

## Historical look at Hurricanes in Baja

The Eastern Pacific Hurricane Season begins May 15th, but residents of Baja will scoff about any threat so early in the season. I've heard tribal knowledge like, "Hurricanes never come up the Sea of Cortez before September 1st." Well, right off the bat, my first hurricane, Ignacio proved that one wrong last year.

So we did a little research and here's the scientific straight scoop. We went to the NHC's Historical Hurricane Plotter which has data on tropical weather compiled from 1948 to 2002. We looked at plots of tropical storms though Category 5 hurricanes that passed within 250 miles of Baja. To confirm our data, it was checked against the Unisys data compiled independently. Our plots and data do not include 2003's direct hits by Ignacio and Marty.

There is a map for each month of the season, click on the map for an enlarged view of storms tracked during that month. Each table shows the year of the storm, the first date of it's highest wind speed and the highest Saffir-Simpson Scale Category rating the storm achieved. The storms are sorted by the day they achieved maximum strength, showing what part of the month is most prone to storms.

Let's Start with May, that's an easy one. Since 1951 not a single tropical storm or hurricane has passed within 250 miles of Baja.

In June the Eastern Pacific is starting to really warm up and the storm activity increases. By mid June hurricanes become a possibility in Baja, although still pretty remote. The last time a June hurricane hit Baja was in 1958. The early season storm packed winds of 85 mph as it passed within 25 miles of Cabo San Lucas, which wasn't much more than a few fishing huts at the time.

YEAR	JUNE DAY	STORM NAME	WIND (MPH)	CAT
1949	12	NOT NAMED	50	TS
1959	12	NOT NAMED	50	TS
1958	14	NOT NAMED	85	H1



In July the water in the Sea of Cortez is warmer. But hurricanes in our hemisphere want to go to the west because of their rotation. The jet stream usually doesn't drop southward across Baja until late August. Historically speaking, July is a safe month too, as the storms move harmlessly out into the Pacific and dissipate. There has been one Category 2 hurricane brush past Magdalena Bay back in July of 1954. Tropical storm Calvin hit East Cape in 1993 and another tropical storm Calvin hit Todos Santos in 1981. (yes, the same day twelve years apart!) Ok, we can make it though July without a hurricane.

YEAR	JULY DAY	STORM NAME	WIND (MPH)	CAT
1950	4	NOT NAMED	85	H1
1985	4	FEFA	70	TS
1984	7	FAUSTO	100	H2
1981	8	CALVIN	45	TS
1993	8	CALVIN	60	TS
1984	11	GENEVIEVE	90	H1
1954	16	NOT NAMED	85	H1
1970	18	HELGA	60	TS
1952	19	NOT NAMED	50	TS
1958	28	NOT NAMED	50	TS



Well, dream on if you think the luck will hold though August. I heard it said just days before hurricane Ignacio last year that "...it was no concern, storms never come up the Sea until after September 1st." That is nothing but an old wives tale. By the end of August we can start to get into some serious hurricane weather.

Anyone who has spent the summer in Baja knows, about August 15th the days become still and humid, and this is in addition to near 100 degree heat every day. Thunderstorms appear regularly over the mountains between Cabo San La Paz. The saving grace is the jet stream. The jet stream can steer the hurricanes east, in opposition to their natural desire to head west. These strong high level winds usually drop down the west coast of Baja and turn eastward north of Turtle Bay.

The warm water of the Sea can be in the upper 80°s by late August and this becomes a very strong hurricane magnet. Storms that generate NW of Acapulco can sometimes get stuck 'inside' and travel up the Sea. Hurricane Ignacio did exactly that on August 26, 2003.

The good news is August hurricanes in Baja are still rare. The upper atmosphere steering winds are still moving eastward far north of the hurricane track and a majority of the storms move off into the colder waters of the Pacific and spin apart.

YEAR	AUG DAY	STORM NAME	WIND (MPH)	CAT
1970	7	KRISTEN	45	TS
1994	8	HECTOR	65	TS
1995	10	FLOSSIE	80	H1
1971	11	KATRINA	65	TS
1994	12	ILEANA	75	H1
1977	15	DOREEN	75	H1
2000	15	ILEANA	70	TS
1968	17	HYACINTH	50	TS
1960	18	DIANA	60	TS
1988	18	JOHN	40	TS
1960	19	DIANA	85	H1
1969	23	EMILY	65	TS
1993	23	HILARY	60	TS
1953	25	NOT NAMED	50	TS
1953	26	NOT NAMED	50	TS
1989	27	KIKO	120	H3
1981	29	IRWIN	40	TS
1965	31	EMILY	85	H1
1967	31	KATRINA	85	H1

August can spawn monster storms too, like Kiko in 1989. Kiko made it to Category 3 has it churned up the Sea of Cortez and made landfall on the East Cape with winds in excess of 120 MPH.



September is the month to be a storm watcher in Baja. More than 150 tropical storms have passed within 250 miles of Cabo San Lucas since 1950. Many of them were just tropical storms, but September is the peak of the storm season.

By mid September the jet stream has dropped well down into Baja Sur before it makes a dramatic turn to the east. Last year while I was plotting hurricane Marty the computer models forecast a continued NW progress harmlessly into the Pacific. Friday afternoon I noticed a drop to the south in the jet stream on the US Navy plots. These high speed upper air currents came almost as far as Magdalena Bay, then turn 90° east. That Friday night the Bajalnsider predicted that Marty would not continue into the Pacific but would turn and cross the peninsula south of Magdalena Bay. Marty hit the eastward winds south of the jet stream and banked against it's spin, progressively to the east. Marty arrived in La Paz on Monday morning. (thanks to my amateur weather tutor, Jim from Sea Witch!)

The jet stream can make a hurricane turn and it can tear it apart. The central column of convection is the engine that drives a hurricane. Hard turns or strong high altitude winds can disrupt the column and spin the storm apart. As the northern hemisphere cools these upper atmosphere steering winds drop further down Baja before turning east. The combination of these winds and energy still

built up in the tropical regions are what make the period from September 15th to October 15th the peak of our storm season.



YEAR	SEPT DAY	STORM NAME	WIND (MPH)	CAT
1965	1	EMILY	85	H1
1998	2	ISIS	75	H1
1998	2	ISIS	70	TS
1962	3	BERNICE	50	TS
1995	4	HENRIETTE	100	H2
1969	5	FLORENCE	70	TS
1999	6	GREG	65	TS
1949	6	NOTNAMED	50	TS
1971	7	NANETTE	85	H1
1999	7	GREG	75	H1
1959	8	NOT NAMED	85	H1
1964	8	TILLIE	50	TS
1971	8	NANETTE	70	TS
1969	10	GLENDA	75	H1
1969	10	GLENDA	65	TS
1949	11	NOT NAMED	85	H1
1979	11	GUILLERMO	75	H1
1958	11	NOT NAMED	50	TS
1979	11	GUILLERMO	60	TS
1968	12	NAOMI	85	H1
1993	12	LIDIA	105	H2
1996	12	FAUSTO	120	H3
1958	12	NOT NAMED	50	TS
1951	13	NOT NAMED	50	TS
2001	13	IVO	50	TS
1995	14	ISMAEL	80	H1
1953	15	NOT NAMED	85	H1
1954	15	NOT NAMED	50	TS
2000	16	MIRIAM	40	TS
1957	20	NOT NAMED	50	TS
1981	20	KNUT	65	TS
1962	21	CLAUDIA	50	TS
1989	22	PRISCILLA	65	TS
1986	23	NEWTON	85	H1
1984	24	NORBERT	135	H4
1973	25	IRAH	110	H2
1965	26	HAZEL	50	TS
1973	26	IRAH	60	TS
1978	26	PAUL	45	TS
2001	27	JULIETTE	100	H2
1966	28	KIRSTEN	50	TS
2001	28	JULIETTE	70	TS
1982	29	PAUL	110	H2
1976	30	LIZA	140	H4

Once we get to October you would think that the season is winding down. Well, not exactly. The threat of tropical weather extends through the entire month of October. It is said the British Privateer Cromwell and Spanish explorer Cabrillo were taken by surprise in a late season storms.

By October the Sea of Cortez has reached it's high temperature, acting as a magnet to the warm water hungry storms. In addition the high altitude steering winds now have enough strength to overpower the storms desire to head west. One look at the storm plot for October and you can see what I mean. There are fewer storms than in September, but the path moves them right over Baja.

The good news is that by November 1st, like a line in the sand, the threat is over. Since 1950 only three tropical storms have even made it to within 250 miles of Cabo, none of them making land or achieving hurricane strength.



YEAR	OCT DAY	STORM NAME	WIND (MPH)	CAT
1976	1	LIZA	140	H4
1987	1	PILAR	40	TS
1955	2	NOT NAMED	50	TS
1986	2	PAINE	100	H2
1990	2	RACHEL	65	TS
1958	3	NOT NAMED	85	H1
1962	3	DOREEN	85	H1
1984	3	POLO	45	TS
1978	5	ROSA	85	H1
1981	7	LIDIA	50	TS
1985	9	WALDO	90	H1
1969	11	JENNIFER	75	H1
1981	11	NORMA	110	H2
1967	13	OLIVIA	85	H1
1963	18	MONA	85	H1
1983	19	TICO	135	H4
1998	19	MADLINE	65	TS
1957	21	NOT NAMED	140	H4
1986	21	ROSLYN	85	H1
1960	22	HYACINTH	85	H1
1975	24	OLIVIA	105	H2
1976	28	NAOMI	45	TS



YEAR	NOV DAY	STORM NAME	WIND (MPH)	CAT
1970	5	SELMA	50	TS
1951	29	NOT NAMED	50	TS
1951	30	NOT NAMED	50	TS

Now our look at hurricanes has been focused on Baja Sur, where the storms are a more regular occurrence. But eight Category 1 hurricanes have made it north of Guerrero Negro and three have made it all the way to the US border since 1948. Two have passed through Loreto and one through Mulege.



On the Pacific side the water is colder and few storms maintain hurricane strength much past Magdalena Bay. Weakened, these storms often travel up the outside of Baja and lash Turtle Bay and the Cedros Islands with tropical storms force winds and rain.

What about the monster storms? The good news is they just don't happen here in Baja like they do in the Caribbean. A Category 5 storm has yet to be generated in our region and according to our research nothing larger than a Category 2 storm has ever made landfall in Baja.

That's not to say our storms don't deserve respect. The most common mistake amongst hurricane prone areas on the east coast is complacency. Boaters should be well aware of anything in excess of a tropical depression while land dwellers should recall a Category 2 storm in the late 70's killed thousands in La Paz from the flooding.

Kiko in 1989 was the most powerful storm when it made landfall in Baja at Category 3. Fausto, once a Category 3 storm tracked a path of destruction from Todos Santos to La Paz. But according to NHC and Unisys records, it was only a Category 1 storm by the time it made landfall on Baja. Hurricane Liza in 1986 never made landfall on Baja but maintained Category 4 strength up though the Sea until making landfall on the mainland south of Guaymas.

So there you have it, everything you needed to know about the history of hurricanes in Baja. In summary of the statistics, it would appear the real Baja Hurricane Season runs from the last week of August to the second week of October. So batten down the hatches, prepare and protect your life and property and wait for the season to pass!



YEAR	MONTH	DAY	STORM NAME	WIND (MPH)	CAT
1957	Oct.	21	NOT NAMED	140	H4
1976	Sept.	30	LIZA	140	H4
1983	Oct.	19	TICO	135	H4
1984	Sept.	24	NORBERT	135	H4
1989	Aug.	27	KIKO	120	H3
1996	Sept.	12	FAUSTO	120	H3

Stay informed as our tropical weather season progresses. The BajaInsider will continue to have informative articles on hurricane preparedness and weather updates on our [Tropical Weather Watcher](#) page. [Subscribe](#) to the BajaInsider for free and receive email updates and weather bulletins.

Source Data:  
National Hurricane Center Historical Hurricane Plots  
Unisys Hurricane Archives

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