

FOCUS on Accuracy

San_Francisco_Baylands_LiDAR_California_State_Plane

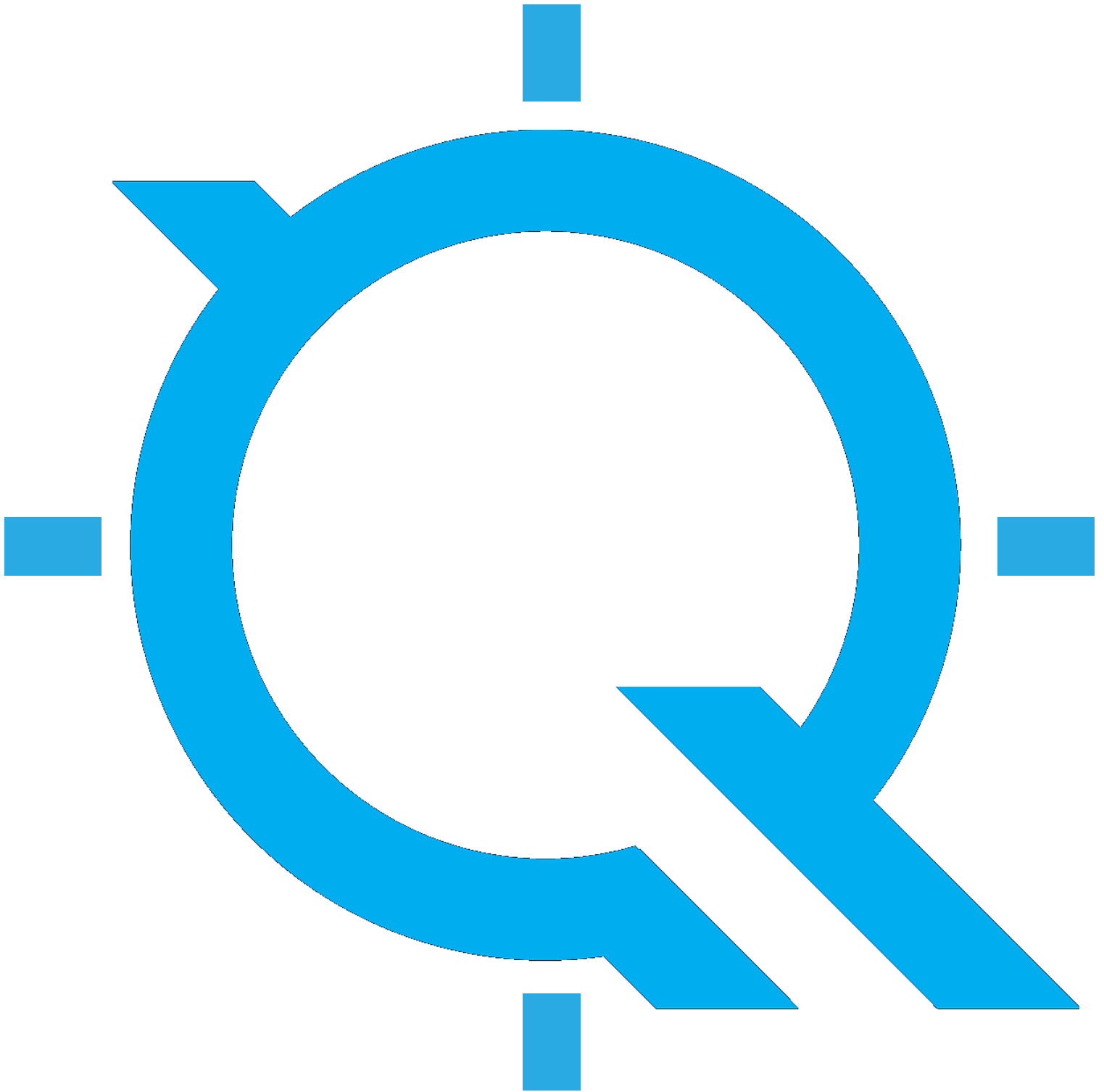


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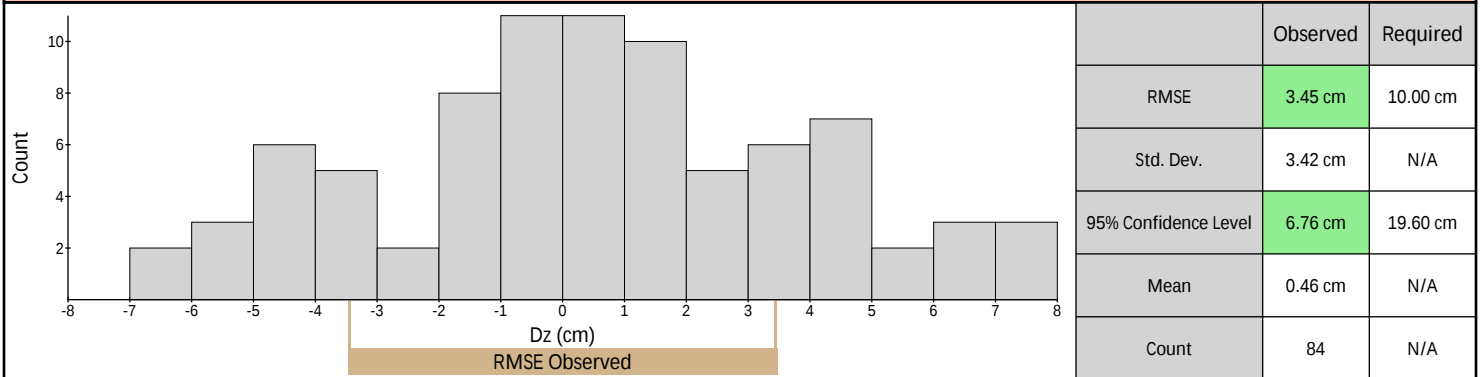
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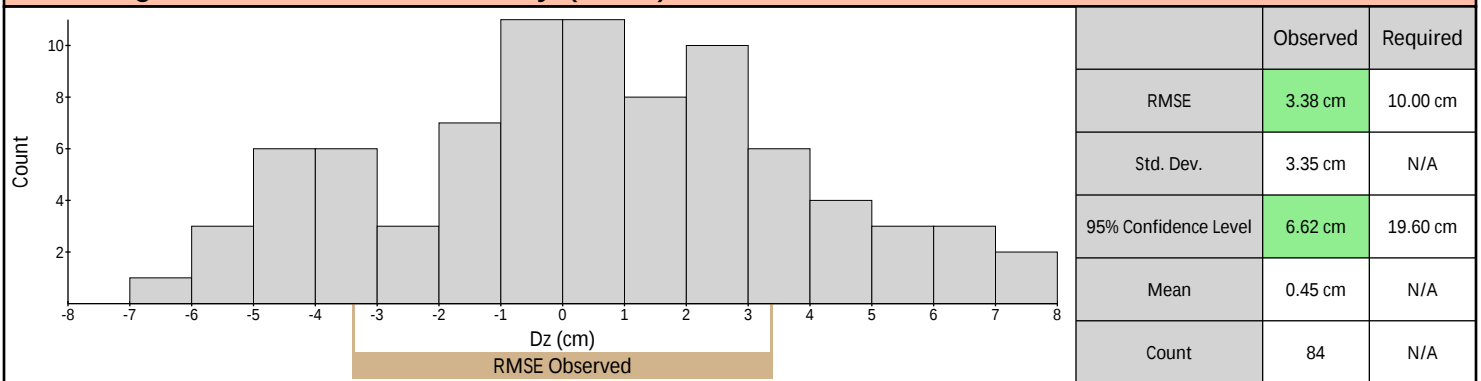
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Vertical Accuracy Assessment

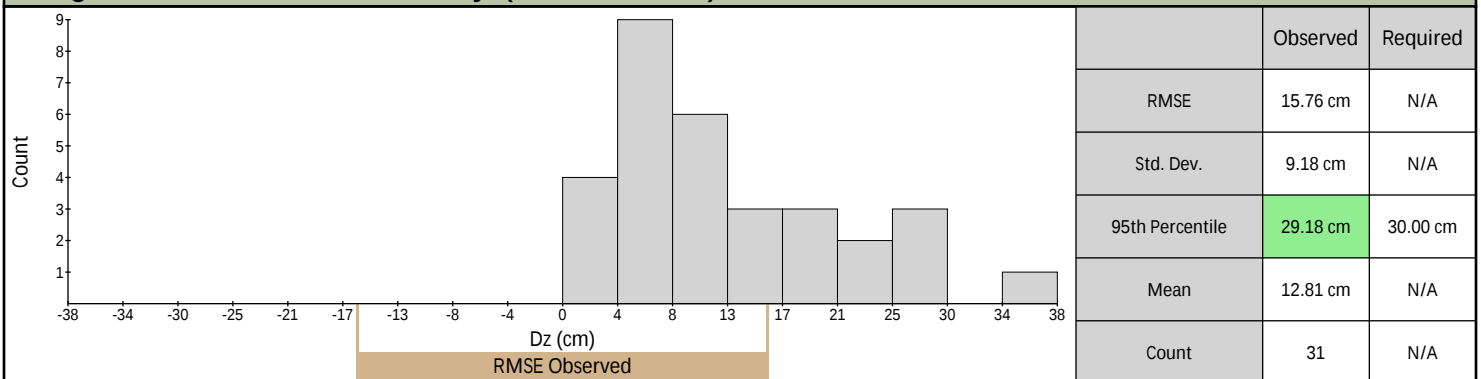
Nonvegetated Vertical Accuracy (Ground LAS)



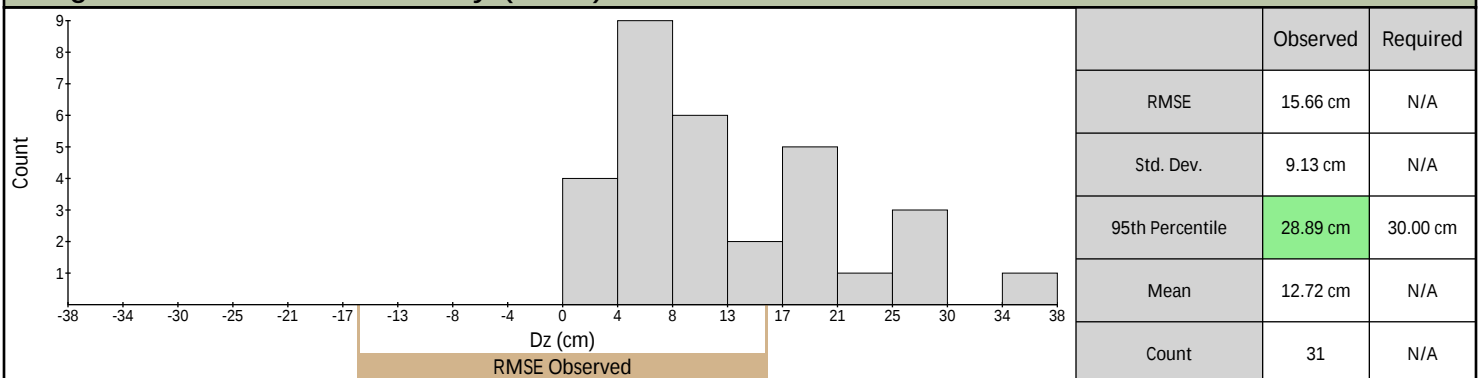
Nonvegetated Vertical Accuracy (DEM)



Vegetated Vertical Accuracy (Ground LAS)

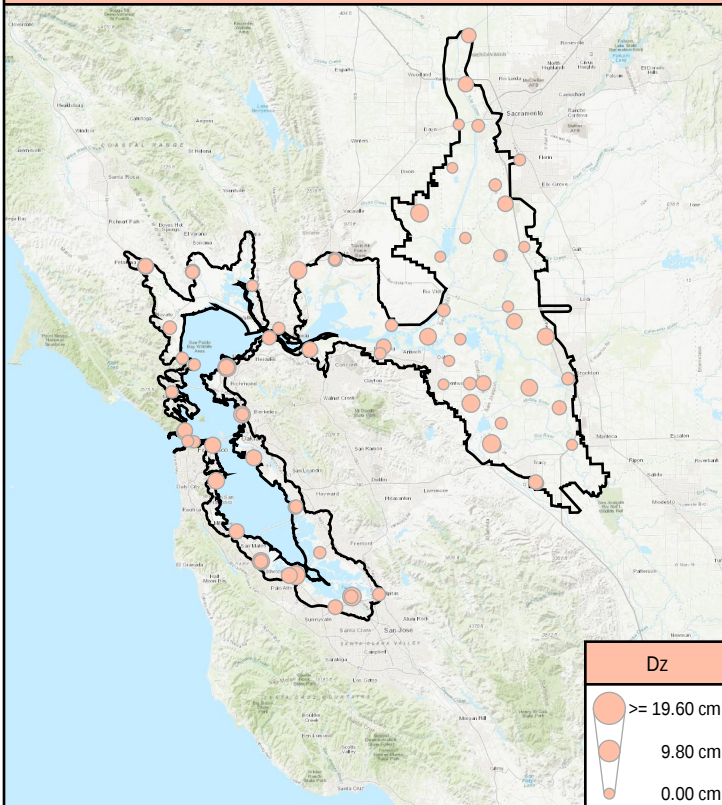


Vegetated Vertical Accuracy (DEM)

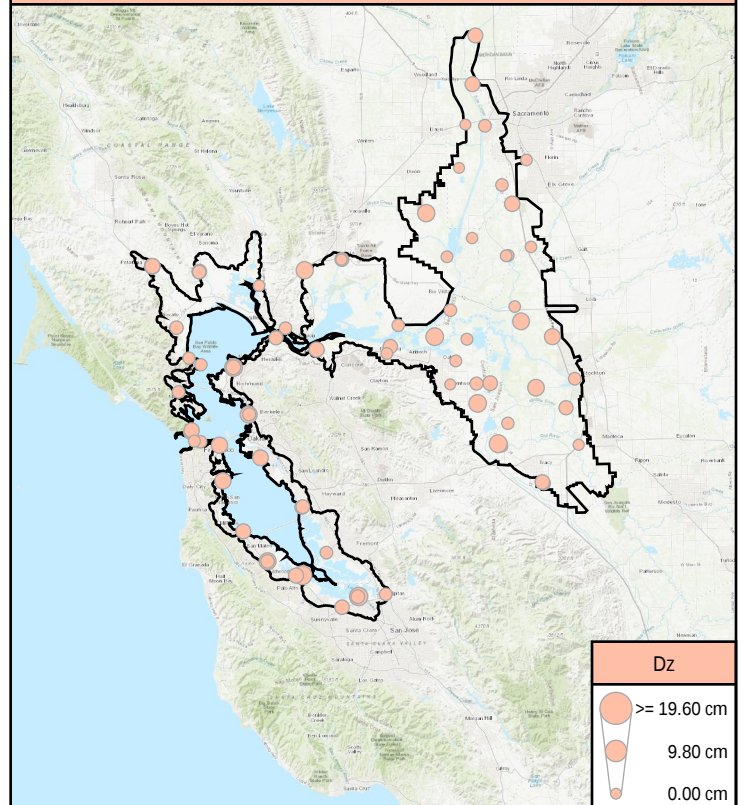


Control Point Locations

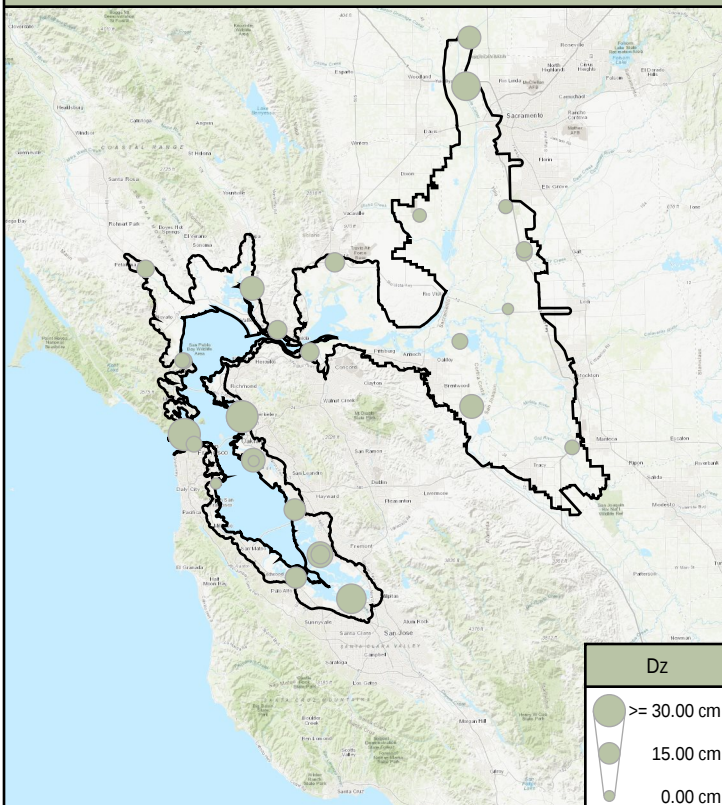
Nonvegetated Vertical Accuracy (Ground LAS)



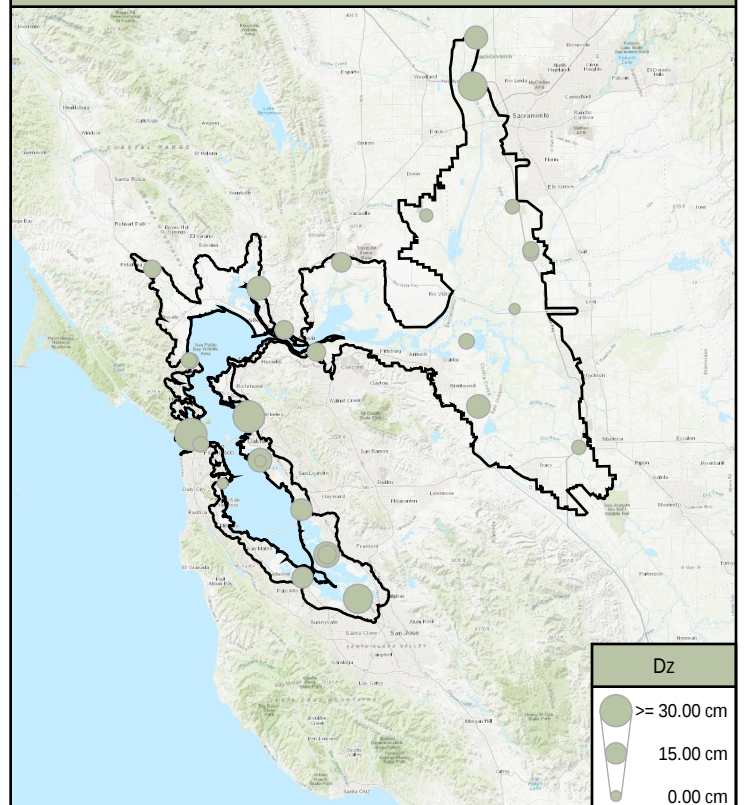
Nonvegetated Vertical Accuracy (DEM)



Vegetated Vertical Accuracy (Ground LAS)



Vegetated Vertical Accuracy (DEM)



Control Point Breakdown

Point	Type	Project	Ground (LAS Points)				DEM Dz
			Dz	Density	Nearest	Slope	
BE001	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-0.49 cm	9.66 ppsm	0.23 m	1.01°	-0.72 cm
BE002	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.62 cm	12.41 ppsm	0.20 m	4.57°	0.99 cm
BE003	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	5.58 cm	10.65 ppsm	0.09 m	1.00°	5.75 cm
BE004	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.38 cm	24.19 ppsm	0.08 m	4.35°	-1.35 cm
BE005	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	4.97 cm	15.31 ppsm	0.07 m	4.29°	4.64 cm
BE006	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.61 cm	18.14 ppsm	0.10 m	2.73°	0.32 cm
BE007	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.49 cm	26.99 ppsm	0.05 m	5.71°	3.78 cm
BE008	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.39 cm	13.86 ppsm	0.07 m	3.24°	-1.48 cm
BE009	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	7.33 cm	16.98 ppsm	0.15 m	1.72°	7.43 cm
BE010	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	7.25 cm	9.44 ppsm	0.20 m	1.72°	7.00 cm
BE011	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	3.07 cm	13.51 ppsm	0.16 m	1.43°	2.99 cm
BE012	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-2.70 cm	14.22 ppsm	0.13 m	1.43°	-2.29 cm
BE013	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.21 cm	9.44 ppsm	0.22 m	1.62°	0.25 cm
BE014	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	3.05 cm	16.84 ppsm	0.04 m	1.43°	2.86 cm
BE015	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-4.48 cm	13.12 ppsm	0.22 m	3.64°	-4.64 cm
BE016	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-0.44 cm	13.86 ppsm	0.10 m	2.29°	-0.68 cm
BE017	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.22 cm	14.43 ppsm	0.19 m	4.95°	0.26 cm
BE018	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.99 cm	12.73 ppsm	0.15 m	1.01°	2.04 cm
BE020	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.33 cm	11.81 ppsm	0.13 m	1.43°	-0.06 cm
BE021	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-0.91 cm	12.10 ppsm	0.14 m	1.43°	-0.94 cm
BE022	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.68 cm	13.26 ppsm	0.04 m	3.29°	0.58 cm
BE023	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-3.86 cm	11.57 ppsm	0.03 m	4.72°	-3.62 cm
BE024	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.62 cm	13.65 ppsm	0.16 m	1.32°	-0.54 cm
BE025	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.78 cm	11.18 ppsm	0.12 m	2.02°	1.68 cm
BE026	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	3.51 cm	15.35 ppsm	0.13 m	1.01°	3.59 cm
BE027	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-3.79 cm	14.11 ppsm	0.08 m	1.00°	-3.25 cm
BE028	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	7.01 cm	16.55 ppsm	0.07 m	2.43°	6.48 cm
BE029	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	2.21 cm	15.95 ppsm	0.11 m	1.62°	2.31 cm

Control Point Breakdown (continued)

Point	Type	Project	Ground (LAS Points)				DEM Dz
			Dz	Density	Nearest	Slope	
BE030	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	6.02 cm	12.98 ppsm	0.25 m	1.00°	5.75 cm
BE031	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.16 cm	14.50 ppsm	0.14 m	2.33°	-1.45 cm
BE032	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-4.42 cm	11.64 ppsm	0.15 m	3.86°	-5.51 cm
BE033	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.48 cm	10.79 ppsm	0.11 m	0.71°	0.85 cm
BE034	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.00 cm	12.52 ppsm	0.26 m	2.93°	0.05 cm
BE035	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.13 cm	15.42 ppsm	0.15 m	6.98°	-0.81 cm
BE036	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-4.27 cm	16.23 ppsm	0.21 m	1.62°	-3.83 cm
BE037	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-3.13 cm	13.86 ppsm	0.07 m	1.72°	-3.10 cm
BE038	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	5.49 cm	14.75 ppsm	0.23 m	1.32°	6.38 cm
BE039	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	1.36 cm	19.74 ppsm	0.05 m	2.43°	1.52 cm
UA001	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-0.26 cm	13.16 ppsm	0.11 m	1.43°	-0.26 cm
UA002	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-0.20 cm	16.73 ppsm	0.04 m	2.29°	-0.99 cm
UA003	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	1.83 cm	11.81 ppsm	0.08 m	1.43°	1.51 cm
UA004	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	1.27 cm	13.05 ppsm	0.11 m	2.02°	1.61 cm
UA005	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.96 cm	13.55 ppsm	0.20 m	1.43°	2.07 cm
UA006	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.30 cm	14.36 ppsm	0.12 m	1.01°	-1.38 cm
UA007	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	3.93 cm	14.18 ppsm	0.10 m	1.00°	4.11 cm
UA008	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.48 cm	17.19 ppsm	0.17 m	1.86°	0.54 cm
UA009	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.03 cm	34.70 ppsm	0.10 m	2.43°	4.03 cm
UA010	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.11 cm	13.62 ppsm	0.14 m	1.32°	1.07 cm
UA011	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-5.35 cm	11.81 ppsm	0.15 m	1.01°	-5.00 cm
UA012	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.00 cm	11.18 ppsm	0.16 m	1.32°	3.86 cm
UA013	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	2.55 cm	8.56 ppsm	0.16 m	1.62°	2.76 cm
UA014	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.37 cm	12.84 ppsm	0.12 m	2.33°	1.69 cm
UA015	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	2.38 cm	11.39 ppsm	0.12 m	0.86°	2.77 cm
UA016	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-4.80 cm	13.55 ppsm	0.20 m	2.33°	-4.57 cm
UA017	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.33 cm	13.79 ppsm	0.15 m	2.93°	4.11 cm
UA018	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.55 cm	12.10 ppsm	0.12 m	1.43°	-0.58 cm

Control Point Breakdown (continued)

Point	Type	Project	Ground (LAS Points)				DEM Dz
			Dz	Density	Nearest	Slope	
UA019	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-4.30 cm	11.81 ppsm	0.14 m	1.00°	-4.23 cm
UA020	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.27 cm	12.98 ppsm	0.07 m	1.86°	-0.69 cm
UA021	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-6.46 cm	15.07 ppsm	0.20 m	1.92°	-6.00 cm
UA022	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-6.51 cm	11.85 ppsm	0.05 m	3.04°	-6.32 cm
UA023	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-3.58 cm	12.31 ppsm	0.14 m	2.29°	-3.85 cm
UA024	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	1.83 cm	14.04 ppsm	0.15 m	1.43°	1.83 cm
UA025	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-3.32 cm	11.88 ppsm	0.15 m	1.43°	-3.47 cm
UA026	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.04 cm	12.77 ppsm	0.04 m	0.71°	0.07 cm
UA027	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-5.59 cm	11.85 ppsm	0.04 m	1.86°	-4.84 cm
UA028	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-1.52 cm	11.46 ppsm	0.24 m	1.01°	-1.60 cm
UA029	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.76 cm	12.66 ppsm	0.05 m	2.73°	-1.66 cm
UA030	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	-0.90 cm	13.26 ppsm	0.08 m	2.29°	-0.73 cm
UA031	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-5.39 cm	13.05 ppsm	0.16 m	2.33°	-5.36 cm
UA032	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	6.71 cm	13.05 ppsm	0.08 m	2.02°	6.61 cm
UA033	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.72 cm	13.58 ppsm	0.13 m	2.33°	-2.08 cm
UA034	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-2.63 cm	9.44 ppsm	0.25 m	2.72°	-2.49 cm
UA035	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	2.32 cm	14.93 ppsm	0.08 m	2.86°	2.37 cm
UA036	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	6.24 cm	11.92 ppsm	0.24 m	1.86°	5.91 cm
UA037	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.06 cm	14.61 ppsm	0.05 m	0.91°	0.90 cm
UA038	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.73 cm	12.87 ppsm	0.02 m	1.01°	4.00 cm
UA039	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-1.95 cm	10.82 ppsm	0.06 m	1.32°	-1.69 cm
UA040	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	3.62 cm	12.13 ppsm	0.17 m	1.01°	3.40 cm
UA041	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	-4.93 cm	17.58 ppsm	0.13 m	2.43°	-4.98 cm
UA042	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	1.53 cm	14.54 ppsm	0.03 m	1.01°	1.73 cm
UA043	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	4.59 cm	15.35 ppsm	0.03 m	5.14°	3.72 cm
UA044	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	2.94 cm	16.02 ppsm	0.09 m	7.13°	2.88 cm
UA045	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	3.01 cm	11.92 ppsm	0.15 m	1.01°	2.69 cm
UA046	NVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	0.91 cm	12.56 ppsm	0.14 m	0.86°	0.88 cm

Control Point Breakdown (continued)

Point	Type	Project	Ground (LAS Points)				DEM Dz
			Dz	Density	Nearest	Slope	
FR001	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	25.09 cm	1.41 ppsm	0.81 m	-	25.09 cm
FR005	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	6.67 cm	5.62 ppsm	0.13 m	4.15°	6.48 cm
SH001	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	6.14 cm	4.35 ppsm	0.35 m	9.79°	6.42 cm
SH002	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	28.94 cm	3.89 ppsm	0.14 m	5.95°	28.66 cm
SH003	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	6.83 cm	9.80 ppsm	0.13 m	10.52°	6.47 cm
SH004	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	37.53 cm	14.61 ppsm	0.18 m	16.83°	37.77 cm
SH005	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	7.10 cm	11.78 ppsm	0.31 m	20.30°	7.11 cm
SH006	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	9.28 cm	13.19 ppsm	0.11 m	5.65°	9.67 cm
SH008	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	21.16 cm	7.64 ppsm	0.17 m	23.39°	20.85 cm
SH009	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	18.19 cm	2.23 ppsm	0.92 m	-	18.19 cm
TG001	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	5.42 cm	14.25 ppsm	0.04 m	3.94°	5.11 cm
TG002	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.75 cm	8.35 ppsm	0.12 m	1.72°	0.40 cm
TG003	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	7.07 cm	11.28 ppsm	0.20 m	6.25°	6.75 cm
TG004	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	11.33 cm	13.51 ppsm	0.19 m	5.95°	11.07 cm
TG005	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	29.43 cm	12.98 ppsm	0.24 m	9.14°	29.13 cm
TG006	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	6.14 cm	18.36 ppsm	0.16 m	8.81°	6.36 cm
TG007	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	9.29 cm	11.39 ppsm	0.08 m	1.42°	9.36 cm
TG008	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	18.57 cm	13.90 ppsm	0.08 m	5.71°	18.03 cm
TG009	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.39 cm	13.83 ppsm	0.21 m	3.29°	0.18 cm
TG010	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	14.54 cm	12.48 ppsm	0.11 m	1.42°	14.25 cm
TG011	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	26.33 cm	7.57 ppsm	0.22 m	2.33°	25.72 cm
TG012	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	11.32 cm	13.30 ppsm	0.06 m	4.72°	11.03 cm
TG013	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	15.24 cm	12.77 ppsm	0.11 m	11.49°	15.19 cm
TG014	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	0.49 cm	13.26 ppsm	0.17 m	3.86°	1.28 cm
TG015	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	10.67 cm	11.28 ppsm	0.04 m	5.55°	10.53 cm
TG016	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	11.99 cm	14.78 ppsm	0.03 m	1.92°	12.31 cm
TG017	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	4.52 cm	11.92 ppsm	0.10 m	1.86°	5.04 cm
TG018	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	7.58 cm	11.92 ppsm	0.27 m	1.62°	7.59 cm

Control Point Breakdown (continued)

Point	Type	Project	Ground (LAS Points)				DEM Dz
			Dz	Density	Nearest	Slope	
TG019	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	3.89 cm	13.09 ppsm	0.14 m	1.86°	3.27 cm
TG020	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 3	18.37 cm	11.57 ppsm	0.15 m	2.43°	17.84 cm
TG021	VVA	San Francisco Baylands LiDAR Cal State Plane Zone 2	16.86 cm	11.07 ppsm	0.22 m	3.29°	17.27 cm