

**April 7, 2010 updates to SPC historical tornado files in comma-separated-value (csv) format available here: <http://www.spc.noaa.gov/wcm/#data>**

Recently, Daniël van Os, of the Netherlands, has taken an interest in the SPC Tornado database files in csv format on our website. While ingesting the files into his database he noticed some problems with several records across several years. Most of these problems have to do with identical OM (serial) numbers that are residuals from tornado segments that should have been combined into single records in the OneTornado database. There are a few other issues too but overall the changes and solutions described below will have only minimal impact on annual tornado numbers in the record. State tornado totals will also be altered in some cases but, here too, the impact is minimal and probably “in the noise” when considering the quality of this information to begin with.

When ingesting the tornado csv files into a spreadsheet or database, it is important to analyze the segment information contained in columns 22-24 [22(ns), 23(sn), 24(sg)]. If one is looking for mostly continuous tornado tracks, regardless of those crossing state boundaries, then sg=1. There are only two cases where tornado records for any year will have identical OM (serial) numbers. 1) Those that cross state boundaries (sg>1) and 2) tornadoes that exceed a 4 four county track (sg=-9). In those cases, all identical OM numbers must be analyzed to determine the character of the tornado event.

Please note: The tornado OM serial number may have been used at one time as a serial number sequence indicating when the tornado occurred in the year. (e.g. OM=1 meant “first tornado of the year”). However, the coding of these serial numbers has changed over time and it is not recommended that the OM serial number be used for this purpose anymore. The same holds true for the state number (field 10, stn). This field was discontinued in 2008 because these values are trivial to compute by ingesting the raw csv file into a spreadsheet or database and sorting the data based on date, time and state, and segment information.

Please refer to the .csv file template documentation for additional information: [http://www.spc.noaa.gov/wcm/SPC\\_severe\\_database\\_description.pdf](http://www.spc.noaa.gov/wcm/SPC_severe_database_description.pdf)

Updates to tornado .csv files as of (Cross-referenced and confirmed with the NCDC Storm Events Database in all cases!):

**50-59\_torn.csv**

No problems found and no changes made to this file.

**60-69\_torn.csv**

1961 problem: Two entries with OM=516 but no entry for OM=517.

1961 solution: Second OM=516 entry changed to OM=517.

**70-79\_torn.csv**

1973 problem: Two entries with OM=618. The second one does not match the dates surrounding it. There is no entry for OM=681 so this is probably a typo. The second entry should have OM=681.

1973 problem: Two entries with OM=690. OM=691 is missing so the second entry should probably be OM=691.

1973 solution(s): Changed second OM=618 to OM=681 and changed second OM=690 to OM=691.

### **80-89\_torn.csv**

1982 problem: OM=410 and OM=411 are mixed up. These entries describe a single state tornado and a two-state tornado.

1982 solution: OM sequence=410,410,410,411 was changed to OM sequence=410,411,411,411 (OM=411 was the two-state tornado).

1982 problem: OM=1025 and OM=1026 are mixed up as well.

1982 solution: Changed to OM=1025, followed by three OM=1026 records.

### **90-99\_torn.csv**

1995 problem: There is an OM=0 in 1995 for a tornado in Puerto Rico.

1995 solution: Changed OM=0 to OM=1235 (next available sequence number in this year).

1999 problems: OM numbers with double entries included: 925, 1183, 1320, and 1333

1999 solutions: 925 was the same tornado that affected 4 counties, combined and deleted extra 2-county record.

1183. Kept two-county tornado in OK and changed KS tornado with same OM number to OM=1340 (next available sequence number in this year).

OM=1320 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

OM=1333 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

### **2000-2004\_torn.csv**

2001 problems: OM numbers with double entries included: 56, 662

2001 solutions: OM=56 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

OM=662 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

2002 problems: OM numbers with double entries included: 506, 926

2002 solutions: OM=506 included 2 distinct weak tornado touchdowns. Changed second event to OM=934 (next available sequence number in the year).

OM=926 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

2003 problems: OM numbers with double entries included: 834, 1046

2003 solutions: OM=834 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

OM=1046 was the same tornado that affected 2 counties, combined and deleted extra 1-county record.

#### **2005-2007\_torn.csv**

2006 problems: Duplicate OM 105 was incorrectly coded as having a county continuation (sg=-9). However, the OM=105/sg=-9 record is actually a continuation of OM=103.

2006 solutions: Deleted the OM=105 record containing the sg=-9 and added a new/second OM 103 record containing a sg=-9.

(The use of sg=-9 indicates it this is a tornado that moved across more than 4 counties. There should be a duplicate OM number for these records just like there are duplicate OM numbers for state boundary crossing tornadoes).

#### **2008\_torn.csv**

2008 problems: Three records with the same OM number (32367).

2008 solutions: These were all given new OM numbers 1690, 1691 and 1692 (the next available sequence numbers in the year).