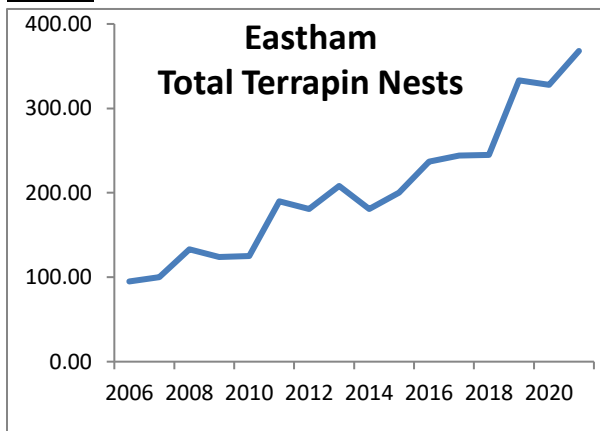


# Eastham Diamondback Terrapin Conservation Report 2021

## Summary

Another record year for the number of nests, which is a proxy for the population of mature females. This year's nest total of 369, was 15% higher than last year & 26% higher than the average of the past 3 years. Hatchling recruitment was slightly higher than last year (1814 vs. 1720). Hatchling recruitment has been somewhat managed since 2013, not protecting some nests by only staking the location. Through 2019 predation was very low (5%-20%) allowing the hatchling recruitment to grow to almost 2300 by 2019. That changed in 2020 & 2021 with predation by raccoons & skunks approaching 50%. With recovery of the population of terrapins in the Great & Boat Meadow Marshes, we have entered the period where they are serving a more significant ecological role as both food & support for their own population stability. It remains an open question as to "the right" level of hatchling recruitment. So, the focus of our conservation program has shifted somewhat from recruitment to protecting the recovered population of nesting terrapins

## Nests



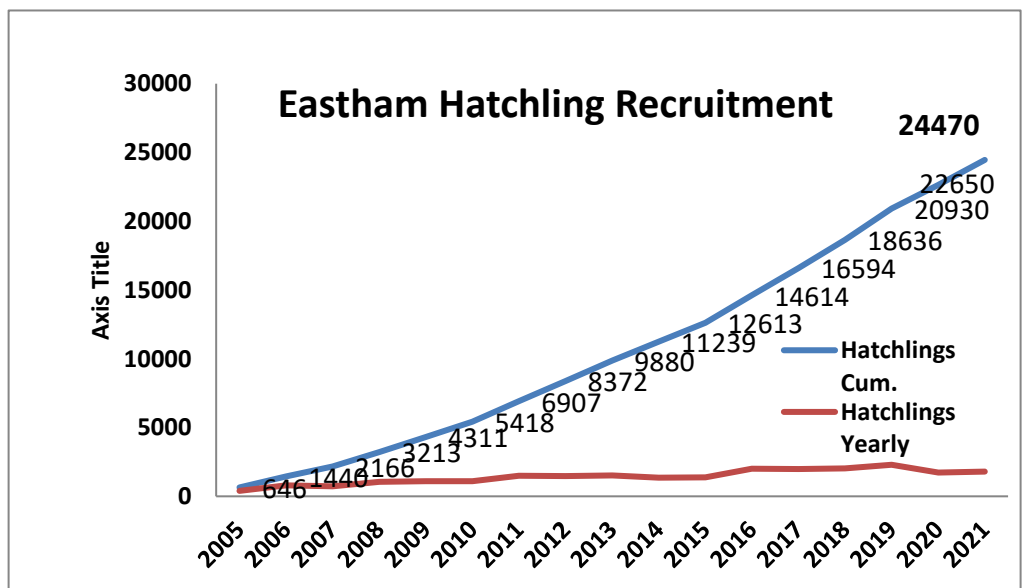
The increased level of nesting continued in 2021 with a 15% increase to 369 nests. The most significant increases occurred on the TNC barrier beach (+28 nests, 47%), Mixer Bluff (+14 nests, 11%), & the Herring Brook Rd sites (+7 nests, 47%).

*See chart below of nest activity by site*

## Hatchlings

Hatchling recruitment of 1814 was slightly higher than last year but significantly lower than the prior 4 years due to increased predation. This is still higher than any year before 2016 & should be enough to maintain the population.

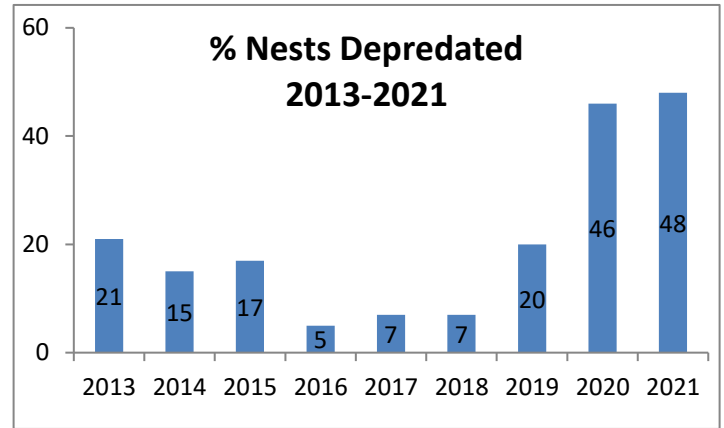
Total hatchling recruitment since the start of Eastham's conservation program in 2002 is over 24,000. Recruitment over the past 9 years, which will support population growth through the next 9 years, is more than double the total of all previous years since 2002.



# Eastham Diamondback Terrapin Conservation Report 2021

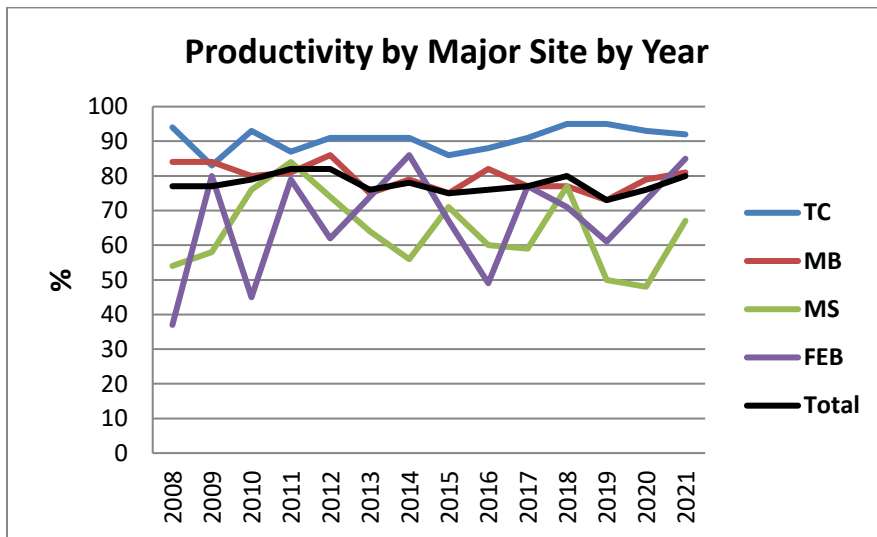
## Predation

The increase in predation by raccoons & skunks continued for the second straight year with almost half of the nests being depredated. There appears to be both more predators & predators that are more adept at finding nests. The increased nesting in grassy terrain where nests are hard to find also contributed to the rise.



## Productivity

Total productivity was 80%, slightly higher than the historical average. The upland site Terrapin Cove continued extraordinarily high productivity (92%) due to low desiccation & almost non-existent mortality from maggots & ants. Overall, one third of the egg mortality was due to non-development with the other major factors being desiccation (24%), maggots (19%), & ants (17%).



## Roadkill

There were only 2 road kills this year on Samoset Rd. just before the ticket booth at FEB & on Bridge Rd. near Teal Way.

## ECF Habitat Improvement Program (SE 19-1740 #23)

The protection provided by road fencing to the nesting terrapins has reduced roadkill to zero for the 3<sup>rd</sup> consecutive year at the Bridge Road site near the bridge & the dip on Herring Brook Rd. Many of those terrapins that otherwise would have been killed are now nesting nearby. At Bridge Rd. there was a total of 15 nests & at Herring Brook Rd. 15 nests. A more complete report of the program as required by the NOI has been sent to ECC & NHESP.

## Eastham Diamondback Terrapin Conservation Report 2021

### Acknowledgements

Thanks to Annie, Dennis, Joanna, Heather, Jerry, Diane & Carla for your help. Also, thanks to the following homeowners: Steve & Sue Ellen on Widgeon Rd., John & Martha on Blue Bill Rd.; Deb & John, Mary & Rick, & Uri & Rahel on Herring Brook Rd.; Rick, Bob & Dan (family) at Cartway South & North; Annette on Bridge Rd; Gail on Governor Prince Rd. Your commitment to the terrapin conservation program over the years has made the success of the program possible.

### **\*Nest Activity by Site**

<u>Location</u>	<u>Protected/Mark ed*</u>	<u>Depredated **</u>	<u>Wild</u>	<u>Total Nests</u>	<u># Hatchling s</u>
First Encounter Beach	11	39	1	51	79
Mixer Sanctuary (TNC)	35	42	10	87	340
Mixer Bluff	64	71	5	140	682
TC (Widgeon)	34	9	1	44	391
Rock Harbor	6	3	0	9	76
Bridge Rd	7	7	0	14	78
HBR	10	3	1	14	96
Other	<u>7</u>	<u>1</u>	<u>2</u>	<u>10</u>	<u>72</u>
<b>Total</b>	<b>174</b>	<b>175</b> <u>48%</u>	<b>20</b>	<b>369</b>	<b>1814</b>

\*Includes 142 protected nests & 32 marked nests not depredated  
 \*\* Includes 43 marked nests that were depredated

**Eastham Diamondback Terrapin Conservation Report  
2021**