

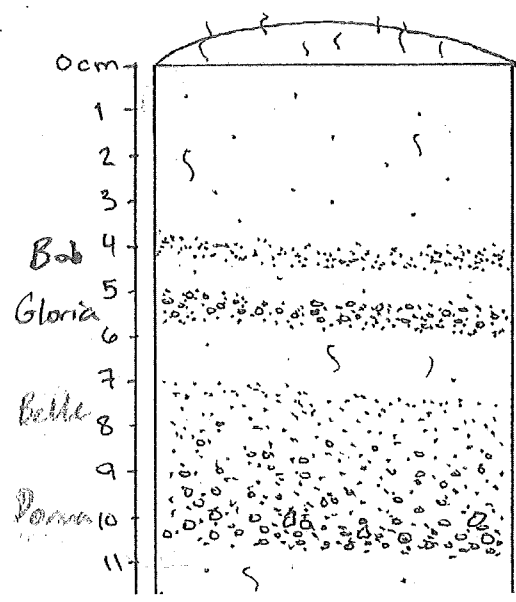
ID 131mgc
Date 3/26

1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) $\frac{11}{160} = 0.0687$ hurricanes/yr
c) Recurrence interval of major hurricanes? $\frac{4}{160} = 0.025$ hurricanes/yr

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**
 - b) Date range? 1950s - present
 - c) Possible landfall states? CT, RI, NY, MA
 - d) Hurricane categories? 3-5

a) List of hurricanes:

Bob
Gloria



rate of sea level rise = $2^{mm}/yr$

ID 131 mks
Date 26.3.2013

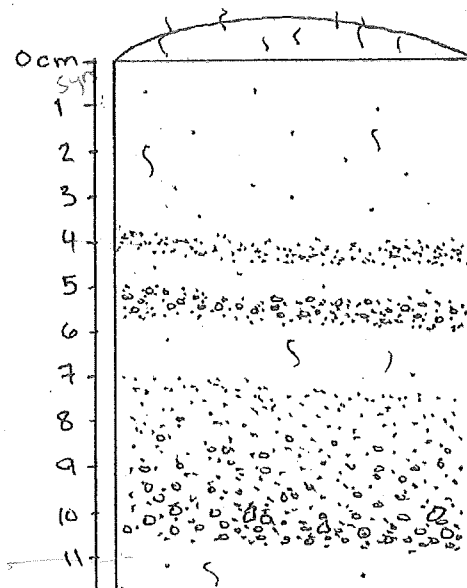
1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) $1/159$ ~~0.0063~~ 0.0063/yr
c) Recurrence interval of major hurricanes? $4/159$ ~~0.0255~~ 0.0255/yr

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 1993 \pm 2
c) Possible landfall states? CT, NY, RI
d) Hurricane categories? CAT 1,

a) List of hurricanes:

Bob



2mm/yr

ID 131mij
 Date 3/26/13

1. a) How many hurricanes have made landfall in CT 1851-2010?

11 hurricanes

b) Recurrence interval (hurricanes/year) $\frac{\text{total yrs}}{\# \text{ hurricanes}} = \frac{160 \text{ yrs}}{11 \text{ hurricanes}} = 14.55 \text{ yrs/hurr}$

c) Recurrence interval of major hurricanes? $\frac{160}{4} = 40 \text{ yr/hurr}$

ASSUMPTIONS:
 edit sand thickness
 $\frac{2 \text{ cm}}{1000 \text{ mm}} = \frac{1 \text{ cm}}{500}$
 $\frac{2 \text{ cm}}{1000 \text{ mm}} = \frac{1 \text{ cm}}{500}$
 $\frac{2 \text{ cm}}{1000 \text{ mm}} = \frac{1 \text{ cm}}{500}$

Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

b) Date range? $20 \text{ yrs ago} = 1990$
 $25 - 27 \text{ yrs ago} = 1984$
 $35 - 52 \text{ yrs ago} = 1960 - 1974$

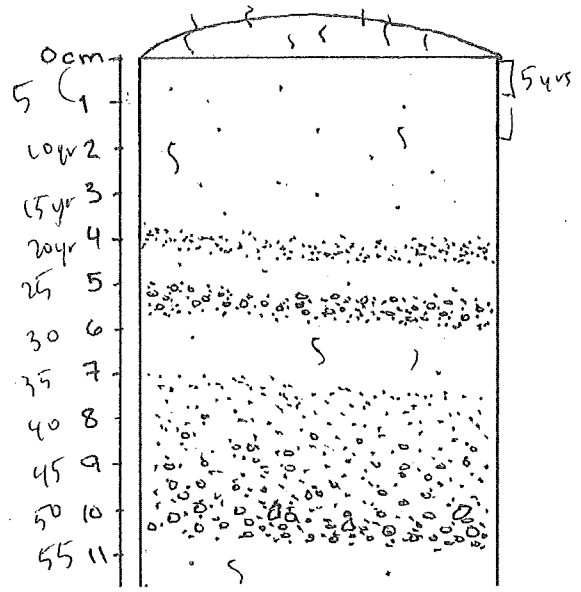
c) Possible landfall states? _____

d) Hurricane categories? _____

a) List of hurricanes:

BOB in 1991 {
 windspeed 77-196 mph
 landfall in CT.
 category 2

GLORIA in 1985 {
 windspeed 77-196 mph
 landfall in CT.
 category 3



ID 131 mda
Date 3/26/13

1. a) How many hurricanes have made landfall in CT 1851-2010? 11

b) Recurrence interval (hurricanes/year) $\frac{160}{11} = 14.55$ total years/# of hurricanes

c) Recurrence interval of major hurricanes? $\frac{160}{4} = 40$ "

Recurrence interval (average time b/t hurricanes) $RI = \frac{\text{total years}}{\# \text{ hurricanes}}$

$$14.55 = \frac{160 \text{ total yr}}{11 \# \text{ of hurricanes}}$$

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

b) Date range? 20 yrs ago, 25-27, 35-52
_{1990 1991 1960-1974}

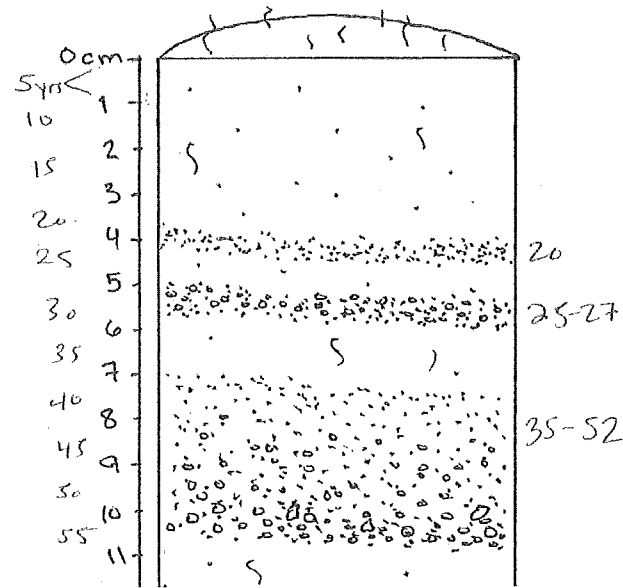
c) Possible landfall states? CT

d) Hurricane categories? 1-2

a) List of hurricanes:

BOB 1990-1991
max wind speed: 69-196
landfall in CT.

GLORIA



2 mm per year

$\frac{1}{5}$ cm/yr

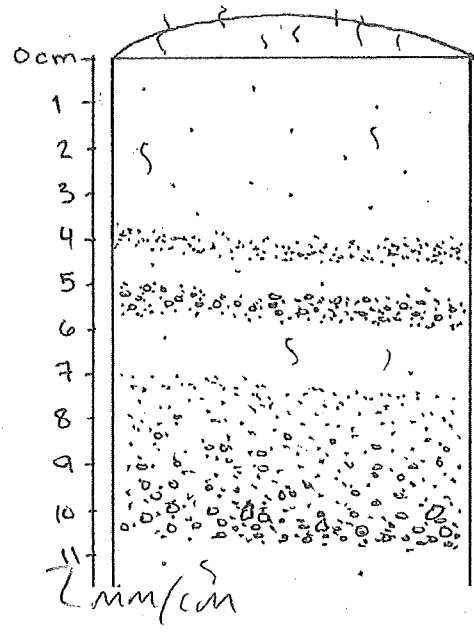
ID 131WLG
Date 3/26/13

1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) 0.073
c) Recurrence interval of major hurricanes? 0.026

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 20 years
c) Possible landfall states? MA, ME, RI, CT
d) Hurricane categories? TS, 1, 2

a) List of hurricanes:
Bob



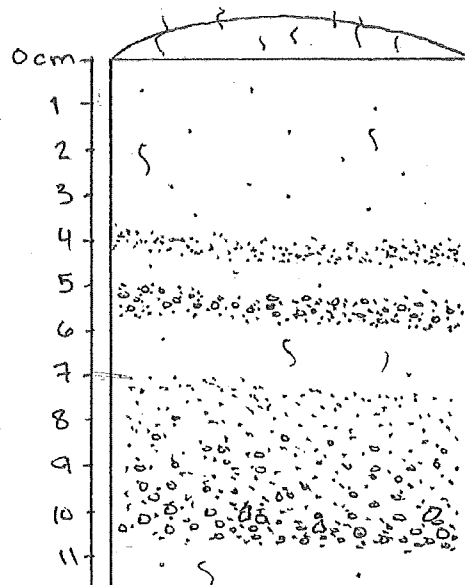
ID 131 WML
Date March 26

1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) .06875 hurr/yr
c) Recurrence interval of major hurricanes? 4/160 = .025 hurr/yr (major)

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? _____
c) Possible landfall states? _____
d) Hurricane categories? _____

a) List of hurricanes:



RI { Bob, Aug 13, 1991
cat 1 / TS

OR

CT { Gloria, Sep 15, 1985
cat 1 / TS

← 2 cm / year
→ 4 cm = 20 yrs

ID 131 nijk
Date _____

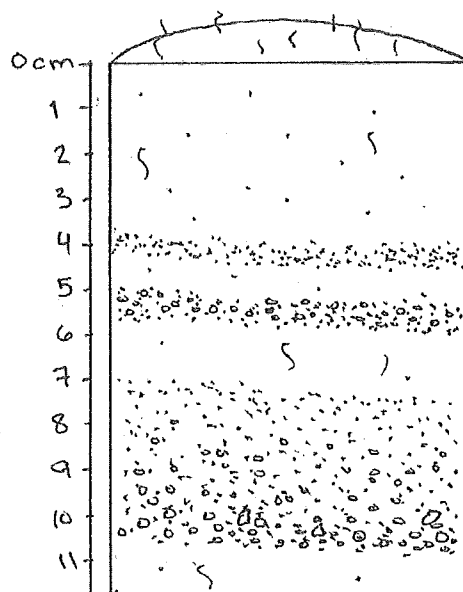
1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (~~hurricanes~~/^{1/160}year) 0.06875 hurricanes/year
c) Recurrence interval of major hurricanes? 4/160 = 10.25 hurricanes/year

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? _____
c) Possible landfall states? CT
d) Hurricane categories? TD-5

a) List of hurricanes:

Bob, 1991 (17 days)
Glenn, 1985 (17 days)



2cm/yr

ID 131W6M
Date 3/26/13

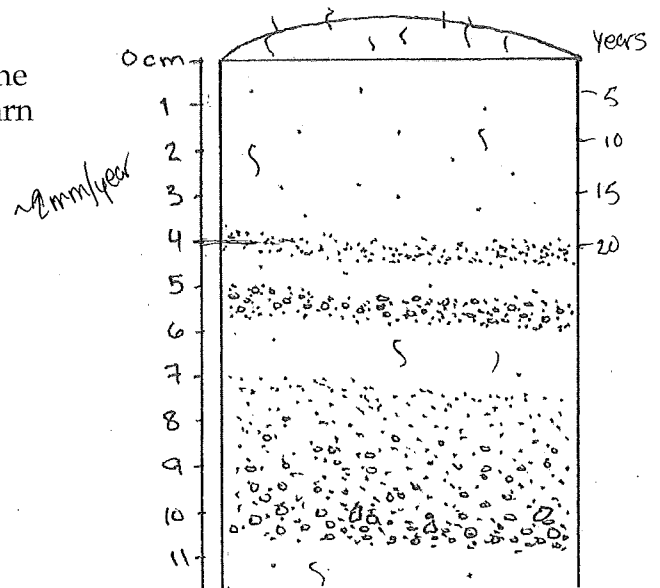
1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) $\frac{11}{159} =$ ~~0.069~~ 0.069 hurricanes/year
c) Recurrence interval of major hurricanes? $\frac{4}{159} =$ ~~0.025~~ 0.025 hurricanes/year

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 1993
c) Possible landfall states? NY, NJ, CT, MA
d) Hurricane categories? any

a) List of hurricanes:

-Bob, category 1



ID 131WQS
Date 26 Mar 13

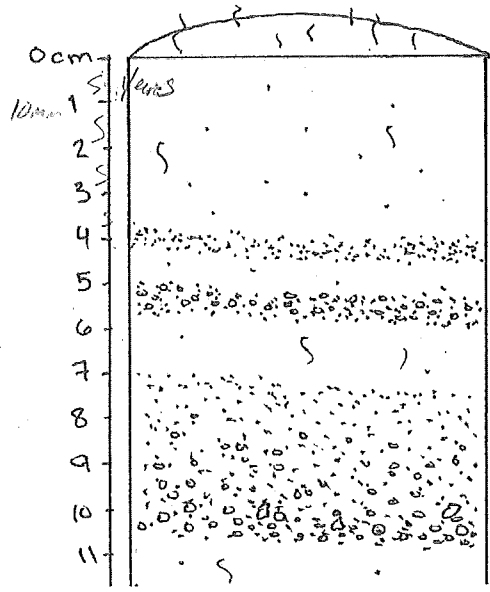
1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) 0.073 hurricanes/year
c) Recurrence interval of major hurricanes? 0.026 hurricanes/year

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 20 years
c) Possible landfall states? Maine, Mass, RI, CT
d) Hurricane categories? TS, 1, 2

a) List of hurricanes:

BOB



2 cm / year

ID 131 WTM
Date 3/26/13

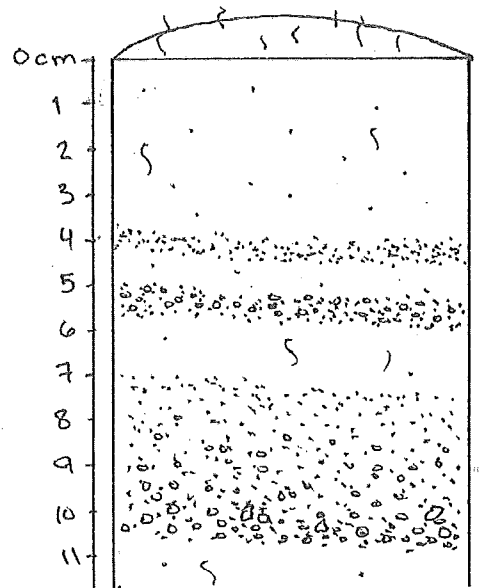
1. a) How many hurricanes have made landfall in CT 1851-2010? ~~11~~ 11
b) Recurrence interval (hurricanes/year) ~~14.54~~ 160 yrs/11 hurricanes
c) Recurrence interval of major hurricanes? 40 14.54 ~~hurricanes~~
yrs/hurricanes

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 20-25 years
c) Possible landfall states? CT
d) Hurricane categories? 3-5

a) List of hurricanes:

Donna - 1960
Gloria - 1985
Not Named - 1944
Not named - 1938



.2 cm/per year

ID 131 mca
Date 3-26-13

1. a) How many hurricanes have made landfall in CT 1851-2010? 11
b) Recurrence interval (hurricanes/year) 14.54
c) Recurrence interval of major hurricanes? 40

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**

- b) Date range? 20-25 years
c) Possible landfall states? CT
d) Hurricane categories? 3-5

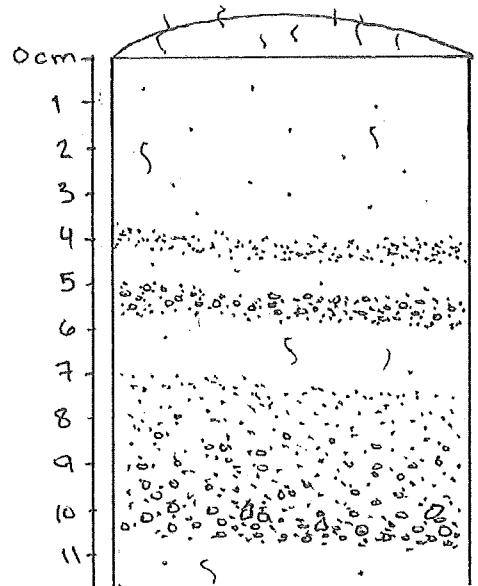
a) List of hurricanes:

Not named, 1944

Donna, 1960

Gloria, 1985

Not named, 1938



1. a) How many hurricanes have made landfall in CT 1851-2010? 11
- b) Recurrence interval (hurricanes/year) 0.0687 hurricanes/yr
- c) Recurrence interval of major hurricanes? 0.025 hurricanes/yr.

2mm/yr = rate of sea level rise / marsh accretion.

2. Make a list of hurricanes that may have caused the sand layer we found 4 cm below the surface at Barn Island Marsh. **First consider your assumptions:**
 - b) Date range? 1950s - 2012
 - c) Possible landfall states? CT, RI, NY, MA, BOB
 - d) Hurricane categories? 3-5

a) List of hurricanes:

