R I Freshwater Wetlands
“Buffer Zones”

November 29, 2012
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RIDEM Freshwater Wetlands
Buffer Zone Defined

Means an area of undeveloped vegetated land retained in its natural undisturbed condition, or created to resemble a naturally occurring vegetated area which serves to mitigate impacts from human activities to wetland functions & values.
Area of Land Within Fifty Feet (‘‘Perimeter Wetland’’)

A freshwater wetland consisting of the area of land within fifty feet (50’) of the edge of any bog, marsh, swamp or pond as defined by the Rules.
Swamp

- Three acres or greater in size
- Where groundwater is near or at surface for significant part of the growing season or where surface water drainage collects frequently
- Dominated by woody growth
Pond

- Quarter acre or greater in size
- Natural or manmade
- Open standing or slowly moving water present for at least 6 months a year
Marsh

- One acre or greater in size
- In standing or running water during the growing season
- Dominated primarily by herbaceous emergent plants
Bog

- No minimum size, with standing/slowly moving water near or at surface during a normal growing season
- 50% ground or water surface covered by Sphagnum moss
- Specific species of vegetation listed
Measurement

- Measured from the landward edge
- Measured without regard to topography
Special Cases

• Wetland Complexes

• Wetlands Separated by Physical Barriers
  – 4+ lane highways
  – 2 lane roadways
  – Driveways
  – Other barriers (e.g. railroad)
Special Cases (continued)

- Wetlands Not Separated by Barriers
  - Connected only by ASSF
  - Connected only by river or stream, where wetland is entirely within the banks
  - Connected by clear wetland corridor along any watercourse type
  - Separated by *natural* barrier with suspected subsurface hydrological connection
Riverbank Wetland

That area of land within two hundred feet (200’) of the edge of any flowing body of water having a width of ten feet (10’) or more, and that area of land within 100 feet (100’) of the edge of any flowing body of water having a width of less than ten feet (10’) during normal flow.
Flowing Body of Water

Any river, stream or intermittent stream which flows long enough during the year to develop and maintain defined channels and generally has flowing water at times other than those periods immediately following storm events. Such watercourses have defined banks, a bed, and maintain evidence of flow or continued reoccurrence of flowing water.
Flowing Bodies of Water

- Rivers
- Streams
Determination of a Riverbank Wetland can be broken up into three general steps:
1. Identification of the Edge of the Channel

- Using recorded hydrologic data from specific planning & design documents, in-stream flow studies, stream gauge data, or RIDEM file data; or
- Demarcation of the edge caused by flowing water based on scouring, vegetative density or water marks on rocks, walls, etc.
2. Measure width along channel

- Choose midpoint near midpoint of project or area of concern;
- Measure width at the midpoint, and at least 5 points upstream & downstream, at even intervals of 20-50 feet.
- Calculate the arithmetic average.
3. Determine Riverbank Wetland based on arithmetic average

- Greater or equal to 10 feet = 200 foot riverbank wetland
- Less than 10 feet = 100 foot riverbank wetland
- Measured without regard to topography.
Special Case:

Dammed segment of a river
Buffer Zone Regulation

Why?

• Filters surface water runoff to protect water quality of the wetland
• Reduces velocity of, and provides storage for, floodwaters
• Attenuates groundwater pollutants
• Provides important food, cover and nesting sites for numerous wildlife species
Buffer Zone Regulation

Why?

- Provides buffer zone from outside disturbances for species utilizing wetland resources
- Provides escape from floods
- Facilitates migration and dispersion along a wetland corridor
- Moderates water temperatures of watercourses
Buffer Zone Regulation

What do we consider?

- Wetland type
- Functions & values of the wetland it is associated with
- General characteristics of the buffer
- Density of vegetation
Buffer Zone Regulation

*What do we consider?*

- Steepness of slope
- Soil characteristics
- Surrounding land uses and proximity to other wetland areas
- Project type
Considerations for Project Design
...things to generally keep in mind

- Realistic construction areas
  - Structures
  - OWTS fill perimeters
- Plantings
- Grading
- Lighting
Single-family dwelling

LOT AREA = 1.977 AC

WOODED SWAMP

SCREEN PLANTINGS
SEE NOTE 6

2:1 SLOPE (MAX.)

L = 156.89'

25 MIN

22' 36'

20' 67'

50' WETLAND SETBACK

EDGE OF FLAGGED WETLANDS

D.I.
Plantings
Rule 9.03(B)
Significant Alterations

• (B)(3)(b): detrimental modifications to the biological, chemical or hydrologic characteristics of any wetland areas that could reduce its associated natural values

• (B)(3)(c): reduce the value of any perimeter wetland or riverbank wetland thru permanent loss or change in characteristics
Rule 9.03(B) (cont’d)

Concept of Cumulative Impacts

(B)(2)(4): appears temporary, but may lead to extensive effects on wetlands and associated functions and values.

(B)(2)(5): alterations which, when evaluated cumulatively with other alterations, result in significant impacts to wetland functions and values.
Rule 10.05

Specific Review Criteria

These apply to all Projects!!
Some apply primarily to buffer zones

• For example: 10.05(C)(11): “Elimination of, or severe limitation to traditional human access to, along the bank of, up, and or down, or through any rivers, streams, ponds or other freshwater wetlands.”
Most are influenced by alterations to buffer zones

- Impacts to wildlife habitat values such as escape cover, travel, dispersal, & nesting
- Impacts to water quality through reduction in filtering, loss of shading, etc.
- Impacts to flood storage and abatement values
Thanks for your attention!

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