

## 250m MODIS 2002 Average (Spring, summer, fall/winter) vs. 30m ETM 2002 (Feb + June)

### 1. Polygon-based Accuracy Assessment (ETM classification)

	Water	Forest	Grass	Urban	Barren	Total	User's
Water	11029876	3610062	1457746	507394	2206629	18811709	59%
Forest	2627267	21948406	24938144	7580233	4916999	62011051	35%
Grass	784363	9139024	53121339	25298668	3235175	91578571	58%
Urban	989839	2115689	17265082	27331242	7774096	55475949	49%
Barren	1586699	1769859	3748165	5271938	17348555	29725218	58%
Total	17018046	38583041	100530477	65989477	35481455	257602500	
Producer	65%	57%	53%	41%	49%		<b>51%</b>

### 2. Point-based Accuracy Assessment (483 reference points)

	Water	Forest	Grass	Urban	Barren	Total	User's
Water	44	10	0	0	3	57	77%
Forest	6	72	30	3	2	113	64%
Grass	0	11	86	32	7	136	63%
Urban	0	3	17	87	6	113	77%
Barren	0	3	8	4	49	64	77%
Total	50	99	141	126	67	483	
Producer's	88%	73%	61%	69%	73%		<b>70%</b>

## 30m ETM Classification vs. 1m IKONOS

### 1. Polygon-based Accuracy Assessment (6 km<sup>2</sup> manual interpretation)

TM/IKONOS	Water	Forest	Grass	Urban	Barren		User's Accuracy
Water	37710	9244	15213	4022	9753	75942	50%
Forest	2364	684282	51303	5881	6348	750178	91%
Grass	35272	699542	1464023	483798	134212	2816847	52%
Urban	10058	164818	692168	823520	165342	1855906	44%
Barren	4586	47826	116406	48919	285903	503640	57%
	89990	1605712	2339113	1366140	601558	6002513	
Producer's Accuracy	42%	43%	63%	60%	48%		<b>55%</b>

### 2. Point-based Accuracy Assessment (352 reference points)

TM 0206	Water	Forest	Grass	Urban	Barren	Total	User's
Water	38	0	0	0	0	38	100%
Forest	1	49	3	0	0	53	92%
Grass	9	5	75	13	3	105	71%
Urban	2	0	1	88	5	96	92%
Barren	0	0	1	12	47	60	78%
Total	50	54	80	113	55	352	
Producer's	76%	91%	94%	78%	85%		<b>84%</b>

## 4M IKONOS Classification vs. 1M IKONOS

### 1. Polygon-based Accuracy Assessment (6 km<sup>2</sup> manual interpretation)

	Water	Forest	Grass	Urban	Barren	Total	User's
Water	54108	5213	5063	4936	6110	75432	72%
Forest	5451	1136101	136078	27426	8999	1314056	86%
Grass	7904	436542	1919635	195364	122437	2681884	72%
Urban	21343	12002	76415	848430	17635	975827	87%
Barren	1185	16031	201785	289661	446283	954946	47%
Total	89993	1605891	2338977	1365818	601466	6002146	
Producer's	60%	71%	82%	62%	74%		<b>73%</b>

### 2. Point-bases Accuracy Assessment (492 reference points)

	Water	Forest	Grass	Urban	Barren	Total	User's
Water	58	0	0	2	0	60	97%
Forest	0	104	2	1	0	107	97%
Grass	1	25	100	3	0	129	78%
Urban	14	0	0	96	8	118	81%
Barren	0	0	0	12	66	78	85%
Total	73	129	102	114	74	492	
Producer's	79%	81%	98%	84%	89%		<b>86%</b>

## LIDAR Accuracy Assessment

Test Areas Indexes	New Residential		Old Residential		Multi-Family		Commercial		City Center	
	G	M	G	M	G	M	G	M	G	M
<b>(Point-based)</b>										
Detect Rate	100%	99%	90%	87%	97%	82%	98%	93%	100%	73%
Correct Rate	98%	94%	84%	66%	78%	80%	79%	80%	68%	64%
<b>(Polygon-based)</b>										
Matched Overlay	84%	92%	70%	78%	85%	90%	95%	97%	97%	98%
Area Omission Error	16%	8%	30%	22%	15%	10%	5%	3%	3%	2%
Area Commission Error	9%	25%	18%	58%	8%	35%	7%	14%	2%	10%
RMS Error (meter)	1.49	3.10	1.98	5.59	2.00	4.58	1.59	4.06	1.96	4.33
Corner Difference	1.85	2.95	2.82	4.10	1.44	3.45	1.95	3.48	1.73	4.50
Perimeter Difference	5%	22%	5%	60%	8%	39%	9%	14%	0.4%	9%
Area Difference	7%	14%	12%	84%	7%	23%	3%	20%	11%	28%
Shape Similarity	0.14	0.41	0.17	0.31	0.51	2.28	0.42	3.54	0.34	4.56