

Sea Turtle Strandings: Maine to Virginia (2000-2020)

Description:

This layer represents sea turtle strandings from Maine to Virginia for the 2000-20 time period. These data are a subset of the larger dataset maintained by the National Oceanic and Atmospheric Administration (NOAA) Sea Turtle Stranding and Salvage Network.

All sea turtles that occur in U.S. waters are listed as either threatened or endangered under the Endangered Species Act. To advance the conservation and recovery of listed sea turtles, each sea turtle recovery plan developed jointly by NOAA Fisheries and the U.S. Fish and Wildlife Service identifies and highlights the need to maintain an active stranding network. As a result, the Sea Turtle Stranding and Salvage Network (STSSN) was formally established by NOAA Fisheries in 1980 to document strandings of sea turtles along the coastal areas from Maine to Texas and in portions of the U.S. Caribbean.

The STSSN is a cooperative effort comprised of federal, state, and permitted private partners that respond to live and dead stranded turtles, collect scientific data, transport sick and injured turtles to rehabilitation facilities, and help educate the public about sea turtle conservation. The STSSN works to inform causes of morbidity and mortality in sea turtles by responding to and documenting sea turtles in a manner sufficient to inform conservation management and recovery.

NOAA Fisheries maintains a database containing the species, date of initial observation, location of stranding, condition at initial observation, sex, age class, condition and other data fields for all strandings. A subset of these data were supplied by NOAA and processed from tabular to geographic information systems (GIS) point file format by the MARCO Portal and prepared for visualization in partnership with the NOAA Fisheries Greater Atlantic Regional Stranding Coordinator.

Data Visualization on the Portal

Sea Turtle Stranding data are visualized by the following categorizations on the Mid-Atlantic Ocean Data Portal:

- **County Summaries (2000-2020):** Provides the number of overall stranding events reported by county. Circle icons floating over each county are sized commensurate with the number of strandings.
- **Strandings: By Season (2000-2020):** Depict where stranding events for all sea turtle types were reported in the winter, spring, summer, and fall. The seasons are defined for these map layers as follows.
 - Winter: December, January, February
 - Spring: March, April, May
 - Summer: June, July, August
 - Fall: September, October, November
- **Strandings: By Species (2000-2020):** Shows sites where strandings were reported for the following sea turtle types.
 - Loggerhead sea turtle
 - Green sea turtle
 - Leatherback sea turtle
 - Hawksbill sea turtle
 - Kemp's ridley sea turtle
 - Unknown
- **Strandings: By Stranding Type (2000-2020):** Shows sites where strandings reported by three common stranding types, which are defined below.
 - Cold stunning: Cold-stunned sea turtles are those suffering the ill effects of prolonged exposure to temperatures below 50°F (10°C).
 - Incidental capture: An incidental capture is when a sea turtle is caught incidental to (i.e., not the purpose of) an activity such as fishing (recreational or commercial), dredging activities, relocation trawling, non-sea turtle research activities, or power plant operations. Whether an incidental capture is documented through the STSSN may be optional depending upon the circumstances and may vary by state. Many incidental captures are documented elsewhere, and that documentation does not necessarily need to be duplicated by the STSSN. Incidental captures recorded by NOAA Fisheries observer programs are not reflected in this data unless the network was involved (for example, to assist with disentanglement, necropsy, or rehab for a living sea turtle).
 - Traditional stranding: A traditional stranding is when a dead, sick, or injured sea turtle is found washed ashore, floating, or underwater, and when it is not an incidental capture or a cold-stunning. Traditional strandings do not involve healthy, uninjured sea turtles.

Data Attributes Shown on the Portal

STSSNID: Sea Turtle Stranding and Salvage Network database number

ReportDate: report date (month day year)

ObsMonth: observation month

Species: species abbreviation

SpeciesName: common name

PhotosTaken: photo (Y or N)

StrandType: stranding type

County: county

State: state

Latitude: latitude coordinate (decimal degrees)

Longitude: longitude coordinate (decimal degrees)

Locations can be determined by several methods. The first is with a GPS at the stranding site. The second is by collecting a detailed location description during response and a latitude/ longitude identified via map at a later time. The last is an estimated location based on information from the reporting party and/or stranding responder that is used to determine an estimated latitude/longitude via map. For instance, in MA cold stun events, due to the high volume of strandings in a short time frame, sea turtles collected off of known beaches are assigned the reference location associated with that known beach. In this case, there could be many strandings at the same location due to the use of this reference location.

InitialCondition: condition. (See below for definitions.)

- ***Alive.*** The sea turtle was alive at the time of initial observation, even if the turtle died after it was first reported or discovered.
- ***Fresh Dead or Mildly Decomposed.*** The carcass may have rigor mortis, but the eyes should be clear and there should be no smell of decomposition or evidence of bloating.
- ***Moderately Decomposed.*** The carcass has a mild to moderate smell of decomposition and mild to moderate bloating and bulging eyes (if present). The soft tissue may feel spongy and the scutes and skin may be beginning to slough.
- ***Severely Decomposed.*** The carcass has a foul smell and is either very distended by gas or has completely degassed (appears deflated). There is a mass of rotting flesh in areas of degassing and the scutes and skin are sloughing or missing. The limbs and carapace may be starting to disarticulate (especially upon handling) and there could be inundation by insect larvae (e.g., maggots).
- ***Dried Carcass.*** The carcass is completely desiccated with only dry skin and bones with little to no smell.
- ***Skeletal.*** In this case, the skeletal features are prominent and are disarticulating. Skin may still be present but large portions of the carcass are skeletonized.

Caveats: Please note that stranding data are collected opportunistically rather than by standardized surveys. Reports of stranded turtles indicate the presence not only of a stranded turtle, but also of a person that sights and reports the turtle. Lack of reports of stranded turtles may indicate there are no strandings in that location, that there were no people there to sight the turtle, or that it was simply not reported. Stranding location also does not indicate location of death. Turtles that die offshore usually will sink until decomposition produces enough gas to cause them to float to the surface where they are moved by winds, waves, and currents until they ultimately strand and are reported. Water temperature, nature of injuries, nutritional status, and other factors can affect the timing of decomposition and, therefore, the stranding location.

Public Data Access and Release Policy: Any publication or use of this data must credit the Sea Turtle Stranding and Salvage Network. Users with the intent to publicly present or publish this data should consult and collaborate with contributing network coordinators. Preliminary data and summaries posted on this site are subject to change and are not recommended for use in publications and analyses.

Source: NOAA Fisheries Sea Turtle Stranding and Salvage Network; web service published by the MARCO Portal

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