

SDMI ORTHO 2012 Acceptance Report

Acceptance Overview for 20130829 delivery

CM3_13_a_20130830: 73 Tiles 24,800 km²

The 20130829 delivery of CM3_13_a_20130830 has been inspected and evaluated by UAF-GINA staff. The evaluation has determined that no corrections or modifications are necessary, and this delivery complies with the Scope of Work under this contract.

[SDMI ORTHO 2012 Acceptance Report](#)

[Acceptance Overview for 20130829 delivery](#)

[Figure 1 - Coverage for 20130829 Delivery](#)

[Radiometric Accuracy Assessment](#)

[Northern Block - CM3_13_a_20130830 - Review](#)

[Figure 2-CM3_13_a_20130830 Cutline Haze Artifacts 1042 1174, 1044 1174](#)

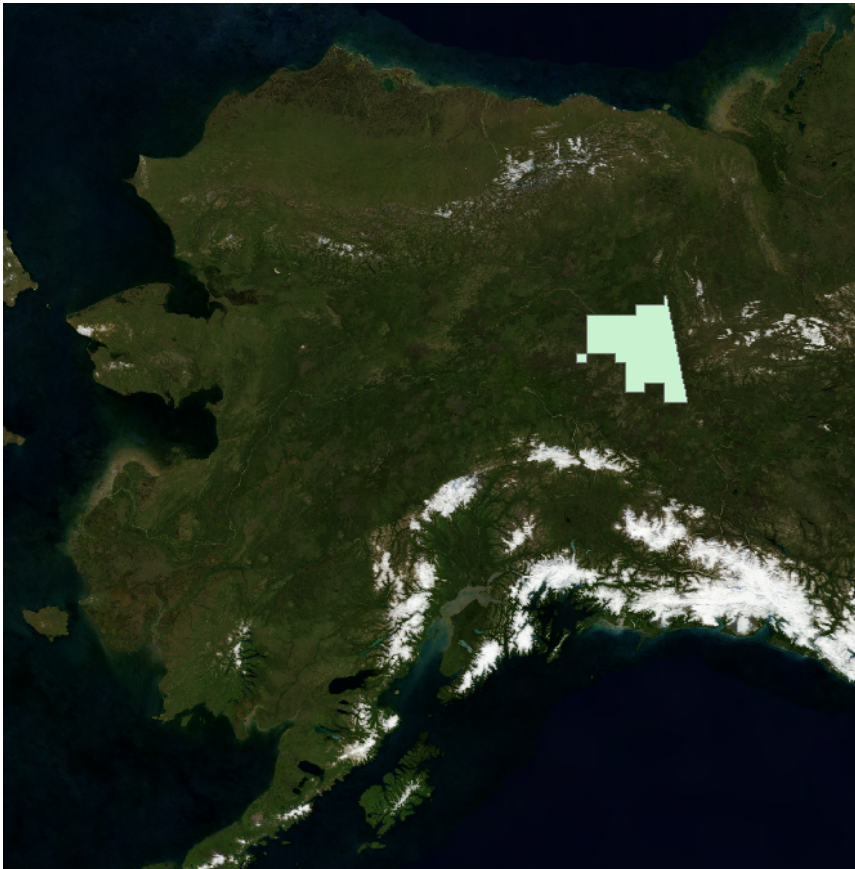
[Figure 3-CM3_13_a_20130830 Dense Cloud Cover Tile 1050 1170](#)

[Geometric Accuracy Assessment](#)

[CM3_13_a_20130830 - Review](#)

[Figure 4 - RGB RMS Report](#)

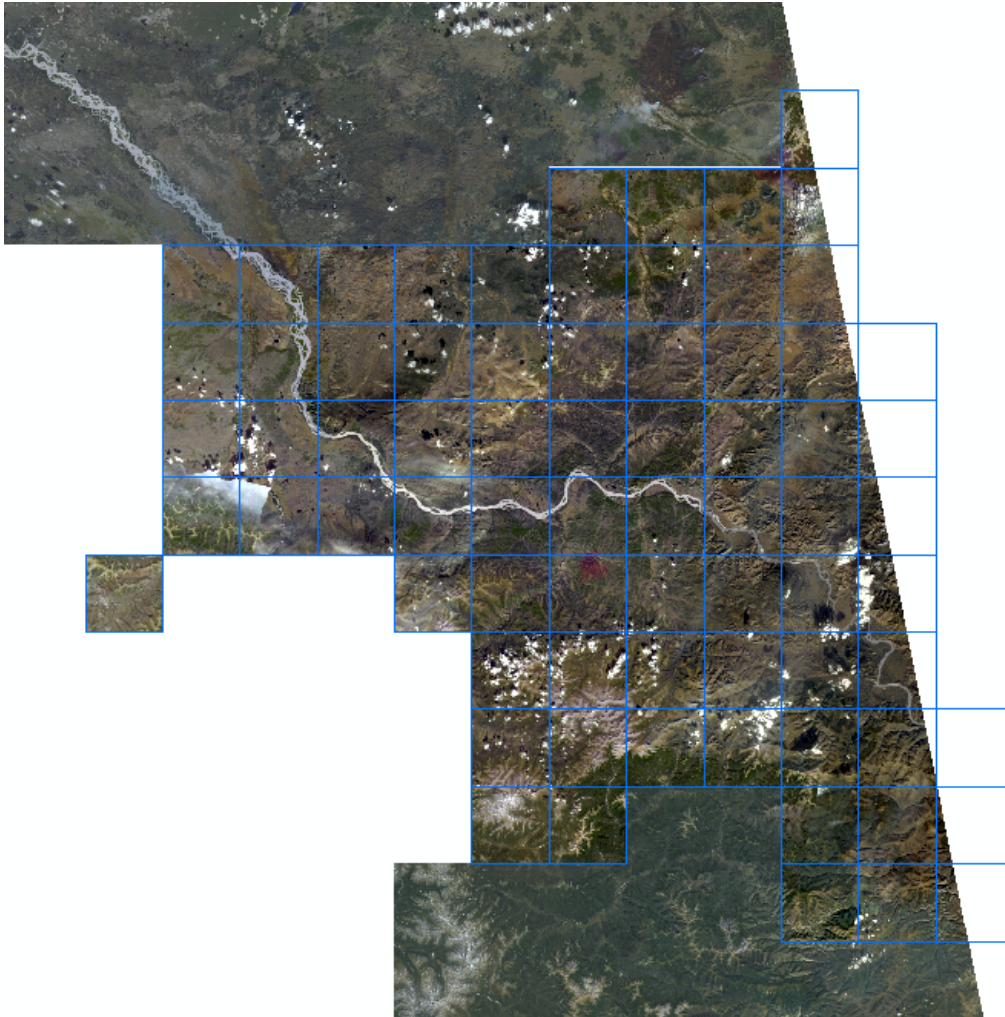
[Figure 1 - Coverage for 20130829 Delivery](#)



Radiometric Accuracy Assessment

Radiometric quality for all three image types (CIR, PAN, and RGB) was visually evaluated based on these categories: cloud/shadow, haze, blend, contrast, saturation, artifact, blurry, ghosting, color, location, and nodata. All images were within allowable limits.

Northern Block - CM3_13_a_20130830 - Review



The CM3 block contains several tiles obscured by heavy haze and cloud cover, Figure 2 & 3. Much of Central and Circle are covered by the haze in tiles 1042 and 1044.

Figure 2-CM3 13 a 20130830 Cutline Haze Artifacts 1042 1174, 1044 1174

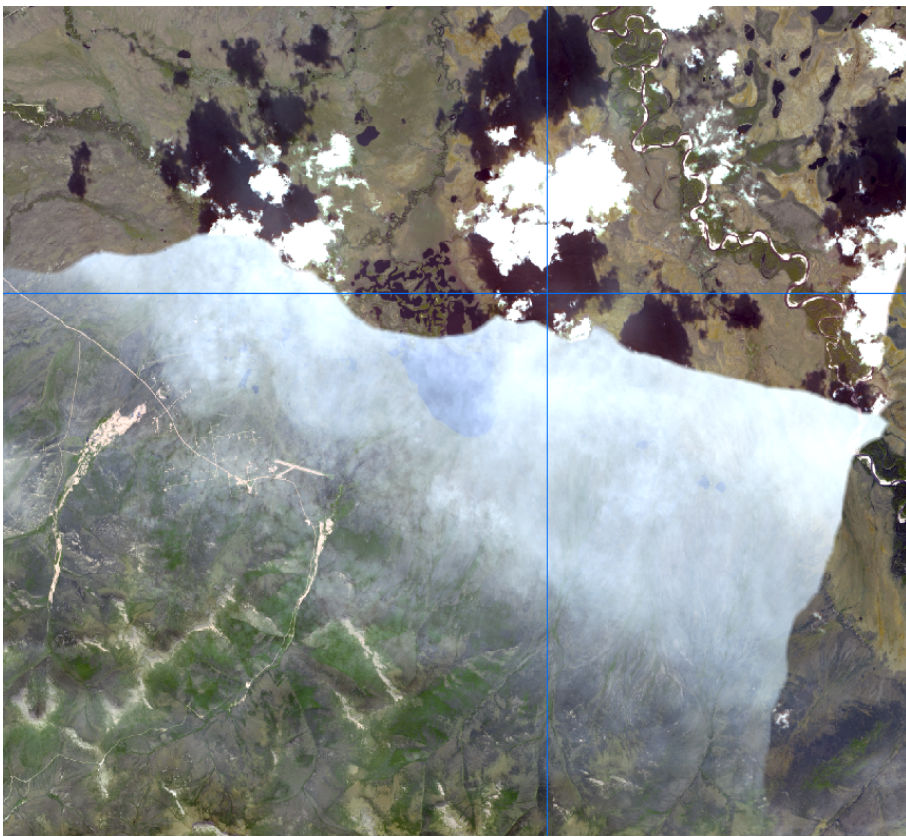


Figure 3-CM3_13_a_20130830 Dense Cloud Cover Tile 1050 1170



Geometric Accuracy Assessment

The geometric accuracy assessment was based on methodology developed by i-cubed, *Alaska SDMI QC Setup & Procedures*. The RMSE was calculated based on the i3tools toolbox, RMS Reporter tool developed for use in ArcMap. Control points were chosen for each block from the base imagery, and were adjusted if necessary. The RMSE was calculated based on these differences. Control points were chosen based on them being photo identifiable in the base imagery. High resolution base imagery provided limited coverage of the CM3_13_a_20130830 delivery. Assessment for this block was also made by alignment to adjacent SDMI ortho imagery and relative comparison among CIR, PAN, and RGB imagery.

CM3_13_a_20130830 - Review

The northern block images (Figure 1) (CIR, PAN, and RGB) were compared to base images obtained from the DCCED Village Profiles ortho collection. A total of 40 ground control points were analyzed and all points fell within the project target National Map Accuracy Standard (NMAS) CE90 of 12.2 meters and gave an RMSE of less than 4.7 meters (Figure 4). These errors are acceptable base on map accuracy of the National Standard for Spatial Data Accuracy (NSSDA) CE95 of 13.9 meters or a RMSE of 8 meters.

Figure 4 - RGB RMS Report

FID	POINT_X1	POINT_X2	POINT_Y1	POINT_Y2	X_Diff.	Y_Diff.	XY_Diff.	Ratio_to_R
0	603755.6	603762.6	1705524	1705523	-7.01147	1.7198	7.219311	1.55
1	602065.5	602067.6	1706316	1706319	-2.11667	-2.91042	3.598728	0.77
2	600015	600019.6	1705375	1705373	-4.63022	2.3151	5.176737	1.11
3	598906.4	598912.3	1705562	1705565	-5.95314	-2.8575	6.603419	1.41
4	609310.8	609314.7	1704645	1704645	-3.91584	0.10584	3.917272	0.84
5	611739.2	611745	1704847	1704845	-5.82085	1.27001	5.957782	1.28
6	605677.7	605680.5	1703277	1703276	-2.75167	1.48167	3.125227	0.67
7	601019.9	601026.7	1703028	1703029	-6.74689	-1.05834	6.829392	1.46
8	598557.9	598560.5	1703099	1703098	-2.54001	0.42333	2.575041	0.55
9	613766.4	613767.7	1707389	1707393	-1.27	-3.81001	4.016103	0.86
10	613255.1	613257.9	1707606	1707604	-2.77813	1.98438	3.414056	0.73
11	454261.8	454260.1	1789146	1789148	1.653649	-2.64584	3.1201	0.67
12	454666.2	454666.2	1790530	1790530	0	0	0	0
13	452197.6	452201.6	1792628	1792625	-3.96876	3.63802	5.383886	1.15
14	453013.6	453011.8	1793040	1793040	1.852087	0	1.852087	0.4
15	455203.1	455196.2	1793197	1793201	6.879181	-4.23335	8.0774	1.73
16	451393.1	451390.8	1794153	1794150	2.315109	2.97657	3.770902	0.81
17	452571	452567.7	1794368	1794365	3.28084	2.32834	4.023068	0.86
18	453127.2	453127.2	1797090	1797090	0	0	0	0
19	454208.6	454204.7	1798304	1798295	3.968758	9.92189	10.6862	2.29
20	451977	451974.9	1798503	1798503	2.063754	0	2.063754	0.44
21	451669.7	451668.4	1799492	1799490	1.322919	2.11667	2.496078	0.53
22	452865.6	452866.6	1800578	1800581	-1.05834	-2.32834	2.557585	0.55
23	452274.4	452274.4	1801067	1801067	0	0	0	0
24	450811.6	450810.8	1800780	1800781	0.793752	-1.19062	1.43095	0.31
25	450491.3	450490	1801742	1801740	1.32292	1.7198	2.169753	0.46
26	453988.9	453991	1801742	1801739	-2.11667	2.75167	3.471597	0.74
27	451298.5	451296.9	1803046	1803045	1.587503	1.16417	1.968618	0.42
28	452536.4	452535.8	1803298	1803295	0.641616	2.1762	2.268814	0.49
29	452137.5	452136.9	1804456	1804457	0.595314	-0.47625	0.762373	0.16
30	451070.4	451072.8	1805453	1805453	-2.43417	0.635	2.515635	0.54
31	421738.6	421731.8	1763368	1763371	6.746888	-2.38125	7.154778	1.53
32	420667.8	420660	1763608	1763611	7.805224	-2.91043	8.330194	1.78
33	423553	423547.3	1764268	1764265	5.715012	2.75168	6.342957	1.36
34	423625.5	423620.1	1763091	1763091	5.397511	0.15875	5.399845	1.16
35	427026.4	427020.8	1763738	1763740	5.609178	-1.79917	5.890661	1.26
36	427391.4	427387.9	1764239	1764238	3.439591	0.26459	3.449753	0.74
37	432593.8	432590.1	1764385	1764386	3.704175	-0.52916	3.741781	0.8
38	430245	430241.8	1762760	1762758	3.175007	1.58751	3.549769	0.76
39	426365.8	426361.2	1762911	1762908	4.564072	2.84427	5.37779	1.15
Sum of Sq. .					609.0878	263.9125	873.0004	
n =					40			
RMS in X,Y					3.902204	2.568621		
RMS					4.671725			
Average Er					4.007235			

