

Table 4-10. Domain-wide groundwater-level calibration statistics comparison

Groundwater Model	SAS				UFA			
	Number of Targets	Mean Error (ft)	Abs Mean Error (ft)	RMSE* (ft)	Number of Targets	Mean Error (ft)	Abs Mean Error (ft)	RMSE* (ft)
NF v2	118	-0.77	4.54	7.43	487	-0.83	2.79	4.09
PF v2	343	1.99	8.15	12.24	669	0.12	3.52	4.92
NEF v3	43	1.57	2.63	3.82	131	1.31	2.50	3.26
NCF	82	0.19	4.01	4.84	279	0.01	3.10	3.75
VOL	100	-0.55	3.21	5.01	208	-0.43	2.41	3.07
ECF	55	0.98	3.65	6.44	72	-0.08	2.80	3.63
NFSEG v1.1 (2001)	228	-0.06	4.20	6.23	979	-0.45	3.68	4.98
NFSEG v1.1 (2009)	328	0.10	3.60	5.79	990	-0.91	3.40	4.67

overlap comparisons are more appropriate than the comparisons represented in Table 4-10 that include observations from large areas not common to both models. Statistics for the NFSEG v1.1 2001 and 2009 calibration years show that NFSEG v1.1 is calibrated comparatively with other regional models in the SAS and UFA (Table 4-11).

3) 1-to-1 Model Overlap Comparisons: Observation points were limited to groundwater level targets utilized in the calibration of both models. The 1-to-1 model overlap comparison is the most direct method for comparisons of the groundwater level residuals because it excludes targets from outside the areas of overlap and includes only those targets that were common to both model calibrations. For these reasons, it is the most reliable indicator of the quality of the NFSEG v1.1 2009 calibration relative to those of the existing regional scale models to which it was compared (Table 4-12 a, Table 4-12 b). The results indicate that both the NFSEG v1.1 2001 and 2009 calibrations are at least comparable to the other regional scale models and many cases are arguably better (Table 4-12 a, Table 4-12 b).

Comparisons to PF v2 and NF v2 are perhaps the most instructive, because the respective domains of these two models overlap to the largest extent with the domain of NFSEG v1.1 and more comparable to NFSEG v1.1 in terms of domain extent and the numbers of targets common to their respective calibrations.