

Wetland Buffers in New Hampshire

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What Are Wetland Buffers?

- **“An area of upland adjacent to a wetland intended to protect the wetland from indirect impacts resulting from activities in the upland that degrade the wetland values as enumerated in RSA 482-A:1”**

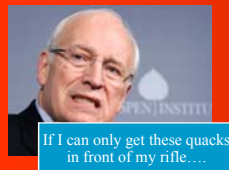
• [As proposed by the Land Development Commission, 2010]



Wetland Buffer Protection in NH – A Brief Snapshot

- 2006: NH Supreme Court upholds NH Wetlands Council permit decision for Greenland development project, thus limiting DES' consideration of indirect impacts
- 2007: SB 435 that would require DES' consideration of direct and indirect impacts to wetlands is tabled; reheard in 2008
- 2008: NH House establishes Land Development & Land Development Regulation Commission to study wetland buffers and their role in protecting wetland function
- 2008: Army Corps re-issues SPGP with updated guidelines for Secondary Impacts
- 2009: HB 222 that would require DES' consideration of direct and indirect impacts to wetlands is ITL'd
- 2009: HB 384 establishes waivers for work in the buffer of prime wetlands, notably for utilities and the forest products industry
- 2010: LD Commission submits report and proposes revisions to RSA 482-A to recognize wetland buffers based on NH Method function scores
- 2011-12: SB 19 eliminates prime wetland buffers (100 ft) from law; forestry impacts allowed in prime wetlands if "minimum impact"
- 2014-15: HB 349 that would require DES to consider impacts to wetland buffers before granting permits is tabled in Feb.; NHANRS wetland buffer scientific work group is established in Mar.

THE COMMITTEE...



Then of course, there was ...

THE DONALD !!



“WE MUST SAVE THE
WETLANDS.....

They are our SOROTF”

[Strategic Oil Reserves Of The Future!!!!]

THE NHANRS WETLAND BUFFER SCIENTIFIC WORK GROUP:

- Rick Van de Poll, CWS, NHANRS Work Group Chair
- Larry Morse, CWS, CSS, NHANRS Legislative Committee Chair
- Collis Adams, Chief, NHDES Wetlands Bureau
- Mary Ann Tilton, Assistant Bureau Administrator, Wetlands Bureau
- Cindy Balcius, CWS, CSS, Stoney Ridge Environmental
- Pete Walker, CWS, Van Hagen Bruslin
- Tracy Tarr, CWS, GZA Environmental
- Matt Urban, Wetlands Program Manager, NHDOT

Findings of the Land Development Commission

- 1) “The implementation of a statewide standardized wetland buffer system is a practical approach to balancing the need to protect wetlands with the rights of private property owners and the ability of NHDES to efficiently administer such a program”
- 2) “The functions of a wetland are of utmost importance when prioritizing wetlands for protection. When defining indirect impacts to wetlands, the primary functions of ecological integrity, water quality, water quantity, and wildlife should be considered
- 3) To balance competing interests such as economics, private property rights, and environmental protection, wetland buffers should be applied only to the most functionally significant wetland, i.e. the most significant 10 to 25% of all individual wetlands. Not all wetlands need to be protected from indirect impacts.”

Tasks of the NHANRS Wetland Buffer Scientific Work Group

- 1) Compile a database of wetland assessment using the Method for Inventoring and Evaluating Freshwater Wetlands in New Hampshire (The ‘NH Method’)
- 2) Review the database and determine the appropriateness of using the NH Method to identify High Value Wetlands (HVW)
- 3) Conduct a review of other wetland assessment methodologies for possible use in the identifying HVW’s

Tasks of the NHANRS Wetland Buffer Scientific Work Group

- 4) Compile and review pertinent scientific literature related to the role of wetland buffers in protecting wetland function
 - 5) Compile and review wetland buffer regulations from other states in New England
 - 6) Draft suitable criteria for identifying high value wetlands and recommend adequate buffers to protect these wetland types
- (Phase II): Seek input from other stakeholder groups and integrate these recommendations into a report to the NH legislature in favor of passing a wetland buffer bill

Buffer Protection Goal #1



Buffer Protection Goal #2



Buffer Protection Goal #3



WBSWG Process

Phase I

- 8 Meetings (7 'Official')
- Reviewed scientific literature on buffers
- Evaluated use of NH Method for establishing thresholds
- Reviewed buffer regulations in other New England states
- Agreed upon an alternative approach



WBSWG Process

- Designed a "Simplified Approach" to identifying high value wetlands or HVW's that mimicked Maine's approach
- Defined each category or class
- Reviewed scientific basis for each HVW type
- Drafted summary document



Findings

- ❖ Literature Review:
 - ❖ 18 state-specific publications
 - ❖ 6 compendiums representing 468 peer-reviewed articles
 - ❖ All state BMP's
 - ❖ EPA guidance documents on buffers, RMZ's
 - ❖ Army Corps guidance on direct, secondary, and cumulative impacts mitigation
 - ❖ Compiled 16-page reference list on wetland buffers

ResearchGate

See discussion, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/262929255>

Streamside Forest Buffer Width Needed to Protect Stream Water Quality, Habitat, and Organisms: A Literature Review

ARTICLE IN JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION
Report Number: 1.0: DOI: 10.1111/jwa.12188

Legislative Task Force

The Science of Setting Buffers for Wetlands and OWTS: A Literature Review
August 8, 2014

13

2 ARTICLES, INCLUDING:

Diane A. Nadel
Stream Water Research Center

Rhode Island Department of Administration
Division of Planning
One Capitol Hill
Providence, RI 02908
www.dplanning.state.ri.us

RHODE ISLAND DIVISION OF PLANNING

Use of the NH Method

1. Total of 133 wetland evaluations submitted by 10 wetland scientists
2. Wetlands from all over the state, mixed types (not just high value)

Wetland Functions & Scores	MEAN	ST DEV	1 st Quart	2 nd Quart	3 rd Quart
1. ECOLOGICAL INTEGRITY	7.20	2.10	5.40	7.60	9.00
2. WETLAND WILDLIFE HABITAT	6.55	1.53	5.33	6.50	7.70
3. FISH & AQUATIC HABITAT	4.52	1.69	3.40	4.45	5.73
4. SCENIC QUALITY	6.26	1.96	4.57	6.00	7.90
5. EDUCATIONAL VALUE	5.87	1.66	5.09	6.07	6.86
6. WETLAND-BASED RECREATION	5.64	1.73	4.31	5.50	6.90
7. FLOODWATER STORAGE	4.13	1.55	2.92	4.08	5.20
8. GROUNDWATER	3.60	2.63	1.00	3.30	5.90
9. SEDIMENT TRAPPING	5.75	1.68	4.60	5.75	6.70
10. NUTRIENT TRANSFORMATION	6.02	1.70	5.10	6.30	7.30
11. SHORELINE ANCHORING	6.22	2.69	5.50	6.63	8.13
12. NOTEWORTHINESS	25.53	13.60	10.00	30.00	35.00

Comparison with Other States

MAINE

Natural Resources Protection Act (NRPA) 38 MRSA Sec 480-B (1988)

Under the NRPA adjacency provision, activities within 75 ft of certain wetlands (wetlands of special significance), and rivers, streams, and brooks are regulated.

Additionally, under NRPA, a 250 ft regulatory zone extends from the edge of certain vernal pools.

Wetlands of Special Significance

75' Buffer

Significant Vernal Pool

250' Buffer

Wetlands Protection Act Massachusetts General Laws (MGL) Chapter 131, Section 40

Under the Massachusetts Wetlands Protection Act, upland activity within 100 ft of most wetlands and within 200 ft of perennial streams is regulated.

Most Wetlands

100' Buffer applies to the following:
Bordering vegetated wetlands
Banks (i.e., streams, ponds)
Land under waterbody
Bordering land subject to flooding (i.e., 100-year floodplain)

Perennial Streams

200' Buffer applies to:
Perennial streams (as defined on USGS topo maps)

Comparison with Other States

VERMONT

Vermont Wetland Rules Vt Code R. 12 004 056 Amendments adopted 7-16-10

Under the Vermont Wetland Rules (VWR), upland activity adjacent to wetlands is regulated. In most cases, the buffer is 100 ft from Class I and 50 ft for Class II wetlands. The VWR give authority to the Secretary of ANR to increase the buffer under certain circumstances.

http://www.watershedmanagement.vt.gov/wrprules/wsm�_VWR%207-16-10.pdf

Class I Wetlands

100' Buffer

Class II Wetlands

50' Buffer

RHODE ISLAND

Freshwater Wetlands Act, RI General Law Section 2-1-18

In Rhode Island, a 50 ft buffer is applied to some freshwater wetlands based on their type and size. In the coastal zone, permits for upland activities are generally required within 200 feet of a tidal wetland or coastal feature.

Perimeter Wetland

50' Buffer

Riverbank Wetland (Stream width < 10 ft)

100' Buffer

Riverbank Wetlands (Stream width ≥ 10 ft)

200' Buffer

Comparison with Other States

CONNECTICUT

Inland Wetlands and Watercourses Act (IWWA), Sections 22a-36 through 22a-45 of the General Statutes of Connecticut.

Connecticut Coastal Management Act (Section 22a-90 through 22a-112 of the Connecticut General Statutes), the Structures Dredging and Fill statutes (Section 22a-359 through 22a-363f) and the Tidal Wetlands Act (Section 22a-28 through 22a-35).

Freshwater wetlands are regulated by each municipality under the IWWA; the upland review zones, buffer zones, and setbacks that may be required vary widely among the regulations adopted by the 169 municipalities implementing the IWWA.

The CT DEEP Coastal Management Program regulates work in tidal, coastal and navigable waters and tidal wetlands, where a minimum 100-foot buffer zone is recommended.

New Hampshire

NH Dredge and Fill (RSA 482-A) and NH Code of Administrative Rules Chapters Env-Wt 100-900

100' Tidal Buffer Zone - 100' from highest observable tideline

100' Prime Wetlands Adjacency - Municipally Designated Prime Wetlands (pre-2007)



Proposed: The “Simplified Approach”

- **Based on the definition of High Value Wetlands (HVW)**
 - 1) S1 or S2 wetland natural community (NHB) – size established by NHB
 - 2) Exemplary wetland natural community (NHB) – size established by NHB
 - 3) Critical Wildlife Habitat (NHF&G)
 - a) Marsh/Scrub-Shrub: .75 acres min. size within the entire wetland evaluation unit being evaluated
 - b) Peatland: no min. size, definition initially set by NHB selection of NWI types for NHF&G use in mapping peatland habitats, field requirement of $\geq 50\%$ sphagnum moss
 - c) T&E Wildlife Species: documented occurrence or habitat in wetland; no min. size

Proposed: The “Simplified Approach”

- d) Wetland is within 50 feet of *and* hydrologically connected to a Tier 3 or larger stream; buffer to be set from the Ordinary High Water Mark (OHWM) of the stream, regardless of the width of the wetland – need to add 25-foot buffer to wetland itself
- e) Wetlands within the Active Floodplain (i.e. extent of frequently flooded soils); buffer to extend from the edge of the maximum extent of the Active Floodplain
- f) Forested wetlands > 5 acres* and not otherwise included in the above criteria, this shall include all forested wetlands that have a minimum of 50% very poorly drained soils

❖ Note that this minimum size was added after the meeting by email vote based on minimum map unit sizes for each county in NH (very poorly drained soils), and mean forested swamp polygons sizes (NWI) that were not peatland units according to definitions of the NH Natural Heritage Bureau and the NH Fish & Game Department. (see process description)

Summary Chart

Wetland Type	Defined By	Min. Size	Recomm. Buffer	Exceptions?
S1 or S2 Natural Community	NH Natural Heritage Bureau (NHB)	None	??????	None
Exemplary Nat. Community	NHNHB	None	??????	None
Critical Wildlife Habitat				
a. Marsh/Scrub-Shrub	NH Fish & Game Dept. but determined by DES	.75 acres	??????	Wet meadows, Ditches, gravel pits, det. basins
a. Peatland	NH Fish & Game Dept., NHB	None	??????	If < 50% sphagnum
a. T&E Wildlife Species and/or Habitat	NHF&G documented occurrence of species or habitat	None	??????	None
Tier 3 or larger stream	watershed > 640 acres; wetland must be hydrologically connected & adjacent	No minimum channel width	??????	SWQPA guidelines supercede
Wetlands within Active Floodplain	geomorphological features on landscape	None	??????	SWQPA guidelines supercede
Forested Wetlands	Non-peatlands; >30% cover by tree canopy	5 acres	??????	

Approximate Amount of Wetlands Affected (NWI only)

- S1, S2, Exemplary Natural communities: N = 627, most alpine, coastal, floodplain [2500 – 3000 ac.]
- Marsh/Scrub-Shrub > .75 acres:
 - N = 8348 [37382 acres]
 - N = 13493 [69250 acres]
- Peatlands (any size)
 - PSS2/3 N = 878 [4132 acres]
 - All other Ba subscripts N = 103 [1668 acres]
- T&E species habitats (included)
- Tier 3 streams N = 1120 [9734 acres based on 50-ft buffer
- Floodplains (included)
- Forested Swamps > 5 ac. N = 6009 [96796 ac.]
- S1/S2/ENC: 0.6%
- PEM/PSS: 22%
- Peatlands: 1.2%
- T&E Spp.: ?
- Tier 3 stream edges: 2.0%
- Floodplains (included)
- PFO's > 5 ac.: 19.9%

Phase II Integration

- Receive & incorporate feedback from NHANRS BOD, NHDES
- Circulate draft among various stakeholder groups
- Hold open discussions with various stakeholder groups and members of the NH legislature
- Work through 2016 to establish bill for next session
- Submit for consideration during 2016-2017 legislative session



Some Remaining Questions

- Does the state-established buffer guidance nullify local rule?
- Can HVW's be recognized in a statewide GIS database that is available to the public?
- What happens when during an application review an S1, S2 or exemplary natural community is discovered?
- Can this 'simplified approach' be adapted to the use of a rapid assessment method?
- Can directional buffers be established on the basis of impacts to function?
- Conversely, can directional relief from buffer setbacks be offset by ILF payments? At what rate?