

WAAS Technical Report
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DR#50: Loss of Northwest coverage due to 3 satellites being set to Not Monitor.
GPS Week/Day: Week 1408 Day 3 (1/3/2007)

Discussion:

On Week 1408 Day 3, WAAS CONUS coverage experienced a drop in availability around GPS time 316890 (16:01:31 GMT) to 317760 (16:16:01 GMT). This drop affected the northwest area of CONUS, where the 100% availability was lost as shown in Figure 1. Figure 2 shows the instantaneous LPV WAAS coverage plot for CONUS area for the entire GPS day.

Figure 1

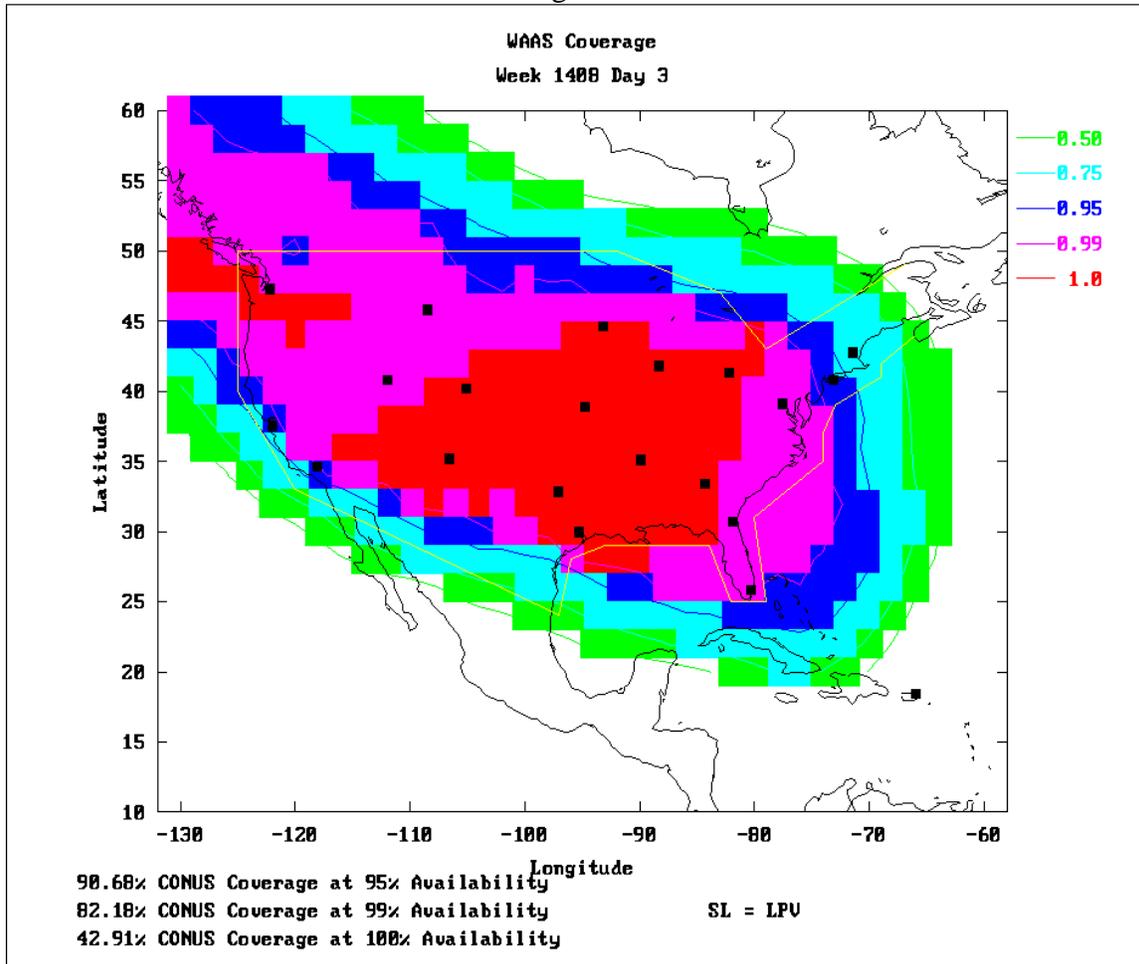
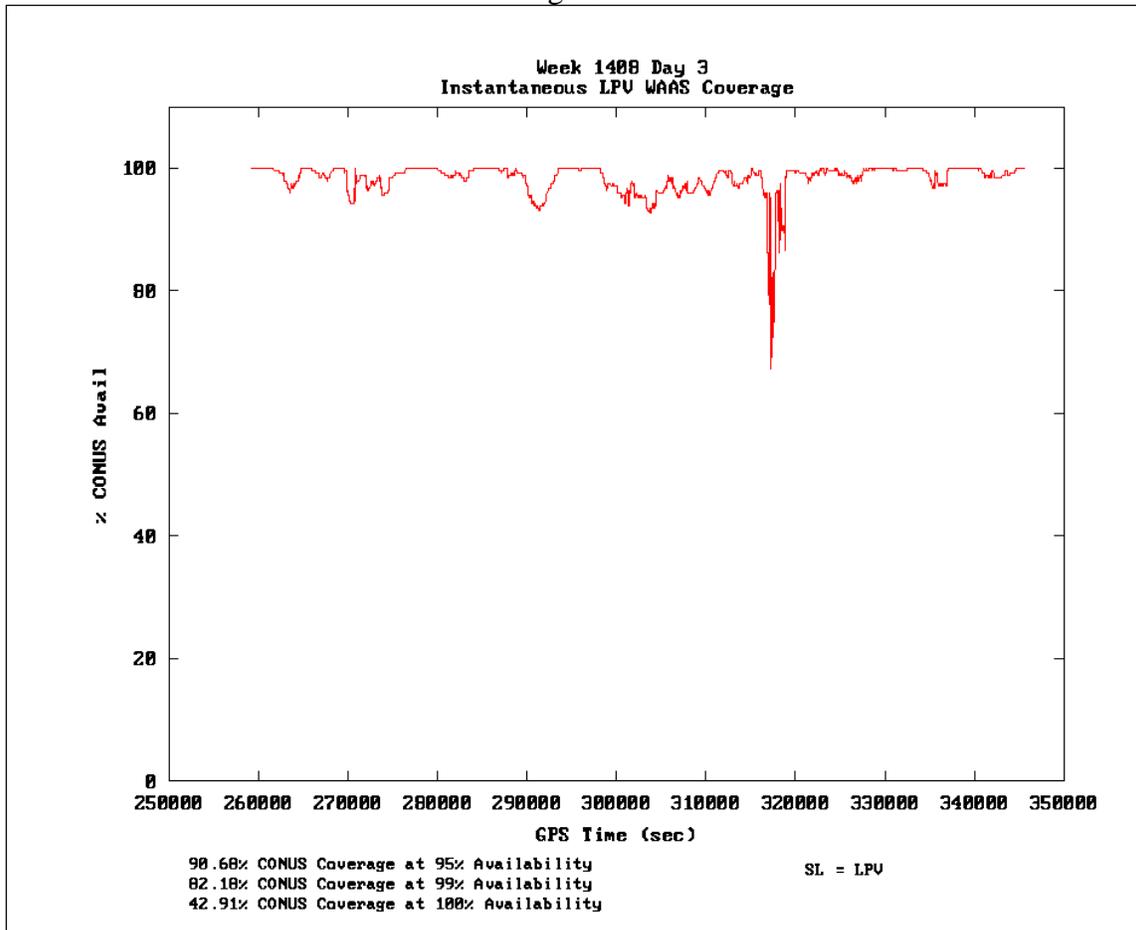


Figure 2



During the period when the coverage dropped, three satellites were set to Not Monitored. The satellites are PRN 4, 8 and 29. Table 1 shows the GPS time of week when the three satellites were set to Not Monitored. The signal to noise ratio and code minus carrier values for L1 and L2 for all three satellites were also analyzed, and there were no issues on any of the signals from these satellites during this period of time. Also, there was no NANU issued for the three satellites on this day. All three satellites were expected to be monitored by WAAS at the times listed in Table 1.

Table 1

Satellite	GPS Time of Week (seconds)	Duration (seconds)
4	316959 – 319514	2555
8	316881 – 318944	2063
29	317204 - 317635	431

Conclusion

WAAS CONUS coverage experienced a drop in availability in the Northwest area due to three satellites being set to Not Monitored. There was no satellite maintenance recorded on this day that would have cause the three satellites to being set to Not Monitored.