

SDMI ORTHO 2012 Acceptance Report

Acceptance Overview for 20130527 delivery

NM2_20130307_20130523: **13 Tiles** **5,200 km²**

SM2_West_20130401_20130523: **21 Tiles** **8,400 km²**

The 20130527 delivery of NM2_20130307_20130523 (Northern Block) SM2_West_20130401_20130523 (Southern Block) 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.

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[Figure 1 - Northern and Southern Block Coverages for 20130527 Delivery](#)

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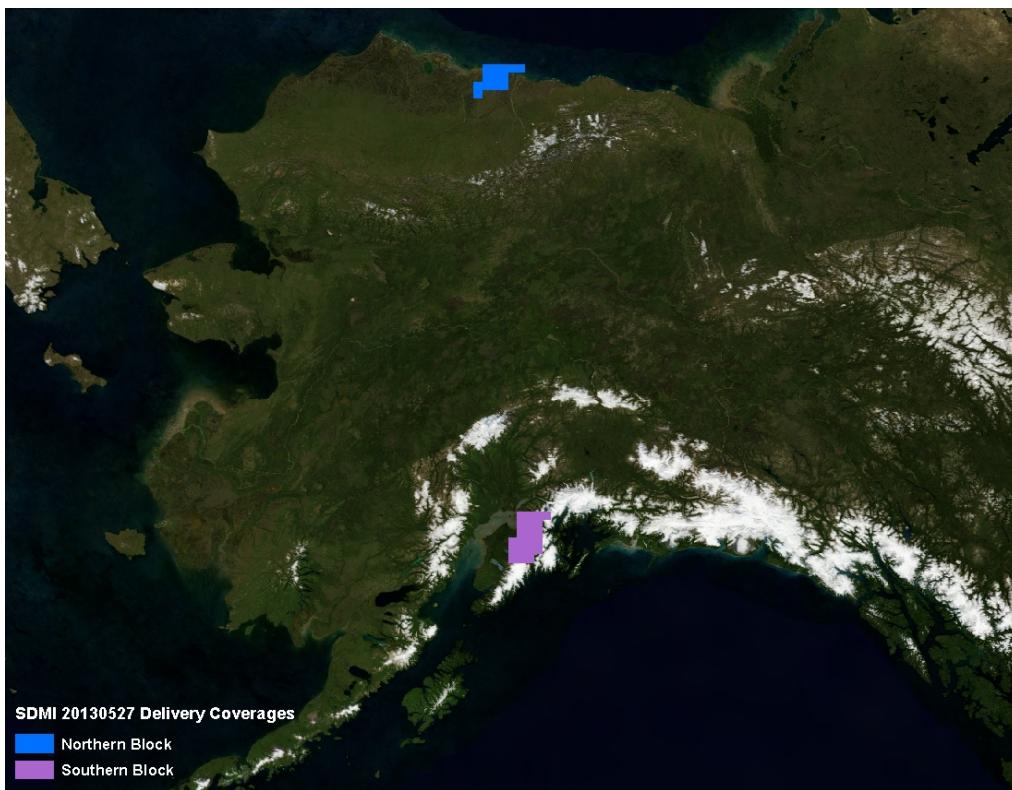
[Northern Block - NM2_20130307_20130523 - PASSED](#)

[Southern Block - SM2_West_20130401_20130523 - PASSED](#)

[Figure 4 - Northern Block RMS Report](#)

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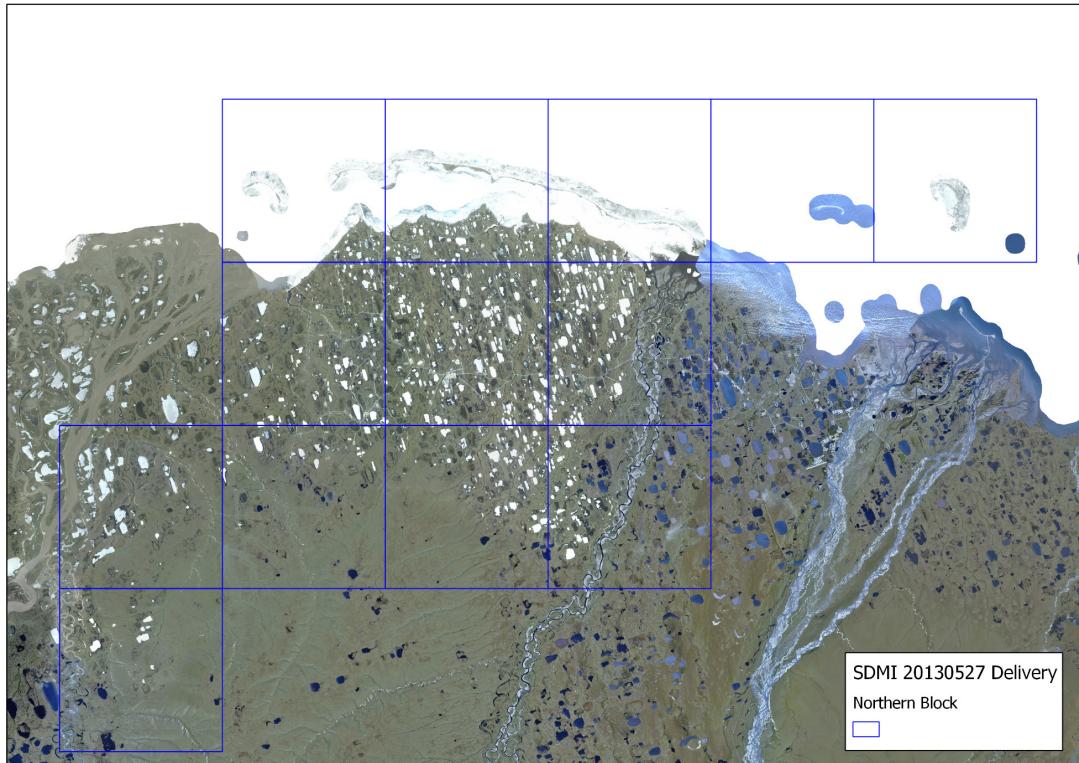
Figure 1 - Northern and Southern Block Coverages for 20130527 Delivery



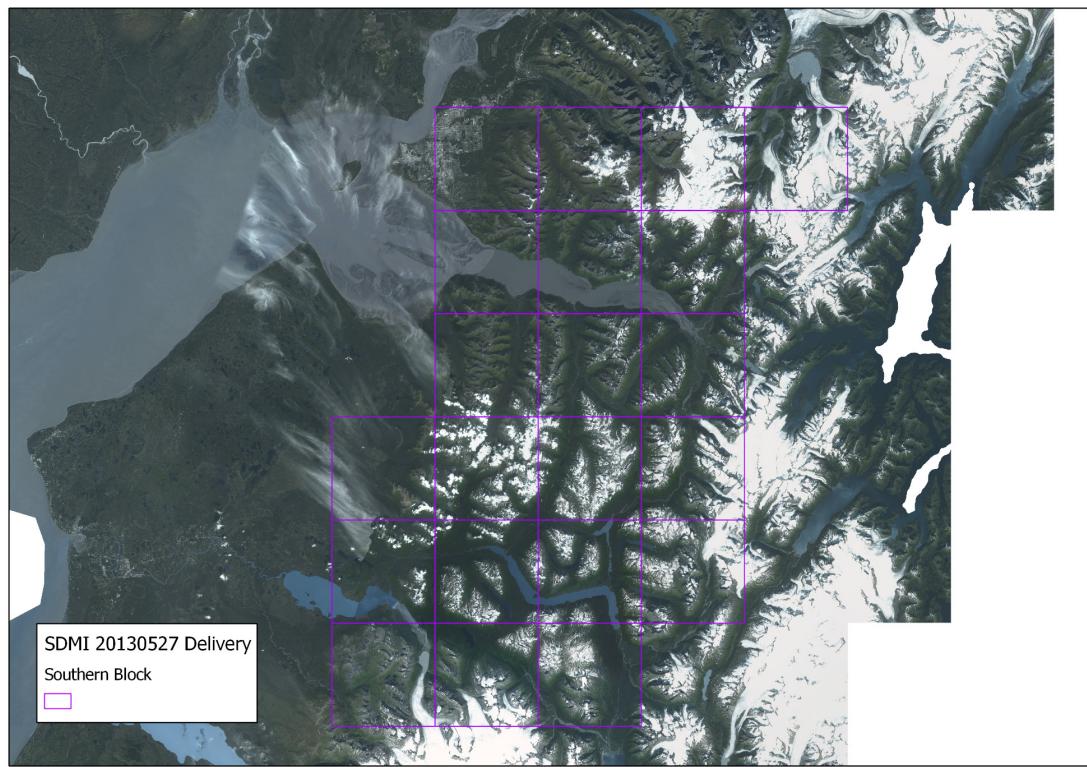
Radiometric Accuracy Assessment

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 - NM2_20130307_20130523 - PASSED



Southern Block - SM2_West_20130401_20130523- PASSED



The imagery was transmitted with cloud and haze artifacts of previous year's collection as exhibited in Figure 2 and 3. The artifacts do not exceed 5% coverage in any of the tiles and are derived from source imagery that met the projects requirements of less than 10% cloud cover in a source scene.

Figure 2-NM2 20130307 20130523 artifacts

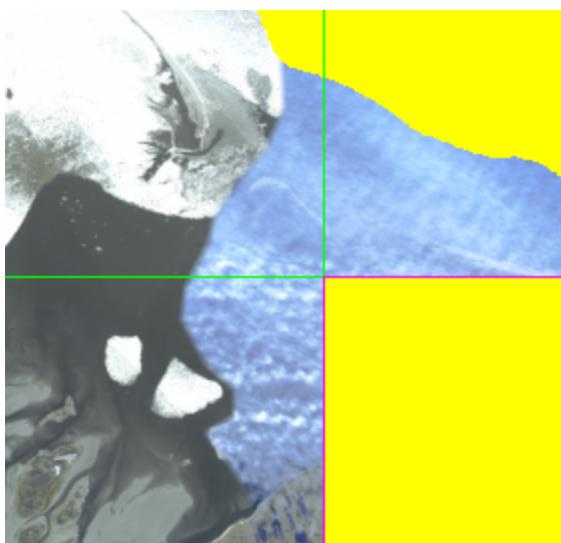
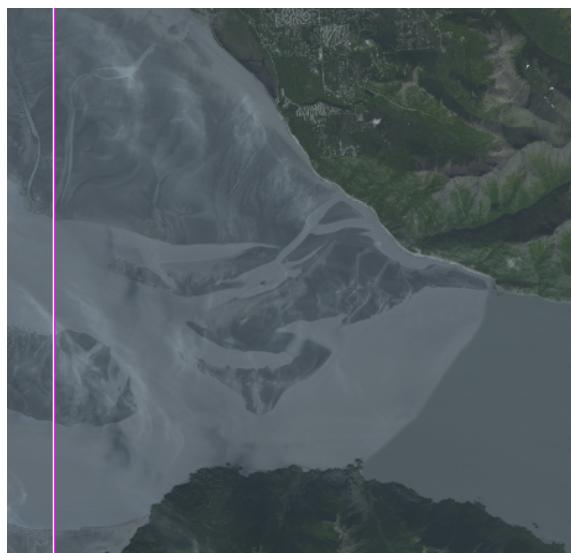


Figure 3-SM2_West_20130401_20130523 artifacts



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 in Northern and Southern block delivery images if necessary and 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 used for the northern block provided complete coverage of the NM2_20130307_20130523 delivery. Only partial coverage of high resolution base imagery was available for the southern block SM2_West_20130401_20130523 delivery.

Northern Block - NM2_20130307_20130523 - PASSED

The northern block images (Figure 1) (CIR, PAN, and RGB) were compared to base images under the NextView license at 0.5 meters spatial resolution. A total of 48 ground control points were analyzed and all points fell within the National Map Accuracy Standard (NMAS) CE90 of 12.2 meters and gave an RMSE of 5.0 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.

Southern Block - SM2_West_20130401_20130523 - PASSED

The southern block images (Figure 1) (CIR, PAN, and RGB) were compared to UA-GINA's best data layer (BDL), where imagery was available at greater than 2.5 meters spatial resolution. There was not sufficient coverage for the entire southern block delivery, resulting in 25 ground control points being analyzed. The RMSE for the southern block was 4.69 meters (Figure 5). These points fell within the National Map Accuracy Standard (NMAS) CE90 of 12.2 meters. 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 - Northern Block RMS Report

Northern Block RMS Report								
FID	POINT_X1	POINT_X2	POINT_Y1	POINT_Y2	X_Diff.	Y_Diff.	XY_Diff.	Ratio_to_RMS
0	123372.887	123372.887	2246187.61	2246187.61	0	0	0	0
1	121389.5965	121386.8349	2259788.976	2259784.596	2.76153	4.38036	5.17818517	1.04
2	139856.0454	139859.9688	2258212.348	2258207.023	-3.923464	5.3247	6.61407589	1.32
3	139874.4546	139869.6329	2240030.442	2240027.73	4.821711	2.71221	5.53217679	1.11
4	139849.4696	139846.8957	2245408.516	2245403.22	2.573906	5.29631	5.88862392	1.18
5	121266.7869	121266.7869	2240570.425	2240570.425	0	0	0	0
6	137828.7106	137822.7305	2234269.248	2234266.378	5.980069	2.87043	6.63329433	1.33
7	123688.124	123689.2607	2231998.07	2231995.418	-1.136731	2.65237	2.88569298	0.58
8	156057.115	156056.3286	2258003.98	2257995.33	0.786397	8.65037	8.68604176	1.74
9	144975.6206	144974.0066	2253233.684	2253231.566	1.614046	2.11844	2.663256	0.53
10	154177.4145	154172.0144	2243147.803	2243142.763	5.400092	5.04008	7.38670427	1.48
11	178994.0768	178995.6471	2244990.583	2244983.988	-1.570258	6.59508	6.7794388	1.36
12	166766.376	166758.9873	2259363.257	2259363.785	7.388785	-0.52777	7.40760994	1.48
13	162687.7824	162679.0511	2258486.643	2258483.086	8.731243	3.55605	9.42762409	1.89
14	165688.4626	165679.58	2259736.242	2259738.578	8.88264	-2.33564	9.18457988	1.84
15	164949.1745	164938.9479	2245850.077	2245849.044	10.226552	1.03298	10.2785901	2.06
16	193427.7402	193426.2068	2255063.618	2255058.251	1.533368	5.36679	5.58154569	1.12
17	190498.5787	190498.5787	2246898.317	2246898.317	0	0	0	0
18	187995.8273	187995.8273	2257643.682	2257641.805	0	1.87716	1.87716	0.38
19	141762.6083	141762.6083	2262019.328	2262019.328	0	0	0	0
20	157440.7793	157441.9335	2261492.907	2261488.675	-1.154252	4.23226	4.38683512	0.88
21	145327.32	145329.4248	2272239.232	2272239.466	-2.104813	-0.23387	2.11776603	0.42
22	157732.9056	157735.8968	2278842.047	2278841.568	-2.991166	0.47858	3.02920994	0.61
23	155240.1637	155240.1637	2270439.052	2270433.739	0	5.31284	5.31284	1.06
24	162551.5734	162545.9884	2267543.749	2267541.422	5.585014	2.32709	6.05043215	1.21
25	162658.0612	162655.9866	2279659.976	2279659.976	2.074636	0	2.074636	0.41
26	176370.498	176368.6788	2266149.803	2266146.584	1.819208	3.2186	3.69714805	0.74
27	178447.4074	178446.673	2277833.782	2277827.995	0.734413	5.84689	5.89283337	1.18
28	168104.5623	168107.8926	2269303.592	2269296.055	-3.330316	7.53703	8.24001371	1.65
29	186484.2105	186486.1494	2265908.789	2265903.942	-1.938913	4.84728	5.2206807	1.04
30	197709.5042	197710.6029	2264944.848	2264943.338	-1.098674	1.51068	1.86795038	0.37
31	191477.7706	191477.0601	2270312.223	2270307.818	0.710468	4.4049	4.46182797	0.89
32	198780.431	198782.1208	2271149.825	2271147.713	-1.689814	2.11227	2.7050242	0.54
33	181162.7631	181163.1444	2267290.644	2267285.687	-0.38128	4.95664	4.97128299	0.99
34	142374.3833	142375.9697	2283117.758	2283119.186	-1.58637	-1.42773	2.13424055	0.43
35	155113.1707	155114.5895	2290735.278	2290737.128	-1.418798	-1.84916	2.33074676	0.47
36	158069.7998	158067.8255	2284285.003	2284285.2	1.974231	-0.19742	1.98407729	0.4
37	157109.9	157110.4949	2282445.373	2282445.968	-0.594889	-0.59489	0.8413008	0.17
38	159197.8747	159196.2535	2281111.607	2281111.342	1.621137	0.26458	1.64258569	0.33
39	164742.6191	164740.4091	2285930.194	2285932.846	2.209926	-2.65191	3.45201384	0.69
40	164279.9973	164279.9973	2280524.556	2280524.556	0	0	0	0
41	160067.4804	160065.222	2281378.948	2281379.556	2.258421	-0.60741	2.33867747	0.47
42	172158.5776	172154.2854	2281467.448	2281471.024	4.292202	-3.57683	5.58719168	1.12
43	176503.5022	176504.9743	2281370.111	2281366.922	-1.472056	3.18945	3.51276816	0.7
44	180763.0456	180763.6904	2284942.171	2284938.302	-0.644785	3.86871	3.92207404	0.78
45	188622.1859	188617.9174	2281848.664	2281844.567	4.268504	4.09776	5.91707389	1.18
46	185290.354	185285.2237	2282952.248	2282953.295	5.130381	-1.04702	5.23613026	1.05
47	228366.9327	228364.9642	2288972.29	2288972.226	1.968504	0.0635	1.96952793	0.39
			Sum of Sq. Diff.	605.8938518	594.75652	1200.65037		
			n = 48					
			RMS in X,Y	3.552856397	3.52005125			
			RMS	5.001354757				
			Average Error	4.227114344				

Figure 5 - Southern Block RMS Report