



## Legislative Task Force

Meeting #6

**Thursday February 27, 2014**  
**8:00 – 10:00 AM**

**Conference Room C**, 2<sup>nd</sup> Floor  
Department of Administration  
One Capitol Hill, Providence, RI

### Agenda

- 8:00** Welcome and Overview of Agenda – *Kevin Flynn, DOP*
- 8:05** Feedback on meeting notes for:
1. 12.19.13\_ Meeting #4
  2. 01.21.14\_Meeting #5
- 8:10** Subject Topics and Technical Presentations:
- 8:10** 1. Summary of New England States buffers/ regulatory requirements – *Carol Murphy, DEM*
- 8:40** 2. Summary of RI municipal ordinance inventory – *Sean Henry, DOP Intern*
- 9:00** 3. Task Force Questions & Discussion of Presentations – *All - moderated by Kevin Flynn, DOP*
- 9:30** 4. Discussion on developing case studies for identifying friction points - *moderated by Kevin Flynn*
- 9:55** Next Steps – *Nancy Hess, DOP*
- 10:00** Adjourn



Community	Ordinance type	Setback From	Applicability (type of use/activity)	Location Applied	Type of Wetland	Setback Distance (ft)	Prohibited Uses (within buffer)	Exemptions	Development Standards	OWTS design	Application Procedure	Adm Review	Application requirements	Source	Date Accessed
Barrington	Zoning 185-22 Setback from wetlands and waterbodies	Building, structure or sign		Townwide	wetland, waterbody, stream	100		piers, etc in Waterfront Business District						Code of Ordinances, Chapter 185. Zoning, Article VII. Supplementary Regulations, Sec. 22. Setback from wetlands and water bodies. www.generalcode.com	10/23/2013
	Zoning 185-169 Wetland Overlay District	Land Disturbance	New / re construction, expansion of buildings or new / modified uses of property	Townwide	Coastal and freshwater wetlands ≥ 1/2 acre	100	Discharge of pollutants, haz mat storage, solid waste or debris, thermal pollutant discharge	ZB may exempt construction that is no closer than existing construction if ZB finds no significant env impact.	yes		Special use permit w/ Conserv.Comm rec to ZB			Code of Ordinances, Chapter 185. Zoning, Article XXV. Wetlands Overlay District, Sec. 169-174. Developmental Standards. www.generalcode.com	10/23/2013
Bristol	Ordinance Article IV. Hazardous Waste Management Facilities	Hazardous waste management facilities and related pavement and disturbance		Townwide	Fresh water wetlands, steep slopes ≥ 5% percent, other water-related environmentally sensitive areas.	1,000 ft								Code of Ordinances >> Part IV - Chapter 13 - Health and Sanitation, Article IV. Hazardous Waste Management Facilities >> www.municode.com	11/4/2013
	Zoning Sec. 28-145. Setback of individual sewage disposal facilities	OWTS	OWTS shall comply with DEM and CRMC regulations	Townwide										Code of Ordinances >> Part IV -Chapter 28 - Zoning >> Article V. Saupplementary Regulations Sec. 28-145 >> www.municode.com	11/12/2013
Burrillville	Zoning Sec. 153. Lots containing wetlands Setback	OWTS	Any lot with > 40% wetland area, including buffer.	Townwide	Within 200 horizontal feet of a "fresh water wetland" or "river" as defined in RIGL	200			Only single family housing allowed in residential zones. Comm & Mfg. must be sewerd. Min lot buildable area 12,000 sf excluding wetland and jurisdictional areas.					Code of Ordinances, Chapter 30. Zoning, Article V. Special Regulations, Sec. 153. Lots containing wetlands >> www.municode.com	7/30/2007
	Zoning Sec. 30-202 Aquifer Zoning			Townwide						Maximum wastewater flow (gpd) for non-residential development based on lot size.				Code of Ordinances >> Part II - Revised Genral Ordinaces Chapter 30 - Zoning Article VI. Special regulations >>www.municode.com	2/12/2014
Charlestown	Zoning Sec. 78 Water Bodies setback	OWTS		Townwide	Freshwater or coastal wetlands as defined in RIGL river /intermittent stream < 10 ft wide.	100	Repair or alteration of an existing OWTS				Special use permit			Code of Ordinances Chapter 218. Zoning, Article XII. Development Standards, Sec. 78. Water Bodies. www.generalcode.com	2/21/2014
					River ≥ 10 ft. wide	200									
					floodplain -A or V zone										
Coventry	Setbacks	OWTS		townwide	Freshwater wetland, stream, river, pond or lake	75								Zoning Ordinance Article 9. Section 925 Water Bodies. www.coventryri.org	11/12/2013
		Structure			Freshwater wetland, stream, river, pond or lake	50	Sheds (for boat & accessory storage), piers, etc							Zoning Ordinance Article 9. Section 925 Water Bodies. www.coventryri.org	11/12/2013
Exeter	Zoning Supplementary Regulations Setback	Proposed Project within 300 feet of wetland	New site plans	Townwide	Freshwater Wetland (As defined by RIDEM)	100	Soil disturbance				Review by PB within 45 days		Site Features map required	Code of Ordinances, Appendix A Zoning, Article II, Sec. 2.5 Development Plan Review. 2.16 Water Bodies. Www.municode.com	11/15/2013
Foster	Zoning Sec. 6 Sewerage Disposal Setback	Sewerage Disposal System		Townwide	Freshwater wetland	200								Zoning Ordinance, Article VI, Supplementary Regulations, Section 6 Sewerage Disposal.	11/15/2013
	Zoning Industrial Performance Standard Sec 17 Water Bodies	Proposed Project within 300 feet of wetland	Commercial and/or Industrial site plans	Townwide	Freshwater wetland	100	Soil disturbance							Zoning Ordinance, Article IX. Site Plan Review, Section 8 Site Plan for Commercial and Industrial Development, F. Performance Standards. 17 Water bodies	11/15/2013

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Jamestown	Zoning Sec. 308. Setback	OWTS	Development - any manmade change including buildings or other structures, mining, dredging, filling, paving, excavation, or drilling on the lot.	townwide	freshwater wetland				yes		Dev plan review by Planning Comm, with rec to ZB.	If < 25% relief, planner processes application for recommendation to ZB	Erosion and sed control plan; tree protection, limits of disturbance, Revegetation plan for the buffer, slopes and erodible areas, mitigation plan for vernal pools.	Code of Ordinances, Chapter 82. Zoning, Article 3. Application of District Regulations, Sec. 308. Setback from freshwater wetlands. www.municode.com	10/21/2013
	Zoning Sec. 82-214. High Ground water table and impervious overlay district		Lots < 40,000 sf in mapped overlay district	High Water Table District. Mapped area of non-conforming lots, no public water or sewer, shallow depth to water table and impervious layer. [J1]	na		District A: no basements, in-ground swimming pools; Districts A&B: no subdrains, no footings below shwt.		Yes				Soil testhole(s) for any dev in SubDistrict A and for a new dwelling or one that requires an OWTS suitability determination in SubDistrict B.	Code of Ordinances Chapter 82 - Zoning, High Groundwater Ordinance. http://www.jamestownri.net/plan/hgwt.html	10/21/2013
				Subdistrict A: SHWT ≤ 18", OR Impervious layer ≤ 42" below original grade.			Subdistrict A: no basements, in-ground swimming pools, subdrains, footings below shwt.		SUP criteria: Detailed findings on need to prevent further impacts and restore impaired areas; Minimize cutting and filling; To the extent possible, meet 6 dev. standards of Subdistrict B; Demonstrate that combined impacts from OWTS design, SW Mgt, and potential wetland buffer disturbance are minimized; Maximum impervious cover 8-15% based on depth to shwt and imperv layer, with max 2,000 sf. and with freshwater wetlands subtracted from lot size to calculate impervious. Use Variance criteria: to the extent possible meet dev standards for Subdistrict B and for SUP.		A: Special use permit after review by PB A: Use variance for prohibited uses, after review by PB.	no	Yes, Dev Plan required for SUP and for Use Variance. The Planning Commission may require additional information they determine to be necessary to act on the application.	Code of Ordinances Chapter 82 - Zoning, RI. High Groundwater Ordinance. http://www.jamestownri.net/plan/hgwt.html	10/21/2013
				Subdistrict B: SHWT >18" and ≤ 48", OR Impervious layer > 42" to ≤60" below original grade.			Subdistrict B: no subdrains, no footings below shwt.	Elevated structures < 120 sf exempt from impervious.	For admin approval in Subdistrict B: 1. Separation between foundation slab and shwt 12"; 2. Advanced treatment standards for OWTS; 3. Pathogen treatment if OWTS < 100 ft. from well; 4. Well and dwelling located on same lot; 5. impervious cover ≤ 15%; 6. Contain difference between pre- and post development RO volume for 10 yr. 24 hr. storm, with 10ft between leach field and sw infil. system. IF any standard not met, must apply for SUP. OWTS 50% denite and ≤ 19mg/l; TSS and BOD5 ≤ 10 mg/l each; f.coliform ≤ 1,000 MPN/100 ml; and ≤ 200 MPN/100 ml if well < 100 ft; OWTS and well on same lot as structure served	OWTS 50% denite and ≤ 19mg/l; TSS and BOD5 ≤ 10 mg/l each; f.coliform ≤ 1,000 MPN/100 ml or ≤ 200 MPN/100 ml if well < 100 ft. OWTS and well on same lot as structure served	B: Special use permit if one or more of the 6 development standards are not met.	Yes, if all 6 dev standards met. Review by Zoning officer, after review with planner and town engineer.	No, but must demonstrate compliance with standards	Code of Ordinances Chapter 82 - Zoning, High Groundwater Ordinance. http://www.jamestownri.net/plan/hgwt.html	10/21/2013
Little Compton	Zoning 14-5.8 Water Bodies and Wetland Setbacks	All structures & septic systems	Townwide	Freshwater and coastal wetlands	100		Administrative subdivisions, boat sheds, piers, bathhouses and fences	Advanced OWTS treatment required for new construction, alterations and repairs. Maximize distance between OWTS and house from wetland except where necessary to maintain 100 ft. between OWTS and well. No net increase in off-site runoff.	OWTS 50% denite and ≤ 19mg/l; TSS and BOD5 ≤ 30 mg/l each, or F.coliform ≤ 1,000 MPN/100 ml with TSS and BOD5 ≤ 10 mg/l each.		For lots of record, administrative approval from Building Official (between the 50 ft. state wetland buffer and town 100 ft. buffer - not specified if it goes to ZB if closer)	Yes, Site plan with DEM-verified wetland edge for new construction. Soil erosion and sediment control plan for new construction and OWTS alteration.	Code of Ordinances, Chapter XIV Zoning, Sec. 14-5 Supplementary Regulations. Subsec. 8 Water Bodies and Wetlands www.clerkshq.com	11/15/2013	
Middletown	Zoning Setbacks from wetlands	Disposal trench, cesspool, septic tank, or other leaching facility		Townwide	Any bog, marsh, swamp or pond Freshwater wetlands and flowing bodies less than 10 feet wide Any river or flowing body 10 feet wide or greater	50 100 200								Code of Ordinances, Title XV Land Usage, Chapter 152 Zoning Code, Appendix A, Article 6 Application of District Regulations, Section 707 - Setback from Wetlands or Rivers. www.amlegal.com	11/19/2013
Narragansett	Zoning ISDS Setback	Individual sewage disposal systems		Townwide	Any coastal feature adjacent to Narrow River, Pt. Judith Pond, Wesquage Pong or other poorly flushed estuarine waters	200								Code of Ordinances, Appendix A Zoning, Section 7 Supplementary Zoning Regulations, Subsection 5 Individual sewage disposal systems. www.municode.com	11/19/2013

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New Shoreham	Zoning Section 506 Onsite Wastewater Treatment Systems	OWTS		Townwide	150 ft. from freshwater wetland and coastal features. 200 ft from drinking water supply reservoirs and contiguous wetlands.	150, 200			Limits of construction and disturbance shown on plans and marked in field. Use of permeable driveways and LID to reduce runoff and maintain recharge. No net increase in off-site runoff. Must meet specified development standards and OWTS design requirements; demonstrate through engineering report that other resource protection criteria are met, and meet general zoning standards for SUP. Cesspool phase out applies townwide. Phase out of galley drainfields planned, beginning in critical water resource areas.	Advanced treatment standards established based on OWTS location within critical water resource areas, location within wetland buffers, and soil characteristics (depth to water table and impervious layer, and excessive permeability). Shallow drainfield (PSND) may be required. For OWTS located in wetland buffers to critical water resources, maximum 450 gpd design flow and <1880 sq.ft. dwelling living area.	Application for deviation in setback may be made to building official (BO) with administrative review and approval.  SUP where building official does not approve, applicant does not modify as recommended by BO, and any site with water table <= 2.5 ft. or impervious layer <= 4 ft.	New Shoreham had first review and approval of all OWTS applications before DEM under DEM Rule 17.3. Deviations in wetland setbacks are approved administratively if building official finds there are no alternative locations.	Cumulative impact assessment, engineering report to evaluate impacts to ground and surface waters for OWTS with design flow => 690 gpd.	Zoning Article 5, Performance Standards, Section 506 Onsite Wastewater Treatment Systems	10/21/2013
	Zoning Section 505 Uses Involving Toxic or Hazardous Waste									Groundwater quality resulting from OWTS or other onsite operations shall not fall below 5 mg/l nitrate-N at downgradient property boundary.					
Newport	Zoning Wetlands Setback	All development		Ocean Drive district	Designated wetlands and coastal features	75	All - To remain in natural state	Covenants or deed restrictions existing prior to adoption				Yes, by critical area review committee		Code of Ordinances. Title 17 Zoning, Chapter 92 Critical Area Review - Ocean Drive District. Section 070 Design Standards www.municode.com	12/5/2013
North Kingstown	Zoning Sec. 21-326. Septic System Setback	Any wastewater treatment system components	All lots created after effective date	Townwide	All surface water bodies, wetlands, and coastal features, mean high tide line	150		Systems or facilities in existence before Feb 21 2001						Code of Ordinances. Chapter 21 Zoning, Article XII Miscellaneous Provisions. Sec 21-326 Septic System setback. www.municode.com	12/5/2013
	Zoning Sec. 21-186. Groundwater recharge and wellhead protection overlay districts.			Groundwater overlay district						Maximum 5 mg/l nitrate loading standard for all new commercial and industrial development. Denite OWTS required for substandard residential lots (by area) with new construction or alteration. Average density of residential developments shall not exceed 1 dwelling unit /2 acres, no density bonuses allowed. Nutrient loading and recharge assumptions provided.	SUP	yes, including provisions of appropriate natural buffers for wetlands and surface water bodies. Nitrate loading analysis required; nutrient loading assumptions provided.	Code of Ordinances >> PART III - REVISED ORDINANCES >> Chapter 21 - ZONING >> ARTICLE VIII. - OVERLAY DISTRICTS www.municode.com	1/29/2014	
	Zoning Sec. 21-94 Post Road Business District			Post Road Business District					In addition to 5 mg/l nutrient loading standard for groundwater, requires use of infiltration measures and LID to maintain pre-development recharge conditions.				Code of Ordinances >> Part III - Revised Ordinances >> Chapter 21 - Zoning Article II. - Zoning Districts >> Business Districts >> Sec. 21-94 Post Road district >> www.municode.com	1/29/2014	
	Sec 21-95. Compact Village Development			Compact Village Development District					Nitrogen loading analysis required, maximum result of 7.5 mg/l for district. Nutrient loading and density limits based on number of bedrooms/acre.	OWTS effluent monitoring required, with nitrogen concentrations reported to town at least annually.			Code of Ordinances >> Part III - Revised Ordinances Chapter 21 - Zoning Article II. - Zoning Districts Business Districts Sec. 21-95 Compact Development district >> www.municode.com	1/29/2014	

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North Smithfield	Zoning Section 6.12 Wetland Setbacks for OWTS, Buildings and Impervious Surfaces	OWTS		Surface water supply watersheds and town-owned school WHPAs	freshwater wetlands	150	OWTS replacement, major repair, alteration or modification of OWTS which exists 30 days after ordinance date provided Advanced OWTS Treatment requirements are met.		Criteria for admin review [NS1]: general, 12 inch separation between bottom elev of the structure and SHWT; All new OWTS and major repairs DEM-approved denit or enhanced pathogen removal; demonstrate OWTS and associated buildings are sited as far as possible from wetland edge. Advanced treatment OWTS, limits of disturbance, reveg plan. Stormwater management plan using LID with impervious cover reduced to the maximum extent. No net increase in runoff volume between pre and post development for 25 yr. storm	Advanced treatment OWTS Category 1 for water supply watersheds, other sensitive waters; Category 2 non-critical areas; O&M agreement with advanced treatment and/or mechanical components recorded in Land Evidence records. Setback from OWTS and stormwater infil system 15 ft.	Special Use Permit if standards not met for admin review (for construction of OWTS not less than 100 ft. from wetland.	Yes, if dev standards met, including advanced treatment OWTS	Development plan including ESC / Stormwater mgt plans; plan for buffer revegetation. DEM verified wetland edge for new construction or alteration.	Zoning Section 6, Supplementary District Regulations, Section 6.12 Wetland Setbacks for Onsite Waste Water Treatment Systems, OWTS, Buildings and Impervious Surfaces Source: North Smithfield Planning Department	October, 2013
					Drinking water supply impoundment or tributary	200									
		Structures and Impervious Surfaces	Surface water supply watersheds and town-owned school WHPAs. Except "due to economic impact", zoning Districts RS20, MU1, and MU2, and all nonconforming RS40 lots <= 20,000 sq.ft.	freshwater wetlands	100	Developed wetland buffers where stormwater runoff volume is maintained at pre-dev levels or restored to mep. Elevated structures < 120 sq.ft in size. Certain accessory uses and structures < 200 sq.ft. Construction which is no closer to the wetland than the existing construction on the lot where provided general development standards are met.									
Portsmouth	Zoning Watershed Protection Overlay District		High risk uses	overlay district	All critical environmental areas, including reservoirs and their tributaries	95	All Zones - Uses which employ hazardous chemicals, chemical storage, auto repair shops		All development shall be situated as far from reservoirs, tributaries, and wetlands as reasonably possible. At least 50% of each parcel within 300 feet of the surface of a reservoir shall remain undisturbed. Discharge of stormwater into reservoir tributary wetlands granted upon adequate scientific and technical documentation that proves elimination of any measurable impact to water quality	Alternative technology septic systems shown to greatly reduce nitrogen, pathogens, BOD, and TSS shall be used in the A Zone. BMPs are required for all uses within Watershed Protection district. All septic tanks installed after effective date to be certified watertight according to ASTM standards		All proposed construction (except single family houses) shall be reviewed by Planning Board. Single family houses reviewed by Zoning Officer	Environmental Review Assessment	Zoning Ordinance, Article 3, Section H, Watershed Protection District	12/5/2013
			OWTS		reservoir	200	UD Zone - Outdoor junk storage, outdoor or underground storage of hazardous material, sewage treatment plants, incinerators, landfill, solid waste transfer stations, vehicle washing establishments, water discharge systems (except surface water), placement of ISDS with 200 feet of reservoir								
Richmond	Zoning	Sewage disposal facilities		Townwide	Any water body	50								Code of Ordinances, Title 18 Zoning, Chapter 36 Special Regulations, Section 080 Sewage disposal facilities www.municode.com	12/5/2013

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Scituate	Zoning	Building or structure Sewage disposal facilities		Townwide	Any pond or stream	75 150					Special use permit			Code of Ordinances, Appendix A Zoning, Article IV Special Regulations, Section 7 Setbacks from Water Bodies www.municode.com	12/5/2013
	Subdivision, Sec. 14-55, Specifications of condition, design, layout and construction	All construction	subdivisions	Townwide	Any wetland	100			At a minimum, all lots shall have sufficient building area so that all construction will be a minimum of one hundred (100) feet from any wetland.		Planning Board review and approval			Code of Ordinances >> Part II Chapter 14 - Subdivisions and Land Development >> Article III, Subdivision Review Sec. 14-55 (14)	2/18/2014
Smithfield	Zoning	All structures		Townwide	Freshwater Wetlands	100			Within the outermost 50 feet of the buffer, decks, swimming pools, septic systems, fences, signs, accessory structures under 200 sq feet, and parking lots are permitted					Zoning Ordinance, Article 5 - Dimensional Regulations, Section 5.3.4 Buffers	12/5/2013
South Kingstown	Zoning, Section 504 Special Use Permits (pertaining to OWTS)	OWTS	construction of new dwelling or complete replacement of existing.		fresh water and coastal wetlands	150	Repair or replacement of existing OWTS or leach field IF meeting performance standards for advanced treatment.		Maximum 15% impervious cover. Maintain natural drainage based on 24 hr., 25 yr. storm. Locate OWTS and dwelling as far as possible from wetland; reduce size of dwelling and configuration to minimize site disturbance. Revegetate wetland and restore compacted soils following construction. Criteria in zoning ord. to address cumulative impacts to wetland through use of OWTS, land clearing and grading and/or stormwater runoff from impervious surfaces. Res construction must meet min dimensional setbacks of the zoning district. ZB may not grant any dimensional relief for setbacks concurrent with SUP application.	Advanced treatment required within CRMC SAMP, Wellhead protection areas, groundwater overlay district, within 100 ft of a well, high water table less than 48". OWTS 50% denite and <= 19mg/l; TSS and BOD5 <= 30 mg/l each; f.coliform <= 1,000 MPN/100 ml or <=200 MPN/100 ml if well < 100 ft.	(For sake of consistency, should be same as Barrington) Advisory review by Conservation Commission to ZB.		Yes, including site plan with DEM-verified wetland edge, erosion control plan, stormwater mgt plan with use of LID, buffer revegetation plan with fencing to prevent disturbance. Post construction certification required to demonstrate compliance with approved plans and conditions of approval.	Code of Ordinances, Appendix A, Zoning, Article 5 Supplementary Regulations, Section 504 Special Use Permits (pertaining to OWTS). http://www.municode.com/library/RI	10/22/2013
Tiverton	Zoning, Article VI, Other District Regulations, Section 7. Setbacks from certain water bodies.	OWTS	Townwide EXCEPT Stafford Pond Watershed	town except Stafford Pond drinking water supply watershed	Several named (but not limited to) freshwater and coastal wetlands, unnamed perennial streams on UGSG map, and any other waters or wetlands defined. Does NOT include Stafford Pond watershed.	125 ft - single family homes; 200 ft all other uses, except where exceeded by state requirements.					Special Use Permit			Code of Ordinances >> Part III Appendix A - Zoning Article VI Other District regulations >> www.municode.com	7/31/2007
	Zoning, Article VII, Watershed Protection Overlay District Regulations, Section 7. Setbacks from certain water bodies.	Development		Stafford or Nonquit Ponds and their direct tributaries		200	Natural Vegetation shall not be disturbed. Efforts to improve existing buffers are encouraged.		Maximum 10% impervious cover.	Cesspool / substandard system phase out by 2005 within overlay district	Special Use Permit for development within Overlay district	Use Variance for development within 200 ft. of water supply reservoirs and direct tributaries	Environmental Review Statement required with special use permit application	Code of Ordinances >> Part III Appendix A - Zoning Article VIII, Watershed Protection Overlay district >> www.municode.com	7/31/2007
Warren	Zoning Wetlands Setback	All development ISDS Sewage disposal facilities		Townwide	Any wetland, water body, coastal feature, or stream	50 100 150	All development		Provisions of Article IV					RI Zoning Ordinance, Article XV Special Yard and Dimensional Requirements, Section 32-89 Setback from Wetlands and Water Bodies. www.townofwarren-ri.gov	12/12/2013
Warwick	Zoning Coastal Setback	All structures, impervious surfaces, ISDS, and underground utilities		Townwide	Coastal features	50	All structures, impervious surfaces, ISDS, and underground utilities	Docks, piers, boat launching ramps, or similar structures	Minimum lot area per dwelling unit requirement within 200 feet of mean high-water mark must adhere to Table 2A for the zone it is located in.					Code of Ordinances, Appendix A Zoning, Section 500 Sepcial Regulations, 503 Coastal regulations	12/12/2013
	Zoning Wetlands Setback	All structures, impervious surfaces, ISDS, and underground utilities		Townwide	Freshwater wetlands	50								Code of Ordinances, Appendix A Zoning, Section 500 Sepcial Regulations, 504 Freshwater wetlands regulations	12/12/2013
West Greenwich	Zoning OWTS Setback	Sewage disposal facilities		Townwide	Any pond or stream	200								Zoning Ordinance, Article VII Special Regulations, Section 5 Setbacks from Water Bodies	12/12/2013
Westerly	Zoning Hazardous Waste Management Facility Siting	Hazardous Waste Management Facilities		Townwide	Freshwater wetlands and other water-related sensitive areas	1,000								Code of Ordinances, Article XI Development Standards for Particular Uses, Section 260-84 Hazardous waste management facility siting, www.ecode.com	12/12/2013
Multiple Communities	Erosion and sediment control ordinance and/or regulations		Construction or alteration of a single family home or duplex	Townwide	Watercourses and coastal features	100 - 200 (varies by town)	A determination of applicability must be submitted to the town and if necessary, a soil erosion and sediment control plan must be prepared.		A performance bond may be required for any land disturbance activity within the specified buffer distance.					RI General Law, Title 45 Chapter 45-46 Section 45-46-5 Model ordinance - Soil erosion and sediment control.	2/21/2014

## Legislative Task Force Meeting #4

**Thursday, December 19, 2013**

8:00 AM – 10:00 AM

Conference Room C, 2<sup>nd</sup> Floor

Department of Administration

One Capitol Hill, Providence, RI



Task Force members in attendance were: Jim Boyd (Coastal Resources Management Council), Joseph Casali (Civil Engineer Representative), Russell Chateaufneuf (Civil Engineering Representative), Janet Coit (DEM Director), Thomas D'Angelo (Builder's Trade Association), Gary Ezovski (Business Community Representative), Kevin Flynn (DOP-Associate Director), Vincent Murray (Municipal Representative – South Kingstown), Tom Kutcher (Wetlands Biologist), Eric Prive (Environmental Engineering Representative), Scott Rabideau (Business Community Representative), Leslie Taito (Office of Regulatory Reform).

The Division of Planning (DOP) and DEM also had several agency staff members present. From DEM, those present were Carol Murphy, Ernie Panciera, Terry Gray, and Alicia Good. Nancy Hess and Sean Henry were on hand from DOP.

### Welcome and Introduction

Director Flynn began the meeting by introducing the meeting's presenters. Dr. Peter Paton is a wildlife ecology professor at the University of Rhode Island, whose specialty is the effects of humans on wildlife populations, and his presentation was an examination of the buffer zones around wetlands. Nancy Hess (DOP) also had a short presentation which was a culmination of the information presented to the task force thus far.

### Wetlands Buffer Zones

Dr. Paton began his presentation by defining what "buffer zones" are: A vegetative area designed to protect both the water quality and movement corridors (and habitats) of wildlife species. In terms of wildlife protection, buffers function as travel corridors between habitats, nesting areas, access to resources, and more for many species. Dr. Paton also highlighted that the "habitat matrix", essentially the types of habitats surrounding the wetland, will have an effect on what types of species use that particular area. Using a local example, he stated "[a] fifty foot buffer in the middle of Cranston is going to have radically different wildlife than a fifty foot buffer in western Rhode Island." The buffers create "uplands", areas of habitat in close proximity to the wetland. Large percentages of reptile, avian,

and amphibian species use the uplands as much as the wetland itself, all at different times of the year. Vernal pools are particularly important for these wildlife functions, because they do not retain water year-round and lack the presence of fish, which are predators for amphibians. There is also no buffer for vernal pools (referred to as "special aquatic sites" in Rhode Island law).

Dr. Paton offered a theory of wetlands regulation created by Ray Semlitsch called the life zone, which creates various buffers around a wetland that protects the surrounding core habitat, but still allows for some development within some of the buffers. The types of development allowed would typically be low-density housing, to minimize negative effects on the nearby habitats, and would be limited to a certain percentage of the total buffer zone. After detailing this theoretical regulatory route, members discussed vernal pool regulations at the local level and in surrounding states. Dr. Paton took several questions on the findings and examples he provided earlier in the presentation.

### Wetlands Buffer Zones (cont'd)

After the discussion, Dr. Paton continued the presentation by outlining the current regulatory regime regarding vernal pools in Maine. In the Pine Tree State, vernal pools enjoy a 100 foot "envelope" on all sides in which no development can take place. Beyond that, there is a 750 foot buffer referred to as "critical terrestrial habitat" that must remain at least 75% undisturbed. There are also "significant vernal pools", which have a 250 foot "zone of consultation" around them. In the zones of consultation, no unreasonable disturbances can be made. Members then discussed the implications of this regime and compared it to aspects of current Rhode Island law and Dr. Paton fielded more questions pertaining to vernal pools and wildlife conservation considerations. Mr. Rabideau commented on the need for any plan the task force eventually presents to the legislative to be simpler and more predictable than the current regulations, and members talked about feasibility and how to make rules that provide adequate protection for the municipalities to be content with, that are simpler than current standards, and more predictable for the development and business communities to better navigate. Discussion continued in the area of vernal pools and the ways both Rhode Island and Massachusetts identify and classify vernal pools. Carole Murphy outlined the system Rhode Island has used to identify them. The members agreed that vernal pools are relatively special areas of environmental concern and need better protection than is provided under current state law.

### Nancy's Top Ten Wetland Functions

Nancy Hess, DOP, next provided a summary of the task force's first two presentations (at the November and December meetings). To this end, she constructed a list of the ten most important functions and values of wetlands discussed to date:

1. Food chain and food diversity
2. Wildlife habitat
3. Fish and shellfish habitat
4. Flood storage
5. Erosion control
6. Water filtration and transformation
7. Groundwater recharge and discharge
8. Open space and aesthetics
9. Recreation
10. Education and research resources



### Next Steps and Next Meeting

Nancy Hess reviewed the tentative schedule of subject matter for the meetings to take place in 2014. A presentation on OWTS (Onsite Wastewater Treatment Systems) regulations is scheduled for January, but future topics include regulatory platforms for other states, examining wetlands regulation at the municipal level, case studies involving wetlands regulatory friction points, and other areas. The next meeting was scheduled for January 21st, 2014 at the Department of Administration building

### Adjourn

10:00 AM

**Tuesday, January 21, 2014**

8:00 AM – 10:00 AM Conference Room B,  
2<sup>nd</sup> Floor Department of Administration One  
Capitol Hill, Providence



Task Force members in attendance were: Jim Boyd (Coastal Resources Management Council), Joseph Casali (Civil Engineer Representative), Russell Chateaufneuf (Civil Engineering Representative), Janet Coit (DEM Director), Tim Stasiunas (Builder’s Trade Association), Gary Ezovski (Business Community Representative), Kevin Flynn (DOP-Associate Director), Lorraine Joubert (Environmental Entity), Tom Kutcher (Wetlands Biologist), Nancy Scarduzio (Office of Regulatory Reform).

The Division of Planning (DOP) and DEM also had several agency staff members present. From DEM, those present were Alicia Good, Carol Murphy, Ernie Panciera, Terry Gray, and Brian Moore. Nancy Hess and Sean Henry were on hand from DOP.

#### Introduction

Kevin Flynn introduced the meeting’s presenters, University of Rhode Island professor Arthur Gold and URI Onsite Wastewater Treating Center Director George Loomis. The two men presented information pertaining to Onsite Wastewater Treatment Systems (OWTS) and water resource issues.

#### Water Pollutants

Art Gold was the first presenter. He began by outlining three main pollutants in water: pathogens, phosphorus, and nitrogen. Pathogens (bacteria, viruses, parasites, etc.) are an obvious pollutant, as well as a health risk, and can be retained in water for a very long time. Phosphorus is an issue for freshwater because algae growth is limited by a lack of phosphorus. Phosphorus is a nutrient that triggers excessive growth of algae which then reduces water clarity. As algae die and decompose, they consume dissolved oxygen in the water column, resulting in low oxygen levels, and degrading the overall health of the water resource. Blue-green algae are particularly hazardous because they can release cyanotoxins, a neuro toxin that is a health hazard to both animals and humans alike.

Nitrogen is another nutrient that that causes similar problems in coastal water resources. Even very low levels of nitrogen can generate explosive algae growth and deplete oxygen levels in water, leading to “dead zones” that are unsuitable for aquatic life

#### Onsite Wastewater Treatment Systems

George Loomis presented the next segment of the meeting. He presented a basic “OWTS 101” for task force members not as familiar as others with the workings of these systems. OWTSs have several components. In a conventional system, wastewater exits a structure through a sewage pipe and enters a septic tank. Here solids settle and there is some anaerobic decomposition, typically over a 2-day residence time in the tank. Liquid wastewater effluent then exits into a leach field where the effluent is dispersed and allowed to slowly seeps into the soil and into the groundwater. This process relies on the unsaturated soil underlying the drainfield to treat wastewater through filtering and aerobic processes. It requires adequate vertical separation distance between the bottom of the drainfield and the groundwater table, as well as horizontal distance to wetlands and other surface waters to increase travel time before discharge to nearby wetlands and surface waters.

In an advanced treatment system there is treatment unit between the septic tank and drainfield, which is usually designed to reduce nitrogen. Pressure-dosed drainfields are often used to distribute effluent more evenly throughout the drainfield rather than by gravity flow. In addition, these are generally shallow, placed in the upper soil to allow better pollutant removal by microbes and grass roots, and to increase separation distance from the water table. These drain fields can be in a variety of configurations, but the important fact to remember is that the longer it takes the wastewater to reach the local water table, the more time the wastewater has to potentially be treated. The composition and character of the surrounding soil is also a contributing factor to how much nitrogen and phosphorus can be removed from the wastewater during the aerobic phase before it reaches the water table.

### Questions

The gentlemen paused their presentation to field several questions from task force members. Questions included subjects such as the levels of nitrogen removed by wastewater treatment systems (10-15% in tank, 50% in denitrifying system), and what engineers do when soils around a system have become saturated. Members also discussed some of the topics Mr. Gold and Mr. Loomis had presented. The use of advanced treatment technologies, impacts of climate change, and Rhode Island wastewater treatment regulations were discussed as well.

### Water Resources

Mr. Gold continued his presentation on what happens to wastewater after it leaves the OWTS drain fields. He started by sharing that water flows in the direction of least resistance. Rather than flowing downhill or towards a water resource, it will move through the soil in whichever direction provides the easiest flow. Hydrologists and developers cannot know how deep an aquifer is or in which direction it flows without digging a well to observe it, which is expensive. Urbanization and filling can also change the flow of the groundwater. He mentions that some people have begun using different substances and filters for phosphorus retention in order to prevent most of it from reaching the soil. When asked about the source of phosphorus in OTWS systems by Mr. Flynn, he shared that the main sources are fertilizers and human waste.

Beneath the soil's surface, groundwater eventually reaches a water body. If there is a sandy or gravelly layer of sand, water will move in that direction because it provides the path of least resistance. Buffers provide the necessary space for water to disperse and be treated by the soil. Mr. Gold finished his presentation by sharing his parting thoughts about buffers and buffer width. He believes there is no silver bullet distance that would prevent all forms of contamination and balance development concerns. He also noted that wetland buffers provide a measure of safety, reducing the risk of contamination while avoiding costly field investigations needed to establish a site-specific buffer distance. He then fielded several questions from task force members pertaining to water flow, OWTS, climate change, and treatment regulations.

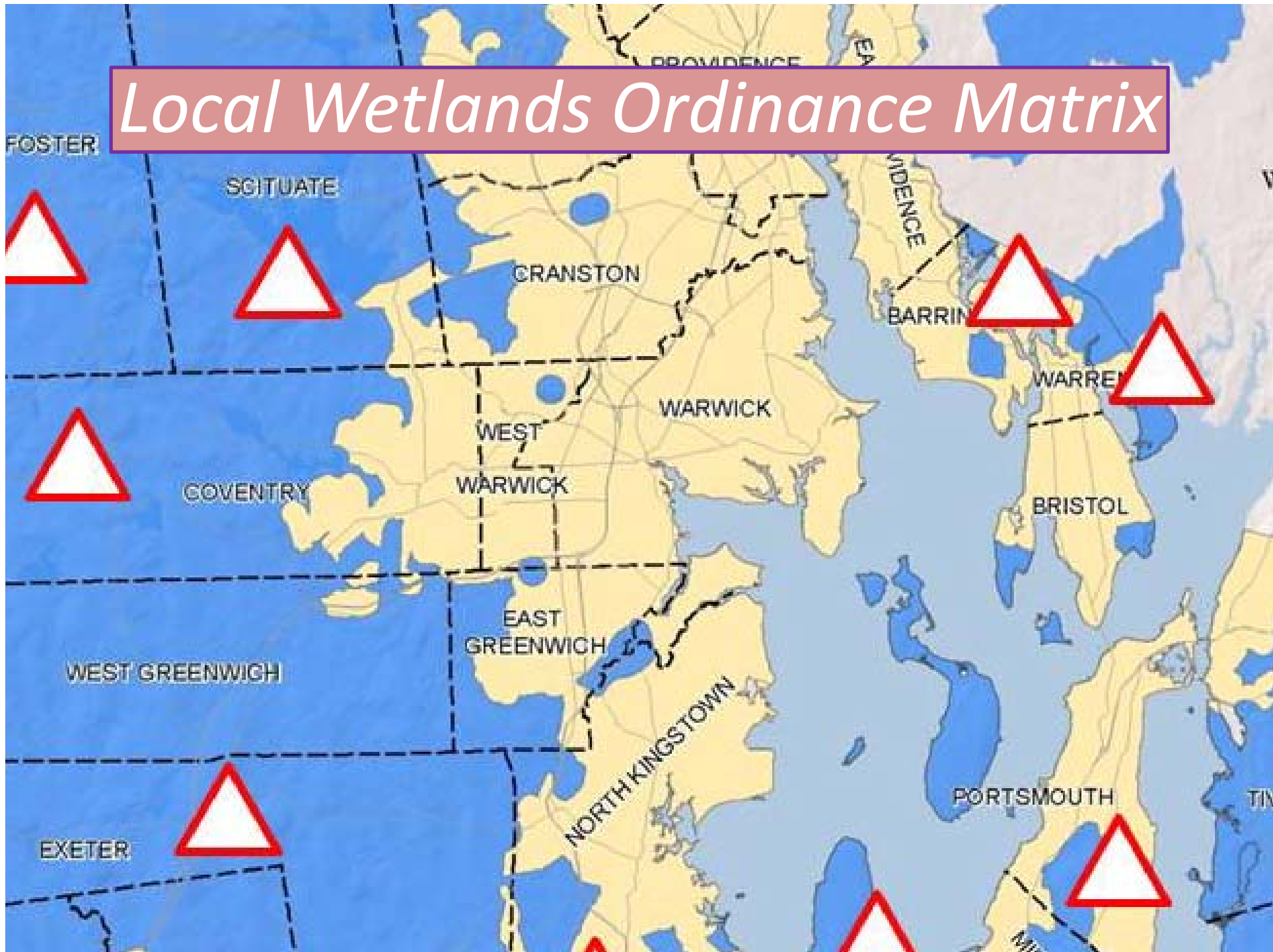
### Next Meeting

The next meeting is scheduled for February 27 at the same location. Next month's topic is the relationship between state and municipal regulations and friction points as they relate to wetlands management. Nancy Hess also stated that the materials from the meeting would be put onto the task force's webpage.

### Adjourn

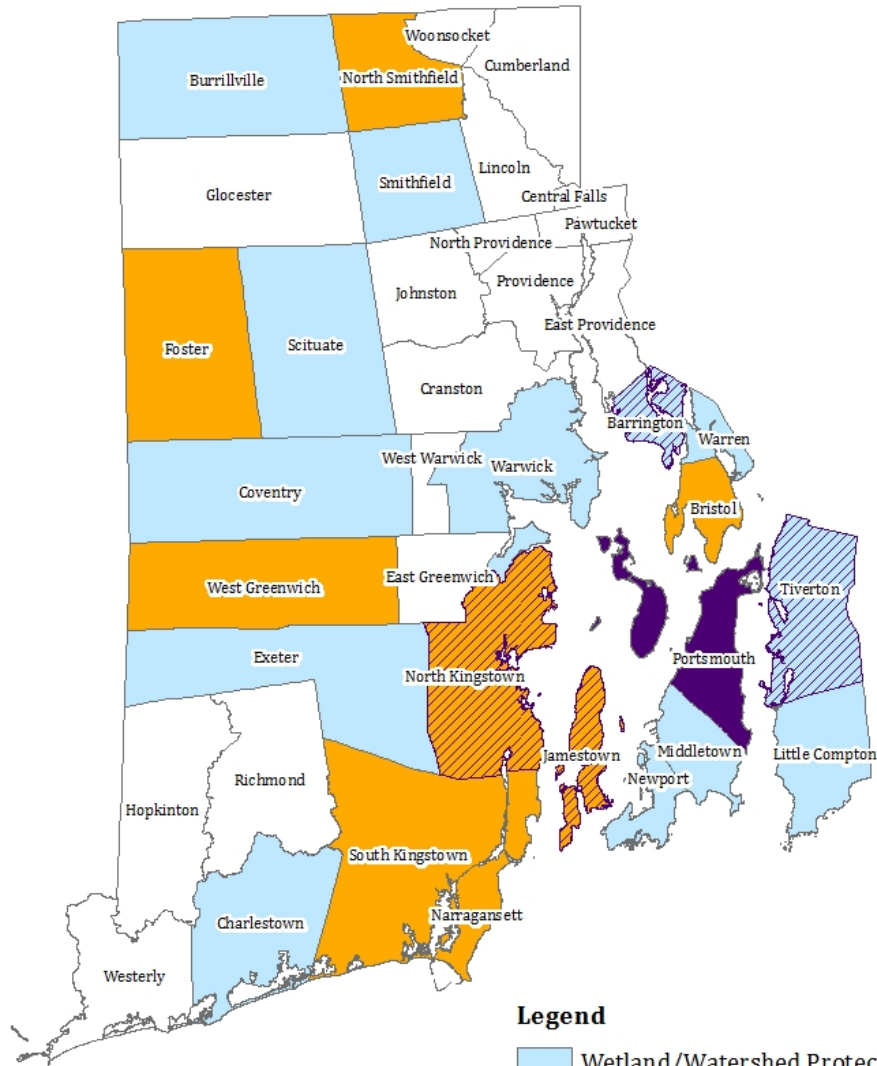
10:00 AM

# Local Wetlands Ordinance Matrix





New Shoreham



- Legend**
- Wetland/Watershed Protection
  - OWTS Regulations
  - Wetlands Related Overlay Districts

