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DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149

REPLY TO
ATTENTION OF
CENED-OD-R (1145-2-303B)

16 May 1991

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Revised Guidance --Adjacent Wetlands in New England

1. References:

a. Memorandum, CENED-OD-R (Sheehan), 8 Mar 91, subject: Staff Guidance -- Adjacent Wetlands in New England

b. Memorandum, CENED-OD-R (Sheehan), 9 May 91, subject: Home ranges and migration distances for some animals that use both riparian and palustrine habitats in New England.

2. Many members of our staff have offered constructive criticism for the improvement of the referenced memoranda. It is important to remember that these memoranda do not constitute the official policy of New England's Regulatory Division; instead, they are an assemblage of concepts that may be useful to project managers as they confront the issue of "adjacency."

3. The following summarizes the changes and improvements that are have been made on the three enclosed charts:

a. Enclosure 1: Adjacent Wetlands in New England -- Rules of Thumb

(1) In tidal waters the terms "High Tide Line" should be substituted for Ordinary High Water Mark (OHWM) in the concepts for bordering, contiguous or neighboring.

(2) The language relating to neighboring proximity has been softened to make it clear that there may be a judgmental element in this determination. The quoted 500 foot distance is based upon a review of 54 reptiles, amphibians and mammals that use both freshwater waters and wetlands in New England. While this distance may serve as a useful screening tool, its appropriateness depends upon resource-specific physical, chemical or biological conditions.

(3) The terms "active alluvial plain" created some problems, particularly when man's activities in the alluvial plain can confuse the issue. Substitution of the term "natural" is intended to include areas that have been artificially removed from the alluvial plain by man's intervention. In spite of this, when floodplain data is available, the 100-year flood may be a useful screening tool.

(4) The concept of a discontinuity should include abrupt changes in average rates of flow, such as occurs at the confluence of streams; so "hydrology" has been added to the list of abrupt changes.

b. Enclosure 2: Adjacent Wetlands: Some Examples. This plan view illustrates some possible interpretations using the concepts of bordering, contiguous and neighboring. These concepts have been discussed in detail in the referenced memoranda.

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c. Enclosure 3: Palustrine/Riparian Reptiles, Amphibians, and Mammals Known to occur in New England. This chart has been modified to facilitate black and white photocopying. Additionally, it has been upgraded to illustrate the common names of the species associated with their bar graphs. The details and data are available in the referenced memorandum dated 9 May 91.

4. If you or your staff have any questions or comments, I will receive them enthusiastically.

3 Encls

1-3. as

/S/

MICHAEL J. SHEEHAN

Senior Wetland Scientist

Environmental Resource Unit

DISTRIBUTION:

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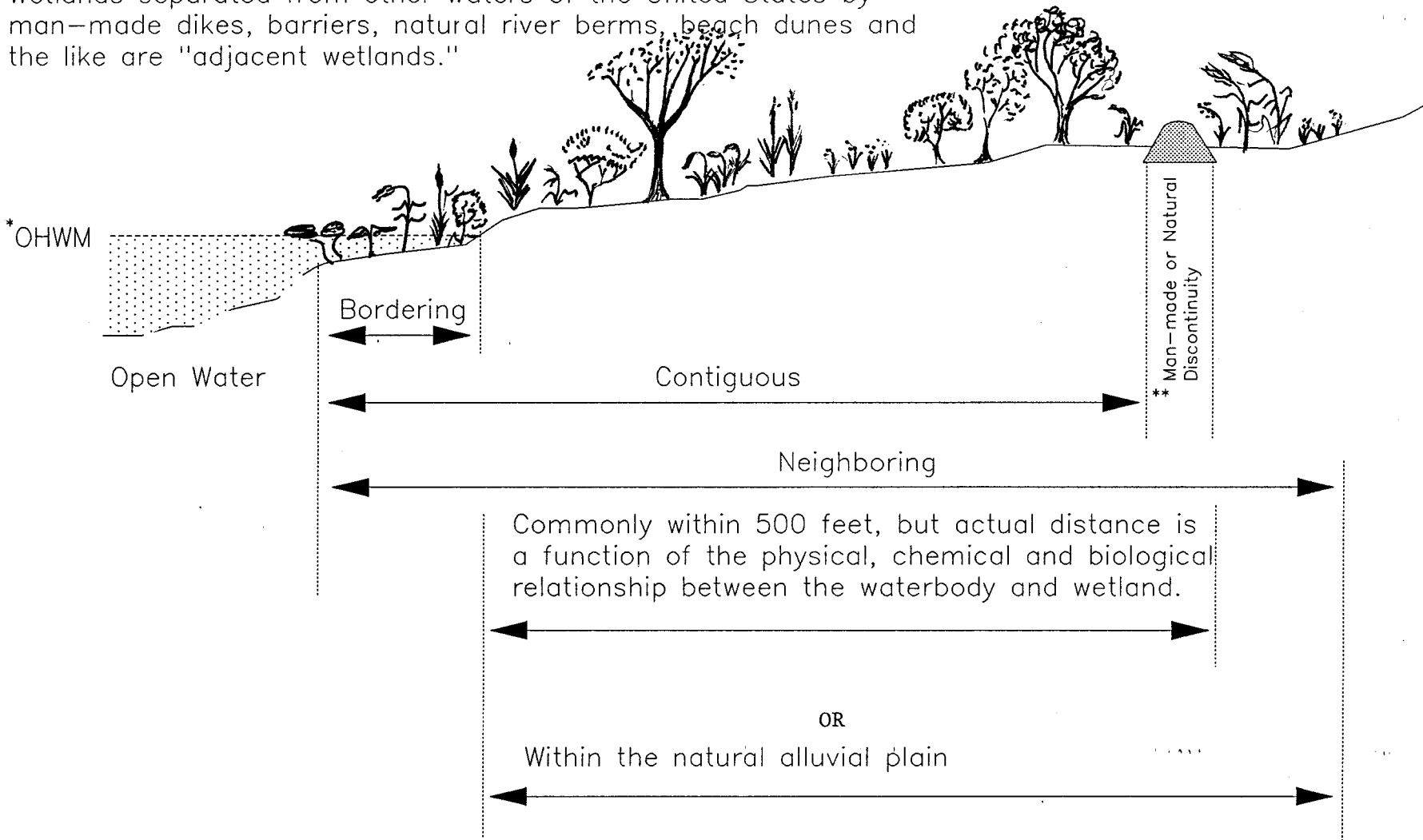
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CHIEF OF REGULATORY DIVISION

ADJACENT WETLANDS IN NEW ENGLAND -- Rules of Thumb

The term "adjacent" means bordering, contiguous or neighboring. Wetlands separated from other waters of the United States by man-made dikes, barriers, natural river berms, beach dunes and the like are "adjacent wetlands."



* In tidal waters the High Tide Line is used

** Discontinuities include dikes, barriers, river berms, beach dunes and, in New England, abrupt changes in hydrology, slope or soil materials.

Encl 1

ADJACENT WETLANDS: SOME EXAMPLES

LEGEND:



Ordinary High Water Mark

[B] = Bordering

[C] = Contiguous

[N] = Neighboring

Average Annual Flow:

4 cfs for Creek 1 above its confluence with Creek 2

3 cfs for Creek 2 at confluence with Creek 1

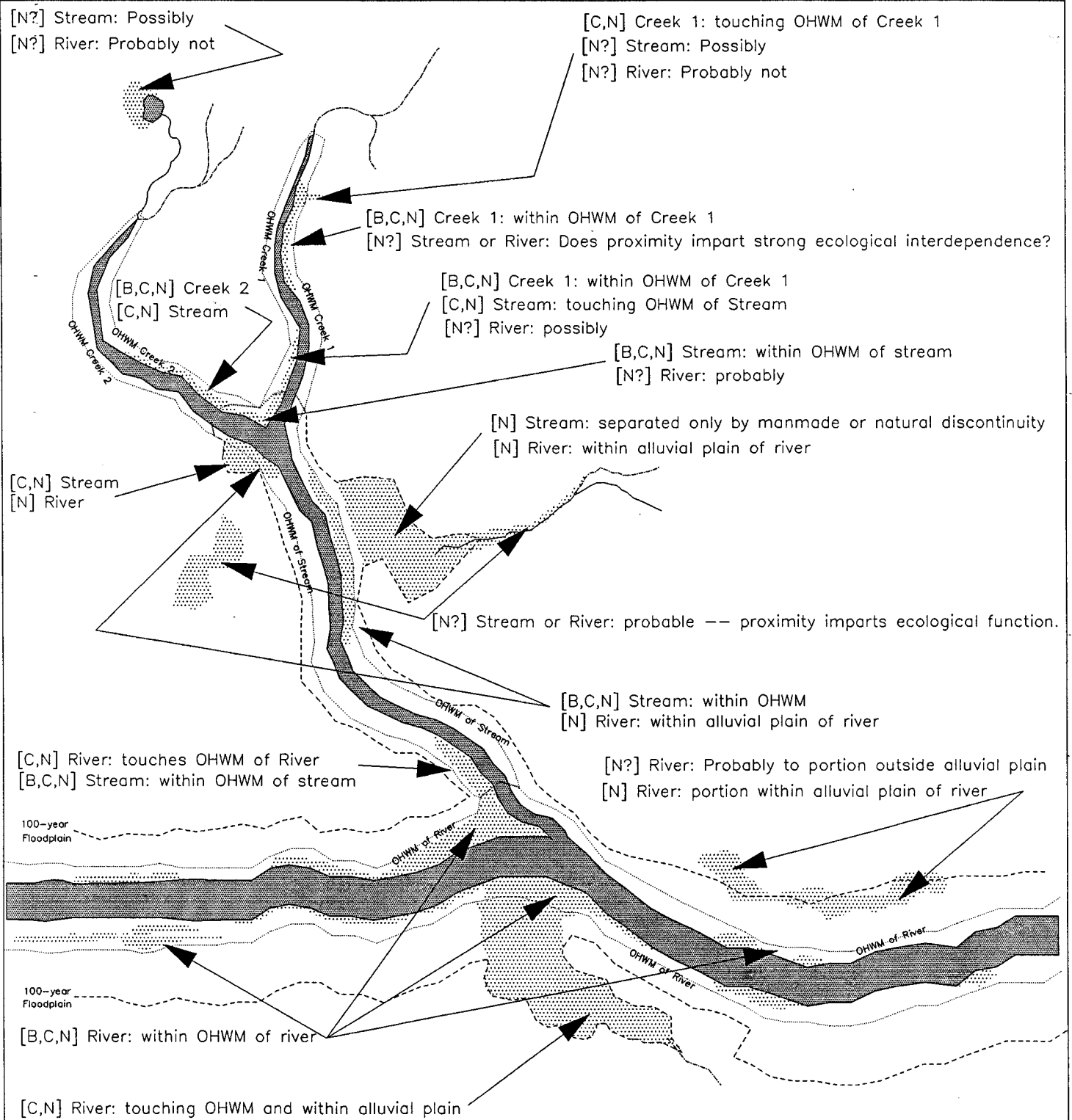
7 cfs for Stream above its confluence with River

43 cfs below its confluence with Stream

SCALE:



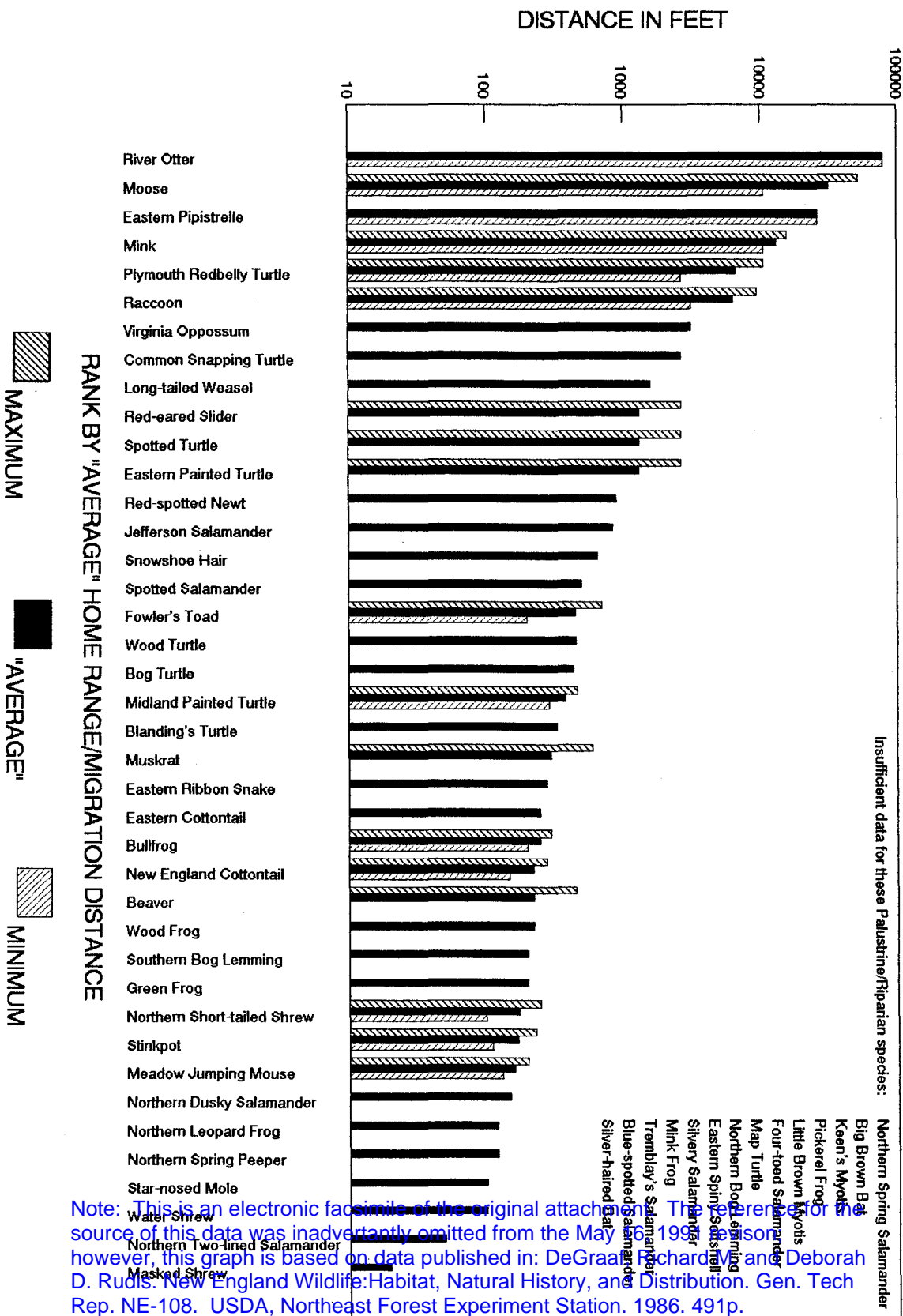
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Encl 2

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PALUSTRINE/RIPARIAN REPTILES, AMPHIBIANS AND MAMMALS KNOWN TO OCCUR IN NEW ENGLAND



Note: This is an electronic facsimile of the original attached. The reference for the source of this data was inadvertently omitted from the May 16, 1999 version of the report; however, this graph is based on data published in: DeGraaf, Richard V. and Deborah D. Rudis. New England Wildlife: Habitat, Natural History, and Distribution. Gen. Tech Rep. NE-108. USDA, Northeast Forest Experiment Station. 1986. 491p.



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REPLY TO
ATTENTION OF

CENED-OD-R (1145-2-303B)

9 May 1991

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Home ranges and migration distances for some animals that use both riparian and palustrine habitats in New England

1. PURPOSE: To provide decision-makers with summary information to guide them in "neighboring wetland" determinations.

2. SUMMARY: Two graphs and data are enclosed for 54 species of vertebrates that are known to be dependent on both water and wetland habitats. While a multitude of other animals may use both of these habitats, readily available data for reptiles, amphibians and mammals are most manageable and were used for this memorandum. Home ranges or migration distances are reported for 40 of these animals. The enclosures illustrate that a "red-flag" distance is conceivable and may be appropriate for routine screening of "neighboring" wetland determinations.

3. PROCEDURES:

a. Home Range/Movement and Nesting data were reviewed for amphibians, reptiles, and mammals found in New England. The source of this data is DeGraaf and Rudis (1986). The species reviewed use both riparian and palustrine habitats, with one or both of those being a preferred habitat. This sample population includes many ubiquitous species as well as creatures with a very localized distribution in parts of our region.

b. In the following procedure it should be evident that distance interpretations are conservatively on the low side. The "average" distance is the distance that these animals might reasonably be expected to move to use both riparian and palustrine habitats. It was determined in the following sequence:

(1) If the narrative could be construed as a mean distance, that was considered the "average."

(2) When only the maximum distance was given, zero was used as the minimum and the "average" was calculated.

(3) If only the minimum distance was stated, that was used as an admittedly low "average" estimate.

(4) If no mean was stated but a range was stated, the average from this range was calculated.

CENED-OD-R

SUBJECT: Home ranges and migration distances for reptiles, amphibians and mammals that use both riparian and palustrine habitats in New England

c. All distances were rounded to the nearest 10 feet. Metric measurements were converted to their nearest 10 feet. When only area dimensions were used, they were converted to the minimum linear dimension by their square roots.

4. REFERENCE: DeGraaf, Richard M. and Rudis, Deborah D. **New England Wildlife: Habitat, Natural History, and Distribution.** Gen. Tech. Rep. NE-108. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station; 1986. 491 p.

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1. Data
2. Percentage vs Distance Graph
3. Maximum/"Average"/Minimum Graph



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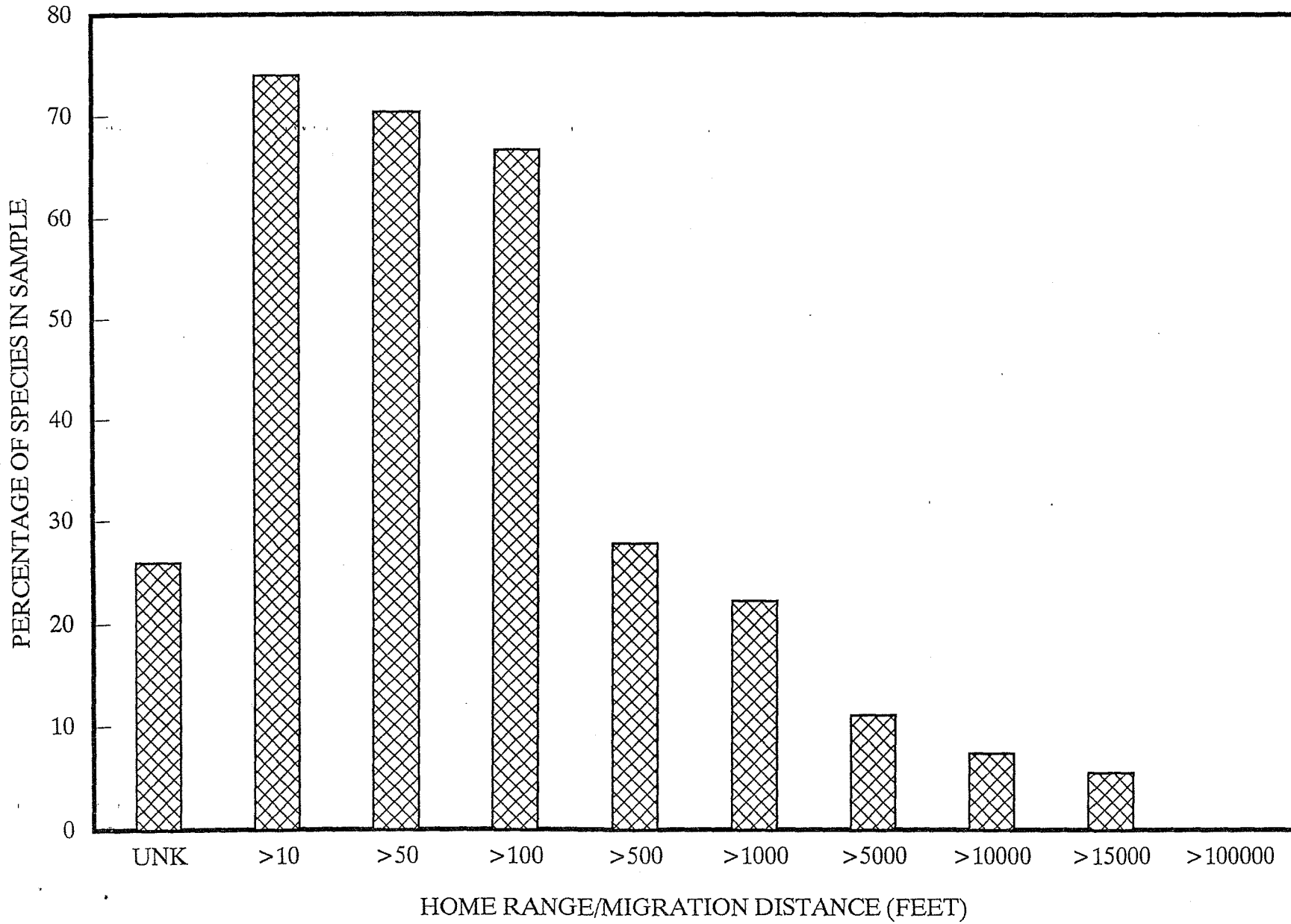
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PALUSTRINE/RIPARIAN REPTILES, AMPHIBIANS & MAMMALS OF NEW ENGLAND

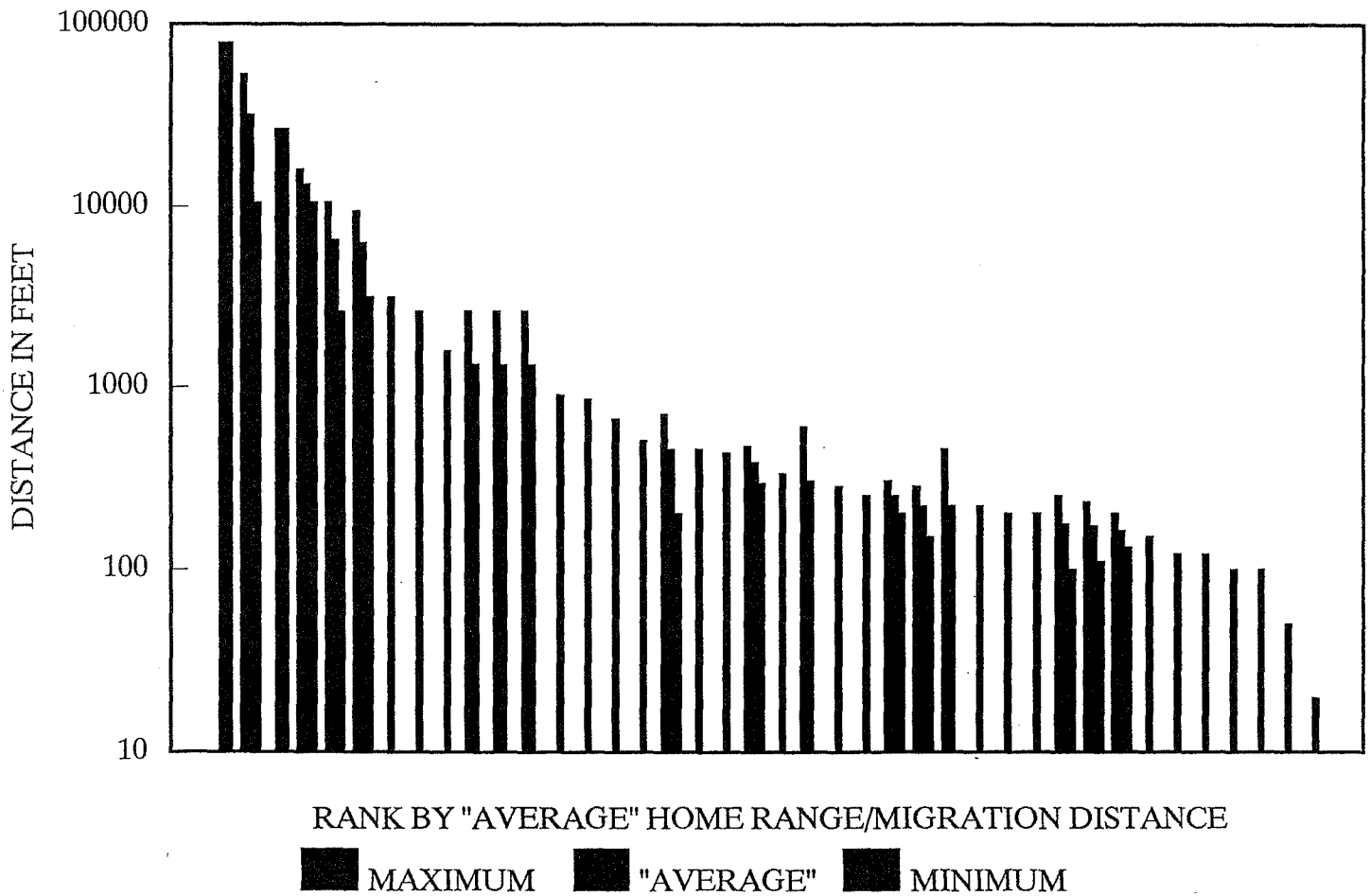
RANK NAME	PAGE	min	"average"	mean	maximum
1 River Otter	456	79200	79200		
2 Moose	461	10560	31680		52800
3 Eastern Pipistrelle	416	26400	26400		
4 Mink	454	10560	13200		15840
5 Plymouth Redbelly Turtle	80	2650	6600		10560
6 Raccoon	449	3170	6340		9500
7 Virginia Opossum	400		3170	3168	
8 Common Snapping Turtle	70		2640	2640	
9 Long-tailed Weasel	453		1580	1580	
10 Red-eared Slider	79		1330		2650
11 Spotted Turtle	72		1320		2640
12 Eastern Painted Turtle	81		1320		2650
13 Red-spotted Newt	48		900	900	
14 Jefferson Salamander	42		850	850	
15 Snowshoe Hair	422		660	660	
16 Spotted Salamander	46		500	500	
17 Fowler's Toad	61	200	450		700
18 Wood Turtle	75		450	450	
19 Bog Turtle	73		430	430	
20 Midland Painted Turtle	82	290	380		470
21 Blanding's Turtle	83		330	330	
22 Muskrat	437		300		600
23 Eastern Ribbon Snake	91		280	280	
24 Eastern Cottontail	420		250	250	
25 Bullfrog	64	200	250		300
26 New England Cottontail	421	150	220		280
27 Beaver	430		220		450
28 Wood Frog	67		220	220	
29 Southern Bog Lemming	438		200	200	
30 Green Frog	65		200	200	
31 Northern Short-tailed Shrew	406	100	175		250
32 Stinkpot	71	110	170		230
33 Meadow Jumping Mouse	442	130	160		200
34 Northern Dusky Salamander	50		150	150	
35 Northern Leopard Frog	68		120	120	
36 Northern Spring Peeper	62		120	120	
37 Star-nosed Mole	410		100	100	
38 Water Shrew	402		100	100	
39 Northern Two-lined Salamander	58		50	50	
40 Masked Shrew	401		20	20	
Northern Spring Salamander	57				
Big Brown Bat	417				
Keen's Myotis	412				
Pickerel Frog	69				
Little Brown Myotis	411				
Four-toed Salamander	56				
Map Turtle	78				
Northern Bog Lemming	439				
Eastern Spiny Softshell	84				
Silvery Salamander	43				
Mink Frog	66				
Tremblay's Salamander	45				
Blue-spotted Salamander	44				
Silver-haired Bat	415				

Encl 1

PALUSTRINE/RIPARIAN REPTILES, AMPHIBIANS & MAMMALS
IN NEW ENGLAND



PALUSTRINE/RIPARIAN REPTILES, AMPHIBIANS AND MAMMALS
 40 SPECIES OBSERVED IN NEW ENGLAND



Maximum, "Average," and Minimum datapoints are left, center and right, respectively



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REPLY TO
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CENED-OD-R (1145-2-303B)

8 March 1991

MEMORANDUM FOR Chief, Regulatory Division, Operations Directorate

SUBJECT: Staff Guidance -- Adjacent Wetlands in New England

1. On almost a daily basis a project manager or a consultant asks me, "Is this an adjacent wetland?" What do these terms mean and what is their significance to the regulatory program? Our first exposure occurred during the phase-in of waters within the Corps' Clean Water Act jurisdiction. This began on July 25, 1975 with discharges into navigable waters and their adjacent wetlands and continued through subsequent phases up the tributaries and towards the headwaters until, on July 1, 1977, our jurisdiction embraced essentially all naturally occurring waters, wetlands and some manmade waters as "Waters of the United States."

2. Our current fascination began in 1977 with the precursors to an existing nationwide authorization for isolated waters and (2) the above headwaters permit for waters with less than 5 cfs average annual flow. These general permits may be valid only when the discharge involves a wetland that is not also adjacent to a waterbody that has more than 5 cfs average annual flow. The common use of the terms adjacent wetlands relates to that Nationwide Permit [33CFR330.5(a)26].

3. According to the Corps Regulations, the term "adjacent" means bordering, contiguous or neighboring. Wetlands separated from other waters of the United States by man-made dikes, barriers, natural river berms, beach dunes and the like are "adjacent wetlands." What follows is a discussion of these fundamental concepts and how they apply to situations in New England.

a. Bordering Wetland -- is immediately next to its adjacent waterbody. It may lie at, or below, the ordinary highwater mark of that waterbody and is directly influenced by its hydrologic regime. In New England, Forest Class wetlands do not exist as bordering wetlands. Wetlands that border marine, estuarine, riverine, or lacustrine waterbodies are classified correspondingly in the National Wetland Inventory; for example, when cartographic capabilities allow, a wetland that truly borders a river is usually mapped as a Riverine System and not as a Palustrine System.

b. Contiguous Wetland -- extends landward from its adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary highwater mark and above the normal hydrologic influence of their adjacent waterbody. The lateral extent of a contiguous wetland depends upon the existence of a discontinuity. Man-made discontinuities include dikes and barriers such as roads, etc. Natural discontinuities may be river berms, beach dunes, abrupt slope changes or abrupt changes in the soil material, etc.

c. Neighboring Wetland -- is close enough that it plays a role in the physical, chemical or biological integrity of its adjacent waterbody. Neighboring wetlands include bordering wetlands and contiguous wetlands as well as those that are separated from their adjacent waterbody by a natural or manmade discontinuity.

(1) It has been very difficult for the Corps to develop useful guidelines regarding proximity. How close is close enough to convey a physical, chemical or biological relationship between a waterbody and a wetland? These relationships are most apparent when there is an observable surface water connection between the two resources. However, "isolated" wetlands are also within the concept of neighboring, e.g. United States v. City of Ft. Pierre 580 F. Supp. 1036 (1983). When the hydrologic connection is absent, then the strongest relationship may be an ecological one.

(2) Several years ago, in the interests of regulatory consistency, I suggested two rules of thumb for determining whether a wetland is close enough to be considered "neighboring." First, a wetland should normally be considered neighboring to a waterbody when it lies within the active alluvial plain of that waterbody. In the alluvial setting, the relationship between waterbody and wetland may be reinforced by occasional inundation or saturation from riparian floods.

(3) The second rule of thumb has some ecological basis, but it was originally suggested for the sake of staff consistency. Normally, a wetland should be considered neighboring to a waterbody when it lies within 800 feet of that waterbody. It is recognized that this distance may be inappropriate in some settings, so contrary opinions are considered when they are reasonably demonstrated. However, routine administration should place the burden on the applicant to demonstrate an absence of a physical, chemical or biological relationship when wetlands are within 800 feet of the waterbody. Over the past three years, there has been no general reaction against this guideline by the regulated public in New England.

CENED-OD-R

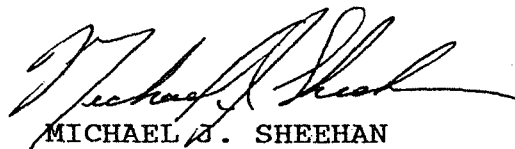
SUBJECT: Staff Guidance -- Adjacent Wetlands New England

(4) To demonstrate that this second rule of thumb is reasonable throughout New England, the following list includes species whose ranges include large portions of the region. There are many others with more localized distribution that could be used to make a similar point. These species are generally considered to have habitat requirements that involve both flowing waters and wetlands. The 800-foot distance is conservatively within the home range/migration distances for most of these flightless natives.

Jefferson Salamander	<u>Ambystoma jeffersonianum</u>
Spotted Salamander	<u>Ambystoma maculatum</u>
American Toad	<u>Bufo americanus</u>
Bullfrog	<u>Rana catesbeiana</u>
Common Snapping Turtle	<u>Chelydra serpentina serpentina</u>
Spotted Turtle	<u>Clemmys guttata</u>
Wood Turtle	<u>Clemmys insculpta</u>
Eastern Painted Turtle	<u>Pseudemys picta picta</u>
Water Shrew	<u>Sorex palustris</u>
Smoky Shrew	<u>Sorex fumeus</u>
Beaver	<u>Castor canadensis</u>
Muskrat	<u>Ondatra zibethicus</u>
Southern Bog Lemming	<u>Synaptomys cooperi</u>
Northern Bog Lemming	<u>Synaptomys borealis</u>
Meadow Jumping Mouse	<u>Zapus hudsonius</u>
Mink	<u>Mustela vison</u>
River Otter	<u>Lutra canadensis</u>
Moose	<u>Alces alces</u>

4. I recommend that project managers routinely use these standards when applying the concepts of bordering, contiguous, and neighboring when determining "Adjacent Wetlands." The enclosure illustrates relevant details of this recommended standard.

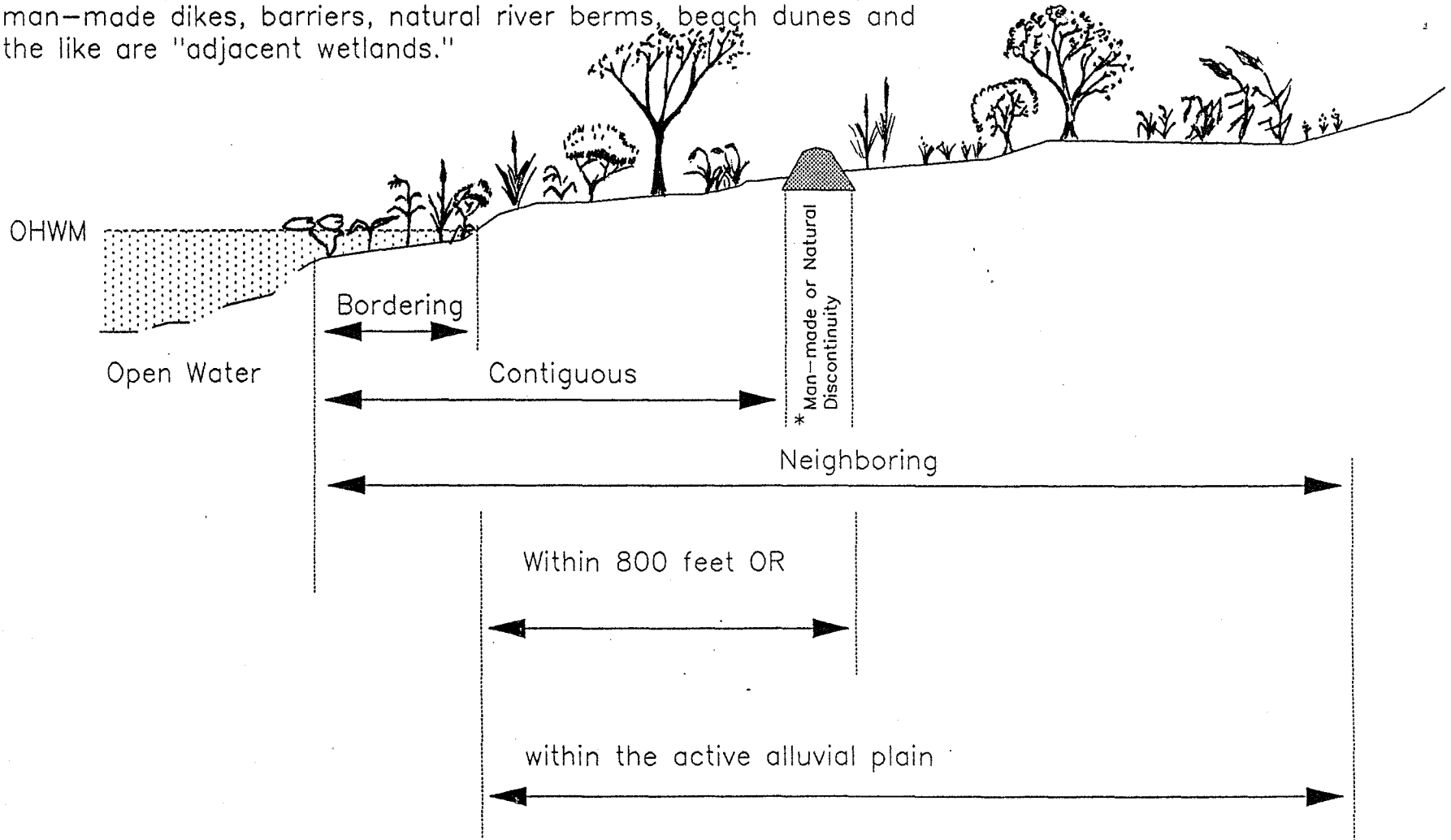
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ADJACENT WETLANDS IN NEW ENGLAND -- Rules of Thumb

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* Discontinuities include dikes, barriers, river berms, beach dunes and, in New England, abrupt change in slope or soil materials.