

**Causes of UMEs: 1991-2008**

Biotoxins – 27%  
 Infectious Disease – 13%  
 Ecological Factors – 7%  
 Human Interactions – 7%  
 Undetermined – 46%

**Species Impacted by UMEs: 1991-2008**

Cetaceans – 53%  
 Pinnipeds – 29%  
 Manatees – 12%  
 Sea Otters – 6%

**UMEs per Geographic Area: 1991-2007**

Atlantic – 29%  
 Gulf of Mexico – 34%  
 Pacific Coast – 33%  
 Alaska – 2%  
 Hawaii – 2%

**UMEs Per Year by Cause: 1991-2008**

<b>Year</b>	<b>Infectious Disease</b>	<b>Biotoxins</b>	<b>Ecological Factors</b>	<b>Human Interactions</b>	<b>Undetermined</b>	<b>Total</b>
1991	2	0	0	0	1	3
1992	1	0	1	0	1	3
1993	0	0	0	1	0	1
1994	1	0	0	0	1	2
1995	0	0	0	0	0	0
1996	0	1	0	1	1	3
1997	1	0	0	0	0	1
1998	0	1	0	0	0	1
1999	0	1	0	0	1	2
2000	1	1	0	0	0	2
2001	0	0	1	0	1	2
2002	0	2	0	0	0	2
2003	0	1	1	0	2	4
2004	0	1	0	0	2	3
2005	0	2	0	0	2	4
2006	0	1	0	0	4	5
2007	0	1	0	1	3	5
2008	0	0	0	0	2	2
<b>Total</b>	<b>6</b>	<b>12</b>	<b>3</b>	<b>3</b>	<b>21</b>	<b>45</b>