

= 1997 Pacific hurricane season =

The 1997 Pacific hurricane season was a very active hurricane season . With hundreds of deaths and hundreds of millions of dollars in damage , this season was the costliest and one of the deadliest Pacific hurricane seasons . This was due to the exceptionally strong 1997 ? 98 El Niño event . The 1997 Pacific hurricane season officially started on May 15 , 1997 in the eastern Pacific , and on June 1 , 1997 in the central Pacific , and lasted until November 30 , 1997 . These dates conventionally delimit the period of each year when almost all tropical cyclones form in the northeastern Pacific Ocean .

Several storms impacted land . The first was Tropical Storm Andres which killed four people and left another two missing . In August , Tropical Storm Ignacio took an unusual path , and its extratropical remnants caused minor damage in the Pacific Northwest and California . Linda became the most intense east Pacific hurricane in recorded history . Although it never made landfall , it produced large surf in Southern California and as a result five people had to be rescued . Hurricane Nora caused flooding and damage in the Southwestern United States , while Olaf made two landfalls and caused eighteen deaths and several other people were reported missing . Hurricane Pauline killed several hundred people and caused record damage in southeastern Mexico . In addition , Super Typhoons Oliwa and Paka originated in the region before crossing the International Date Line and causing significant damage in the western Pacific . There were also two Category 5 hurricanes : Linda and Guillermo .

Activity in the season was above average . The season produced 17 named storms , which was a little above normal . The average number of named storms per year is 15 . The 1997 season also had 9 hurricanes , compared to the average of 8 . There were also 7 major hurricanes compared to the average of 4 .

= = Season summary = =

The 1997 Pacific hurricane season officially started on May 15 , 1997 in the eastern Pacific , and on June 1 , 1997 in the central Pacific , and lasted until November 30 , 1997 . These dates conventionally delimit the period of each year when most tropical cyclones form in the northeastern Pacific Ocean . This season exceeded these boundaries appreciably , as Tropical Storm Paka formed December 2 , and dissipated nineteen days later after crossing the International Dateline and then moved into the Western Pacific .

The 1997 Pacific hurricane season was fairly active , due to the strong El Niño that was occurring at the time . El Niño causes wind shear to be reduced and water temperatures to increase , resulting in conditions more conducive for tropical cyclones in the East Pacific . There were 24 cyclones in total , including five unnamed tropical depressions . Of these , 19 were in the east Pacific (east of 140 ° W) . Of these , eight peaked at tropical storm intensity , while ten reached hurricane status . Seven of these reached Category 3 intensity or higher on the Saffir @-@ Simpson hurricane scale , including central Pacific cyclones Super Typhoons Oliwa and Paka , which became typhoons after crossing into the western Pacific . The first hurricane of the year was Hurricane Dolores , and the first major hurricane was Hurricane Enrique . Most months during the year had several storms , but no records were set for storms in any particular month .

Activity in the central Pacific was also above average . Two tropical storms formed , as did several tropical depressions . A number of storms moved in from the east . With a total of nine tropical cyclones entering or forming there , this was the fourth highest number since satellite observations began . The first storm formed on June 1 . The last storm dissipated December 21 , which gives this season the latest known end . However , if December 6 , the date the last storm crossed the dateline is taken to be the end , this season has the second latest end , behind the 1983 season and tied with the 1957 season .

= = Season summary and statistics = =

The season began with the formation of Tropical Depression One @-@ E on June 1 and ended with the dissipation of Tropical Depression Paka on December 22 . The season can alternatively be considered to end on December 6 , the day Tropical Storm Paka crossed the international dateline . No named storms formed in May , three in June , four in July , four in August , five in September , one in October , and one in November . Very unusually , a tropical storm formed in December , after the season ended . The other two times this feat occurred since the satellite era began in 1971 were in 1983 and 2010 .

= = Storms = =

= = = Tropical Storm Andres = = =

Andres originated from a disturbance that slowly organized and formed into Tropical Depression One @-@ E on June 1 . The next day , it reached tropical storm status as a second circulation formed north @-@ northwest of the initial circulation . However , the former circulation became dominant , and Andres intensified slightly . After a brief period of a normal track to the northwest , Andres was picked up by westerly winds and became the first named storm to threaten Central America . Initially forecast to cross the isthmus and enter the Caribbean Sea , Andres instead turned to the southeast and paralleled the coast . This was the first time since record @-@ keeping began that any East Pacific storm had taken such a path . Andres then turned back to the northeast . It weakened to a depression and made landfall near San Salvador on June 7 and dissipated shortly thereafter .

Among the casualties were two fishers who were reported missing . Andres caused power outages , flooding rivers , several car crashes , and damage to roughly ten homes . The highest rainfall report from Mexico was 11 @.@ 42 inches (290 mm) at Mazatan . Damage was noted in parts of Nicaragua . Andres also killed four people in Usulután , El Salvador due to heavy flooding .

= = = Tropical Storm Blanca = = =

Tropical Depression Two @-@ E formed from a broad area of low pressure on June 9 . Six hours later the depression strengthened into Tropical Storm Blanca . This system developed a good outflow , and reached its peak intensity with winds of 45 mph (75 km / h) . However , its circulation was not well @-@ defined and a weakening trend began , and Blanca was downgraded to a depression on June 12 . It lost its closed circulation shortly thereafter and was thus declared dissipated .

Blanca briefly threatened land on June 10 as warnings and watches were established by the Mexican Servicio Meteorológico Nacional . Shortly thereafter , a ridge of high pressure turned Blanca away from the coast . As Blanca moved just south of the Mexican coast , it dropped a total of 5 @.@ 77 inches (147 mm) of rainfall at Fincha Chayabe / Maragaritas . There were no major damage or casualties as Blanca 's impact was generally minimal .

= = = Tropical Depression Three @-@ E = = =

Tropical Depression Three @-@ E formed June 21 . Moving rapidly westward , it never strengthened and the winds of the depression soon decreased . It dissipated early on June 24 . The depression never impacted land .

= = = Tropical Storm Carlos = = =

On June 22 , showers increased associated with a tropical wave several hundred miles away from land . Three days later , deep convection became more concentrated , and the system became a tropical depression . It intensified into Tropical Storm Carlos as banding features increased and the

outflow became better defined . As it moved west , convection diminished as Carlos moved into cooler water . Shortly thereafter , increased wind shear took its toll on Carlos as the low @-@ level center became exposed from the deep convection . Carlos weakened into a depression early on June 27 , and dissipated June 28 . However , a swirl of clouds remained for a couple of days . Except for Socorro Island , which the system passed close to , Carlos never threatened land . No indications of casualties or damage were reported .

== Tropical Depression Five @-@ E ==

On the afternoon of June 29 , Tropical Depression Five @-@ E formed . It erratically moved westward . On July 1 , the depression weakened slightly , but quickly reintensified . It dissipated on July 4 , without even threatening land .

== Hurricane Dolores ==

In early July , shower activity increased in association with an area of disturbed weather . With surface pressures lower than normal for a tropical disturbance , deep convection increased further and Tropical Depression Six @-@ E formed late on July 5 and reaching tropical storm status the following day and was named Dolores . Despite moderate wind shear , very cold cloud tops formed as the winds increased to 50 mph (80 km / h) , a moderate tropical storm . Moving westward , Dolores strengthened into the first hurricane of the season on July 7 as a ragged eye formed .

Dolores continued to intensify and it reached a peak windspeed of 90 mph (140 km / h) , a strong Category 1 hurricane , two days later . Meanwhile , Dolores became the first hurricane in over two years to cross longitude 125 ° W. Shortly thereafter , the hurricane started losing strength as it moved over cooler waters . The eye dissipated from satellite imagery while the associated thunderstorm activity became sheared . Dolores weakened back into a tropical storm on July 10 and a tropical depression the next day . The cyclone then crossed into the Central Pacific Hurricane Center 's area of responsibility (west of longitude 140 ° W) while producing minimal shower activity . It dissipated on July 12 . The hurricane was not a threat to any land .

== Hurricane Enrique ==

The first major hurricane of the season originated from a broad area of low pressure on July 8 near the Gulf of Tehuantepec . The thunderstorms gradually became more concentrated and a tropical depression formed on July 12 . It strengthened into a tropical storm twelve hours later , and then began to rapidly intensify as convection increased further near the center . It became a hurricane on July 13 . Enrique continued to steadily intensify and became a Category 2 hurricane on July 14 . The next day , Enrique reached its peak intensity of 115 mph (185 km / h) and peak pressure 960 mbar (hPa) on July 14 . Shortly thereafter , the hurricane outflow became asymmetrical and it began to weaken over cool waters . It weakened fairly quickly and was downgraded into a Category 2 hurricane on July 15 . It then lost hurricane intensity later that day . On July 16 the winds had decreased further to 50 mph (80 km / h) . Enrique weakened into a depression the next day , and degenerated into a swirl of clouds shortly thereafter . The system never threatened land .

== Hurricane Felicia ==

A large area of disturbed weather formed on July 13 . It then organized into a depression south of Manzanillo , Colima , on July 14 . Intensification was delayed by wind shear due to its proximity to Enrique for about two days . However , it became a tropical storm late July 15 as it moved west @-@ northwestward . Continuing to intensify , an eye formed . Based on this , Felicia was upgraded into a hurricane on July 17 . Its development was again halted by increased wind shear , and as such it leveled off in intensity . After the shear decreased , Felicia began to intensify and the hurricane 's winds reached 135 mph (217 km / h) and its pressure fell to 948 mbar (hPa) , making

it a moderate low @-@ end Category 4 hurricane . Shear increased for the third time , and then moved into cooler waters . It began to weaken as it moved west @-@ northwest . On July 20 , it lost major hurricane intensity . Shortly before being downgraded to a tropical storm , it crossed 140 ° W. A strong wind shear took toll on Felicia and it was downgraded into a tropical depression July 22 . No damage or deaths were reported in wake of the hurricane .

= = = Tropical Depression One @-@ C = = =

Tropical Depression One @-@ C formed on July 26 from a disturbance that had been showing signs of organization for the past three days . It moved west to southwest through an unfavorable environment . On the morning of July 27 , it dissipated due to strong wind shear caused by an upper @-@ level trough . The system never impacted land , thus no damage was reported .

= = = Hurricane Guillermo = = =

A tropical wave emerged into the Pacific Ocean on July 27 . It organized into a depression July 30 and was named Tropical Storm Guillermo the next day . It quickly intensified , reaching hurricane status on August 1 . Guillermo became a major hurricane August 2 . It reached Category 4 intensity on August 3 . Continuing to rapidly intensify , Guillermo attained Category 5 strength August 4 . The tropical cyclone peak intensity was 919 mbar (hPa) and 160 mph (260 km / h) .

Guillermo then weakened slowly , becoming a tropical storm August 8 . It crossed 140 ° W and entered the Central Pacific . It weakened to a depression late August 10 , but restrengthened back into a storm 24 hours later when it encountered a small area of warmer water . It weakened to a depression for the second and final time August 15 and became an extratropical cyclone early the next day . The storm 's remnants recurved over the far northern Pacific . They were tracked to a point 500 nautical miles (930 km) west of Vancouver Island . The remnants persisted for a few more days and drifted south before being absorbed by a mid @-@ latitude cyclone August 24 off the coast of California .

= = = Tropical Storm Hilda = = =

A tropical wave that had showed signs of development emerged into the East Pacific and organized into Tropical Depression Ten @-@ E on August 10 . Despite some wind shear , the depression managed to become a tropical storm late on August 11 . Hilda reached its peak intensity as a moderate 50 mph (85 km / h) tropical storm the next day . After maintaining its peak intensity for 24 hours , it gradually weakened due to increasing wind shear . On August 14 , shear weakened Hilda to a depression and the cyclone dissipated early the next morning . Hilda was no threat to land and caused no known damage or deaths .

= = = Tropical Storm Ignacio = = =

Tropical Storm Ignacio formed first as a depression in an area of disturbed weather on August 17 . Twelve hours later , it organized into a tropical storm . Its location of tropical cyclone formation was further north and west of where most East Pacific tropical cyclones develop . Steering currents pulled Ignacio north , where it encountered wind shear and cooler waters . Ignacio never intensified beyond 40 mph (65 km / h) and then was downgraded into a depression on August 18 . It last transitioned into an extratropical cyclone 24 hours later . It was then absorbed by a cyclone associated with the remnants of Hurricane Guillermo .

Ignacio 's remnants moved north , bringing gusty winds to California coastal waters before dissipating . Severe flooding was recorded along Highway 97 with a debris flow estimated at 0 @-@ 5 mi (0 @-@ 80 km) and 7 ft (2 @-@ 1 m) deep . They caused rainfall as far north as the U.S. state of Washington . Thunderstorms caused power outages in central California .

== Hurricane Jimena ==

During the third week of August , a tropical disturbance formed far from land . Although the system was located over warmer than average sea surface temperatures , the upper @-@ level environment was initially unfavorable . However the environment gradually became more conducive for tropical cyclone formation and Tropical Depression Twelve @-@ E formed August 25 from an area of disturbed weather in a rather easterly location . It became a tropical storm the next day and a hurricane on August 27 . Intensification was rapid , with winds increasing from 75 mph (121 km / h) to 115 mph (185 km / h) in just 6 hours . Continuing to rapidly intensify , it reached its peak intensity as a low @-@ end category 4 hurricane . After maintaining peak intensity for 30 hours , it moved north @-@ northwest and encountered increasing wind shear which reduced its winds from 115 mph (185 km / h) to 35 mph (56 km / h) in just 24 hours . Jimena completely dissipated on August 30 , not long after entering the Central Pacific Basin . Hurricane Jimena was of no threat to land .

== Tropical Storm Oliwa ==

Tropical storm Oliwa began as a tropical disturbance that had meandered south of Johnston Atoll . It organized into Tropical Depression Two @-@ C on September 2 . Later that day , it was upgraded to Tropical Storm Oliwa (Hawaiian for Oliver) as it slowly moved towards the west . It crossed the dateline late on September 3 and entered the Joint Typhoon Warning Center 's Area of Responsibility .) In the Pacific Ocean , tropical cyclones are not renamed when they cross basin boundaries , so Oliwa kept its name .

Oliwa passed south of Wake Island on September 6 , where it caused heavy rains but no damage . On September 7 , Oliwa started a period of rapid strengthening , becoming a typhoon on September 8 and a Super Typhoon eight hours later . Oliwa stayed at that intensity for over two days . While still a strong typhoon , Oliwa passed near the Northern Marianas Islands . It then started weakening as it curved towards Japan . It made landfall as a minimal typhoon September 16 . It quickly dissipated later that same day . Typhoon Oliwa caused 12 fatalities and left 30 @, @ 000 people homeless . Damage totaled to 4 @.@ 36 billion yen (\$ 50 @.@ 1 million USD) .

== Tropical Storm Kevin ==

Tropical Storm Kevin , first displayed hints of development while located near Panama , and developed a well @-@ defined circulation after emerging into the Pacific . It was classified as a tropical depression in the Pacific on September 3 while located south @-@ south west of Baja California . Convection increased and the outflow of the storm became better defined . As such , it became a tropical storm on the morning of September 4 . Gradually intensifying , it reached it peak intensity as a mid @-@ level tropical storm on September 5 . As it moved westbound , it maintained its intensity for 12 hours . The environment was unfavorable , and two days later , Kevin weakened to a depression when deep convection ceased . It dissipated early on September 7 , having never posed a threat to land .

== Hurricane Linda ==

A tropical disturbance formed on September 9 and became Tropical Depression Fourteen @-@ E later that day . The cyclone moved northwest and strengthened into a tropical storm on September 10 . Linda then rapidly intensified reaching hurricane intensity the next day as an eye formed . It peaked in intensity on September 12 with it reaching a maximum windspeed of 185 mph (298 km / h) ? enough to make it a Category 5 hurricane on the Saffir @-@ Simpson Hurricane Scale ? and a minimum pressure of 902 mbar (902 hPa) , making it the most intense Pacific hurricane ever recorded until Hurricane Patricia took its place in 2015 . However , Linda soon moved over cooler waters , and lost hurricane intensity on September 16 . It then slowly weakened and dissipated on

September 17 .

Linda passed very near Socorro Island . In addition , early forecasts predicted that Linda would make landfall in California . The landfall never materialized and warnings or watches were not necessary for any location . However , Linda caused large surf , which crashed ashore in California , where it swept five people off a jetty . Moisture related to Linda also contributed to a landslide in southern California that destroyed or damaged 79 houses .

= = = Tropical Storm Marty = = =

An area of disturbed weather formed early on September 10 . It became better organized two days later as convection increased , and then organized into Tropical Depression Fifteen @-@ E late on September 12 . Moving slowly in a westward direction , it strengthened into a tropical storm in the morning of September 14 . Later that day , the system reached its peak intensity of 45 mph (72 km / h) . Meanwhile , the storm 's forward speed slowed down even more , and it turned to the south . It then encountered an area of strong wind shear , and it weakened into a depression on September 15 as the center of circulation became displaced from the deep convection . The shear continued to weaken , and the tropical cyclone dissipated late on September 16 . There were no deaths or damage .

= = = Hurricane Nora = = =

A large area of disturbed weather moved into the Pacific on September 12 . It then organized into Tropical Depression Sixteen @-@ E on September 16 and quickly strengthened into a tropical storm . Early on September 18 , a poorly defined and ragged eye appeared on infrared imagery . Shortly thereafter , its winds reached 105 mph (169 km / h) . Nora eventually peaked at Category 4 . It then encountered water temperature anomalies , and fluctuated in strength . Then , a trough pulled Nora northward and accelerated the storm . After weakening to a Category 1 , Nora made landfall in northern Baja California and stayed a tropical storm as it entered the United States . At that time , however , most of the deep rest convection was displaced to the northeast . Nora dissipated over Arizona , but its remnants kept going north .

Hurricane Nora was the first Pacific hurricane to bring gale @-@ force winds to the Continental United States since Kathleen in 1976 . In Mexico , Nora produced high waves , flooding , and heavy damage . Many homes were destroyed . In the United States , rains were heavy , and damage amounted to several hundred million dollars . Several hundred people were rendered homeless , and there was wind and flood damage in Arizona . Nora killed two people in Mexico , and several indirect deaths were reported in California .

= = = Tropical Storm Olaf = = =

A tropical disturbance left Central America on September 22 . Despite some wind shear , the system gradually became better organized and a tropical depression formed September 26 , being upgraded to a tropical storm several hours later . The cyclone immediately moved north . Instead of strengthening into a hurricane before landfall as forecasted , Olaf weakened due to its proximity to land . On September 29 , Olaf made landfall near Salina Cruz , Oaxaca .

Olaf , as a tropical depression , moved westward , far out to sea . Operationally , Olaf was believed to have dissipated for six days. however , in the Tropical Cyclone Report , a report issued several months after the hurricane 's duration , it was believed to have remained a tropical cyclone the entire time . After restrengthening slightly , Olaf moved southeast on October 5 due to the influence of Hurricane Pauline . Olaf then turned north , and on October 12 made a second landfall near Manzanillo , Colima , as a tropical depression . Olaf 's surface circulation weakened , and its remnants moved back out to sea , but did not redevelop .

Olaf resulted in some reports of damage and flooding in Mexico and Guatemala . During two time frames , from September 27 through October 2 and 10 through October 16 , a total of 27 @-@ 73

inches (704 mm) of rainfall fell in association with Olaf in Soyalapa / Comaltepec . Several people were reported missing . Most of its damage was from its first landfall . Throughout Southern Mexico , Guatemala and El Salvador , flooding caused by Olaf was blamed for eighteen deaths .

== Hurricane Pauline ==

On October 3 , a distinct area of disturbed weather formed . It drifted eastbound , and a well defined low pressure soon formed . It became Tropical Depression Eighteen @-@ E on October 5 . Early the next day it intensified into tropical Storm Pauline . An eye feature developed on October 7 and as such Pauline was upgraded into a hurricane . In a favorable environment , the cyclone rapidly intensified , reaching Category 4 intensity . After fluctuating in intensity , interaction with land weakened Pauline to a Category 2 by the time it made landfall on October 9 . It accelerated to the northwest , and passed over a mountainous region . The mountains disrupted Pauline 's circulation , and squeezed the moisture from the hurricane . Pauline dissipated on October 10 while over Jalisco .

Hurricane Pauline was the deadliest storm of the season . Landslides and flooding caused by heavy rain caused tragic loss of life and left thousands homeless . There were at least 230 casualties . The Red Cross reported that 400 people died , but this was disputed by Mexican officials . Pauline was Mexico 's deadliest hurricane since 1976 's Liza . In addition , the hurricane caused \$ 447 @. @ 8 million in damage (1997 USD ; \$ 473 million 2008 USD) .

== Tropical Depression Three @-@ C ==

A tropical disturbance formed near 140 ° W. It became Tropical Depression Three @-@ C on October 6 . The waters were very warm , and there was only moderate wind shear . However , the depression slowly moved westward without intensifying , and dissipated the next day .

== Tropical Depression Four @-@ C ==

A tropical disturbance formed in late October . It became Tropical Depression Four @-@ C on October 30 well southwest of Hawaii . Although the waters were very warm , some dry air was located north of the system . It slowly moved westward without intensifying , and dissipated the next day as the circulation became exposed .

== Hurricane Rick ==

The first hurricane in November since 1991 formed from a tropical disturbance . Although the circulation was initially poorly defined , it later acquired enough organization and was classified as a tropical depression on November 7 . It moved north until a trough of low pressure turned it to the northeast . It was named on November 8 , and was upgraded to a hurricane the next day . It reached its peak intensity of 100 mph (160 km / h) and 973 mbar (hPa) . Rick made landfall in Oaxaca ? the same area devastated by Hurricane Pauline one month earlier ? and quickly weakened , dissipating early on November 11 .

The storm downed trees , washed out recently repaired roads , and disrupted communications in some small population centers . A total of 10 @. @ 47 inches (266 mm) of rain was reported at Astata / San Pedro Huameluca near the point of landfall in Mexico . No one was killed .

Rick is one of only eight known hurricanes to form in the Pacific Ocean east of the dateline in the month of November . The other ones are Nina , Tara , Iwa , Nora , Sergio , Kenneth , and Sandra of which only Rick , Tara , and Iwa directly impacted land . It was also the second @-@ latest landfalling Pacific hurricane .

== Tropical Storm Paka ==

Tropical Depression Five @-@ C formed on December 2 , two days after the season ended . It was the second December tropical depression east of the dateline ; 1983 's Hurricane Winnie was the only other one . The depression strengthened into Tropical Storm Paka (Hawaiian for Pat) while west of Palmyra Atoll . The system began to move westward at a steady pace . As Paka moved westward , dry air and wind shear disrupted its development until it crossed the dateline on December 6 .

After entering the Western Pacific , the cyclone encountered a more favorable environment , resulting in rapid intensification . It became a typhoon on December 10 and passed near Kwajalein with winds of 120 mph (190 km / h) . It strengthened further , twice reaching Category 5 intensity . While a super typhoon , Paka passed close to Guam on December 17 , causing major damage . Afterwards , Paka encountered a hostile environment and had completely dissipated by the evening of December 22 .

= = Season effects = =

This is a table of the storms in 1997 and their landfall (s) , if any . Deaths in parentheses are additional and indirect (an example of an indirect death would be a traffic accident) , but are still storm @-@ related . Damage and deaths include totals while the storm was extratropical or a wave or low , but do not include impacts in the Western Pacific basin .

= = Accumulated Cyclone Energy (ACE) = =

Accumulated Cyclone Energy (ACE) is a measure of how active a hurricane season is . It is calculated by squaring the windspeed of a cyclone with at least tropical storm @-@ force winds every six hours , summing the results , and dividing that total by 104 . This explains why Hurricane Guillermo has a higher ACE than Linda . It was not as strong as that storm , but because it was above tropical storm force for a longer time , it reached a higher ACE level . As a tropical cyclone does not have gale @-@ force winds until it becomes a tropical storm , tropical depressions are not included in these tables . For all storms , ACE is given to three significant figures . The ACE in the east Pacific proper (140 ° W to North America) is given ; the ACE in the central Pacific (the international dateline to 140 ° W) is given in brackets .

The table includes the ACE for Oliwa and Paka only during those storm 's time east of the dateline . Their ACE west of the dateline is part of the totals of the 1997 typhoon season .

The National Hurricane Center uses ACE to rank hurricane seasons as above @-@ normal , near @-@ normal , and below @-@ normal . This season has a total of 17 tropical storms , 9 hurricanes , and 7 major hurricanes . The total ACE of this season is 160 * 104 kt² in the east Pacific proper . This qualifies this season as above @-@ normal .

= = Storm names = =

The following names were used for named storms that formed in the eastern Pacific in 1997 . Names that were not assigned are marked in gray . The names not retired from this list were used again in the 2003 season . This is the same list used for the 1991 season except for Felicia , which replaced Fefa . A storm was named Felicia for the first time in 1997 . Also , the name " Dolores " was misspelled " Delores " in the 1991 season ; in this and subsequent seasons , the typo was corrected .

For storms that form in the Central Pacific Hurricane Center 's area of responsibility , encompassing the area between 140 degrees west and the International Date Line , all names are used in a series of four rotating lists . The next four names that were slated for use in 1997 are shown below , however , only two of them were used .

= = Retirement = =

The World Meteorological Organization retired one name in the spring of 1998 : Pauline . It was replaced in the 2003 season by Patricia . In 2006 , a name from the Central Pacific list was retired due to its effects west of the International Dateline in this season : Paka . The name set to replace it is Pama .