

Appendix G. Vertical hydraulic head gradient data between adjacent monitoring zones for boreholes USGS 103, USGS 105, USGS 108, USGS 131A, USGS 132, USGS 133, USGS 134, USGS 135, USGS 137A, MIDDLE 2050A, and MIDDLE 2051, Idaho National Laboratory, Idaho, June or September 2012.

[**Local name** is the local well identifier used in this study. **Zone No.** is the identifiers used to locate monitoring zones. **Port No.** is the identifiers used to locate measurement ports. **Depth interval** limits in feet below land surface (ft bls). **Hydraulic head** values in feet above National Geodetic Vertical Datum of 1929 (NGVD29); difference in feet (ft), and vertical gradient in feet per foot (ft/ft). Vertical gradients are calculated over a 3.0 ft thick inflated packer bladder]

Local name	Zone No.	Port No.	Depth interval		Hydraulic head			
			Bottom (ft bls)	Top (ft bls)	Bottom (ft)	Top (ft)	Difference (ft)	Gradient (ft/ft)
USGS 103	1, 2	1, 2	1,257.4	1,254.4	4,420.4	4,420.4	-0.1	0.0
	2, 3	2-4	1,242.9	1,239.9	4,420.4	4,420.4	0.0	0.0
	3, 4	3-5	1,184.4	1,181.4	4,420.4	4,420.4	0.0	0.0
	4, 5	5, 6	1,115.2	1,112.2	4,420.4	4,420.3	0.0	0.0
	5, 6	6-8	1,100.6	1,097.6	4,420.3	4,420.3	0.0	0.0
	6, 7	7-9	1,063.2	1,060.2	4,420.3	4,420.4	-0.1	0.0
	7, 8	9, 10	1,045.5	1,042.5	4,420.4	4,420.3	0.1	0.0
	8, 9	10-12	1,016.5	1,013.5	4,420.3	4,420.5	-0.1	0.0
	9, 10	11-13	958.0	955.0	4,420.5	4,420.4	0.1	0.0
	10, 11	13, 14	948.4	945.4	4,420.4	4,420.4	0.0	0.0
	11, 12	14-16	922.6	919.6	4,420.4	4,420.4	0.0	0.0
	12, 13	15-17	891.6	888.6	4,420.4	4,420.3	0.1	0.0
	13, 14	17, 18	862.6	859.6	4,420.3	4,420.4	-0.1	0.0
	14, 15	18-20	835.1	832.1	4,420.4	4,420.4	0.1	0.0
	15, 16	19-21	766.9	763.9	4,420.4	4,420.9	-0.5	-0.2
	16, 17	21-23	694.3	691.3	4,420.9	4,420.4	0.4	0.1
USGS 105	1, 2	1-3	1,279.2	1,276.2	4,420.0	4,420.1	-0.1	0.0
	2, 3	2-4	1,224.8	1,221.8	4,420.1	4,420.0	0.1	0.0
	3, 4	4, 5	1,165.9	1,162.9	4,420.0	4,420.0	0.0	0.0
	4, 5	5-7	1,105.5	1,102.5	4,420.0	4,420.0	0.0	0.0
	5, 6	6-8	1,034.6	1,031.6	4,420.0	4,420.0	0.1	0.0
	6, 7	8, 9	1,005.1	1,002.1	4,420.0	4,420.0	0.0	0.0
	7, 8	9-11	985.4	982.4	4,420.0	4,420.0	0.0	0.0
	8, 9	10-12	929.3	926.3	4,420.0	4,419.9	0.0	0.0
	9, 10	12, 13	909.6	906.6	4,419.9	4,419.9	0.0	0.0
	10, 11	13-15	865.3	862.3	4,419.9	4,419.7	0.2	0.1
	11, 12	14-16	830.4	827.4	4,419.7	4,419.7	0.1	0.0
	12, 13	16-18	754.9	751.9	4,419.7	4,419.6	0.1	0.0
	USGS 108	1, 2	1-3	1,160.9	1,157.9	4,420.3	4,420.2	0.0
2, 3		3, 4	1,121.6	1,118.6	4,420.2	4,420.4	-0.2	-0.1
3, 4		4-6	1,062.6	1,059.6	4,420.4	4,420.5	0.0	0.0
4, 5		5-7	1,018.0	1,015.0	4,420.5	4,420.4	0.0	0.0
5, 6		7, 8	980.4	977.4	4,420.4	4,420.4	0.0	0.0
6, 7		8-10	906.7	903.7	4,420.4	4,420.2	0.2	0.1
7, 8		9-11	872.0	869.0	4,420.2	4,420.1	0.1	0.0
8, 9		11-13	832.7	829.7	4,420.1	4,420.0	0.1	0.0
9, 10		12-14	791.4	788.4	4,420.0	4,419.7	0.3	0.1
10, 11		14-16	681.8	678.8	4,419.7	4,419.7	0.0	0.0

G2 Multilevel Groundwater Monitoring of Hydraulic Head and Temperature, Eastern Snake River Plain Aquifer, Idaho, 2011–13

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Local name	Zone No.	Port No.	Depth interval		Hydraulic head			
			Bottom (ft bls)	Top (ft bls)	Bottom (ft)	Top (ft)	Difference (ft)	Gradient (ft/ft)
USGS 131A	1, 2	1, 2	1,176.9	1,173.9	4428.9	4429.0	-0.1	0.0
	2, 3	2 - 4	1,160.1	1,157.1	4429.0	4429.0	0.0	0.0
	3, 4	3 - 5	1,120.4	1,117.4	4429.0	4429.0	0.0	0.0
	4, 5	5 - 7	1,061.4	1,058.4	4429.0	4428.9	0.0	0.0
	5, 6	6 - 8	956.3	953.3	4428.9	4429.0	0.0	0.0
	6, 7	8, 9	928.4	925.4	4429.0	4431.7	-2.7	-0.9
	7, 8	9 - 11	844.9	841.9	4431.7	4430.9	0.8	0.3
	8, 9	10 - 12	795.4	792.4	4430.9	4429.5	1.4	0.5
	9, 10	12, 13	733.0	730.0	4429.5	4429.4	0.1	0.0
	10, 11	13, 14	693.7	690.7	4429.4	4429.5	-0.1	0.0
	11, 12	14 - 16	634.6	631.6	4429.5	4430.1	-0.6	-0.2
USGS 132	1, 2	1–3	1,152.3	1,149.3	4,420.5	4,420.5	-0.1	0.0
	2, 3	3, 4	1,144.1	1,141.1	4,420.5	4,420.5	0.1	0.0
	3, 4	4, 5	1,134.3	1,131.3	4,420.5	4,420.4	0.1	0.0
	4, 5	5–7	1,046.1	1,043.1	4,420.4	4,420.4	0.0	0.0
	5, 6	6–8	984.3	981.3	4,420.4	4,420.5	0.0	0.0
	6, 7	8, 9	953.2	950.2	4,420.5	4,420.5	0.0	0.0
	7, 8	9–11	938.4	935.4	4,420.5	4,420.4	0.0	0.0
	8, 9	10–12	911.1	908.1	4,420.4	4,420.4	0.1	0.0
	9, 10	12, 13	876.7	873.7	4,420.4	4,420.4	0.0	0.0
	10, 11	13–15	866.8	863.8	4,420.4	4,420.4	0.0	0.0
	11, 12	14–16	811.5	808.5	4,420.4	4,420.4	0.0	0.0
	12, 13	16, 17	801.6	798.6	4,420.4	4,420.4	0.0	0.0
	13, 14	17–19	790.1	787.1	4,420.4	4,420.4	0.0	0.0
	14, 15	18–20	726.6	723.6	4,420.4	4,420.3	0.1	0.0
	15, 16	20, 21	672.5	669.5	4,420.3	4,420.3	0.0	0.0
	16, 17	21–23	662.6	659.6	4,420.3	4,420.3	0.0	0.0
	USGS 133	1, 2	1–3	724.8	721.8	4,457.4	4,457.4	0.0
2, 3		3, 4	715.0	712.0	4,457.4	4,457.4	0.0	0.0
3, 4		4, 5	698.6	695.6	4,457.4	4,457.5	-0.1	0.0
4, 5		5, 6	685.5	682.5	4,457.5	4,462.5	-5.0	-1.7
5, 6		6, 7	618.2	615.2	4,462.5	4,462.9	-0.4	-0.1
6, 7		7–9	593.7	590.7	4,462.9	4,463.6	-0.7	-0.2
7, 8		8–10	555.5	552.5	4,463.6	4,463.6	0.0	0.0
8, 9		10, 11	539.1	536.1	4,463.6	4,463.6	0.0	0.0
9, 10		11–13	483.2	480.2	4,463.6	4,463.4	0.1	0.0

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Local name	Zone No.	Port No.	Depth interval		Hydraulic head			
			Bottom (ft bls)	Top (ft bls)	Bottom (ft)	Top (ft)	Difference (ft)	Gradient (ft/ft)
USGS 134	1, 2	1, 2	881.0	878.0	4,453.9	4,454.0	-0.1	0.0
	2, 3	2–4	871.0	868.0	4,454.0	4,454.0	0.0	0.0
	3, 4	3–5	846.0	843.0	4,454.0	4,454.0	0.0	0.0
	4, 5	5, 6	831.0	828.0	4,454.0	4,454.0	0.0	0.0
	5, 6	6–8	821.0	818.0	4,454.0	4,454.0	0.0	0.0
	6, 7	7–9	782.0	779.0	4,454.0	4,454.0	0.0	0.0
	7, 8	9, 10	747.0	744.0	4,454.0	4,454.0	0.0	0.0
	8, 9	10–12	723.0	720.0	4,454.0	4,454.2	-0.1	0.0
	9, 10	11–13	690.9	687.9	4,454.2	4,455.0	-0.8	-0.3
	10, 11	13, 14	664.9	661.9	4,455.0	4,454.3	0.6	0.2
	11, 12	14–16	654.9	651.9	4,454.3	4,454.3	0.0	0.0
	12, 13	15–17	638.9	635.9	4,454.3	4,454.4	0.0	0.0
	13, 14	17, 18	604.8	601.8	4,454.4	4,454.4	0.0	0.0
	14, 15	18–20	592.8	589.8	4,454.4	4,454.6	-0.2	-0.1
	USGS 135	1, 2	1–3	1,105.6	1,102.6	4,419.5	4,417.9	1.5
2, 3		3, 4	1,054.8	1,051.8	4,417.9	4,417.9	0.0	0.0
3, 4		4–6	1,010.6	1,007.6	4,417.9	4,417.9	0.0	0.0
4, 5		5–7	967.5	964.5	4,417.9	4,417.9	0.0	0.0
5, 6		7, 8	923.3	920.3	4,417.9	4,417.9	0.0	0.0
6, 7		8–10	864.2	861.2	4,417.9	4,417.8	0.1	0.0
7, 8		9–11	822.6	819.6	4,417.8	4,417.8	0.0	0.0
8, 9		11, 12	790.0	787.0	4,417.8	4,417.8	0.0	0.0
9, 10		12–14	765.3	762.3	4,417.8	4,417.9	0.0	0.0
USGS 137A		1, 2	1, 2	874.5	871.5	4,416.5	4,416.6	0.0
	2, 3	2 - 4	864.7	861.7	4,416.6	4,416.6	0.0	0.0
	3, 4	3 - 6	840.1	837.1	4,416.6	4,416.5	0.0	0.0
	4, 5	5 - 8	746.2	743.2	4,416.5	4,416.5	0.0	0.0
MIDDLE 2050A	1, 2	1, 2	1,267.5	1,264.5	4,446.1	4,446.5	-0.4	-0.1
	2, 3	2, 3	1,229.7	1,226.7	4,446.5	4,446.5	0.0	0.0
	3, 4	3, 4	1,179.7	1,176.7	4,446.5	4,446.5	0.0	0.0
	4, 5	4, 5	1,081.3	1,078.3	4,446.5	4,446.7	-0.1	0.0
	5, 6	5, 6	1,043.6	1,040.6	4,446.7	4,446.6	0.0	0.0
	6, 7	6, 7	998.7	995.7	4,446.6	4,446.7	0.0	0.0
	7, 8	7, 8	843.1	840.1	4,446.7	4,446.7	-0.1	0.0
	8, 9	8, 9	810.4	807.4	4,446.7	4,446.7	0.1	0.0
	9, 10	9, 10	790.0	787.0	4,446.7	4,446.7	0.0	0.0
	10, 11	10, 11	719.5	716.5	4,446.7	4,446.7	-0.1	0.0
	11, 12	11, 12	706.4	703.4	4,446.7	4,447.3	-0.6	-0.2
	12, 13	12, 13	643.3	640.3	4,447.3	4,447.3	0.0	0.0
	13, 14	13, 14	623.7	620.7	4,447.3	4,447.3	0.1	0.0
	14, 15	14, 15	541.6	538.6	4,447.3	4,447.3	0.0	0.0

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Local name	Zone No.	Port No.	Depth interval		Hydraulic head			
			Bottom (ft bls)	Top (ft bls)	Bottom (ft)	Top (ft)	Difference (ft)	Gradient (ft/ft)
MIDDLE 2051	1, 2	1, 2	1,140.3	1,137.3	4,429.8	4,429.7	0.0	0.0
	2, 3	2, 3	1,130.5	1,127.5	4,429.7	4,429.7	0.0	0.0
	3, 4	3, 4	1,090.5	1,087.5	4,429.7	4,429.7	0.0	0.0
	4, 5	4, 5	1,002.2	999.2	4,429.7	4,426.5	3.2	1.1
	5, 6	5, 6	879.4	876.4	4,426.5	4,426.5	0.0	0.0
	6, 7	6, 7	826.2	823.2	4,426.5	4,426.4	0.1	0.0
	7, 8	7, 8	791.9	788.9	4,426.4	4,426.4	0.0	0.0
	8, 9	8, 9	773.8	770.8	4,426.4	4,426.5	0.0	0.0
	9, 10	9, 10	748.4	745.4	4,426.5	4,426.5	0.0	0.0
	10, 11	10, 11	646.7	643.7	4,426.5	4,435.3	-8.8	-2.9
	11, 12	11, 12	612.2	609.2	4,435.3	4,437.5	-2.2	-0.7