

Civil Report Card On GPS Performance

September 2006

Operational Performance Parameter	CY 2005	Aug 2006	Sep 2006	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	28.93	28.22	27.18	↓	↓
<i>Average number of satellites usable in primary slots</i>	23.80 (99.17%)	23.55 (98.13%)	23.25 (96.89%)	↓	↓
<i>Average availability of 6 satellites in view</i>	TBD%	98.14%	99.97%		↑
99.99% Horizontal DOP					
<i>Area Median</i>	2.1	1.7	1.6	↑	→
<i>Worst Site</i>	4.1	4.1	4.1	→	→
99.99% Vertical DOP					
<i>Area Median</i>	3.8	3.2	3.1	↑	→
<i>Worst Site</i>	5.6	8.2	7.9	↓	↑
99.99% Position DOP (PDOP)					
<i>Area Median</i>	4.1	3.6	3.4	↑	↑
<i>Worst Site</i>	6.0	9.1	8.8	↓	↑
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.77 *	1.75	1.79	→	→
<i>Worst Satellite</i>	2.22 *	2.50	2.15	→	→
95% Horizontal Error					
<i>Area Median</i>	3.44	2.56	2.50	↑	→
<i>Worst Site</i>	6.04	3.51	4.50	↑	↓
<i>Availability (% <4.5m (historical 3-sigma))</i>	99.67%	98.97%	99.70%	→	↑
95% Vertical Error					
<i>Area Median</i>	5.83	4.39	4.33	↑	→
<i>Worst Site</i>	7.43	4.98	4.89	↑	→
<i>Availability (% < 9m (historical 3-sigma))</i>	99.93%	99.21%	99.96%	→	↑

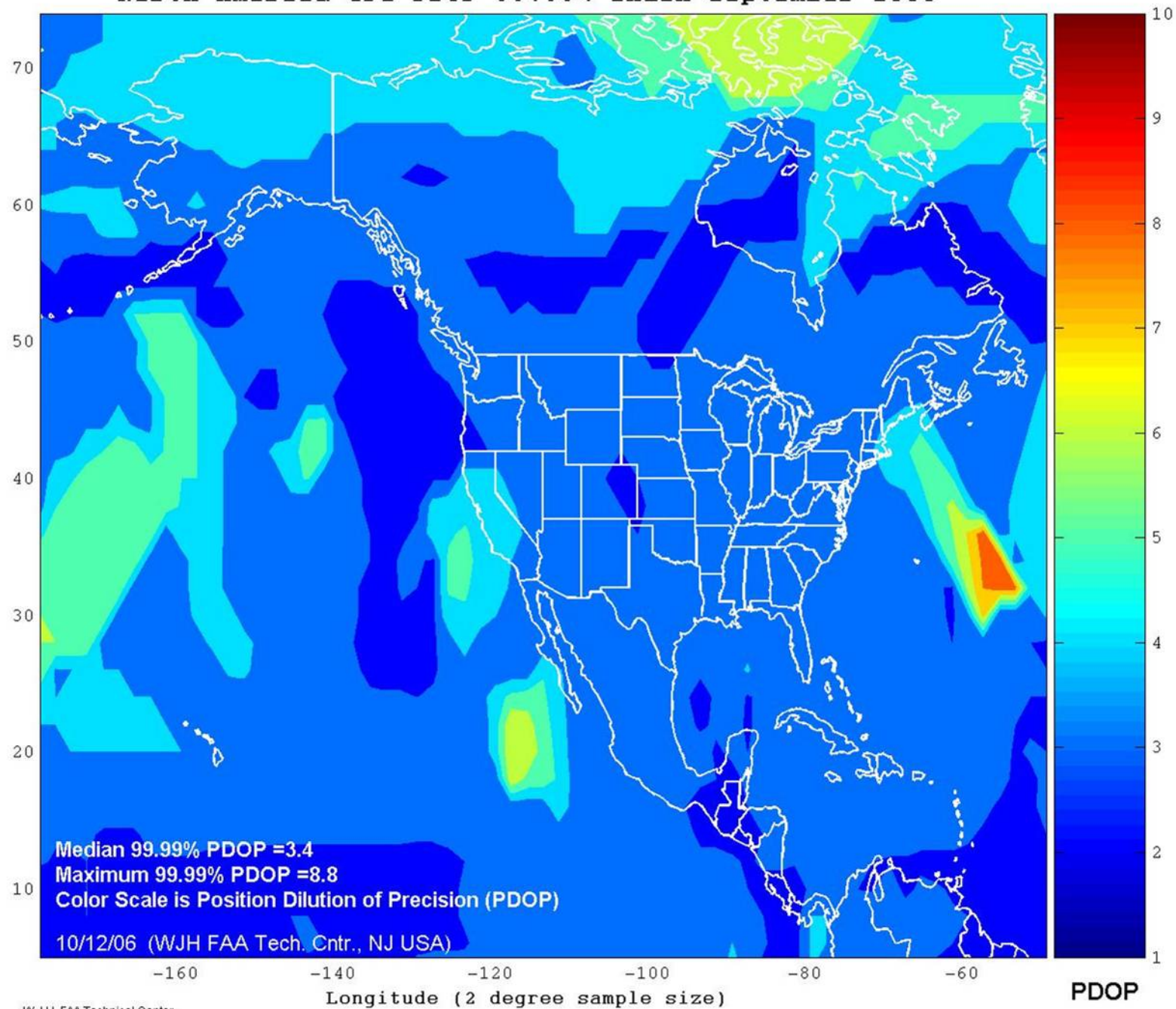
Key: ↑ improving ↓ worsening → no significant change

* CY 2006 (1 Jan – 31 August 2006)

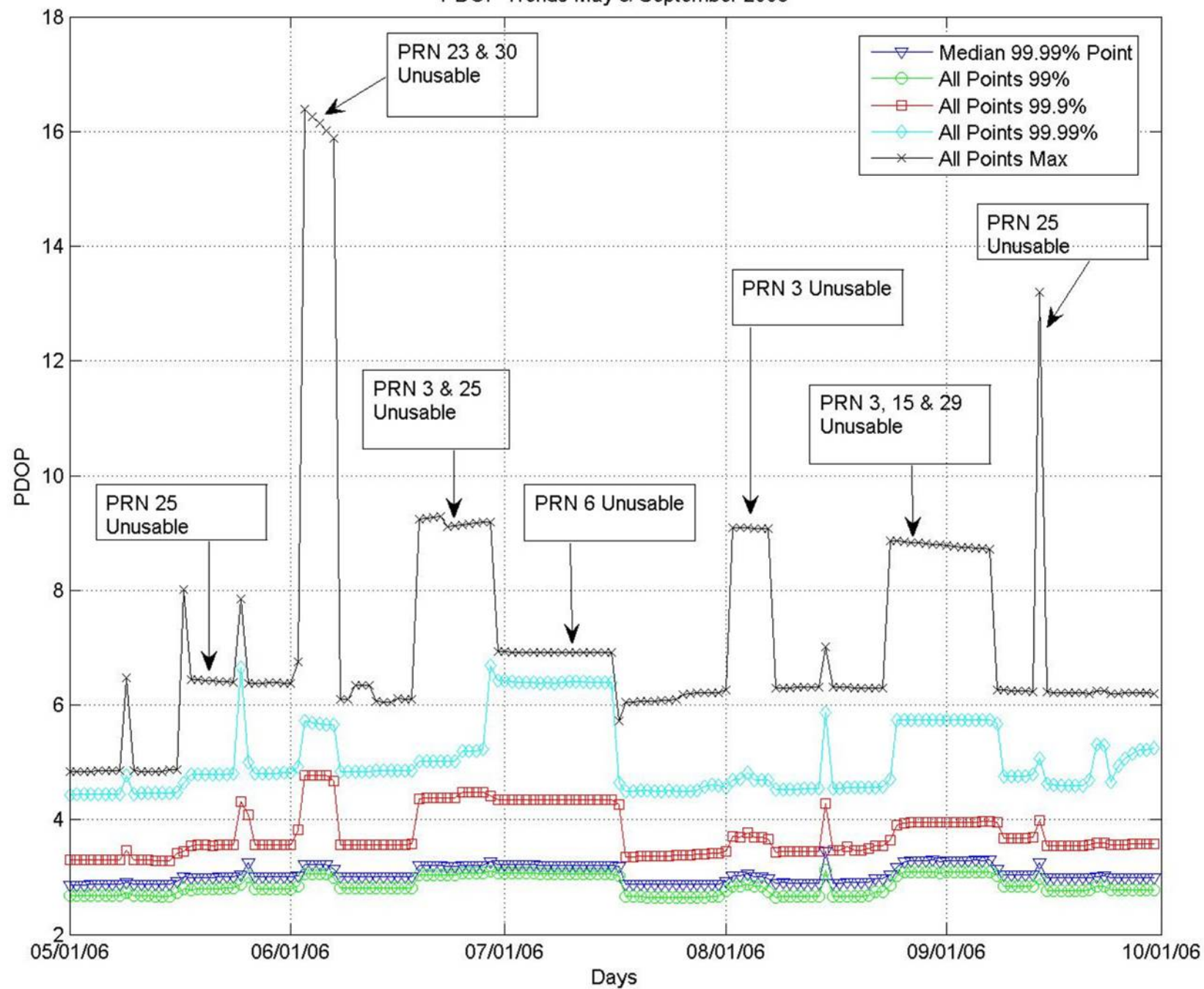
Long Term is current month vs. prior 24 months, Short Term is current month vs. prior month

Compiled from WAAS network as requested by the Defense Science Board

North America GPS PDOP 99.99% Index September 2006



PDOP Trends May & September 2006



RAIM Availability Trends May & September 2006

