Edgecombe

The preliminary checkpoint spreadsheets were received from NCGS on June 14, 2001. Two spreadsheets were included for each county, which compared the independent QAQC survey checkpoints with the interpolated LIDAR "Z" value as provided by the contractors. The spreadsheet summaries included:

1. All the checkpoints with the RMSE calculation for combined land cover
2. 95% of the checkpoints with the RMSE calculation (5% of points having the largest error removed)

All data was reviewed and further analyzed to assess the quality of the data. The review process examined the statistics for the combined land cover and the trends for each specific land cover type. The following graphs and figures illustrate the data quality as per the RMSE criteria.

Table 1 summarizes the RMSE using:

- 100% of the checkpoints
- 95% of the checkpoints
- Checkpoints categorized by land cover type

Table 1. RMSE by Land Class

%	RMSE (cm)	# of Points	Land Class	RMSE Criteria (cm)
100	32.6	136	All	
95	**17.4**	**129**	**All**	**25**
17	12.3	24	Grass	
19	19.5	26	Weeds/Crop	
15	18.1	20	Scrub	
30	17.9	41	Forest	
13	18.2	18	Built-up	

The LIDAR data for Edgecombe County meets the specification as per the RMSE criteria of 25 cm.

All figures represent the data with the 95% data set. The data is of good quality and easily meets specifications.

Figure 1 illustrates the RMSE by specific land cover class.

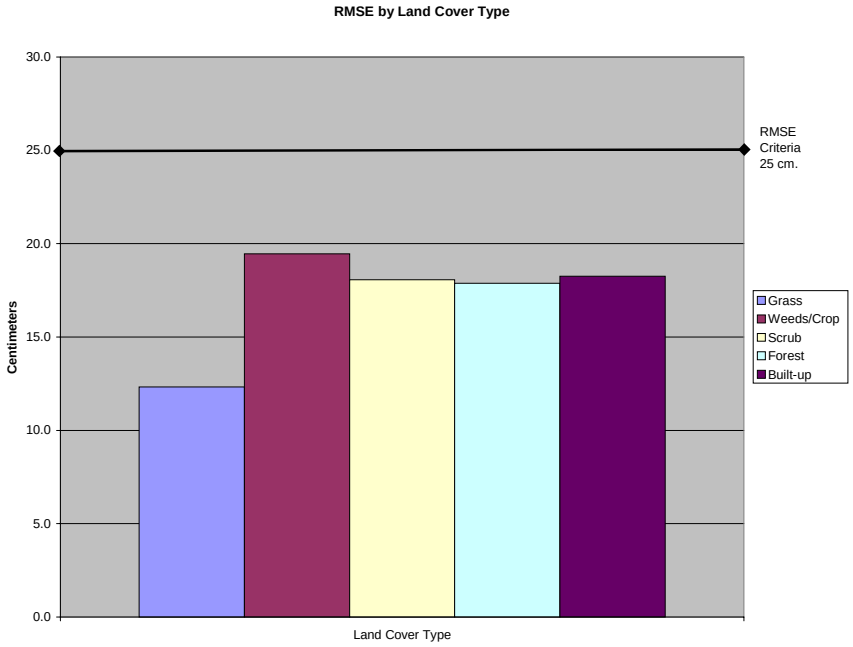

Figure 1

Figure 2 illustrates the magnitude of the differences between the checkpoints and LIDAR data by specific land class type and sorted from lowest to highest.

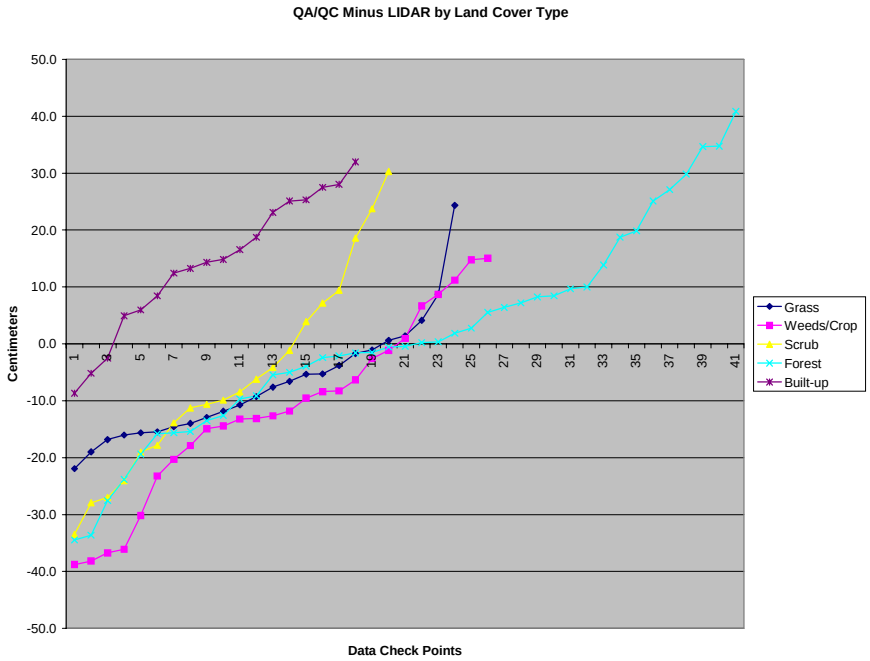

Figure 2

Table 2 illustrates the Delta between the QAQC survey checkpoints and that of the interpolated LIDAR.

Table 2. Elevation Delta	
Delta (cm)	**Land Cover**
-21.9	Grass
-19.0	Grass
-16.8	Grass
-16.0	Grass
-15.6	Grass
-15.5	Grass
-14.5	Grass
-14.0	Grass
-12.9	Grass
-11.8	Grass
-10.7	Grass
-9.3	Grass
-7.6	Grass
-6.6	Grass
-5.3	Grass
-5.3	Grass
-3.8	Grass
-1.7	Grass
-1.1	Grass
0.6	Grass
1.4	Grass
4.1	Grass
8.8	Grass
24.3	Grass
-38.8	Weeds/Crop
-38.2	Weeds/Crop
-36.8	Weeds/Crop
-36.1	Weeds/Crop
-30.2	Weeds/Crop
-23.2	Weeds/Crop
-20.3	Weeds/Crop
-17.9	Weeds/Crop
-14.9	Weeds/Crop
-14.4	Weeds/Crop
-13.2	Weeds/Crop
-13.1	Weeds/Crop
-12.7	Weeds/Crop
-11.8	Weeds/Crop
-9.6	Weeds/Crop
-8.4	Weeds/Crop
-8.3	Weeds/Crop
-6.3	Weeds/Crop
-2.6	Weeds/Crop
-1.1	Weeds/Crop
1.0	Weeds/Crop
6.7	Weeds/Crop
8.7	Weeds/Crop
11.2	Weeds/Crop
14.8	Weeds/Crop
15.0	Weeds/Crop
-33.5	Scrub
-27.9	Scrub
-27.0	Scrub
-24.0	Scrub
-19.0	Scrub
-17.8	Scrub
-13.9	Scrub
-11.3	Scrub
-10.6	Scrub
-9.9	Scrub
-8.4	Scrub
-6.2	Scrub
-4.2	Scrub
-1.1	Scrub
3.9	Scrub
7.2	Scrub
9.4	Scrub
18.6	Scrub
23.7	Scrub
30.3	Scrub
-34.5	Forests
-33.6	Forests
-27.6	Forests
-23.8	Forests
-19.4	Forests
-15.8	Forests
-15.6	Forests
-15.4	Forests
-13.5	Forests
-12.6	Forests
-9.7	Forests
-9.1	Forests
-5.5	Forests
-5.0	Forests
-3.9	Forests
-2.4	Forests
-2.1	Forests
-1.6	Forests
-1.5	Forests
-0.6	Forests
-0.4	Forests
0.2	Forests
0.4	Forests
1.9	Forests
2.8	Forests
5.5	Forests
6.4	Forests
7.2	Forests
8.2	Forests
8.4	Forests
9.7	Forests
10.0	Forests
13.9	Forests
18.7	Forests
19.8	Forests
25.1	Forests
27.1	Forests
29.8	Forests
34.7	Forests
34.8	Forests
40.9	Forests
-8.7	Built-up
-5.2	Built-up
-2.5	Built-up
4.9	Built-up
6.0	Built-up
8.4	Built-up
12.4	Built-up
13.3	Built-up
14.3	Built-up
14.8	Built-up
16.6	Built-up
18.7	Built-up
23.1	Built-up
25.1	Built-up
25.3	Built-up
27.5	Built-up
28.0	Built-up
32.0	Built-up

Table 3 illustrates the overall statistics for the checkpoint data.

Table 3. Overall Descriptive Statistics

	RMSE (cm)	Mean (cm)	Median (cm)	Skew	Std Dev	# of Points	Min (cm)	Max (cm)
Total	**17.4**	-2.2	-3.8	0.20	17.34	129	-38.8	40.9
Grass	**12.3**	-7.1	-8.4	1.27	10.29	24	-21.9	24.3
Weeds/Crop	**19.5**	-11.6	-12.2	-0.12	15.96	26	-38.8	15.0
Scrub	**18.1**	-6.1	-9.2	0.51	17.46	20	-33.5	30.3
Forest	**17.9**	1.3	-0.4	0.21	18.05	41	-34.5	40.9
Built-up	**18.2**	14.1	14.6	-0.43	11.89	18	-8.7	32.0