

EARTHQUAKE WATCH – 3 YEAR TRACKING REPORT

Three years ago the Earth did something very strange. In the last week of December of 2005 Chandler's Wobble, the wobble of the earth on its axis, stopped dead for a period of almost two weeks. In our scientific knowledge it had never done so before. Predictions proliferated about what the result of such an anomaly would be.

One of the predictions was that the magnetic poles would shift. This is happening. The magnetic North pole is moving rapidly toward Siberia. It is moving at the rate of 25 miles per year. If you are keeping up with our Earth Watch series on RHS1, you are not extremely worried about the magnetic pole shift itself. Magnetic pole shifts are periodic events and will not end life on the planet as many have been lead to believe. Other results of the event were not predicted to be so benign.

The other prediction was that the event was initiating some tectonic plate movement. Such movement would cause major earthquake and tsunami events. So we started watching to see if earthquakes were increasing – in either size or amounts.

To determine average amounts of earthquakes we have used USGS data averages. Their current averages have been compiled from recordings of quakes from 1990 to the early 2000's. Before 1990 global tracking systems now in place were not available globally which means records from before that time could be incomplete.

At times quakes can be initially recorded as being a different magnitude than they are later verified so data sometimes needs a bit of updating. This happened just this year when the 7.9 magnitude quake in China that took so many lives and wreaked so much damage was recorded initially as an 8 magnitude quake. I'm sure it's not really a significant factor for those who lost lives, loved ones, or homes in that quake, but we have updated statistics as frequently as possible to keep them as accurate as possible. That is why if you follow the Earthquake Watch series in the forums you will see data periodically change or will find the statistics compiled here just a tad different from what you had expected.

Our tracking includes quakes of magnitude 5 and over. There are two reasons for this. The first is that it is at this strength that quakes usually start to cause damage. We may feel a 4 or even a 3 magnitude quake, but at magnitude 5 you have reached a danger point. In ten years of statistics no deaths or major amounts of damage have been recorded to have resulted from a magnitude 4 or weaker earthquake.

The second reason is that at magnitude 4 and under you have tens of thousands of quakes per year, and face it, I have a day job and just plain would not have the time to do that kind of extensive reporting. If you are interested in magnitude 4 quakes, I did include the number of mag 4's that occurred during each timespan reported in the statistic recordings in the Earthquake Watch thread in the forum, but no details were recorded on those quakes. It's normal to have between 20 and 40 of them a week.

So with all that said, lets take a look at the last three years of earthquakes.

MAGNITUDE 8 OR GREATER

The average: 1, if any, per year

There were no magnitude 9 quakes in any of these three years.

Magnitude 8.0 - 8.9

2006 = 2

2007 = 4

2008 = 0

The 3 year average = 2 per year. 200% higher.

While 2007 was one frightening year, with 400% the normal number of these shakers, but in 2008 the earth seems to have calmed down again. The number of these quakes actually add up to double the average number. How this roller-coaster trend will continue will be interesting to watch.

MAGNITUDE 7

The average: 17 per year. The number of these quakes has been lower than average for three years running now.

2006 = 8

2007 = 14

2008 = 12

The 3 year average = 11 (rounded). 35% drop in frequency. This is a very welcome trend, indeed.

MAGNITUDE 6

The average: 134 per year. This figure has been exceeded for three years in a row now.

2006 = 139

2007 = 180

2008 = 159

The 3 year average = 159 (rounded). 16% acceleration in frequency. This trend is discomfoting as these quakes can cause massive destruction and casualties.

MAGNITUDE 5

The average: 1319 per year. Frequency of these quakes has fluctuated.

2006 = 1230

2007 = 1390

2008 = 1205

Three year average = 1275. 5% drop in frequency. Another welcome trend.

LIVES LOST

The lives lost in a quake are not always determined by the strength of the event. A magnitude 6.5 quake happening just 10 kilometers underneath a town can wield unconscionable destruction and death, while the same quake at a depth of 200 miles beneath the surface may go totally unnoticed. Likewise, a quake happening in the middle of nowhere might go unnoticed no matter how close to the surface it may be. It's really a toss of the dice whether a person will be killed by a magnitude 5 quake or will survive a magnitude 8. Those living in subduction zone areas are the most prone to experience extremely large quakes, however.

In the three years we have been tracking 95,146 people lost their lives in earthquakes.

2006 = 6,559

2007 = 681

2008 = 87,906

While numbers of quakes other than magnitude 6 events were lower than average during 2008, 87906 lives were lost in ten of these quakes. The most devastating being the 7.9 magnitude quake in Eastern Sichuan China which took 87,587 lives on its own and displaced millions. To those lost in these quakes, it doesn't matter what the magnitude was finally confirmed to have been.

In 2007 we experienced a very heavy quake year and had an unprecedented amount of magnitude 8 quakes for one year. Only 593 lives were lost in three of these magnitude 8 quakes. In the unprecedented number of six quakes of magnitude 8 throughout 2006 and 2007, only three of these monstrous events claimed lives.

Some years will be worse than others, and as the magnetic pole and mantle rotation continue to shift we may expect more turbulence as plates crush together or as crustal blocks drift apart. It is crucial to understand that just because you live in an area not accustomed to having quakes does not in any way, shape, or form mean that you will never experience one there. Many of our planet's faults and fissures are yet undiscovered – especially in areas where earthquakes are not normal. It is the areas in which seismic activity is frequent that are receiving the most study and monitoring and our earth is continually changing.

It is vital for each of us on this planet to know about safety measures to take to ensure survival in a catastrophic earthquake event. Please feel free to grab a copy of our earthquake safety pdf. The link will be just below the one for this pdf. Here's to your safety!

