NH 03801

Dear Mr. Bohenko and City Council;

We kindly request the City of Portsmouth to consider approving continued funding for **Portsmouth400** with the City granting $1.00 for every $2.00 raised by PHS up to a maximum of $25,000. The Grant money would support the Director of Portsmouth400 salary and a modest overhead of about 15%.

Susan Labrie was hired as the Director in December 2017 by the Steering Committee to continue the efforts and activities relating to the promotion of Portsmouth400 celebrations.

Since January, we have focused on bringing Portsmouth400 to life in the community through community outreach and fundraising.

Celebrating the 400th anniversary of Portsmouth was not on the radar of most people six months ago. Through diligently working with community leaders and public outreach, the Director of Portsmouth400 and the staff of Portsmouth Historical Society (PHS) have increased public awareness and infused excitement and anticipation of what can be done to celebrate such a milestone.

Portsmouth400 is designed to be a positive vehicle to connect and enrich the community while bridging the past to the future. Organizations and individuals are eager to join in the movement with support and ideas.

Two public input sessions were held in June. With over 16 volunteers, and a programmed presentation, 70 people enjoyed working together to imagine what can be accomplished in the years leading up to and beyond 2023, creating legacies to be inclusive of all ages. Participants ranged in age from late teens to 90 years old. Residents, professionals, historians, city board and staff members, nonprofit staff and trustees, educators and leaders attended to share ideas while inspiring those around them. Two themes common to both sessions were

"*involving school age children/education"* and "*collecting oral history of the older population, including those who have contributed to Portsmouth's' success*". One individual was so impressed with the results that he donated $5,000.

Additional public input and informational sessions will be held in the fall. Several nonprofits have requested a separate input session to brainstorm on ways to collaborate to produce programming/events that complement each other and/or work together to combine ideas to celebrate the history, culture and art of Portsmouth.

Please refer to the summary of our achievements since January 2018, attached, "*Portsmouth400 Achievements January 1, 2018 – June 30, 2018"*.

Through an "*Early Adopter*" campaign, we received donations of $20,300 in cash and $35,000 in pledges; please note *"Portsmouth400 Summary of Donations/Pledges January – June 2018"* attached.

The City's continued financial support will allow Portsmouth400 to focus on several ambitious goals as listed in the Table "*Portsmouth400 Goals June – December 2018*" (attached). A few of the goals are:

1. Organize additional Public Input and Informational Sessions to create task forces;
2. Develop a comprehensive strategic plan, which includes marketing and fundraising, to be presented to the City for approval by the end of 2018;
3. Discuss with educators how to develop an interactive curriculum to engage local students;
4. Create harmonious relationships with other seacoast communities;
5. Structure a plan to systemize existing oral history and create new opportunities to capture people on video; and
6. Raise additional money through active fundraising.

We are grateful for your continued enthusiasm in supporting Portsmouth400! Thank you in advance for your consideration.

Director of Portsmouth400
Susan Labrie

Kathleen Soldati
Executive Director of Portsmouth Historical Society

cc: Denise Wheeler, Peter Loughlin co-chairs of Steering Committee

Portsmouth Historical Society

Portsmouth400 Achievements
January 1, 2018 – June 30, 2018
Director of Portsmouth400 Started December 1, 2017

These achievements are a result of efforts of the Director with support from PHS staff, City staff, Steering Committee, and volunteers

Action / Goal	Result / Metric
Create Fundraising Initiatives/Sponsorship Opportunities • Raise $50,000 in combination of Pledges and cash • Identify and meet with potential fundraising sources	1. Raised a total of $53,300 in combination cash and pledges a. Received cash of $18,300 b. Received two pledges for $5,000 and one for $25,000 (total pledges = $35,000) c. Received two verbal pledges totaling $16,000 2. Built relationships with individuals and business owners for long term high value pledges 3. Two individuals who have pledged have offered to go on asks with Director 4. Met with Sheraton for insight on hotel sponsorships 5. Met with 9 individuals/organizations as funding prospects 6. Consulted with local fundraisers, such as Jude Blake, Tim Alison, Zach Slater for input on strategy and connecting with other prospects 7. Identified fundraising sources such as Flat Breads, Seacoast Half Marathon, Fabulous Finds, NH Charitable Foundation, various grants, Seacoast Running Series, Rotary, Clipper Foundation 8. Created Fundraising Work Group, including board member and local young professional 9. Met with NH Charitable Foundation who is interested in developing a relationship 10. Developed relationship with UNH grant writers

Action / Goal	Result / Metric
Hold Public Input Sessions • Engage Public • Identify common themes and direction of community	1. Updated PHS Portsmouth400 webpage to include information on sessions and a public portal for those who could not attend to "share your thoughts" 2. Developed training manual and provided in-person training for facilitators 3. Recruited 16 volunteers to facilitate 4. Investigated potential venues, including costs and logistics, selected Library which allowed us to use rooms at no cost 5. Consulted with professional facilitators for advice on invitations, timing, logistics, presentations, materials etc. 6. Developed community outreach campaign, framework, logistics, time line for successful execution of public sessions 7. Two held in June at Portsmouth Public Library 8. Over 80 RSVPs; 70 attended, some coming from Hampton, NH 9. Entertaining agenda to engage public with introduction by Mayor Blalock, presentation and PowerPoint by Dennis Robinson, short play by Pontine Theater. 10. On PHS Portsmouth400 webpage through the public portal -18 people shared thoughts on Portsmouth400 ideas 11. Press Release went all media outlets, including Associated Press and Portsmouth Herald 12. NHPR called for interview on Portsmouth400 and the public input sessions 13. Estimate 1,000 volunteer hours = $24,960
Network • Create awareness, excitement and "buy in" from community leaders/organizations • Identify potential volunteers • Encourage ideas	1. Met with over 20 community leaders of History, Arts and Culture; Executive Directors and Board of Trustees, from organizations such as the Music Hall, Strawbery Banke Museum, Seacoast Science Center, PPAF, Seacoast Rep, Pontine, PMAC, Portsmouth Chamber etc. 2. Met with executive directors of social organizations as well to promote collaboration, such as Cross Roads, Gather, Chase Home 3. Met with UNH board members, Dean Bostic, UNH Student Internship Director, professors

Action / Goal	Result / Metric
• Establish Portsmouth400 in the Community as credible	4. Met with Portsmouth High School history/civics teacher Sam Tombarelli, 5. Attended networking opportunities such as Portsmouth Chamber events, RAIN, Veterans Count, Sippin' for Seals, 100-Club Networking events, PMAC fundraiser, Rye Historical Society Fund Raiser, UBS Financial Seminar (met David Choate ex-navy seal with Portsmouth roots, interested in participating in the P400), West End Meetings, NHBCA, Catapult Networking, Portsmouth Historic Sites 6. Several nonprofits have started thought process of what their contribution will be for 2023 7. Created list of volunteers and interested parties, recruited 20 volunteers for various advisory groups, input sessions, etc. 8. Established relationship with volunteer coordinators from Seacoast Science Center, Strawbery Banke and Music Hall to help create a volunteer pool
Establish Regional Partnerships • Rye, Newcastle, Dover • Plymouth, MA	1. Presented Portsmouth400 vision to both Rye and Newcastle Historical Societies 2. Established working relationship with Dover 400 Director 3. Created interest for all four communities to meet to discuss working together 4. Met with Plymouth 400 Director, who shared her strategy, PowerPoint, concerns, challenges etc.
Create Procedures for City Finances/Portsmouth400 Trust Manage Budget • Establish Portsmouth400 Trust/City Finance Department Procedures/Policies • Establish Internal Finance	1. Met with City Finance Staff to understand Trust procedures 2. Developed financial management process with help of City Finance Director; created process and deposit sheets accepted by city 3. Systems in place for smooth process of depositing funds into Portsmouth400 Trust 4. Four deposits have been made successfully 5. Developed internal reporting procedures, thank you letters, internal data management, and deposit procedures 6. Created donate button on PHS Portsmouth400 webpage that links to Portsmouth400 Trust 7. System in place for recurring pledge payouts

Action / Goal	Result / Metric
Management for Pledges, donations, donor management	8. Control budget by utilizing in-house talent and resources 9. Oversee and manage costs through mindful expenditures
Steering Committee Guidance	1. Hired Director who started in December 2. Meets monthly 3. Helped develop framework for Public Input Sessions 4. Oversees, guides, provide direction and support for Directors efforts 5. Evaluated strengths and needs of committee 6. Identified possible additional members with specific skills 7. Approved short term plan and goals
Create Marketing Campaign • Registered trade names • Public Input Sessions • Information Dissemination • Social Media • Create RFP	1. PHS Hired a part time Director of Marketing in May 2. Created marketing committee of in-house talent, including Dennis Robinson 3. Established - #portsmouth400 4. Updated PHS Portsmouth400 web page with public portal and email for questions, press releases, information and donate button 5. E-news – three shout-outs, one dedicated 6. Created marketing collateral as a fundraising tool 7. Information disseminated through Portsmouth Chamber, local press, Seacoast Lately, Portsmouth Love Letter, Catapult, and several other platforms that we have established relationships 8. Bi-weekly column by Dennis Robinson focused twice on Past Portsmouth400 celebrations 9. Created draft RFP for Marketing Agency with assistance from Marketing Director, other marketing professionals to be considered for future use 10. Met with Stout Heart and Rumbletree Agencies for input on draft RFP to ensure the request is clear and measureable 11. Engaged Diane Devine, Raya on Assignment, and Maggie Sutherland on

Action / Goal	Result / Metric
	marketing strategies and information needed for a marketing plan
Create Awareness through Positive Press	November 29, 2016: http://www.seacoastonline.com/news/20161129/portsmouth-prepares-to-fund-400th-anniversary-in-2023 November 11, 2016 Portsmouth Prepares to Fund 400th in 2023 - http://www.seacoastonline.com/news/20161129/portsmouth-prepares-to-fund-400th-anniversary-in-2023 December 6, 2016: http://www.seacoastonline.com/news/20161206/council-oks-100k-for-portsmouths-400th-anniversary August 23, 2017 Historical Society Seeks director for Portsmouth400: http://www.seacoastonline.com/news/20170823/historical-society-seeks-director-for-portsmouth400 December 18, 2017 Susan Labrie to lead Portsmouth400 celebration: http://www.seacoastonline.com/news/20171218/susan-labrie-to-lead-portsmouth400-celebration June 4, 2018 Portsmouth400 seeks input for June forums: http://www.seacoastonline.com/news/20180604/portsmouth400-seeks-public-input-for-june-forums

Action / Goal	Result / Metric
	June 11, 2018 How should we celebrate Portsmouth400: http://www.seacoastonline.com/news/20180611/how-should-we-celebrate-portsmouth400 Portsmouth Prepares for its 400 birthday Five Years in Advance http://nhpr.org/post/portsmouth-prepares-its-400th-birthday-five-years-advance August 1, 2018 Party Like its 2023: http://www.seacoastonline.com/news/20180701/portsmouth-get-ready-to-party-like-its-2023 July 15, 2018 Locals Galvanized by Portsmouth400 Rally Cry: http://www.seacoastonline.com/news/20180715/locals-galvanized-by-portsmouth400s-rallying-cry
Create opportunities to "pass the torch" to the next generation • UNH • Great Bay Community College • Young Professionals /families • Elementary – High School	1. UNH Senior Capstone class spent one semester focused on creating a marketing plan to help engage the younger generation 2. Working with UNH on intern possibilities 3. Developed relationship with Dawn Cavito, Hospitality Dean at GBCC 4. Reached out to several young professionals who are engaging their peer group to be involved and contribute – one is volunteering 5. Catapult president is eager to have us present to his group and inspire volunteers. 6. Met with Sam Tombarelli, Portsmouth High School History teacher, for student involvement opportunities 7. Created Seacoast Education Coalition for Portsmouth400 for integrating existing

Action / Goal	Result / Metric
	non-profit organizations with the schools, met twice
Create Strategic Plan	1. Received guidance for strategic plan content utilizing professional strategic planners (*Rick Smith, Janet Davis, and Allan "Chad" Chadwick of Piscataqua Maritime Commission)* and nonprofit executive directors 2. Several tasks identified by strategists for understanding logistics and reporting required investigation and refinement 3. Ideas generated through Public Input Sessions to be used to create the plan 4. Met with Director of Plymouth 400 to discuss her experience with their strategy 5. Estimated volunteer hours: 40 x $24.46 = $978.40
Identify Possible Events/Programs etc. • Assign volunteers to investigate • Meet with those interested and provide direction and support	1. Tall Ships – Piscataqua Maritime Commission planning on helping to promote the Portsmouth400 and invite extra special tall ships for 2023 2. Peter Rice – creating strategy for military outreach 3. Strawbery Banke – renovating house; working with Kent Stevens on play 4. Gundalow – interactive maritime history exhibit 5. Parma, PSO - interested in creating music scores for Portsmouth400 6. Pod Casts – NHPR, local pod cast creators, interested in helping 7. Film Makers – ie Sweaty Turtle, Doug Webster, and others – creating a vision for documentary, short films, videos 8. Oral history – meeting with elders and family for thoughts – getting a list of people to interview 9. History of last 50 years

END

Portsmouth Historical Society

Portsmouth400 Goals
July 1, 2018 – December 31, 2018

Goal/Action	Due Date
Raise additional $30,000 **Combination of pledges and cash by End of Year** *Annual goal to be a line item in PHS budget –* • Identify and meet with 8 new prospects • Use existing donors for introductions • Identify industries and expected support	

Identify Fundraising Initiatives/Sponsorship Opportunities
 	
• Fundraising Task Force
• Create Tiered Partnerships/Sponsorship Opportunities/Levels of Giving
  ○ Individual
  ○ Partnerships
  ○ Corporate
• Develop sponsorship package - October
  ○ Hospitality Sponsorship/Support
  ○ Corporate
• Apply for Community Sponsor – December (deadlines vary)
  ○ Seacoast Half Marathon
  ○ Rotary – Seacoast and Portsmouth
  ○ Flat Breads Pizza
  ○ Fabulous Finds	

• Update NH Charitable Foundation - September • Meet with Portsmouth Regional Hospital – November • Identify opportunities for promoting the Portsmouth400 as a tool for economic development	
Finalize and Submit Annual Report • Create Budget for Producing • Timeline/deadlines for finalizing	

Manage Finances
 	
• Create budget for PHS
  ○ Marketing
  ○ Fundraising
  ○ Collateral	

Hold Public Input Sessions • Fall Sessions ○ Up to three - Nonprofits, Young Adult and Public, Corporate • Summary/Quantify results • UNH Research Questionnaire	

Create Marketing Campaigns • Promote Fall Public Input Sessions • Develop Strategy for fall 2018/spring 2019 • Create and engage in Radio/video/press opportunities • Create Awareness through Positive Press	

Create Strategic Plan 2019 - 2023
 	
• Work with Advisory Group to create plan
  ○ Marketing
  ○ Fundraising
  ○ Community Engagement
  ○ Young Professionals
 	
• Create Critical Time Line
  ○ Sponsorships
  ○ Events
  ○ Through 2023	

Create Task Forces
 	
• Create expectations/goals/criteria for Task Forces
  ○ Education
  ○ Oral History
  ○ Hospitality/Food/Beer
  ○ Others as they appear	

Steering Committee
 	
• Populate remaining seats
  o Identify skills needed
  o Identify persons interested
• Create Subcommittees/Advisory Groups/Task Forces
  o Identify sub-committees needed with descriptions and expectations
  o Populate	

Engage Younger Generation
Create campaign to "pass the torch"
 	
• Establish the Task Force "Seacoast Education Coalition for Portsmouth400"
  o Focus on:
  ▪ Elementary - High School Students
  ▪ Inspire Class of 2023
  ▪ Create framework for engaging classes of all ages in the 2023 celebration
• Begin Strategizing for engaging college students by talking with:
  o UNH
  o GBCC
• Investigate/create internship opportunities
• Develop draft plan to engage young professionals and families with history, arts and culture – incorporate into Strategic Plan	

Increase Board of Trustees Involvement • Communication of all events • Attendance at all events • Submit monthly Director Reports to Board with action items with talking Points for trustees to promote	

Re-establish Sister Cities • Meet with Sister City Committee • Identify Portsmouth400 connections **Re-enforce relationships with history, arts and culture organizations and Seacoast Communities** • Continue to meet/communicate with them quarterly, network, and seek out opportunities • Host Input Session to focus on collaborating ideas and projects • Organize meeting with Rye, Newcastle, and Dover	
Oral History/Documentary/Publications • Investigate potential with Portsmouth High School and others for oral history of our elders and storytellers • Discuss documentary concept with film makers • Discuss potential publication of last 50 years history • Investigate Pod Cast potential	

END

PORTSMOUTH400
1623-2023

Become an Early Adopter: Help Bring the Anniversary to Life

How do you want to celebrate the history of our remarkable city? What do you want Portsmouth to look like in 2023, 2073, for us, for our children and grandchildren?

The Portsmouth400 is a multi-year celebration of the diverse and dramatic evolution of NH's only seaport, a celebration that will layer in programs and events leading up to and beyond 2023.

Portsmouth Historical Society and the City of Portsmouth have partnered to convene the individuals and organizations that will shape the anniversary.

We are in the initial stages of planning and need your help. Join us as an Early Adopter to fund community outreach and the creation of strategic and marketing plans for the celebrations.

"If you have ever had the opportunity to live, work, stay, or play, in Portsmouth, you have won the lottery" – George Carlisle, Olde Port Properties, Early Adopter for the Portsmouth400

Our Early Adopters will provide key leadership in getting the project up and running. With your support we will seek public input and create an engagement plan to involve all those interested in participating in the design of Portsmouth400 events.

We're just at the beginning of envisioning how to mark the anniversary.
As an Early Adopter, you will leave behind an important legacy in our community. Thank you for being a leader!

Goals for Portsmouth400:

- 100% participation.
- Successfully pass the torch to the younger generation through education and engagement.
- Motivate individuals and organizations to bring ideas, resources and commitment forward.
- Offer multi-year programs for all ages to foster connection to our heritage and community.
- Reinforce our communal spirit and pride in Portsmouth as well as build confidence in our shared future.
- Preserve our vibrant history, arts and culture.

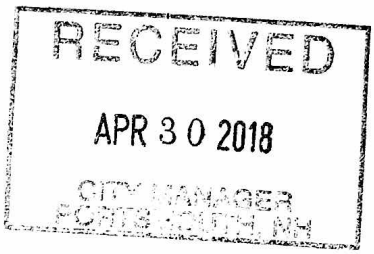
For more information or to become an Early Adopter, please contact Susan at: susan@portsmouthhistory.org

Portsmouth400 is a program of the Portsmouth Historical Society, a 501(c)3 nonprofit, in partnership with the City of Portsmouth. Donations and funding will be managed by the Portsmouth400 Trust.

Portsmouth400
Summary of Donations/Pledges
January - June 2018
(showing city grant money from 2017)

Name	Cash or Pledge	Amount	Comments
City of Portsmouth	Grant	$50,000	Deposited July 2017
City of Portsmouth	Grant	$50,000	Deposited December 2017
Harold Whitehouse	Cash	$300	Deposited into Trust
Anonymous	Cash	$10,000	Deposited into Trust
Olde Port Properties	Pledge	$5,000	Received $1,000 Deposited into Trust
Zach and Nancy Slater	Pledge	$5,000	Received $1,000 Deposited into Trust
Chinburg Properties	Cash	$3,000	Deposited into Trust
Ed and Fran Mallon	Cash	$5,000	Deposited into Trust
Steve Scott	Pledge (for fireworks)	$25,000	Will provide in 2022/2023

SPINNAKER POINT CONDOMINIUM
70 SPINNAKER WAY
PORTSMOUTH, NH 03801
(603) 431-9208 Office
(603) 431-9308 Fax
mgmt@spinnakerpointnh.net



April 24, 2018

Mr. John P. Bohenko
City Manager
1 Junkins Avenue
Portsmouth, NH 03801

Re: Osprey Landing Water Tank Removal

Dear Mr. Bohenko:

The Board of Directors is delighted to hear that the final phase of the water tank removal project is slated to begin in early May. Please share our appreciation with the city's staff; Deputy Director, Brian Goetz; Assistant City Engineer, Ray Pezullo; and Steve Rickerich of Ransom Engineering who have respected the Association's interests and worked closely with our Management Agent throughout each phase of the project.

Moving forward we are most interested in the City's plans for this parcel of land, the removal of the existing Water Easement, returning the landscape back to the same condition as prior to the construction, and the potential for the City to consider returning this parcel of land to the Association.

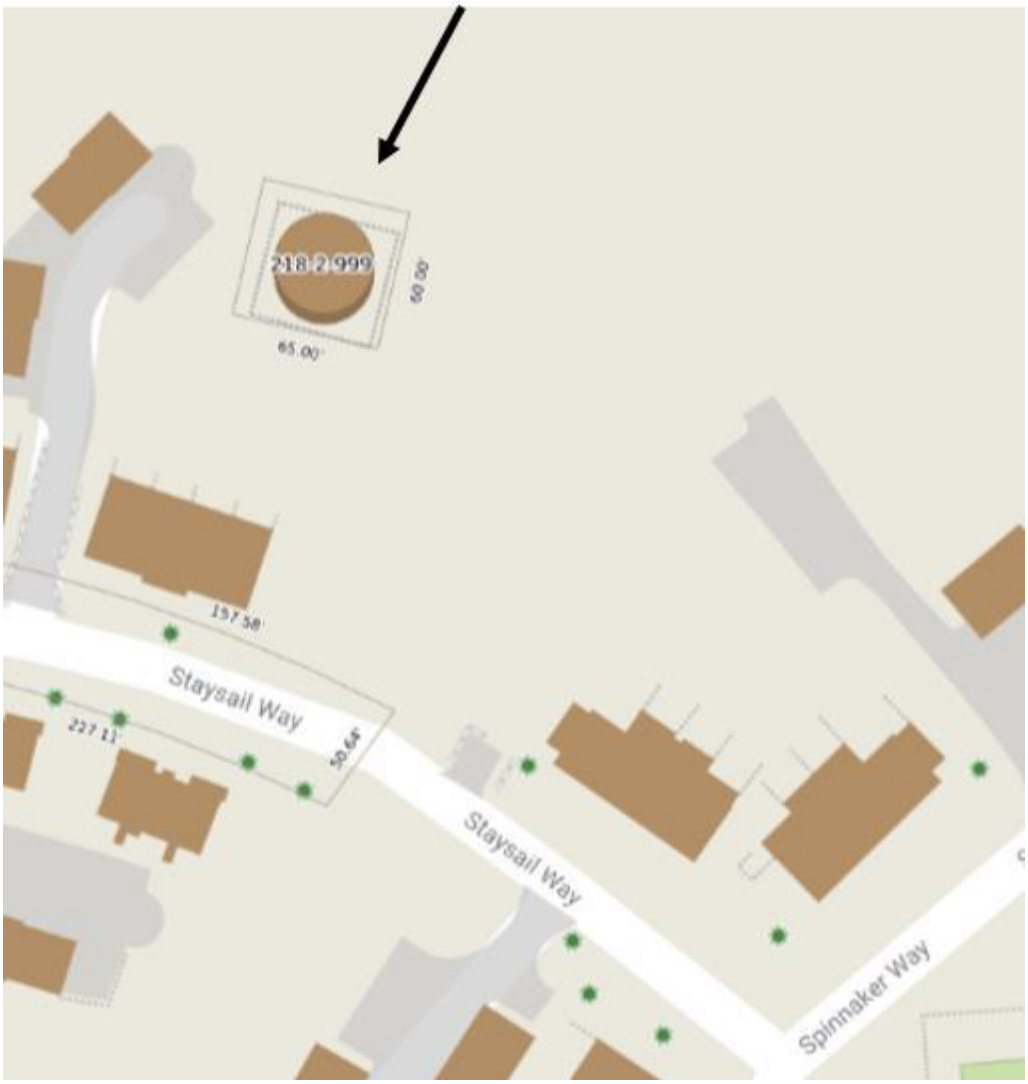
We look forward to hearing back from you at your earliest convenience.

Best Regards,

BOARD OF DIRECTORS
SPINNAKER POINT CONDOMINIUMS

Thomas Szopa,
President

Osprey Landing Tank Property



4/21/87

WATER EASEMENT

BK2675 P2511

KNOW ALL MEN BY THESE PRESENTS that Portsmouth Coastal Development Partners, a New Hampshire partnership having a mailing address of 40 Randall Avenue, Freeport, New York 11520

WITH QUITCLAIM COVENANTS convey to the City of Portsmouth, New Hampshire, a municipal corporation having a place of business at 126 Daniel Street, Portsmouth, County of Rockingham, State of New Hampshire

26421

A perpetual easement for purposes of maintaining water lines as follows: Lower property located in the City of Portsmouth

Apr 30 10 35 AM '87

ROCKINGHAM COUNTY REGISTRY OF DEEDS

The City shall have a perpetual easement ten feet on either side of all water lines shown on plans entitled "RECORD DRAWING, PORTSMOUTH WATER WORKS, Seacrest Water System, Scale: 1" = 1' drawn by T.V. Cravins revised 3/6/84" except that this water line easement shall be less than ten feet on either side of the existing mains where a ten foot width would bring the easement within two feet of an existing building.

The purpose of this easement is to allow the City of Portsmouth to continue to maintain all water lines as they are shown on the above plans.

Grantor agrees that the Grantee is not responsible for any damages caused during the Grantee's normal maintenance, repair and replacement of the easement facility to any new structures the Grantor has constructed within the above described easement.

Meaning and intending to convey an easement for water purposes in and across portions of a parcel of land conveyed to Grantors by deed of Timothy G. Pearson, Trustee of the Ribblesdale Trust by deed dated July 25, 1985 and recorded in the Rockingham County Registry of Deeds at Book 2509, Page 1403.

This easement is granted upon the express condition that Grantee agrees to repair any and all damage and disturbance caused by the use of the right-of-way area or the replacing of the water line therein, such repair to restore any disturbed area to its condition prior to such disturbance, all at the Grantee's sole expense. Grantee further to keep and maintain the right-of-way area in good condition, repair and working order at all times at their expense. Grantee agrees that it will at all times keep the right of way area and water line in conformity with any and all federal, state, local and other governmental or applicable law or regulation at the Grantee's sole cost and expense.

The Grantor reserves the right from time to time at Grantor's expense to relocate said right-of-way area and the water line, at Grantor's sole cost and expense, to any other portion of the Grantor's land, so long as such relocation does not unreasonably interfere with Grantee's use thereof. Grantor agrees that before making any such relocation, it shall seek Grantee's consent to the relocation, which consent shall not be unreasonably withheld.

The terms and conditions hereof shall be binding upon and inure to the benefit of the Grantor and Grantee and their respective heirs, executors, legal representatives, successors in title, and assigns.

Signed on this 27th day of April, 1987.

PORTSMOUTH COASTAL DEVELOPMENT PARTNERS

Witness

By: _____
Richard Schlesinger

Witness

By: _____
William Weinstein

STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

On this 28th day of April, 1987, personally appeared the above named Richard Schlesinger d/b/a Portsmouth Coastal Development Partners, known to me or satisfactorily proven to be the person described in the foregoing instrument, and acknowledged that he executed the same in the capacity therein stated and for the purposes therein contained.

Justice of the Peace/Notary Public

STATE OF New York
COUNTY OF Nassau

On this 27th day of April, 1987, personally appeared the above named William Weinstein d/b/a Portsmouth Coastal Development Partners, known to me or satisfactorily proven to be the person described in the foregoing instrument, and acknowledged that he executed the same in the capacity therein stated and for the purposes therein contained.

Justice of the Peace/Notary Public

ELIZABETH ROMEO
Notary Public, State of New York
No. 4982811
Qualified in Nassau County
Term Expires January 12, 19[illegible]

1462-122

Ref. John Whaley

1462 122 KNOW ALL MEN BY THESE PRESENTS, that we, Randal Holden of Larchmont, in the County of Westchester and the State of New York, and Ralph M. Schwartzberg and Isadore Fishman of Chicago, in the County of Cook and the State of Illinois, for and in consideration of the sum of One ($1.00) Dollar and other valuable consideration to us in hand paid by the City of Portsmouth, a Municipal Corporation in the County of Rockingham and State of New Hampshire, the receipt whereof we do hereby acknowledge, have given, granted, bargained, sold, and by these presents do give, grant, bargain, sell, alien, enfeoff, convey and confirm unto the said City of Portsmouth, and its successors and assigns forever,

A certain parcel of land with the water tank so-called, thereon, and more particularly described as follows:

A certain tract or parcel of land hexagonal in shape, 30 feet on each side as now fenced, surrounding the existing water tank, and bounded on all sides by other land of the grantors. Containing 2,340 square feet.

Together with all the water pipes, conduits, hydrants, and every appurtenance to said water line pertaining as shown upon a plan entitled, "Water Plan, Wentworth Acres, Plot Plan, September, 1957, John W. Durgin, C. E.", and delineated on said plan in purple ink; with the right of the grantees to go upon the land of the grantors for the purpose of maintaining, repairing, or replacing said water line wherever situate in said Wentworth Acres, said plan to be recorded in Rockingham County Registry of Deeds, and the right of ingress and egress to said water tank over land of the grantors.

TO HAVE AND TO HOLD the granted premises, with all the privileges and appurtenances thereto belonging, to the City of Portsmouth, the said grantee, and its successors and assigns, to it and its only proper use and benefit forever.

And we, the said grantors, for ourselves and our heirs, administrators and assigns, do hereby covenant, grant, and agree to and with the said grantee, and its successors and assigns, that until the delivery hereof, we are the lawful owners of the said premises and we are seized and possessed thereof in our own right in fee simple; and have the full power and lawful authority to grant and convey the same in the manner aforesaid; that the said premises are free and clear from all and every incumbrance whatsoever, excepting: a mortgage to the United States of America, acting by and through the Public Housing Administration, and a mortgage to Gabriel Elias, under which mortgages, by agreement, the mortgagees have agreed to release the within described property to the City of Portsmouth, and the grantors herein agree to apply to said United States of America and to the said Gabriel Elias for the release of the within described property from the said mortgages; and that we and our heirs, administrators, and assigns, shall and will WARRANT and DEFEND the same unto the said grantee and its successors and assigns against the lawful claims and demands of any person or persons whomsoever.

And we, Dorothy Holden, wife of Randal Holden, and Celia Schwartzberg, wife of Ralph M. Schwartzberg, and Sophie Fishman,

1462-123

1462 123

wife of Isadore Fishman, do hereby release to the City of Portsmouth our rights of dower in the above-mentioned premises.

And we do each of us hereby release all rights of HOMESTEAD secured to us, or either of us under and by virtues of any law of the State of New Hampshire and all other rights and interests therein.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 22nd day of January in the Year of Our Lord, 1958.

Signed, sealed, and delivered
in the presence of:

Ann E. Meyer
Ann E. Meyer
Josephine B. Kid
Josephine B. Kid
Josephine B. Kid
Josephine B. Kid

Randal Holden
Dorothy Holden
Ralph M. Schwartzberg
Celia Schwartzberg
Isadore Fishman
Sophie Fishman

STATE OF ILLINOIS
Westchester, ss.

January 26 1958

Personally appeared the above-named Randal Holden and Dorothy Holden and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Notary Public in the State of New York
Appointed for Westchester County
Commission Expires March 30, 1959

NOTARY PUBLIC

STATE OF ILLINOIS
Cook, ss.

January

Personally appeared the above-named Ralph M. Schwartzberg and Celia Schwartzberg and Isadore Fishman and Sophie Fishman and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Evelyn Meyer
NOTARY PUBLIC
My Commission expires: Jan 8 1961

Rec. & recorded Mar. 31, 3:40 P.M. 1958

BK 3078 P1969

QUITCLAIM DEED

G-FOUR, L.L.C., a New Hampshire limited liability company, of Manchester, Hillsborough County, New Hampshire, for consideration paid, grants to the CITY OF PORTSMOUTH, a New Hampshire municipal corporation with an address of 1 Junkins Avenue, Portsmouth, Rockingham County, New Hampshire 03801, with quitclaim covenants, certain land located in Portsmouth, New Hampshire, described in Exhibit A attached hereto, being a rectangular tract of land under and surrounding a water tower owned by grantee; together with the right of access to the said water tower over other land of grantor described in Exhibit B attached hereto, and over private roads connecting the latter-described land to Circuit Road and Market Street, as shown on the Subdivision Plan referred to in Exhibits A and B.

This deed is being given in order to reconfigure the water tower parcel in accordance with the Subdivision Plan, and to redefine the access easement area in accordance with the said plan. The water tower, a hexagonal parcel surrounding it, and a nonspecific access easement were originally conveyed to the grantee by a warranty deed from Randal Holden, Ralph M. Schwartzberg and Isadore Fishman dated January 23, 1958, and recorded in the Rockingham County Registry of Deeds at Book 1462, Page 122. The new rectangular parcel described and conveyed in this deed completely surrounds and contains the hexagonal parcel originally granted in the said warranty deed.

For grantor's title, see Quitclaim Deed from Stanley Miller, Trustee in Bankruptcy for Portsmouth Coastal Development Partners, to grantor of near or even date, recorded herewith.

This conveyance is exempt from real estate transfer tax under NHRSA 78-B:2, I, as a transfer of title to a city.

EXECUTED on ~~October~~ November 7, 1994.

G-FOUR, L.L.C.

By: _____
John C. Madden, Sole Manager
Duly Authorized

[Sign in black ink]

STATE OF NEW HAMPSHIRE
COUNTY OF Hillsborough

The foregoing instrument was acknowledged before me on this 7th day of ~~October~~ November, 1994, by John C. Madden, sole manager of G-Four, L.L.C., a New Hampshire limited liability company, on behalf of the company.

Notary Public/~~Justice of the Peace~~

My commission expires:

[Sign in black ink]

JOHN M. SULLIVAN
NOTARY PUBLIC, NEW HAMPSHIRE
MY COMMISSION EXPIRES JANUARY 22, 1998

NOTARY PUBLIC NEW HAMPSHIRE

EXHIBIT B
TO QUITCLAIM DEED
FROM G-FOUR, L.L.C.
TO CITY OF PORTSMOUTH

A certain tract of land located off Market Street, in Portsmouth, Rockingham County, New Hampshire, shown as "Proposed Access Easement to City of Portsmouth" on a certain plan entitled, "Subdivision Plan of Mariners Village & Spinnaker Point Condominium, Market Street, Portsmouth, New Hampshire," by Associated Engineering Services, dated October 23, 1993, and recorded herewith in the Rockingham County Registry of Deeds, being bounded and described as follows:

Beginning at a point on the northerly side of a private road shown on the said plan as Parcel R-1, and formerly known as Circuit Road, at the westernmost corner of the tract;

thence running N 13° 51' 14" E a distance of 122.86 feet to a point;

thence running N 32° 03' 09" E a distance of 96.78 feet to a point;

thence running S 77° 37' 00" E a distance of 127.35 feet to a point;

thence running S 12° 23' 00" W a distance of 114.00 feet to a point;

thence running N 77° 37' 00" W a distance of 100.58 feet to a point;

thence running N 13° 51' 14" E a distance of 17.87 feet to a point;

thence running N 77° 37' 00" W a distance of 34.92 feet to a point;

thence running S 13° 51' 14" W a distance of 118.50 feet to a point, all of the preceding courses running through Lot 2-0900;

thence running westerly along a curve to the left having a radius of 789.00 feet, a distance of 25.00 feet along Parcel R-1 to the point of beginning.

Excepting and reserving that certain tract of land lying within the above-described tract, shown on the said plan as "Proposed Fee Simple to City of Portsmouth," and being further bounded and described in Exhibit A above.

f:\user\krm\madden\g4-city.wa

EXHIBIT A
TO QUITCLAIM DEED
FROM G-FOUR, L.L.C.
TO CITY OF PORTSMOUTH

A certain tract of land, with all improvements thereon, located off Market Street, in Portsmouth, Rockingham County, New Hampshire, shown as "Proposed Fee Simple to City of Portsmouth" on a certain plan entitled, "Subdivision Plan of Mariners Village & Spinnaker Point Condominium, Market Street, Portsmouth, New Hampshire," by Associated Engineering Services, dated October 23, 1993, and recorded herewith in the Rockingham County Registry of Deeds, more particularly bounded and described as follows:

Beginning at a point at the southeasternmost corner of the tract;

thence running N 77° 30' 07" W a distance of 65.00 feet to a point;

thence running N 12° 29' 53" E a distance of 60.00 feet to a point;

thence running S 77° 30' 07" E a distance of 65.00 feet to a point;

thence running S 12° 29' 53" W a distance of 60.00 feet to the point of beginning, all of the said courses being along Lot 2-0900.

Excepting and reserving the hexagonal parcel contained within the above-described rectangular parcel and previously conveyed to grantee by warranty deed from Randal Holden, Ralph M. Schwartzberg and Isadore Fishman dated January 23, 1958, and recorded in the Rockingham County Registry of Deeds at Book 1462, Page 122.

RETURN TO:
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

DRAINAGE EASEMENT DEED

Know All Persons By These Presents, **Seacoast Development Group, L.L.C.** a New Hampshire limited liability company with an address of 505 US Hwy 1 By-Pass, Portsmouth, County of Rockingham, State of New Hampshire (the "Grantor"), owner of property located on Rockingham Avenue, Portsmouth, New Hampshire, also identified as Portsmouth Tax Assessor's Map 235, Lot 2, described in a deed from V.S. Haseotes & Sons Limited Partnership to Grantor dated March 28, 1995, and recorded at the Rockingham County Registry of Deeds (the "Registry") at Book 3099, Page 2851 (the "Premises"), in consideration of the mutual promises set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the **City of Portsmouth**, a municipal corporation with an address 1 Junkins Avenue, Portsmouth, County of Rockingham and State of New Hampshire ("Grantee"), easements for drainage on the following portion of the Premises shown as "Drainage Easement to City of Portsmouth & Utility Easement to Eversource" on a plan entitled "Subdivision Plan, Rockingham Estates" dated September 20, 2016 and revised through July 12, 2018, prepared by MSC, a division of TFMoran, Inc. and recorded in the Registry as Plan _____ (the "Easement Plan"), bounded and described as follows (the "Easement Area"):

Beginning at a point in the Southerly sideline of Rockingham Avenue; said point being located S63°15'16"W a distance of 55.96 feet from an iron rod; thence through the said land of Seacoast the following eight courses: S26°44'44"E a distance of 10.00 feet to a point; thence proceeding S63°15'16"W a distance of 302.04 feet to a point; thence proceeding S71°15'48"W a distance of 77.21 feet to a point; thence proceeding S22°09'14"E a distance of 5.83 feet to a point; thence proceeding S67°50'46"W a distance of 17.01 feet to a point; thence proceeding N22°09'14"W a distance of 6.85 feet to a point; thence proceeding S71°15'48"W a distance of 63.51 to a point; thence proceeding N25°12'40"W a distance of 10.06 feet to a point in the southerly sideline of Rockingham Avenue; said point being located N71°15'48"E a distance of 38.24 feet from an iron rod; thence proceeding along the southerly sideline of Rockingham Avenue the following two courses: N71°15'48"E a distance of 158.19 feet to an iron rod; N63°15'16"E a distance of 301.34' to the point of beginning. Said Easement Area containing 4,704 square feet.

The purpose of this easement is to permit Grantee, within the Easement Area, the right to construct, grade, repair and maintain drainage swales, structures and associated improvements for the collection and discharge of surface water and to collect and discharge such surface water and to pass and repass over the Easement Area for the purposes thereto, but subject to the limitations set forth herein. Grantor further covenants to Grantee that it shall not erect any buildings or structures within the Easement Area; provided, however, that Grantor may, or may grant to third parties, the right to install above-ground or underground utilities and related infrastructure within the Easement Area in a manner not inconsistent with this easement.

The easements and restrictions granted herein are granted in perpetuity and shall run with the land.

Dated this ____ day of _____, 2018.

Seacoast Development Group, L.L.C.

By:_____

THE STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

On this ____ day of _____, 2018, personally appeared the above named in his capacity of _____ known to me or satisfactorily proven to be the person whose name appears in the within document and acknowledged that he executed the same for the purposes contained herein,

Before me,

_____
Notary Public/Justice of the Peace

RETURN TO:
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

DRAINAGE EASEMENT DEED

Know All Persons By These Presents, **Seacoast Development Group, L.L.C.** a New Hampshire limited liability company with an address of 505 US Hwy 1 By-Pass, Portsmouth, County of Rockingham, State of New Hampshire (the "Grantor"), owner of property located on Rockingham Avenue, Portsmouth, New Hampshire, also identified as Portsmouth Tax Assessor's Map 235, Lot 2, described in a deed from V.S. Haseotes & Sons Limited Partnership to Grantor dated March 28, 1995, and recorded at the Rockingham County Registry of Deeds (the "Registry") at Book 3099, Page 2851 (the "Premises"), in consideration of the mutual promises set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the **City of Portsmouth**, a municipal corporation with an address 1 Junkins Avenue, Portsmouth, County of Rockingham and State of New Hampshire ("Grantee"), easements for drainage on the following portion of the Premises shown as "Drainage Easement to City of Portsmouth" on a plan entitled "Subdivision Plan, Rockingham Estates" dated September 20, 2016 and revised through July 12, 2018, prepared by MSC, a division of TFMoran, Inc. and recorded in the Registry as Plan _____ (the "Easement Plan"), said easement to be fifteen (15) feet wide and centered on the as-built location of the drainage swale and located not more than twenty-five (25) feet from the southeastern (rear) boundary of the Premises (the "Easement Area").

The purpose of this easement is to permit Grantee, within the Easement Area, the right to construct, grade, repair and maintain a drainage swale and associated improvements for the collection and discharge of surface water and to collect and discharge such surface water and to pass and repass over the Easement Area for the purposes thereto, but subject to the limitations set forth herein. Grantor further covenants to Grantee that it shall not erect any buildings or structures within the Easement Area.

The easements and restrictions granted herein are granted in perpetuity and shall run with the land.

Dated this ____ day of _____, 2018.

Seacoast Development Group, L.L.C.

By:_____

THE STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

On this ____ day of _____, 2018, personally appeared the above named in his capacity of _____ known to me or satisfactorily proven to be the person whose name appears in the within document and acknowledged that he executed the same for the purposes contained herein,

Before me,

_____
Notary Public/Justice of the Peace

RETURN TO:
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

DRAINAGE AND WETLAND RESTORATION EASEMENT DEED

Know All Persons By These Presents, **Seacoast Development Group, L.L.C.** a New Hampshire limited liability company with an address of 505 US Hwy 1 By-Pass, Portsmouth, County of Rockingham, State of New Hampshire (the "Grantor"), owner of property located on Rockingham Avenue, Portsmouth, New Hampshire, also identified as Portsmouth Tax Assessor's Map 235, Lot 2, described in a deed from V.S. Haseotes & Sons Limited Partnership to Grantor dated March 28, 1995, and recorded at the Rockingham County Registry of Deeds (the "Registry") at Book 3099, Page 2851 (the "Premises"), in consideration of the mutual promises set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the **City of Portsmouth**, a municipal corporation with an address 1 Junkins Avenue, Portsmouth, County of Rockingham and State of New Hampshire ("Grantee"), easements for drainage and wetland restoration on the following portion of the Premises shown as "Drainage & Wetland Restoration Easement to City of Portsmouth" on a plan entitled "Subdivision Plan, Rockingham Estates" dated September 20, 2016 and revised through July 12, 2018, prepared by MSC, a division of TFMoran, Inc. and recorded in the Registry as Plan _____ (the "Easement Plan"), bounded and described as follows (the "Easement Area"):

Beginning at a point in the southerly sideline of Rockingham Avenue, at the Northwesterly corner of Lot 2, thence proceeding along said southerly sideline of Rockingham Avenue N71°15'48"E a distance of 38.24 feet to a point, said point being located S71°15'48"W a distance of 81.52 feet from an iron rod to be set at the corner of Lots 2 and 2-1; thence proceeding S25°12'40"E a distance of 171.58 feet to a point at the westerly sideline of Interstate 95; thence proceeding along said westerly sideline of Interstate 95 S51°42'48"W a distance of 175.96 feet to a New Hampshire Highway Bound in the easterly sideline of Spaulding Turnpike; thence proceeding along said easterly sideline of Spaulding Turnpike N39°02'18"W a distance of 73.02 feet to a New Hampshire Highway Bound; thence proceeding along said easterly sideline of Spaulding Turnpike N20°57'42"E a distance of 209.11 feet to the point of beginning. Said Easement Area containing 25,702 square feet (0.5900 acres).

The purpose of this easement is to permit Grantee, within the Easement Area, the right to construct, grade, repair and maintain a drainage impoundment and associated improvements for the collection and discharge of surface water, to retain and restore wetland plants and soils, and to pass and repass over the Easement Area for the purposes thereto, but subject to the limitations set forth herein. Grantor further covenants to Grantee that it shall not erect any buildings or structures within the Easement Area.

Said easements and restrictions are conveyed subject to the following conditions:

1. Grantee may not erect or install any drainage structures or impoundments within twenty (20) feet of the building envelope, as shown on the Subdivision Plan.
2. If any grading occurs within twenty (20) feet of the building envelope, then the Grantee shall plant a coniferous screen of trees at least six feet in height on, or as close as reasonably possible to, the building envelope line.
3. Any slopes within twenty (20) feet of the building envelope, as shown on the Subdivision Plan shall be at a minimum ratio of 4:1.
4. Grantee shall not block discharge of surface water from Lots 1-3 as shown on the Subdivision Plan.
5. The Easement Area shall be maintained in perpetuity as open space and used only for drainage and/or wetland restoration purposes as referenced above;
6. Access to the easement shall be from Rockingham Avenue only and Grantee shall not pass over Grantors adjacent land;
7. All structures and improvements constructed pursuant to this easement shall be maintained by Grantee.
8. Grantor may, but shall not be obligated, to enter the land for the purposes of mowing or any landscape maintenance as allowed by the City's Wetland Ordinance.
9. The sole remedy for the Grantor or Grantee for violations of this agreement shall be specific performance.

The easements and restrictions granted herein are granted in perpetuity and shall run with the land.

Dated this ____ day of _____, 2018.

Seacoast Development Group, L.L.C.

By:_____

THE STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

On this ____ day of _____, 2018, personally appeared the above named in his capacity of _____ known to me or satisfactorily proven to be the person whose name appears in the within document and acknowledged that he executed the same for the purposes contained herein,

Before me,

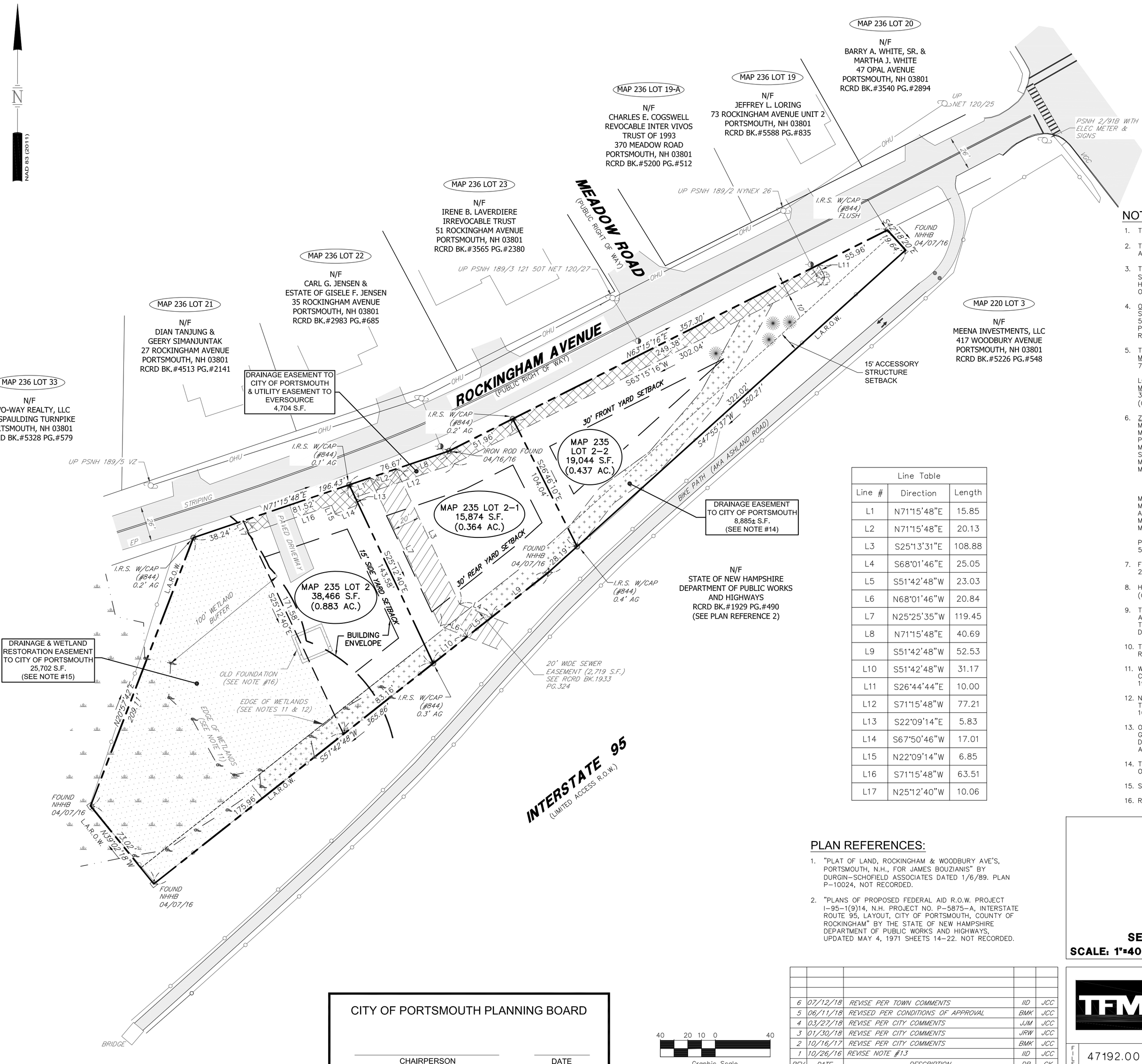
_____
Notary Public/Justice of the Peace

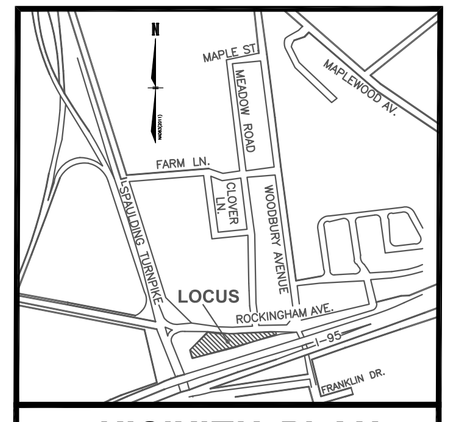
LEGEND

AC.	ACRES
AKA	ALSO KNOWN AS
BK./PG.	BOOK NO./PAGE NO.
EP	EDGE OF PAVEMENT
I.R.S.	IRON ROD SET 04/25/18
NET	NEW ENGLAND TELEPHONE
N/F	NOW OR FORMERLY
PSNH	PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
S.F.	SQUARE FEET
UP	UTILITY POLE
NHHB	NEW HAMPSHIRE HIGHWAY BOUND
	GUY POLE
	GUY WIRE
	SIGN
	TREE
	UTILITY POLE
	PROPERTY LINE
	EDGE OF WETLANDS
	CHAIN LINK FENCE
OHU	OVERHEAD UTILITIES
	ACCESSORY STRUCTURE SETBACK
	WETLANDS
	PAVEMENT
	CONCRETE
	SEWER EASEMENT
	UTILITY & DRAINAGE EASEMENT
	DRAINAGE EASEMENT
	DRAINAGE AND WETLAND RESTORATION EASEMENT

N

NAD 83 (2011)





VICINITY PLAN
NO SCALE

NOTES:

1. THE PARCEL IS LOCATED IN THE SINGLE RESIDENCE B ZONE (SRB).
2. THE PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 235 AS LOT 2.
3. THE PARCEL IS LOCATED IN FLOOD ZONE X (AREAS OF MINIMAL FLOODING) AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM) ROCKINGHAM COUNTY, NEW HAMPSHIRE, PANEL 259 OF 681, MAP NUMBER 33015C0259E AND PANEL 260 OF 681, MAP NUMBER 33015C0260E WITH EFFECTIVE DATES OF MAY 17, 2005.
4. OWNER OF RECORD:
   SEACOAST DEVELOPMENT GROUP, LLC
   505 INTERSTATE BY-PASS
   PORTSMOUTH, NH 03801
   RCRD BK.#3099 PG.#2851
5. TOTAL LOT AREA:
   MAP 235 LOT 2
   73,384 S.F. (1.694 AC.)

   LOT AREAS:

MAP 235 LOT 2:	MAP 235 LOT 2-1:	MAP 235 LOT 2-2:
38,466 S.F.	15,874 S.F.	19,044 S.F.
(0.883 AC.)	(0.364 AC.)	(0.437 AC.)

6. ZONE REQUIREMENTS:

MINIMUM LOT AREA:	15,000 S.F.
MINIMUM LOT AREA PER DWELLING UNIT:	15,000 S.F.
MINIMUM CONTINUOUS STREET FRONTAGE:	100 FEET
MINIMUM LOT DEPTH:	100 FEET
MINIMUM YARD SETBACKS:	
FRONT:	30 FEET
SIDE:	10 FEET
REAR:	30 FEET
MAXIMUM STRUCTURE HEIGHT:	35 FEET
MAXIMUM ROOF APPURTENANCE HEIGHT:	8 FEET
MAXIMUM BUILDING COVERAGE:	20%
MINIMUM OPEN SPACE:	40%

   PER THE CITY OF PORTSMOUTH, NEW HAMPSHIRE ZONING ORDINANCE ARTICLE 5, SECTION 10.521.
7. FIELD SURVEY WAS COMPLETED BY TCE & NJM IN AUGUST 2016 AND APRIL 2018 WITH A TOPCON SD103 AND TOPCON TESLA DATA COLLECTOR.
8. HORIZONTAL DATUM IS NAD83 (2011) AND THE VERTICAL DATUM IS NAVD88 (GEOID12B) PER STATIC GPS OBSERVATIONS AND PROCESS USING OPUS.
9. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH THE CURRENT LEGAL DESCRIPTIONS. IT IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP OR DEFINE LIMITS OF TITLE.
10. THE PURPOSE OF THIS PLAN IS TO SHOW A PROPOSED THREE LOT RESIDENTIAL SUBDIVISION.
11. WETLANDS SHOWN HEREON WERE DELINEATED BY CHRISTOPHER DANFORTH, CWS IN APRIL 2016. THE WETLANDS WERE DELINEATED ACCORDING TO THE 1987 ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL.
12. NO BUFFER IS REQUIRED FOR WETLAND AREAS LESS THAN 10,000 S.F. PER THE CITY OF PORTSMOUTH, NEW HAMPSHIRE ZONING ORDINANCE SECTION 10.1013.10.
13. ON OCTOBER 18, 2016 THE PORTSMOUTH ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE TO ARTICLE 5 SECTION 10.520; 10.521, TABLE OF DIMENSIONAL STANDARDS OF THE CITY OF PORTSMOUTH ZONING ORDINANCE TO ALLOW LOT 3 A LOT DEPTH OF 61.84 FEET WHERE IS 100 FEET IS REQUIRED.
14. THE DRAINAGE EASEMENT SHALL BE CENTERED ON THE AS-BUILT LOCATION OF THE DRAINAGE SWALE.
15. SEE DEED FOR DRAINAGE AND WETLAND RESTORATION EASEMENT TERMS.
16. REMOVAL OF EXISTING FOUNDATION WILL REQUIRE A CONDITIONAL USE PERMIT.

Line Table		
Line #	Direction	Length
L1	N71°15'48"E	15.85
L2	N71°15'48"E	20.13
L3	S25°13'31"E	108.88
L4	S68°01'46"E	25.05
L5	S51°42'48"W	23.03
L6	N68°01'46"W	20.84
L7	N25°25'35"W	119.45
L8	N71°15'48"E	40.69
L9	S51°42'48"W	52.53
L10	S51°42'48"W	31.17
L11	S26°44'44"E	10.00
L12	S71°15'48"W	77.21
L13	S22°09'14"E	5.83
L14	S67°50'46"W	17.01
L15	N22°09'14"W	6.85
L16	S71°15'48"W	63.51
L17	N25°12'40"W	10.06

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY THOSE UNDER MY DIRECT SUPERVISION AND ARE THE RESULT OF A FIELD SURVEY CONDUCTED IN AUGUST 2016 AND APRIL 2018. THIS SURVEY CONFORMS TO THE ACCURACY REQUIREMENTS OF AN URBAN SURVEY OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I FURTHER CERTIFY THAT THIS SURVEY IS CORRECT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, AND THE FIELD TRAVERSE SURVEY EXCEEDS A PRECISION OF 1:15,000.

LICENSED LAND SURVEYOR _____ DATE _____

DIG SAFE
MA ME NH RI VT
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
CALL 811 TOLL FREE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

CITY OF PORTSMOUTH PLANNING BOARD

CHAIRPERSON _____ DATE _____

40 20 10 0 40
Graphic Scale

PLAN REFERENCES:

1. "PLAT OF LAND, ROCKINGHAM & WOODBURY AVE'S, PORTSMOUTH, N.H., FOR JAMES BOUZIANIS" BY DURGIN-SCHOFIELD ASSOCIATES DATED 1/6/89. PLAN P-10024, NOT RECORDED.
2. "PLANS OF PROPOSED FEDERAL AID R.O.W. PROJECT I-95-1(9)14, N.H. PROJECT NO. P-5875-A, INTERSTATE ROUTE 95, LAYOUT, CITY OF PORTSMOUTH, COUNTY OF ROCKINGHAM" BY THE STATE OF NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS, UPDATED MAY 4, 1971 SHEETS 14-22. NOT RECORDED.

REV.	DATE	DESCRIPTION	DR	CK
6	07/12/18	REVISE PER TOWN COMMENTS	IID	JCC
5	06/11/18	REVISED PER CONDITIONS OF APPROVAL	BMK	JCC
4	03/23/18	REVISE PER CITY COMMENTS	JJM	JCC
3	01/30/18	REVISE PER CITY COMMENTS	JRW	JCC
2	10/16/17	REVISE PER CITY COMMENTS	BMK	JCC
1	10/26/16	REVISE NOTE #13	IID	JCC

TAX MAP 235 LOT 2
SUBDIVISION PLAN
ROCKINGHAM ESTATES
FOR PROPERTY AT
ROCKINGHAM AVENUE
PORTSMOUTH, NEW HAMPSHIRE
COUNTY OF ROCKINGHAM
OWNED BY
SEACOAST DEVELOPMENT GROUP, LLC
SCALE: 1"=40' **SEPTEMBER 20, 2016**

TFM MSC
A division of TFMoran, Inc.
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.TFMoran.com

FILE	47192.00	DR	BMK	FB	-	S-2
		CK	JCC	CADFILE	47192.00_SUB	

Jul 13, 2018 - 10:04am
F:\MSC Projects\47192 - Rockingham Ave - Ports\47192.00-C3D Seacoast Rockingham Ave-PortsSurvey\Drawings\47192.00_S-2_Subdivision.dwg

Return to:

ACCESS EASEMENT DEED

Islington Commons, LLC, a New Hampshire limited liability company, having a place of business at 116 Middle Street, Rockingham County, Portsmouth, New Hampshire 03801 ("Grantor"), for consideration paid, with Warranty Covenants, grants to the **City of Portsmouth**, a municipal corporation organized under the laws of New Hampshire, having a place of business at 1 Junkins Avenue, Portsmouth, New Hampshire 03801 ("Grantee"),

An access easement over and through Grantor's property (Combined Tax Map 145-Lots 34-35-36) for the purpose of reading, maintaining and replacing water meters located on homes built or to be built on the property and which shall become units within the 410-430 Islington Street Condominium. Also included are all rights associated with supplying water service to the units within the Condominium, including the right to terminate service for non-payment.

Meaning and intending to describe and convey easements over lots of the land conveyed to the Grantor by deeds recorded in the Rockingham County Registry of Deeds at Book 5744, Page 1214 & Book 5807, Page 2524.

This transaction is exempt from real estate transfer tax pursuant to R.S.A. 78-B:2, I.

Executed this ___ day of _____, 2018.

ISLINGTON COMMONS, LLC

By: _____
Barrett Bilotta, Managing Manager

STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

This instrument was acknowledged before me on _____, 2018 by Barrett Bilotta, Managing Manager of Islington Commons, LLC.

_____
Notary Public / Justice of the Peace
(My commission expires: _____)

Return to:
City of Portsmouth, Legal Department
1 Junkins Avenue
Portsmouth, NH 03801

SIDEWALK EASEMENT DEED

Jonathan Guilbert and Diana Guilbert, a married couple, with an address of 15 Thornton Street, Portsmouth, New Hampshire 03801, hereinafter Grantors, for consideration paid, grant to the CITY OF PORTSMOUTH, a municipal corporation with a principal place of business of 1 Junkins Avenue, Portsmouth, New Hampshire 03801, hereinafter Grantee, with QUITCLAIM COVENANTS, the following:

A permanent easement over a portion of land of Grantors situate at 15 Thornton Street Portsmouth, County of Rockingham New Hampshire, as more particularly shown on a plan of land entitled "SUBDIVISION PLAN, TAX MAP 160 - LOT 1" and marked thereon as "Sidewalk Easement" revised July 31, 2018, prepared by Ambit Engineering, Inc. recorded herewith as Plan No.#: D-40991, (hereinafter referred to as the Plan), bounded and described as follows:

Beginning at a Mag Nail set in a drill hole on the southeasterly side of Dennett Street and the northerly corner of land of the Grantor and the westerly corner of land now or formerly of The Gary D. Crilley and Diane L. Crilley Revocable Trust of 2017; thence running along land now or formerly of the Crilley Trust S 37°10'57" E a distance of 1.25 feet to a point; thence turning and running over and across land of the Grantor S 52°50'37" W a distance of 44.29 feet to a point; thence turning and running over and across land of the Grantor on a curve to the left to a point on the northeasterly side of Thornton Street, so called, said curve having a radius of 10.00 feet, a length of 13.94 feet, a delta angle of 79°52'22", a chord bearing of S 12°54'26"W, and a chord distance of 12.84 feet; thence turning and running along the northeasterly side of Thornton Street, N 27°01'45" W a distance of 12.58 to a railroad spike at the intersection of the northeasterly side of Thornton Street and the southeasterly side of Dennett Street, thence turning and running along the southeasterly side of Dennett Street N 56°01'40" E a distance of 52.00 feet to the point of beginning, the above described easement having an area of 155 square feet, more or less.

Purpose and Rights. The Grantee, its successors and assigns, shall have a perpetual, permanent, uninterrupted and unobstructed exclusive easement and right of way in, under, across and over the easement area for the purpose of installing and maintaining a public sidewalk. The Grantors shall not make any improvements to, or make any use of the easement area that would interfere with the Grantees use thereof.

Easements to Run with Land. All rights and privileges, obligations and liabilities created by this instrument shall inure to the benefit of, and be binding upon, the heirs, devises, administrators, executors, successors and assigns of the Grantee and the Grantors and shall run with the land.

MEANING AND INTENDING to convey a permanent easement over a portion of the premises conveyed to the within Grantors by deed recorded in Book 3081 Page 124 of the Rockingham County Registry of Deeds.

This is an exempt transfer per RSA 78-B:2(I).

DATED this 8th day of August, 2018

Jonathan Guilbert

Diana Guilbert

STATE OF NEW HAMPSHIRE
COUNTY OF Rockingham

On this, the 8th of August, 2018, the foregoing instrument was acknowledged before me by Jonathan and Diana Guilbert as their free act and deed for the purposes contained therein.

Justice of the Peace/Notary Public
Printed Name:
My Commission Expires:

CHRISTOPHER P. MULLIGAN
JUSTICE
OF THE PEACE
NEW HAMPSHIRE
MY COMMISSION EXPIRES JAN. 24, 2023

Return to:
City of Portsmouth, Legal Department
1 Junkins Avenue
Portsmouth, NH 03801

SIGHT LINE EASEMENT DEED

Jonathan Guilbert and Diana Guilbert, a married couple, with an address of 15 Thornton Street, Portsmouth, New Hampshire 03801, hereinafter Grantors, for consideration paid, grant to the CITY OF PORTSMOUTH, a municipal corporation with a principal place of business of 1 Junkins Avenue, Portsmouth, New Hampshire 03801, hereinafter Grantee, with QUITCLAIM COVENANTS, the following:

A permanent easement over a portion of land of Grantors situate at 15 Thornton Street Portsmouth, County of Rockingham New Hampshire, as more particularly shown on a plan of land entitled SUBDIVISION PLAN, TAX MAP 160 - LOT 1" and marked thereon as "Sight View Easement" revised July 31, 2018, prepared by Ambit Engineering, Inc. recorded herewith as Plan No.#: D-40991, (hereinafter referred to as the Plan), bounded and described as follows:

Beginning at a Mag Nail set in a drill hole on the southeasterly side of Dennett Street and the northerly corner of land of the Grantor and the westerly corner of land now or formerly of The Gary D. Crilley and Diane L. Crilley Revocable Trust of 2017; thence running over and across land of the Grantor thence S 35°08'41" W a distance of 58.37 to a point on the northeasterly side of Thornton Street; thence turning and running along the northeasterly side of Thornton Street N 27°01'45" W a distance of 20.96 to a railroad spike at the intersection of the northeasterly side of Thornton Street and the southeasterly side of Dennett Street; thence turning and running along the southeasterly side of Dennett Street N 56°01'40" E a distance of 52.00 feet to the point of beginning, the above described easement having an area of 541 square feet, more or less.

Purpose and Rights. The Grantee, its successors and assigns, shall have a perpetual, permanent, uninterrupted and unobstructed sight line easement in favor of the Grantee upon which there shall be constructed no structures, nor will there be maintained any plantings which could or would obstruct the free ability of those using Dennett Street or Thornton Street to see vehicular traffic approaching the easement area. The Grantors shall not make any improvements to, or make any use of the easement area that would interfere with the Grantees use thereof. Within the easement area the grantee may, but shall not be obligated to, trim bushes and vegetation for the purpose of maintaining sight lines.

Easements to Run with Land. All rights and privileges, obligations and liabilities created by this instrument shall inure to the benefit of, and be binding upon, the heirs, devises, administrators, executors, successors and assigns of the Grantee and the Grantors and shall run with the land.

MEANING AND INTENDING to convey a permanent easement over a portion of the premises conveyed to the within Grantors by deed recorded in Book 3081 Page 124 of the Rockingham County Registry of Deeds.

This is an exempt transfer per RSA 78-B:2(I).

DATED this 8th day of August, 2018

Jonathan Guilbert

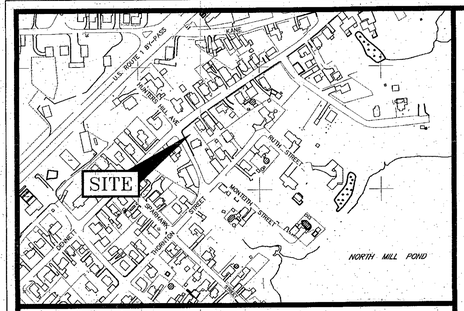
Diana Guilbert

STATE OF NEW HAMPSHIRE
COUNTY OF Rockingham

On this, the 8th of August, 2018, the foregoing instrument was acknowledged before me by Jonathan and Diana Guilbert as their free act and deed for the purposes contained therein.

Justice of the Peace/Notary Public
Printed Name:
My Commission Expires:

CHRISTOPHER P. MULLIGAN
JUSTICE
MY COMMISSION EXPIRES JAN. 24, 2023
OF THE PEACE
NEW HAMPSHIRE



LOCATION MAP SCALE 1"=300'

EASEMENT LENGTH TABLE

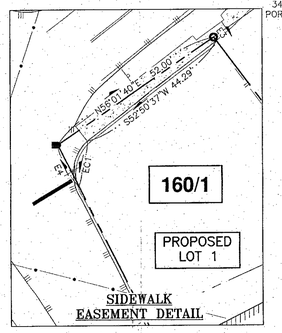
LINE	BEARING	DISTANCE
E1	S41°50'16"W	8.16'
E2	N52°23'58"E	10.40'
E3	S37°10'57"E	1.25'
E4	N27°01'45"W	12.58'

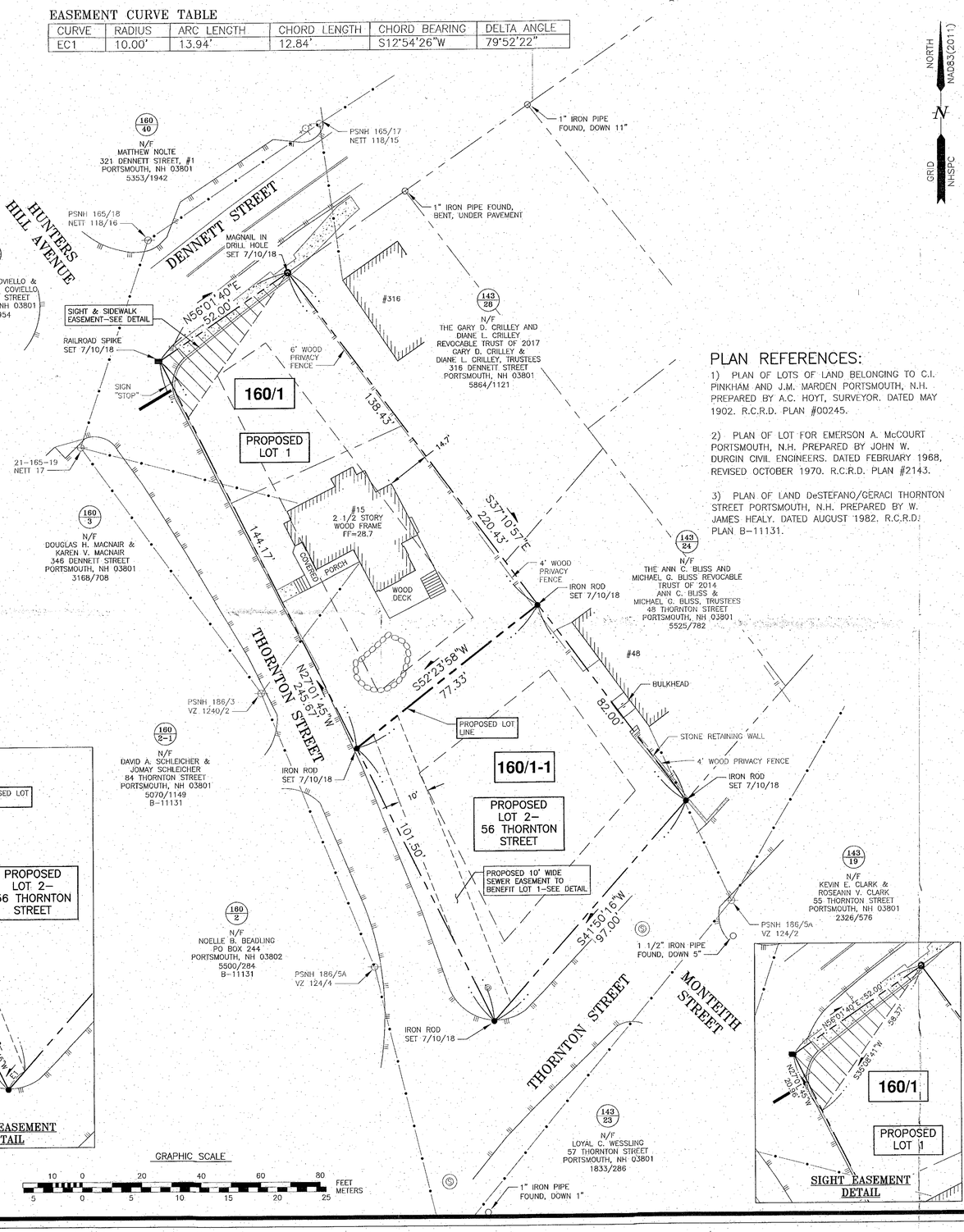
EASEMENT CURVE TABLE

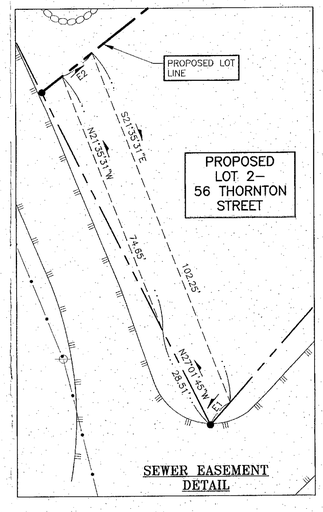
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
EC1	10.00'	13.94'	12.84'	S12°54'26"W	79°52'22"

LEGEND:

EXISTING	PROPOSED	
N/F		NOW OR FORMERLY
RP		RECORD OF PROBATE
RCRD		ROCKINGHAM COUNTY REGISTRY OF DEEDS
11/21		MAP 11 / LOT 21
		BOUNDARY
		SETBACK
RR SPK FND	RR SPK SET	RAILROAD SPIKE FOUND/SET
IR FND	IR SET	IRON ROD FOUND/SET
IP FND	IP SET	IRON PIPE FOUND/SET
DH FND	DH SET	DRILL HOLE FOUND/SET
NHHB FND		NHDOT BOUND FOUND
TB FND		TOWN BOUND FOUND
BND w/DH	BND w/DH	BOUND w/ DRILL HOLE
	ST BND w/DH	STONE BOUND w/DRILL HOLE







GRAPHIC SCALE
10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

VARIANCES REQUIRED:

APPROVED: MAY 22, 2018

PROPOSED LOT 1

1) SECTION 10.520-TO ALLOW FOR A REAR YARD OF 14.7 FEET, 14.7 FEET EXISTS, AND 20 FEET IS REQUIRED.

2) SECTION 10.520-TO ALLOW A FRONT YARD OF 8.6 FEET, WHERE 8.6 FEET EXISTS, AND 15 FEET IS REQUIRED.

3) SECTION 10.520-TO ALLOW FOR A LOT DEPTH OF 64.66 FEET, WHERE 74.50 FEET EXISTS, AND 70 FEET IS REQUIRED.

WAIVER REQUESTED:

PROPOSED LOT 2

WAIVER FOR SUBDIVISION REGULATIONS: SECTION VI.2.B LOT SIZES. LOT 2 HAS 101.50 FEET OF FRONTAGE WHERE 110 FT IS REQUIRED (10% EXTRA WIDTH REQUIREMENT).

APPROVED 6/21/18

PROPOSED DIMENSIONS:

LOT 1

LOT AREA:	9,074 S.F.	
FRONTAGE:	52.00 FEET	(DENNETT STREET)
	144.17 FEET	(THORNTON STREET)
SETBACKS:	FRONT	8.6 FEET
	SIDE	24.3 FEET
	REAR	14.7 FEET
STRUCTURE HEIGHT:	<35 FEET	
BUILDING COVERAGE:	15.9%	
OPEN SPACE:	75.2%	

"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

7-31-18

JOHN R. CHAGNON, LLS — DATE

STATE OF NEW HAMPSHIRE LAND SURVEYOR NO. 739 JOHN R. CHAGNON

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN — DATE 8.9.2018

PLAN REFERENCES:

1) PLAN OF LOTS OF LAND BELONGING TO C.I. PINKHAM AND J.M. MARDEN PORTSMOUTH, N.H. PREPARED BY A.C. HOYT, SURVEYOR. DATED MAY 1902. R.C.R.D. PLAN #00245.

2) PLAN OF LOT FOR EMERSON A. McCOURT PORTSMOUTH, N.H. PREPARED BY JOHN W. DURGIN CIVIL ENGINEERS. DATED FEBRUARY 1968, REVISED OCTOBER 1970. R.C.R.D. PLAN #2143.

3) PLAN OF LAND DeSTEFANO/GERACI THORNTON STREET PORTSMOUTH, N.H. PREPARED BY W. JAMES HEALY. DATED AUGUST 1982. R.C.R.D. PLAN B-11131.

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOTUH ASSESSOR'S MAP 160 AS LOT 1.

2) OWNERS OF RECORD:
JON GUILBERT & DIANA GUILBERT
15 THORNTON STREET
PORTSMOUTH, NH 03801
3081/124 (TRACTS 1 & 2)

3) PARCEL IS NOT IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.

4) EXISTING LOT AREA:
16,836 S.F.
0.3865 ACRES

PROPOSED LOT AREAS:

PROPOSED LOT 1:
9,074 S.F.
0.2083 ACRES

PROPOSED LOT 2:
7,762 S.F.
0.1782 ACRES

5) PARCEL IS LOCATED IN THE GENERAL RESIDENCE A (GRA) ZONING DISTRICT.

6) DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:		7,500 S.F.
FRONTAGE:		100 FEET
SETBACKS:	FRONT	15 FEET
	SIDE	10 FEET
	REAR	20 FEET
MAXIMUM STRUCTURE HEIGHT:		35 FEET
MAXIMUM BUILDING COVERAGE:		25%
MINIMUM OPEN SPACE:		30%

7) THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SUBDIVISION OF TAX MAP 160 LOT 1 IN THE CITY OF PORTSMOUTH INTO TWO LOTS.

8) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83(2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.05').

9) EXISTING HEDGE ROW ALONG DENNETT STREET AND ALONG THORNTON STREET FROM INTERSECTION TO NORTHWEST SIDE OF EXISTING HOUSE TO BE REMOVED OR MAINTAINED TO BE CONSISTENT WITH SIGHT LINE EASEMENT TO CITY OF PORTSMOUTH, TO BE RECORDED HEREWITH.

10) BASEMENT SHALL HAVE NO OPEN SANITARY SEWER CONNECTIONS.

11) NO DISCHARGE ONTO CITY PROPERTY OF SUMP PUMP WATER, IF GROUNDWATER IS ENCOUNTERD, A STORMWATER PIPE WILL NEED TO BE CONSTRUCTED TO THE NEAREST STORMWATER PIPE.

NO.	DESCRIPTION	DATE
5	EASEMENT METES & BOUNDS	7/31/18
4	LOT 2 SETBACKS	7/5/18
3	SEWER EASEMENT, LOT 2 WAIVER	6/11/18
2	REVISE PER COMMENTS	6/5/18
1	ISSUED FOR TAC COMMENTS	5/21/18
0	ISSUED FOR COMMENT	5/7/18

REVISIONS

SUBDIVISION PLAN
TAX MAP 160 - LOT 1

OWNERS:

JON GUILBERT & DIANA GUILBERT

15 THORNTON STREET
CITY OF PORTSMOUTH
COUNTY OF ROCKINGHAM
STATE OF NEW HAMPSHIRE

SCALE 1"=20' MAY 2018

FB 330 PG 20 — 2865.01

AMENDMENT TO LICENSE AGREEMENT

This AMENDMENT TO LICENSE AGREEMENT (this "License") dated August ___, 2018 is by and between the City of Portsmouth, New Hampshire, a municipal corporation duly existing under the laws of the State of New Hampshire with offices located at 1 Junkins Avenue, Portsmouth, County of Rockingham, State of New Hampshire 03801 (the "City") and Vaughan Street Hotel LLC, a New Hampshire limited liability company, having an address of 1359 Hooksett Road, Hooksett, NH 03106 (for itself and its successors and assigns, the "Owner"). The City and the Owner may sometimes be collectively referred to herein as the "Parties" and sometimes each be individually referred to as a "Party."

RECITALS

A. **WHEREAS,** the Owner owns the land, with the buildings and other improvements thereon, in the City of Portsmouth, Rockingham County, State of New Hampshire, located at 225 and 299 Vaughan Street in Portsmouth, County of Rockingham and State of New Hampshire, being shown on the City of Portsmouth's Assessor's Map as Tax Map 124, Lot 10 (the "Premises"). For the Owner's title to the Premises, see two (2) deeds recorded in the Rockingham County Registry of Deeds (the "Registry") at Book 5848, Page 0129, and Book 5848, Page 1508.

B. **WHEREAS,** the Owner is developing the Premises for use as a 154-room AC Hotels by Marriott hotel (the "Project").

C. **WHEREAS,** the Premises abuts Vaughan Street, a public right-of-way, Green Street, a public right-of-way, and a parcel of land owned by the City and commonly known as Tax Map 123, Lot 15.

D. **WHEREAS,** the Owner has requested a construction license from the City in connection with construction of the Project as described in that certain Construction Management and Mitigation Plan (CMMP) by and among the City and the Owner dated April 13, 2018 attached hereto as Exhibit A (the "CMMP").

E. **WHEREAS**, the Parties are parties to that certain License Agreement dated June 26, 2018 (the "Original License Agreement").

F. **WHEREAS**, the Parties desire to amend and restate the Original License Agreement as set forth herein.

E. **WHEREAS**, the City acknowledges that it will benefit from the development of the Project and hereby desires to grant this License to the Owner.

AGREEMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Parties, and in consideration of the mutual promises contained herein, the Parties covenant and agree as follows:

1. Grant of License. The City hereby grants to the Owner as appurtenant to the Premises, the right and license to enter upon and use the areas depicted as (i) Proposed License Area #1 ("License Area #1"), and (ii) Proposed License Area #2 ("License Area #2" and, collectively, with License Area #1, the "Licensed Areas") on the License Exhibit attached hereto as Exhibit B (the "Plan").

2. Term of License. The License Areas shall have the following terms (collectively, the "Term"):

a. License Area #1: July 1, 2018 to August 1, 2019; and

b. License Area #2: September 11, 2018 to January 30, 2019.

Upon expiration of the Term applicable to each License Area, the License shall automatically terminate with regard to the applicable License Area without necessity of execution of any additional document or instrument, and the Parties shall no longer have any rights or obligations under this License, except such rights and obligations as expressly survive termination of this License, including as set forth in Sections 7 and 8 below.

3. Access and Use of Licensed Area. The Owner shall have access to the Licensed Areas and the ability to exercise the rights under the License twenty-four (24) hours a day during the Term in accordance with applicable City ordinances and regulations. The License shall be irrevocable during the Term, except that the City may temporarily suspend the License in cases of (i) emergency, (ii) paramount municipal need, or (iii) for the City's access to its underground utilities and pipes. The City will provide the Owner with reasonable notice of the suspension of the License to access its underground utilities and pipes or in the event of a paramount municipal need.

4. Use of Easements by Those Claiming By, Through, or Under Parties. The License shall include use of the License by those claiming by, through or under the Owner, including, but not limited to, any agents, representatives, guests, licensees and invitees of the Owner.

5. Signage. The Owner will post appropriate detour signage for the benefit of the public in accordance with the Plan and the CMMP.

6. Public Safety. The Owner shall exercise the License in a safe and sound fashion at all times and shall take such actions as are necessary to protect the public safety in accordance with the CMMP.

7. Damage. The Owner shall repair any damage to the Licensed Areas caused by the Owner's exercise of the License as reasonably specified by the City and to the extent not already required by the approved site plan. This Section 7 shall survive termination or revocation of the License.

8. Indemnity. The Owner agrees to indemnify, defend and hold harmless the City and its officials, agents and employees from any and all claims arising from Owner's use of the Licensed Areas. This Section 8 shall survive termination or revocation of the License.

9. Insurance. Licensee shall at all times maintain insurance for bodily injury and property damage in the amount of at least $1,000,000 per occurrence. Licensee shall maintain a certificate of insurance on file with the City's Legal Department during the Term.

10. Notices. Any notice or other like communication given pursuant to this License shall be in writing and shall be delivered by hand, by certified mail, or by FedEx or other overnight delivery service, at the address listed in the initial paragraph of this License. Any Party shall have the right to designate a different notice address by notice similarly given. Any notices or other communications given under this License shall be deemed to have been given on the date the same was delivered, if delivered in hand, deposited in the United States mails as certified mail, or deposited with Federal Express or other overnight delivery service.

11. Force Majeure. If the Project shall be delayed or the Owner is hindered in or prevented from the performance of any act required under this License by reason of acts of God, strikes, lockouts, labor troubles, riots, insurrection, or war, then the Term of the License shall be extended on a day-for-day basis corresponding to the length of the delay.

12. License Fee. Owner shall pay to the City a fee of $22,898.00 (the "License Fee") for License Area #2 in accordance with City Council Policy No. 2018-02 entitled "License Fee for Encumbrance of City Property" (the "License Fee Policy") and shall provide the City or its designees with 10 daily parking passes in the Portwalk garage (the "Parking Passes") for the entire term of this License free of charge to the users of such Parking Passes. The License Fee shall be paid to the City on or prior September 11, 2018. No fee shall be payable to the City for License Area #1. In addition, no fee shall be due to the City for the duration of the Vaughan Street City Sewer Construction Project or any other period during which the City closes Vaughan Street.

13. Amendments and Termination. This License may be modified, amended, or cancelled only by a written instrument executed by all parties in interest at the time of such modification, amendment, or cancellation; provided, however, that Owner may terminate this License with respect to all or a portion of the Licensed Areas at any time by giving notice to the City.

14. Waivers. Failure on the part of any Party hereto to complain of any action or non-action on the part of any other Party, no matter how long the same may continue, shall never be a waiver by such Party of any of the rights hereunder. Further, no waiver at any time of any of the provisions hereof by a Party shall be construed as a waiver of any of the other provisions hereof, and a waiver at any time of any of the provisions hereof shall not be construed as a waiver at any subsequent time of the same provisions.

15. Exhibits; Captions; Recitals. Exhibits A and B is hereby incorporated herein by reference and made a part hereof, as fully as if set forth in full herein. The captions of the articles and sections of this License are for convenience only and shall not be considered or referenced in resolving questions of interpretation and construction. The Recitals are incorporated herein by reference.

16. Construction of License. This License, which may be executed in multiple copies, is to take effect as a sealed instrument; shall be construed under New Hampshire law (without regard for conflicts of laws principles); sets forth the entire agreement between the Parties; and supersedes all prior agreements and memoranda with respect to the subject matter hereof, except for the approved site plan and the CMMP.

[Signatures Page Follows]

VAUGHAN STREET HOTEL LLC

By: _____
Name:
Its: Manager
Duly Authorized

CITY OF PORTSMOUTH

By: _____
Name:
Its:
Duly Authorized

THE STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

This Amendment to License Agreement was acknowledged before me on this ___ day of _____, 2018 by _____the Manager of Vaughan Street Hotel LLC, a New Hampshire limited liability company, on behalf of the limited liability company.

Before me,

_____
Justice of the Peace/Notary Public
My commission expires:
Name: _____
[print]

THE STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

This Amendment to License Agreement was acknowledged before me on this ___ day of _____, 2018 by _____the _____ of the City of Portsmouth, New Hampshire, on behalf of the City of Portsmouth.

Before me,

_____
Justice of the Peace/Notary Public
My commission expires:
Name: _____
[print]
My Commission Expires:

EXHIBIT A

CMMP

[To Be Attached Hereto]

EXHIBIT B

License Exhibit

[Attached Hereto]

LEGEND

LICENSE AREA #1
FOR CONSTRUCTION STAGING AND LAYDOWN
(2,540± SF)

LICENSE AREA #2
SIDEWALK AND PARKING REMOVAL
(4,115± SF)

PROPOSED LICENSE AREA #1
FOR CONSTRUCTION STAGING
AND LAYDOWN
(2,540± SF)

3S ACCESS
EASEMENT

PROPOSED
COMMERCIAL
RETAIL SPACE

PROPOSED HOTEL

PROPOSED LICENSE AREA #2
SIDEWALK AND PARKING REMOVAL
(4,480± SF)

GREEN STREET

VAUGHAN STREET

PARKING SPACES 1 - 7 TO BE TAKEN

T6 T7 T8 T9

FOUR (4) TEMPORARY
PARKING SPACES

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Tighe&Bond
www.tighebond.com

AC Hotel and Community Space

299 Vaughan Street, LLC

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-2
DATE:	JUNE 4, 2018
FILE: C-0960-2_C-DSGN.dwg	
DRAWN BY:	NAH/CML
CHECKED:	PMC
APPROVED:	BLM

LICENSE EXHIBIT

SCALE: AS SHOWN

1 OF 1

Last Saved: 6/4/2018
Plotted: June 04, 2018 1:20pm By: CML
Tighe & Bond: J:\CC\C0960 Cathartes\C-0960-2 Vaughan St\Drawings, Figures\AutoCAD\Xref\C-0960-2_C-DSGN.dwg

THE CITY OF PORTSMOUTH
TWO THOUSAND EIGHTEEN
PORTSMOUTH, NEW HAMPSHIRE

WIND-POWER TAX EXEMPTION

RESOLUTION #

BE IT RESOLVED:

THAT Pursuant to RSA 72:27-a and RSA 72:65-66, the City adopts the following:

If qualified, for persons owning real property equipped with a wind-powered energy system as defined in RSA 72:65, the City shall exempt from taxes an amount equal to the assessed value of the wind-powered energy system.

BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY THE CITY COUNCIL
_____, 2018

_____
Kelli L. Barnaby, City Clerk

NOTE (not part of the Resolution): The first opportunity for application to receive this exemption will be for taxes assessed as of April 1, 2019.

THE CITY OF PORTSMOUTH
TWO THOUSAND EIGHTEEN
PORTSMOUTH, NEW HAMPSHIRE

WOODHEATING TAX EXEMPTION

RESOLUTION #

BE IT RESOLVED:

THAT Pursuant to RSA 72:27-a and RSA 72:69-70, the City adopts the following:

If qualified, for persons owning real property equipped with a woodheating energy system as defined in RSA 72:69, the City shall exempt from taxes an amount equal to the assessed value of the woodheating energy system.

BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

APPROVED:

_____
Jack Blalock, Mayor

ADOPTED BY THE CITY COUNCIL
_____, 2018

_____
Kelli L. Barnaby, City Clerk

NOTE (not part of the Resolution): The first opportunity for application to receive this exemption will be for taxes assessed as of April 1, 2019.

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Fri Aug 17, 2018

4pm - 8pm Musical Peformance
Where: Vaughan Mall Stage

Sat Aug 18, 2018

4pm - 7pm Fife and Drum Corps
Where: Market Square in front of North Church

Fri Aug 24, 2018

4pm - 5pm Solo Piano
Where: Vaughan Mall Stage

7pm - 10pm Folk Trio
Where: Vaughan Mall Stage

Sat Aug 25, 2018

10am - 2pm National Multiple Sclerosis Society
Where: Route 1A South Bike Tour
Description:
- http://main.nationalmssociety.org - Contact: Emily Christian, Logistics Manager - (781) 693-5154 or Emily.Christian@nmss.org - Start/Finish Location: Stratham Hill Park

3pm - 6pm Aharonian Trio
Where: Vaughan Mall Stage

Sat Sep 1, 2018

1pm - 2pm Solo Piano
Where: Vaughan Mall Stage

Mon Sep 3, 2018

4pm - 7pm 5-Piece Jazz Band
Where: Vaughan Mall

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Fri Sep 7, 2018

7:30am - 6pm TEDXPortsmouth

Where: Music Hall
Description:
Closure of Chestnut Street to vehicle traffic for the day of the show starting at 7:
30 a.m. to 6:00 p.m. Registration and networking will take place outside from 8:00 a.m. until 9:
00 a.m. then the show will move indoors. There will be 90 minute sessions inside, but breaks will take place out on the street.

Sat Sep 8, 2018

3pm - 6pm Aharonian Trio

Where: Vaughan Mall Stage

Sun Sep 9, 2018

12pm - 4:30pm Electric Vehicle Show

Where: To be discussed - use of City Hall lower parking lots
Description: Contact: James Penfold

Fri Sep 14, 2018

All day Music Hall Telluride by the Sea Film Festival

Fri Sep 14, 2018 - Sun Sep 16, 2018
Where: Music Hall
Description:
- https://www.themusichall.org - Contact: Chris Curtis ccurtis@themusichall.org
-Congress to Porter Streets will be closed.

Sat Sep 15, 2018

All day Music Hall Telluride by the Sea Film Festival

Fri Sep 14, 2018 - Sun Sep 16, 2018
Where: Music Hall
Description:
- https://www.themusichall.org - Contact: Chris Curtis ccurtis@themusichall.org
-Congress to Porter Streets will be closed.

10am - 11am American Foundation for Suicide Prevention

Where: Little Harbour School Begin and End
Description:
- https://afsp.donordrive.com - Contact: Ken La Valley, Chair - (603) 862-4343 or ken.lavalley@unh.edu - Registration begins at 8:30 a.m. and walk duration from 10:00 a.m. to Noon.

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Sat Sep 15, 2018

2pm - 9pm 4-Piece Folk Band

Where: Vaughan Mall Stage

Sun Sep 16, 2018

All day Music Hall Telluride by the Sea Film Festival

Fri Sep 14, 2018 - Sun Sep 16, 2018

Where: Music Hall

Description:

- https://www.themusichall.org - Contact: Chris Curtis ccurtis@themusichall.org -Congress to Porter Streets will be closed.

7:30am - 9:30am My Breast Cancer Support

Where: Portsmouth Middle School, 155 Parrott Ave, Portsmouth, NH 03801, USA

Description:

- http://cp5k.mybreastcancersupport.org - Contact: Jennie Halstead, Executive Director, Survivor - (603) 759-5640

Sat Sep 22, 2018

All day Granite State Wheelmen Inc. - Seacoast Century Bicycle Ride

Sat Sep 22, 2018 - Sun Sep 23, 2018

Where: Route starts at Hampton Beach cycle into Massachusetts and Maine

Description:

- http://www.granitestatewheelmen.org - Contact: Donna Hepp, Seacoast Century Co-Coordinator dhepp3@gmail.com or 414-258-3287.

All day Friends of the South End Fairy House Tour

Sat Sep 22, 2018 - Sun Sep 23, 2018

Where: Use Peirce Island Parking as well as the use of Prescott Park

Description:

- http://www.portsmouthfairyhousetour.com - Contact Caroline Amport Piper caroline@canoeharbor.com or (603) 686-4338 - The Tour will take place on the grounds of the Governor John Langdon House, Strawbery Banke Museum and in collaboration with the Prescott Park Arts Festival. Use of Peirce Island for parking as well as the use of Prescott Park. Closure of Washington Street between Hancock and Court Streets to through traffic from 9:30 a.m. to 4:00 p.m. both days.

3pm - 6pm Aharonian Trio

Where: Vaughan Mall Stage

Description: Phone contact info for Merrill is: 603-205-6167 and Russell is 207- 752-3862.

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Sun Sep 23, 2018

All day Granite State Wheelmen Inc. - Seacoast Century Bicycle Ride

Sat Sep 22, 2018 - Sun Sep 23, 2018

Where: Route starts at Hampton Beach cycle into Massachusetts and Maine

Description:

- http://www.granitestatewheelmen.org - Contact: Donna Hepp, Seacoast Century Co-Coordinator dhepp3@gmail.com or 414-258-3287.

All day Friends of the South End Fairy House Tour

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8:30am - 1pm Seacoast Walk to End Alzheimer's

Where: Little Harbour School begin and end

Description:

- http://act.alz.org - Contact: Kate Corriveau, NH Development Officer - kcorriveau@alz.org or (617) 393-2151 - The Walk site opens at 8:30 a.m. for registration, the Walk itself kicks off at 10:00 a.m. and clean up and off the premises by 1:00 p.m.

10am - 12pm 5K Road Race - Bottomline Technologies

Where: Pease Tradeport

Description:

- Contacts: Holly Tennent and Jylle Nevejans - htennent@bottomline.com or 603-501-6653 - jnevejans@bottomline.com or 603-501-6185

Sat Sep 29, 2018

All day Portsmouth Maritime Folk Festival

Sat Sep 29, 2018 - Sun Sep 30, 2018

Where: Market Square

Description: - http://www.pmffest.org - Contact: Bruce MacIntyre

3pm - 6pm Aharonian Trio

Where: Vaughan Mall Stage

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Sun Sep 30, 2018

All day Portsmouth Maritime Folk Festival

Sat Sep 29, 2018 - Sun Sep 30, 2018
Where: Market Square
Description: - http://www.pmffest.org - Contact: Bruce MacIntyre

Sun Oct 7, 2018

10am - 11:30am 6th Annual Memorial Bridge 5k

Where: US Route 1 Memorial Bridge
Description:
- https://www.prescottpark.org - Contact: Ben Anderson, Executive Director, Prescott Park Arts Festival (603) 436-2848 - This event is held by Prescott Park Arts Festival in conjunction with Seacoast Community School.

Thu Oct 11, 2018

All day NH Film Festival

Thu Oct 11, 2018 - Sun Oct 14, 2018
Where: Music Hall
Description:
Closure of Chestnut Street to vehicle traffic on Friday, October 12, 2018 beginning at 9:00 a.m. to allow for set-up for a red-carpet gala. The street will be reopened to traffic following the conclusion of the gala at 8:30 p.m.

Fri Oct 12, 2018

All day NH Film Festival

Thu Oct 11, 2018 - Sun Oct 14, 2018
Where: Music Hall
Description:
Closure of Chestnut Street to vehicle traffic on Friday, October 12, 2018 beginning at 9:00 a.m. to allow for set-up for a red-carpet gala. The street will be reopened to traffic following the conclusion of the gala at 8:30 p.m.

Sat Oct 13, 2018

All day NH Film Festival

Thu Oct 11, 2018 - Sun Oct 14, 2018
Where: Music Hall
Description:
Closure of Chestnut Street to vehicle traffic on Friday, October 12, 2018 beginning at 9:00 a.m. to allow for set-up for a red-carpet gala. The street will be reopened to traffic following the conclusion of the gala at 8:30 p.m.

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Sun Oct 14, 2018

All day NH Film Festival

Thu Oct 11, 2018 - Sun Oct 14, 2018

Where: Music Hall

Description:

Closure of Chestnut Street to vehicle traffic on Friday, October 12, 2018 beginning at 9:00 a.m. to allow for set-up for a red-carpet gala. The street will be reopened to traffic following the conclusion of the gala at 8:30 p.m.

Wed Oct 31, 2018

7pm - 9pm Portsmouth Halloween Parade

Where: Beginning at Peirce Island to conclude at Prescott Park

Description: - http://www.portsmouthhalloweenparade.org - Contact: Abigail Wiggin

Sun Nov 11, 2018

8am - 9am Seacoast Half Marathon

Where: Begins and Ends at Portsmouth High School

Description:

- https://seacoasthalfmarathon.com - Contact: Jay Diener, Co-Race Director (603) 758-1177 or shmracedirector@gmail.com

Sun Dec 9, 2018

10am - 11am Jingle Bell Run/Walk for Arthritis

Where: Little Harbour School

Description:

- https://www.arthritis.org/new-hampshire/ - Contact: Thomas Bringle, Director of Development (603) 460-4213 or tbringle@arthritis.org - Registration opens at 9:00 a.m. and race start time is 10:00 a.m.

Sat Apr 13, 2019

9:30am - 11:30am New Castle 10K

Where: Starts and finishes at Great Island Common New Castle

Description:

- https://www.newcastlenh10k.com/ - Contact: Nick Diana (603) 498-8539 or nick@newcastlenh10k.com

Portsmouth CM-OFFICE, City of Portsmouth - Community Events

Sun May 5, 2019

8:30am - 9:30am American Lung - Cycle the Seacoast

Where: Cisco Brewers Portsmouth
Description:
This event will be held at Cisco Brewers (formerly Redhook) Portsmouth. Melissa Walden, Manager, Development, American Lung Association notified the City on Aug. 3, 2018 of the event date of Sunday, May 5, 2019. A request letter will be submitted.

INTEROFFICE MEMORANDUM

TO:	JOHN BOHENKO, CITY MANAGER
FROM:	NANCY COLBERT PUFF, DEPUTY CITY MANAGER
SUBJECT:	MCINTYRE UPDATE
DATE:	AUGUST 20, 2018

Following is an update on recent progress concerning the McIntyre project:

1. Revised Design Plans: Last week we reviewed a revised design with National Park Service (NPS) officials from the Historic Monument program. The new proposal removed any construction atop the single-story wing of the McIntyre building, and reduced the height of the proposed new residential building which fronts on the newly-constructed "Linden Way." The initial reaction from NPS was encouraging, and we expect to receive further comments from them in the near future. In addition, the NPS has suggested they may decide to make a site visit here in the near future, so the team has postponed plans to travel to Philadelphia for the time being.

2. Post Office Relocation Consultation Process: The postal service requested the City provide a meeting room for them to conduct a public hearing, which is a required component of their relocation process. We have offered the use of City Council chambers for this purpose. They are in the process of finalizing the date and time for this meeting, which is targeted for mid-September. We have no additional information with regard to the potential sites they are exploring or the suitability of the Foundry Place flex space at this time.

3. Revised Schedule: A revised schedule for Council consideration of an application to the Historic Monument program is largely dependent upon additional input from the NPS. Once the project team is comfortable with a revised design that will meet the Secretary Standards, a fall schedule may proceed as follows:

    a. Council receives revised design and considers formally extending the timeframe to exclusively deal with Redgate/Kane as contemplated in the Negotiating Principles;

    b. Revised project returns before Historic District for review (Note: project square footage needs to be established for completion of the Historic Monument application; architectural details may continue to be reviewed by HDC post-application, until the Commission is satisfied that the design meets its approval.

    c. Council considers submission of a completed application to NPS and corresponding development agreement;

    d. Project design proceeds; NPS conducts its application review; project seeks additional land use approvals;

    Once GSA has received a favorable recommendation from NPS regarding approval of the application, it will proceed with its disposition process. They continue to project vacating the building in Spring, 2019 and are targeting no later than the start of June.

August 14, 2018

Peter Britz
Coakley Project Coordinator
1 Junkins Avenue
Portsmouth, New Hampshire 03801

RE: Results of Storm Water Sampling at the Coakley Landfill - North Hampton, New Hampshire

Dear Mr. Britz:

As requested by the Coakley Landfill Group (CLG), CES, Inc. (CES) has prepared this letter to describe actions completed to date regarding the interaction between Site stormwater management components (i.e. stormwater retention ponds, pond outfall pipes, perimeter drainage ditches, and sand drainage layer discharge (underdrain discharge)) relative to seepage discharging on an embankment adjacent to seep sampling location L-1. A Site Plan is included as **Figure 1**.

BACKGROUND

As part of Site remedy design and construction activities implemented in the mid to late 1990s, stormwater runoff from the landfill surface is conveyed to two unlined stormwater retention ponds (northwest and northeast ponds) via a series of perimeter drainage ditches and rip rap let-down structures on the landfill. Stormwater retained in the ponds is subsequently discharged to adjacent wetland areas via an outlet structure in the ponds and associated corrugated metal piping (outfall pipe).

In addition to direct surface stormwater runoff, precipitation falling on the landfill surface infiltrates through the upper part of the landfill's cover system above the liner (discussed below). The cover system is composed of a vegetative layer, cover soil, and sand drainage layer placed immediately above an impermeable, polyethylene geomembrane liner. Water that infiltrates through the vegetative layer and cover soil enters the sand drainage layer above the liner and is then collected and conveyed via perforated piping (underdrain) to three discharge locations; one at each retention pond and a third at a rip rap outlet near the northwestern toe of the landfill slope.

Following remedy construction, a seepage area was noted on an embankment adjacent to the northwest pond outfall pipe discharge. This seepage was previously interpreted to be shallow groundwater discharging to the ground surface at or near the head of a wetland complex west of the landfill. The seepage location became a sampling point in the Site monitoring network in 2001 and is designated as location L-1 on site plans and in annual monitoring reports. Analytical results for samples collected at L-1 have been reported in monitoring reports since 2001. Some historic reports have referred to L-1 and a "leachate" sampling location but more recent review by CES,

Seven Locations in Maine | www.ces-maine.com
640 Main Street
Lewiston, Maine 04240
T 207.795.6009
F 207.795.6128

including developing the cross sections discussed below, indicates it is most accurately referred to simply as a “seep”.

During a review of 2017 analytical data for the L-1 location, it was noted that concentrations of per and polyfluoro alkyl substances (PFAS) in the L-1 sample were significantly higher in the Spring event when discharge was observed from the adjacent pond outfall pipe, as compared to the Fall event when little or no discharge was observed in the pond outfall pipe. These results seemed contrary to an assumption that a potentially larger stormwater component would result in a lower PFAS concentration in the L-1 sample since stormwater runoff has no direct contact with landfill waste.

Following discussions with CLG, CES was proactively authorized to prepare a workplan and further investigate the relationship between stormwater and seepage observed at the L-1 sampling location. The initial workplan was submitted to the agencies on December 22, 2017 and sampling was performed in conjunction with the 2018 Spring semiannual sampling event.

INVESTIGATION

As a first step, CES conducted a site visit on December 7, 2017 to observe conditions at the L-1 location and adjacent pond outfall pipe. During the Site visit, iron stained soil on the embankment adjacent to the corrugated steel outfall pipe from the landfill stormwater retention pond was noted. Soil staining appeared to extend to (or above) the bottom elevation (invert) of the stormwater outfall pipe, although the inside of the stormwater outfall pipe did not show evidence of iron staining or iron precipitates. The heaviest staining and actual water seepage was observed to be in a ponded area (head of wetland) approximately 10-20 feet downslope and slightly lower in elevation than the bottom of the outfall pipe. The extent of staining is interpreted to represent an approximation of shallow (or seasonal high) groundwater levels adjacent to the wetland complex.

Based on the results of this Site visit and a review of available site information (i.e. well logs, cover system design, topography), a cross section was created depicting the relationships between the structures and features discussed above. The location of the cross section can be found on **Figure 1** with the cross section illustrated as **Figure 2**.

As shown on the cross section, elevations of shallow groundwater and the bottom of the retention pond do not indicate a direct hydraulic connection between shallow groundwater and the northwest retention pond. However, during high recharge/groundwater level periods, seepage along the embankment may be close to the pond outfall pipe invert elevation.

To better understand local conditions, water samples were collected from the stormwater management system during the Spring 2018 sampling event to further investigate stormwater quality for comparison to L-1 sample results. Note that the Spring 2018 sampling event occurred from April 24 through May 2, 2018 with stormwater samples collected within 24-hours following a large rain event on April 25, 2018.

CES collected samples of stormwater runoff from a landfill perimeter ditch, a sand drainage layer underdrain outlet that discharges to a rip-rap lined drainage sump west of the landfill, and the outfall pipe from the northwest pond on April 26, 2018. Samples were sent to Eastern Analytical Inc. (EAI) in Concord, New Hampshire with PFAS analysis performed by Vista Analytical (Vista) (via subcontract to EAI). Samples were analyzed for 1,4-dioxane and six PFAS compounds in accordance with the EPA approved Sampling and Analytical Plan (SAP).

Laboratory results are enclosed as **Attachment 1** with a summary of analytical results from samples collected as part of this stormwater investigation presented in **Table 1**. Results for the seep (L-1) sample collected during the Spring 2018 sampling event in addition to the two sampling events performed in 2017 were added to the table for comparison.

As shown on Table 1, 1,4-dioxane was not detected in any of the stormwater samples collected. 1,4-dioxane was reported in the L-1 seep sample at concentrations of 4.9 and 4.1 ug/L (2018 original and duplicate samples, respectively).

Concentrations of PFOA ranged from 532 (B) nanograms per liter (ng/L) (northwest pond Outfall piping) to 1,480 (B) ng/L (underdrain discharge at rip rap sump). The B qualifier indicates that PFOA was also detected in the method blank at a very low concentration. PFOA was reported in the L-1 seep at concentrations of 532 and 492 ng/L.

Concentrations of PFOS ranged from 1,230 (northwest pond Outfall piping duplicate sample) to 3,060 (D) ng/L (underdrain discharge at rip rap sump). The D qualifier indicated that the sample was diluted at the lab before analysis due to high concentration. PFOS was reported in the L-1 seep sample at concentrations of 567 and 571 ng/L.

The combined concentrations of PFOA and PFOS ranged from 1,831 (Perimeter ditch) to 4,540 ng/L (underdrain discharge at rip rap sump). The combined concentrations of PFOA and PFOS were reported in the L-1 seep and L-1 seep duplicate at concentrations of 1,099 and 1,063 ng/L, respectively.

The higher PFAS concentration in the underdrain sample is likely due to a longer residence (contact) time for water infiltrating and traveling through cover materials and conveyance piping, as compared to the perimeter ditch sample which reflects the more short-term runoff from the rain event.

CONCLUSIONS

Concentrations of 1,4-dioxane were not reported in any of the stormwater samples collected. 1,4-dioxane has been detected in many of the groundwater monitoring wells, as well as in the L-1 sample and is a Contaminant of Concern (CoC) at the Coakley Site. The absence of 1,4-dioxane suggests that the stormwater samples are not interacting with shallow groundwater, landfill waste, or leachate.

All three stormwater samples reported concentrations of PFOA/PFOS at higher concentrations than those reported in the L-1 seep sample. These data suggest that stormwater is coming into contact with PFAS-containing materials and subsequently being conveyed to the wetland complex west of the landfill.

RECOMMENDATIONS

The sampling results represent one limited data set focused on stormwater runoff samples. Data suggest that stormwater is coming into contact with PFAS-containing materials, but the currently available information is insufficient to identify variability of results or a direct source of PFAS. Stormwater comes in contact with one or more of the following:

- Vegetative (topsoil) layer
- Cover soil (frost protection barrier for the liner)
- Sand drainage layer
- The linear low-density polyethylene (LDPE) liner, and
- High density polyethylene (HDPE) underdrain piping

In order to address these data gaps, we recommend the following actions:

1) Collect a second set of stormwater samples from the same locations as the original samples and analyze for the six PFAS compounds in the original samples (**Table 1**). Samples will need to be collected following a rain event when surface runoff is present and be representative of the conditions under which the original samples were obtained.

2) Expand the sampling to include the northeast pond outfall and underdrain discharge to both retention ponds and complete the same analysis as noted above.

3) Collect representative samples (minimum of three) from each of the earthen materials used in the cover system – vegetative layer, cover soil and sand drainage layer and analyze for the six PFAS compounds listed above.

4) Investigate the use of PFAS in polyethylene liner and piping manufacturing in the 1990s.

If you have any questions concerning this letter, please contact either of the undersigned at (207) 795-6009.

Sincerely,
CES, Inc.

Suzanne Yerina, P.G.
Project Geologist

Michael A. Deyling, P.G.
Senior Project Geologist

SLY/MAD/jna

Enclosures

TABLE

TABLE
Summary of Stormwater Analytical Data for Spring 2018
Coakley Landfill Superfund Site - North Hampton Greenland, New Hampshire

SAMPLE IDENTIFICATION	Perimeter Ditch	Northwest Outfall Pipe	Northwest Outfall Pipe Dup	Subsurface Underdrain Piping	L-1	L-1 Dup	L-1	L-1 Dup	L-1	L-1 Dup				
DATE SAMPLED	4/26/2018	4/26/2018	4/26/2018	4/26/2018	4/28/17	4/28/17	9/21/17	9/21/17	4/30/2018	4/30/2018	EPA Screening Levels		EPA Screening Levels	
1,4-Dioxane by 8260B SIM ug/L											Adult	Child	Adult	Child
1,4-Dioxane	0.25U	0.25U	0.25U	0.25U	1.5	1.3	17	18	4.9	4.1	Recreator	Recreator	Recreator	Recreator
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)											EF = 45 Days		EF = 120 Days	
Perfluorobutanesulfonic acid (PFBS)	2.58U	2.29U	2.19U	3.62J	2.09U	2.13U	4.85J	5.50J	2.72J	2.99J	18,300,000	2,030,000	6,850,000	760,000
Perfluoroheptanoic acid (PFHpA)	217	223	223	531	175	170	111	109	208	196	---	---	---	---
Perfluorohexanesulfonic acid (PFHxS)	6.68U	7.77J	8.22J	19.6J	9.12J	9.39J	19.0J	19.4J	12.0J	11.6J	---	---	---	---
Perfluorooctanoic acid (PFOA)	591B	532B	631B	1480B	656	736	319	310	532	492	18,300	2,030	6,850	760
Perfluorononanoic acid (PFNA)	268	307	299	770	308	310	70.3	75.6	207	193	---	---	---	---
Perfluorooctanesulfonic (PFOS)	1240	1440	1230	3060D	1930D	1560J	164J	150	567	571	18,300	2,030	6,850	760
Combination of PFOA and PFOS	1831	1972	1861	4540	2586	2296	483	460	1099	1063	---	---	---	---

NOTES:

1. J = Amount detected is below the reporting limit/Limits of Quantitation
2. B = Compound detected in the method blank
3. D = Dilution
4. U = Not detected above the detection limit
5. Shaded values denote EPA Screening Level Child Recreator Exceedances, EF = 120 days
6. Shaded values denote EPA Screening Level Child Recreator Exceedances, EF = 45 days

FIGURES

LEGEND

△ L-1 SEEP SAMPLING LOCATION

PLAN REFERENCE

EXISTING CONDITIONS BASEMAP FROM PLAN TITLED "AS-BUILT SURVEY OF THE COAKLEY LANDFILL, BREAKFAST HILL ROAD, NORTH HAMPTON, N.H.", PREPARED BY RICHARD D. BARTLESS & ASSOCIATES, INC. AND DATED SEPT. 23, 1998.

0 100' 200'

N

WETLAND

WETLAND

A1

L-1

SEEPAGE AREA

POND OUTFALL PIPE SAMPLING LOCATION

NORTHWEST RETENTION POND

PERIMETER DITCH SAMPLE LOCATION

SUBSURFACE UNDERDRAIN PIPING SAMPLING LOCATION

UNDERDRAIN PIPING DISCHARGE

OUTFALL PIPE DISCHARGE

NORTHEAST RETENTION POND

UNDERDRAIN PIPING DISCHARGE

E 1211000 E 1211500 E 1212000 N 184000 N 184000

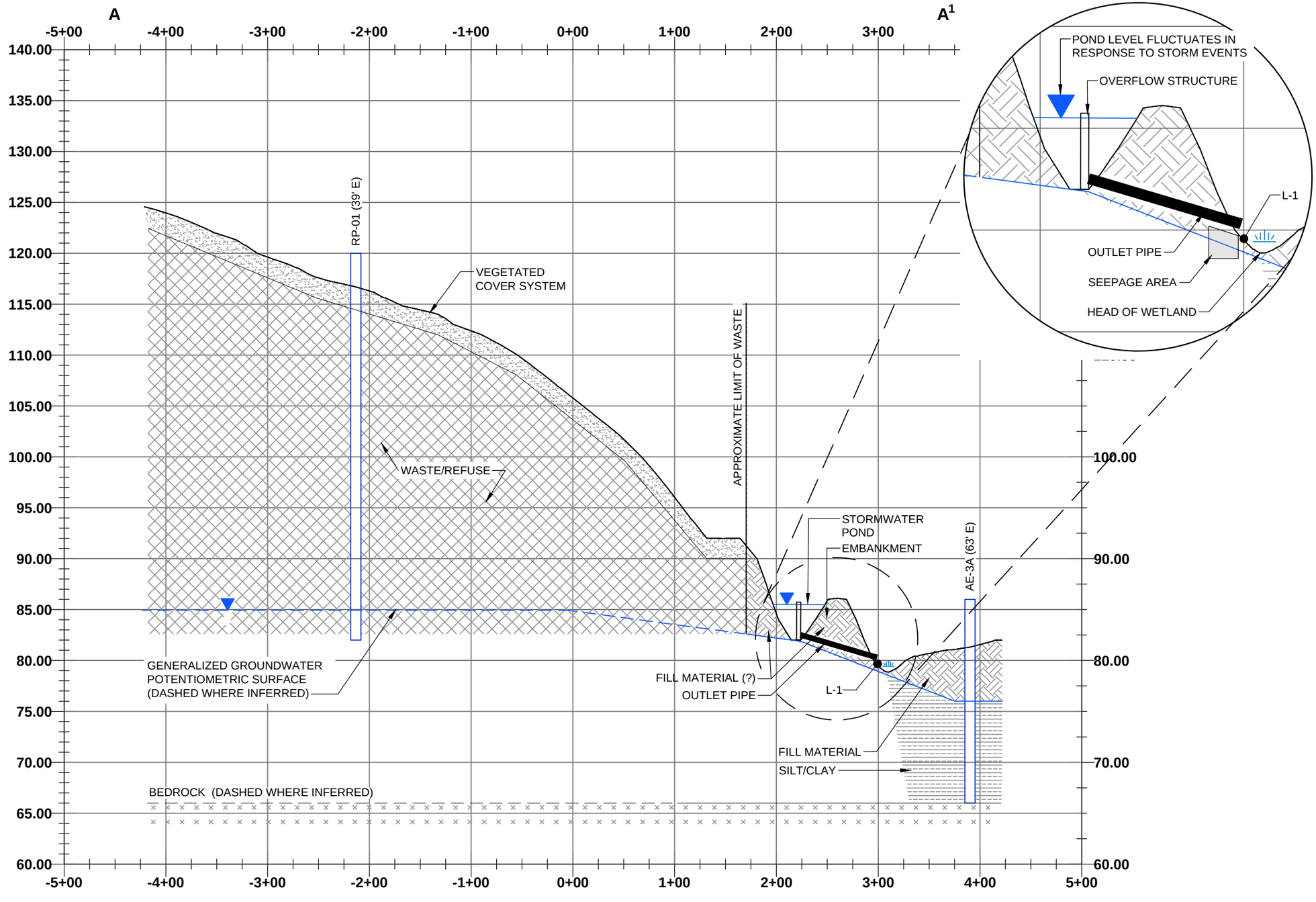
PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE	DWG: FIGURE 1	BY: BLQ	REV:	DESCRIPTION:	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 2018-08-08	REV DATE:		
SHEET TITLE: STORM WATER SAMPLING PLAN	JN: 10424.019	APPROVED BY: MD	ISSUE:	DESCRIPTION:	
	SCALE: 1"=100'	CHECKED BY: SY	ISSUE DATE:		

LEGEND

- FILL MATERIAL
- LANDFILL REFUSE
- MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.
- BEDROCK (DASHED WHERE INFERRED)
- WETLAND
- WATER ELEVATION (DASHED WHERE INFERRED)

NOTE:

CROSS SECTIONS BASED ON ORIGINAL SOIL BORING LOGS AND WELL INSTALLATION INFORMATION PROVIDED IN THE SEPTEMBER 2017 SAMPLING AND ANALYSIS PLAN (SAP). EXISTING GRADE AND LOCATION OF L-1 BASED UPON 2011 COASTAL NEW HAMPSHIRE LIDAR, WITH A VERTICAL ACCURACY OF 15 CM.



PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE	DWG: FIGURE 2	BY: BLQ	REV:	DESCRIPTION:	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 2018-08-08	REV DATE:		
SHEET TITLE: CROSS SECTION A-A1	JN: 10424.002	APPROVED BY: MD	ISSUE:	DESCRIPTION:	
	SCALE: AS SHOWN	CHECKED BY: DC	ISSUE DATE:		

P:\10424-Coaklev Landfill Groun\002-General Tech.Assistance Services\02-Cad Drawings\Civil\dsn dwgs\10424.002-SECTION RP-1.dwg

CITY OF PORTSMOUTH
MAYOR'S OFFICE
MEMORANDUM

DATE: August 15, 2018

TO: CITY COUNCIL

FROM: JACK BLALOCK, MAYOR

RE: RESIDENCY OF MEMBERS OF THE PLANNING BOARD

At the City Council meeting of August 20, 2018 I will be recommending the immediate adoption by the City Council of the following new Council Policy:

POLICY #: 2018-__

All members of the Planning Board of the City of Portsmouth, whether characterized as Ex Officio, Alternate, Designated, Appointed or otherwise, shall be residents of the City of Portsmouth.

This policy shall take effect upon the passage by the City Council.

cc: John P. Bohenko, City Manager

h\mayor\memo re-residency of pb members (2018)

CITY OF PORTSMOUTH, N.H.
BOARDS AND COMMISSIONS

APPOINTMENT APPLICATION

Instructions: Please print or type and complete all information
Please submit resume along with this application

RECEIVED
AUG 02 2018
By

Renewing applicant

Committee: Parking Traffic Safety

Name: Shari Donnermeyer Telephone: 603-498-5788

Could you be contacted at work? (YES)/NO - If so, telephone # ↑

Street address: 193 Gosport Rd Portsmouth, NH 03801

Mailing address (if different): same

Email address (for clerk's office communication): sharidonnermeyer@gmail.com

How long have you been a resident of Portsmouth? since 1988

Occupational background:

sales
management
marketing

Would you be able to commit to attending all meetings? (YES)/NO

Reasons for wishing to continue serving:

Fun!
Public service

OVER

6/27/2012

Please list any organizations, groups, or other committees you are involved in:

Past:
Rotary, Prescott Park, Chamber of Commerce, Harbour Trail, Holiday Home Tour founder

Please list two character references not related to you or city staff members:
(Portsmouth references preferred)

1) Margaret A O'Brien, Rye, NH 603-828-7245
Name, address, telephone number

2) Nancy Clayburgh, FW Hartford Dr Portsmouth 603-475-3037
Name, address, telephone number

BY SUBMITTING THIS APPLICATION YOU UNDERSTAND THAT:

1. This reappointment application is for consideration and does not mean you will necessarily be reappointed to this Board/Commission; and
2. The Mayor will review your application, may contact you, check your references, and determine any potential conflict of interests; and
3. This application may be forwarded to the City Council for consideration at the Mayor's discretion; and
4. If this application is forwarded to the City Council, they may consider the application and vote on it at the next scheduled meeting.
5. Application will be kept on file for one year from date of receipt.

Signature: [signature] Date: 8/2/2018

CITY CLERK INFORMATION ONLY:

New Term Expiration Date: 9/17/2021

Annual Number of Meetings: 10 (2017) Number of Meetings Absent: Ø

Date of Original Appointment: 9/17/2012

Please submit application to: City Clerk's Office, 1 Junkins Avenue, Portsmouth, NH 03801

ACTION ITEMS

PARKING and TRAFFIC SAFETY COMMITTEE

8:00 A.M. – August 2, 2018
City Hall – Conference Room A

MEMBERS PRESENT:	Chairman, Doug Roberts City Manager, John Bohenko Police Captain, Frank Warchol Deputy Fire Chief, James Heinz Members: Harold Whitehouse, Ronald Cypher, Shari Donnermeyer, Mary Lou McElwain and Ralph DiBernardo
MEMBER ABSENT:	Public Works Director, Peter Rice
CITY STAFF PRESENT:	Parking and Transportation Engineer, Eric Eby Parking Director, Ben Fletcher

Action Items requiring an immediate ordinance during the next Council meeting:
None

Temporary Action Items requiring an ordinance during the annual omnibus:

Action Item (VI.A.) Request for a loading zone on Brewster Street, by The Kitchen. VOTED to approve a loading zone between the hours of 7 a.m. and 3 p.m., Monday through Friday, on Brewster Street, north of Islington Street.

Action Item (VI.B.) Request to reaffirm parking restriction on both sides of Hill Street between Bridge Street and Autumn Street, by Martin Burns. VOTED to prohibit parking along both sides of Hill Street between Bridge Street and Autumn Street.

Action Item (VI.D.) Request for a handicap parking space at 30 Sudbury Street, by Randle Wright. VOTED to designate parking space on south side of Sudbury Street in front of #30 Sudbury Street as Handicap Parking Only.

Action Item (VI.F.) Two hour time limit on tennis court and playground parking spaces in South Mill Pond lot. VOTED to restrict 9 parking spaces nearest the tennis courts, and the 7 parking spaces currently designated as Playground Parking Only in the South Mill Pond parking lot, to 2 hour parking time limit, from April 1st through December 1st.

1. Accepted and placed on file meeting minutes from June 7, 2018.

2. Public Comment: Five Speakers: Liz Good, Robin Rousseau, Cate Jones, Caroline McMullen and Roger Pederson

3. (VI.A.) **Action Item:** Request for a loading zone on Brewster Street, by The Kitchen. **VOTED to approve a loading zone between the hours of 7 a.m. and 3 p.m., Monday through Friday, on Brewster Street, north of Islington Street.**

4. (VI.B.) **Action Item:** Request to reaffirm parking restriction on both sides of Hill Street between Bridge Street and Autumn Street, by Martin Burns. **VOTED to prohibit parking along both sides of Hill Street between Bridge Street and Autumn Street.**

5. (VI.C.) **Action Item:** Relocate motorcycle parking spaces in Market Square from east side of Pleasant Street to the west side of Pleasant Street. **VOTED to table action item.**

6. (VI.D.) **Action Item:** Request for a handicap parking space at 30 Sudbury Street, by Randle Wright. **VOTED to designate parking space on south side of Sudbury Street in front of #30 Sudbury Street as Handicap Parking Only.**

7. (VI.E.) **Action Item:** Reinstall NO TURN ON RED signs at the intersection of Middle Street, Miller Avenue and Summer Street. **VOTED to prohibit right turns on red at the intersection of Middle Street, Miller Avenue and Summer Street.**

8. (VI.F.) **Action Item:** Two hour time limit on tennis court and playground parking spaces in South Mill Pond lot. **VOTED to restrict 9 parking spaces nearest the tennis courts, and the 7 parking spaces currently designated as Playground Parking Only in the South Mill Pond parking lot, to 2 hour parking time limit, from April 1st through December 1st.**

9. (VII.A.) **Action Item:** Report back: Langdon Street parking changes.
   No action required by Committee.

10. (VII.B.) **Action Item:** Report back: Chairman Robert's parking space suggestions.
    No action required by Committee.

11. (VIII.A.) **Action Item:** Echo Avenue closed on July 20, 2018.
    No action required by Committee.

12. (VIII.B.) **Action Item:** Quarterly accident report.
    VOTED to forward recommendation to the Portsmouth City Council's Legislative Subcommittee that motorcycle helmets be required in New Hampshire.

13. (VIII.C.) **Action Item:** PTS open action items.
    No action required by Committee.

14. (IX.A.) **Action Item:** Possible site visit time change.
    Site visit time change from 8 a.m. to 9 a.m.

Adjournment – At 9:05 a.m., **VOTED** to adjourn.

Respectfully submitted by:
Amy Chastain
Secretary to the Committee

MEETING MINUTES

PARKING and TRAFFIC SAFETY COMMITTEE

8:00 A.M. – August 2, 2018
City Hall – Conference Room A

I. CALL TO ORDER:

At 8:00 a.m., Chairman Roberts called the meeting to order.

II. ROLL CALL:

Members Present:
Chairman, Doug Roberts
City Manager, John Bohenko
Police Captain, Frank Warchol
Deputy Fire Chief, James Heinz
Member, Ronald Cypher
Member, Shari Donnermeyer
Member, Mary Lou McElwain
Member, Harold Whitehouse
Alternate Member, Ralph DiBernardo

Member Absent:
Public Works Director, Peter Rice

Staff Advisors Present:
Parking and Transportation Engineer, Eric Eby
Parking Director, Ben Fletcher

III. ACCEPTANCE OF THE MINUTES:

Ronald Cypher moved to accept the meeting minutes of the June 7, 2018 meeting, seconded by Harold Whitehouse. **Motion passed 8-0.**

IV. FINANCIAL REPORT:

No financial report.

V. PUBLIC COMMENT:

Liz Good, North Church moderator, spoke to agenda item (VI.C.) regarding motorcycle parking on Pleasant Street. Ms. Good noted that the North Church conducts public tours in the summer and is currently increasing programming at the building. Ms. Good was concerned about the noise impact.

Caroline McMullen, North Church deacon, expressed concerned about agenda item (VI.C.). She stated motorcycle parking was moved to the other side of Pleasant Street a few years ago because North Church's windows are so fragile. She also expressed concern about the noise impact.

Cate Jones is a resident of Portsmouth and spoke to agenda item (VI.C.). Ms. Jones did not see any need to provide any motorcycle parking in Market Square.

Roger Pederson is a resident of Portsmouth and spoke to agenda item (VI.C.). He stated the Police Department has equipment to measure motorcycle noise and to ensure compliance. He said that the motorcycle spaces maximize parking in the City.

Robin Rousseau lives on the corner of Fleet Street and Congress Street. She stated the motorcycle noise level is very high. Ms. Rousseau suggested that motorcycle parking be added at the entrance of the new Deer Street Garage. She felt it would redirect motorcycle traffic out of Market Square.

VI. NEW BUSINESS:

A. Request for a loading zone on Brewster Street, by The Kitchen. City Manager John Bohenko moved to approve a time restricted loading zone on Brewster Street, north of Islington Street. Seconded by Shari Donnermeyer.

Eric Eby provided background on this agenda item. The loading zone that was there was not in the City ordinances. This action will make it an official loading zone. Chairman Doug Roberts noted that the restaurant owner requested that the space be restricted as a loading zone from 7 a.m. to 3 p.m. Ralph DiBernardo added that the owner did not need the space on the weekends.

City Manager John Bohenko amended the motion to approve a loading zone between the hours of 7 a.m. and 3 p.m., Monday through Friday, on Brewster Street, north of Islington Street. Seconded by Harold Whitehouse. Motion passed 8-0.

B. Request to reaffirm parking restriction on both sides of Hill Street between Bridge Street and Autumn Street, by Martin Burns. **Harold Whitehouse moved to prohibit parking along both sides of Hill Street between Bridge Street and Autumn Street, seconded by Shari Donnermeyer.**

Eric Eby noted that the matter was presented by a resident. Currently, there is No Parking signage on Hill Street at this location. However, there has been a problem with enforcement because it's not in the City ordinance. PTS voted in 2001 to prohibit parking on both sides of Hill Street, but it was not recorded in the ordinance at that time.

The Committee discussed enforcement issues associated with it not being in the City ordinance.

Motion Passed 8-0.

C. Relocate motorcycle parking spaces in Market Square from east side of Pleasant Street to the west side of Pleasant Street. **City Manager John Bohenko moved to table the action item, seconded by Ronald Cypher.** City Manager Bohenko elaborated that this would give City staff more time to research the options presented by speakers in today's public comment period.

Ralph DiBernardo requested Police Captain Frank Warchol explain the state regulations on motorcycle noise and enforcement. Police Captain Frank Warchol commented that motorcycle noise is specifically governed by decibel levels by the State of New Hampshire. NH State law limits the volume of motorcycle exhaust noise at different levels, depending on speed and engine type. He stated that NH State law is specific about how and where motorcycle noise should be measured and provided details. He also stated that by state law, a police officer cannot walk up to a motorcyclist and request to test the bike. In order to legally test a motorcycle's exhaust noise, the driver must be stopped because of a violation e.g. running a stop sign, speeding, having a tail light out. NH State law prohibits the enforcement of motorcycle noise level restrictions at motorcycle-only roadside checkpoints.

Shari Donnermeyer questioned what motivated this proposal. City Manager John Bohenko responded that there has been a lot of frustration about the issue in the area.

Motion Passed 8-0.

D. Request for a handicap parking space at 30 Sudbury Street, by Randle Wright. **Harold Whitehouse moved to designate parking space on south side of Sudbury Street in front of #30 Sudbury Street as Handicap Parking Only, seconded by Ronald Cypher.**

Mary Lou McElwain commented that Randle Wright requested that it not be marked on the pavement, but she felt that it should be marked to be consistent with other spots in the City. Eric Eby noted that the law required a sign that is visible all year round. The City has been adding the pavement markings for extra visibility, but it is not required by law. City Manager John Bohenko pointed out that pavement markings make it more difficult to move the spot, if needed.

Ralph DiBernardo noted that the requester Randle Wright referred to the spot as his designated spot in the letter. He clarified that it would be a public handicap parking space.

Motion passed 8-0.

E. Reinstall NO TURN ON RED signs at the intersection of Middle Street, Miller Avenue and Summer Street. **City Manager John Bohenko moved to prohibit right turns on red at the intersection of Middle Street, Miller Avenue and Summer Street, seconded by Mary Lou McElwain.**

Eric Eby noted that this was presented by residents in that area. The sight lines at this intersection are not conducive to allow right on red. He spoke to the visibility challenges of the intersection.

Chairman Doug Roberts questioned if there was a way to realign the crosswalks to allow for better visibility. Eric Eby responded that the intersection geometry does not allow for realignment because the crosswalks are designed to use the shortest route possible. If they went corner to corner it would increase the crossing distance and create delays for pedestrians and traffic.

Shari Donnermeyer questioned if it was still prohibited to go right on red from Middle Street to State Street. Eric Eby responded there is a blank-out sign that displays only when pedestrians cross.

Mary Lou McElwain commented that it was hard to see the pedestrian lights from the intersection. City Manager John Bohenko responded they would look into adding it to the Capital Improvement Plan (CIP) for next year.

Motion Passed 8-0.

F. Two hour time limit on tennis court and playground parking spaces in South Mill Pond lot. City Manager John Bohenko moved to restrict 9 parking spaces nearest the tennis courts, and the 7 parking spaces currently designated as Playground Parking Only in the South Mill Pond parking lot, to 2 hour parking time limit, seconded by Mary Lou McElwain.

Eric Eby noted that this parking lot is filled to capacity almost every day. It's a free lot that is within walking distance of downtown. People who come to use the facilities have nowhere to park because cars are parked all day. This is an attempt to create turnover.

City Manager John Bohenko questioned if there could be a seasonal restriction added. He stated people will not be using the facilities in the winter. He recommended restrictions be in effect from April to December.

City Manager John Bohenko amended the motion to restrict 9 parking spaces nearest the tennis courts, and the 7 parking spaces currently designated as Playground Parking Only in the South Mill Pond parking lot, to 2 hour parking time limit, from April 1st through December 1st, seconded by Mary Lou McElwain.

Ralph DiBernardo questioned if the parking spaces would be for the playground only or if they would just have a two-hour time limit. Eric Eby responded that the parking spaces now are marked for playground only and they do not have a time limit. This change would add a time limit to the playground use.

Mary Lou McElwain questioned how this would be enforced. City Manager John Bohenko responded that it would be enforced by making chalk marks on the vehicle tires.

Harold Whitehouse pointed out that there were only three handicap spots in the parking lot. Is that compliant? Eric Eby responded that it was. Harold Whitehouse noted that they were full all the time.

Motion passed 8-0.

VII. OLD BUSINESS:

A. Report back: Langdon Street parking changes. Eric Eby commented that at the last meeting the Committee voted to restrict parking on both sides of Langdon Street except for the one space nearest to the McDonough Street intersection. When City staff erected signage, it became clear that there was not enough room for a parking space because of the crosswalk. Currently, parking is restricted on both sides of Langdon Street from McDonough Street to the end of the street. This report back to the Committee was supposed to address that one spot, and if it was impacting Regan Electric trucks. Since the space does not exist, no report back is needed.

B. Report back: Chairman Robert's parking space suggestions. Chairman Doug Roberts noted that there was a meeting to discuss the parking suggestions on Fleet Street. The final decision was to not do anything in the short term but wait until the roadway is reconstructed. When reconstruction is completed, it will be reevaluated to see if there is room to add parking.

Eric Eby commented on Chairman Robert's parking space suggestion on Maplewood Avenue next to the Bridge Street parking lot. He stated there is a long-term design project on Maplewood Avenue and parking could possibly be added. He stated it is not a good recommendation in the short term because the City is using the area for message boards. Chairman Roberts noted that doing something in the short term could still be beneficial depending on how much parking could be added.

VIII. INFORMATIONAL:

A. Echo Avenue closed on July 20, 2018. Eric Eby stated the neighbors have noticed a significant benefit to the closure. There is less traffic through the neighborhood. Shari Donnermeyer questioned if the City had notified Google Maps. Eric Eby confirmed that they had.

B. Quarterly accident report. Police Captain Frank Warchol noted that there had been one pedestrian accident during the second quarter of 2018. It happened on the corner of Daniel Street and Penhallow Street. The pedestrian did not use the crosswalk. The July numbers show that the number of accidents in the City is up 2% from last year.

Mary Lou McElwain noted that she had seen quite a few cyclists riding on the sidewalks. Police Captain Frank Warchol stated lack of enforcement was due to the limited number of police officers in the downtown. He stated if they see it, they do address it. The Committee briefly discussed that bicycles are not allowed on sidewalks unless the bike has 16-inch wheels or smaller.

Chairman Doug Roberts noted that there was a motorcycle accident recently and asked if they were wearing a helmets. Police Chief Frank Warchol confirmed they were not. Chairman Doug Roberts noted that over 20 people are killed in motorcycle accidents a year in the state. In 2015, 23 people were killed and 37% of those could have been prevented if they were wearing helmets.

Chairman Roberts moved to forward recommendation to the Portsmouth City Council's Legislative Subcommittee that motorcycle helmets be required in New Hampshire, seconded by Mary Lou McElwain. Motion passed 8-0.

C. PTS open action items.
No action required by the Committee.

IX. MISCELLANEOUS:

A. Possible site visit time change. Chairman Roberts noted that site visits on Tuesdays would happen at 9:00 a.m. instead of 8:00 a.m.

Mary Lou McElwain questioned why parking issues with new developments were not coming in front of PTS. She asked why the Portsmouth Housing Authority (PHA) project did not come before PTS. City Manager John Bohenko responded that the land was owned by the PHA. He stated anything on public property should come to this committee. Anything on private property becomes a land use issue. Chairman Doug Roberts added that the PHA made an argument that their project would not be as feasible if they had to fulfill the parking regulations. They used the space to provide more housing rather than more parking. City Manager John Bohenko suggested the Committee could always send a letter to the Planning Board to weigh in on issues.

Harold Whitehouse raised concern about shared motorized scooters. City Manager John Bohenko stated that it was on the August 20th City Council Agenda.

Ralph DiBernardo commented that the property owners on Aldrich Road at Islington Street were straddling the curb and ruining the grass, but it had been addressed by DPW. However, he stated there is another house on the street doing the same thing. He asked if it could be addressed. He also requested staff look at 1244-1246 Islington Street due to vehicles obstructing the sidewalk.

Chairman Doug Roberts had received an email about Madison Street. There is an apartment building where people are parking on the dirt, which is City property. The owner had put up his own boulders. Staff responded that the boulders were removed. Drainage is an issue in the area and would need to be investigated before installing any curbing.

Chairman Doug Roberts and City Manager John Bohenko presented Ronald Cypher with a plaque commemorating his 18.5 years of service on the Committee. This was his last meeting as a member serving on the Committee. City Manager John Bohenko noted that Ronald had seen a lot of changes in the City and worked on many parking solutions. The City staff really appreciated Ronald and his willingness to serve. City Manager John Bohenko stated it was an honor to have someone who was as interested and committed as Mr. Cypher on PTS and he would be missed.

X. ADJOURNMENT – at 9:05 a.m., VOTED to adjourn.
Respectfully submitted by:

Becky Frey
PTS Recording Secretary

STATE OF OUR ESTUARIES 2018

PREP

Piscataqua Region Estuaries Partnership

STATEOFOURESTUARIES.ORG

LETTER FROM THE EXECUTIVE DIRECTOR

Dear Friends and Partners,

It is with great pride that we present the ***2018 State of Our Estuaries*** report.

You will find that it builds on our previous status and trends reports to send a clear signal: our estuaries have declined due to stress and they are losing resilience to sustain themselves in the face of growing pressures. There are a number of contributing factors. Some of them are due to human activity; others are the result of natural processes beyond our immediate control. Combined, these factors are continually changing the ecosystem function and conditions in our region.

Every five years, the Piscataqua Region Estuaries Partnership (PREP) synthesizes and analyzes data regarding the health of our estuaries and communicates this information to you. We are deeply grateful to the many partners whose data, technical expertise, and practical experience have made this work possible. As one of 28 federally-designated National Estuary Programs established by the United States Environmental Protection Agency, developing this report was PREP's responsibility. Acting on the information it presents, however, is a task for all of us.

In a system as uniquely dynamic as ours, we will not reestablish estuarine health by focusing on one problem. Nor will we get there by allowing ourselves to be discouraged by what we observe or distracted by our differences. We must work collaboratively to make our estuaries more resilient to the changes they are experiencing now, and those to come. The good news is that we know we can do this; we are doing this. From improvements to wastewater treatment to significant increases in land conservation, we have demonstrated an increasing commitment to collaborating to build the resilience of our estuaries.

Since our program was founded 22 years ago, PREP has worked to protect and improve the water quality and health of our region's estuaries. We feel fortunate to be taking up this challenge as part of the University of New Hampshire's School of Marine Science and Ocean Engineering and with many other groups who willingly invest so much passion and dedication to help our ecosystems thrive. Our Comprehensive Conservation and Management Plan names more than 150 organizations and individuals across 52 communities as stakeholders in this effort; it also provides direction for reports like this one and our program overall.

Here is how PREP - your National Estuary Program - intends to act on the findings in this report:

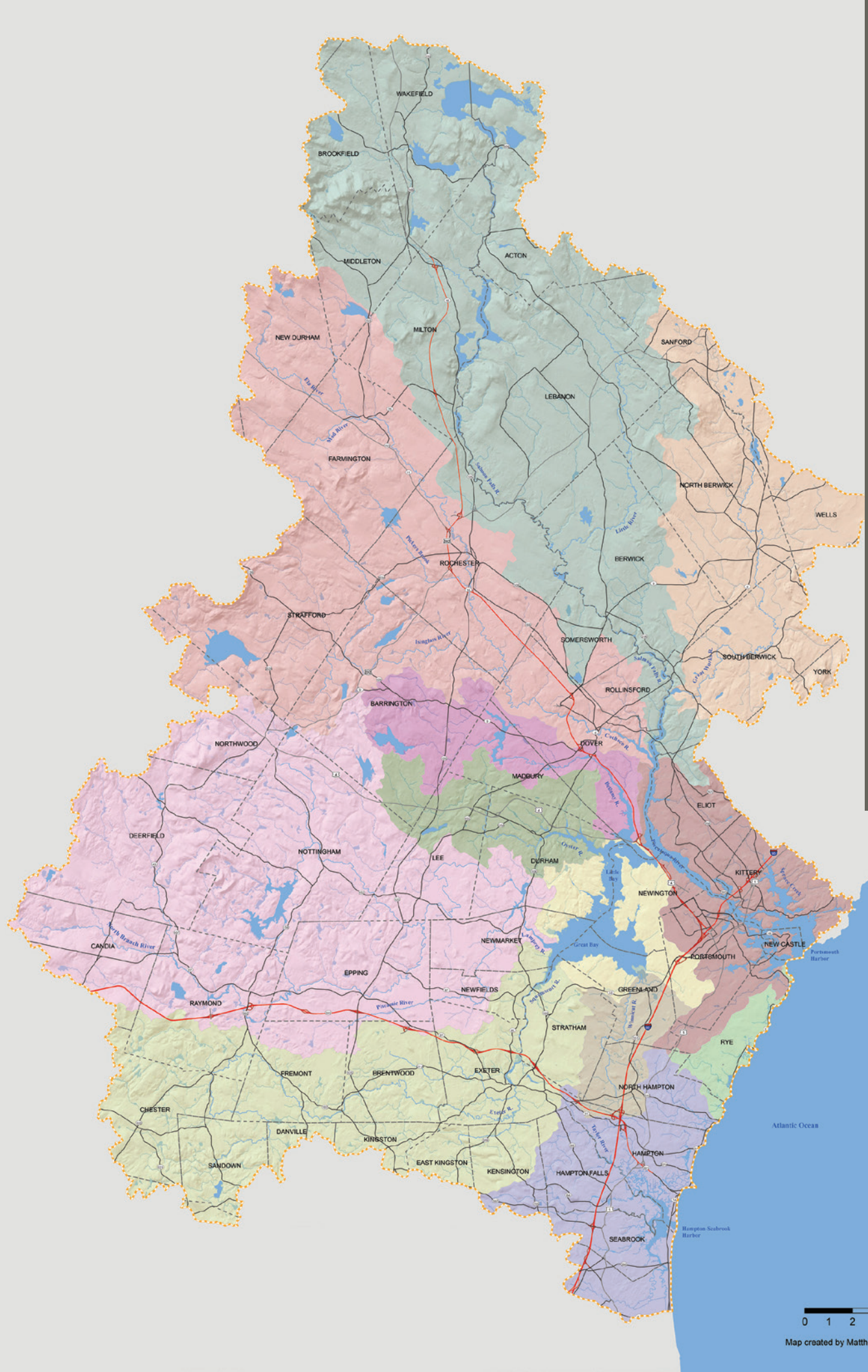
- **Continue to improve our capacity for stakeholder involvement**
- **Build a stronger, more transparent science program that provides the best possible data and science to assist our partners in decision-making for issues such as oyster restoration**
- **Engage our partners in bringing more resources to bear on critical work, such as gathering new data**
- **Leverage the National Estuary Program network to bring the technical expertise of nationally acknowledged experts to help us understand the Great Bay and Hampton-Seabrook estuaries**

Like our estuaries, our social fabric and community spirit need to be resilient in the face of changes to come. For the sake of our economy, quality of life, and public health, we must continue to find common ground and push forward together.

Warm regards,

Rachel Rouillard
Executive Director, Piscataqua Region Estuaries Partnership

For more information and to explore the full report interactively,
visit the new www.StateofOurEstuaries.org



PISCATAQUA REGION WATERSHED

Rivers flowing from 52 communities in New Hampshire and Maine converge with the waters of the Atlantic Ocean to form the Great Bay and Hampton-Seabrook estuaries. The watershed covers 1,086 square miles. These bays provide critical wildlife habitat, nurseries for seafood production, buffering from coastal flooding, recreational enjoyment, and safe harbor for marine commerce. Our estuaries are part of the National Estuary Program and recognized broadly as exceptional natural areas in need of focused study and protection.

GREAT BAY ESTUARY

The entire Great Bay Estuary system including all seven tributaries, Great Bay, Little Bay, Piscataqua River, and Portsmouth Harbor.

GREAT BAY

Only the Great Bay portion of the Great Bay Estuary, south of Adams Point.

RYE, NH | PHOTO BY A. LYON

TABLE OF CONTENTS

INTRODUCTION

INDICATORS

2018 STATE OF OUR ESTUARIES EXECUTIVE SUMMARY

Every five years, the Piscataqua Region Estuaries Partnership (PREP) reports on the environmental condition of the Great Bay and Hampton-Seabrook Estuaries. Our goal is to provide an assessment that resource managers, residents, community leaders, scientists, policy makers, and others can use in their efforts to understand, manage, and protect our local estuaries of national significance.

The 2018 report presents a synthesis of 23 indicators of estuarine health that have been selected for their capacity to help us understand the dynamics and conditions of our estuaries. Some are biological, some are related to management activities, and this year, we are introducing three new indicators that explore the relationship between environmental conditions, social values, and human behavior.

Together, these indicators are sending a clear signal that our estuaries have declined and are under stress. Of the 16 environmental indicators, 12 are characterized as having cautionary or negative trends. The four indicators focused on management activities are split; two show positive progress toward management goals and two demonstrate only marginal headway. The new data we have begun to collect on social indicators will allow us to learn more about how human, economic, and social values influence the overall health of our estuaries. In general, it is clear that our estuaries, and the many benefits they provide for our communities, continue to experience significant stress.

Together, these indicators are sending a clear signal that our estuaries have declined and are under stress.

Where does the stress come from?

Estuaries are complex systems that respond to many compounding influences. Some of these are natural processes, largely beyond the control of citizens and decision makers. Others are byproducts of population growth and increased development. PREP monitors several indicators related to population growth including: housing permit approvals, impervious surfaces, and nutrient loading.

- **Demand for built infrastructure places increased pressure on our estuaries. This is reflected in the number of new housing unit permits approved each year (p. 41) and the growing expanse of impervious surfaces (p. 14) across the Piscataqua Region watershed.**
- **Nutrient loading is a critical stressor. Although we have been making impressive improvements since 2012, nutrients remain of high concern, particularly during rainy years where more runoff leads to increased loading (p. 16).**

How are our estuaries responding to stress?

Some indicators of estuarine health have been in decline for many years. As a consequence, our estuaries are becoming much less resilient to change and the stress it brings. This decline in their ability to bounce back is reflected in the changing condition of multiple indicators including the following:

- **Shellfish are at extremely low levels compared with populations in the 1980s and early 1990s. Critical habitats for clams in the Hampton-Seabrook Estuary and oysters in the Great Bay Estuary are close to being completely decimated (p. 32, 33).**
- **Eelgrass in the Great Bay Estuary shows an overall decline and, more importantly, a clear deterioration in its ability to recover from episodic stress (p. 23).**

What are we doing to help our estuaries be more resilient?

It is evident we value the importance of working together to protect our estuaries and natural resources across the Piscataqua Region. Since 2012, we have taken important steps together.

- **Land conservation efforts have increased across the region (p. 35), although more restoration efforts are needed to fully protect salt marshes (p. 25), eelgrass (p. 23), oysters (p. 32), and migratory fish (p. 34).**
- **Municipal efforts to reduce nutrient loading from point sources, such as wastewater treatment facilities, are an important step in the reduction of nutrient loading in the Great Bay Estuary (p. 16).**
- **Municipalities are being proactive with their stormwater regulations. Thirty communities in the Piscataqua Region have adopted, or are in the process of adopting, updated stormwater standards (p. 44).**
- **Piscataqua Region residents are stepping up to help. In 2016, stewardship volunteers donated more than 40,000 hours to protect water quality, wildlife, and natural resources (p. 46).**

Where do we go from here?

Our collective efforts to monitor, protect, and restore the health of our estuaries deserve celebration. We have shown innovation, diligence, and fortitude in our evolving approach to managing these precious resources. However, we cannot relax our diligence until we see clear evidence that our estuaries are recovering.

There is an urgent need for us to come together to make significant, strategic investments in increased monitoring and research, better shoreland protection policies, and infrastructure improvements. We cannot think in terms of a "silver bullet" action that will alleviate all of the stress on our estuaries. Instead, we must take cross-cutting steps that help our estuarine ecosystems be strong and healthy enough to rebound from the challenges we currently face and those we will encounter in the future (p. 48).

For more on what you can do to help make our estuaries more resilient, please see the companion pieces for this report: the *2018 State of Our Estuaries Municipal Guide* and the *2018 State of Our Estuaries Citizen Guide* at www.StateofOurEstuaries.org. In each you will find science-based actions you can take in your community and at home to protect water quality and the natural resources in our region.

ESTUARINE HEALTH: STRESS AND RESILIENCE

RESILIENCE: THE CAPACITY OF AN ECOSYSTEM TO ABSORB REPEATED DISTURBANCES OR SHOCKS AND ADAPT TO CHANGE WITHOUT CONTINUALLY DEGRADING AND FUNDAMENTALLY SWITCHING TO AN ALTERNATIVE STABLE STATE.[1]

PREP is one of many groups that work to protect and restore the estuaries in the Piscataqua Region. In our collective pursuit to understand what is driving the declining health of our estuaries, the debate has often centered on a single dynamic—the relationship between nitrogen and eelgrass loss. Nitrogen is an important factor that cannot be dismissed, but it is only one of many shocks and disturbances that impact our estuaries.[2] Some of these are slow-acting and chronic, others are episodic. Some are within our control, others much less so. All of these influences, however, act as stressors on estuarine health, and cannot be considered independently of one another. Some of the most significant include the following:

- ***Changing precipitation patterns:*** **Overall, our region is experiencing changing precipitation and more extreme storm events. Between 2004 and 2009, total annual precipitation levels remained above the 75th percentile (Figure 1). Since 2012, levels have been below the 25th percentile. Between 1996 and 2014, extreme precipitation (two inches or more in one day) in the Northeast was 53% higher than it was in the previous 94 years.[3] The 2006 Mother's Day Storm alone greatly increased levels of dissolved organic matter and brought salinity levels close to zero for five days.**

- ***Increasing colored dissolved organic matter (CDOM):*** **The entire Gulf of Maine is experiencing increases in CDOM from rivers as a result of the impacts of climate change, particularly increased precipitation.[4] CDOM, which is composed of decaying plant matter from the watershed, can significantly reduce light penetration and limit growth of eelgrass, phytoplankton, and seaweed.**

- ***Increased impacts of coastal acidification:*** **Coastal acidification has increased as a result of higher levels of carbon dioxide in the atmosphere. It is magnified by the increased frequency of extreme storms, which bring nutrient-rich freshwater into the coastal system. Nutrients can promote intense respiration (the digestion of dead algae by microbes), which consumes oxygen and produces carbon dioxide that leads to increased acidification. This negatively impacts many important species, from blue mussels and oysters to lobsters and flounder. It also has profound impacts on ecosystem health.[5]**

- ***Increasing sea-level rise and storm surge:*** **Since 1993, the rate of sea-level rise for New Hampshire has been 1.3 inches per decade, as compared with 0.7 inches per decade between 1900 and 1993. These higher sea-levels mean that current and future storm surge events will lead to much greater inundation, posing "significant risks to coastal systems by altering hydrology, sedimentation, and land-forming processes.[6]"**

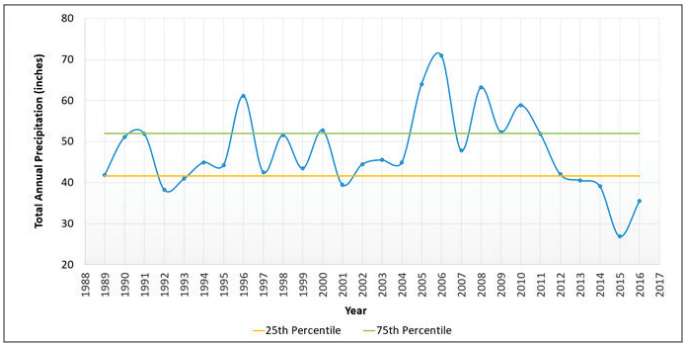


Figure 1 Precipitation in total inches from Greenland/Portsmouth Station. Data are averaged between Portsmouth (Pease) and Greenland weather stations.

Data Source: NOAA National Centers for Environmental Information

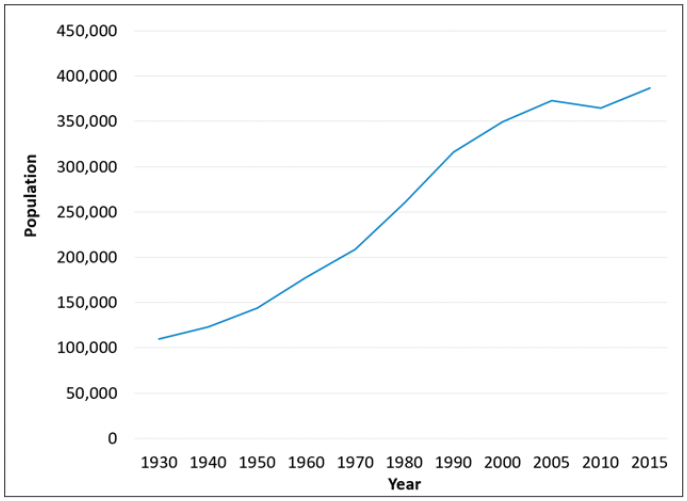


Figure 2 Human population of the 52 towns in the Piscataqua Region watershed; there are 42 communities in New Hampshire and 10 in Maine.

Data Source: U.S. Census Bureau

- ***Increasing human population:*** **Between 1990 and 2015, the combined population of the 52 towns in the Piscataqua Region watershed (10 in Maine and 42 in New Hampshire) grew by 38%, from 280,205 to 386,658 (Figure 2). A growing population can add stress to the environment through increased wastewater, fertilizers, toxic contaminants, and impervious surfaces.**

ESTUARINE HEALTH: STRESS AND RESILIENCE, CONT.

- ***Spread of impervious surfaces:*** **Between 1990 and 2010, impervious surfaces in our watershed increased by 120%[7] and have continued to increase over the last five years (p. 14). Combined with changes in precipitation, these impervious surfaces are sending more contaminants into our estuaries. During extreme storm events, they are delivered in large, disruptive pulses. Such rapid inflows of runoff not only add more nitrogen and toxics to the system, they also stir up estuarine sediments.**
- ***Increased nitrogen loading:*** **Before recent reductions from municipal wastewater treatment facilities (WWTFs), point source nitrogen loading levels had increased steadily between 1988 and 2012. In that time, non-point source (NPS) nitrogen loading also increased steadily, peaking between 2006 and 2008 due to the extreme precipitation that occurred during those years (p. 16).**

  At 43.6 tons per square mile (of tidal estuary surface area), nitrogen levels between 2012 and 2016 were much higher than the 14 tons per square mile threshold for eelgrass health indicated in a 2010 study of 62 New England estuaries.[8] While the Great Bay Estuary may have traits that make it more tolerant of high nutrient levels (such as high flushing rates), our system has three times the threshold level from that study, which is a concern.

  Nutrients fuel the growth of phytoplankton and seaweed and make it more difficult for light to reach eelgrass beds. In our system, monthly sampling of phytoplankton levels are most often in ranges considered "good" or "fair," though sometimes "poor" (p. 19). Seaweed percent cover at intertidal monitoring sites increased from 8% in 1980 to 19% in 2016 (p. 21).

  Excessive seaweed and phytoplankton growth also can lead to low dissolved oxygen levels. Low dissolved oxygen events continue to occur in our tributaries, but these are not necessarily caused by excess nitrogen (p. 22). Finally, excess nitrogen can lead to the organic enrichment of sediments, which limits abundance of benthic animals and shellfish and the growth of eelgrass.[9] It is unclear if this is happening in our system; we are still collecting and analyzing data on sediment conditions in the Great Bay Estuary.

Building estuary resilience in a time of change

There are many more stressors on estuarine health that need consideration, but we lack the data to track. These include disturbance by geese, green crabs, and other animals, and the cascading effects that come from the loss of large predatory fish, invasive species, and disease. It is critical to understand that all stressors—from extreme precipitation to disease—are additive and synergistic. Combined, they change each other's impacts in ways that make it very difficult to isolate the relationship between any one factor and a biological response.

Their collective impact, however, is evident in many of the indicators presented in this report. For example, oyster, clam, and eelgrass habitats decreased significantly over the last 25 years and do not show signs of rebounding (p. 32, 33 & 23). Without eelgrass and oyster habitat in the Great Bay Estuary, sediments and bits of plant and algal material (also known as "Total Suspended Solids" or "TSS") re-suspend more easily and may stay in suspension much longer (p. 15).

In the case of oysters (p. 32), it is acknowledged that disease (MSX and Dermo) has been the primary source of their deterioration. Resource managers locally—as well as in other parts of the world[10]—have recognized that we cannot limit our management actions to one primary stressor. However, we can help oysters become more resilient through restoration, providing more available substrate (shells) on which larvae can settle, or conducting oyster restoration (p. 38) in a way that encourages more vertical growth to help the oysters avoid being smothered by sediment.

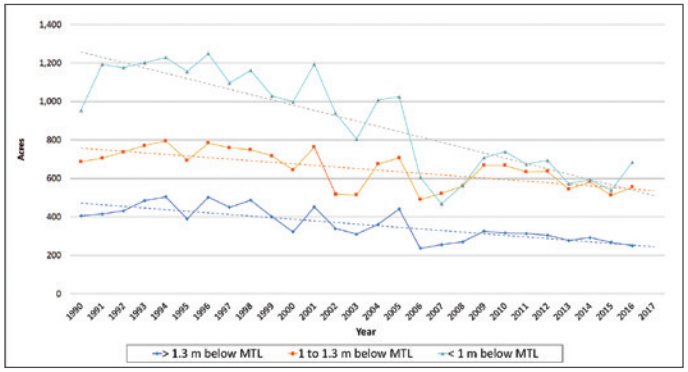


Figure 3 Acres of Eelgrass in Particular Depth Regimes in Great Bay. New Hampshire Department of Environmental Services analysis of loss of eelgrass by depth in Great Bay only. MTL = mean tide.

>1.3 m below MTL >1 to 1.3 m below MTL <1 m below MTL

Data Source: Eelgrass acres = Kappa Mapping, Inc. (for 2013 & 2016) and UNH Jackson Estuarine Laboratory (1990-2015). Bathymetry data from UNH Coastal & Ocean Mapping

In the Great Bay Estuary, eelgrass loss over time has been most pronounced in the deepest beds,[11] suggesting that lack of light is contributing to its decline (Figure 3). CDOM, TSS, and phytoplankton all combine to decrease water clarity and reduce the light that is available to eelgrass. In addition, precipitation and development influence the impact of all of these constituents on the health of our estuaries.

Some stakeholders tend to analyze these light-attenuating components separately, asking which of the three is the stressor on eelgrass. To help eelgrass recover, however, we cannot focus our management strategies on reducing the one factor that limits light the most as these stressors impact the system in an additive way;[12] a more comprehensive approach will be required.

It is also important to consider how eelgrass, seaweed, and phytoplankton compete for light and nutrients. Algae do not have roots like eelgrass and so they are dependent on nutrients in the water column. When algae are not limited by nutrients, as was indicated in a study of the green seaweed *Ulva* in 2010,[13] providing more light by reducing TSS or CDOM may not help eelgrass and instead lead to increases in seaweed and phytoplankton.

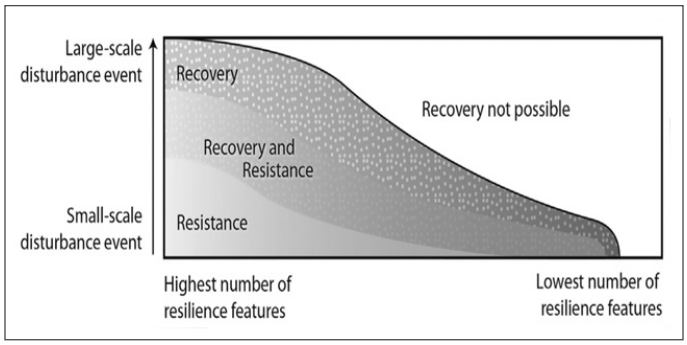


Figure 4 Resilience in Response to Disturbances. Resilience is comprised of resistance (light grey shade) and recovery (spotted fill) processes. Habitats with the highest number of resilience features (x axis) can resist and/or recover from large-scale disturbance events. As the number of resilience features declines, so does the capacity of the habitat to resist or recover from such disturbances.[16]

Given that our goal is healthy estuaries, we should consider taking actions to improve the overall resilience (Figure 4) of these systems. We may have little control over episodic events like extreme storms, but we can reduce the short-term and chronic impacts of these events by continuing to improve stormwater practices, conserve land, and better manage the buffer lands along the edges of our rivers, bays, and coast.[14]

We also can continue to work together to reduce nitrogen loading to increase resilience. The external reviewers (engaged by PREP's Technical Advisory Committee to analyze eelgrass stressors for the Great Bay Estuary) have indicated we should build on the significant reductions from municipal wastewater sources and focus on reducing non-point source (NPS) nitrogen, which accounts for 68% of the nitrogen load. (For a synthesis of this external expert review,[15] see sidebar).

As we work together on solutions, it is important that we recognize that the path back to healthy estuaries may not be the reverse of how we got here. Our estuarine resources and their stressors are different than they were 30 years ago. The impacts we have experienced are significant and recovery may be slow and unpredictable.[17] In light of this, we need to be prepared to invest in data collection and analysis that will allow us to better understand the impacts of the many stressors influencing the health of our estuaries, track the impacts of past management actions, and modify future strategies so they are as effective as possible.

EXTERNAL ADVISOR REVIEW OF STRESSORS IN GREAT BAY

In 2016 and 2017, external advisors were asked to provide input on which stressors to prioritize when managing for improved ecosystem health, with an emphasis on eelgrass. Using 44 different sources of information on the ecology of the Great Bay and Hampton-Seabrook estuaries, the external advisors made the following observations:

- **Eelgrass continues to recover partially, but it has not returned to its previous abundance. While returning to historic conditions may be possible, it will be challenging and it may require stressors to decrease to levels that are lower than those observed before eelgrass began to decline.**
- **Narrowly focusing on single stressors does not reflect the complexity of our estuarine systems.**
- **Despite encouraging reductions from wastewater treatment facilities, nitrogen loading levels are high enough that they should be considered an important stressor.**
- **To decide how much nitrogen reduction is enough, a thorough, quantitative ecosystem based model would be required.**
- **Based on available information, it is evident that a large fraction of the nitrogen entering the system comes from non-point sources. Given that only 2.6% of its watershed is occupied by wetlands, which buffer non-point sources of pollution, the Great Bay Estuary is extremely vulnerable to non-point source loadings.**
- **Eelgrass decline may relate to episodic stressors, such as storms, but it is equally plausible that chronic stressors, such as decreased water quality, may have limited the resilience of eelgrass to episodic disturbances. More comprehensive data is needed to better understand the interactive effects of these stressors.**

To read the complete external advisor report, please visit: http://scholars.unh.edu/prep/377 [18]

INDICATOR TABLE

Indicators are things we measure to characterize pressures on our estuaries, the conditions in our estuaries, and the steps we are taking to respond to challenges in our estuaries. The indicators PREP monitors are tied with PREP's Comprehensive Conservation and Management Plan (CCMP) and many include goals for management associated with them. Indicators do not stand alone, and many impact each other. To learn more about these important interactions refer to the *Estuarine Health: Stress and Resilience* section on p. 7. This report is organized with pressure indicators first, then condition indicators, followed by response indicators, and for the first time, it now includes social indicators. This list of indicators is not exhaustive and does not reflect every pressure, condition, response, or social factor that does or could exist for our estuaries. However, the list of indicators covers the major issues and provides a reasonably complete picture of the State of Our Estuaries.

PRESSURE INDICATORS — These measure some of the key human stresses on our estuaries.

CONDITION INDICATORS — These measure the current state of conditions in our estuaries.

RESPONSE INDICATORS — These track some key actions we are taking to restore our estuaries.

SOCIAL INDICATORS — These measure the social landscape that could impact environmental indicators.

TRENDS

Trends and their associated color drops are based on the entire data set for the indicator, and will vary by indicator.

POSITIVE — The trend or status of the indicator demonstrates improving conditions, generally good conditions, or substantial progress relative to the management goal.

CAUTIONARY — The trend or status of the indicator demonstrates possibly deteriorating conditions, a mixture of positive and negative trends, or moderate progress relative to the management goal.

NEGATIVE — The trend or status of the indicator demonstrates deteriorating conditions, generally poor conditions, or minimal progress relative to the management goal.

NO TREND — Demonstrates indicators that are too new to establish trends of any kind.

INDICATOR	STATUS	STATE OF THE INDICATOR	PAGE
Impervious Surfaces		In 2015, 5.6% of the land area of the Piscataqua Region watershed was covered by impervious surfaces. This is an increase of 1,257 acres of impervious cover or 0.2% of the land area since 2010.	14
Total Suspended Solids		Suspended solids at Adams Point have increased since 1989, but they have decreased at the Great Bay Station since 2002.	15
Nutrient Loading (Point-Sources)		Significant reductions in point source nitrogen loading have and are continuing to occurr at municipal wastewater treatment facilities.	16
Nutrient Loading (Non-Point Sources)		Non-point source loading has decreased, but low rainfall is a contributing factor.	16
Nutrient Concentration		Total nitrogen decreased at Adams Point but increased at the Chapman's Landing and Lamprey River stations. DIN decreased at the Oyster River and Upper Piscataqua stations while Chapman's Landing indicates an increasing trend.	18
Phytoplankton		Based on monthly sampling at low tide, four of the eight stations periodically—though infrequently—exhibit high (>20 ug/L) levels for chlorophyll-a. There are no statistically significant trends.	19
Seaweeds		At limited intertidal sampling sites, green and red seaweeds increased from 8% percent cover to 19% between 1980 and 2016. Two new invasive species are now the dominant red seaweeds.	21
Dissolved Oxygen		In 2015, at the Great Bay and Coastal Marine Laboratory datasondes, dissolved oxygen levels never fell below 6 mg/L. Low dissolved oxygen events occur in all the tidal rivers. There are no clear trends.	22
Eelgrass		Eelgrass acreage in the Great Bay is 31% less than when first mapped in 1981.	23
Salt Marsh		Between the early 1900s and 2010, over a thousand acres of salt marsh area was lost in the Piscataqua Region watershed. As of 2017, approximately 5,521 acres of salt marsh habitat remain.	25
Bacteria		Between 1989 and 2016, dry weather concentrations of bacterial indicators of fecal pollution in the Great Bay Estuary have typically fallen 67% to 93% due to pollution control efforts in most, but not all areas.	27
Shellfish Harvest Opportunities		The percentage of possible acre-days between 2012 and 2016 was 80% and 66% for the Great Bay and Hampton-Seabrook estuaries, respectively, continuing the long-term trend of gradual increase in acre-days.	28
Beach Advisories		Across the 17 tidal beaches in the Piscataqua Region watershed, beach advisory days occurred less than 1% of beach-days from 2012 to 2016. There are no statistically significant trends.	29
Toxic Contaminants		Most concentrations of measured metals and organic chemicals in blue mussel tissue from 1991-2016 are declining or not changing. Mercury and PCB levels remain high enough to merit continued concern. Many emerging contaminants are not yet monitored consistently.	30
Oysters		The number of adult oysters decreased from over 25 million in 1993 to 1.2 million in 2000. Since 2012, the population has averaged 2.1 million oysters, which is 28% of the PREP goal.	32
Clams		The clam population in 2015 was 1.4 million and the percentage of clams infected by disease has significantly increased.	33
Migratory Fish		Migratory river herring returns to the Great Bay Estuary increased 69% between 2012 and 2016; however, river herring returns have sharply declined for the Oyster and Taylor Rivers. No statistically significant trends.	34
Conservation Lands (General)		As of May 2017, 130,302 acres have been conserved (15.5% of the total land area) representing an increase of 5% in new land area coming under conservation (41,555 acres) since 2011.	35
Conservation Lands (Focus Areas)		In 2017, 34.4% of Conservation Focus Areas (CFAs) in New Hampshire and 14.2% of CFAs in Maine were conserved, for a combined impact of 40.9% of progress toward the PREP goal.	37
Oyster Restoration		More than 26 acres of oyster restoration efforts have taken place since 2011. For recent efforts, the actual area covered by oyster shell has decreased by an average of 63%, while one site increased by 30%.	38
Migratory Fish Restoration		In 2016, 42% of the historical distribution for river herring in the Piscataqua Region has been restored. Additionally, removal of the Great Dam in Exeter in July 2016 has improved/enhanced river herring passage on the Exeter River.	39
Housing Permit Approvals		There were a total of 19,483 multi-family and single-family permits issued between 2000-2015 for the 42 New Hampshire watershed towns. There were 331 permits issued for the 10 Maine watershed towns in 2015.	41
Stormwater Management Effort		As of July 2017, of the 42 NH watershed towns - 8 have adopted the complete set of standards, 7 are in the process of adoption, 5 have partial or different, and 22 have not adopted. The 10 ME towns adhere to a state-level standard.	44
Stewardship Behavior		In 2016 there were 38,878 volunteer hours logged in the watershed through the work of six selected New Hampshire-based groups. In 2016, there were 524 people who signed up for 96 events through the Stewardship Network New England.	46

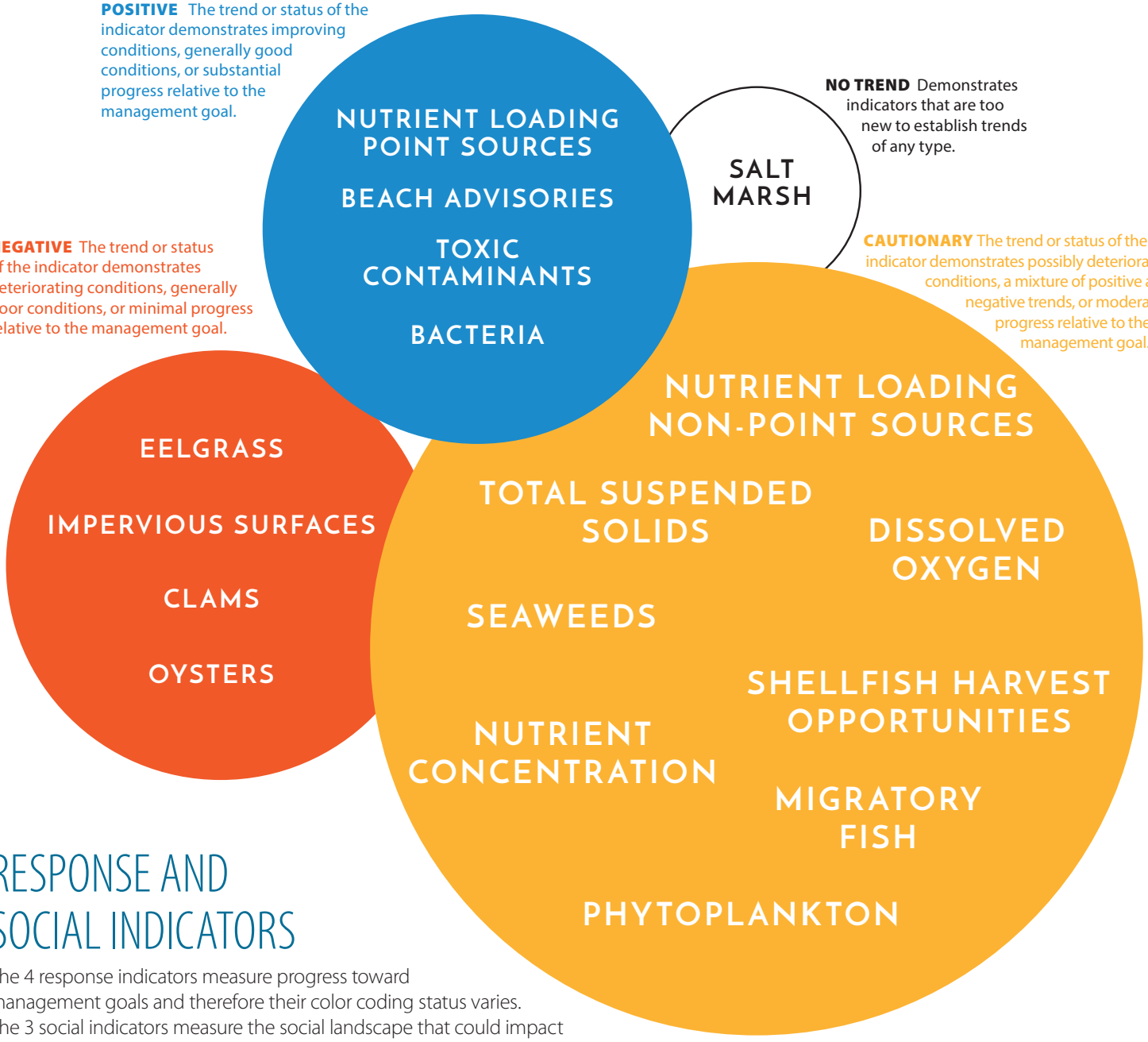
INDICATOR SUMMARY

POSITIVE The trend or status of the indicator demonstrates improving conditions, generally good conditions, or substantial progress relative to the management goal.

NO TREND Demonstrates indicators that are too new to establish trends of any type.

NEGATIVE The trend or status of the indicator demonstrates deteriorating conditions, generally poor conditions, or minimal progress relative to the management goal.

CAUTIONARY The trend or status of the indicator demonstrates possibly deteriorating conditions, a mixture of positive and negative trends, or moderate progress relative to the management goal.



RESPONSE AND SOCIAL INDICATORS

The 4 response indicators measure progress toward management goals and therefore their color coding status varies. The 3 social indicators measure the social landscape that could impact environmental indicators.

- CONSERVATION LANDS (GENERAL)
- CONSERVATION LANDS (FOCUS AREA)
- OYSTER RESTORATION
- MIGRATORY FISH RESTORATION
- HOUSING PERMIT APPROVALS
- STORMWATER MANAGEMENT EFFORT
- STEWARDSHIP BEHAVIOR

HAMPTON BEACH, NH | PHOTO BY A. LYON

IMPERVIOUS SURFACES

How much of the Piscataqua Region watershed is currently covered by impervious surfaces and how has it changed over time?

In 2015, 5.6% of the land area of the Piscataqua Region watershed was covered by impervious surfaces. This is an increase of 1,257 acres of impervious cover or 0.2% of the land area since 2010.

WHY THIS MATTERS Impervious surfaces are man-made features, such as parking lots, roads, and buildings, that do not allow precipitation to infiltrate into the ground. When precipitation falls on impervious surfaces, it runs off those surfaces carrying pollutants and sediments into nearby waterways. Watersheds reach a tipping point around 10% impervious cover[19], beyond which water quality impacts become increasingly severe.

PREP GOAL: NO INCREASE IN THE NUMBER OF WATERSHEDS AND TOWNS WITH GREATER THAN 10% IMPERVIOUS COVER AND NO DECREASE IN THE NUMBER OF WATERSHEDS AND TOWNS WITH LESS THAN 5% IMPERVIOUS COVER.

EXPLANATION The 2015 update to this dataset represents a new, improved baseline for impervious surface across the region due to the use of higher resolution imagery and different processing methodology. Impervious surface values reported in the *2013 State of Our Estuaries* report using 30-meter satellite imagery (63,214 acres) were greater than those reported using the improved and more accurate 1-foot orthoimagery (45,377 acres) in this report. In 2015, 46,634 acres (5.6% of the land area) of impervious surface were mapped representing an increase of 1,257 acres (0.2% of the land area) since 2010 (45,377 acres).

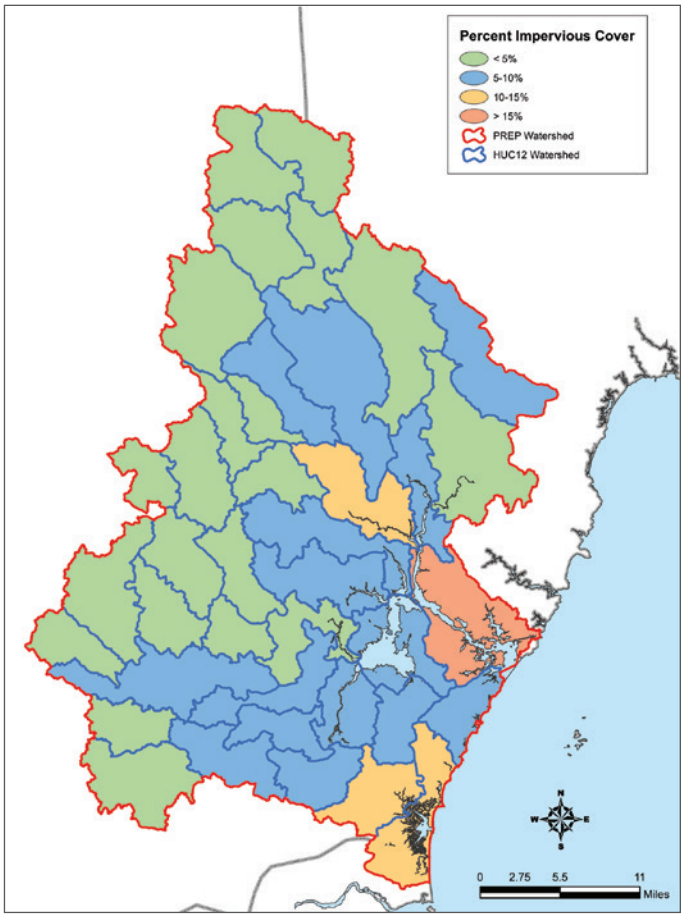


Figure 1.1 Percent impervious cover by subwatershed (HUC-12) as of 2015.
Data Source: UNH Complex Systems Research Center

Watersheds with greater than 10% impervious surface coverage of land area are around the Hampton-Seabrook Estuary, the Piscataqua River, and the Route 16 corridor along the Cocheco River. Impervious surfaces in 2015 in each of the Piscataqua Region subwatersheds are shown as a percentage of land area in Figure 1.1.

Communities with the highest reported impervious surface percentages were found in Portsmouth (26.7%), New Castle (20%), and Seabrook (20%), while the largest increase of impervious surfaces between 2010 and 2015 occurred in Rochester (122 acres), Wells (64 acres), Seabrook (64 acres), Dover (56 acres), York (42 acres), and Sanford (39 acres). Communities with the smallest increases in impervious surfaces occurred in Madbury (4 acres), New Castle (2 acres), and Brookfield (2 acres). Small increases in impervious surfaces may be a result of limited availability of buildable lots. Town-by-town information on impervious surfaces in 2015 is shown in Figure 1.2.

Between 2010 and 2015 population in the Piscataqua Region watershed increased 6% (21,760 people), and impervious surfaces increased 2.7% (1,257 acres). For every one person increase in population, impervious surface increased by .06 acres. However, as shown in Figures 1.1 and 1.2, the amount of impervious cover is not evenly spread across the watershed. For more discussion on population and housing trends in the watershed refer to the Housing Permit Approvals section p. 41.

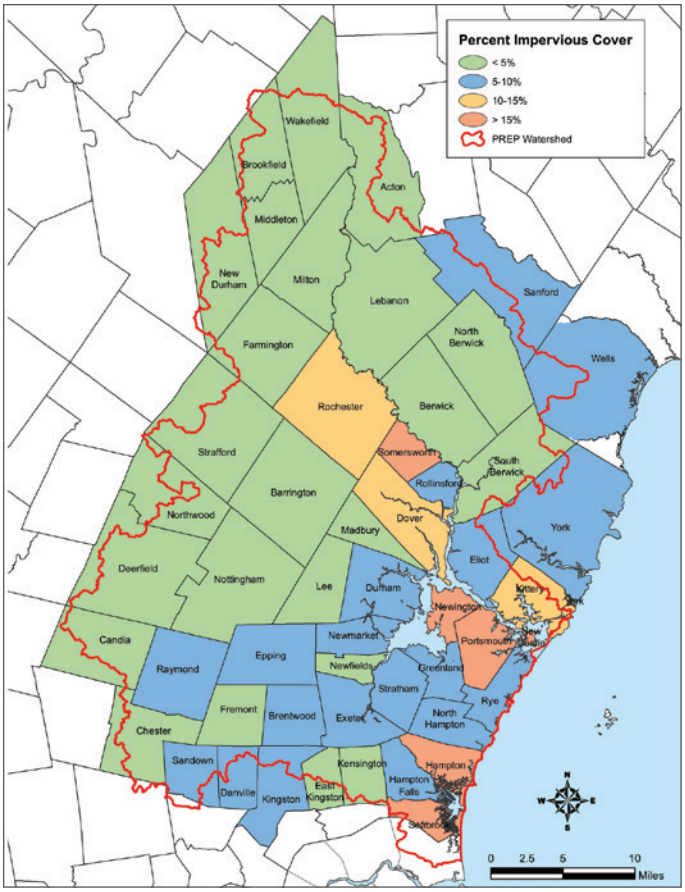


Figure 1.2 Percent impervious cover by town as of 2015.
Data Source: UNH Complex Systems Research Center

In 2015, 5.6% of the land area of the Piscataqua Region watershed was covered by impervious surfaces. This is an increase of 1,257 acres of impervious cover or 0.2% of the land area since 2010.


PLOWED SNOW PILE ON THE PIERCE ISLAND SALT MARSH, PORTSMOUTH, NH
PHOTO BY: J. FARRELL

TOTAL SUSPENDED SOLIDS

How have total suspended solids (TSS) in the Great Bay Estuary changed over time?

Suspended solids at Adams Point show a statistically significant trend since 1989. At the Great Bay Station, there is no statistically significant trend in the data going back to 2002.

WHY THIS MATTERS Total suspended solids (TSS) are what is left over when a water sample is filtered and dried. While a small percentage of phytoplankton or pieces of plant matter remain, most of TSS is made up of sediment. Suspended solids come from resuspension within the estuary as well as erosion from streambanks, salt marshes, and the upland portion of the watershed. This material is then delivered to the estuary via tributaries. Increasing suspended sediments reduce water clarity and impact primary producers such as eelgrass, seaweeds, and phytoplankton.

PREP GOAL: NO INCREASING TRENDS FOR TOTAL SUSPENDED SOLIDS.

EXPLANATION Total suspended solids have increased at Adams Point since 1989 (Figure 2.1). The average median value for the first 13 years of the dataset (1989-2002) was 12.0 mg/L. For the second half of the data set (2003-2015), the average median value increased to 22.9 mg/L, an increase of 90%. In contrast, suspended solids have remained relatively stable at the Great Bay station since 2002.

Continued

Total Suspended Solids, cont.

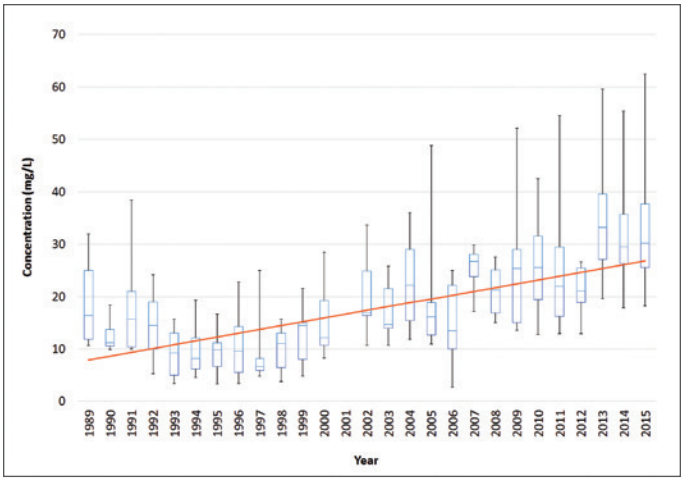


Figure 2.1 Total suspended solids at Adams Point Station. Box and whisker chart of data collected at low tide only. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values. Year 2001 not included due to missing data.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

In 2015, the median concentration was 14.1 mg/L (Figure 2.2).

More research is necessary to understand the source and transport of sediments in the Great Bay Estuary. For example, decreases in eelgrass and oyster habitats lead to greater resuspension of sediments, but sediments may also be added to the estuary from the tributaries or the estuary shores.

Higher suspended solids concentrations have the potential to harm eelgrass and oysters. Anything that reduces light to eelgrass leaves can add stress. In addition, sediment build-up on leaves can inhibit gas exchange. Oyster monitoring efforts show that oyster reefs that do not build high enough above the estuary floor can be smothered by sediment deposits.

It is important to acknowledge, however, that a certain amount of sediment supply is necessary to maintain salt marsh elevations, and sediment supply is a key factor in determining salt marsh resilience to rising sea-level and potential migration.

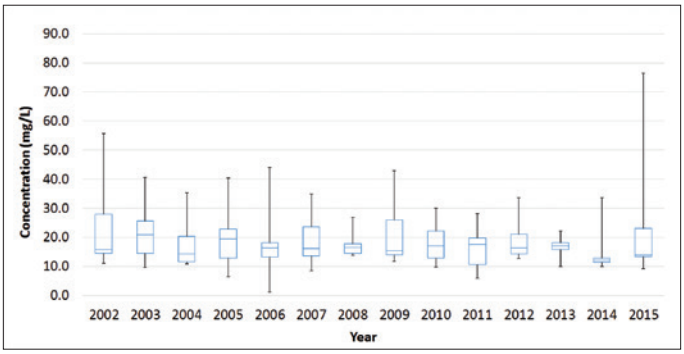


Figure 2.2 Total suspended solids at Great Bay Station. Box and whisker chart of data collected at low tide only. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

NUTRIENT LOADING

How much nitrogen is coming into the Great Bay Estuary?

Total nitrogen loading from 2012 to 2016 was 903 tons per year, which is 26% percent lower than the 2009 to 2011 levels (1,224 tons per year). Low rainfall and corresponding streamflow during this period, as well as significant reductions in nitrogen loading at municipal wastewater treatment facilities, are the primary reasons for this decrease. Since the human population and impervious cover continue to increase, nitrogen management remains a high priority.

WHY THIS MATTERS Nitrogen is one of many nutrients that are essential to life in the estuaries. However, high levels of nitrogen may cause problems like excessive growth of seaweed and phytoplankton. When these organisms die, bacteria and other decomposers use the available oxygen to break down the organic matter, decreasing oxygen availability for other organisms like fish. In addition, excessive algal growth can have negative impacts on sediment quality, seagrass, shellfish, and benthic invertebrates. Other important nutrients, such as phosphorus, are addressed in the *State of Our Estuaries Environmental Data Report*.[20]

PREP GOAL: MANAGE NUTRIENT LOADS TO THE ESTUARIES AND THE OCEAN TO MINIMIZE ADVERSE, NUTRIENT-RELATED CONSEQUENCES.

EXPLANATION The average annual load of total nitrogen into the Great Bay Estuary from 2012 to 2016 was 903.1 tons per year (Figure 3.1). In 2016, the total nitrogen load was 707.8 tons per year, the lowest since consistent monitoring of loads began in 2003. Before 2003, there were three studies that assessed nitrogen loading to the Great

Bay Estuary; they relied on data collected between 1987 and 1996[21] and estimated nutrient loading at approximately 715 tons per year. These three studies all used different methods from each other and from the current approach, but yielded very similar results.

Figure 3.1 indicates that, since 2003, most of the variability relates to nitrogen from non-point sources. Non-point source nitrogen enters our estuaries in two major ways: 1) from stormwater runoff, which carries nitrogen from atmospheric deposition (including mobile transportation sources – cars, trucks, trains; and stationary stack emissions – smoke stacks), fertilizers, and animal waste to the estuaries; and 2) from groundwater contribution, which carries nitrogen from septic systems, sewer leakage, and infiltrated stormwater runoff into streams, rivers, and the estuary itself.[22, 23] These non-point sources (NPS) accounted for 606.6 tons per year or 67% of the nitrogen load for 2012-2016 (Figure 3.2). It is important to understand that NPS loads are much more difficult to manage than point source loads because they come from a variety of sources, many of which are controlled by private land owners.

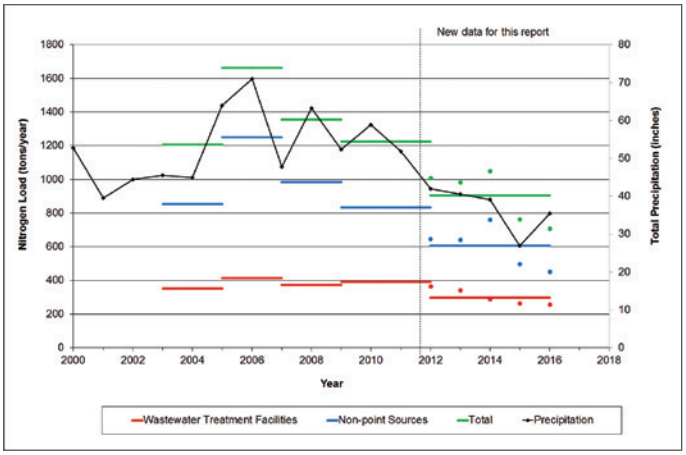


Figure 3.1 Nitrogen loads to the Great Bay Estuary, shown separated by source as well as the total nitrogen load. Precipitation data are averaged between Portsmouth (Pease) and Greenland weather stations. Colored circles indicate annualized loads for 2012 through 2016.

Data Source: NH Water Resources Research Center. Load estimates from 2003-2011 from NHDES (2010)

In addition, there are 17 municipal wastewater treatment facilities (WWTFs) that discharge treated wastewater into the bay or into rivers that flow into the bay. Point sources of nitrogen from these WWTFs account for 296.4 tons per year or 33% of the total nitrogen load for 2012-2016 (Figure 3.2). Of the 903.1 tons of total nitrogen entering the bay annually from 2012-2016, 506.0 tons were dissolved inorganic nitrogen (DIN), which is the most biologically available form of nitrogen. The DIN load was approximately evenly split between point and non-point sources (Figure 3.3). However, during the summer months when plant and algae growth is highest, point sources from WWTFs dominate DIN loading.[24, 25]

The highest loads since 2003 were seen in the 2005 to 2007 period (1,662.4 tons per year), a time that coincides with the highest total annual precipitation values (Figure 3.1). In comparison, the 2012 to 2016 period exhibited lower rainfall (Figure 3.3), a contributing factor to the 27% decrease in NPS loading since the 2009-2011 period. This underscores the association between nitrogen loading and run-off. Precipitation records[26] (see Figure 1, p. 7) and forecasts[27] suggest that our region will continue to see periods of extreme highs and lows, which will continue to impact non-point source load.

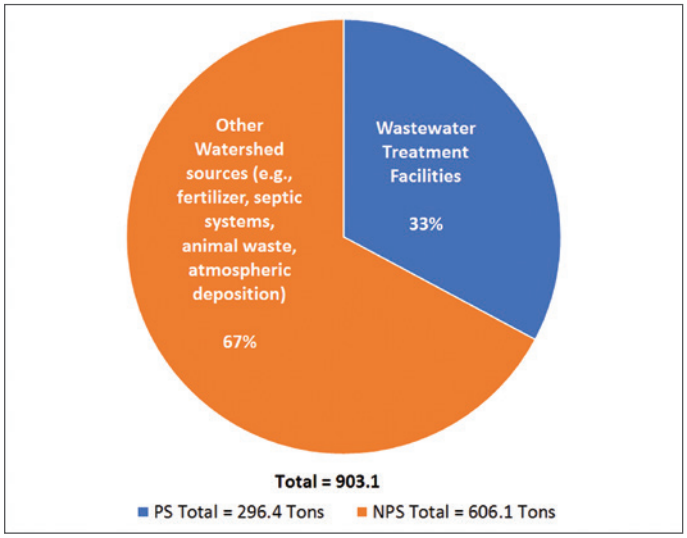


Figure 3.2 Total nitrogen loads from different sources (2012 to 2016).

Data Source: NH Water Resources Research Center

The nitrogen load from WWTFs for 2012-2016 was 296.4 tons, a decrease of 24% since the 2009-2011 period. In 2015 and 2016, the nitrogen load from WWTFs was 264.3 and 256.2 tons per year, respectively (Figure 3.1). Municipalities have made recent, substantial improvements to their WWTFs to reduce the amount of total nitrogen they discharge. Rochester, Dover, and Newmarket have recently completed major upgrades; Durham has reconfigured its facility; and Portsmouth, Newington, and Exeter are in the process of upgrading their treatment plants. Each of these upgrades should result in less nutrients in wastewater effluent.

See the *Estuary Health: Stress & Resilience* section, p. 7 for more on how nitrogen loading relates to other indicators, such as phytoplankton, seaweed, and eelgrass.

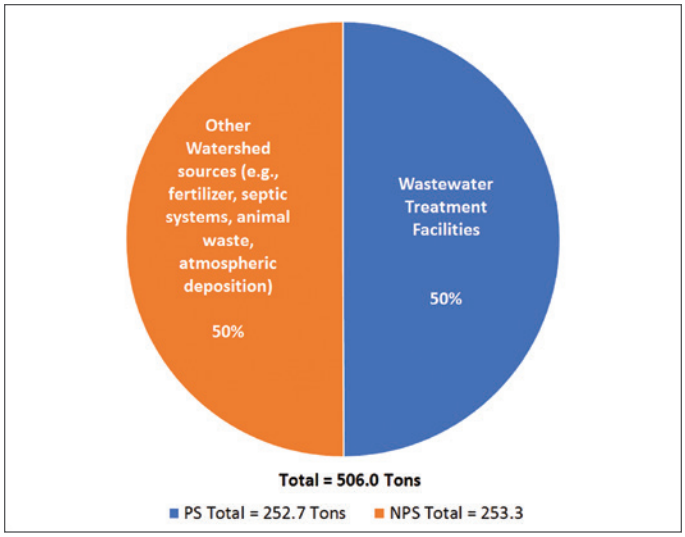


Figure 3.3 Dissolved inorganic nitrogen loads to Great Bay Estuary from different sources (2012-2016).

Data Source: NH Water Resources Research Center

NUTRIENT CONCENTRATION

How has the concentration of nitrogen in the waters of Great Bay Estuary changed over time?

Nitrogen concentration varies by location and type of nitrogen. Total nitrogen (TN), which is less variable in space and time than dissolved inorganic nitrogen (DIN), shows a statistically significant decreasing trend at Adams Point. TN shows a statistically significant increasing trend at the Chapman's Landing and Lamprey River stations. No other stations indicate TN trends. For DIN, the Oyster River and Upper Piscataqua River stations indicate statistically significant decreasing trends while Chapman's Landing indicates a statistically significant increasing trend.

WHY THIS MATTERS Nitrogen is a critical nutrient for estuarine ecosystems; some is needed, but too much leads to problems. While nutrient loading measures how much nitrogen is being added to the system from the land and air, nutrient concentration measures the amount of nitrogen present in the water as a result of continual processing, at time of sampling. Measuring the concentration of nitrogen adds insight into the impact of nitrogen loading on the ecosystem. This report discusses two forms of nitrogen: total nitrogen (TN) and dissolved inorganic nitrogen (DIN). It is important to note that both forms – but especially DIN – are taken up quickly by plants and algae, so the concentration of DIN does not necessarily reflect the potential effects of nitrogen on the estuarine ecosystem.

PREP GOAL: NO INCREASING TRENDS FOR ANY NITROGEN SPECIES.

EXPLANATION ***Total Nitrogen (TN)***: Includes both dissolved inorganic nitrogen (DIN) and nitrogen contained in particulate and dissolved organic matter, and is considered to be a more accurate measure of the nitrogen status of an estuary than DIN alone. TN at Adams Point shows a significant decreasing trend (Figure 4.1), but it is important to note that the time series begins relatively recently, in 2003. Since 2012, median values ranged from 0.23mg/L to 0.30mg/L over the sample season for TN at Adams Point. Figure 4.1 indicates that the years 2005, 2008, and 2015 experienced TN concentrations above 0.6 mg/L.

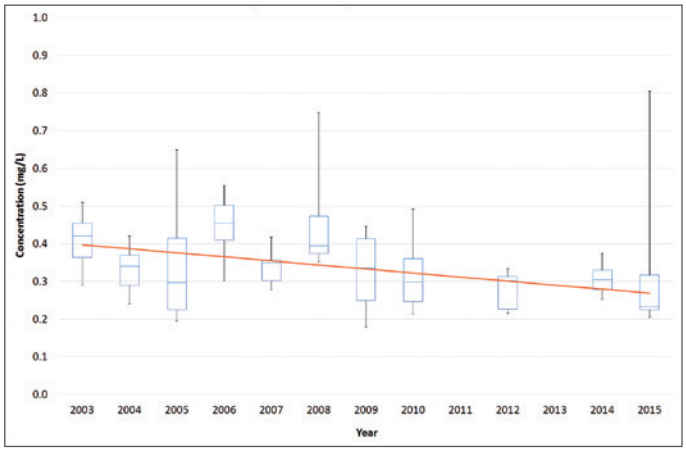


Figure 4.1 Total nitrogen at Adams Point. Box and whisker plots of total nitrogen concentrations (collected monthly, April through December, at low tide) between 2003 and 2015. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values. Years 2011 and 2013 not included due to missing data.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

TN values at the Lamprey River and Chapman's Landing stations (see Monitoring Map p. 49) show a significantly increasing trend, with average values over the last reporting period (2009 - 2011) of 0.52 and 0.90 mg/L, respectively. Average values for other stations were: 0.77 mg/L (Squamscott River), 0.35 mg/L (Great Bay), 0.52 mg/L (Oyster River), 0.44 mg/L (Upper Piscataqua), and 0.24 mg/L (the Coastal Marine Laboratory in Portsmouth Harbor).

Dissolved Inorganic Nitrogen (DIN): At Adams Point, median values for DIN for 2012 to 2015 ranged from 0.04 to 0.1 mg/L comparable to median values for the years 1974 to 1981 (Figure 4.2). For reference, the *EPA National Coastal Assessment Condition Report* categorizes values less than 0.1 as "good." Other categories include "fair" (0.1 to 0.5 mg/L), and "poor" (greater than 0.5 mg/L).[28, 29]

The Oyster River and Upper Piscataqua River stations both showed statistically significant decreasing trends for DIN, with average values since 2012 at 0.18 and 0.04 mg/L, respectively. In contrast, Chapman's Landing showed a statistically significant increasing trend

with average values since 2012 at 0.48 mg/L. Average values for other stations were: 0.37 mg/L (Squamscott River), 0.21 mg/L (Lamprey River), 0.08 mg/L (Great Bay), and 0.09 mg/L (Coastal Marine Lab).

Nutrient concentrations in the water are affected by nutrient loading from the watershed. As noted in the Nutrient Loading Section (p. 16), loadings since 2012 have been reduced in part due to reductions at municipal wastewater treatment facilities. Additionally, loading has been reduced due to consecutive years of low annual rainfall amounts and low occurrence of extreme rainfall events, which equate to less non-point source loading from run-off.

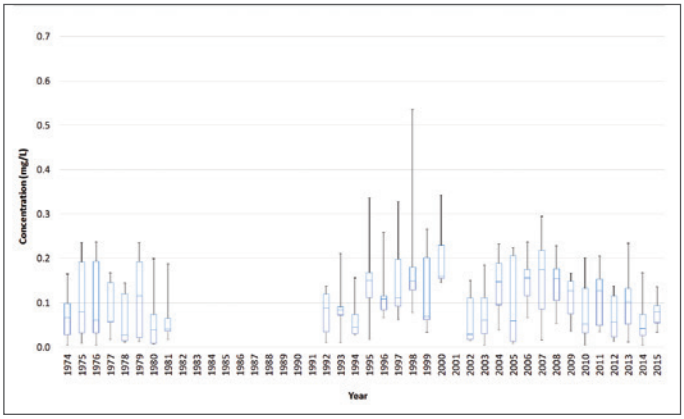
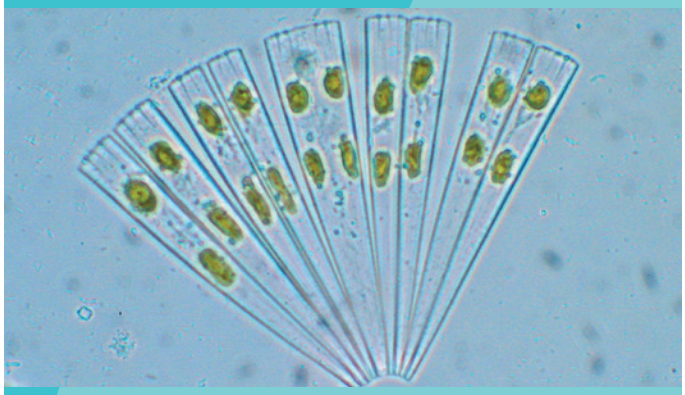


Figure 4.2 Dissolved inorganic nitrogen (DIN) at Adams Point. Box and whisker plots of dissolved inorganic nitrogen (DIN) concentrations (collected monthly, April through December, at low tide) between 1974 and 2015. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values. Some years omitted due to missing data.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

ESTUARINE NUTRIENT CONCENTRATION DATA ARE COLLECTED IN THE FIELD BY UNH RESEARCHERS ON A MONTHLY BASIS | PHOTO BY E. LORD

PHYTOPLANKTON



How have phytoplankton concentrations changed over time?

Chlorophyll-a concentrations—an accepted proxy for phytoplankton biomass—show no statistically significant trends at the eight stations sampled in the Great Bay Estuary. The chlorophyll-a (chl a) levels recorded in the Great Bay Estuary are often within ranges considered "good" or "fair" in the peer-reviewed literature. Periodically, however, chl a levels increase to levels considered "poor."

WHY THIS MATTERS Phytoplankton convert the sun's energy into biomass and are a key part of the food web. Phytoplankton can impact water clarity and compete with eelgrass and seaweeds for available light. Additionally, when large populations of phytoplankton die, their decomposition consumes the dissolved oxygen needed by fish and benthic invertebrates.

PREP GOAL: NO INCREASING TRENDS FOR PHYTOPLANKTON.

EXPLANATION National assessments note that less than 5 ug/L chlorophyll-a (chl a) is considered "good," between 5 and 20 ug/L is considered "fair," and above 20 ug/L is considered "poor."[30, 31] For the years 2012 to 2015, monthly sampling results suggest that, much of the time, chl a levels in the Great Bay Estuary were within ranges regarded as "good" or "fair", but that they sometimes exceeded 20 ug/L. As noted in Figure 5.1, changes since the last reporting period (2009–2011) vary, depending on the sampling station.

All of the data reported below were collected at low tide, when daily concentrations of chl a tend to be highest. None of the eight stations sampled on a monthly basis show a statistically significant

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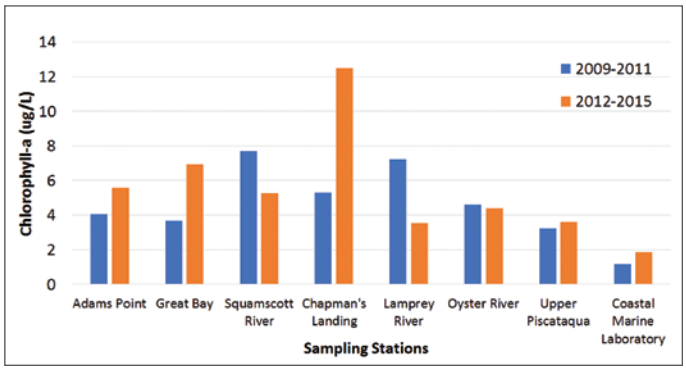

Figure 5.1 Reporting average concentrations by sampling station.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

trend (Figure 5.1). At Adams Point (Figure 5.2), between 2012 and 2015, median chl a levels ranged from 2.9 to 4.0 ug/L and maximum values ranged from 5.7 to 25.2 ug/L. At the Great Bay station (Figure 5.3), between 2012 and 2015, median levels ranged from 2.9 to 8.3 ug/L and maximum values ranged from 8.4 to 22.1 ug/L.

The Chapman's Landing station indicated the highest levels of chl a. Since 2012, median levels ranged from 4.8 to 6.9 ug/L and maximum levels ranged from 18.3 to 71.7 ug/L. At the Lamprey River station, median levels ranged from 1.4 to 4.6 ug/L and maximum levels ranged from 2.1 to 21.0 ug/L. At the Upper Piscataqua River Station, median levels ranged from 2.1 to 3.2 ug/L with maximum levels from 4.1 to 24.5 ug/L. Note that 2012 was the only year that levels rose above 20 ug/L for this station. Chl a levels at the remaining three stations (Squamscott River, Oyster River, and Coastal Marine Laboratory) did not exceed 12 ug/L between 2012 and 2015.

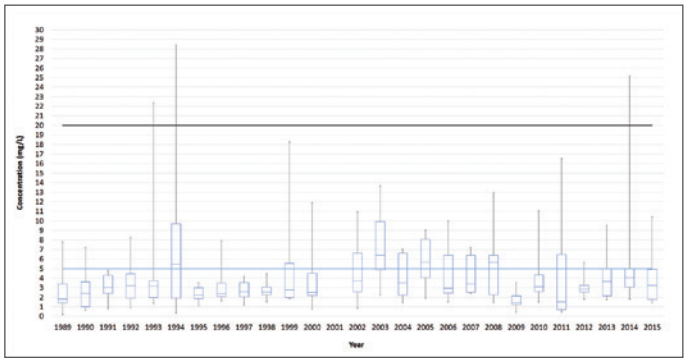

Figure 5.2 Chlorophyll-a concentrations at Adams Point. Box and whisker chart of data collected at low tide only. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values. Levels between the blue and the black line are considered "fair." Levels above the black line are considered "poor."

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

Other parts of the Great Bay Estuary—in addition to the eight stations reported here—also show counts in excess of 20 ug/L. For example, Little Bay registered 25.2 ug/L in 2014 and the Cocheco River indicated a maximum of 28.9 ug/L in 2015.[32]

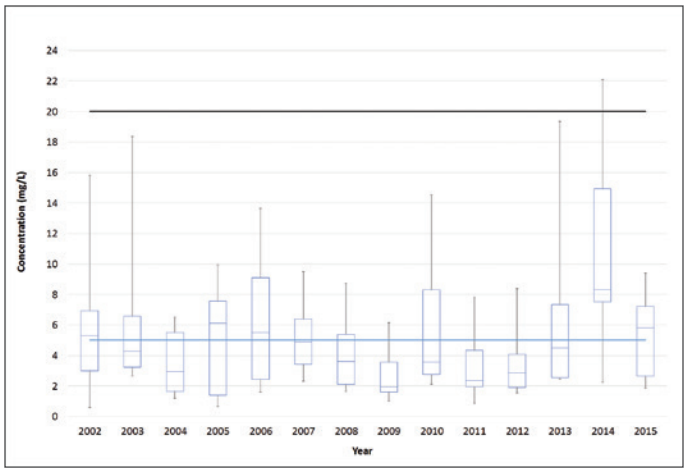

Figure 5.3 Chlorophyll-a concentrations at Great Bay. Box and whisker chart of low tide only. The horizontal line in each box is the median. Boxes encompass the middle 50% of the data points. Upper and lower vertical lines show the complete range of data values. Levels between the blue line and the black line are considered "fair." Levels above the black line are considered "poor."

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

PROCESSING WATER SAMPLES AT THE UNH JACKSON ESTUARINE LABORATORY
PHOTO BY E. LORD

SEAWEEDS

How has the amount of seaweed in the Great Bay Estuary changed over time?

At intertidal sampling sites, green and red seaweeds (combined) increased from approximately 8% cover in 1980 to 19% cover in 2016. At these same sites, invasive species now dominate the red seaweed category, which comprised approximately 15% of all seaweeds in 2016.

WHY THIS MATTERS Seaweeds are an important and critical group of estuarine primary producers, but many of the factors affecting estuaries globally (e.g., climate change, sedimentation, nutrient pollution) also accelerate the growth of some seaweeds.[33, 34] In these situations, seaweeds can grow so abundant that they shade eelgrass. Since they can "bloom"—that is, grow and die very quickly—they can also negatively impact sediment conditions by decomposing on the estuary floor.[35] This can negatively impact shellfish and benthic invertebrates as well as eelgrass.

PREP GOAL: NO INCREASING TRENDS FOR SEAWEEDS.

EXPLANATION Great Bay Estuary seaweeds can be categorized as brown, green, and red. This indicator focuses on changes in the red and green seaweeds, which are much more abundant in the subtidal areas (those areas always covered by water) and are more likely to compete with eelgrass. However, there are only a few data points in the subtidal areas of the Great Bay Estuary that allow for assessment of changes in the abundance of these seaweeds where impacts on eelgrass could also be assessed (Figure 6.2).

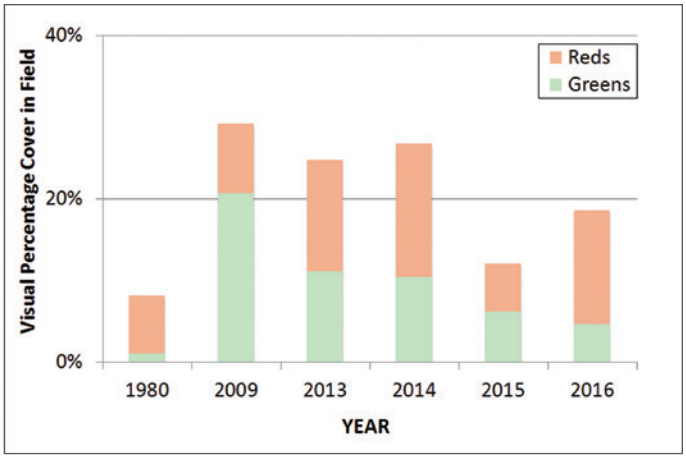

Figure 6.1 Percent cover of red and green seaweed at selected intertidal sites in the Great Bay Estuary.

Data Source: UNH Jackson Estuarine Laboratory

The mean percent cover of green and red seaweeds (combined) at a limited number of sampling sites in the Great Bay Estuary was 8% in 1980 but increased to 19% by 2016 (Figure 6.1). For green seaweeds, this increase includes the presence of both native and invasive species of *Ulva*. It is notable that no invasive species of *Gracilaria* (a red seaweed) were seen in 1980, but now two major invasive Asiatic red seaweeds (*Gracilaria vermiculophylla* and *Dasysiphonia japonica*) along with a native species (*Gracilaria tikvahiae*) dominate the red seaweeds.[36]

While the seaweed data are cause for concern, it is important to note that this dataset is not comprehensive in time and space; more research is required to verify these trends. In addition, these data are restricted to intertidal areas. While important steps to establish a baseline in the subtidal area have occurred, this work needs to be followed up by additional monitoring to better assess trends.

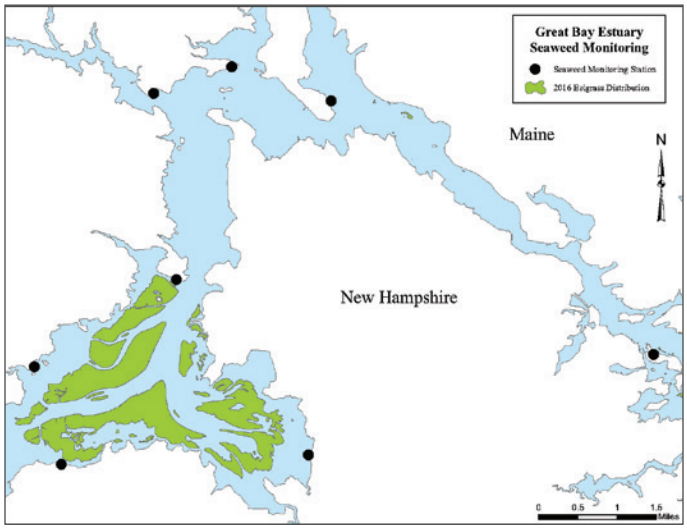

Figure 6.2 Locations of the eight intertidal seaweed monitoring sites are designated by the black circles. Green areas indicate mapped eelgrass habitat from 2016.

DISSOLVED OXYGEN

How often does dissolved oxygen (DO) in the estuary fall below 5 mg/L?

Datasondes, an automated water quality sensor or probe, in the bays and open waters located at the center of the Great Bay and in Portsmouth Harbor at the Coastal Marine Laboratory indicate dissolved oxygen levels well above 5 mg/L. Low dissolved oxygen events occur in all the tidal rivers. In August 2015—the most recent year we have data—most low dissolved oxygen events in the tidal rivers lasted between two and six hours.

WHY THIS MATTERS Fish and many other organisms need dissolved oxygen in the water to survive. Dissolved oxygen levels can decrease due to various factors, including rapid changes in temperature and salinity, as well as respiration of organic matter. Dissolved oxygen levels can also decrease as a reaction to nutrient inputs. When nutrient loading is too high, phytoplankton and/or seaweed can bloom and then die. Bacteria and other decomposer organisms then use oxygen to break down the organic matter.

PREP GOAL: ZERO MEASUREMENTS BELOW 5 MG/L FOR DISSOLVED OXYGEN CONCENTRATION.

EXPLANATION National ecosystem health thresholds for dissolved oxygen (DO) concentrations range from 2 mg/L to 5 mg/L, depending on the region or state.[37] The threshold of 5 mg/L is considered protective of all organisms.[38] Dissolved oxygen levels in Great Bay at the central datasonde and in Portsmouth Harbor at the Coastal Marine Laboratory (See Monitoring Map p. 49) remain consistently above 5 mg/L. The most recently collected data from 2015 show that DO concentrations never fell below 6 mg/L at these two sites.

The tidal portions of the major tributary rivers continue to experience many days when the minimum DO concentration value is below 5 mg/L. No long-term trends are notable at any stations, as exemplified by the data from the Salmon Falls River and Squamscott River datasondes (Figures 7.1 and 7.2). These datasondes were used in this long-term trend analysis because they had complete datasets going back as far as 2004, and because they represent different parts of the estuary.

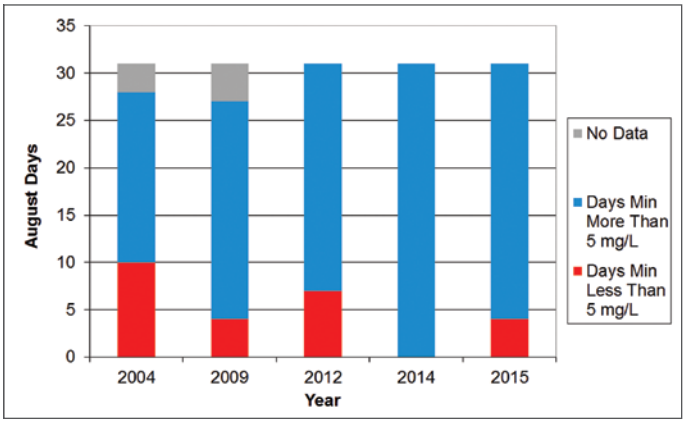

Figure 7.1 Number of days when minimum dissolved oxygen (DO) fell below 5 mg/L at the Salmon Falls datasonde. Particular years shown have the most complete datasets.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

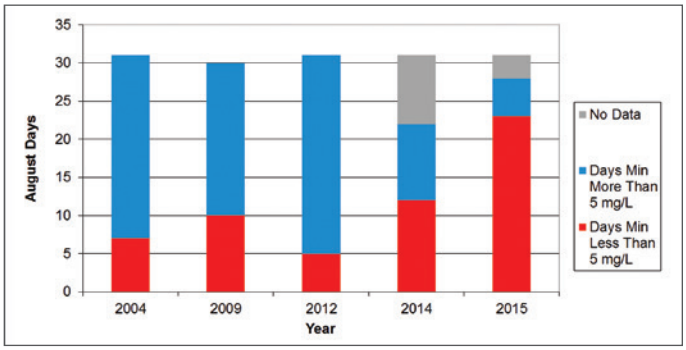

Figure 7.2 Number of days when minimum DO fell below 5 mg/L at the Squamscott River datasonde. Particular years shown have the most complete datasets.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

It is important to note not only the number of low DO events but also the duration of those events because there are implications for organisms (such as small invertebrates in the sediment) that cannot move quickly to areas with higher DO levels. In 2015, the Lamprey and Squamscott Rivers had the highest number of low DO events, the majority of which took place in August and September. Figure 7.3 shows data taken every 15 minutes throughout August 2015 for the Squamscott River; this figure indicates that DO concentrations fell below 5 mg/L most days during the month, and that there was less than 5 mg/L for 12% of the month. These low DO events lasted anywhere from one to four hours.

In August 2015, 73% of the time Lamprey River DO levels were below 5 mg/L and stayed below the threshold for more than 24 hours on two occasions (Figure 7.4) with the second occasion lasting almost 168 hours (7 days). A 2005 study[39] of the Lamprey River concluded that the datasonde readings were reflective of river conditions, but that density stratification—when salt water and fresh water stack in layers without mixing—was a significant factor in the low DO conditions in the Lamprey River.

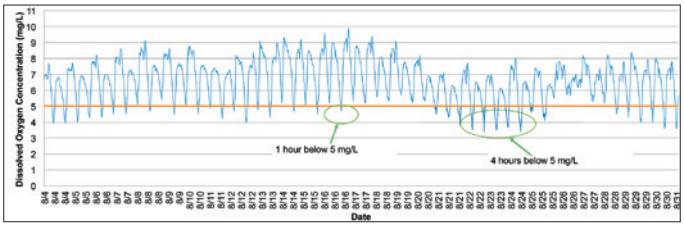

Figure 7.3 Dissolved oxygen concentration measurements at the Squamscott River datasonde, August 2015. Measurements were taken every 15 minutes. The orange line marks the 5 mg/L threshold.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

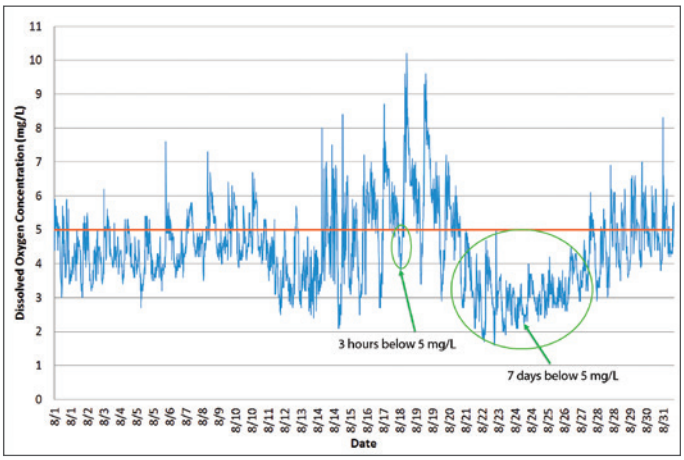

Figure 7.4 Dissolved oxygen concentration measurements at the Lamprey River datasonde, August 2015. Measurements were taken every 15 minutes. The orange line marks the 5 mg/L threshold.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

In August 2015, the Oyster River experienced four low DO events, lasting between two and six hours each. The Salmon Falls River experienced two low DO events, each lasting approximately three hours. In the Cocheco River, data was only available for the month of September 2015. In that month, the datasonde indicates 12 low DO events, all lasting approximately two hours. More data and analysis is required to understand the relative importance of temperature, tidal stage, time of day, freshwater inputs, organic matter loading, and nutrient loading as contributing factors to these low DO events.

Finally, this analysis does not include all DO data collected in the Great Bay Estuary. For information on other data, please see the *2017 Technical Support Document for Aquatic Life Use Support* from NH Department of Environmental Services.[40]

EELGRASS

How many acres of eelgrass are currently present in the Great Bay Estuary and how has it changed over time?

The Great Bay Estuary, which includes seven tidal tributary rivers, the Piscataqua River, and Portsmouth Harbor, had 1,625 acres of eelgrass in 2016, which is 54% of the PREP goal of 2,900 acres. In Great Bay, there were 1,490 acres of eelgrass, which is a 31% reduction from 1981, the first year that data was collected. Over time, eelgrass habitat indicates a diminishing ability to recover from periodic disturbances, such as stress from extreme storms.

WHY THIS MATTERS The long leaves of eelgrass (*Zostera marina*) slow the flow of water, encouraging suspended materials to settle, thereby promoting water clarity. Eelgrass roots stabilize sediments and both the roots and leaves take up nutrients from sediments and the water. Eelgrass provides habitat for fish and shellfish, and it produces significant amounts of organic matter for the larger food web.

PREP GOAL: INCREASE EELGRASS DISTRIBUTION TO 2,900 ACRES AND RESTORE CONNECTIVITY OF EELGRASS BEDS THROUGHOUT THE GREAT BAY ESTUARY BY 2020.

Continued

EXPLANATION In 2016, there were 1,625 acres of eelgrass in the Great Bay Estuary. Figure 8.1 shows a statistically significant decreasing trend in eelgrass acreage since 1996 when the data became available for the entire estuary. The year 1996 also represents the highest amount of eelgrass on record for the Great Bay Estuary; this must be considered when evaluating the trend. Figure 8.2 compares 2016 eelgrass coverage with the acreage of eelgrass in 1996.

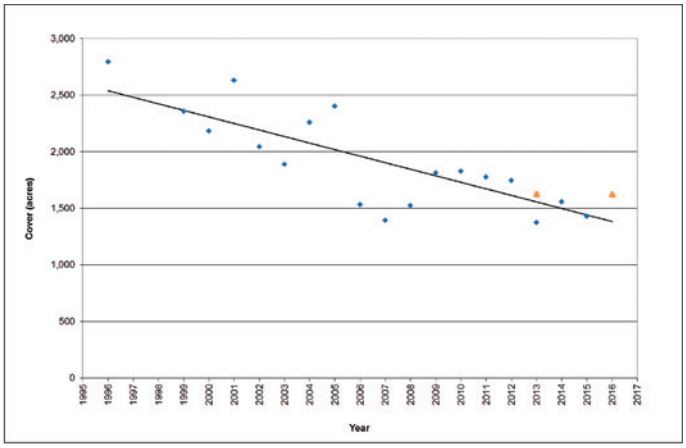

Figure 8.1 Eelgrass cover in the Great Bay Estuary.

Data Source: Kappa Mapping, Inc. (for years 2013 & 2016) and UNH Jackson Estuarine Laboratory (1996-2015). In 2013, the two data sources were averaged for the linear regression

For Great Bay only, in contrast, data exists going back to 1981 (Figure 8.3). In 2016, there were 1,490 acres of eelgrass in Great Bay. The trend is not statistically significant; however, there is broad scientific consensus that eelgrass in the Great Bay shows a consistent pattern of being less and less able to rebound from episodic stresses. Current levels of eelgrass in the Great Bay are 31% reduced from 1981 levels. Connectivity of the remaining eelgrass habitat in the Great Bay Estuary is critical for habitat health and expansion. See figure 8.2 for 2016 eelgrass distribution.

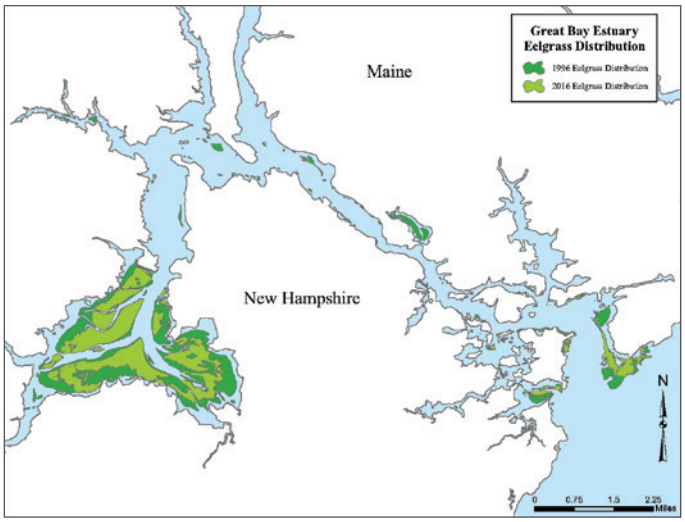

Figure 8.2 Map of eelgrass cover for 1996 and 2016. Map based on 2016 data from Kappa Mapping, Inc. and 1996 data provided by the UNH Jackson Estuarine Laboratory. To be counted as present, eelgrass must cover at least 10% of a given area. Therefore, this map does not distinguish between areas with dense versus sparse cover. With negligible exceptions, the 2016 areas also existed in 1996; the darker shade of green therefore represents areas that have been lost since 1996.

Data Source: Kappa Mapping, Inc. (for 2016) and UNH Jackson Estuarine Laboratory (for 1996)

In Portsmouth Harbor (Figure 8.4), there were 87.4 acres of eelgrass in 2016. The entire time series (1996-2016) shows a statistically significant decreasing trend. On a positive note, the number of acres in 2016 was higher than the previous eight years.

The causes of eelgrass decline in the Great Bay continue to be the subject of great interest. Worldwide, the main causes of temperate (between the tropics and the polar regions) seagrass loss are nutrient loading, sediment deposition, sea-level rise, high temperature, introduced species, biological disturbance (e.g., from crabs and geese), and wasting disease[41]. Toxic contaminants such as herbicides that are used on land can also stress eelgrass[42]. All of these causes are plausible in the Great Bay Estuary and many magnify each other to stress eelgrass and make habitats less resilient. Proactive actions to increase resilience for eelgrass habitat are critical as climate science predicts an increase of stressful events, such as extreme storms with increased rains and higher winds. Since the 1930s there have been three 100-year storms recorded by measurements of the river discharge at the Lamprey River: two of those storms occurred in 2006 and 2007; the third was in 1987. Increased rainfall during these events causes a large quantity of water flow to enter the estuary delivering increased sediments and nutrients as well as resuspending sediments throughout the water column. Since eelgrass relies on clear water to grow, these events are important to note.

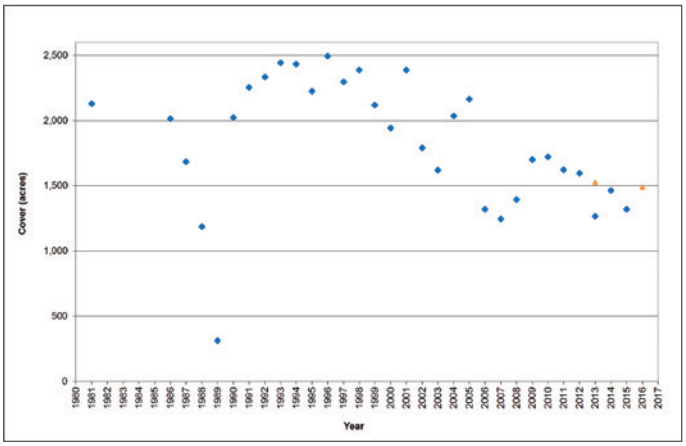

Figure 8.3 Eelgrass cover in the Great Bay only (not entire Great Bay Estuary). Missing data for years 1982-1985. Years 1988 and 1989 show very low values due to eelgrass wasting disease event. These data, however, are still included in linear regression calculations.

Data Source: NH Fish and Game (for 1981); Kappa Mapping, Inc. (for years 2013 & 2016) and UNH Jackson Estuarine Laboratory (1986-2015). In 2013, the two data sources were averaged for the linear regression

Research and discussions continue to focus on the type of recovery Great Bay Estuary can expect for eelgrass. In some cases, recovery requires only a decrease in the stressors that caused the problem. In other cases, conditions for recovery have to be better than conditions before the habitat loss began to occur.[43] Figure 8.3 shows that eelgrass recovered after the wasting disease event of 1988-1989. After a drop in 2002-2003, eelgrass rebounded, but not quite to previous levels. Another three year downturn during 2006-2008 was followed by a weaker recovery.

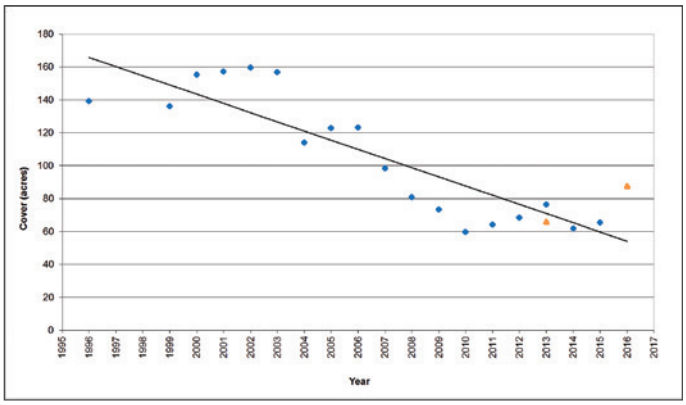

Figure 8.4 Eelgrass cover in Portsmouth Harbor. Linear regression showing a statistically significant trend.

Data Source: Kappa Mapping, Inc. (for year 2013 & 2016) and UNH Jackson Estuarine Laboratory (1996-2015). In 2013, the two data sets were averaged for the linear regression

SNAILS GRAZE ALGAE GROWING ON EELGRASS LEAVES, HELPING THE PLANT TO GET MORE LIGHT
PHOTO BY A. NORTON

SALT MARSH

How many acres of salt marsh habitat are there in the towns of the Piscataqua Region watershed?

As of 2017, there are 5,521 acres of salt marsh habitat in the Piscataqua Region watershed, with these acres distributed among 17 municipalities. Hampton and Seabrook have the most salt marsh habitat, with 1,342 and 1,140 acres, respectively. This baseline will be monitored in the future in order to track changes in the amount, location, and characteristics of salt marsh habitat in the Piscataqua Region.

WHY THIS MATTERS Salt marshes are among the most productive ecosystems in the world and provide many services, such as habitat, food web support, and buffering from storms and pollution. Most salt marshes in the Piscataqua Region watershed have been degraded over time due to development and past management activities. Also, as the rate of sea-level rise increases, salt marshes will experience impacts that will change marsh composition, cause erosion, or force these marshes to migrate landward.

PREP GOAL: UNDER DEVELOPMENT.

EXPLANATION As of 2017, there are 5,521 acres of salt marsh habitat in the Piscataqua Region watershed (Figure 9.1) with these acres distributed among 17 municipalities (Figure 9.2). The area surrounding the Hampton-Seabrook Estuary has the greatest amount of salt marsh habitat. Hampton had the most acres of salt marsh

Continued

(1,342 acres), followed closely by Seabrook (1,140 acres). Hampton Falls and Rye had 725 and 627 acres, respectively. Great Bay Estuary municipalities, such as Stratham, Greenland, and Dover, had less than half the salt marsh acreage of Rye (Figure 9.2).

Between the early 1900s and 2010, an estimated 431 acres of salt marsh area was lost in the Great Bay Estuary, and in the Hampton-Seabrook Estuary, 614 acres (or 12% of the historic salt marsh) was lost[44]. As these habitats experience continued pressures from development and impacts related to climate change, such as sea-level rise, it will be important to assess changes in marsh location, total acreage, and salt marsh structure. For example, one possible reaction to sea-level rise, forecasted to be between 6 and 11 mm/year, is that plant species that are less tolerant to flooding, such as high-marsh grass (*Spartina patens*) will be replaced by low-marsh grass (*Spartina alterniflora*) and the boundary between high and low will shift upslope. In addition, the lower edge of the marsh will migrate landward as the marshes literally drown, and pannes (depressions in the marsh that do not tend to retain water) and pools (which do retain water) are likely to expand.[45]

Acreages presented in this report represent a new baseline that will be monitored consistently into the future. The 2017 baseline assessment is the first to use standardized digital methods, which are being employed across the nation by NOAA and the National Estuarine Research Reserve (NERR) system. Although this report focuses only on number of acres, future years will include other salt marsh categories, such as acres of high marsh versus low marsh, pannes and pools, and amount of invasive species such as *Phragmites australis*. PREP anticipates that the new baseline will be used to track the area of marsh lost to sea-level rise, the area of marsh gained by landward migration, as well as the conversion of high marsh to low marsh.

Figure 9.1 Map of salt marsh coverage, showing marsh habitat in New Hampshire only.

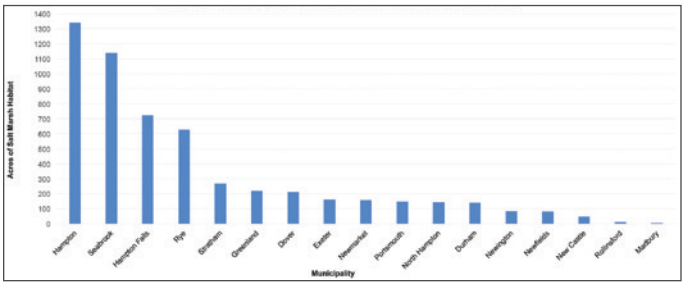

Figure 9.2 Number of acres of salt marsh habitat in 2017, by town/city within the Piscataqua Region watershed.

Data Source: Great Bay National Esturaine Research Reserve; Kappa Mapping, Inc. (2013 Flight); USGS LIDAR Data (2011 and 2014); NOAA Office of Coastal Management, and NHDES Coastal Program

VOLUNTEERS PLANTING SALT MARSH GRASSES AT CUTTS COVE RESTORATION SITE IN PORTSMOUTH, NH | PHOTO BY E. LORD

BACTERIA

How have bacterial pollution concentrations changed over time in the Great Bay Estuary?

Between 1989 and 2016, dry weather concentrations of bacterial indicators of fecal pollution in the Great Bay Estuary have typically fallen 67% to 93% at four monitoring stations due to pollution control efforts in most, but not all, areas.

WHY THIS MATTERS Elevated concentrations of bacterial pollutants in estuarine waters can indicate the presence of pathogens from sewage and other fecal pollution. Illness-causing microorganisms pose a public health risk, and are a primary reason why shellfish beds can be closed and beach advisories can be posted.

PREP GOAL: NO INCREASING TRENDS FOR FECAL COLIFORM BACTERIA, ENTEROCOCCI, OR *E. COLI* IN THE GREAT BAY ESTUARY.

EXPLANATION Elevated levels of fecal-borne indicator bacteria in our estuaries can indicate the presence of sewage pollution from failing septic systems, overboard marine toilet discharges, wastewater treatment facility overflows, illicit connections between sewers and storm drains, and sewer line failures, as well as livestock, pet, and wildlife waste that can run off impervious surfaces. Such indicator bacteria can also originate from polluted sediments that become resuspended in the estuary due to waves and tides. Increases in rainfall often cause increases in indicator bacteria concentrations because stormwater runoff can cause flushes of pollution into the estuary. PREP uses measurements from days without significant rainfall to reflect chronic contamination levels rather than include data from rainfall events that would cause runoff-induced peak levels of bacteria. Data for this indicator is only presented for the Great Bay Estuary.

At all four long-term water pollution monitoring stations in the estuary (See Monitoring Map p.49), a decrease in fecal coliform bacteria during dry weather has been observed over the past 26 years. For example, at Adams Point, fecal coliform bacteria decreased by 67% between 1989 and 2016 (Figure 10.1). Upgrades to wastewater treatment facilities, improvements to stormwater and sewage infrastructure, and microbial source tracking studies that identify and address sources of bacterial pollution are all contributing factors to the long-term decreasing trend. It should be noted that not all trends were decreasing. Fecal coliform bacteria measurements in Portsmouth Harbor and enterococci at Adams Point, the Squamscott River, and Portsmouth Harbor showed no significant trends (not plotted in figure).

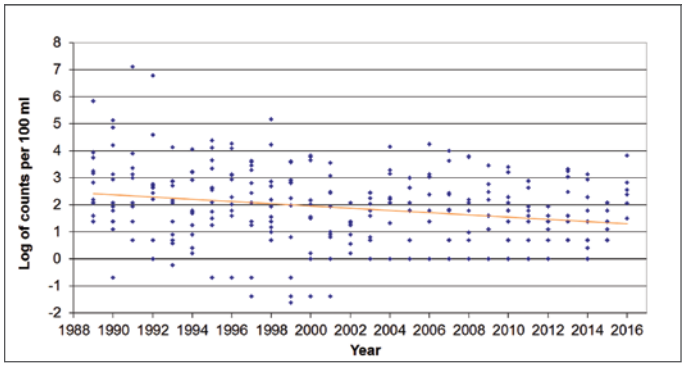

Figure 10.1 Fecal coliform bacteria concentrations at low tide during dry weather at Adams Point. Line shows a statistically significant trend.

Data Source: Great Bay National Estuarine Research Reserve and the UNH Jackson Estuarine Laboratory

POTENTIAL *VIBRIO* ON CHROMagar AT UNH JACKSON ESTUARINE LABORATORY | PHOTO BY E. LORD

SHELLFISH HARVEST OPPORTUNITIES

How much of our estuaries are open for shellfish harvesting and how has it changed over time?

The percentage of possible acre-days (i.e., the number of open acres multiplied by the number of days those acres were open for harvest) between 2012 and 2016 was 80% and 66% for the Great Bay and Hampton-Seabrook estuaries, respectively. This continues the long-term trend of a gradual increase in acre-days. The next reporting period may see continued increases as the Portsmouth wastewater treatment facility upgrade is completed in 2019.

WHY THIS MATTERS Shellfish beds are closed—either temporarily or indefinitely—to commercial and recreational harvesting when there are high amounts of bacteria or other pollution in the water. Closures also occur for precautionary reasons related to wastewater treatment facilities (WWTFs). Therefore, the amount of time that shellfish beds are open for harvest can be used as an indicator of water quality.

PREP GOAL: IMPROVE WATER QUALITY AND IDENTIFY AND MITIGATE POLLUTION SOURCES SO THAT ADDITIONAL ESTUARINE AREAS MEET WATER QUALITY STANDARDS FOR BACTERIA AND FOR SHELLFISH HARVESTING.

EXPLANATION Figure 11.1 indicates open and closed areas of the Great Bay and Hampton-Seabrook estuaries for recreational shellfish harvesting. (Note that open areas may become temporarily closed after large rain events due to water quality issues). The percentage of possible acre-days between 2012 and 2016 was 80% and 66% for the Great Bay and Hampton-Seabrook estuaries, respectively (Figure 11.2). The Great Bay acre-days open data exhibits a sawtooth profile between 2006 and 2009, which is most likely caused by major storms, such as the Mother's Day storm of 2006. The 2016 steep decrease in the Hampton-Seabrook acre-days open data was the result of a prolonged discharge of raw sewage from a broken 14-inch force main pipe under a salt marsh in the Town of Hampton. The pipe broke in late 2015 and was fixed in early 2016. The overall long-term trend of gradual improvements since the year 2000 may reflect improved pollution source management, such as efforts by NHDES and municipalities to identify and eliminate illicit discharges. Lower rainfall amounts in recent years may also have led to a decrease in the occurrence of bacterial pollution events related to stormwater runoff.

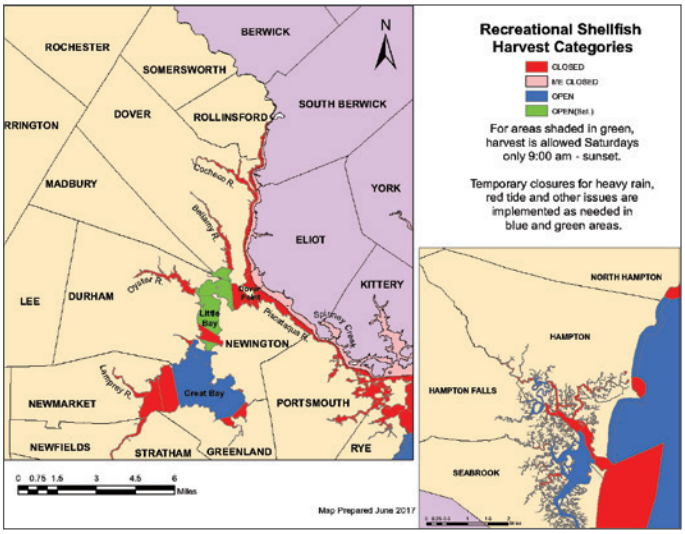

Figure 11.1 Map showing recreational shellfish harvest categories for the Great Bay and Hampton-Seabrook estuaries.

Courtesy of the NH DES Shellfish Program

The areas designated as "conditionally approved" (open but subject to temporary closures due to water quality issues), "restricted" (closed due to chronic water quality problems), and "prohibited" (closed due to water quality issues that require further investigation) have remained fairly constant since 2004 (Figure 11.3). The most notable change occurred in 2014 with the conversion of over 1,300 acres that was "prohibited/unclassified" area (closed because the water quality is unknown) to "prohibited/safety zone." This refers to areas closed due to pollution sources that may unpredictably affect the water quality of the area and create a potentially dangerous public health risk. These zones are most often related to WWTFs.

This 2014 conversion was a direct result of the December 2012 Portsmouth WWTF dye study[46], which examined how this primary WWTF affected water quality in the estuary, and how those effects might change once the facility upgrade is complete in 2019. The

dye study indicated effluent travels further up river and faster than previously determined; this resulted in the reduction of harvest opportunities at the Little Bay and Bellamy River shellfish beds (Figure 11.1). Specifically, harvest days were reduced from seven days/week to Saturdays only, from 9 a.m. to 5 p.m.; this approach gives wastewater operators and the NHDES Shellfish Program more time to react in the event of a WWTF problem that occurs overnight. (Note: aquaculture operators in Little Bay are mandated to call the NHDES Shellfish Program before harvesting and so are not impacted by the new rule).

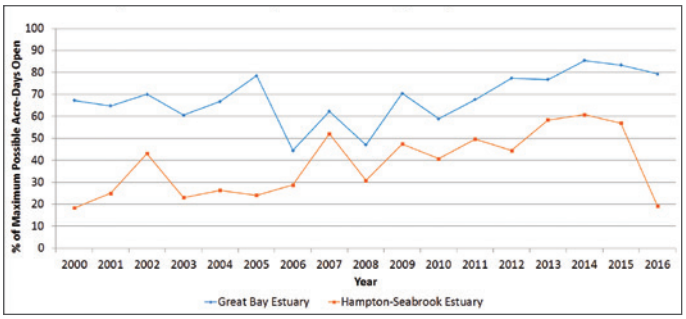

Figure 11.2 Shellfish harvest opportunities for Great Bay and Hampton-Seabrook estuaries. Percentage maximum possible "acre-days", which is the number of open acres multiplied by the number of days those acres were open for harvest.

Data Source: NH Department of Environmental Services, Shellfish Program

Maine waters, including areas of the Piscataqua River and Spruce Creek, are also closed due to concerns about the Portsmouth WWTF. This facility is being upgraded from primary to secondary treatment, which should greatly reduce both the risk of bacterial/viral contamination during failure events as well as improve overall water quality. When the Portsmouth upgrade is complete, NHDES and Maine Department of Marine Resources will reassess the public health risks and modify harvesting classifications accordingly.

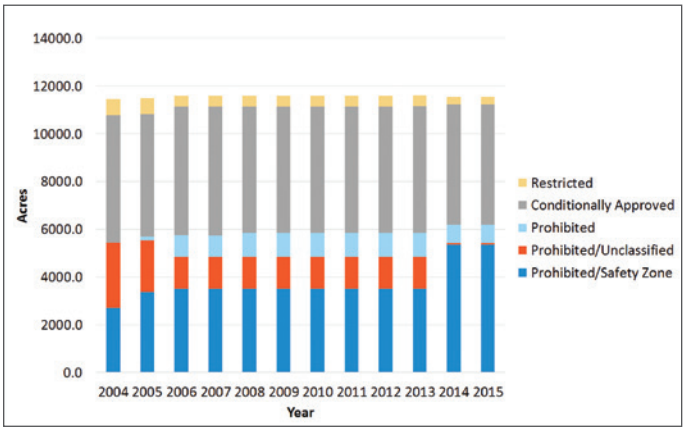

Figure 11.3 Shellfish closure acres by classification.

Data Source: NH Department of Environmental Services, Shellfish Program

BEACH ADVISORIES

How many times did beach advisory days occur on public tidal beaches in the New Hampshire and Maine Piscataqua Region due to bacterial pollution, and have beach advisory days changed over time?

Across the 17 tidal beaches in the Piscataqua Region watershed, beach advisory days occurred less than 1% of beach-days from 2012 to 2016. There are no statistically significant trends.

WHY THIS MATTERS Beach advisories are an indicator of water quality overall and they are a particularly important measure of the health and safety of the region's popular recreational areas. Beach areas in the region supply vital economic benefits from the tourist economy. Advisories are issued by the New Hampshire Beach Inspection program and Maine Healthy Beaches program when bacteria water quality samples do not meet state and federal standards for swimming.

PREP GOAL: LESS THAN 1% OF BEACH DAYS OVER THE SUMMER SEASON AFFECTED BY ADVISORIES DUE TO BACTERIA POLLUTION.

EXPLANATION The Atlantic coast is home to 17 public tidal beaches in the Piscataqua Region. At these beaches, between 1 and 11 advisories have been issued per year since 2003. Advisories between

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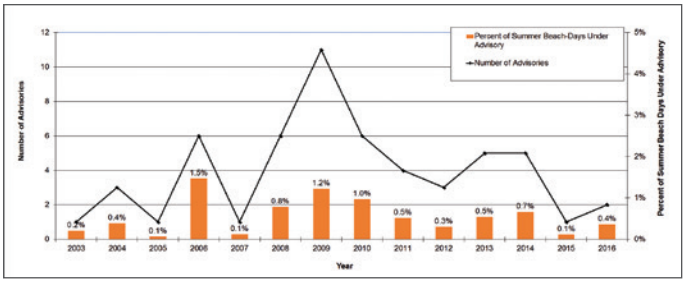
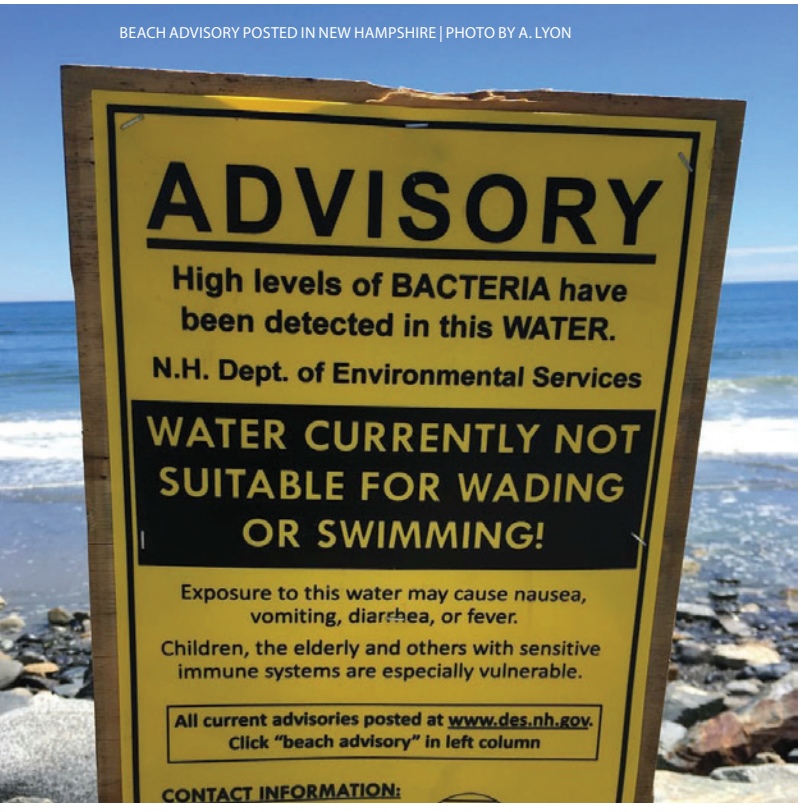


Figure 12.1 Advisories at tidal beaches in the Piscataqua Region 2003-2016. Beach days are calculated based on days between Memorial Day and Labor Day each year.

Data Source: NH Dept. of Environmental Services and Maine Dept. of Environmental Protection

2003 and 2016 have affected 130 of 23,373 beach summer days (0.06%). The most advisories occurred in 2009 with 11 advisories affecting six beaches for a total of 23 days (1.2% of total beach-days) (Figure 12.1). In 2016, North Hampton State Beach had two advisories for a total of six days (0.4% of beach-days). A 2014 report by the Natural Resources Defense Council ranked New Hampshire beaches as the second cleanest out of 30 states.[47] During 2012-2016, New Hampshire and Maine tidal beaches in the region continued to meet PREP's goal of beach advisories affecting <1% of beach-days each summer.

Poor water quality in 2016 resulted in two beach advisories (0.4% of summer days). There are no apparent trends.



BEACH ADVISORY POSTED IN NEW HAMPSHIRE | PHOTO BY A. LYON

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

TOXIC CONTAMINANTS

How much toxic contamination is in shellfish tissue and how has it changed over time?

Most concentrations of measured metals and organic chemicals in blue mussel tissue from 1991-2016 are declining or not changing. Mercury and PCB levels remain high enough to merit continued concern. Many new contaminants have been introduced to the estuary, such as pharmaceuticals, perfluorinated compounds, and brominated flame retardants, and they are not being consistently monitored.

WHY THIS MATTERS Toxic and persistent contaminants such as PCBs (polychlorinated biphenyls), mercury, and DDT (dichlorodiphenyltrichloroethane) can accumulate in the tissue of filter-feeding mussels, clams, oysters, and other marine biota and seafood. Tracking contamination in mussel tissue offers insight into changes in contaminant levels in our estuarine and coastal ecosystems.

PREP GOAL: ZERO PERCENT OF SAMPLING STATIONS IN THE ESTUARY HAVE SHELLFISH TISSUE CONCENTRATIONS THAT EXCEED LEVELS OF CONCERN AND NO INCREASING TRENDS FOR ANY CONTAMINANTS.

EXPLANATION The Gulfwatch Program uses blue mussels (*Mytilus edulis*) to better understand trends in the accumulation of toxic and persistent contaminants, including metals, pesticides, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). The use of many of these contaminants has been banned or is limited, so trends are expected to be stable or decreasing. At Dover Point, concentrations of DDT, an insecticide banned in the U.S. in 1972, are relatively low and gradually decreasing (Figure 13.1). Inputs of mercury, a heavy metal, have been reduced since the 1990s due to regulatory action taken on coal-fired power plants, medical waste, and municipal incinerators, but mercury continues to be deposited through wet and dry atmospheric deposition.[48] At most sites, including Clark's Cove in Portsmouth Harbor, mercury levels in shellfish have been fairly stable since 2003 (Figure 13.2); these levels are similar to those seen in other estuaries located close to urban centers[49]. PAHs, which mostly come from oils spills, the burning of fossil fuels, and some driveway sealants, have been stable across all stations, including Hampton-Seabrook. Only one value was above the national median level of 250 ug/kg (Figure 13.3). Other data collected at that time indicate a possible fuel spill.[50] Trend lines are not shown as there were no statistically significant results.

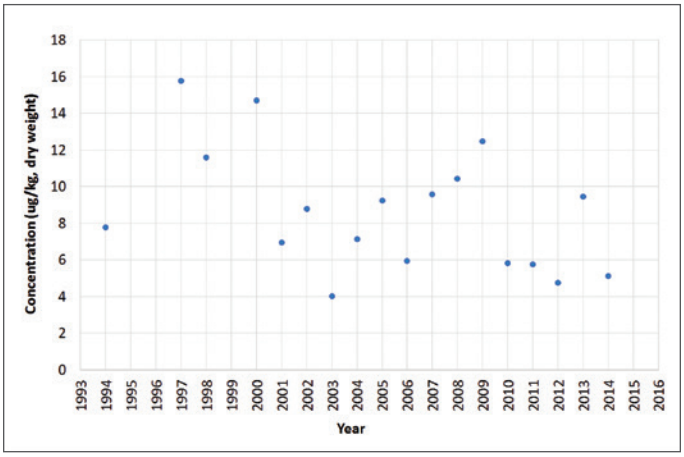


Figure 13.1 Concentrations of DDT in mussel tissue at Dover Point. The most recent national median for the Mussel Watch program was 30ug/kg.[51] The 85th percentile was 130ug/kg.

Data Source: Gulfwatch Contaminant Monitoring Program

PCBs, DDT, and mercury at these three stations—Dover Point, Clark's Cove, and Hampton-Seabrook (see Monitoring Map p. 49)—are generally representative of the trends in the more comprehensive dataset, which includes over 120 different specific contaminants. Focusing only on these three contaminants, however, does not provide a comprehensive picture of the level of toxic contamination in our estuaries. Many new contaminants have been introduced to the estuary, such as pharmaceuticals, perfluorinated compounds, and brominated flame retardants, and they are not being consistently monitored.

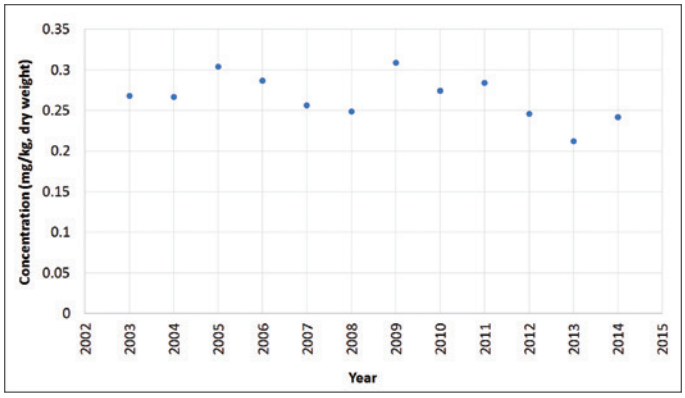


Figure 13.2 Concentrations of mercury in mussel tissue at Clark's Cove, Portsmouth Harbor. The most recent national median for the Mussel Watch program was 0.7mg/kg.[51] The 85th percentile was 0.13mg/kg.

Data Source: Gulfwatch Contaminant Monitoring Program

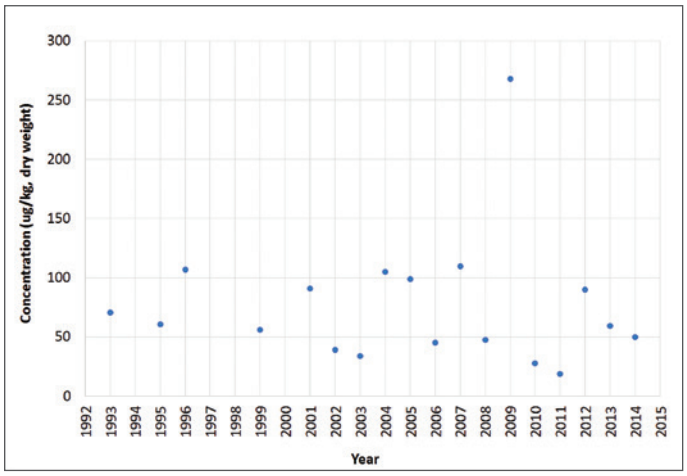


Figure 13.3 Concentration of PAHs at Hampton-Seabrook Harbor. In 2008, the national median for the Mussel Watch program was 250 ug/kg.[51] The 85th percentile was 1250 ug/kg.

Data Source: Gulfwatch Contaminant Monitoring Program

PAHs COME FROM A VARIETY OF SOURCES INCLUDING OIL SPILLS | PHOTO BY A. LYON

OYSTERS

How many adult oysters are in the Great Bay Estuary and how has it changed over time?

The number of adult oysters decreased from over 25 million in 1993 to 1.2 million in 2000. Since 2012, the population has averaged 2.1 million oysters, which is 28% of the PREP goal for oyster recovery by 2020. This shows a decline from the previous reporting period (2009-2011) which averaged just over 2.8 million oysters.

WHY THIS MATTERS Filter-feeding oysters are both a fisheries resource and a provider of key ecosystem services and functions. For example, they can reduce phytoplankton biomass and other suspended particles; this increases the ability for light to penetrate through the water, which helps benthic plants, like eelgrass, to grow. They also provide important habitat for many invertebrate species and enhance biodiversity. Since the early 1990s as oyster populations in the Great Bay Estuary have declined, it is likely these important functions and services that oysters provide may have also declined.

PREP GOAL: INCREASE THE ABUNDANCE OF ADULT OYSTERS AT THE SIX DOCUMENTED BEDS IN THE GREAT BAY ESTUARY TO 10 MILLION OYSTERS BY 2020.

EXPLANATION From 2012 to 2016, the average standing stock of adult oysters (greater than 80 mm in shell height) at the six largest oyster habitat sites (Figure 14.1) was just over 2.1 million oysters. This shows a decline from the previous reporting period (2009-2011), which averaged just over 2.8 million oysters (Figure 14.2). In

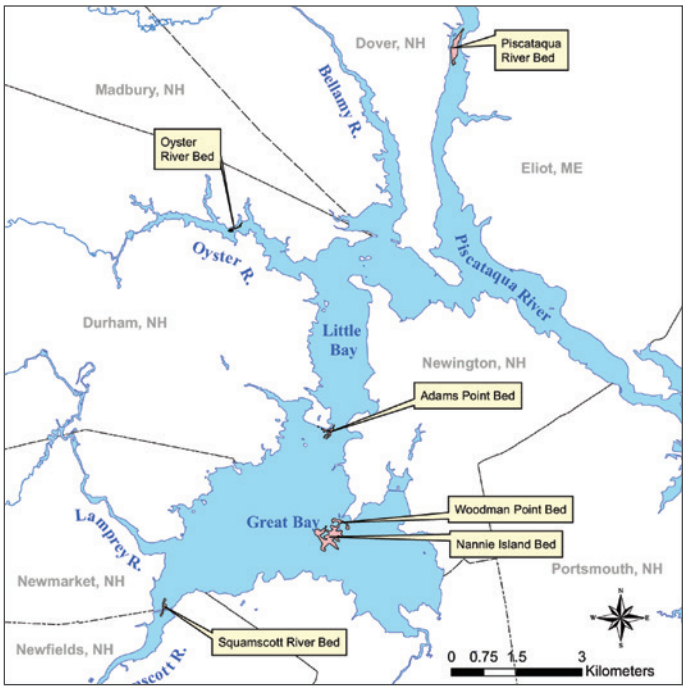


Figure 14.1 Map showing the locations of the six major oyster beds in the Great Bay Estuary.

2016, there were 2,766,314 oysters, a decrease of 89% from 1993, when 25,729,204 adult oysters were present. The 2016 oyster population is approximately 28% of the PREP goal.

A primary limitation on oyster health is disease, caused by two microscopic parasitic organisms, Dermo (*Parkinsus marinus*) and MSX (*Haplosporidium nelsoni*). Figure 14.3 shows that Dermo, a warmer water organism, has become more prevalent over time. The prevalence of both diseases increases with salinity.[52] Figure 14.3 also indicates that oysters no longer grow above 115 mm in shell height, which suggests that oysters are only living four or five years, rather than 10+ years as they did in the early 1990s.

Oyster habitat in the Great Bay Estuary also faces challenges due to a lack of available substrate for oyster larvae to settle. Oysters themselves can provide this substrate, but less and less oyster habitat diminishes the available substrate. This can be offset by

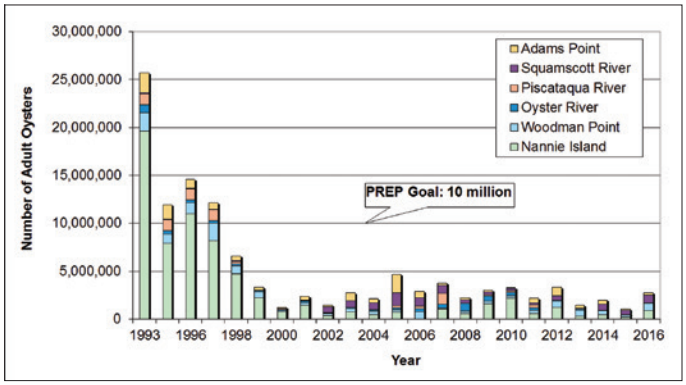


Figure 14.2 Standing stock of adult (>80 mm shell height) oysters in the Great Bay Estuary. Standing stock is estimated by multiplying adult densities by estimates of the acreage at each site.

Data Source: Oyster density data from NH Fish and Game; site acreages from UNH Jackson Estuarine Laboratory

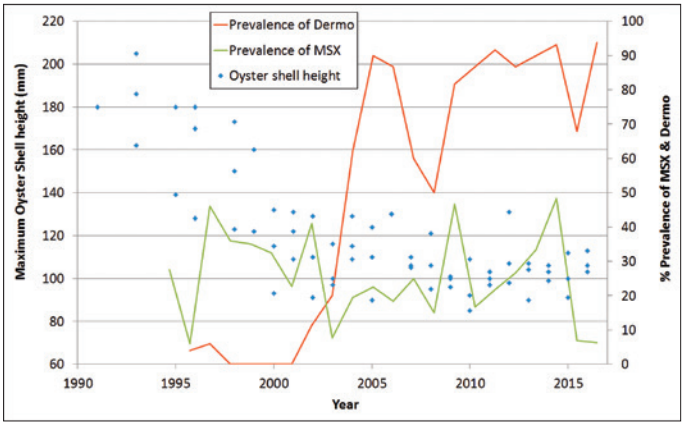


Figure 14.3 Maximum shell height of oysters from the Adams Point, Nannie Island, and Woodman Point reefs. Updated from the original graph, published in Eckert (2016), available at https://scholars.unh.edu/prep/371.

Data Source: NH Fish and Game

planting recycled oyster shell material—for example, from restaurants and other sources—in key locations in the estuary. (See "Oyster Restoration" p. 38).

Sedimentation is another stressor on oysters and it relates to the issue of available substrate. Sediments occur in the watershed from run-off, from stream and river erosion, and they get resuspended from the substrate in the estuary. With eelgrass and oyster habitats decreased from historic levels, sediments may be more easily resuspended following storms and high-flow periods. Oyster restoration monitoring has indicated that young reefs can easily be smothered by sediment.

Recreational harvesting of oysters may also be stressing the population. However, studies from other areas have shown that some restricted harvesting can provide benefit, through the removal of sediment.

SHUCKING OYSTERS ON THE CEDAR POINT SHELLFISH OYSTER FARM | PHOTO BY A. LYON

CLAMS

What is the current population of clams in Hampton-Seabrook Harbor and how has it changed over time?

The most recent clam population in Hampton-Seabrook Harbor in 2015 was 1.4 million clams. The population has declined most years since 1997.

WHY THIS MATTERS Soft shell clams provide recreational opportunities to state residents as well as visitors from outside the region. Clams consume phytoplankton and other detrital material and therefore have a significant impact on coastal and estuarine ecosystems.

PREP GOAL: INCREASE THE NUMBER OF ADULT CLAMS IN HAMPTON-SEABROOK ESTUARY TO 5.5 MILLION CLAMS BY 2020.

EXPLANATION In 2015, there were 1.4 million clams in Hampton-Seabrook Harbor. Since 2012, clam populations have remained below the PREP goal of 5.5 million clams and below the average level (2.4 million) from 2009 to 2011 (Figure 15.1).

Clams may be limited by a type of cancer (*Hemic neoplasia*) that affects marine bivalves but is not dangerous to humans. Figure 15.2 shows that the percentage of clams infected with *Neoplasia* has increased since 2002. Research suggests there are several factors that make clams more susceptible to this disease, especially pollution (mainly heavy metals and hydrocarbons) and warming water temperatures.[53]

Green crabs eat clams and have also been shown to reduce clam populations. However, Figure 15.3 shows that green crab abundance in Hampton-Seabrook Harbor has steadily declined – for unknown reasons – between 2011 and 2015.

Continued

Clams, cont.

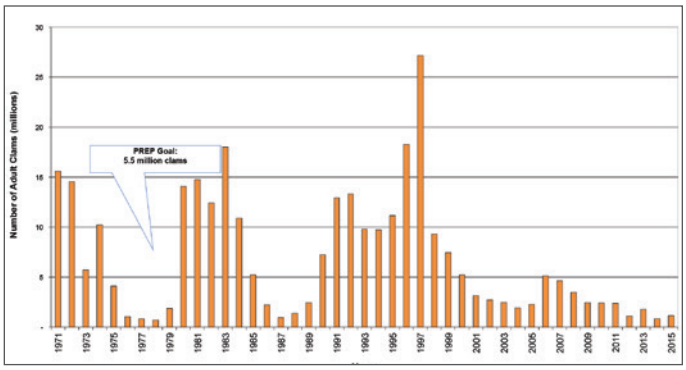


Figure 15.1 Standing stock of adult clams in Hampton-Seabrook Harbor. Number of adult clams is calculated by multiplying clam densities by the acreage of clam flats in Hampton-Seabrook Harbor.

Data Source: Normandeau Associates, with support from NextEra Energy

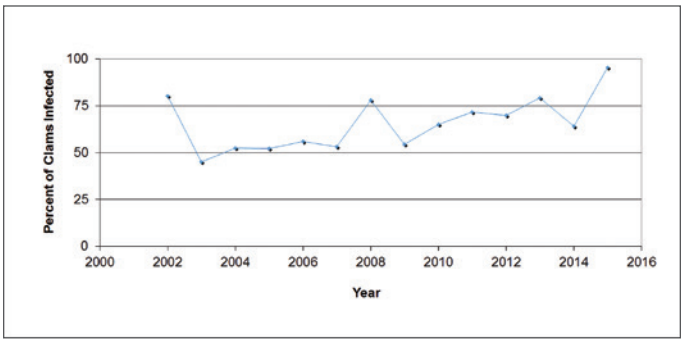


Figure 15.2 Percent of clams with any *Neoplasia* infection in Hampton-Seabrook Harbor.

Data Source: Normandeau Associates, with support from NextEra Energy

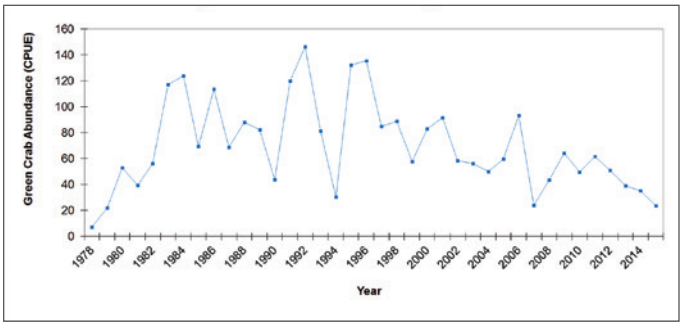


Figure 15.3 Green crab abundance in Hampton-Seabrook Harbor. CPUE = catch per unit effort. Crabs are caught in baited traps, twice a month year-round with the exception of February and March.

Data Source: Normandeau Associates, with support from NextEra Energy

In 2015, there were only 1.4 million clams in Hampton-Seabrook Harbor (only 25% of the PREP goal).

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

MIGRATORY FISH

How have migratory fish returns to the Piscataqua Region changed over time?

Overall migratory river herring returns in the Piscataqua Region watershed increased 69% between 2012 and 2016; however, river herring returns have sharply declined for the Oyster and Taylor Rivers. Returns for American shad have been consistently fewer than five since 2011 and zero were reported in 2016. There are no statistically significant trends. A lack of fishable ice resulted in insufficient data for rainbow smelt in 2012, 2013, and 2016.

WHY THIS MATTERS Migratory fish – such as river herring and American shad – travel from ocean waters to freshwater streams, marshes, and ponds to reproduce. River herring are an important source of food for wildlife and bait for commercial and recreational fisheries.

PREP GOAL: NO GOAL.

EXPLANATION Observed river herring returns to the coastal rivers of the Piscataqua Region watershed varied during the 1972-2016 period (Figure 16.1). Total river herring returning to fish ladders in 2016 reached 199,090. This is a 69% increase from 2012 that was driven by record river herring returns in the Lamprey and Cocheco

Rivers. Conversely, returns have sharply declined in two other rivers: the Taylor and the Oyster. Due to variability in the dataset there are no statistically significant trends. Declines in river herring returns in some rivers may be due to several factors including: limited freshwater habitat quantity and quality, difficulty navigating fish ladders, safe downstream passage over dams, fishing mortality, pollution, predation, and flood events during upstream migrations. To continue improving river herring returns, NH Fish and Game and the NH Coastal Program continue to work with state, federal, and local partners on dam removal and culvert replacement projects on the Cocheco River (Gonic dams in Rochester), Bellamy River (Sawyer Mill dams in Dover), and Exeter River (Great Dam in Exeter; completed in September 2016).[54, 55]

Despite increases in river herring returns for some rivers, the Oyster and Taylor River populations have declined dramatically in recent years most likely due to poor water quality in impoundments upstream.[56] Additionally the Winnicut River fish ladder has been declared ineffective and NH Fish and Game is working on a solution.[57] The 2016 river herring returns are almost exclusively from the Lamprey and Cocheco Rivers.

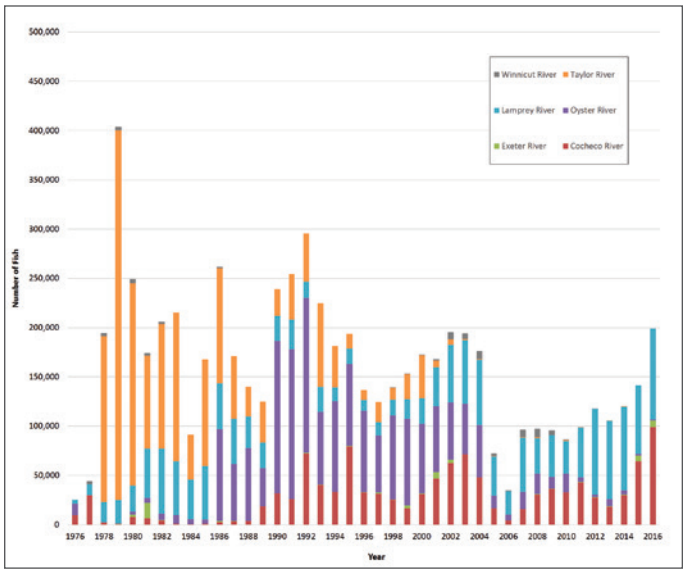


Figure 16.1 Returns of river herring to NH coastal tributaries 1976-2016. In 2016 river herring returns were almost exclusively from two rivers: the Lamprey and Cocheco.

Data Source: NH Fish and Game

NH FISH AND GAME SURVEYING ANADROMOUS RIVER HERRING
PHOTO BY I. MACLELLAN

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

CONSERVATION LANDS (GENERAL)

How much of the land in the 52 communities that make up the Piscataqua Region is permanently conserved or considered public lands?

There have been 130,302 acres conserved as of May 2017 and this is 15.5% of the total land area in the 52-town Piscataqua Region. This represents an increase of 5% (41,555 acres) in new land area coming under conservation since 2011. Focusing on the 22 coastal communities in the Piscataqua Region, 49,918 acres of land have been conserved to date. That represents 19.6% of the land area in those 22 towns, and is approaching the PREP goal of 20%.

WHY THIS MATTERS Our region is under pressure from population growth and associated development (see Housing Permit Approvals p. 41). Conserving a network of natural lands across the region is the most effective action to take to ensure clean water and healthy and abundant wildlife populations, to minimize flood damages, and to provide a diversity of quality, recreational opportunities.

PREP GOAL: CONSERVE 20% OF THE WATERSHED BY 2020.

Continued

EXPLANATION In the full 52-town Piscataqua Region there have been 130,302 acres conserved as of May 2017. This amounts to 15.5% of the total land area in the region and represents an increase of 5% in new land area coming under conservation (41,555 acres) since 2011. Of all the acres considered conserved, 82% of them are under permanent protection. An additional focus for this data is on the 22 coastal communities in the region. These are the communities that are tidally influenced in the coastal zone and together are seeing the greatest development pressures. There has been a total of 49,918 acres of land conserved in these communities. This represents 19.6% of the land area in the 22 towns, and is very close to the PREP goal of 20%.

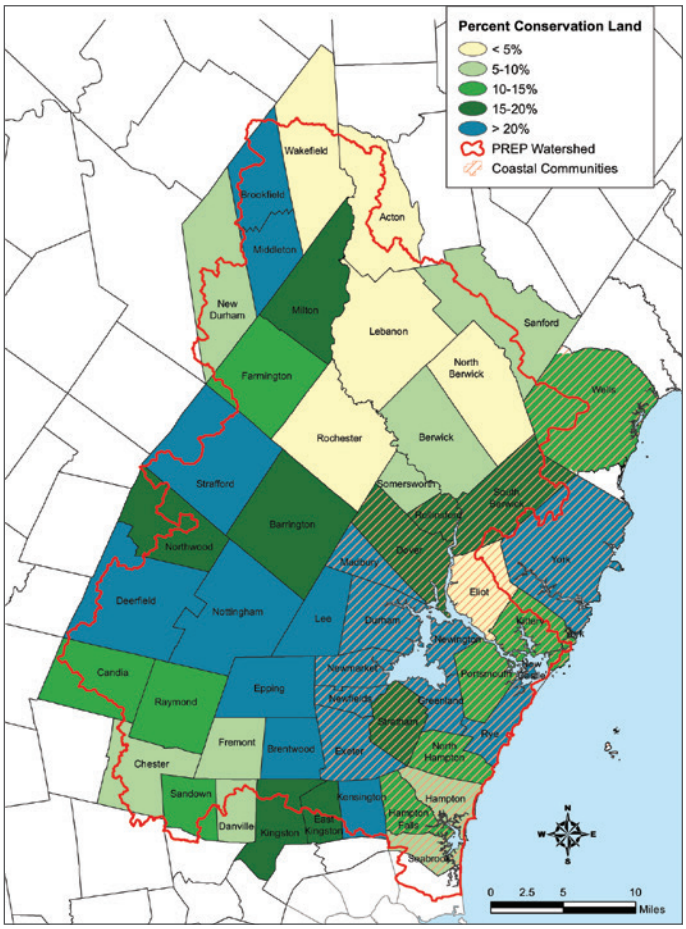


Figure 17.1 Land conservation by percent of total land area for each Piscataqua Region community.

Data Source: NH GRANIT

The percentage of conserved land area protected in each town is shown in Figure 17.1. As of 2017, 18 communities have greater than 20% conserved lands, and 9 communities have between 15 and 20% conserved lands. Overall, conservation lands have increased across most of the region, but there are still communities where conservation lands as a total percentage of the municipality's land area is below 5% (yellow). Figures 17.1 and 17.2 (HUC-12 analysis) highlight areas where conservation efforts have been significant (+30% of total land area) and these include Great Bay, Exeter-Squamscott, Lamprey River, Oyster River, Pawtuckaway Pond, and Scamen Brook-Little River. Conversely, areas where conserved lands are lower include the Cocheco, Salmon Falls, Bog Brook-Little River, and Great Works River.

Recent progress suggests the region can meet PREP's goal of 20% of the watershed conserved. Although the 22 coastal communities are very close at 19.6%, region-wide an additional 37,700 acres will need to be conserved in order to achieve the goal.

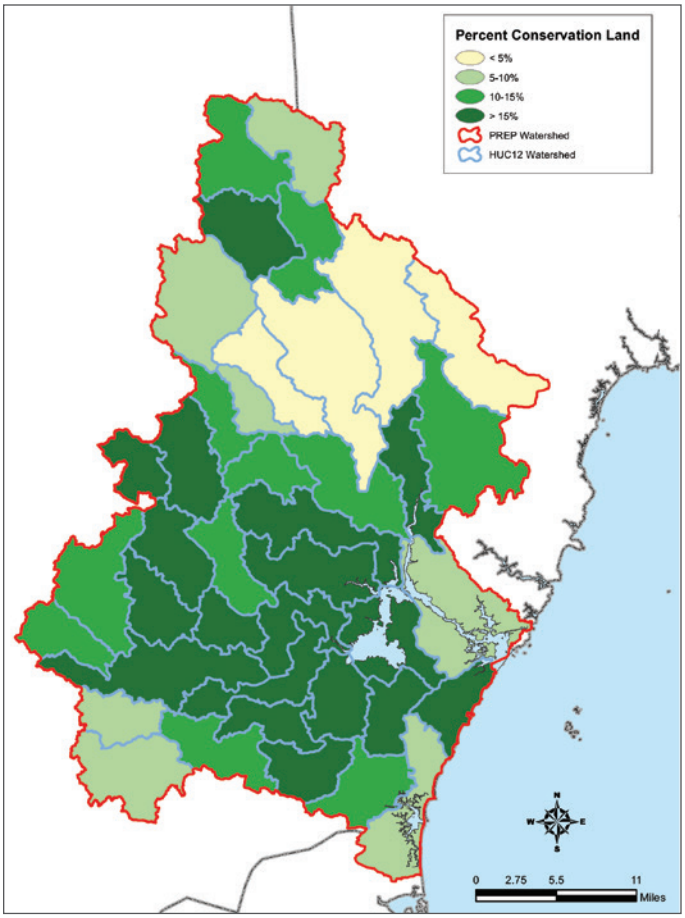


Figure 17.2 Land conservation by percent of total area for each subwatershed (HUC-12).

Data Source: NH GRANIT

PHOEBE'S NABLE MOUNTAIN, MIDDLETON, NH | PHOTO BY E. LORD

CONSERVATION LANDS (FOCUS AREAS)

How much of the Conservation Focus Areas in the Piscataqua Region are permanently conserved or considered conserved public lands?

In 2017, 34.4% of Conservation Focus Areas (CFAs) in New Hampshire and 14.2% of CFAs in Maine were conserved. This represents a combined impact of 40.9% of progress toward the PREP goal of conserving 75% of all total acres in the CFAs. Given the challenges associated with conserving these important lands, the goal of conserving 75% (or 124,659 acres) of these core focus areas in both Maine and New Hampshire by 2025 will take significant additional effort to achieve.

WHY THIS MATTERS The Piscataqua Region is home to exceptional, unfragmented natural areas and corridors supporting important wildlife populations, water filtration capacity, and storm buffering. Due to the infrastructure and growth pressures in our region, there is limited time to protect these areas in order to ensure they will continue to provide benefits for future generations.

PREP GOAL: CONSERVE 75% (124,659 ACRES) OF LANDS IDENTIFIED AS CONSERVATION FOCUS AREAS BY 2025.

EXPLANATION *The Land Conservation Plan for New Hampshire's Coastal Watersheds*[58] and *The Land Conservation Plan for Maine's Piscataqua Region Watersheds*[59] are two science-based regional conservation master plans developed by a range of municipal, regional, and technical partners to guide conservation efforts throughout the region. The plans identify 90 CFAs that have high conservation values associated with them (such as rare habitat for threatened or endangered species). Of the 166,212 acres that fall within these designated CFAs, a total of 51,062 acres have been permanently protected (40.9% of progress toward the PREP goal of 124,659 acres). This represents an increase of 3.7% since 2011 or 5,197 new conserved acres, with the majority of these increases being in New Hampshire. There are a few notable areas where gains have been significant (over 50% increases since 2011), including the Winnicut River, Isinglass River, Kennard Hill, and Birch Hill Lowlands. There are 16 CFAs where 50% or more of the acres have been protected (see Figure 18.1). CFAs where 70% or more have been protected include the Upper and Middle Winnicut, Creek Pond Marsh, Lower Lubberland Creek, Exeter River, Fabyan Point, and Laroche and Woodman Brooks. Continued, focused efforts are needed to meet the goal in protecting 75% of these CFAs by 2025.

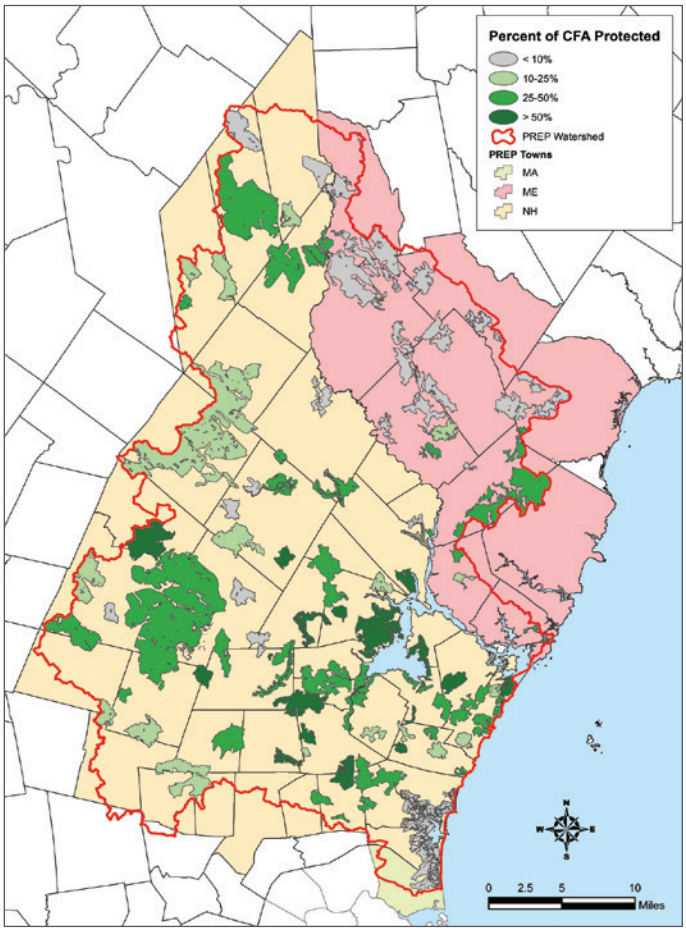


Figure 18.1 Percent of each Conservation Focus Area in the Piscataqua Region conserved.

Data Source: NH GRANIT

OYSTER RESTORATION

How many acres of oyster restoration have been initiated?

More than 26 acres of oyster restoration have been initiated since 2000—15.5 of those acres since 2011. Sedimentation hampers success at most, but not all sites.

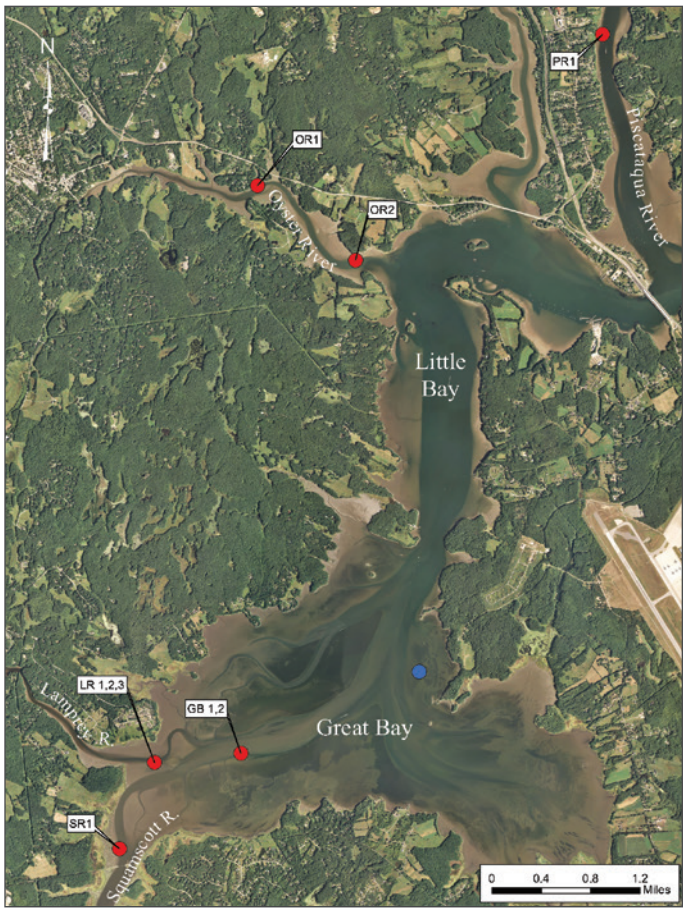


Figure 19.1 Map showing major oyster restoration activity. The red dots show general location of sites that have been monitored. Note that two of the red dots show the location of multiple sites (in the Lamprey River and in Great Bay). The blue dot shows the most recent restoration site in the Great Bay.

Data Source: Grizzle and Ward (2016) and Grizzle and Ward (2017)

WHY THIS MATTERS The oyster fishery and commercial oyster aquaculture industry support the local economy through jobs and sales. Filter-feeding oysters can improve light penetration through the water; they provide critical habitat for many species of invertebrates and juvenile fish, and they can sequester nitrogen and carbon. Unfortunately, the Great Bay Estuary has lost 89% of its wild oysters since 1993, which results in less available substrate and, in turn, less available area for juvenile oyster spat to settle.

PREP GOAL: RESTORE 20 ACRES OF OYSTER REEF HABITAT BY 2020.

EXPLANATION Between 2000 and 2012, 10.8 acres of oyster restoration were initiated. Between 2012 and 2016, an additional 15.5 acres of oyster restoration were established in the Great Bay Estuary (Figures 19.1 and 19.2) through collaborations between the University of New Hampshire (UNH) and The Nature Conservancy (TNC). The cumulative total for oyster restoration sites is now over 26 acres, above the PREP goal of 20 acres. Although 26 acres of restoration area exist, each site is only partially covered by oyster shell. For example, a common design is to establish multiple small circles of shell on which oysters can settle.

Unfortunately, in many cases, these restoration sites have struggled to remain viable, primarily due to burial by fine sediments (sedimentation)[60]. Table 19.1 shows monitoring results for seven different restoration sites; in four of the seven sites, shell cover has decreased since initial construction. Only one site showed an increase in shell cover.

Monitoring of these sites suggests several keys to successful future restoration, including: 1) build reefs to achieve greater vertical height to guard against burial by sediments and 2) select sites as close as possible to a natural reef. Recent UNH research showed that recruitment (new oyster larvae settling) decreased significantly as distance from a native natural reef increased[61].

Oyster aquaculture (i.e., oyster farms) in the Great Bay Estuary has increased steadily since 2011, with 22 aquaculture harvest licenses issued in 2016, as compared to only five in 2011. In 2016, NH Fish and Game estimates that over 180,000 oysters were harvested from aquaculture activities.

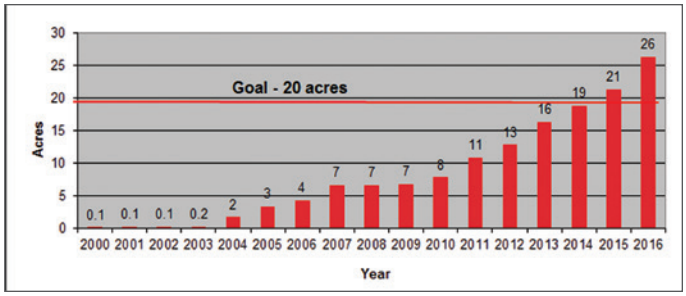


Figure 19.2 Cumulative acres of oyster restoration projects 2000-2016. Data pertain to the total areas of a restoration site, not necessarily the area covered by oysters.

Data Source: UNH Jackson Estuarine Laboratory

	Date Constructed	Shell Cover, Initial (% of total area)	Shell Cover, 2015 (% of total area)
Lamprey River #1	2011	60	3
Lamprey River #2	2011	20	26
Squamscott River	2012	20	5
Lamprey River #3	2013	38	25
Piscataqua River	2013	54	23
Great Bay #1	2014	25	1
Great Bay #2	2015	21	4

Table19.1 Change in shell cover after initial construction.

Data Source: UNH Jackson Estuarine Laboratory

CEDAR POINT SHELLFISH OYSTER AQUACULTURE ON GREAT BAY ESTUARY | PHOTO BY A. LYON

MIGRATORY FISH RESTORATION

How many miles of mainstem freshwater rivers are accessible to river herring in the Piscataqua Region?

As of 2016, 42% of the historical distribution for river herring in the rivers of the Piscataqua Region has been restored. Additionally, removal of the Great Dam in Exeter in July 2016 has improved river herring passage on the Exeter River.

WHY THIS MATTERS Physical barriers such as dams and culverts can prohibit the movement of migratory fish between upstream and downstream areas. Migratory fish – such as river herring – live mostly in saltwater but travel upstream to freshwater to reproduce. Limiting passage to freshwater upstream can limit populations.

PREP GOAL: RESTORE NATIVE MIGRATORY (DIADROMOUS) FISH ACCESS TO 50% OF THEIR HISTORICAL MAINSTEM RIVER DISTRIBUTION RANGE BY 2020.

EXPLANATION Coastal rivers of the Great Bay Estuary historically supported abundant fish returns for river herring (alewife and blueback herring) and American shad. However, during the 19th century the construction of dams along coastal rivers limited access to freshwater spawning habitats[62]. To support recovery of river herring populations in the 1950s, NH Fish and Game began efforts to restore access to historically accessible freshwater streams and

Continued

ponds. Figure 20.1 shows the historically accessible miles of freshwater in the main stem of each major river, and how many miles of freshwater habitat are currently accessible. For this indicator, fish ladders are considered to provide limited access for migratory fish; however, fish ladders on the Winnicut Dam in Greenland and former Great Dam in Exeter are inefficient at passing river herring to upstream spawning habitat.

For the Exeter, Cocheco, and Winnicut Rivers, 100% of freshwater miles historically accessible are once again open for fish passage as of 2017, assuming fish ladders provide limited access. Less than 30% access is open for the remaining mainstem rivers. Overall, freshwater access for river herring has been restored to 42% of historical distribution within the main stems of the region's major rivers (Figure 20.2).

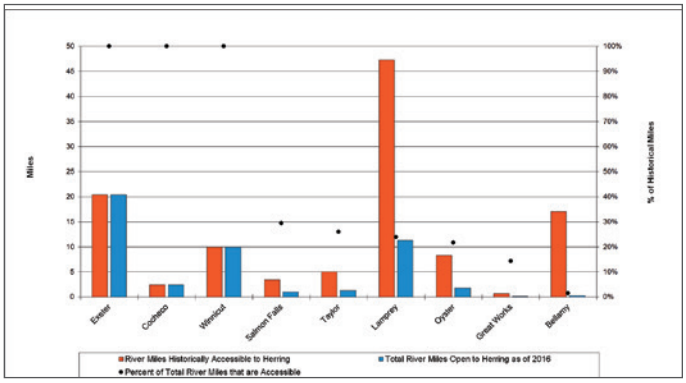


Figure 20.1 Mainstem stream miles accessible to river herring in major rivers of the Piscataqua Region. River miles historically accessible to river herring and total river miles open to river herring as of 2016.

Data Source: NH Fish and Game

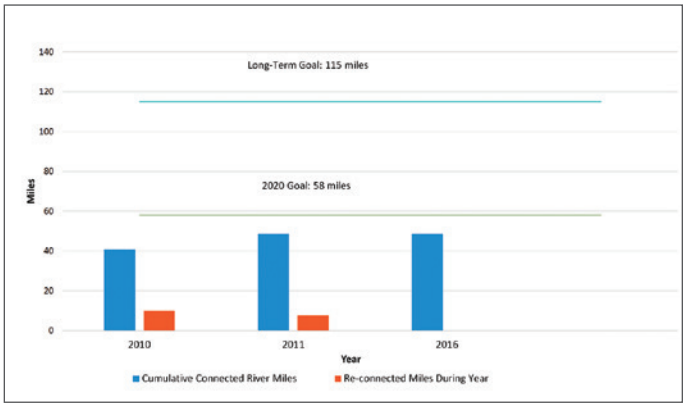


Figure 20.2 Upstream river miles re-connected for migratory herring on the mainstems of major rivers.

Data Source: NH Fish and Game

*The Social Indicators Project was funded using a combination of federal funds coordinated by the NOAA Office for Coastal Management and $15,000 of nonfederal funding provided by PREP. This funding supported a NOAA Coastal Management Fellow for two years working on the project, and the NH Department of Environmental Services Coastal Program provided in-kind support and office space for the fellow during this period.

SOCIAL INDICATORS

Since the first *The State of New Hampshire's Estuaries* report in 2000[62], PREP has been committed to reporting on a suite of ecological and biological indicators of health in the Great Bay and Hampton-Seabrook Estuaries. These estuaries are not just places of biological value; they also provide social value, economic benefits, and many other quality of life assets such as recreational opportunities and community character. They are where rivers meet the sea, where land meets the water, and where people meet the water.

In 2015, PREP partnered with the NH Department of Environmental Services Coastal Program (NHCP), Great Bay National Estuarine Research Reserve (GBNERR), the National Oceanic and Atmospheric Administration (NOAA), and Plymouth State University (PSU) to kick off the *Social Indicators Project**. This two-year initiative is our region's first attempt to gather, understand, and link social and behavioral data to regional environmental indicators. The project team conducted an extensive assessment of values through almost 40 one-on-one interviews with watershed stakeholders that included resource managers, business owners, regional planners, community organizers, and state policy makers (Figures 21.1 and 21.2). Following the interviews, a technical advisory process was used to find existing data and/or indicators that reflected the stakeholder values that were identified in the interviews (Figure 21.2). After a broad review of existing data sources, a list of 31 potential indicators was shared with the advisory board for input, refining, and ranking. This input was used to categorize and narrow 31 indicators to 15 indicators that fit into seven categories. PREP staff evaluated and chose the final three indicators: housing permit approvals, stormwater management effort, and stewardship behavior, for their relevance to environmental trends, how rigorously they were collected, geographic scale, and applicability to management actions. Additional detail on the indicator selection process is outlined in the full *2018 State of Our Estuaries Environmental Data Report*[20].

At their core, these social indicators are meant to strike up conversation, prime questions, and encourage more research.

GREAT BAY GUNNERS REMOVING DEBRIS ALONG THE SHORES OF THE GREAT BAY ESTUARY
PHOTO BY E. LORD

Each social indicator has a strong connection to several environmental indicators that PREP monitors and reports on (Table 21.1). They represent the beginning of PREP's ongoing commitment to robust social-ecological indicator monitoring.

Figure 21.1 Sectors represented across 38 stakeholder interviews.

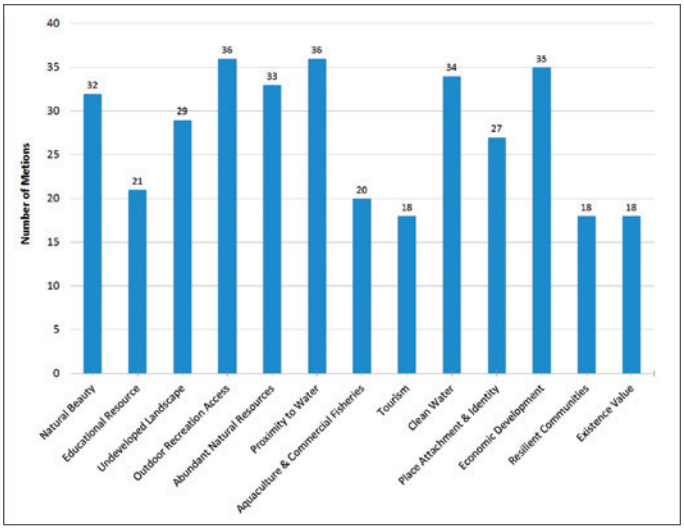


Figure 21.2 Social ecological values expressed across 38 stakeholder interviews. Bars represent number of times that concept was mentioned or referenced in interviews.

Social Indicator	Housing Permits	Stormwater Effort	Stewardship Behavior
Environmental indicators that this social indicator could relate to or affect	• Impervious Surfaces • Total Suspended Solids • Nutrient Load / Concentration • Bacteria • Toxic Contaminants • Conservation Lands • Stormwater Effort	• Impervious Surfaces • Total Suspended Solids • Nutrient Load / Concentration • Conservation Lands • Bacteria • Eelgrass • Phytoplankton	• Conservation Lands • Oyster Restoration • Migratory Fish Restoration

Table 21.1 Connecting social indicators to PREP's environmental indicators.

HOUSING PERMIT APPROVALS

How many single and multi-family new housing permits were issued by communities in the Piscataqua Region from 2000 to 2015?

There were 19,483 multi-family and single-family new housing permits issued in the 42 New Hampshire towns in the watershed from 2000 to 2015. There were 331 new housing permits issued in the ten Maine towns in the watershed in 2015.

WHY THIS MATTERS The Piscataqua Region is a desirable place to live, and as the population increases, so too do pressures. The number of housing permit approvals in the Piscataqua Region provides good context for considering an increase in population and the commensurate disturbance of the land to support that population. If not properly mitigated and planned for, construction can change the hydrology of the land and can lead to short-term soil erosion. New housing units increase impervious cover, which can lead to more stormwater and sediment runoff and nutrient loading. Since the U.S. Census is run every ten years, monitoring housing permit approvals gives us a more frequent indicator of increase in population, demand for development, and conversion of land to housing. Additionally, monitoring new housing permit approvals can shed light on economic development trends, migration patterns, shifting demographics, and overall pressure on our coastal and

Continued

recreational resources. Furthermore, as development trends shift geographically, it can also help communities understand where development pressure is occurring and can prime conversations about smart growth and low-impact development practices that allow for an increase in population and economic development and the protection of sensitive, natural areas.

PREP GOAL: NO GOAL.

EXPLANATION Population pressure on the nation's 452 coastal shoreline counties has been continually on the rise. In 2010, 123.3 million people, or 39% of the nation's population, lived in counties directly on the shoreline (called coastal shoreline counties) and 52% resided in coastal watershed counties (upriver and on tributaries from the shore). This population is expected to increase by 8%, or 10 million people, by 2020. Not only are there more people living on the coast, the population density far outweighs the rest of the U.S. There are 446 persons per square mile in coastal shoreline counties and 319 persons per square mile in coastal watershed counties nationwide. This is in stark contrast to the rest of the U.S., which averages 105 persons per square mile. Nationwide, there were 1,355 building permits issued per day in coastal shoreline counties from 2000–2010.[63]

This trend rings true in the Piscataqua Region. There were 386,658 people living in our three coastal and estuarine counties in 2015—an increase of 126,453 people since 1980.[64] There is also close alignment to the national density numbers, with 317 persons per square mile in New Hampshire watershed towns and 216 persons per square mile in Maine watershed towns in 2015 (Figure 21.3). In 2015 more people moved into New Hampshire than moved out of it; ~53,000 residents moved into New Hampshire, and 42,000 left the state[65].

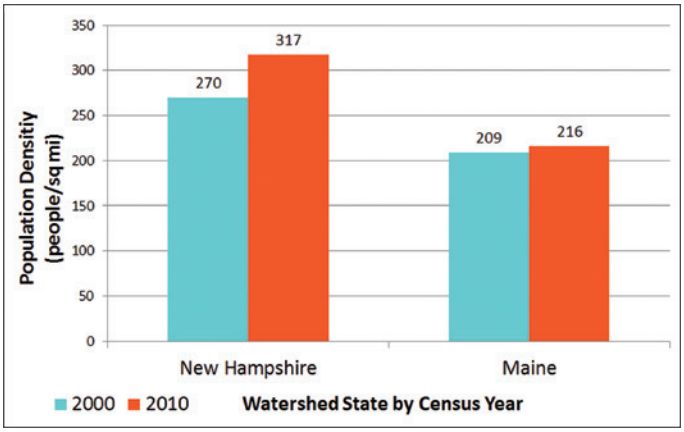
Population increases can bring many positive benefits to communities and the region, including:

- **Increase in the tax base**
- **Enhanced tourist economy**
- **Additional people to enjoy and steward our lands (see Stewardship Behavior p. 46)**
- **Growth of local business and commerce**
- **Diversificiation of our socio-economic structure**

However, more housing development also means more services for communities to provide such as schools, road maintenance, police, fire, public services, etc., all requiring more pull on already strained municipal budgets.

Historically, New Hampshire's population is among the most mobile in the nation. Only a third of New Hampshire residents age 25 and older were born in the state (Figure 21.4)[66]. This is an important consideration as this kind of demographic shift can mark how policy is made at the town level and can help inform outreach partners on the best engagement tactics for reaching a different type of taxpayer and resident who are more accustomed to state-level environmental policies.

As pressure on existing housing stock increases, so does the need for new units. An accepted indicator for new development is



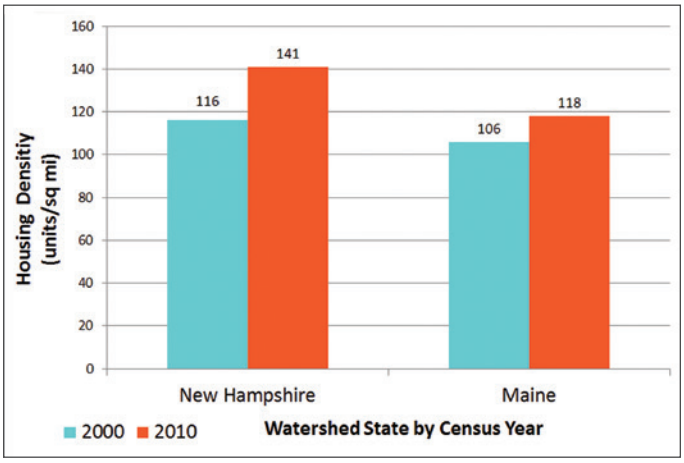


Figure 21.3 Population and housing densities in the Piscataqua Region: census years 2000 and 2010.

Data Source: US Census Bureau

the number of approved new housing unit permits in each town. It is important to note that an approved permit does not always equate to the actual construction of the unit; permits are often pulled but development can stall due to various factors. The construction sector in the 42 New Hampshire watershed towns experienced an all-time high in 2000 and an all-time low in 2009. Since then, it has been rising incrementally (Figure 21.5). There are confounding factors as to why the construction sector has not bounced back as robustly since 2009, including loss of construction workers, limitations of local regulations, and lack of buildable lots.[68]

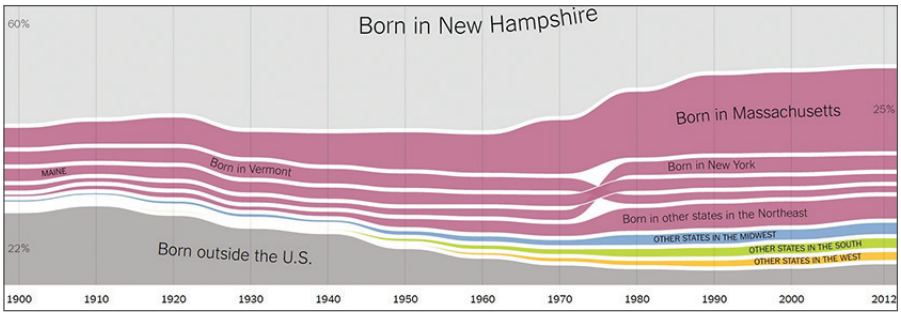


Figure 21.4 Created by *The New York Times*, this graphic shows the make-up of New Hampshire residents living in the state as of 2012.

Data Source: New York Times: The Upshot, Aug. 19, 2014[67]

Of particular note is the recent increase in multi-family unit permit approvals (dark blue bars in Figure 21.5). In the last six years, these have steadily kept pace with single-family units. From a land use perspective this is encouraging, as multi-family units often have an overall smaller lot size per person than typical, single-family, one-acre lot zoning.

The NH Office of Energy and Planning provides a very useful statewide data clearinghouse for all New Hampshire housing data. Table 21.2 shows the percent change, which gives a relative sense of growth as compared to the baseline of 2000. Absolute changes in housing units from 2000 to 2015 provide another interesting perspective. Table 21.3 displays the 10 New Hampshire Piscataqua Region towns that have seen the largest absolute changes in housing units. Additionally, when looking at where the newest development is occurring (Tables 21.2 and 21.3), it is important to note that it is increasing in towns that are upwatershed from Great Bay and in communities that have been more traditionally rural. There can be negative impacts when converting land from open space to development, especially along smaller tributaries. Engaging the tenets of low impact development should become increasingly more important in these communities.

For the Piscataqua Region municipalities in Maine, data on new single family housing permit approvals is available on a town-by-town basis (Table 21.4). Each municipality publishes an annual Town Report that includes a chapter from the town code enforcement officer. PREP extracted the number of new single-family housing permits reported in each of the 10 Maine watershed communities from 2015 (the latest year all 10 communities had publically available data at the time of publication). PREP anticipates continuing to collect Maine municipalities' data year to year and developing trend analyses for the next *State of Our Estuaries* report.

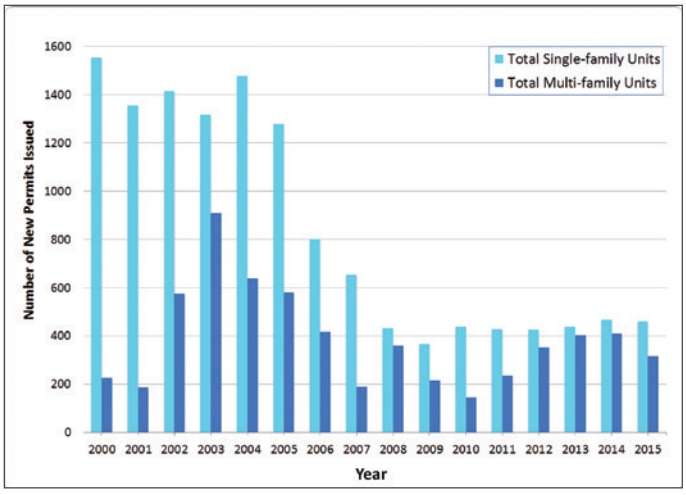


Figure 21.5 New building permits in the Piscataqua Region watershed communities in New Hampshire.

Data Source: NHOEP State Data Center

NH Municipality	Total Housing Units, 2000 (from Census)	Total Units, 2015 (from 2010 Census and new permits)**	Change from 2000-2015	% change (change/ total housing units in 2000)
Brentwood	920	1,446	526	57.17%
Fremont	1,201	1,735	534	44.46%
East Kingston	648	935	287	44.29%
Chester	1,247	1,725	478	38.33%
Epping	2,215	2,959	744	33.59%
Sandown	1,777	2,345	568	31.96%
Deerfield	1,406	1,851	445	31.65%
Nottingham	1,592	2,093	501	31.47%
Greenland	1,245	1,603	358	28.76%
Hampton Falls	729	912	183	25.10%

Table 21.2 Top 10 New Hampshire Piscataqua Region watershed communities with the largest percent change in units from 2000-2015.

Data Source: NHOEP State Data Center & US Census Bureau

NH Municipality	Absolute change in housing units from 2000-2015
Dover	2,252
Rochester	1,845
Hampton	847
Newmarket	844
Portsmouth	770
Epping	744
Durham	738
Exeter	707
Barrington	670
Raymond	663

Table 21.3 Top 10 New Hampshire Piscataqua Region watershed communities with the largest absolute changes in housing units.

Data Source: NHOEP State Data Center & US Census Bureau

**Because Census data is only collected every decade, the 2015 data from the NH Office of Energy and Planning is based on census data and the total number of permits issued from 2010-2015. Permits are not an exact measure of housing units as some permits issued never materialize into a new housing unit but this is the closest estimate available. This section has been reviewed by the NHOEP.

Housing Permit Approvals, cont.

Maine Municipality	New Single-Family Housing Permits Issued in 2015
Wells	113
York	68
Berwick	28
Kittery	27
Acton	22
Lebanon	18
Elliot	18
Sanford	17
South Berwick	10
North Berwick	10
Total:	331

Table 21.4 Maine Piscataqua Region watershed communities housing permit data in 2015.

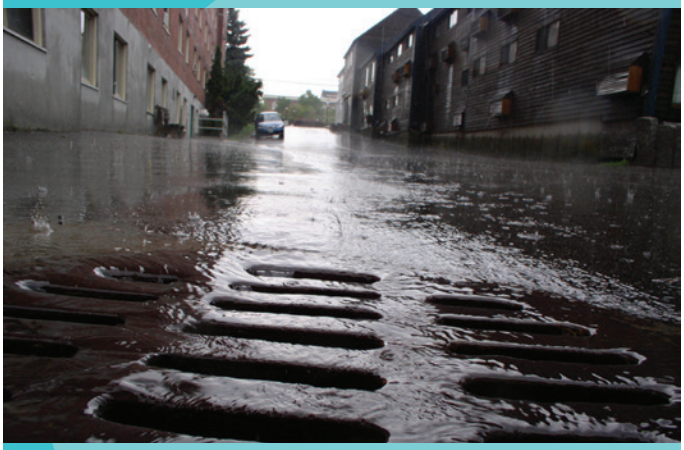
Data Source: ME 2015 Town Reports***

PORTSMOUTH, NH, FROM THE AIR | PHOTO BY A. LYON

***Maine municipalities record the number of new single-family housing permits issued annually on either a fiscal year or calendar year basis. This data can be found in each municipality's Annual Town Report under the Code Enforcement section.

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

STORMWATER MANAGEMENT EFFORT



How many communities in the Piscataqua Region watershed have adopted the Southeast Watershed Alliance Model Stormwater Standards for Coastal Communities and how many communities have other regulations in place? Additionally, how many communities in the watershed have a stormwater utility?

As of July 2017, in the 42 New Hampshire municipalities, 8 communities have adopted the complete set of stormwater standards, 7 communities are in the process of adoption, 5 communities have partial or a different set of standards, and 22 communities have not adopted standards. The 10 Maine communities are required to adhere to state-level stormwater management regulations. Zero communities have adopted a stormwater utility.

WHY THIS MATTERS Stormwater runoff is a main driver of declining water quality in local waterways and leads to increased flooding. One way communities can reduce pollution and alleviate flooding is to adopt up-to-date stormwater management standards. This action will increase the resilience of each community and the region as a whole in the face of climate change and increasingly severe storm events and flooding.

PREP GOAL: NO GOAL.

EXPLANATION Adopting local stormwater management standards allows a community to grow in a resilient manner, while improving existing conditions and preventing future water quality impairments. In New Hampshire, state statute enables municipalities to adopt regulatory standards for stormwater management for projects not captured under state Alteration of Terrain regulations (projects smaller than 100,000 sq. ft. of terrain or 50,000 sq. ft. of protected shoreland).[69] In Maine, the state stormwater management law provides stormwater management standards for development that municipalities must adhere to (if projects exceed one acre of disturbance).

Communities in New Hampshire have already achieved many stormwater management successes through partnerships with the Southeast Watershed Alliance (SWA), the University of New Hampshire Stormwater Center (UNHSC), Soak Up the Rain, and other regional resources. Adopting enhanced standards allows communities to build on the great progress they have already made and continue to strengthen the culture of stormwater management leadership throughout the Piscataqua Region.

Local stormwater standards empower communities to guide development and protect natural resources while providing developers with consistent, equitable guidelines for managing impervious cover. These standards can be adopted in the zoning ordinance or as land development regulations. While any improvement to existing stormwater standards is a beneficial first step, the SWA model represents a comprehensive approach. Below is a summarized version of what is contained in the Southeast Watershed Alliance's Model Stormwater Standards for Coastal Watershed Communities: Elements B-D[70]. Stormwater experts encourage municipalities to include the following four components to minimize further water quality impairment and improve present conditions.

- **Threshold for Applicability**: Creates a minimum threshold area of disturbance for new development projects that requires full compliance with stormwater standards.
- **Performance Measures**: Improves water quality by requiring the removal of an established percentage of Total Suspended Solids, Total Nitrogen, and Total Phosphorous.
- **Groundwater Recharge**: Promotes use of infiltration practices (groundwater recharge) to reduce runoff caused by a project and replenish groundwater supply.
- **Redevelopment Criteria**: Requires improvements in stormwater management and treatment for redevelopment projects on existing properties. By capturing redevelopment projects this addresses existing stormwater runoff.

A 2015 UNHSC study of the Oyster River watershed found early adoption of enhanced stormwater standards could reduce average annual pollutant loads by up to 70% and save towns an estimated $14 million in avoided costs over the next 30 years.[71] If other municipalities in the Piscataqua Region watershed adopt such regulations, future cost savings could increase dramatically. To track stormwater management progress across the watershed, PREP and its partners monitor which municipalities have adopted enhanced stormwater standards. Figure 22.1 reflects which communities have adopted the SWA model stormwater standards or something similar (8), which communities have adopted a partial set of the recommended regulations without redevelopment standards (5), and which communities have regulations pending (7). Overall, 30 out of 52 communities in the Piscataqua Region watershed have adopted some level of stormwater standards; this includes the 10 Maine communities that adhere to Maine state standards.

In addition to adopting new regulations, communities are exploring creative options for funding sustainable stormwater management. One option is adoption of a stormwater utility designed to generate funding through user fees that are often based on a property's collective amount of impervious cover within the utility district. A stormwater utility provides a stable revenue source to support long-term operation and implementation of a municipal stormwater program that addresses flooding, water quality, and aging infrastructure. These utilities require equitable cost distributions (charging owners with the most impervious cover their fair share), incentivize reduction of stormwater volumes through lower fees, and help communities comply with federal regulations. Many communities in Maine, Vermont, and Massachusetts have successfully adopted stormwater utilities. While no such utilities currently exist in New Hampshire (Table 22.1), the cities of Dover and Portsmouth have conducted feasibility studies.[72, 73]

For more information:

Model Standards:
https://www.unh.edu/unhsc/sites/unh.edu.unhsc/files/Final_SWA_SWStandards_Dec_20121_0.pdf

Durham Study Fact Sheet:
https://www.unh.edu/unhsc/sites/unh.edu.unhsc/files/FactSheet%20-%20P2%20ModelingRV_WEB.pdf

Stormwater Manual:
https://www.des.nh.gov/organization/divisions/water/stormwater/manual.htm

Number of Piscataqua Region watershed communities that have adopted a stormwater utility	**0**

Table 22.1 Number of watershed communities that have adopted a stormwater utility.

Data Source: Rockingham Planning Commission & Strafford Regional Planning Commission, July 2017

Continued

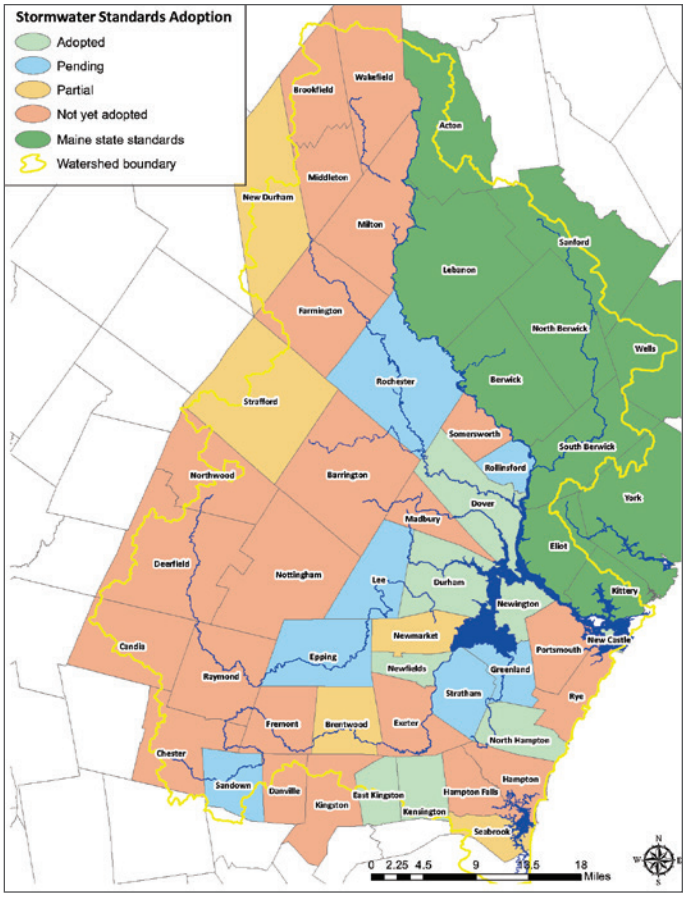


Figure 22.1 Map depicting adoption status of SWA model stormwater standards across 42 New Hampshire communities and 10 Maine communities.

Data Source: Rockingham Planning Commission & Strafford Regional Planning Commission, July 2017. Mapping and GIS technical assistance provided by the University of New Hampshire Cooperative Extension

AN EXAMPLE OF STORMWATER BEST MANAGEMENT PRACTICES ON SITE AT THE UNH JACKSON ESTUARINE LABORATORY | PHOTO BY PREP

PRESSURE INDICATOR
CONDITION INDICATOR
RESPONSE INDICATOR
SOCIAL INDICATOR

STEWARDSHIP BEHAVIOR

How many volunteer hours were logged in the watershed through the work of six New Hampshire stewardship groups in 2015 and 2016?

Additionally, how many signups and events for stewardship-related activities were completed through The Stewardship Network: New England from 2015 to 2016?

In 2015, there were 44,174 volunteer hours logged in the watershed through the work of six selected New Hampshire-based stewardship groups. In 2016, there were 39,788 volunteer hours logged in the watershed through those same six selected groups.

In 2015, there were 422 people who signed up for 122 events in the watershed, and, in 2016, there were 524 people who signed up for 96 events in the watershed through the Stewardship Network: New England.

WHY THIS MATTERS Stewardship of local ecosystems improves environmental conditions and fosters and sustains a sense of investment in, and value for, the long-term wellbeing of those systems. No matter how stringent local environmental regulations are or how advanced wastewater and stormwater technology becomes, local communities cannot be truly sustainable without an engaged citizenry that takes action to care for and protect local natural resources. Environmental stewardship in communities has been shown to create personal connections to the landscape and improve local quality of life, and its role in strengthening the social resilience of communities is being studied[74]. Many organizations, groups, and individuals in the Piscataqua Region are already working to ensure that stewardship culture is ingrained in the identity of local residents. The health of this region depends on this stewardship culture's capacity to reach and engage new demographics of residents, including newcomers to the region and the growing millennial population.

PREP GOAL: NO GOAL.

EXPLANATION Stewardship can be defined as the careful and responsible management of something entrusted to one's care.[75] While there are many active organizations working on stewardship and conservation across the region, PREP developed criteria for which groups' data would be used for this indicator. These include 1) regular collection of volunteer data; 2) opportunities for engagement offered for a majority of the year; 3) stewardship activities that occurred within the PREP watershed boundary, and 4) a focus on coastal resources. The entities selected were the Blue Ocean Society for Marine Conservation, Great Bay National Estuarine Research Reserve (GBNERR), the Gundalow Company, the Seacoast Science Center, the New Hampshire Department of Resources and Economic Development (NHDRED), and the Coastal Research Volunteer (CRV) Program at University of New Hampshire Sea Grant.

These organizations have dedicated volunteer bases that combined to donate 44,174 hours in 2015 in the Piscataqua Region and 39,788 hours in 2016 (Table 23.1). Using the latest Bureau of Labor Statistics volunteer rate for New Hampshire ($24.90 per hour), the estimated economic value of this contribution is $1,099,993 in 2015 and $990,721 in 2016[76]. These volunteers work tirelessly to care for the local landscape, be it through cleaning up litter on a beach, restoring eroded dunes, counting glass eels, or teaching students about the historical significance of Great Bay and its tributaries. The work of these passionate volunteers improves environmental conditions and lays the foundation for increased understanding of, and appreciation for, local natural resources. By tracking the hours donated by volunteers from these well-established groups, PREP can track the activity of a dedicated group of stewards in the region. PREP hopes to expand the number of organizations contributing to this indicator in the future, with a particular focus on those that work in Maine.

It is crucial that this spirit of stewardship and understanding of local ecosystems continue in the region, especially as populations increase and our natural resources are more heavily utilized. The University of New Hampshire Cooperative Extension launched The Stewardship Network: New England in 2013 to address New Hampshire's growing need for increased stewardship capacity and volunteer coordination. The Network's mission is to mobilize volunteers to care for and study the lands and waters in New England. In keeping with this mission, the Network cultivates an online hub for stewardship and citizen science volunteer opportunities and trainings. Their website (http://newengland.stewardshipnetwork.org/citizen-science) and weekly e-bulletin are utilized by hundreds of organizations to promote hundreds of stewardship opportunities and events. There are thousands of subscribers interested in taking part in these activities, and The Stewardship Network tracks how many people sign up and how many hours are spent on each event. Additonally, The Stewardship Network can select data by zip code, including the coastal region. In 2015, 422 people signed up for 122 events, and in 2016, 524 people signed up for 96 events (Table 23.2).

Organization	2015	2016
Blue Ocean Society for Marine Conservation	3,080	3,765
NH Dept. of Resources & Economic Development	19,872	19,791
NH Sea Grant Dune & Coastal Research Volunteers	1,764	1,602
Great Bay National Estuarine Research Reserve	3,883	2,963
Gundalow Company	2,500	2,779
Seacoast Science Center	13,075	11,978
Combined Total Hours	**44,174**	**39,878**

Table 23.1 Volunteer hours by selected stewardship groups by year.
Data Source: Blue Ocean Society; NHDRED; NH Sea Grant; GBNERR; Gundalow Company; Seacoast Science Center

Year	Number of Signups	Number of Events
2015	422	122
2016	524	96

Table 23.2 The Stewardship Network: New England volunteer event data in the Piscataqua Region by year.
Data Source: UNH Cooperative Extension, The Stewardship Network: New England

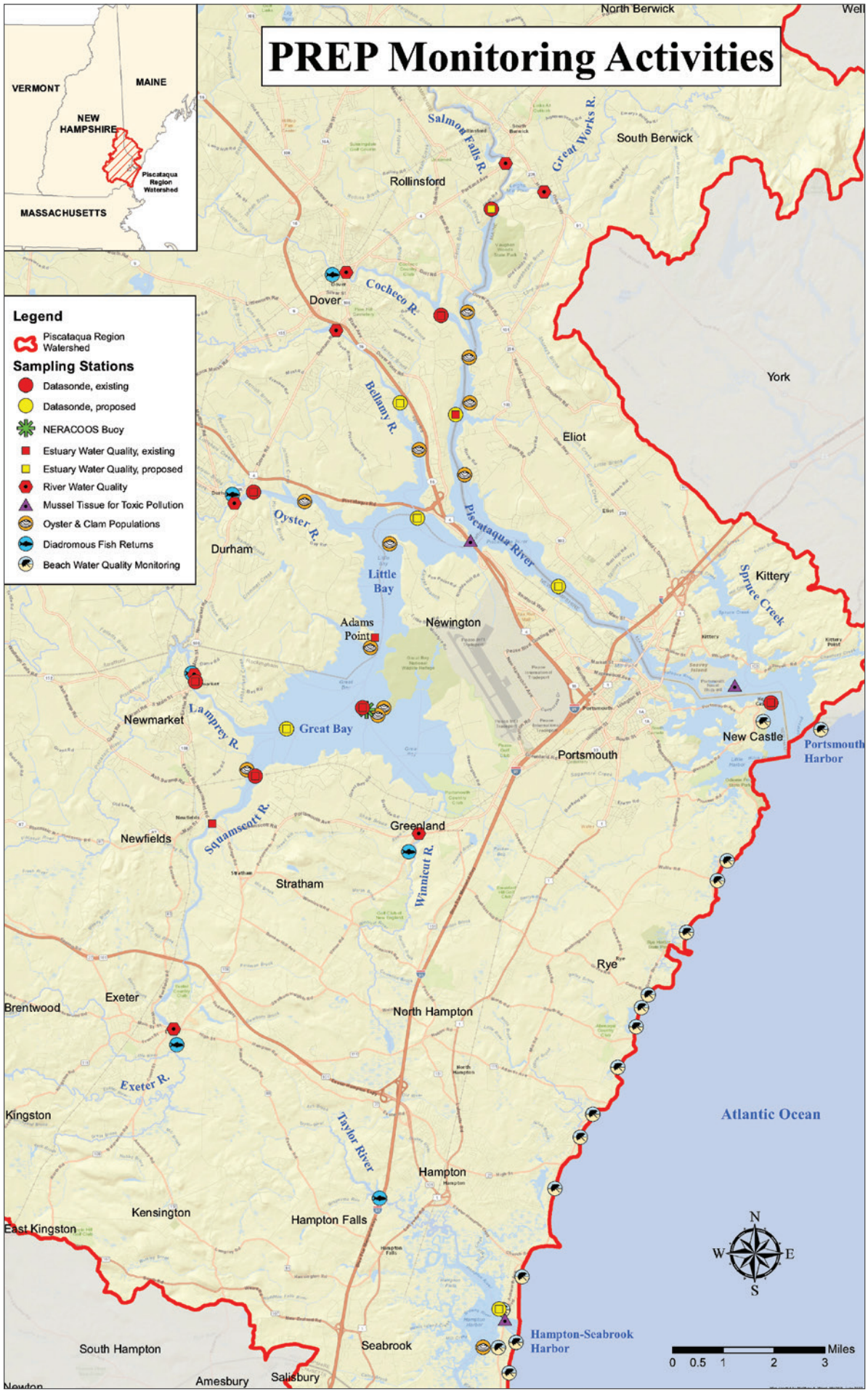
LOOKING AHEAD: 2018 & BEYOND

The Technical Advisory Committee (TAC) process helped to identify the following specific areas of needed research:

- **Continue to Increase Monitoring** Expand sites and parameters in the Hampton-Seabrook Estuary, building on the 2017 addition of an automated datasonde located in the Hampton River.
- **Macroalgae/Seaweed Monitoring** Invest in a more comprehensive monitoring plan looking at subtidal environments in addition to the existing intertidal sites.
- **Bio-optical Modeling** Invest in more highly resolved (time and space) measurements of suspended sediments, CDOM, phytoplankton, seaweed, and epiphytes to develop a data-driven model focused on what is limiting light at different locations in the estuary. Ideally, this would be followed by ground truth monitoring across the estuary to correct the model for accuracy.
- **Sediment Transport** Develop a better understanding of the sources and movement of sediment within the estuary.
- **Benthic Community Health** Augment the resolution (time and space) of our understanding of invertebrate population in the sediments. Key parameters will include–but are not limited to–distribution of species and the overall population density as well as key community indices such as diversity and evenness.
- **Increase Frequency of Nitrogen Sampling** Collect loading data before, during, and after storm events to improve and understand best management practices (BMP's) such as buffers or porous pavements.
- **Sediment Sampling** Invest in high-resolution (time and space) sediment sampling to better understand benthic flux of nitrogen and nitrogen regeneration areas.
- **Improved Mass-Balance Assessment** Incorporate estuarine hydrodynamics and nitrogen cycling in both the water column and sediments to better understand how nutrient loading impacts ecosystem health.
- **Toxic Contaminants Monitoring** Continue and expand mussel tissue analysis for tracking concentration of contaminants. Also, consider methods for better understanding prevalence and impact of emerging contaminants.
- **Clam Research** Better understand the accuracy of current age groupings for clams. Current estimates use clam flat data from Gloucester. Local length versus age is key for soft shell clams and is a research need.
- **SeagrassNet** Look at archived data paying attention to light attenuation and sediment quality, and continue SeagrassNet into the future.
- **Long-term Monitoring** Further develop datasets for additional parameters such as: air/water temperature, storm frequency/intensity, CDOM, and light attenuation.
- **Social Indicators** Continue to monitor and expand the data for the three selected social indicators as well as explore indicator monitoring into recreation, quality of life, and behavior arenas.

It is important to remember that research of this type is costly and therefore prioritization is essential so that PREP together with our partners can seek out appropriate resources for conducting this vital work. As noted in the *Estuary Health: Stress and Resilience* section (p. 7), there are many pieces of the estuary story that we have yet to understand, and expanding our knowledge and understanding of these systems is essential. Asking questions, reviewing our methods, expanding our expertise, and humbly accepting that we may never know it all is a key balance to strike as we move forward.

HAMPTON-SEABROOK ESTUARY | PHOTO BY E. LORD



Map created by Matthew A. Wood, NHDES, July 2017

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HAMPTON-SEABROOK HARBOR | PHOTO BY E. LORD

END NOTES

1. See Holling (1973)
2. See Bierman et. al. (2014)
3. See Huang et. al. (2017)
4. See Balch et. al. (2016)
5. See Gledhill et. al. (2015)
6. See New Hampshire Coastal Risk and Hazards Commission (2016)
7. See PREP (2012)
8. See Latimer and Rego (2010)
9. See Burkholder et. al. (2007)
10. See Guillotreau et. al. (2017)
11. See NH DES (2017a)
12. See Kemp et. al. (2004)
13. See Nettleton et. al. (2011)
14. See Flanagan et. al. (2017)
15. See Kenworthy et. al. (2017)
16. See Unsworth et. al. (2015)
17. See Unsworth et. al. (2015)
18. See Kenworthy et. al. (2017)
19. See Mallin et. al. (2000)
20. See PREP (2017)
21. See NOAA/EPA (1988), Jones et. al. (1992), and Jones (2000)

* *Note: of the three above studies, only the 2000 study incorporated atmospheric deposition into estimates of total nitrogen load. Atmospheric deposition from the 2000 study was combined with nitrogen load estimates from 1988 and 1992 studies to obtain earlier estimates of total nitrogen load.*

22. See NH DES (2014)
23. See Roseen et. al (2015)
24. See PREP (2012)
25. See Jones (2000)
26. See NH State Climate Office (2014)
27. See Hayhoe et. al. (2007)
28. See US EPA (2012)
29. See Bricker et. al. (2003)
30. See US EPA (2012)
31. See NH DES (2017b)
32. See NH DES (2017b)
33. See Mathieson and Dawes (2017)
34. See Thomsen et. al. (2001)
35. See Hauxwell et. al. (2001)
36. See Burdick et. al. (2017)
37. See US EPA (2012)
38. See Bierman et. al. (2014)
39. See Pennock (2005)
40. See NH DES (2017b)
41. See Orth et. al. (2006)
42. See Unsworth et. al. (2015)
43. See Kenworthy et. al. (2013)
44. See PREP (2010)
45. See Smith et. al. (2017)
46. See Ao et. al. (2017)
47. See NRDC (2014)
48. See NEIWPCC (2007)
49. See Sunderland et. al. (2012)
50. See PREP (2009)
51. See LeBlanc et. al. (2011)
52. See Ewart and Ford (1993)
53. See Carballal et. al. (2015)
54. See NHFG (2017)
55. See TNC (2009)
56. See Grout (2017)
57. See Dionne (2017)
58. See Zankel et. al. (2006)
59. See Walker et. al. (2010)
60. See Grizzle and Ward (2016)
61. See Eckert (2016)
62. See New Hampshire Estuaries Project (2000)
63. See NOAA (2013)
64. See US Census Bureau (2015)
65. See NH Employment Security (2016)
66. See Johnson et. al. (2016)
67. See Aisch et. al. (2016)
68. See New Hampshire Public Radio (2017)
69. See NH DES Alteration of Terrain Bureau (2017)
70. See Southeast Watershed Alliance et. al. (2012)
71. See University of New Hampshire Stormwater Center and Vanasse Hangen Brustlin, Inc. (2015)
72. See NHDES (2011a)
73. See NHDES (2011b)
74. See McMillen et. al. (2016)
75. See Merriam Webster (2017)
76. See 2016 Bureau of Labor Statistics (2017)

For full References Cited visit:
www.StateofOurEstuaries.org/OurReports/Citations

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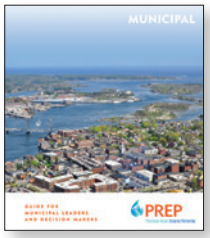

A short guide for municipal leaders and decision makers that provides a list of priority policy options for consideration and model efforts from our own communities.

A short guide for citizens that has examples and tips on simple things everyone can do to help prevent pollution and protect the places we love.

PREP
Piscataqua Region Estuaries Partnership

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CITIZEN

WHAT YOU CAN DO TO HELP IMPROVE OUR ESTUARIES

PREP
Piscataqua Region Estuaries Partnership

Coastal Research Volunteers beach profiling. Photo by E. Lord

PREP is your partner in clean water solutions and go-to resource for the latest data on the health of our estuaries.

PREP GOAL Encourage all who live, work, and play in the Piscataqua Region to take actions to help protect and preserve the places we love.

About This Guide

From the headwaters in Wakefield, New Hampshire, and Acton, Maine, to the coast, the Piscataqua Region watershed encompasses 1,086 square miles, 52 towns, and more than 380,000 citizens. Since 1995, the Piscataqua Region Estuaries Partnership (PREP), as part of the United States Environmental Protection Agency's National Estuary Program (NEP), has been committed to monitoring, protecting, and preserving these nationally significant lands and waters.

To better understand these special places, PREP tracks environmental trends through a long-term monitoring programs. Every five years we release a *State of Our Estuaries* report to provide decision-makers, communities, and **citizens like you** a comprehensive look at the health of our region's estuaries—Great Bay and Hampton-Seabrook.

The *2018 State of Our Estuaries* report sends a clear signal: **our estuaries have declined due to stress and they are losing resilience to sustain themselves in the face of growing pressures that include a changing climate, alterations in land use, and a growing population.** Fortunately, there are simple actions we, those who live, work, and play in this region, can take to improve water quality and ensure healthy communities.

This *Citizen Guide* is a companion document to the *2018 State of Our Estuaries* report. It contains specific actions you can take at home, with your family, in your community, and regionally to become a **Clean Water Champion**! It even includes a fold-out poster that you can hang on your fridge, wall, or office as a quick reference for what you can do to help our estuaries!

Salt marsh along the banks of the Great Bay Estuary. Photo by E. Lord

PISCATAQUA REGION WATERSHED

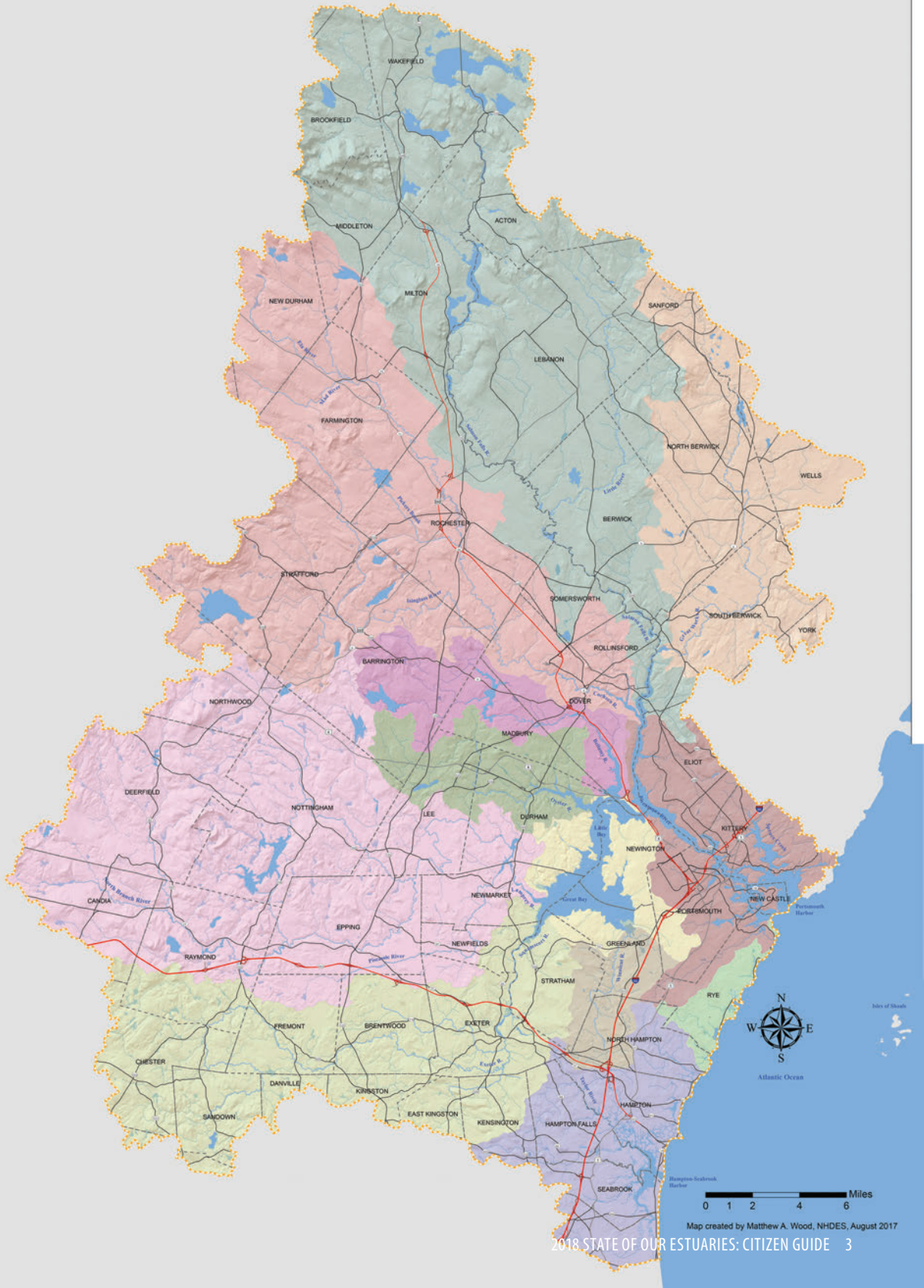
Rivers flowing from 52 communities in New Hampshire and Maine converge with the waters of the Atlantic Ocean to form the Great Bay and Hampton-Seabrook estuaries. The watershed covers 1,086 square miles. These estuaries provide critical wildlife habitat, nurseries for seafood production, buffering from coastal flooding, recreational enjoyment, and safe harbor for marine commerce. Our estuaries are part of the National Estuary Program, and recognized broadly as exceptional natural areas in need of focused study and protection.

GREAT BAY ESTUARY

The entire Great Bay Estuary system, including all seven tributaries, Great Bay, Little Bay, Piscataqua River, and Portsmouth Harbor.

GREAT BAY

The Great Bay portion of the Great Bay Estuary—south of Adams Point.



BECOME A CLEAN WATER CHAMPION

2018 STATE OF OUR ESTUARIES INDICATOR SUMMARY

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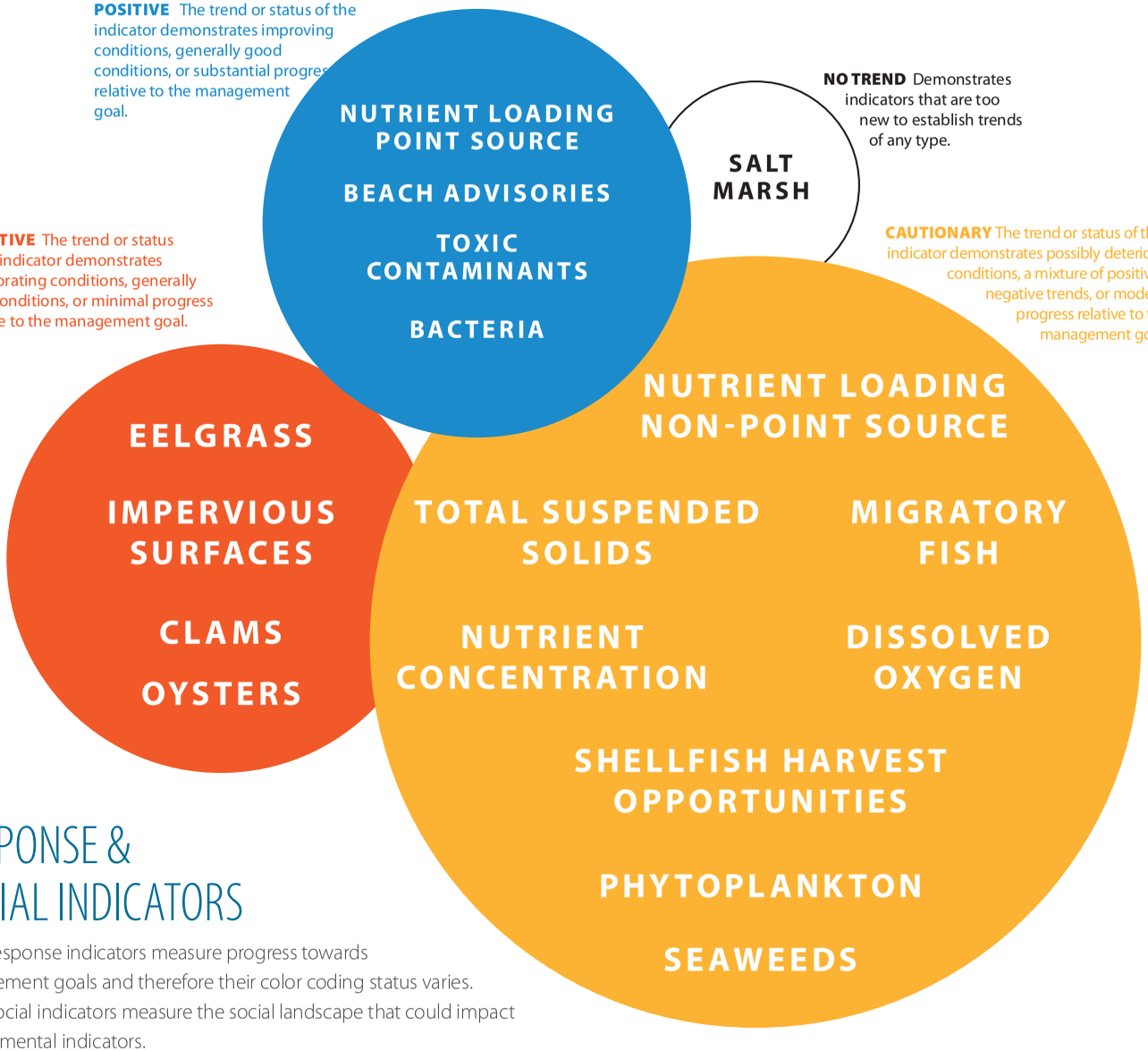

RESPONSE & SOCIAL INDICATORS

The 4 response indicators measure progress towards management goals and therefore their color coding status varies. The 3 social indicators measure the social landscape that could impact environmental indicators.

- CONSERVATION LANDS (GENERAL)
- CONSERVATION LANDS (FOCUS AREA)
- OYSTER RESTORATION
- MIGRATORY FISH RESTORATION
- HOUSING PERMITS
- STORMWATER MANAGEMENT EFFORT
- STEWARDSHIP BEHAVIOR

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WHAT YOU CAN DO

YOU AND YOUR FAMILY

AROUND YOUR HOME

Maintain Your Septic System Dumping chemicals down the drain interferes with the ability of a septic system to process waste. It is recommended that septic systems be pumped every two to three years. Failure to have a septic tank pumped can cause premature failure and overflows that pollute water and threaten public health.

Choose Eco-Friendly Products "Environmentally friendly" products, which are less resource-intensive to make and less harmful when used, reduce the number of contaminants that could find their way into our rivers, lakes, marshes, and bays.

Dispose of Pharmaceuticals, Paint, & Other Chemicals Responsibly Leftover medicines, paint, pesticides, or other chemicals must be disposed of safely and should never be poured down the drain or flushed. Contact your town to learn about hazardous waste collection in your area.

IN YOUR YARD

Capture the Rain Directing downspouts into rain barrels, lawns, or rain gardens helps slow stormwater runoff, reduces the amount of polluted water running off your land, and—in the case of rain barrels—can be reused to water your garden.

Build Healthy Soil When mowing your lawn, set the blade to 3" or higher and leave clippings. This will reduce the need for water and synthetic fertilizers. If necessary, supplement your soil with mulch, compost, or other all-natural soil amendments.

Use Less Pavement Instead of paving, use pervious paving stones set into permeable stone dust, or try crushed stone driveways instead of asphalt. This will allow the rain to soak into the ground instead of running off.

Grow Less Lawn & More Native Plants Gardens allow for more water to soak in than lawns, and can be great for pollinators, too! Use erosion control mulch to stabilize bare soils and sloped areas.

WITH YOUR CAR

Dispose of Fluids Properly Never pour anything down a storm drain, since most drains empty directly into streams or rivers. Recycle oil at registered collection centers throughout the region.

Fix Leaks Chemicals leaking from cars are a major source of pollution and can easily wash into a nearby stream.

Wash Your Car on Grass, Not Asphalt Washing your car on a permeable surface like your lawn allows the water to soak into the ground and not run off into a drain or stream. Use biodegradable or gentle car soap to ensure you do not pollute groundwater through your lawn.

Carpool Carpooling or public transit helps reduce air and water pollution and can save you money.

WITH YOUR PETS

Clean Up Pet Waste Pet and domesticated animal waste contains fecal coliform bacteria and other disease-causing organisms, such as *Salmonella*, roundworms, and *Giardia*. Pick up after your pets and dispose of their waste so pollution does not runoff into our oceans, rivers, lakes, marshes, and estuaries.

Bathe Pets the Green Way Wash your pets indoors or at a do-it-yourself grooming shop, or use a professional groomer. If your dog or animal is so big that they must be washed outdoors, use the lawn or another permeable surface to keep the soapy water from running into a storm drain. Use gentle, biodegradable soap.

IN YOUR COMMUNITY

WITH YOUR VOTE

Vote for Clean Water Support protections for clean water in your community such as upgrades to wastewater treatment facilities, stormwater management projects, land conservation bonds, and natural resource protection regulations (i.e. those that protect buffer lands along water bodies).

WITH YOUR TIME

Get Involved Local and regional conservation organizations and watershed organizations rely on volunteers. Whether you want to get dirty in the field, teach the next generation about protecting our environment, or help stuff envelopes, our community needs people like you! You can also make a difference by volunteering on your town's conservation commission, planning board, energy committee, or select board.

WITH FAMILY & FRIENDS

Spread the Word Set a positive example and help your family and friends implement some of the practices above around their homes, in their yard and with their cars, pets, votes, and time. Be an advocate for your watershed and community!

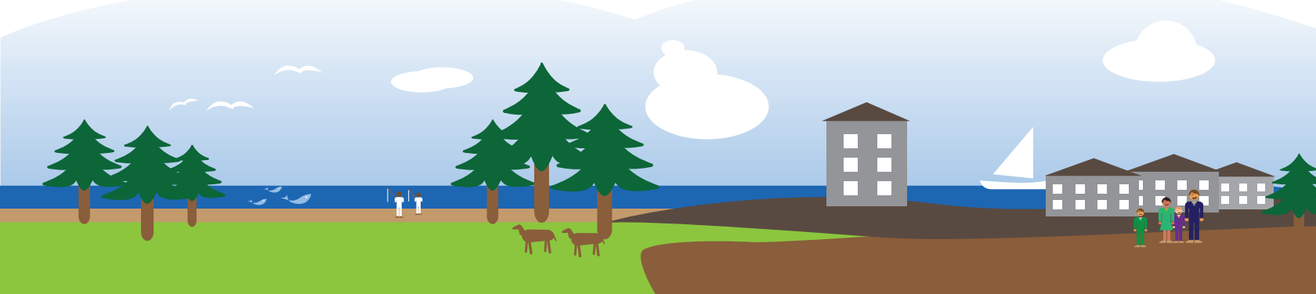
WITH YOUR MONEY

Support Local Business Visit the local businesses you know support clean water. The Green Alliance is one helpful resource for identifying local, environmentally responsible businesses.

Business Owners Think about how you can help protect the waters around you. Reducing the size of your parking lot is a great way to increase infiltration of rain on your property. Or, you can implement stormwater best management practices like a rain garden on site.

BECOME A CITIZEN SCIENTIST

Did you know you can collaborate with scientists who are working to understand and protect our estuaries? Organizations are looking for concerned citizens like you who are interested in contributing to the world of scientific monitoring and research. Many research projects that occur in our watershed would not be possible without volunteers! For a list of opportunities visit: https://extension.unh.edu/volunteer



What can you do to help protect and preserve the places we love?

Clean rivers, lakes, marshes, and estuaries are something we can all agree on, and it is our responsibility as citizens to protect clean water in our region for ourselves, our neighbors, and our health, happiness, and enjoyment. As the Community for Clean Water, PREP works to unite and encourage you, your friends, and family to take simple steps to reduce water pollution caused by our actions every day. The power to make a difference lies in every one of us changing small behaviors so that all of us can continue to enjoy this fantastic place we call home.

Sand dunes along the Hampton-Seabrook Estuary. Photo by E. Lord

Display our poster to follow every-day actions for becoming a *Clean Water Champion!*

Volunteers with the Great Bay Gunners removing large debris from the Great Bay Estuary. Photo by E. Lord

Planting native shrubs for New England Cottontail habitat. Photo by E. Lord

Citizen scientists with the Coastal Research Volunteers monitoring glass eels. Photo by E. Lord

Citizens Tackling Non-Point Sources of Pollution

According to the *2018 State of Our Estuaries* report, non-point sources of pollution, such as fertilizers, septic systems, and animal waste, account for 67% of the nitrogen pollution entering our local waterbodies. The balance (33%) comes from wastewater treatment facilities across the Piscataqua Region watershed. Communities are working to upgrade existing wastewater treatment facilities, but there are plenty of ways you—as a citizen and community member—can help! Here are just a few examples of how community members and volunteers worked together to reduce non-point sources of pollution through regulation, stream restoration, and marine debris removal.

Collaborating to Protect Water Quality in Exeter, NH

Fertilizers used on ball fields and lawns often contain nitrogen and phosphorus, nutrients that are important for plant and lawn health. However, during rain storms, fertilizer can run off lawns and gardens, polluting clean water and harming plant and wildlife.

Recently, a group of Clean Water Champions in **banded together to form the Exeter Healthy Lawns Clean Water (HLCW) initiative,** a collaborative effort between Exeter citizens, town board representatives, and town staff to tackle the problem of fertilizer runoff. With support from a Piscataqua Region Environmental Planning Assessment (PREPA) grant, Exeter and the HLCW developed a plan to expand an existing zoning ordinance limiting the use of chemical fertilizers to include not only wetlands, but also areas around rivers and streams and places that support ground-source drinking water. With unanimous support from the planning board, the amendment was added to the town ballot in March 2016. All of the outreach and education by the HLCW paid off with overwhelming support from Exeter voters.

Before the growing season, the HLCW also hosted more public education and outreach events to encourage clean, water friendly lawn care practices throughout the community. The HLCW serves as a fantastic example of how dedicated community members can work together to change local regulation and educate their neighbors about healthy lawn care practices.

Never dump chemicals down storm drains because they lead directly to rivers and waterbodies. Photo by E. Lord

"I believe the success of this project was attributed to allowing all participants an opportunity to have a voice in the process so that the end product was an outcome everyone agreed upon."

KRISTEN MURPHY
NATURAL RESOURCE PLANNER, EXETER, NH

Partnering with Business: Sagamore-Hampton Golf Golf Club, NH Sea Grant, & UNH Cooperative Extension

As part of the clean water community, our local businesses can implement measures to help ensure clean water on their sites. In 2014, NH Sea Grant, UNH Cooperative Extension, the NH Department of Environmental Services, and the Coastal Research Volunteers partnered with the Sagamore-Hampton Golf Club in North Hampton, NH to address non-point sources of pollution. Cornelius Brook, a headwater stream of the Winnicut River meanders through the 420 acres of turf grass at the Sagamore-Hampton Golf Club receiving nitrogen and sediment along the way. Previously, many areas along Cornelius Brook were mowed down to the water's edge—leaving little to no natural buffer (vegetated area along a shoreline, wetland, or stream). Volunteers working with NH Sea Grant and UNH Cooperative Extension planted native shrubs and trees to restore 50,743 square feet of riparian buffer and a meadow for bees and other pollinators. Based on a model from the USEPA, pollutant loading to Cornelius Brook has been reduced by 10.4 pounds of total nitrogen, 5.2 pounds of total phosphorus, and 6.1 pounds of sediment. In addition to a reduction in pollution, the project has changed minds, engaging over 25 community volunteers in monitoring and restoration efforts. The Sagamore-Hampton Golf Club is also committed to maintaining the newly restored buffer and continuing to improve their practices for clean water.

"Working with the Sagamore-Hampton Golf Club and community volunteers to restore buffers along Cornelius Brook presented a unique opportunity to address this source of nitrogen loading and provides a model for working with other golf courses and community volunteers in the future."

ALYSON EBERHARDT
COASTAL ECOSYSTEM SPECIALIST, NH SEA GRANT & UNH EXTENSION

It Takes a Village: Great Bay Cleanup

Nutrients and sediment are not the only sources of non-point source pollution found in the Piscataqua Region watershed. Debris, including small items like cigarettes, bottles, and cans, and larger items like dock floats, mooring balls, and even small boats, litter the banks of our waterways. The Great Bay Gunners, a coastal NH social and hunting group, was getting frustrated with the amount of trash piling up in their "playground," so they contacted PREP about partnering on a cleanup. PREP happily accepted and reached out to UNH Cooperative Extension and The Stewardship Network to develop a plan to map the trash around the Great Bay Estuary and to mobilize volunteers to remove it. Over six weeks, 10 volunteers kayaked, paddle boarded, and walked the shores of the Great Bay Estuary and recorded the locations of the debris. In June 2016, organized cleanups took place at Adams Point and Wagon Hill Farm in Durham and at the Great Bay National Wildlife Refuge in Newington. The Gundalow Company and their crew also joined the effort and used their gundalow, *Piscataqua*, and a small skiff to clean up debris not reachable on foot. Recognizing the need for continued cleanups, PREP, UNH Cooperative Extension, and The Stewardship Network joined Blue Ocean Society for Marine Conservation in the Ocean Conservancy's International Coastal Cleanup in September 2016. Returning to the Great Bay National Wildlife Refuge, 38 volunteers collected 900 pounds of debris along one mile of coastline. Across the bay, the Great Bay Gunners and their trucks were able to clean up 1,500 pounds of debris in one hour. The Great Bay Cleanup is a perfect example of what it looks like when partners come together to clean up they places they love! Stay tuned for more cleanups along the Great Bay Estuary and coastal beaches.

"Our motivation relative to partnering in the cleanup was to improve the quality of the feeding and resting habitat of many species of waterfowl and other animals that call the bay home."

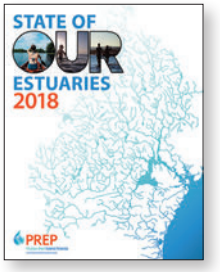
TED HARTMANN
GREAT BAY GUNNERS

For more information, contact:

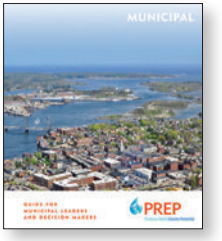
Abigail Lyon
Community Technical Assistance Program Manager
Piscataqua Region Estuaries Partnership

Nesmith Hall 304
131 Main Street
Durham, NH 03824
(603) 862-3729
Abigail.Lyon@unh.edu

LOOK FOR OUR OTHER PUBLICATIONS.
Visit **www.StateofOurEstuaries.org** to view and download:



A full 52-page State of Our Estuaries 2018 report that has deeper explanations, tables, graphs, and future priorities.



A guide for municipal leaders and decision-makers that provides a short list of priority policy options for consideration and model efforts from our own communities.

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www.prepestuaries.org

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MUNICIPAL

GUIDE FOR
MUNICIPAL LEADERS
AND DECISION MAKERS

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PISCATAQUA REGION WATERSHED

Rivers flowing from 52 communities in New Hampshire and Maine converge with the waters of the Atlantic Ocean to form the Great Bay and Hampton-Seabrook estuaries. The watershed covers 1,086 square miles. These estuaries provide critical wildlife habitat, nurseries for seafood production, buffering from coastal flooding, recreational enjoyment, and safe harbor for marine commerce. Our estuaries are part of the National Estuary Program, and recognized broadly as exceptional natural areas in need of focused study and protection.

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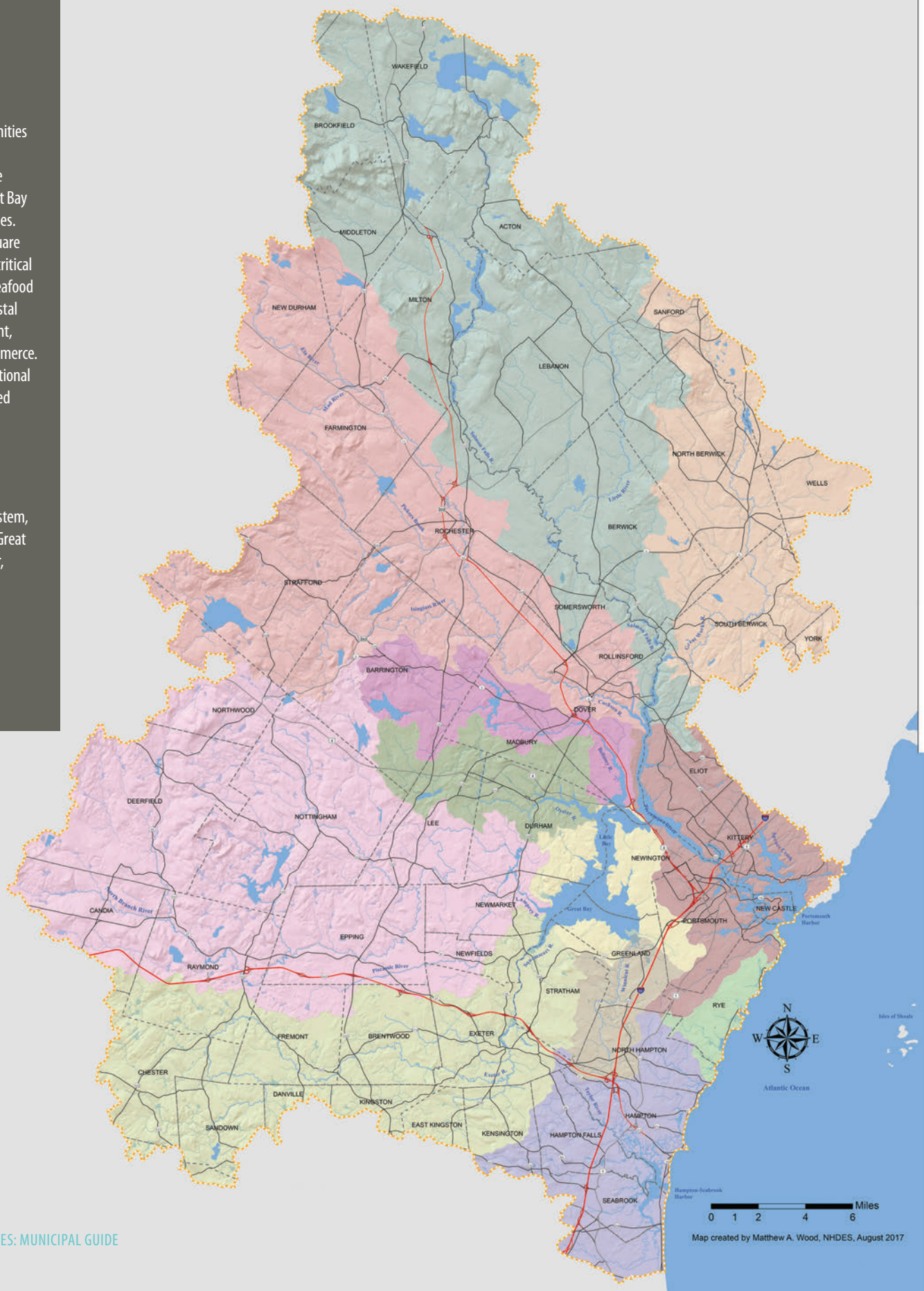


About This Guide

PREP is excited to present this Municipal guide to you, decision-makers and leaders in the Piscataqua Region. This guide is a complementary piece to the full *2018 State of Our Estuaries* report and provides recommendations for action and informed decision making.

The Piscataqua Region watershed encompasses 1,086 square miles, 52 towns and more than 380,000 citizens. Since 1995, the Piscataqua Region Estuaries Partnership (PREP), as part of the Unites States Environmental Protection Agency's National Estuary Program (NEP), has been committed to monitoring, protecting, and preserving these nationally significant lands and waters. As part of PREP's commitment to the Piscataqua Region estuaries, every five years we develop and release a *State of Our Estuaries* report.

The data in the *2018 State of Our Estuaries* report sends is sending us a clear signal: our estuaries have declined due to stress, and they are losing resilience to sustain themselves in the face of growing pressures that include a changing climate, alterations in land use, and a growing population.

The challenges we face are complicated and it will take a multifaceted, dynamic approach to implementing actions that can reverse these trends. Acting now reduces significant future costs associated with restoration and mitigation.

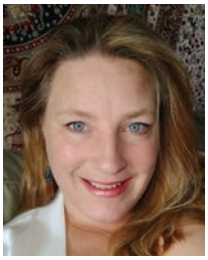
This guide lays out **the most effective activities decision makers and local leaders can take to improve water quality and environmental conditions in our estuaries.** These recommendations represent an aggregation of actions from **across a number of state and regional management and restoration plans.** The recommendations in this guide are intended to provide **significant impact at reasonable financial cost** in recognition of the challenges municipal decision-makers face.

This guide provides targeted recommendations for actions in four priority focus areas: buffers, land conservation, septic systems, and stormwater management.

As a region, we have accomplished a lot, including improvements in infrastructure and conserving lands that help protect water quality. As we continue our collective good work, we also have an opportunity to narrow our focus on solutions that work both for our communities and our environment.

Great Bay Estuary in Newington, NH. Photo by E. Lord

Spruce Creek in Kittery, ME. Photo by E. Lord



"In order to run our water treatment facility properly, we have to start with the source – the Salmon Falls River."

STARR GLENN

Water Systems Operator/Safety Officer, Berwick, ME

"Development and change to our scenic landscape is inevitable. Conservation based planning is critical for the protection of our natural capital. For me, it is the vision of forever conserved ribbons of green that inspires this meaningful work."

CYNTHIA WYATT

Moose Mountains Regional Greenways, Manager of Branch Hill Farm, Chair of Milton Conservation Commission

COMMUNITY ACTION PLAN

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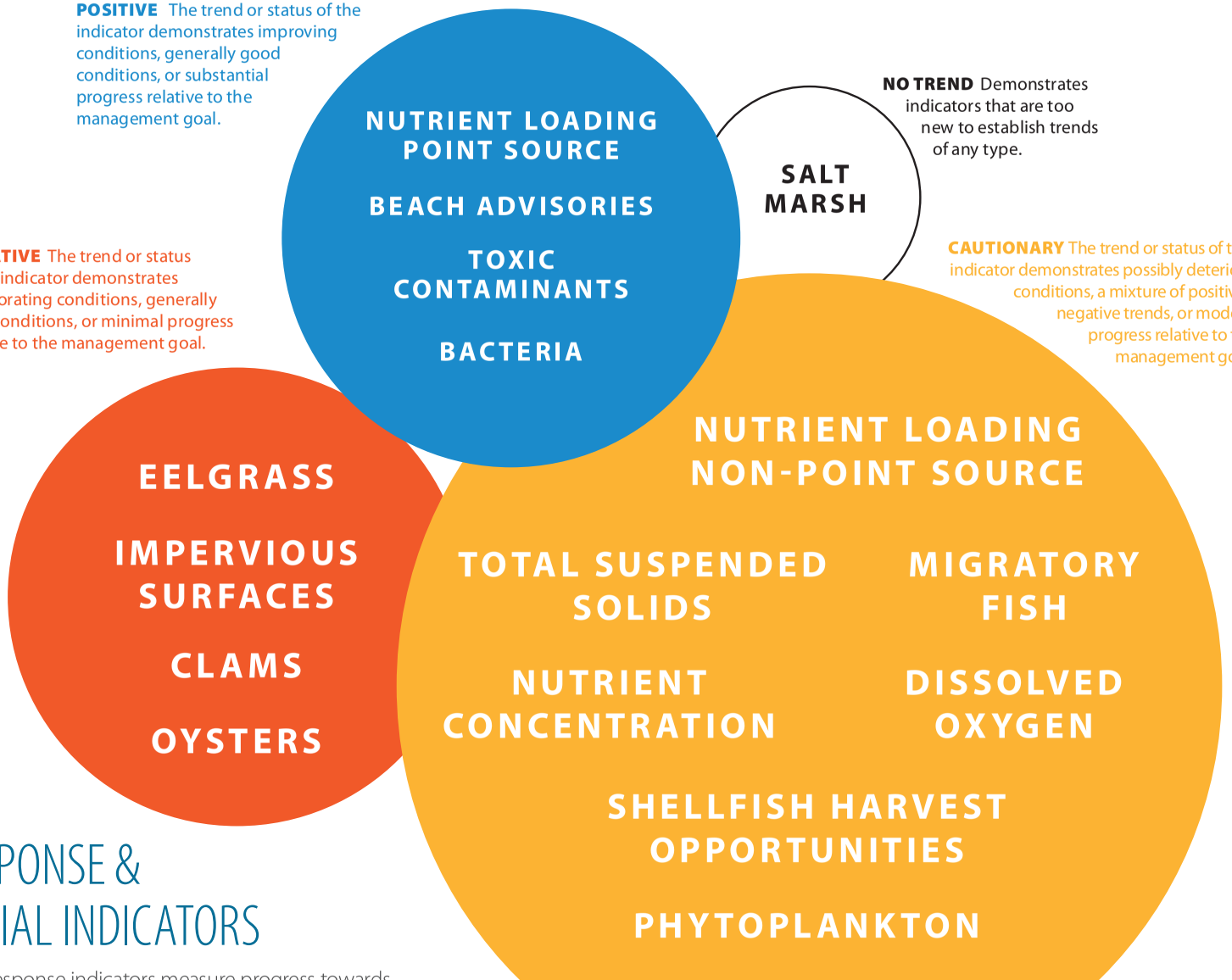

RESPONSE & SOCIAL INDICATORS

The 4 response indicators measure progress towards

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The 4 response indicators measure progress towards management goals and therefore their color coding status varies. The 3 social indicators measure the social landscape that could impact environmental indicators.

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- CONSERVATION LANDS (FOCUS AREA)
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- MIGRATORY FISH RESTORATION
- HOUSING PERMITS
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ACTION TABLE

Topic	Actions	Indicators	Key Resources
BUFFERS & SETBACKS	Assess and prioritize where buffer protection is important to your community based on flood risk, drinking and surface water quality, open space, and habitat goals. Utilize local and regional outreach programs to educate landowners about the importance of managing buffers. 1 2 3 4 5 6 7 8	Nutrient Loading Nutrient Concentration Total Suspended Solids Migratory Fish	*Landscaping at the Waters' Edge* *Protecting Water Resources and Managing Stormwater* NH Lakes Association Buffer Options for the Bay (BOB) PREPestuaries.org/initiatives/BOB
LAND CONSERVATION	Continue actively conserving land and work to prioritize conservation targets that address key functions on the landscape (e.g., salt marshes and wetlands for storm surge buffering, flood storage, pollutant removal, drinking water protection, etc.) Conduct a flooding and inundation mapping analysis that considers predicted climate change impacts from increased freshwater flooding, storm surges, and sea-level rise to identify vulnerable municipal infrastructure, such as roads, culverts, and pump houses. Develop municipal comprehensive land protection support programs and establish a dedicated fund to support land conservation and stewardship through local bonds, impact fees, and/or transfer of development rights. 1 2 3 4 5 6 8	Land Conservation (General and Focus Areas) Nutrient Loading Nutrient Concentration Total Suspended Solids	NH Coastal Viewer *Land Conservation Priorities for the Protection of Coastal Water Resources* Tides to Storms: Assessing Risk and Vulnerability to Sea-level Rise and Storm Surge: A Vulnerability Assessment of Coastal New Hampshire Climate Risk in the Seacoast (C-RiSe): Assessing Vulnerability of Municipal Assets and Resources to Climate Change Your local land trust
SEPTIC SYSTEMS	Research and map locations of septic systems to better understand their impacts on local water quality and prioritize structural and non-structural management approaches. Develop, adopt, and promote municipal regulations to require routine septic system pumping or inspection and upgrades of older systems upon property transfer (specifically those systems within 250 feet of a waterbody). Provide educational and technical assistance for community members regarding proper maintenance of septic systems, such as workshops or cost sharing for replacement or design. 1 2 6 7 8	Bacteria Toxic Contaminants Nutrient Loading Nutrient Concentration Beach Advisories	NHDES Water Quality Planning funding for prioritization & ordinance development Granite State Designers and Installers: materials, workshops, outreach UNH Stormwater Center NHDES OneStop
STORMWATER MANAGEMENT	Adopt model stormwater management standards, such as the Southeast Watershed Alliance model. Identify and prioritize locations with high non-point source and stormwater pollutant loads for restoration and retrofit opportunities. Implement measures to reduce pollutant loading from source areas. Promote and employ best management practices (BMPs) and low impact development (LID) approaches in new, existing, and redevelopment to minimize stormwater runoff impacts and limit changes to pre-development site hydrology. Document and track stormwater best management practices implementation. Utilize local and regional outreach and training programs that promote best management practices for stormwater and low impact development for commercial and residential properties, such as rain gardens or permeable pavement. 1 2 7 8	Total Suspended Solids Impervious Surfaces Nutrient Loading Nutrient Concentration Stormwater Management Effort Toxic Contaminants	Great Bay Pollution Tracking and Accounting Pilot Project (PTAPP) Southeast Watershed Alliance UNH Stormwater Center Soak Up the Rain Seacoast Stormwater Coalition Acton Wakefield Watersheds Alliance

1. *Comprehensive Conservation and Management Plan (2010)*
2. *Piscataqua Region Environmental Planning Assessment (2015)*
3. *Land Conservation Plan for New Hampshire's Coastal Watershed*
4. *Land Conservation Plan for Maine's Piscataqua Region Watersheds*
5. *Preparing New Hampshire for Projected Storm Surge, Sea-Level Rise, and Extreme Precipitation*
6. *Wildlife Action Plan*
7. *Coastal Zone Management Act Section 309 Assessment and Strategy (2016)*
8. **Watershed Management Plans: Bog Brook, Little River, Parsons Creek, Exeter River Main, Cocheco River, Hodgson Brook, Province Lake, Pawtuckaway, Willand Pond, Willow Brook, Winnicut River**

What can cities and towns do to protect clean water?

Volunteers planting salt marsh grasses at Cutts Cove in Portsmouth, NH, at a restoration site. Photo by E. Lord

Display our poster in your office to help educate and guide policy.

Shared Successes and What's Ahead

Over the past five years we have made steady and significant progress in a number of measurable ways. We have progressed towards goals that have substantial impact on water quality, and we have much reason to celebrate. This is due in no small part to committed municipal leaders, energetic town boards, and collaborative technical, educational, and policy partners.

BILL BOULANGER
Deputy Director Community Services, Dover, NH

"The nice thing about Berry Brook is that it's a demonstration site for stormwater management techniques that we can build and maintain. Now, my highway crew wants to think about what we can do in projects that don't have stormwater in the plan. It's changed our thinking and that's true in the community as well."
Visit: https://www.unh.edu/unhsc/berrybrook

Some Highlights Include…

- Communities across the watershed have made significant investments in upgrading and improving public infrastructure, including **seven communities** who have upgraded, reconfigured, or in the process of upgrading their wastewater treatment facilities.

Water quality datasondes at the UNH Jackson Estuarine Laboratory. Photo by E. Lord

TODD SELIG
Town Administrator, Durham, NH

"As a community, Durham invests in the Piscataqua Region Monitoring Collaborative because our NH Seacoast estuaries serve as magnets for tourism supporting the local economy and increase the value of the properties near them. This contributes to state and local tax revenues, as well as a uniquely special region within New Hampshire and Maine to live, work, and play."

Hampton-Seabrook Estuary in Hampton, NH. Photo by E. Lord

- **Eighteen communities** in the watershed have adopted the complete set of Southeast Watershed Alliance's stormwater standards, or an equivalent, in an effort to reduce non-point source pollutant loads to our waters; seven more are in the process of adoption.
- **A total of 41,555 acres** of conservation land has been added in our region since 2011. Conservation land is our first line of defense in the fight against pollutant loads. Putting these lands into protection are a direct result of efforts from municipalities, private landowners, land trusts and state and federal agencies who are committed to proactive action.
- **The Great Bay and Hampton-Seabrook** estuaries have been monitored annually for a number of parameters as part of the Piscataqua Region Monitoring Collaborative (PRMC), a partnership between PREP, the Great Bay National Estuarine Research Reserve, New Hampshire Department of Environmental Services, United States Environmental Protection Agency, National Oceanic Atmospheric Administration, the University of New Hampshire, and a number of municipalities. The PRMC is a commitment to expanding our understanding of our dynamic estuaries. The data collected not only helps us assess trends, it also can be accessed by any community, researcher, or interested party to be used in their own work.

We are fortunate as residents and in our roles as professionals to be stewards of this region—a place we love. PREP will continue to convene the working table; we hope you will continue to join us.

RAYANN DIONNE
Conservation Coordinator, Hampton, NH

"The Hampton Conservation Commission gladly supports continued and expanded data collection efforts in the Hampton-Seabrook Estuary to help us understand the estuary's current health, future trends, and will play an important role in our conservation and educational efforts."

Vegetated buffers along the North Branch River in Candia, NH. Photo by E. Lord

Wastewater treatment facility construction in progress in Exeter, NH. Photo by E. Lord

For more information, contact:

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LOOK FOR OUR OTHER PUBLICATIONS.
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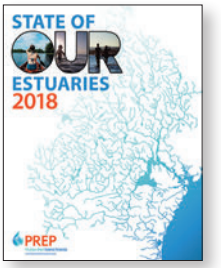

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A short guide for citizens that has examples and tips on simple things everyone can do to help prevent pollution and protect the places we love.

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