Appendix: Groundwater Study

Groundwater Flow Calculations

Flow Calculations

Hydraulic Gradients: I – (ft / ft)

MW-A1 / MW-A2	0.004
MW-B1 / MW-B2	0.01
MW-C1 / MW-C2	0.007
MW-D1 / MW-D2	0.003
MW-E1 / MW-E2	0.008
MW-F1 / MW-F2	0.006
MW-G1 / MW-G2	dry
MW-H1 / MW-H2	dry

Cross Sectional Area:

	A – (ft^2)
A	264,000
B	396,000
C&D	792,000
E	396,000
F	264,000

Hydraulic Conductivity:

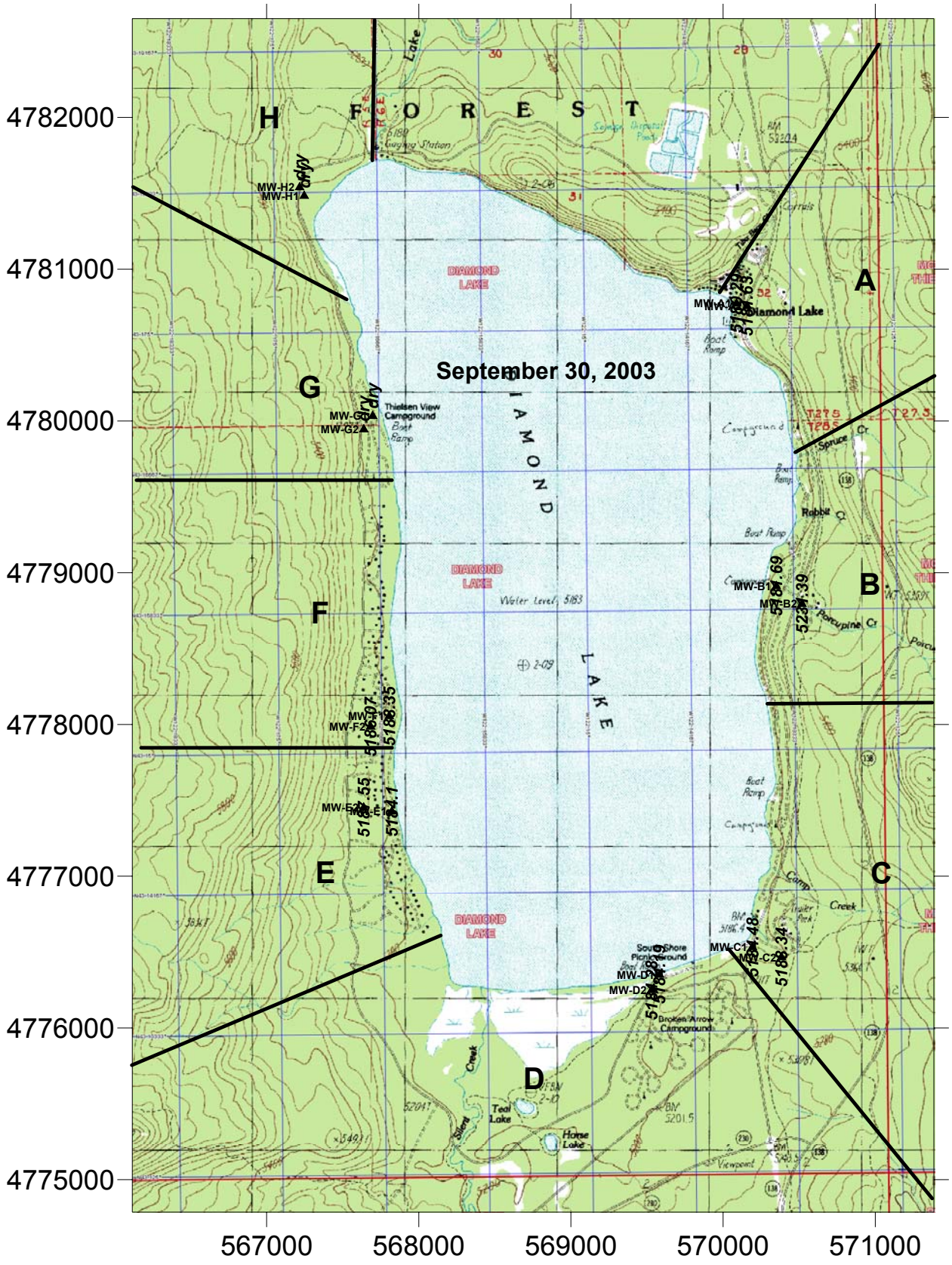
	K – (ft/day)
MW-A1 / MW-A2	1.18
MW-B1 / MW-B2	2.0
MW-C1 / MW-C2	168
MW-D1 / MW-D2	168
MW-E1 / MW-E2	0.3
MW-F1 / MW-F2	0.21

Flows Q = KIA

	cfs
A	0.014
B	0.1
C&D	6.2
E	0.01
F	0.003
Q	**6.3**

Flow using the average value for K and I:

K – 56.61 ft/day
I – 0.0063 ft/ft
A – 2,112,000 ft^2
Q = 8.7 cfs



September 30, 2003
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MW-B2
MW-C1
MW-C2
MW-D1
MW-D2
DIAMOND LAKE
Diamond Lake
Thielsen View Campground
South Shore Picnic Ground
Broken Arrow Campground
Teal Lake
Horse Lake
Water Level 5183

Prepared By_____ **Date**_____

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Project Geohydrologist