

# CITY OF PORTSMOUTH

Community Development Department  
(603) 610-7232

Planning Department  
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Ms. Dori Wiggin, East Region Supervisor  
DES Wetlands Bureau, Pease District Office  
222 International Drive, Suite 175  
Portsmouth, NH 03801

January 25, 2011

**Subject: City of Portsmouth Prime Wetlands Designation**

Dear Ms. Wiggin:

Enclosed with this letter please find the Citywide Prime Wetland assessment and mapping that was recently completed and voted upon by the City Council. This effort was initiated in 2003 with the Completion of the Citywide Wetlands Inventory where all wetlands in the City were mapped and those wetlands meeting Prime Wetland Criteria were identified and reviewed. A follow-up study was begun in 2006 to study in greater detail the wetlands identified as Prime Wetlands and include additional wetlands which met the criteria. As part of this effort all of the wetlands in the City of Portsmouth, including those wetlands on the Pease Tradeport were investigated to determine which ones were most suitable for Prime Wetland designation under RSA 482 A:15

After a thorough review of all the potentially eligible prime wetlands was complete both the Conservation Commission (at their April 11, 2007 meeting) and the Planning Board (at their September 20, 2007 meeting) voted in favor of designating prime wetlands as listed in West Environmental Services report. On April 21, 2008 the City Council, at the recommendation of the Conservation Commission authorized funding for detailed mapping be completed in order to finalize the Prime Wetlands effort and to prepare a submission to the state. As part of this effort all of the wetlands reviewed for Prime Wetland status in the City of Portsmouth, including the wetland within the Pease Development Authority (PDA) had a final field visit where detailed mapping was completed and entered into the City's GIS.

For submission with this letter is a set of 14 wetlands, which have been chosen as the most significant wetlands in the City. At their meeting on July 19, 2010, the Portsmouth City Council held a public hearing, then voted in favor of forwarding the recommendations for the selected wetlands as Prime Wetlands to NHDES. One of these wetlands is within the PDA boundary. The wetland within the boundary of the PDA is labeled as wetland 7 for the purposes of this analysis. The Conservation Commission, Planning Board and the City Council voted to request that the Pease Development Authority adopt the recommendation that Wetland 007 (as shown on attached map) be designated a Prime wetland. A letter has been sent from the City to the PDA regarding wetland 007. If the PDA is interested in pursuing this designation this will be pursued as a separate action.

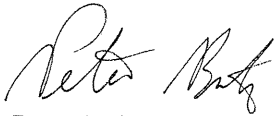
The submittal you have before you includes the following information for your review:

1 Junkins Avenue  
Portsmouth, New Hampshire 03801  
Fax (603) 427-1593

- City of Portsmouth Prime Wetland Analysis Report Completed in January 2010 by the City of Portsmouth and West Environmental Services Inc.
- Action sheet from Portsmouth City Council July 19, 2010 meeting where the City Council held a Public Hearing and took Action to approve designation of selected prime wetlands.
- Citywide map of prime wetlands in accordance with Env-Wt 702.02 format.

If you have questions or need additional information please do not hesitate to contact me at 610-7215 or [plbritz@cityofportsmouth.com](mailto:plbritz@cityofportsmouth.com).

Sincerely

A handwritten signature in black ink, appearing to read "Peter Britz", written in a cursive style.

Peter Britz  
Environmental Planner/Sustainability Coordinator

Cc: John P. Bohenko, City Manager

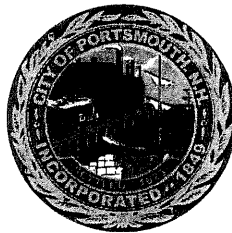
# **CITY OF PORTSMOUTH PRIME WETLAND ANALYSIS REPORT**

Prepared for:  
New Hampshire Department of Environmental Services  
Portsmouth Regional Office  
Pease International Tradeport  
222 International Drive, Suite 175  
Portsmouth, NH 03801

Prepared by:  
**WEST**   
ENVIRONMENTAL INC.

and

The City of Portsmouth  
Planning Department



January 2011

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**Appendix A:** Field forms for Prime Wetlands Proposed and Those Eliminated from Consideration.

**Appendix B:** City Council Action Sheet from July 19, 2010 City Council Meeting with approval to adopt Prime Wetlands.

**Map:** Map of Proposed Prime Wetlands

## 1. Introduction

West Environmental, Inc. (WEI) has prepared this report to provide documentation to support the designation of prime wetlands in the City of Portsmouth, New Hampshire. Initially the 2003 City Wide Wetlands Inventory (CWWI) identified potential prime wetland candidates. WEI used this 2003 mapping as a starting point to field verify the identified wetlands. WEI then included additional wetlands which met the criteria for Prime Wetlands. The verification and identification of new wetland areas was conducted in 2006 with funding assistance from the Piscataqua Region Estuaries Partnership (then New Hampshire Estuaries Project) under their Community Technical Assistance Program. This additional research and evaluation insured that individual wetlands met the requirements of RSA 482-A:15 and Chapter Wt 700 of the NHDES Wetlands Bureau Administrative Rules. WEI worked closely with the Portsmouth Conservation Commission and Planning Department staff to review the technical criteria for Prime Wetland Designation and the results of the CWWI. After review and expansion of the potential prime wetlands a mapping effort was funded in 2007 by the City of Portsmouth at the recommendation of the Conservation Commission to accurately map the wetland boundaries of all potential prime wetlands. This report represents the analysis and approval of the final wetlands to be selected by the Portsmouth Conservation Commission, Portsmouth Planning Board and Portsmouth City Council for designation as Prime Wetlands in the City of Portsmouth.

RSA 482-A:15 defines "Prime Wetlands" as jurisdictional wetlands that "because of their size, unspoiled character, fragile condition or other relevant factors, make them of substantial significance." Env-Wt 701.04 Selection of Designated Prime Wetlands states "Selection of Prime Wetlands shall be based on the ranking of relative function values" and shall meet the following minimum criteria:

- 1) The wetland shall have the presence of hydric soils, hydrophytic vegetation, and wetlands hydrology; and
- 2) At least 50% of the prime wetland shall have very poorly drained soils and the remaining soils shall be poorly drained soils.

The Prime Wetlands Candidates identified in Section 3 of this report meet all qualifications for Prime Wetland status.

## 2. Methodology

Twenty-one wetlands were determined to have the potential to "qualify" for Prime Wetland Designation in the CWWI. WEI identified six additional wetlands that could qualify for this designation resulting in a total of 27 wetlands evaluated. A Portsmouth specific Prime Wetland Data Form was created to evaluate prime wetland status of these wetlands. This form includes the following information necessary for Prime Wetland Designation:

- Soils verification
- Changes in wetland classification since 2002

- Wetland boundary verification
- Land use changes within the wetland buffer
- Potential water quality impacts
- Invasive species
- Information on rare plants and wildlife
- Wildlife habitat
- Educational / scientific values
- Restoration potential
- Results of functional analysis
- Justification for Prime Wetland Designation

Completed data forms are in Section 7 of this report. Each of the 27 wetlands was field inspected to verify the wetland boundaries, functional analysis, values assessments, and other important considerations relating to Prime Wetland Designation. Significant inaccuracies in the wetland boundaries were identified during the field verification process. Some of these boundary corrections required changes in the results of the functional analysis and therefore the previous wetland ranking.

The six new potential prime wetlands were evaluated in comparison to the 21 original qualifying wetlands. A final ranking of the 27 wetlands found significant break between the Prime Wetland Candidates and the remaining qualifying wetlands. Two of the wetlands were combined based on identifying a connection in the field.

### 3. Prime Wetland Candidates

The table below lists thirteen proposed prime wetland candidates, which represent the largest and highest functioning wetlands within the city. These wetlands total 1,860 acres: 1,736 acres of freshwater wetlands and 124 acres of tidal marsh. Eleven of the thirteen wetlands are over 40 acres in size. The salt marsh prime wetland candidates include the upper Sagamore creek marsh (062) the main Sagamore Creek marsh (061A) and the Little Harbor cove salt marshes (061B). The upper Sagamore Creek salt marsh totals 44 acres. The main Sagamore Creek marsh has four components including Tucker's cove marsh totaling 67 acres. The Little Harbor cove salt marsh complex is also made up of four separate components totaling 13 acres. In addition to their top 13 ranking, the proposed prime wetlands comprise the most diverse and critical wetland wildlife habitat in Portsmouth. These systems also are adjacent to some of the only remaining undisturbed upland habitat within the City boundaries. Together, they will provide crucial links between habitats in the form of undisturbed wildlife corridors.

<u>ID</u>	<u>Size (in acres)</u>	<u>Rank</u>	<u>Justification</u>
001	106.12	7	<ul style="list-style-type: none"> <li>▪ Adjacent to Berry's Brook wetland complex</li> <li>▪ Atlantic White Cedar stands</li> <li>▪ 6<sup>th</sup> largest wetland</li> </ul>
002	222.85	2	<ul style="list-style-type: none"> <li>▪ Berry's Brook wetland complex</li> <li>▪ 2<sup>nd</sup> largest wetland</li> <li>▪ Rare species habitat</li> </ul>
003A	542.26	1	<ul style="list-style-type: none"> <li>▪ Great Bog</li> <li>▪ Largest wetland</li> <li>▪ Rare species habitat</li> </ul>

005	203.83	3	<ul style="list-style-type: none"> <li>Berry's Brook wetland complex</li> <li>3<sup>rd</sup> largest wetland</li> <li>Rare species habitat</li> </ul>
006	48.5	8	<ul style="list-style-type: none"> <li>7<sup>th</sup> largest wetland</li> <li>Unique wet meadow complex</li> <li>Headwaters of Sagamore Creek</li> </ul>
007	99.39	6	<ul style="list-style-type: none"> <li>4<sup>th</sup> largest wetland</li> <li>High level of diversity</li> <li>Headwaters to Hodgson Brook</li> </ul>
015	35.22	11	<ul style="list-style-type: none"> <li>High value freshwater marsh habitat</li> <li>Abuts natural forestland</li> <li>High potential for wetland restoration</li> </ul>
018 & 026	32.54*	10	<ul style="list-style-type: none"> <li>Unique open water habitat</li> <li>Diverse wetland complex</li> <li>Potential rare species habitat</li> </ul>
019	15.07	12	<ul style="list-style-type: none"> <li>Tributary to Sagamore Creek</li> <li>Undisturbed wetland system w/natural buffers</li> <li>High value freshwater marsh habitat</li> </ul>
023	55.08	9	<ul style="list-style-type: none"> <li>8<sup>th</sup> largest wetland</li> <li>Atlantic White Cedar stands</li> <li>Adjacent Packers Bog in Greenland</li> </ul>
061A	67.46	4	<ul style="list-style-type: none"> <li>Largest salt marsh</li> <li>Rare species habitat</li> <li>Critical fisheries habitat</li> </ul>
061B	13.38	13	<ul style="list-style-type: none"> <li>One of only two salt marsh complexes</li> <li>Rare species habitat</li> <li>Critical fisheries habitat</li> </ul>
062	43.54	5	<ul style="list-style-type: none"> <li>2<sup>nd</sup> largest salt marsh</li> <li>Rare species habitat</li> <li>Critical fisheries habitat</li> </ul>

## 5. Wetlands Eliminated From Consideration

<u>ID</u>	<u>Size (in acres)</u>	<u>Rank</u>	<u>Justification</u>
003B	18.65	22	<ul style="list-style-type: none"> <li>Directly abuts highway on 3 sides</li> <li>Invasive species</li> <li>No connection to upland habitat</li> </ul>
004	50.46	14	<ul style="list-style-type: none"> <li>Does not qualify due to lack of very poorly drained soils</li> </ul>
013A	39.97	18	<ul style="list-style-type: none"> <li>Historical wetland impacts</li> <li>Incorrectly mapped and 60% of original size</li> <li>Disconnected and culverted</li> </ul>
013B	5.17	20	<ul style="list-style-type: none"> <li>Historical wetland impacts</li> <li>Water quality degradation observed</li> <li>Invasive species</li> <li>Small size (5 acres)</li> </ul>
014	19.87	16	<ul style="list-style-type: none"> <li>Historical wetland impacts</li> <li>Surrounded by development</li> <li>Water quality degradation observed</li> <li>No connection to upland habitat</li> </ul>
016	50.72	15	<ul style="list-style-type: none"> <li>Does not qualify due to lack of very poorly drained soils</li> </ul>
022	19.65	19	<ul style="list-style-type: none"> <li>Incorrectly mapped and 70% of original size</li> <li>Surrounded by development</li> </ul>

\*(22.16+10.38)

			<ul style="list-style-type: none"> <li>Historical wetland impacts</li> </ul>
029	21.88	17	<ul style="list-style-type: none"> <li>Incorrectly mapped and 50% of original size</li> <li>Surrounded by development</li> <li>Historical wetland impacts</li> </ul>
031	15.09	21	<ul style="list-style-type: none"> <li>Surrounded by development</li> <li>Water quality degradation observed</li> <li>No connection to upland habitat</li> </ul>
038	4.96	24 (tied)	<ul style="list-style-type: none"> <li>Small size</li> <li>Not recommended for consideration by CWWI</li> <li>Lacks diversity</li> </ul>
044	4.56	24 (tied)	<ul style="list-style-type: none"> <li>Small size</li> <li>Not recommended for consideration by CWWI</li> <li>Lacks diversity</li> </ul>
050	5.78	23	<ul style="list-style-type: none"> <li>Very small size</li> <li>Surrounded by development</li> </ul>
117	2.51	26	<ul style="list-style-type: none"> <li>Small size</li> <li>Not recommended for consideration by CWWI</li> <li>Lacks diversity</li> </ul>

## 5. Orthophoto Map of Proposed Prime Wetlands

See attached map.



**Appendix A**

**Field Forms for Prime Wetlands Proposed  
And  
Those Eliminated from Consideration**

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 001


Date: September 2006

Size: ~~110~~<sup>106.12</sup> acres

Estimated Percent of Very Poorly Drained Soils: 85%

Field Soils Verification Plots: Plot A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: Only hydrology descriptive to be added 

Boundary Verification

Changes to boundary: Yes, along eastern boundary 2+  
acres of upland

Inlet Streams: Yes, mostly drainage ditches from adjacent development

Outlet Streams: Yes, Berry's Brook to the south, minimal culverting under railroad bed to  
the west

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: New subdivision to the east

Potential Water Quality Impacts: Runoff from commercial development off of  
Weatherstone Street

Natural Heritage Elements Present: Atlantic White Cedar stands

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 50% / Commercial 20% /  
Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, aquatic habitat present

Does this Wetland Rate High in Educational/Scientific Value? Yes, 7<sup>th</sup> in GES study

Does this wetland provide open vistas? Minimal

Is this wetland connected to open space land? Yes, in Greenland

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: ranks 5<sup>th</sup> in GES study for most functions

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Atlantic White Cedar swamp connected to Packer Bog in Greenland

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**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 002

Date: September 2006

Size: ~~400±~~ <sup>222.85</sup> acres

Est. Percent of Very Poorly Drained Soils: 60% with boundary adjustment

Field Soils Verification Plots: Plot 002A off Lang Road

Classification(s) in 2002 Wetland Mapping: PFO4E/PFO1E/SS1E

Classification Change since 2002: Yes - PEM1/SS1E

Boundary Verification

Changes to boundary: Yes, extensive changes along  
western & eastern boundaries 10  
acres of upland

Inlet Streams: Yes, Berry's Brook from south and runoff from adjacent development west

Outlet Streams: Yes, Berry's Brook to the north

Ecological Integrity

Recent Impacts since 2002: Minimal

Recent Buffer Development since 2002: Minimal

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: Possible spotted turtle habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 70% / Fields 10% /  
Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranked 2<sup>nd</sup>

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 2<sup>nd</sup>

Does this wetland provide open vistas? Yes, ranked 1<sup>st</sup> although Sagamore Creek should  
rank higher

Is this wetland connected to open space land? Yes, in central portion

Potential Restoration Opportunity

Type of impact to wetland:

Approximate area of restoration:

Prime Wetland?

Functional Analysis: ranks 2<sup>nd</sup> in GES for most functions

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: 2<sup>nd</sup> largest wetland, connected to Berry's Brook & Prime Wetlands,  
maintains vegetated buffers in many locations

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**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 003A

Date: September 2006

Size: ~~573~~ <sup>542.26</sup> acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 003A-A off of railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: PEM1E & PSS1E – correction, not change

Boundary Verification

Changes to boundary: Minimal only along northern tip of Griffin Avenue

Inlet Streams: Yes, from west

Outlet Streams: Yes, to the west under Interstate 95 into Pickering Brook

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Griffin Ave / Ocean Ave

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: NE Cottontail, Atlantic White Cedar, heavy fruited sedge, tufted loosestrife

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Forest 30% / Commercial 40% / Field 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, 1st

Does this Wetland Rate High in Educational/Scientific Value? Yes, 1st

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: Invasive species

Approximate area of restoration: Interstate 95

Prime Wetland?

Functional Analysis: Ranked 1<sup>st</sup> in GES stuffy for most functions & values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Great Bog is one of the largest contiguous wetlands in Coastal NH and is home for rare plants and wildlife

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**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 005

Date: September 2006

Size: <sup>203.83</sup>  
~~250~~ acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 005-A off Lang Road

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E & PEM1/FO1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, elimination of areas adjacent to Route 1 and along southern boundary

Inlet Streams: Yes, Berry's Brook from south

Outlet Streams: Yes, Berry's Brook to the north

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Minor along western boundary

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: Possible spotted turtle habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 60% / Commercial 10% /  
Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranked 3<sup>rd</sup>

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 4<sup>th</sup>

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, in Rye to the south

Potential Restoration Opportunity

Type of impact to wetland: Fill along southwest boundary adjacent to commercial development on Route 1; phragmites invasion off of Dolphin Drive

Approximate area of restoration: 0.5 acres

Prime Wetland?

Functional Analysis: Ranks 3<sup>rd</sup> in GES study for most functions & values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

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Justification: Combined w/ Wetland 002, this is the largest wetland in the city. This wetland ranked 3<sup>rd</sup> in GES study for the most functions and values and will help to protect Berry's Brook

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 006

Date: September 2006

Size: <sup>48.5</sup>~~89~~ acres Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: 006-A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: PEM1E and PEM1Ed

Boundary Verification Changes to boundary: Yes, northern portion eliminated

Inlet Streams: Yes, headwaters to Sagamore Creek

Outlet Streams: Yes, Sagamore Creek drains under Peverly Hill Road

Ecological Integrity

Recent Impacts since 2002: None

Recent Buffer Development since 2002: Minor along Banfield Road

Potential Water Quality Impacts: None

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Woodland 70% /  
Fields 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 6 out of 7 principal functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Diverse wetland with uncommon wet meadow component and intact natural buffers, headwaters to Sagamore Creek.

**West Environmental, Inc.**

**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 007

Date: September 2006

Size: <sup>99.39</sup> 145 acres

Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: 007-A along access road

Classification(s) in 2002 Wetland Mapping: PFO1 – PFO1/SS1E

Classification Change since 2002: PEM1/SS1E

Boundary Verification

Changes to boundary: Extensive – eliminated / adjust northern boundary

Inlet Streams: Yes, Grafton Ditch

Outlet Streams: Yes, tributary to Hogden Brook drains southeast under Interstate 95

Ecological Integrity

Recent Impacts since 2002: Yes, along northcentral boundary

Recent Buffer Development since 2002: Yes, commercial buildings along northern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff – commercial development and Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 30% / Woodland 30% / Commercial 30% / Fields 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality impacts to Grafton Ditch from Pease Tradeport

Approximate area of restoration: 0.5 acres along 1,000 linear feet of stream

Prime Wetland?

Functional Analysis: 7 out of 7 principal functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Top five sized wetlands in city, diverse wildlife habitat, headwaters to Hogden Brook

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West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 15

Date: September 2006

Size: ~~35.22~~  
36 acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 15-A along the railroad tracks

Classification(s) in 2002 Wetland Mapping: PEM1Eb

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, minor fingers

Inlet Streams: No

Outlet Streams: Yes, to the south

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Significant untreated stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Commercial 50% /  
Woodland 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranks 9<sup>th</sup>

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 8<sup>th</sup>

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, part of well head protection area

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: Several acres

Prime Wetland?

Functional Analysis: Ranks in top ten in most categories of GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Maintains vegetated buffers on two sides with mature forest habitat; portions  
of marsh are diverse and healthy



West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 18 & 26

Date: September 2006

22.16 ± 10.38 = 32.54

Size: ~~31 & 11~~ = 42 acres Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: Plot 18-A along the railroad bed

Classification(s) in 2002 Wetland Mapping: PEM/SS1E and PUBH/PFO1E

Classification Change since 2002: No, but beaver are active

Boundary Verification Changes to boundary: Yes, minor in southeastern corner

Inlet Streams: Yes, from wetland 26

Outlet Streams: Yes, to the north

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from large commercial development to the north

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 40% / Commercial 40% /  
Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranks 10<sup>th</sup>

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 5<sup>th</sup>

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: several acres

Prime Wetland?

Functional Analysis: Combined wetlands rank in top ten in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Pond habitat relatively rare for the city; diverse wetland with vegetated  
buffers still present

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 19

Date: September 2006

Size: <sup>15.07</sup>  
~~16~~ acres

Estimated Percent of Very Poorly Drained Soils: 70%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PSS1E/FO1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, minor along eastern boundary

Inlet Streams: Yes, drainages

Outlet Streams: Yes, to Sagamore Creek (Wetland 61A)

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, at Tuckers Cove development to the east

Potential Water Quality Impacts: Minimal

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 60% / Woodland 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 7<sup>th</sup>

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, part of Urban Forestry Center

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranks high in finfish habitat and education potential in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Maintains vegetated buffers and has uncommon wet meadow habitat;  
tributary to Sagamore Creek Estuary

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 23

Date: September 2006

Size: <sup>55.08</sup>  
~~71~~ acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: 023-A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO4E & PFO1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, along northern boundary

Inlet Streams: No

Outlet Streams: Connected to Packer Bog

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, along northern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: Atlantic White Cedar stands

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 30% / Woodland 70%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 6<sup>th</sup>

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, Packer Bog in Greenland

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranks 6<sup>th</sup> in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Contiguous to Packer Bog in Greenland; extensive stands of Atlantic White Cedar

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 61A

Date: September 2006

Size: <sup>67.46</sup>  
~~120~~ acres

Estimated Percent of Very Poorly Drained Soils: 100%

Field Soils Verification Plots: Plot A along Route 1

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification

Changes to boundary: Yes, mudflats were eliminated because they are not vegetated wetlands

Inlet Streams: Yes, Sagamore Creek

Outlet Streams: Tidal estuary

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: New subdivision Tucker's Cove

Potential Water Quality Impacts: Runoff from Route 1 and associated commercial development

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 30% / Commercial 20% / Woodland 50%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and tidal marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, 3<sup>rd</sup> in GES study

Does this wetland provide open vistas? One of the highest ranking for visual aesthetic quality

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: ranks 4<sup>th</sup> in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Most important estuary / salt marsh in Portsmouth

West Environmental Inc.  
Portsmouth Vegetated Tidal Marsh Evaluation

Date: September 2006

Wetland ID: 61A

Wetland Size: 120 acres

Wetland Classification: E2EM1P

Type of Marsh System:

Coastal/Back Barrier Marsh

	yes	no
Marsh derives most of its sediments from sea water	___	<u>X</u>
No major tidal rivers flow into this marsh	___	___
Marsh located adjacent to Atlantic coast	___	___
Dominated by <i>Spartina patens</i>	___	___

Estuarine Marsh

Marsh derives majority of sediment from freshwater	<u>X</u>	___
Associated with major tidal river and/or bay	___	___

Meadow Marsh

Contains more than 50% high marsh	___	<u>X</u>
Dominated by <i>Spartina patens</i>	___	<u>X</u>

Fringe Marshes

Exposed to wind and wave energy	<u>X</u>	___
Located along river and bay shoreline	<u>X</u>	___
Minimal high marsh	<u>X</u>	___
Gentle grade from open water to upland	___	<u>X</u>
Dominated by <i>Spartina alterniflora</i>	<u>X</u>	___

Ecological Integrity:

Land use within 500 foot zone of influence

20% Residential 10% Roads 5% Parking Lots 10% Freshwater wetlands 55% Forested

X Invasive plants present

X <5% invasive species

\_\_\_ 5% - 20% dominated by invasive species

\_\_\_ > 20% dominated by invasive species

Does restriction restrict seawater into wetland? NO

Does restriction detain freshwater from entering wetland? NO

Does restriction affect flow? NO

NO Tidal Restrictions present

X Is wetland ditched

\_\_\_ grid pattern

X linear pattern

X Buffer present

Shoreline Anchoring:

Type of marsh system

X estuarine fringe

(receives more erosive energy force).

\_\_\_ estuarine meadow

\_\_\_ coastal/back-barrier

Wetland morphology

\_\_\_ no distinct bank between

wetland and upland/freshwater wetland

X distinct vegetated bank present

\_\_\_ distinct non-vegetated bank present

Finfish & Shellfish Habitat:

X Shellfish beds present

X Ecological impacts present

X Diverse wetland system

X Wetland connection to freshwater wetland or stream

X Wetland used for feeding, breeding, protection, or migration

X Fisheries habitat present

WEST ENVIRONMENTAL 

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 61B 1 through 11

Date: September 2006

Size: <sup>13.38</sup>~~5~~ acres Estimated Percent of Very Poorly Drained Soils: 100%

Field Soils Verification Plots: Plot A near Bell Island Bridge

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification Changes to boundary: Yes, mudflats were eliminated because they are not vegetated wetlands

Inlet Streams: Yes, from Curriers Cove

Outlet Streams: Tidal estuary

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Some house lots

Potential Water Quality Impacts: Runoff from adjacent development

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 60% / School 20% /  
Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and tidal marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, directly adjacent to Little Harbour School

Does this wetland provide open vistas? One of the higher ranking for visual aesthetic quality

Is this wetland connected to open space land? Yes, cemetery

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Not ranked in GES study, but very high valued tidal marsh habitat

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Important estuary / salt marsh in Portsmouth

**West Environmental, Inc.**

**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 62

Date: September 2006

Size: ~~110~~ <sup>413.54</sup> acres

Estimated Percent of Very Poorly Drained Soils: 85%

Field Soils Verification Plots: Plot A along railroad bed

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification Changes to boundary: No

Inlet Streams: Yes, Sagamore Creek

Outlet Streams: Creek flows under Route 1

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Commercial re-development

Potential Water Quality Impacts: Runoff from commercial development surrounding wetland

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 50% / Commercial 20% /  
Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and salt marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, but not in GES study

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: ranks 7<sup>th</sup> in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Part of largest salt marsh system in Portsmouth

**West Environmental Inc.**  
**Portsmouth Vegetated Tidal Marsh Evaluation**

Date: September 2006

Wetland ID: 62

Wetland Size: 44 acres

Wetland Classification: E2EM1P

**Type of Marsh System:**

	yes	no
Coastal/Back Barrier Marsh		
Marsh derives most of its sediments from sea water	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No major tidal rivers flow into this marsh	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Marsh located adjacent to Atlantic coast	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dominated by <i>Spartina patens</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Estuarine Marsh**

Marsh derives majority of sediment from freshwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Associated with major tidal river and/or bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Meadow Marsh**

Contains more than 50% high marsh	<input type="checkbox"/>	<input type="checkbox"/>
Dominated by <i>Spartina patens</i>	<input type="checkbox"/>	<input type="checkbox"/>

**Fringe Marshes**

Exposed to wind and wave energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Located along river and bay shoreline	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimal high marsh	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gentle grade from open water to upland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dominated by <i>Spartina alterniflora</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Ecological Integrity:**

**Land use within 500 foot zone of influence**

☐ 30% Residential   ☐ 10% Roads   ☐ 30% Parking Lots   ☐ 10% Freshwater wetlands   ☐ 20% Forested

<input checked="" type="checkbox"/> Invasive plants present	<input type="checkbox"/> YES Tidal Restrictions present
<input checked="" type="checkbox"/> <5% invasive species	
<input type="checkbox"/> 5% - 20% dominated by invasive species	<input type="checkbox"/> Is wetland ditched
<input type="checkbox"/> > 20% dominated by invasive species	<input type="checkbox"/> grid pattern
Does restriction restrict seawater into wetland? <u>NO</u>	<input checked="" type="checkbox"/> linear pattern
Does restriction detain freshwater from entering wetland? <u>NO</u>	
Does restriction affect flow? <u>Yes, minor</u>	<input type="checkbox"/> Buffer present

**Shoreline Anchoring:**

**Type of marsh system**

☒ estuarine fringe  
    (receives more erosive energy force)  
☐ estuarine meadow  
☐ coastal/back-barrier

**Wetland morphology**

☐ no distinct bank between  
    wetland and upland/freshwater wetland  
☒ distinct vegetated bank present  
☐ distinct non-vegetated bank present

**Finfish & Shellfish Habitat:**

☒ Shellfish beds present  
☒ Ecological impacts present  
☒ Diverse wetland system  
☒ Wetland connection to freshwater wetland or stream  
☒ Wetland used for feeding, breeding, protection, or migration  
☒ Fisheries habitat present



**West Environmental, Inc.**

**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 003B

Date: September 2006

Size: <sup>18.65</sup>  
~~19~~ acres

Estimated Percent of Very Poorly Drained Soils: 75%

Field Soils Verification Plots: Plot 003B-A along railroad tracks

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1 & PEM1E/SS1E

Classification Change since 2002: Some die back of canopy – PF05

Boundary Verification

Changes to boundary: No

Inlet Streams: No, just runoff

Outlet Streams: Drainage into 003A

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Griffin Ave

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Highway 65% / Wetland across RR 25%  
/ Commercial 10%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: 20%

Prime Wetland?

Functional Analysis: Ranks relatively low

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Fragmented wetland surrounded by highway off ramp and railroad bed with  
invasive species present

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 004

Date: September 2006

Size: <sup>50.46</sup>  
~~51~~ acres Estimated Percent of Very Poorly Drained Soils: 25%

Field Soils Verification Plots: Off Girl Scout trail

Classification(s) in 2002 Wetland Mapping: N/A

Classification Change since 2002: PFO1/4E

Boundary Verification Changes to boundary: N/A

Inlet Streams: Yes, from southwest

Outlet Streams: Yes, to northeast under Banfield Road

Ecological Integrity

Recent Impacts since 2002: None

Recent Buffer Development since 2002: Minor along Banfield Road

Potential Water Quality Impacts: Yes, from Banfield Road runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Commercial 20% / Woodland 80%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, with Scout property

Does this wetland provide open vistas? Limited

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 6 out of 7 principal functions

Does this wetland qualify as prime? No

Prime Wetland Recommendation: No

Justification: Does not qualify

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 13A

Date: September 2006

Size: ~~25~~<sup>39.97</sup> acres in two areas Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: Plot 13A-A behind high school

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: Some areas of emergent wetland

Boundary Verification

Changes to boundary: Extensive changes eliminating 30% of wetland area and separating them into two areas

Inlet Streams: Yes, from north

Outlet Streams: Through culvert to Wetland 13B

Ecological Integrity

Recent Impacts since 2002: Additional upgrades to high school

Recent Buffer Development since 2002: High school additions

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: High school 40% / Residential 50% / Woodland 10%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? It has the opportunity with its proximity to the high school

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation from stormwater runoff

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranking is inaccurate because of size discrepancy; it actually ranks lower than GES study indicates

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Fragmented disturbed wetland system with degraded wildlife habitat

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 13B

Date: September 2006

Size: <sup>5.17</sup>  
~~5.2~~ acres

Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: Plot 13B-A next to ball fields

Classification(s) in 2002 Wetland Mapping: P SS1/ FO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: No

Inlet Streams: Yes, from Wetland 13A

Outlet Streams: Yes, to Sagamore Creek (Wetland 61A)

Ecological Integrity

Recent Impacts since 2002: None

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, runoff from adjacent ball fields could contain  
fertilizers

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 25% / Commercial 25% /  
High school 25% / Woodland 25%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No, but it has the  
opportunity

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, Sagamore Creek (?)

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: Area adjacent high school

Prime Wetland?

Functional Analysis: Ranks low in GES study, very small size

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Small size, adjacent development, invasive species and historic disturbance

**WEST**   
**ENVIRONMENTAL**

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 14

Date: September 2006

Size: 20 acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 14-A adjacent to hospital parking lot

Classification(s) in 2002 Wetland Mapping: PEM1E

Classification Change since 2002: PSS1E could be added

Boundary Verification

Changes to boundary: Yes, entire southern finger should be eliminated

Inlet Streams: No

Outlet Streams: No

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Commercial 50% /  
Highway 25% / Wetland 15%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation from stormwater runoff

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with no buffers on three sides and invasive species

WEST ENVIRONMENTAL 

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 16

Date: September 2006

Size: ~~50~~ 50.72 acres

Estimated Percent of Very Poorly Drained Soils: 20%

Field Soils Verification Plots: 016-A off Campus Drive

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, southeast finger eliminated

Inlet Streams: No

Outlet Streams: Yes, to north / piped

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Water Country parking lot upgrades and Banfield Road development

Potential Water Quality Impacts: Stormwater runoff from adjacent development

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Woodland 20% /  
Commercial 60% / Sandpit 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, Community Campus

Does this wetland provide open vistas? No

Is this wetland connected to open space land? Yes, recreation land

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 5 out of 7 principal functions present

Does this wetland qualify as prime? No

Prime Wetland Recommendation: No

Justification: Does not qualify

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 22

Date: September 2006

Size: <sup>19.65</sup>  
~~22~~ acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Along Jones Avenue

Classification(s) in 2002 Wetland Mapping: PEM1E & PSS1E/FO1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, minor along northern boundary

Inlet Streams: No

Outlet Streams: Yes, under Jones Avenue to Wetland 13A

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, along southern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes, a few

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranks low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with limited vegetated buffers

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 29

Date: September 2006

Size: ~~12~~ <sup>21.88</sup> acres

Estimated Percent of Very Poorly Drained Soils: 75%

Field Soils Verification Plots: 029-A

Classification(s) in 2002 Wetland Mapping: PSS1/FO1E

Classification Change since 2002: PEM1E

Boundary Verification

Changes to boundary: Major change to western portion  
which is all upland

Inlet Streams: No

Outlet Streams: Yes, under Jones Avenue

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, new development on southern boundary of  
wetland

Potential Water Quality Impacts: Minor from residential development

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 1 out of 7 in GES Study / WEI found 5 out of 7 functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with minimal vegetated buffers



West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 31

Date: September 2006

Size: <sup>15.09</sup>~~15~~ acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: 031-A off Sherburne Street

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E/EM1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: Minor

Inlet Streams: No

Outlet Streams: Yes, under Essex Ave to the east

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from apartment complex

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 100%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 2 out of 7 in GES Study / WEI found 4 out of 7 functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with minimal vegetated buffers

**West Environmental, Inc.**

**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 38

Date: September 2006

Size: <sup>4.96</sup>  
~~5~~ acres

Estimated Percent of Very Poorly Drained Soils: 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO4E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: No

Inlet Streams: No

Outlet Streams: No

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 70% / Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No – surrounded by development

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES Study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Very small (5 acres), surrounded by development, no diverse or unique habitat

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 44

Date: September 2006

Size: <sup>4.56</sup>  
~~4.6~~ acres

Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: No

Inlet Streams: Part of a larger wetland in Rye

Outlet Streams: N/A

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: No

Natural Heritage Elements Present: Unknown

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 35% / Woodland 25% / Golf course 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Unknown

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Most of this wetland is in Rye and the city cannot designate wetlands outside of Portsmouth

**West Environmental, Inc.**  
**Portsmouth Prime Wetland Designation Data Form**

Wetland ID: 50

Date: September 2006

Size: <sup>5.78</sup>~~5.8~~ acres Estimated Percent of Very Poorly Drained Soils: less than 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E with an area of PEM1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: No

Inlet Streams: Yes, from south

Outlet Streams: Yes, from north

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, surrounded by development

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 50% / Woodland 20% /  
Commercial 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

**WEST**   
**ENVIRONMENTAL**

Justification: Very small (6 acres) surrounded by commercial / residential development  
with minimal vegetated buffers, water quality degradation present

West Environmental, Inc.  
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 117

Date: September 2006

Size: ~~2.5~~  
2.51 acres

Estimated Percent of Very Poorly Drained Soils: 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: Emergent area established

Boundary Verification

Changes to boundary: No

Inlet Streams: Yes, from south

Outlet Streams: Yes, from north under Gosport Road

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Residential subdivision

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked lowest in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by residential development with minimal vegetated buffers; not  
diverse or unique

**Appendix B**

**City Council Action Sheet**

**From July 10, 2010 Portsmouth City Council Meeting**

**With Approval to Adopt Prime Wetlands As Described**

TO: JOHN P. BOHENKO, CITY MANAGER  
FROM: VALERIE A. FRENCH, DEPUTY CITY CLERK  
RE: ACTIONS TAKEN BY THE PORTSMOUTH CITY COUNCIL MEETING HELD ON JULY 19, 2010, EILEEN DONDERO FOLEY COUNCIL CHAMBERS, MUNICIPAL COMPLEX, ONE JUNKINS AVENUE, PORTSMOUTH, NEW HAMPSHIRE  
PRESENT: MAYOR FERRINI, ASSISTANT MAYOR NOVELLINE CLAYBURGH, COUNCILORS HEJTMANEK, SPEAR, DWYER\*, COVIELLO AND SMITH  
ABSENT: COUNCILORS LISTER AND KENNEDY

\*Councilor Dwyer participated via conference call, therefore all votes were taken by roll call in compliance with the Right-to-know RSA.

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1. At 6:00 p.m., an Anticipated "Non-Meeting" with Counsel was held regarding Negotiations – RSA 91-A:2, I (b-c).
2. Acceptance of Minutes – June 21, 2010 – Voted on a 7-0 roll call to approve and accept the minutes of the June 21, 2010 City Council meeting.
3. Public Comment Session – There were 6 speakers: Karina Quintans (Downtown Portsmouth Zero Waste Project); Martin Cameron and Bill St. Laurent (WWI Monuments); Al Lapanne and Bill St. Laurent (Opening Sherburne Gate); Al Silva (Projecting Sign at 19 Congress Street); and Mary Lou McElwain (Red Ginger Sidewalk Obstruction)
4. Public Hearing – Pursuant to RSA 482-A:15 II on the Designation of Prime Wetlands in Accordance with the Report Prepared for the Conservation Commission by West Environmental in February 2007 – Held a public hearing. One speaker, Philip Stokel.
5. Acceptance of Conservation License Plate Grant – Voted on a 7-0 roll call to authorize the City Manager to accept and expend a \$10,000.00 grant from the State of New Hampshire Division of Historical Resources Conservation License Plate Grant Program for the Morton-Benedict House Roof Project.
6. Acceptance of Donations to the Coalition Legal Fund - Voted on a 7-0 roll call to approve and accept the donations, as listed, to be placed in the Coalition Legal Fund.
  - Town of Carroll - \$1,000.00
  - Town of Moultonborough - \$5,000.00
  - Town of Tuftonboro - \$5,000.00
7. Voted on a 7-0 roll call to suspend the rules to take up Item X.A.1. – Prime Wetlands Designation.
8. Prime Wetlands Designation – Moved to adopt prime wetlands as designated on the Proposed Prime Wetland map with the exception of wetland 007 located on the Pease Tradeport and to authorize the City Manager to forward all necessary supporting documentation to the NH Department of Environmental Services for their review. Motion to table this matter for a report back from Planning Department failed on a 2-5 roll call vote. Main motion passed on a 6-1 roll call vote, Councilor Smith opposed.

9. Prime Wetlands Designation - Voted on a 7-0 roll call to authorize the City Manager to send a letter to the Pease Development Authority to ask them to seek State designation of wetland 007 as a Prime Wetland.
10. Consent Agenda – Voted on a 7-0 roll call to adopt the Consent Agenda.
  - A. Letter from James Heinz and Rochelle Jones requesting permission to hold a softball game fundraiser for firefighter Sarah Fox on Sunday, August 22, 2010 at 2:00 p.m. at Alumni Field (***Anticipated action – move to refer to the City Manager with power***)
11. Letter from Cindi Blanchette, Portsmouth City Soccer Club, requesting permission to hang banners at Leary field during soccer season from mid August through November (Same conditions as last year) – Voted on a 7-0 roll call to refer to the City Manager with power.
12. Letter from Richard Adams requesting that the City Council reconsider its action regarding the WW I monuments. – Voted on a 6-1 roll call to accept and place the letter on file. Councilor Spear voted opposed.
13. Petition requesting to open the back gate on Sherburne Road for a trial period during construction of the bridge over Interstate 95 – Voted on a 7-0 roll call to refer to the Traffic and Safety Committee for a report back.
14. Letter from Thans Lapanne requesting to change the name of the portion of Sherburne Road on the Tradeport – Voted on a 7-0 roll call to refer to the Planning board for a report back.
15. Request for License Agreement RE: 51 Islington Street, LLC – Voted on a 6-0 roll call to authorize the City Manager to enter into a license agreement with 51 Islington Street LLC to facilitate construction activities. Councilor Coviello abstained from voting on the matter.
16. Request for a License from Jeff Casler, owner of the Second Time Around, for property located at 19 Congress Street to install a projecting sign – Vote on a 7-0 roll call to accept the recommendation of the Planning Board with the aforementioned stipulations and approve the request of Jeff Casler, owner of Second Time Around, to install a projecting sign on a new bracket at 19 Congress Street and further authorize the City Manager to execute a License Agreement for this request.
  - 1) The license shall be approved by the Legal Department as to content and form;
  - 2) Any removal or relocation of the projecting sign, for any reason, will be done at no cost to the City; and
  - 3) Any disturbance of a sidewalk, street or other public infrastructure resulting from the installation, relocation or removal of the projecting sign, for any reason, shall be restored at no cost to the City and shall be subject to review and acceptance by the Department of Public Works.



17. Approval of Downtown Portsmouth Zero Waste Project – Voted on a 7-0 roll call to authorize the City Manager to proceed with the placement of recycling containers in downtown Portsmouth, as presented at the work session and the map location.
18. Report Back Re: Red Ginger, LLC, 261 South Street – Voted on a 7-0 roll call to approve the extension of the Sidewalk Obstruction License for the Red Ginger, 261 South Street for the remainder of the year at which time it is renewable annually.
19. Request to Establish a Work Session with Recreation Board Re: Recreation Needs Study – Voted on a 7-0 roll call to establish a work session with the Recreation Board regarding the Recreation Needs Study on Tuesday, September 7, 2010 at 6:00 p.m.
20. Representatives to the Rockingham Metropolitan Planning Organization (MPO) Technical Advisory (TAC) – Voted on a 7-0 roll call to designate Steve Parkinson, Public Works Director, Dave Allen, Deputy Public Works Director (alternate) and Rick Taintor, Planning Director (alternate) to act as the City's representatives to the Rockingham Metropolitan Planning Organization (MPO) Technical Advisory Committee (TAC) for the July 2010 – June 30, 2013 term
21. Appointment to be Voted – Elissa Hill Stone – Appointment as an Alternate to the Conservation Commission – Voted on a 7-0 roll call to appoint Elissa Hill Stone as an alternate to the Conservation Commission with term to expire 04/01/2013.
22. Acceptance of Resignation – Susanne Delaney – Economic Development Commission – Voted on a 7-0 roll call to accept the resignation of Susanne Delaney from the Economic Development Commission with regret and a letter of appreciation.
23. Report Back from School Board Re: Final Budget Adjustments – Voted on a 7-0 roll call to place on file the list of final adjustments made by the Portsmouth School Board to the FY2010 Budget.
24. Letter from First Lady Michelle Obama Re: Preserve America Community Designation – Voted on a 7-0 roll call to place Letter from First Lady Michelle Obama regarding Preserve American Community Designation on file.
25. Mayor's Report – Request from African Burying Ground Committee to make a presentation before the Council. – Mayor Ferrini submitted into the record a letter from Vernis Jackson, Chair, African Burying Ground Committee, requesting to make a presentation to the City Council with a suggested date of September 20, 2010.
26. Parking Committee Action Sheet and Minutes of the July 8, 2010 meeting. – Voted on a 7-0 roll call to approve and accept the action sheet and minutes of the July 8, 2010 Parking Committee meeting.
27. Adjournment - At 8:35 p.m., voted on a 7-0 roll call to adjourn.

Respectfully submitted by:  
Valerie A. French, Deputy City Clerk I

