

**Average NHC Atlantic Track Forecast Errors (n mi)  
Tropical Storms and Hurricanes<sup>1, 2</sup>**

Year	0 h		12 h		24 h		36 h <sup>3</sup>		48 h		72 h		96 h <sup>4</sup>		120 h <sup>4</sup>	
	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N
1970	18.8	55	45.2	46	84.3	34			185.8	13	253.8	3				
1971	22.7	215	52.5	202	112.4	183			242.0	137	381.9	118				
1972	24.9	66	70.7	66	142.3	57			390.6	38	689.2	25				
1973	24.3	98	63.7	98	116.7	84			246.2	54	363.2	29				
1974	17.9	110	50.3	103	97.1	89			206.5	64	348.3	42				
1975	16.5	156	57.9	140	117.0	121			256.9	92	402.1	68				
1976	21.8	172	62.6	158	127.9	143			285.2	113	433.0	85				
1977	11.7	48	56.8	39	132.9	30			331.0	14	485.1	5				
1978	18.6	137	68.5	115	144.2	101			323.5	59	423.3	33				
1979	17.8	170	47.2	146	89.5	138			160.1	98	238.4	83				
1980	16.4	226	59.8	199	128.6	188			273.2	140	404.8	109				
1981	19.3	232	64.0	210	125.9	190			248.3	146	423.0	106				
1982	17.2	64	62.3	55	131.3	45			244.6	29	271.3	21				
1983	10.1	48	43.0	43	83.4	34			190.7	18	418.0	10				
1984	22.4	198	66.7	180	131.7	157			265.3	122	387.4	89				
1985	17.8	187	55.7	173	109.6	151			222.5	106	339.7	69				
1986	21.8	83	56.6	76	107.4	66			237.5	42	383.5	27				
1987	19.6	142	53.2	131	108.6	119			229.6	95	349.2	67				
1988	12.9	165	39.3	153	71.6	133	103.8	119	143.0	109	230.8	90				
1989	18.1	255	50.9	239	95.6	215	141.3	190	192.1	165	281.2	128				
1990	16.2	269	55.1	239	100.8	209	145.6	181	194.1	157	301.7	114				
1991	15.5	80	58.9	69	113.5	55	148.5	42	191.9	31	296.6	17				
1992	10.4	154	41.1	139	82.9	124	126.0	111	167.8	99	279.9	76				
1993	14.6	118	47.4	98	101.0	82	149.1	72	179.5	60	240.5	41				

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	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N
1994	12.8	111	52.1	97	102.7	83	151.7	72	209.6	62	341.6	50				
1995	12.3	483	47.0	447	87.1	411	124.2	376	160.2	344	233.3	281				
1996	10.5	313	42.4	286	72.0	260	100.6	236	128.1	217	189.8	183				
1997	11.5	106	47.0	90	87.2	75	123.4	62	150.1	51	229.2	38				
1998	12.4	346	45.7	316	83.9	286	117.0	260	144.3	233	201.8	191				
1999	9.3	313	37.2	289	70.2	267	106.3	245	139.7	223	211.1	182				
2000	9.2	259	38.4	230	70.6	202	101.4	179	131.8	164	220.7	136				
2001	6.0	255	41.7	217	74.1	182	100.2	153	125.1	133	187.7	99	235.4	69	315.0	48
2002	6.2	228	39.1	195	66.6	168	95.4	142	122.4	123	177.9	103	268.2	92	327.2	79
2003	6.9	310	34.6	281	57.3	251	81.8	225	107.4	202	132.4	161	160.7	129	205.8	106
2004	5.9	365	30.7	326	53.7	294	73.3	263	94.4	240	143.0	207	200.4	174	280.7	144
2005	6.0	512	31.4	453	55.2	402	77.7	359	101.2	323	150.1	243	229.4	185	316.0	130
2006	8.7	207	27.6	189	48.0	171	69.9	153	96.6	135	147.3	100	207.5	76	276.2	59
2007	7.3	150	31.4	120	50.2	91	68.0	73	86.2	60	139.6	41	144.5	25	221.5	16
2008	5.4	348	27.4	316	48.0	285	68.2	258	87.5	232	124.7	187	158.4	148	195.5	124
2009	9.4	115	32.4	93	46.0	73	57.8	59	70.1	50	111.5	40	190.2	29	289.6	19
2010	10.0	354	31.8	308	49.9	269	65.3	238	80.8	212	123.8	166	168.5	126	187.8	100
2011	10.3	349	27.3	304	42.3	268	56.2	234	69.7	201	105.0	154	163.5	123	245.0	101
2012	7.8	396	23.8	354	38.5	318	51.5	282	65.7	252	95.2	205	140.9	168	184.3	131
2013	8.3	152	29.0	122	48.7	96	70.1	74	105.3	54	132.3	23	133.5	15	146.8	13
2014	6.7	138	24.8	123	36.3	109	48.7	95	63.8	83	95.7	60	148.5	40	238.0	24
2015	7.7	173	25.5	149	42.3	129	59.5	108	81.1	90	123.7	59	193.8	40	332.1	24
2016	6.7	315	23.9	283	35.6	252	45.3	225	57.8	200	83.1	157	127.1	124	168.4	100
2017	5.3	365	18.9	329	29.1	295	39.3	268	52.1	243	81.9	204	104.6	168	145.7	144

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	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N	Error	N
2018	6.2	340	23.3	304	34.8	268	45.4	234	61.5	203	102.0	159	148.0	130	191.3	107
2019	7.4	274	23.9	237	40.5	205	58.3	184	76.1	166	90.1	121	111.9	93	141.5	70
2020	6.4	462	22.5	398	33.3	342	46.5	293	61.6	248	96.0	171	134.2	117	192.6	76
2021	7.4	314	23.0	265	31.1	225	36.9	198	43.5	178	61.4	138	99.1	112	155.4	87
2022	5.4	219	20.0	195	30.6	173	40.8	151	50.4	131	73.4	95	94.6	70	131.3	50
1970-79	19.9	1227	57.3	1113	115.6	980			252.5	682	384.0	491				
1980-89	18.1	1600	56.0	1459	111.1	1298	126.9	309	226.4	972	345.3	716				
1990-99 <sup>3</sup>	12.2	2293	46.0	2070	85.4	1852	122.4	1657	157.2	1477	233.2	1173				
2000-09 <sup>4</sup>	6.8	2749	33.1	2420	57.1	2119	80.1	1864	103.7	1662	153.8	1317	202.0	927	267.4	725
2010-19	7.7	2856	24.9	2513	39.1	2209	52.3	1942	67.7	1704	98.8	1308	139.9	1027	186.1	814
2020-22	6.5	995	22.0	858	32.0	750	42.2	642	53.2	557	78.9	404	111.8	299	163.0	213

Notes:

1. Verification based on NHC best track database as of 4/20/22.
2. Verification sample is homogeneous with best-track 5-day CLIPER, and includes subtropical storms.
3. 36-h forecasts began in 1988.
4. 96- and 120-h forecasts began in 2001, but were not publicly released until 2003.