

APPENDICES

Appendix A

Weathering Rind Measurements and Data Collection Methods

Table A.1 Weathering rind measurements and data collection methods.

Rock #	Unit	Surface	Rock Type	Rind Thickness (mm)	Comment
1	Qs	Springwater	Basalt	7	
2	Qs	Springwater	Basalt	9	Clay-rich rind
3	Qs	Springwater	Basalt	10	Banding
4	Qs	Springwater	Basalt	10	Miner clay
5	Qs	Springwater	Basalt	3	highly variable
6	Qs	Springwater	Basalt	4	
7	Qs	Springwater	Basalt	5	
8	Qs	Springwater	Basalt	11	
9	Qs	Springwater	Basalt	7	banding
10	Qs	Springwater	Basalt	11	
11	Qs	Springwater	Basalt	15	
12	Qs	Springwater	Basalt	15	
13	Qs	Springwater	Basalt	14	
14	Qs	Springwater	Basalt	16	
15	Qs	Springwater	Basalt	6	highly variable
16	Qs	Springwater	Basalt	9	
17	Qs	Springwater	Basalt	10	
18	Qs	Springwater	Basalt	16	
19	Qs	Springwater	Basalt	13	
20	Qs	Springwater	Basalt	16	
21	Qs	Springwater	Basalt	6	
22	Qs	Springwater	Basalt	13	
23	Qs	Springwater	Basalt	15	
24	Qs	Springwater	Porphyritic Basalt	6	~ 5% plagioclase feldspar
25	Qs	Springwater	Porphyritic Basalt	6	
26	Qs	Springwater	Porphyritic Basalt	4	
27	Qs	Springwater	Porphyritic Basalt	3	
28	Qs	Springwater	Porphyritic Basalt	3	
29	Qs	Springwater	Basalt with olivine and 2 feldspars	4	
30	Qs	Springwater	Basalt with olivine and 2 feldspars	19	
31	Qs	Springwater	Basalt with olivine and 2 feldspars	1	
32	Qs	Springwater	Basalt with olivine and 2 feldspars	1	
33	Qs	Springwater	Basalt with olivine and 2 feldspars	3	
34	Qs	Springwater	Basalt with olivine and 2 feldspars	1	
35	Qs	Springwater	Basalt with olivine and 2 feldspars	3	
36	Qs	Springwater	Basalt with olivine and 2 feldspars	6	
37	Qs	Springwater	Basalt with olivine and 2 feldspars	5	
38	Qs	Springwater	Mafic-bearing basalt	14	
39	Qs	Springwater	Mafic-bearing basalt	16	
40	Qs	Springwater	Mafic-bearing basalt	4	Abundant iron
41	Qs	Springwater	Mafic-bearing basalt	8	

Table A.1 Weathering rind measurements and data collection methods (continued).

Rock #	Unit	Surface	Rock Type	Rind Thickness (mm)	Comment
42	Qs	Springwater	Mafic-bearing basalt	7	
43	Qs	Springwater	Mafic-bearing basalt	10	
44	Qs	Springwater	Pink/Grey porphyritic andesite	2	
45	Qs	Springwater	Pink/Grey porphyritic andesite	4	
46	Qs	Springwater	Pink/Grey porphyritic andesite	5	
47	Qs	Springwater	Pink/Grey porphyritic andesite	4	
48	Qs	Springwater	Porphyritic Basalt (zoned plag.)	2	
49	Qs	Springwater	Porphyritic Basalt (zoned plag.)	2	
50	Qs	Springwater	basalt with olivine and feldspar	3	
1	Qt3	Estacada Rock	Fine grained basalt	1	
2	Qt3	Estacada Rock	Fine grained basalt	0.5	
3	Qt3	Estacada Rock	Fine grained basalt	9	
4	Qt3	Estacada Rock	Fine grained basalt	0.5	
5	Qt3	Estacada Rock	Fine grained basalt	1	
6	Qt3	Estacada Rock	Fine grained basalt	trace	
7	Qt3	Estacada Rock	Fine grained basalt	1	
8	Qt3	Estacada Rock	Fine grained basalt	trace	
9	Qt3	Estacada Rock	Fine grained basalt	trace	
10	Qt3	Estacada Rock	Fine grained basalt	0.5	
11	Qt3	Estacada Rock	Fine grained basalt	trace	
12	Qt3	Estacada Rock	Fine grained basalt	0.5	
13	Qt3	Estacada Rock	Fine grained basalt	trace	
14	Qt3	Estacada Rock	Fine grained basalt	2	
15	Qt3	Estacada Rock	Fine grained basalt	trace	
16	Qt3	Estacada Rock	pink/Grey andesite	1.5	
17	Qt3	Estacada Rock	pink/Grey andesite	1	
18	Qt3	Estacada Rock	pink/Grey andesite	trace	
19	Qt3	Estacada Rock	pink/Grey andesite	trace	
20	Qt3	Estacada Rock	pink/Grey andesite	0.5	
21	Qt3	Estacada Rock	pink/Grey andesite	1	
22	Qt3	Estacada Rock	pink/Grey andesite	trace	
23	Qt3	Estacada Rock	pink/Grey andesite	trace	
24	Qt3	Estacada Rock	pink/Grey andesite	1.5	
25	Qt3	Estacada Rock	pink/Grey andesite	trace	
26	Qt3	Estacada Rock	pink/Grey andesite	trace	
27	Qt3	Estacada Rock	pink/Grey andesite	1	
28	Qt3	Estacada Rock	pink/Grey andesite	trace	
29	Qt3	Estacada Rock	Porphyritic basalt	trace	
30	Qt3	Estacada Rock	Porphyritic basalt	1.5	

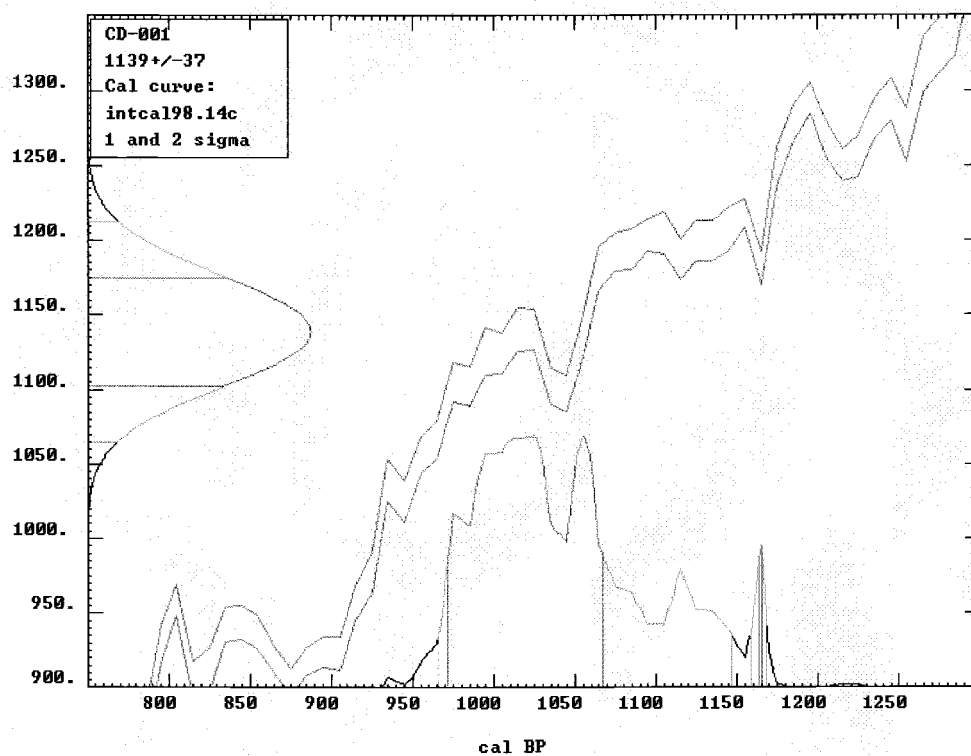
Table A.1 Weathering rind measurements and data collection methods (continued).

Rock #	Unit	Surface	Rock Type	Rind Thickness (mm)	Comment
31	Qt3	Estacada Rock	Porphyritic basalt	trace	
32	Qt3	Estacada Rock	Porphyritic basalt	11	Unclear may only be a trace??
33	Qt3	Estacada Rock	Porphyritic basalt	trace	
34	Qt3	Estacada Rock	Porphyritic basalt	11	Unclear may only be a trace??
35	Qt3	Estacada Rock	Porphyritic basalt	1.5	
36	Qt3	Estacada Rock	Porphyritic basalt	trace	
37	Qt3	Estacada Rock	Porphyritic basalt	2	
38	Qt3	Estacada Rock	diabase	2	
39	Qt3	Estacada Rock	diabase	trace	
40	Qt3	Estacada Rock	diabase	5	
41	Qt3	Estacada Rock	porphyritic olivine dacite	1	
42	Qt3	Estacada Rock	porphyritic olivine dacite	trace	
43	Qt3	Estacada Rock	porphyritic olivine dacite	trace	
44	Qt3	Estacada Rock	porphyritic olivine dacite	1	
45	Qt3	Estacada Rock	propylitically gabbro (altered)	trace	Pyrite present
46	Qt3	Estacada Rock	propylitically gabbro (altered)	trace	
47	Qt3	Estacada Rock	propylitically gabbro (altered)	trace	
48	Qt3	Estacada Rock	propylitically gabbro (altered)	1	
49	Qt3	Estacada Rock	diabase	1.5	
50	Qt3	Estacada Rock	diabase	0.5	

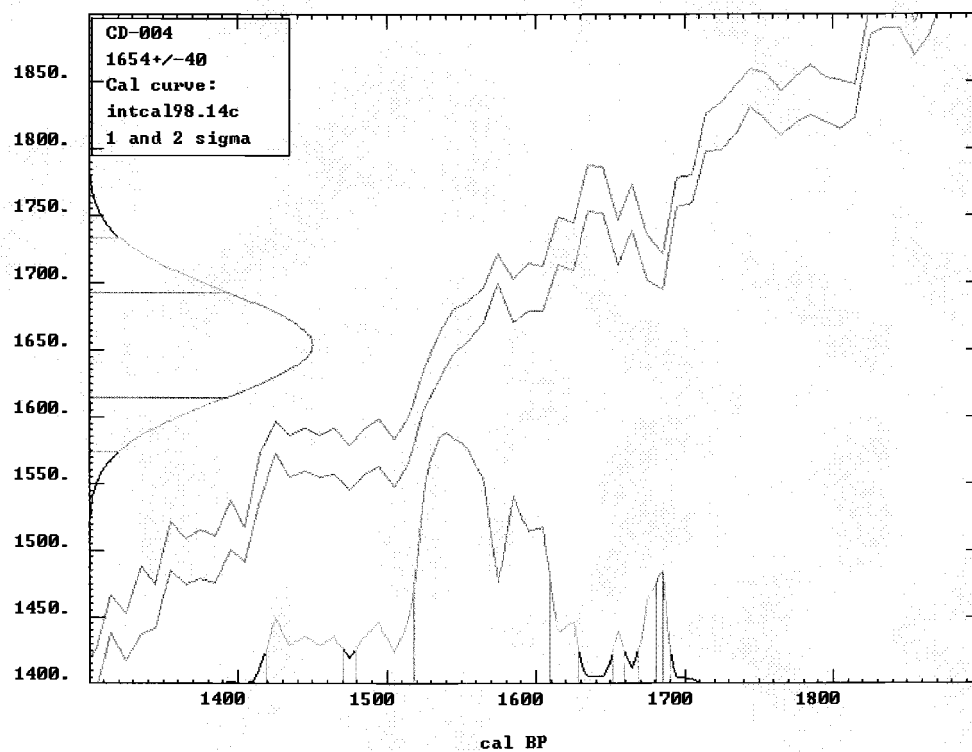
Appendix B

Radiocarbon Calibration Data

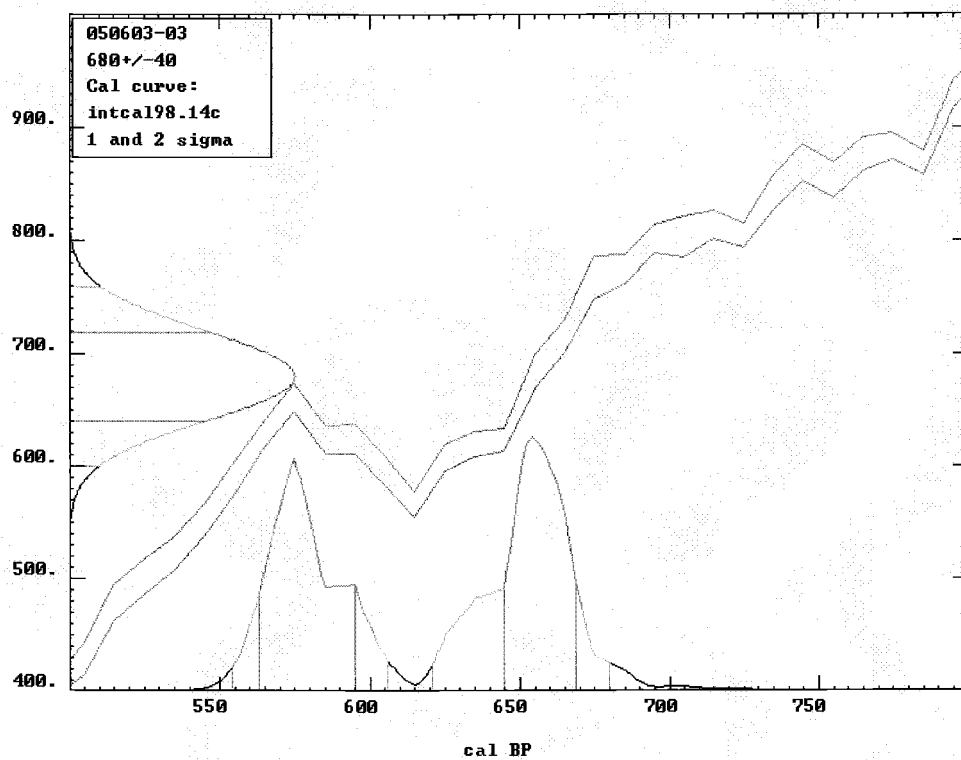
Radiocarbon Age vs. Calibrated Age



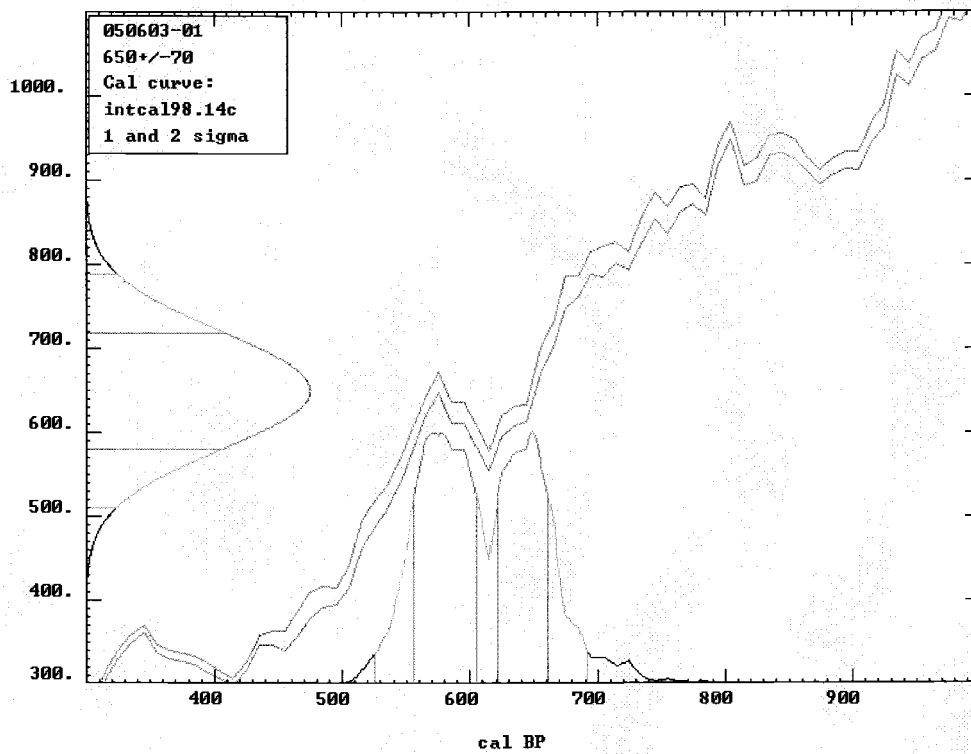
Radiocarbon Age vs. Calibrated Age



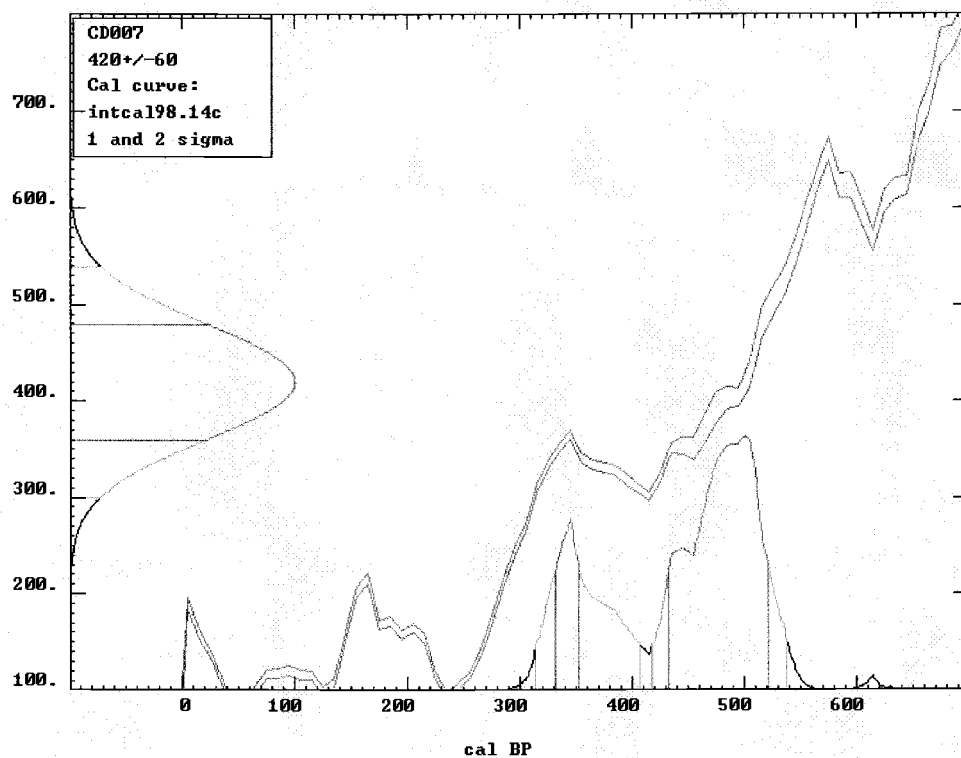
Radiocarbon Age vs. Calibrated Age



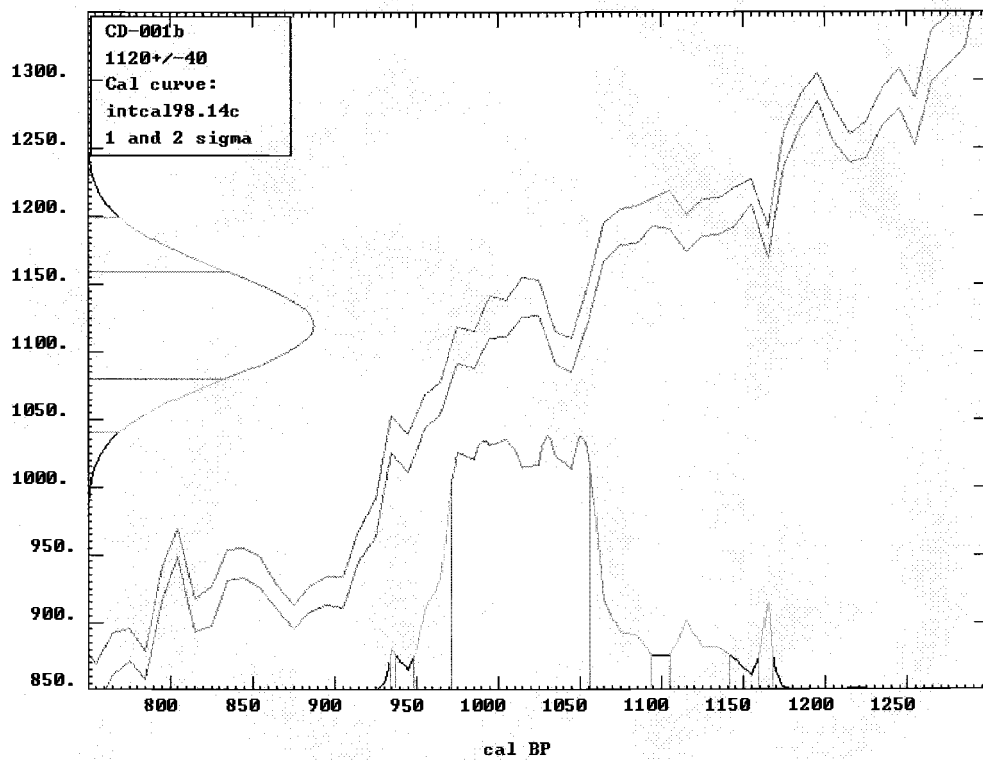
Radiocarbon Age vs. Calibrated Age

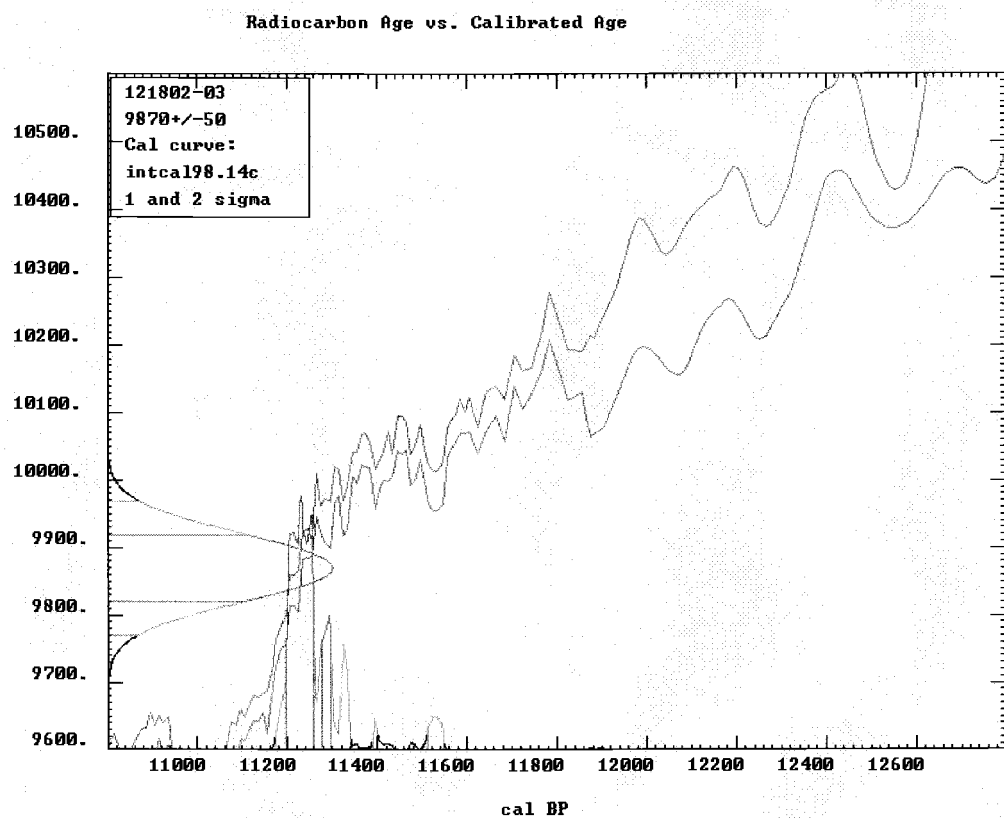


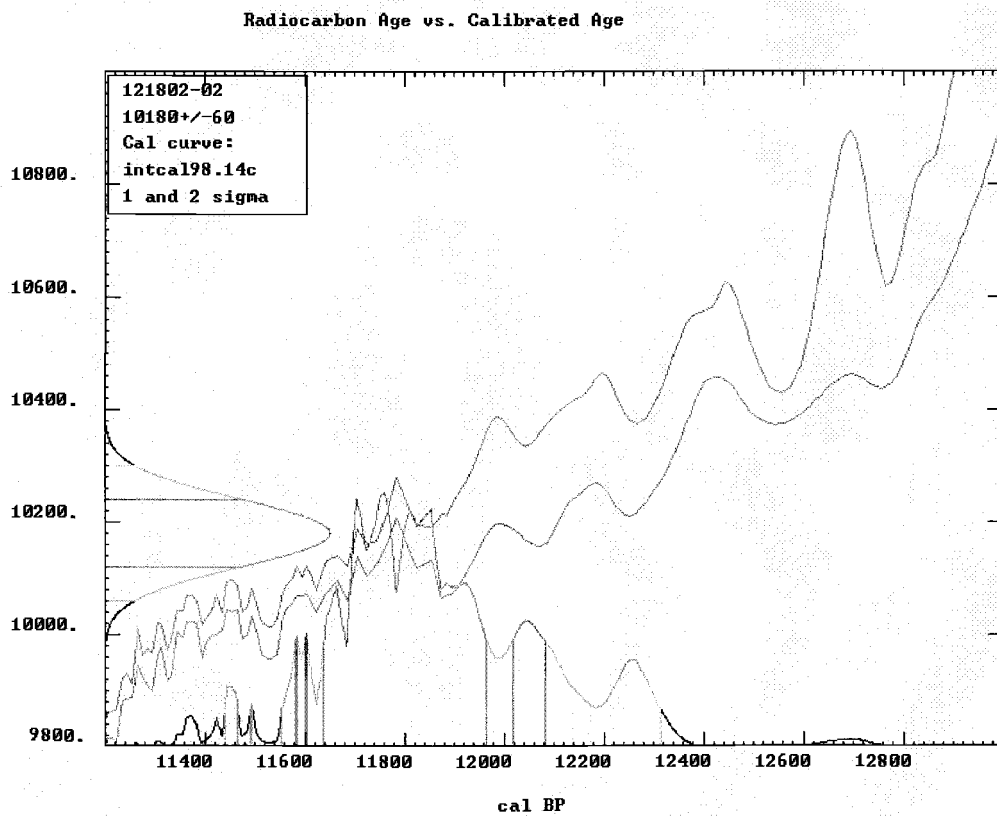
Radiocarbon Age vs. Calibrated Age



Radiocarbon Age vs. Calibrated Age







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 RADIOCARBON CALIBRATION PROGRAM*
 CALIB REV4.4.2

Copyright 1986-2004 M Stuiver and PJ Reimer

*To be used in conjunction with:

Stuiver, M., and Reimer, P.J., 1993, Radiocarbon, 35, 215-230.

Annotated results (text) - calout.doc

Export file - calout.csv

CD-001

T16773

Mciver Surface

Radiocarbon Age BP 1139 +/- 37

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
 relative area under
 probability distribution

68.3 (1 sigma)	cal AD 785- 786	0.006
	882- 978	0.994
95.4 (2 sigma)	cal AD 781- 792	0.035
	804- 984	0.965

CD-004

T16774A

River Island Base of Terrace

Radiocarbon Age BP 1654 +/- 40

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
 relative area under
 probability distribution

68.3 (1 sigma)	cal AD 264- 269	0.024
	340- 432	0.976
95.4 (2 sigma)	cal AD 260- 281	0.069
	291- 298	0.012
	322- 471	0.825
	479- 531	0.094

050603-03

178944

Paradise Park Terrace

Radiocarbon Age BP 680 +/- 40

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
 relative area under
 probability distribution

68.3 (1 sigma)	cal AD 1281- 1305	0.517
	1355- 1386	0.483
95.4 (2 sigma)	cal AD 1269- 1329	0.547
	1343- 1395	0.453

050603-01

178943

Paradise Park Terrace

Radiocarbon Age BP 650 +/- 70

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
 relative area under
 probability distribution

68.3 (1 sigma)	cal AD 1289- 1328	0.436
	1345- 1394	0.564
95.4 (2 sigma)	cal AD 1257- 1424	1.000

CD007

177583

Charcoal from fire pit on Mciver Surface

Radiocarbon Age BP 420 +/- 60

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
 relative area under

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		probability distribution
68.3 (1 sigma)	cal AD 1428- 1517	0.843
	1597- 1619	0.157
95.4 (2 sigma)	cal AD 1411- 1532	0.689
	1543- 1635	0.311

CD-001b
177582

Rerun of CD-001 at Beta

Radiocarbon Age BP 1120 +/- 40

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
relative area under
probability distribution

68.3 (1 sigma)	cal AD 894- 977	1.000
95.4 (2 sigma)	cal AD 782- 791	0.019
	809- 845	0.062
	855- 1002	0.916
	1012- 1016	0.004

121802-03

174351

Estacada Terrace Taken with JO & GG

Radiocarbon Age BP 9870 +/- 50

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
relative area under
probability distribution

68.3 (1 sigma)	cal BC 9347- 9328	0.144
	9311- 9248	0.856
95.4 (2 sigma)	cal BC 9596- 9563	0.047
	9450- 9442	0.009
	9391- 9226	0.944

121802-02

174350

2nd Estacada Surface Date

Radiocarbon Age BP 10180 +/- 60

Calibration data set: intcal98.14c

% area enclosed cal AD age ranges

(Stuiver et al., 1998a)
relative area under
probability distribution

68.3 (1 sigma)	cal BC 10133- 10068	0.112
	10017- 9690	0.877
	9657- 9652	0.006
	9637- 9634	0.005
95.4 (2 sigma)	cal BC 10366- 9605	0.984
	9546- 9543	0.001
	9517- 9492	0.015

References for calibration datasets:

Stuiver, M., and Braziunas, T.F., (1993), The Holocene 3:289-305.

Stuiver, M., Reimer, P.J., and Braziunas, T.F., (1998b)

Radiocarbon 40:1127-1151. (revised dataset)

Stuiver, M., Reimer, P.J., Bard, E., Beck, J.W., Burr, G.S.,

Hughen, K.A., Kromer, B., McCormac, F.G., v.d. Plicht, J., and

Spurk, M. (1998a), Radiocarbon 40:1041-1083.

McCormac, F.G., Reimer, P.J., Hogg, A.G., Higham, T.F.G., Baillie, M.G.L.,

Palmer, J., Stuiver, M., (2002), Radiocarbon 44: 641-651.

Comments:

* This standard deviation (error) includes a lab error multiplier.

** 1 sigma = square root of (sample std. dev.^2 + curve std. dev.^2)

** 2 sigma = 2 x square root of (sample std. dev.^2 + curve std. dev.^2)

where ^2 = quantity squared.

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[] = calibrated with an uncertain region or a linear extension to the calibration curve

0* represents a "negative" age BP

1955* or 1960* denote influence of nuclear testing C-14

NOTE: Cal ages and ranges are rounded to the nearest year which may be too precise in many instances. Users are advised to round results to the nearest 10 yr for samples with standard deviation in the radiocarbon age greater than 50 yr.

Appendix C

Geologic and Geomorphic Unit Descriptions

The geomorphic and geologic units mapped and compiled from previous mapping are as follows:

Qal – Alluvium. This is the modern floodplain of the Clackamas River, broadly coincident with the 100-year floodplain. This includes some low terraces which may be older than the modern floodplain.

Qls – Mass wasting deposits. Numerous small landslides are present along the Clackamas River. Most occur as cusate failures in Sandy River Mudstone, where lateral erosion by the river has resulted in steep cliffs. The most prominent and largest slide mapped is located at river mile (RM) 19.9 near Paradise Park. This landslide extends all the way to Springwater Road to the west.

Qt₁₀ -- Paradise Park Terrace. This extensive terrace is prominent near the Paradise Park and Twin Island housing developments. It is a predominantly a fill terrace with bedrock near the level of the modern water level. Terrace thickness ranges from 1 to 2 m. Two carbon samples from this terrace near McIver Park yielded dates of 555 to 681 (Cal yrs A.D. 1270 to 1400) and 526 to 693 (Cal yrs A.D. 1260 to 1420). This age coincides with the beginning of the Little Ice Age.

Qt₉ – McIver Intermediate Terrace. This terrace was reliably mapped in only one location, the right bank across from McIver Park, at approximately RM 21.4. It occurs below the more extensive McIver Terrace, and is

preserved where the channel appears to have been migrating north over the last several thousand years. No independent dates were obtained for this terrace.

Qt₈ – McIver Terrace. This extensive strath terrace is preserved below River Mill Dam. Carbon dates of 966 to 1169 (Cal yrs A.D. 781 to 984), and 934 to 1168 (Cal yrs A.D. 782 to 1016) were obtained from carbon fragments in alluvium. This date does not coincide well with any cooling periods identified regionally or globally, however it does loosely correlate with an unnamed cooling period identified by (Campbell et al., 1998) which preceded the medieval warm period. Alluvium on the terrace is approximately 1 to 2 m thick.

Qt₇ - Qt₄ Strath terraces preserved primarily at McIver Park near river mile 21. Surface exposure is poor. Alluvium depth is generally 1-3 meters. Bedrock surfaces at the base of the strath terraces and appear to be eroded into flutes and potholes, suggesting bedrock exposure prior to deposition of alluvium on the bedrock strath surface.

Qt₃ -- Estacada Terrace. Fill-cut or strath terrace bounded at the base by Sandy River Mudstone at some locations and by older alluvium in others (Figure C.1). Soil development and weathering are minimal. Weathering rinds are absent to very thin with a maximum thickness of 1 to 2 mm.



Figure C.1 Vertical exposure of Qt₃ terrace with underlying Sandy River Mudstone (RM 22.7).

Qff – Missoula Flood deposits. These are micaceous silt deposits which occur in the lower portion of the Clackamas River on terraces older than the Qt₃ terrace. Qff is absent from locations which should have been inundated by backwater from the Missoula floods, suggesting they were eroded away prior to or during the deposition of Qt₃ cut-fill terrace. Some remnants of

Qff may be present along the edges of the valley and in tributary valleys near Rock Creek (RM 7).

Qt₂ – Gresham Terrace. This fill terrace is preserved on the edges of the lower Clackamas River Valley. Clasts consist of mixed volcanic lithologies. Sand interbeds are rare. Clay is present in the interstices of larger grains, perhaps as a result of weathering of smaller grains (Figure C.2). Weathering rinds are prominent on most clasts. Rind thickness varies between 2 and 10 mm.



Figure C.2 Vertical exposure at Qt₂ near Estacada. Knife is ~ 8 cm.

Qt₁ – Hayden Terrace. The largest remnant of this surface is located along Hayden Road near Estacada. No date was obtained for this terrace; however, based on the position above Qt₂, it is greater than 22,000 years

old. Since this surface lies below the Springwater surface, it is likely less than about 1 million years old.

Qtb – Quaternary/Tertiary volcanic rocks. These include Boring volcanic rocks mapped by Madin (1993), and intra-canyon flows from the High Cascades. Volcanic rocks were not observed near the Clackamas River from RM 8, near Carver, upstream to the eastern limit of the map area (~RM 27).

Qsw – Springwater Formation. This formation consists of conglomerate, volcaniclastic sandstone, siltstone, and debris flows derived from the Cascade Range. Probably deposited in a bajada, a broad, gently sloping, surface formed by the lateral coalescence of a series of alluvial fans from the Cascade Mountains. Boring basalt underlying the formation had been dated at 1.7 ma, capping basalt had been dated at 1.07 ma (Madin, personal communication). Soils associated with this unit have prominent rubrification and strongly weathered, rounded, clasts. Weathering rinds range from 3 to 20 mm.

Tsa – Sardine Formation. The western Cascades generated volcanic breccia which occurs in the upper portion of the map area. The Sardine Formation underlies the Sandy River Mudstone. The contact is sharp and very near horizontal where exposed. Clam fossils, which appear to be fresh water, were recovered near RM 22. (Figure C.3).



Figure C.3 Clam fossil at SRM/Sardine contact.

Tsr - Sandy River Mudstone. Widespread thick lacustrine mudstone and siltstone of unknown age compose this unit. It underlies the Springwater Formation and thus must be older than about 1.7 ma. It has been mapped as Troutdale Formation – Mudstone Facies (Madin, 1993). The unit has numerous unique features. Iron oolites occur near RM 22.5 on the right bank. Oolites are present as dense accumulations in thin interbeds, ranging from 2 - 15 mm in diameter, and have concentric rings. Near the location of the iron oolites, ripple marks between bedding surfaces were observed, suggesting shallow or sub-areal deposition.

Ripple marks with 2-20 mm pumice clasts were observed near approximately RM 18. Clasts were submitted for tephra matching, however they did not match any Cascade or Snake river eruptive episodes catalogued (O'Connor, personal communication).

Cross-beds occur in several locations including large scale (10's of meters) cross-beds that appear to be sub-aerial. Sub-aqueous, deltaic, herringbone cross-beds are near prominent near the outlet of "Rock Creek" at RM 6.3.

Appendix D

Average Daily Temperature (C) Data in River Island Ponds

D.1 Average daily temperature (C) data in River Island ponds, 2000

Date	Upstream of pits		Southern Pond			Downstream of Pits			Δ Temperature
	RISG1	RISG2	RISG6	RISG7	RISG8	Avg 6,7,8	RISG9	RISG10	RISG10-RISG2
7/20/2000	17.12	17.15	19.81	20.23	18.85	19.63	16.93	17.43	0.27
7/21/2000	17.43	17.44	20.38	20.87	19.28	20.18	17.35	17.87	0.43
7/22/2000	16.43	16.43	19.98	20.08	19.17	19.74	16.41	16.81	0.38
7/23/2000	17.09	17.12	19.61	19.84	18.79	19.41	17.05	17.49	0.36
7/24/2000	17.47	17.46	20.20	20.49	19.17	19.95	17.19	17.74	0.29
7/25/2000	17.43	17.41	20.35	20.60	19.37	20.11	17.35	17.79	0.38
7/26/2000	17.41	17.43	20.38	20.59	19.42	20.13	17.38	17.87	0.44
7/27/2000	17.54	17.59	20.46	20.68	19.41	20.18	17.38	17.93	0.35
7/28/2000	17.65	17.68	20.74	21.09	19.63	20.49	17.47	18.04	0.36
7/29/2000	18.11	18.17	21.08	21.43	19.90	20.80	17.98	18.54	0.36
7/30/2000	18.41	18.46	21.60	21.90	20.30	21.27	18.23	18.85	0.40
7/31/2000	18.73	18.77	22.13	22.72	20.60	21.81	18.69	19.14	0.36
8/1/2000	18.60	18.62	22.16	22.54	20.78	21.82	18.57	18.98	0.36
8/2/2000	18.38	18.41	21.93	22.05	20.63	21.54	18.19	18.76	0.35
8/3/2000	18.38	18.39	21.78	21.92	20.65	21.45	18.17	18.73	0.33
8/4/2000	18.65	18.70	22.02	22.06	20.67	21.58	18.44	19.01	0.32
8/5/2000	18.87	18.92	22.27	22.38	20.89	21.85	18.73	19.30	0.38
8/6/2000	18.98	19.01	22.54	22.64	21.06	22.08	18.82	19.33	0.32
8/7/2000	18.77	18.81	22.48	22.60	21.06	22.05	18.62	19.11	0.30
8/8/2000	18.77	18.79	22.24	22.22	20.95	21.80	18.54	19.09	0.30
8/9/2000	18.82	18.84	22.41	22.51	21.00	21.97	18.63	19.19	0.35
8/10/2000	17.71	17.74	21.81	21.65	20.70	21.38	17.66	18.01	0.27
8/11/2000	18.01	18.01	21.16	21.05	20.11	20.77	17.92	18.31	0.30
8/12/2000	17.62	17.66	20.82	20.81	19.92	20.52	17.38	17.89	0.22
8/13/2000	17.52	17.52	20.93	20.98	19.90	20.61	17.43	17.82	0.30
8/14/2000	17.36	17.36	20.82	20.79	19.74	20.45	17.17	17.58	0.22
8/15/2000	17.09	17.11	20.38	20.31	19.46	20.05	16.98	17.41	0.30
8/16/2000	17.06	17.06	20.24	20.20	19.36	19.93	16.87	17.36	0.30
8/17/2000	16.96	16.96	20.35	20.25	19.33	19.97	16.82	17.31	0.35
8/18/2000	15.95	15.92	19.65	19.52	18.95	19.37	15.90	16.24	0.32
8/19/2000	15.93	15.93	18.88	18.80	18.33	18.67	15.98	16.24	0.30
8/20/2000	16.00	16.04	18.71	18.69	17.96	18.45	15.87	16.25	0.21
8/21/2000	16.11	16.19	19.31	19.41	18.14	18.95	16.06	16.46	0.27
8/22/2000	16.20	16.23	19.76	19.89	18.47	19.37	16.19	16.63	0.40
8/23/2000	16.39	16.41	19.98	20.05	18.77	19.60	16.35	16.82	0.41
8/24/2000	15.77	15.79	19.79	19.81	18.64	19.41	15.82	16.14	0.35
8/25/2000	15.85	15.90	19.44	19.39	18.47	19.10	15.90	16.23	0.33
8/26/2000	15.68	15.71	19.49	19.47	18.38	19.11	15.79	16.03	0.32
8/27/2000	15.41	15.44	18.80	18.82	17.92	18.51	15.31	15.62	0.18
8/28/2000	15.52	15.52	18.71	18.66	17.73	18.37	15.39	15.80	0.29
8/29/2000	15.77	15.79	18.80	18.80	17.76	18.45	15.74	16.15	0.36
8/30/2000	16.38	16.41	19.28	19.46	18.09	18.94	16.46	16.78	0.37
8/31/2000	15.34	15.34	19.06	18.95	18.04	18.68	15.63	15.73	0.38
9/1/2000	14.88	14.88	18.03	17.95	17.43	17.80	15.00	15.14	0.25
9/2/2000	14.60	14.61	17.47	17.27	16.89	17.21	14.66	14.80	0.19
9/3/2000	14.73	14.71	17.20	17.17	16.60	16.99	14.82	14.98	0.27
9/4/2000	14.58	14.58	17.05	17.20	16.55	16.93	14.69	14.80	0.22
9/5/2000	14.47	14.48	17.46	17.47	16.62	17.18	14.69	14.95	0.46
9/6/2000	14.50	14.50	17.68	17.81	16.68	17.39	14.69	14.82	0.32
9/7/2000	14.21	14.23	17.41	17.49	16.67	17.19	14.40	14.58	0.35
9/8/2000	13.99	14.02	17.36	17.28	16.62	17.09	14.29	14.40	0.38
9/9/2000	14.10	14.13	16.86	16.81	16.24	16.63	14.21	14.39	0.26
9/10/2000	13.82	13.85	16.70	16.62	16.03	16.45	14.02	14.18	0.34
9/11/2000	14.68	14.69	16.71	16.73	15.95	16.46	14.84	15.04	0.35
9/12/2000	14.66	14.66	17.43	17.62	16.41	17.15	14.80	15.01	0.35
9/13/2000	14.79	14.80	17.96	18.31	16.74	17.67	14.98	15.23	0.43
9/14/2000	15.33	15.34	18.38	18.72	17.24	18.11	15.61	15.77	0.43
9/15/2000	14.84	14.92	18.50	18.66	17.25	18.14	15.12	15.30	0.38
9/16/2000	14.76	14.76	17.90	18.00	17.08	17.66	14.95	15.09	0.33
9/17/2000	14.74	14.79	17.62	17.77	16.74	17.38	14.83	15.01	0.22
9/18/2000	15.15	15.15	17.82	17.98	16.84	17.55	15.22	15.44	0.29
9/19/2000	15.39	15.42	18.09	18.38	17.01	17.83	15.66	15.81	0.38
9/20/2000	15.20	15.22	17.81	18.07	17.05	17.64	15.28	15.44	0.22
9/21/2000	15.17	15.19	17.69	17.81	17.00	17.50	15.30	15.46	0.27
9/22/2000	14.26	14.26	16.44	16.22	16.16	16.27	13.97	14.15	-0.11
9/23/2000	13.75	13.76	15.55	15.62	15.43	15.53	13.56	13.67	-0.10
9/24/2000	13.72	13.72	15.35	15.50	15.09	15.31	13.70	13.81	0.10
9/25/2000	13.54	13.57	15.38	15.66	15.02	15.35	13.56	13.72	0.14
9/26/2000	13.12	13.12	15.35	15.71	15.09	15.38	13.22	13.36	0.24
9/27/2000	12.77	12.80	15.38	15.63	15.15	15.39	12.95	13.07	0.27
9/28/2000	12.69	12.71	15.46	15.71	15.17	15.45	12.88	13.03	0.32
9/29/2000	12.72	12.72	15.62	15.83	15.17	15.54	12.93	13.13	0.40

D.2 Average daily temperature (C) data in River Island ponds, 2001

Date	Upstream of pits			Northern Pond					Southern Pond					Downstream of Pits			PGE	Δ Temperature
	R11	R12	R13	R14	R15	Avg. R13, R14, R15	R16	R17	R18	Avg. R16, R17, R18	R19	R10	CBART	RISG10-RISG2				
6/15/2001	13.02	13.01	14.00	13.19	13.15	13.45	16.16	17.12	15.33	16.20	12.88	13.27	13.41708	0.24				
6/16/2001	13.26	13.23	14.23	13.41	13.39	13.68	16.11	16.93	15.46	16.17	12.91	13.44	13.62417	0.18				
6/17/2001	13.19	13.22	14.12	13.33	13.35	13.60	15.93	16.58	15.38	15.97	12.85	13.44	13.5975	0.26				
6/18/2001	13.89	13.97	14.86	14.14	14.14	14.38	16.12	17.44	15.58	16.38	13.55	14.24	14.40917	0.35				
6/19/2001	14.62	14.59	15.66	14.84	14.86	15.12	17.14	18.39	16.32	17.28	15.32	15.00	15.11833	0.38				
6/20/2001	15.36	15.45	16.50	15.67	15.77	15.98	18.11	20.27	17.20	18.53	15.09	15.83	16.02208	0.48				
6/21/2001	15.83	15.83	17.04	16.09	16.20	16.44	18.88	20.90	18.00	19.26	15.68	16.31	16.4875	0.49				
6/22/2001	15.04	15.06	16.38	15.30	15.31	15.66	19.06	19.60	17.79	18.82	14.93	15.49	15.64208	0.45				
6/23/2001	14.77	14.75	15.92	15.01	14.99	15.31	18.00	18.52	17.31	17.94	14.59	15.20	15.30917	0.43				
6/24/2001	14.20	14.21	15.07	14.31	14.29	14.56	17.49	17.24	16.90	17.21	14.15	14.58	14.63667	0.38				
6/25/2001	14.67	14.67	15.63	14.90	14.85	15.12	16.92	17.14	16.52	16.86	14.23	14.91	15.12292	0.24				
6/26/2001	14.96	14.96	15.95	15.10	15.15	15.40	17.62	18.44	16.78	17.61	14.64	15.30	15.45875	0.33				
6/27/2001	15.30	15.30	16.12	15.49	15.47	15.69	17.33	18.50	16.81	17.55	15.04	15.60	15.77583	0.30				
6/28/2001	14.61	14.67	15.66	14.74	14.75	15.05	17.38	18.04	16.98	17.47	14.55	14.95	15.09	0.34				
6/29/2001	15.13	15.12	16.27	15.37	15.37	15.67	17.70	19.06	17.22	17.99	14.98	15.50	15.68792	0.37				
6/30/2001	14.82	14.83	15.98	14.98	15.01	15.32	18.22	19.07	17.43	18.24	14.71	15.23	15.33542	0.41				
7/1/2001	15.77	15.85	16.96	16.09	16.17	16.41	18.42	19.77	17.68	18.63	15.30	16.22	16.36375	0.44				
7/2/2001	16.01	16.01	17.74	16.28	16.41	16.81	18.95	20.60	18.28	19.28	15.85	16.42	16.62167	0.41				
7/3/2001	16.49	16.47	18.20	16.80	16.84	17.28	19.49	21.34	18.68	19.83	16.17	16.92	17.16458	0.43				
7/4/2001	16.92	16.96	18.84	17.20	17.34	17.79	20.31	21.25	19.20	20.26	16.63	17.46	17.65083	0.54				
7/5/2001	16.69	16.71	19.07	16.95	16.98	17.67	20.34	20.61	19.26	20.07	16.27	17.06	17.26833	0.37				
7/6/2001	16.89	16.87	19.08	17.20	17.23	17.84	20.12	20.66	19.30	20.03	16.30	17.20	17.44958	0.32				
7/7/2001	17.20	17.19	19.81	17.46	17.54	18.27	20.17	21.16	19.49	20.27	16.73	17.58	17.79917	0.38				
7/8/2001	17.63	17.68	20.47	17.95	18.04	18.82	20.61	21.61	19.88	20.70	16.85	18.08	18.2625	0.45				
7/9/2001	18.16	18.17	21.20	18.49	18.54	19.41	21.31	22.18	20.42	21.31	17.52	18.60	18.81958	0.44				
7/10/2001	18.22	18.25	21.62	18.54	18.57	19.57	21.76	22.42	20.69	21.62	17.38	18.65	18.92	0.43				
7/11/2001	18.58	18.62	21.73	18.90	18.96	19.87	21.78	22.38	20.80	21.65	18.12	19.04	19.28917	0.46				
7/12/2001	18.92	18.96	22.45	19.28	19.35	20.36	22.24	23.06	21.14	22.15	18.39	19.38	19.5575	0.46				
7/13/2001	18.74	18.76	22.48	19.08	19.09	20.22	22.14	23.23	21.27	22.21	18.27	19.17	19.36208	0.47				
7/14/2001	18.12	18.08	21.60	18.38	18.41	19.46	21.46	20.75	20.93	21.05	17.66	18.39	18.62375	0.23				
7/15/2001	17.44	17.41	20.38	17.57	17.55	18.50	20.60	19.44	20.26	20.10	17.03	17.70	17.86583	0.25				
7/16/2001	17.31	17.31	19.04	17.46	17.38	17.96	19.66	19.06	19.31	19.34	16.46	17.51	17.69167	0.19				
7/17/2001	17.03	17.01	18.62	17.17	17.12	17.64	19.12	18.63	18.76	18.84	16.16	17.25	17.44333	0.22				
7/18/2001	17.09	17.08	18.81	17.19	17.20	17.73	19.01	19.57	18.60	19.06	16.09	17.30	17.50458	0.21				
7/19/2001	17.39	17.43	19.22	17.65	17.62	18.16	19.49	19.71	18.82	19.34	16.71	17.73	17.88375	0.33				
7/20/2001	16.28	16.30	19.31	16.51	16.49	17.44	19.50	19.17	18.85	19.17	15.98	16.74	16.91208	0.46				
7/21/2001	16.76	16.81	19.33	17.03	17.00	17.79	19.30	19.73	18.71	19.25	16.00	17.05	17.23542	0.29				
7/22/2001	17.20	17.22	20.36	17.57	17.57	18.50	20.06	21.36	19.28	20.23	16.41	17.58	17.81875	0.38				
7/23/2001	17.06	17.08	21.09	17.35	17.35	18.59	20.42	21.42	19.36	20.40	16.41	17.43	17.61833	0.37				
7/24/2001	17.57	17.58	21.47	17.95	17.90	19.11	20.49	21.53	19.57	20.53	16.98	17.90	18.18125	0.33				
7/25/2001	17.76	17.77	21.86	18.11	18.20	19.39	20.93	22.03	19.90	20.95	17.25	18.22	18.43792	0.46				
7/26/2001	17.77	17.77	21.39	18.08	18.14	19.20	21.04	21.01	19.93	20.66	17.17	18.15	18.36583	0.38				
7/27/2001	18.04	18.04	22.72	18.50	18.50	19.91	21.33	21.37	20.55	21.08	17.54	18.43	18.64083	0.38				
7/28/2001	17.46	17.49	22.45	17.82	17.89	19.38	21.35	20.23	20.65	20.74	17.17	18.01	18.22833	0.56				
7/29/2001	16.74	16.74	20.66	16.93	16.89	18.16	20.15	19.00	19.84	19.66	16.30	17.06	17.21667	0.32				
7/30/2001	16.71	16.68	18.88	16.84	16.82	17.52	19.19	18.96	18.71	18.95	16.00	17.00	17.17667	0.28				
7/31/2001	17.12	17.12	19.63	17.36	17.33	18.11	19.57	19.49	18.84	19.30	16.49	17.39	17.56417	0.27				
8/1/2001	17.25	17.25	20.19	17.49	17.58	18.42	19.73	20.29	19.06	19.69	16.76	17.68	17.8225	0.43				
8/2/2001	17.85	17.89	21.81	18.22	18.25	19.43	20.39	22.09	19.53	20.67	17.68	18.31	18.51208	0.46				
8/3/2001	17.01	17.01	21.57	17.22	17.27	18.69	20.23	20.11	19.49	19.94	16.70	17.41	17.6	0.40				
8/4/2001	16.92	16.93	20.60	17.17	17.19	18.32	19.83	19.44	18.11	19.46	16.46	17.35	17.52375	0.43				
8/5/2001	17.60	17.60	20.79	17.92	17.90	18.87	19.79	20.92	19.20	19.97	16.79	17.93	18.13208	0.33				
8/6/2001	17.84	17.90	22.02	18.20	18.33	19.52	20.76	21.90	19.80	20.82	17.65	18.44	18.62708	0.60				
8/7/2001	18.31	18.31	22.90	18.76	18.84	20.16	21.89	23.67	20.30	21.95	17.58	18.71	18.94042	0.40				
8/8/2001	18.25	18.30	22.90	18.70	18.78	20.12	21.65	22.79	20.58	21.67	17.74	18.76	18.95875	0.51				
8/9/2001	18.63	18.68	23.71	19.08	19.22	20.67	21.95	26.49	23.63	24.02	18.50	19.14	19.39958	0.51				
8/10/2001	18.85	18.87	24.68	19.36	19.44	21.16	22.27	26.90	25.92	25.03	18.58	19.47	19.70792	0.62				
8/11/2001	18.77	18.84	25.05	19.24	19.36	21.22	22.27	25.30	24.50	24.02	17.98	19.31	19.53042	0.54				
8/12/2001	18.92	18.95	25.16	19.28	19.36	21.27	22.24	26.14	25.74	24.71	17.71	19.36	19.64	0.44				
8/13/2001	19.28	19.28	25.37	19.70	19.78	21.61	22.81	26.22	25.49	24.84	18.22	19.65	19.93	0.36				
8/14/2001	18.33	18.33	24.13	18.63	18.65	19.82	21.38	22.26	21.42	21.92	17.52	18.69	18.88375	0.37				
8/15/2001	18.55	18.58	23.31	18.90	18.93	20.38	21.38	23.35	22.56	22.43	17.41	18.87	19.07292	0.32				
8/16/2001	17.70	17.71	22.32	17.95	18.04	19.44	21.03	19.79	19.51	20.11	17.08	18.09	18.30167	0.40				
8/17/2001	18.42	18.46	22.26	18.73	18.79	19.92	20.89	22.96	22.15	22.00	17.41	18.68	18.86667	0.25				
8/18/2001	18.03	18.01	22.48	18.28	18.36	19.71	21.23	21.66	21.39	21.43	17.30	18.39	18.64042	0.36				
8/19/2001	18.33	18.31	21.86	18.54	18.62	19.67	20.77	21.71	20.87	21.12	17.50	18.58	18.75083	0.23				

Appendix E

Clackamas River Hydroelectric Project Information

E.1 Clackamas River hydroelectric project information.

Project	FERC Project ID	Installed Capacity (MW)	Peak Capacity (MW)	Annual Energy (aMW)	Year of Initial Service	Type	Owner	Description
River Mill	2195A	19.1	23	15	1911	Hollow Gravity Dam	Portland General Electric Co.	Design work started in 1909 and power generation began in 1911. The dam was completed in 1912. A fish ladder, built in 1912, was modified in 1972 to enlarge the entrance. The dam was retrofitted for earthquakes in 2001-
Faraday	2195B	34.5	14	27	1907	Concrete Gravity	Portland General Electric Co.	Construction of the first power plant began in 1902, and Cazadero wood crib dam was completed in 1905. The original fish passage structure washed out during a flood in 1917, and was not reinstalled until 1939. Cazadero dam washed out in 1964 and was rebuilt as a concrete structure in 1965 (renamed Faraday Dam). Fish passage over Faraday is via a 1.7 mile long
North Fork	2195C	38.4	52	31	1958	Concrete arch Dam	Portland General Electric Co.	Construction began in 1956, and the 54,000 kilowatt facility went into operation two years later. The project created a 331 acre lake which permits daily and weekly control of river flow to
Oak Grove	135A&B	51	49	32	1924	Arch Gravity (rock fill)	Portland General Electric Co.	The Oak Grove project involves a complex system of storage reservoirs and pipelines. A diversion dam impounds Lake Harriet with a capacity of 152 acre-feet. From there, water travels six miles through a pipeline to Frog Lake. It then travels another 1.7 miles by pipeline to a surge tank above the penstocks, which have the greatest vertical drop (696 feet) of any PGE
Timothy Lake	Unknown	N/A	N/A	N/A	1956	Earth-Fill	Portland General Electric Co.	In 1956, Timothy Lake reservoir was built to provide seasonal storage of additional water for the Oak Grove Project. Water is released during fall and winter when natural stream flows are reduced by lack of rain or by cold weather, and water levels are below those which are required for peak operation. Water from the reservoir flows about 10 miles down the Oak Grove Fork to Lake Harriet. No upstream fish passage structure exists at the dam, and downstream passage is limited to occasional spills during
Stone Creek	5264	12	3	8	1993	Concrete Gravity	Eugene Water and Electric	Small concrete diversion dam.

Appendix F

Total Station Survey Data 2001, 2002, 2003 on the Lower Clackamas River

Table F.1 Total station survey data 2001 on the lower Clackamas River.

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
640	8/14/2001	7721081.641	600560.363	289.807	Cross Section
641	8/14/2001	7721076.536	600559.624	290.101	Cross Section
642	8/14/2001	7721070.518	600559.646	290.050	Cross Section
643	8/14/2001	7721060.026	600558.893	290.024	Cross Section
644	8/14/2001	7721052.338	600557.077	290.072	Cross Section
645	8/14/2001	7721046.445	600557.867	290.051	Cross Section
646	8/14/2001	7721037.029	600558.645	289.887	Cross Section
647	8/14/2001	7721025.881	600558.283	290.207	Cross Section
648	8/14/2001	7721015.732	600558.085	289.902	Cross Section
649	8/14/2001	7721009.176	600559.083	289.637	Edge of water
650	8/14/2001	7721002.718	600559.007	288.833	Cross Section in Water
651	8/14/2001	7720998.189	600559.128	287.844	Cross Section in Water
652	8/14/2001	7720992.407	600559.284	286.957	Cross Section in Water
653	8/14/2001	7720986.925	600559.125	286.835	Cross Section in Water
654	8/14/2001	7720982.008	600559.443	287.338	Cross Section in Water
655	8/14/2001	7720977.653	600559.329	287.761	Cross Section in Water
656	8/14/2001	7720973.790	600560.160	287.786	Cross Section in Water
657	8/14/2001	7720968.937	600560.516	287.813	Cross Section in Water
658	8/14/2001	7720963.021	600561.021	288.001	Cross Section in Water
659	8/14/2001	7720958.152	600561.652	288.019	Cross Section in Water
660	8/14/2001	7720952.060	600562.554	288.833	Cross Section in Water
661	8/14/2001	7720946.997	600562.963	288.971	Cross Section in Water
662	8/14/2001	7720941.562	600563.307	289.273	Cross Section in Water
663	8/14/2001	7720936.873	600564.109	290.003	Edge of water
664	8/14/2001	7720931.250	600562.040	291.375	Cross Section
665	8/14/2001	7720927.809	600562.367	292.422	Cross Section
666	8/14/2001	7720922.676	600562.802	292.893	Cross Section
667	8/14/2001	7720915.240	600561.773	292.479	Cross Section
668	8/14/2001	7720912.001	600563.095	292.993	Cross Section
669	8/14/2001	7720908.358	600563.174	293.764	Cross Section
670	8/14/2001	7720903.132	600562.476	293.398	Cross Section
671	8/14/2001	7720894.126	600562.213	293.007	Cross Section
672	8/14/2001	7721097.082	600559.486	289.531	Cross Section
673	8/14/2001	7721104.685	600560.167	289.134	Cross Section
674	8/14/2001	7721111.258	600559.112	289.382	Cross Section
675	8/14/2001	7721117.862	600559.894	288.965	Cross Section
676	8/14/2001	7721122.844	600559.985	288.608	Edge of water
677	8/14/2001	7721131.063	600561.122	288.302	Cross Section in Water
678	8/14/2001	7721139.760	600561.282	287.900	Cross Section in Water
679	8/14/2001	7721145.323	600561.477	287.161	Cross Section in Water
680	8/14/2001	7721151.521	600561.909	286.738	Cross Section in Water
681	8/14/2001	7721157.414	600562.511	286.594	Cross Section in Water
682	8/14/2001	7721162.518	600563.423	286.466	Cross Section in Water
683	8/14/2001	7721167.804	600563.675	286.201	Cross Section in Water
684	8/14/2001	7721171.758	600562.757	285.821	Cross Section in Water
685	8/14/2001	7721176.606	600562.069	286.039	Cross Section in Water
686	8/14/2001	7721181.064	600561.501	285.579	Cross Section in Water
687	8/14/2001	7721184.550	600560.211	285.941	Cross Section in Water

Note: Northings and Eastings are in NAD83 Oregon North State Plane Projection.
Elevations are relative to the NAVD88 vertical datum.

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
688	8/14/2001	7721187.165	600559.680	286.008	Cross Section in Water
689	8/14/2001	7721190.922	600557.082	286.033	Cross Section in Water
690	8/14/2001	7721194.950	600555.983	286.062	Cross Section in Water
691	8/14/2001	7721198.200	600555.893	285.874	Cross Section in Water
692	8/14/2001	7721201.337	600555.320	286.168	Cross Section in Water
693	8/14/2001	7721204.735	600554.666	286.589	Cross Section in Water
694	8/14/2001	7721208.572	600553.974	286.496	Cross Section in Water
695	8/14/2001	7721212.130	600553.784	286.379	Cross Section in Water
696	8/14/2001	7721215.481	600552.699	286.283	Cross Section in Water
697	8/14/2001	7721220.320	600552.601	286.399	Cross Section in Water
698	8/14/2001	7721223.731	600552.119	286.118	Cross Section in Water
699	8/14/2001	7721228.284	600552.292	286.595	Cross Section in Water
700	8/14/2001	7721232.659	600552.546	287.217	Cross Section in Water
701	8/14/2001	7721238.509	600552.647	287.028	Cross Section in Water
702	8/14/2001	7721243.505	600552.694	287.079	Cross Section in Water
703	8/14/2001	7721248.193	600552.653	287.192	Cross Section in Water
704	8/14/2001	7721253.250	600552.755	287.528	Cross Section in Water
705	8/14/2001	7721257.386	600552.894	287.542	Cross Section in Water
706	8/14/2001	7721264.211	600553.511	287.482	Cross Section in Water
707	8/14/2001	7721271.209	600553.302	287.802	Cross Section in Water
708	8/14/2001	7721277.464	600553.567	287.642	Cross Section in Water
709	8/14/2001	7721284.113	600554.059	287.974	Cross Section in Water
710	8/14/2001	7721290.974	600555.174	287.971	Cross Section in Water
711	8/14/2001	7721297.597	600555.574	288.202	Cross Section in Water
712	8/14/2001	7721306.000	600555.319	288.762	Edge of water
713	8/14/2001	7721314.196	600554.547	289.083	Cross Section
714	8/14/2001	7721323.852	600554.697	289.021	Cross Section
715	8/14/2001	7721340.457	600554.490	289.265	Cross Section
716	8/14/2001	7721346.193	600553.326	290.033	Cross Section
717	8/14/2001	7721349.971	600553.597	291.954	Cross Section
718	8/14/2001	7721353.540	600553.676	292.460	Cross Section
719	8/14/2001	7721356.576	600553.344	292.595	Interim Control Point on RB Bar
720	8/14/2001	7721089.123	600560.737	291.374	Check Backsite to CP4010
721	8/14/2001	7721361.619	600553.566	292.267	Cross Section
722	8/14/2001	7721365.161	600553.913	292.663	Cross Section
723	8/14/2001	7721369.850	600554.996	293.276	Cross Section
724	8/14/2001	7721375.307	600555.796	293.483	Cross Section
725	8/14/2001	7721380.476	600557.264	293.672	Cross Section
726	8/14/2001	7721386.322	600557.623	293.384	Cross Section
727	8/14/2001	7721392.973	600559.454	292.706	Cross Section
728	8/14/2001	7721398.941	600559.791	293.266	Cross Section
729	8/14/2001	7721404.441	600559.856	292.294	Cross Section
730	8/14/2001	7721409.958	600562.084	291.952	Cross Section
731	8/14/2001	7721414.590	600562.767	292.805	Cross Section
732	8/14/2001	7721420.042	600563.142	293.359	Cross Section
733	8/14/2001	7721424.584	600564.141	294.192	Cross Section
734	8/14/2001	7721429.769	600565.155	294.512	Cross Section
735	8/14/2001	7721434.348	600567.065	295.198	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastng (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
736	8/14/2001	7721439.342	600568.925	295.350	Cross Section
737	8/14/2001	7721445.764	600571.427	295.263	Cross Section
738	8/14/2001	7721451.302	600571.645	295.068	Cross Section
739	8/14/2001	7721458.849	600568.256	294.536	Cross Section
740	8/14/2001	7721464.840	600570.309	294.143	Cross Section
741	8/14/2001	7721472.022	600569.772	293.643	Cross Section
742	8/14/2001	7721479.883	600570.659	292.871	Cross Section
743	8/14/2001	7721483.638	600571.532	292.815	Cross Section
744	8/14/2001	7721489.636	600572.980	291.683	Cross Section
745	8/14/2001	7721495.278	600573.280	291.016	Cross Section
746	8/14/2001	7721521.875	600576.663	292.968	Cross Section
747	8/14/2001	7721526.333	600578.528	294.754	Cross Section
748	8/14/2001	7721531.665	600579.562	297.425	Cross Section
749	8/14/2001	7721536.018	600580.544	299.702	Cross Section
750	8/14/2001	7721537.696	600584.695	302.744	Cross Section
751	8/14/2001	7721540.357	600585.138	304.900	Cross Section
752	8/14/2001	7721547.045	600591.298	309.104	Iron Rod Control at top of terrace
753	8/14/2001	7721548.151	600591.323	310.173	Iron Rod Control at top of terrace
754	8/15/2001	7721863.958	602816.595	271.781	PWCP0001
755	8/15/2001	7721872.233	602848.170	273.435	Backsite to 4012
756	8/15/2001	7721872.226	602848.144	273.435	Backsite to 4012
757	8/15/2001	7722784.516	603743.784	272.538	Backsite to 4013
758	8/15/2001	7722870.574	603618.593	269.887	D256
759	8/15/2001	7722721.257	603456.469	270.411	Start D180
760	8/15/2001	7722595.178	603300.707	270.777	Start D128
761	8/15/2001	7722429.756	603132.685	270.600	Start D180
762	8/15/2001	7722046.274	602794.426	271.895	Nose of gravel
763	8/15/2001	7722051.580	602799.132	271.986	Nose of gravel
764	8/15/2001	7722057.973	602805.805	271.874	Nose of gravel
765	8/15/2001	7722066.752	602813.305	272.056	Nose of gravel
766	8/15/2001	7722076.307	602821.721	272.339	Nose of gravel
767	8/15/2001	7722086.888	602832.584	272.558	Nose of gravel
768	8/15/2001	7722099.290	602841.361	272.707	Nose of gravel
769	8/15/2001	7722114.795	602850.458	273.117	Nose of gravel
770	8/15/2001	7722124.823	602853.717	272.967	Nose of gravel
771	8/15/2001	7722127.441	602851.181	273.159	Nose of gravel
772	8/15/2001	7722129.460	602848.225	273.136	Nose of gravel
773	8/15/2001	7722129.978	602842.915	273.551	Nose of gravel
774	8/15/2001	7722129.011	602837.258	273.792	Nose of gravel
775	8/15/2001	7722129.002	602831.993	274.264	Nose of gravel
776	8/15/2001	7722129.140	602827.544	274.798	Nose of gravel
777	8/15/2001	7722131.685	602821.737	275.223	Nose of gravel
778	8/15/2001	7722136.562	602809.087	275.698	Nose of gravel
779	8/15/2001	7722136.109	602802.009	276.020	Nose of gravel
780	8/15/2001	7722133.861	602795.464	276.041	Nose of gravel
781	8/15/2001	7722127.431	602787.089	276.344	Nose of gravel
782	8/15/2001	7722123.120	602782.796	276.591	Nose of gravel
783	8/15/2001	7722087.050	602762.800	278.528	D90 Patch

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
784	8/15/2001	7722091.114	602769.429	278.395	D90 Patch
785	8/15/2001	7722094.609	602776.705	278.582	D90 Patch
786	8/15/2001	7722097.628	602785.163	278.407	D90 Patch
787	8/15/2001	7722099.079	602792.516	278.262	D90 Patch
788	8/15/2001	7722102.111	602797.474	278.058	D90 Patch
789	8/15/2001	7722106.390	602803.008	277.851	D90 Patch
790	8/15/2001	7722110.187	602807.730	277.759	D90 Patch
791	8/15/2001	7722114.430	602813.527	277.511	D90 Patch
792	8/15/2001	7722114.111	602818.834	276.900	D90 Patch
793	8/15/2001	7722116.133	602824.678	276.463	D90 Patch
794	8/15/2001	7722115.272	602829.843	275.955	D90 Patch
795	8/15/2001	7722118.302	602834.830	275.530	D90 Patch
796	8/15/2001	7722123.276	602841.279	275.361	D90 Patch
797	8/15/2001	7722125.581	602846.548	274.702	D90 Patch
798	8/15/2001	7722127.190	602850.292	273.446	D90 Patch
799	8/15/2001	7722130.230	602845.209	273.268	D90 Patch
800	8/15/2001	7722129.027	602834.855	273.934	D90 Patch
801	8/15/2001	7722130.069	602824.500	275.078	D90 Patch
802	8/15/2001	7722128.469	602811.692	276.840	D90 Patch
803	8/15/2001	7722125.101	602806.924	277.191	D90 Patch
804	8/15/2001	7722124.420	602801.775	277.384	D90 Patch
805	8/15/2001	7722122.999	602795.802	277.415	D90 Patch
806	8/15/2001	7722120.223	602788.730	277.473	D90 Patch
807	8/15/2001	7722116.182	602783.668	277.433	D90 Patch
808	8/15/2001	7722112.401	602778.438	277.552	D90 Patch
809	8/15/2001	7722107.490	602772.988	277.455	D90 Patch
810	8/15/2001	7722103.547	602767.725	277.512	D90 Patch
811	8/15/2001	7722099.433	602763.372	277.563	D90 Patch
812	8/15/2001	7722094.658	602757.943	277.747	D90 Patch
813	8/15/2001	7722091.563	602754.585	278.025	D90 Patch
814	8/15/2001	7722087.498	602752.021	278.058	D90 Patch
815	8/15/2001	7722085.951	602757.264	278.317	D90 Patch
816	8/15/2001	7722084.849	602763.794	278.614	D90 Patch
817	8/15/2001	7722013.172	602671.646	278.269	D32 Patch
818	8/15/2001	7722015.388	602676.445	278.408	D32 Patch
819	8/15/2001	7722015.918	602680.036	278.452	D32 Patch
820	8/15/2001	7722019.626	602680.896	278.951	D32 Patch
821	8/15/2001	7722022.461	602681.525	279.226	D32 Patch
822	8/15/2001	7722023.834	602683.220	279.255	D32 Patch
823	8/15/2001	7722026.056	602684.894	279.481	D32 Patch
824	8/15/2001	7722028.023	602687.701	279.303	D32 Patch
825	8/15/2001	7722029.588	602690.366	279.380	D32 Patch
826	8/15/2001	7722032.193	602692.492	279.411	D32 Patch
827	8/15/2001	7722034.201	602694.557	279.399	D32 Patch
828	8/15/2001	7722036.505	602697.095	279.250	D32 Patch
829	8/15/2001	7722039.581	602700.058	279.261	D32 Patch
830	8/15/2001	7722042.347	602702.501	279.127	D32 Patch
831	8/15/2001	7722045.797	602704.545	279.071	D32 Patch

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
832	8/15/2001	7722048.821	602706.496	278.963	D32 Patch
833	8/15/2001	7722047.075	602702.485	278.871	D32 Patch
834	8/15/2001	7722043.947	602698.625	278.916	D32 Patch
835	8/15/2001	7722041.230	602695.329	278.967	D32 Patch
836	8/15/2001	7722036.587	602691.063	279.302	D32 Patch
837	8/15/2001	7722031.911	602686.136	279.306	D32 Patch
838	8/15/2001	7722027.867	602682.497	279.201	D32 Patch
839	8/15/2001	7722024.588	602680.653	279.335	D32 Patch
840	8/15/2001	7722021.164	602676.870	279.154	D32 Patch
841	8/15/2001	7722018.581	602674.672	279.080	D32 Patch
842	8/15/2001	7722016.502	602671.083	279.073	D32 Patch
843	8/15/2001	7722012.077	602668.860	278.222	D32 Patch
844	8/15/2001	7722009.261	602667.577	277.446	D32 Patch
845	8/15/2001	7722001.192	602751.734	271.216	Sand Patch (<2mm)
846	8/15/2001	7721997.529	602746.642	271.423	Sand Patch (<2mm)
847	8/15/2001	7721994.356	602741.790	271.575	Sand Patch (<2mm)
848	8/15/2001	7721990.051	602737.282	271.533	Sand Patch (<2mm)
849	8/15/2001	7721987.806	602733.319	271.666	Sand Patch (<2mm)
850	8/15/2001	7721982.991	602727.017	271.901	Sand Patch (<2mm)
851	8/15/2001	7721977.740	602720.912	272.153	Sand Patch (<2mm)
852	8/15/2001	7721973.767	602714.946	272.331	Sand Patch (<2mm)
853	8/15/2001	7721969.662	602709.043	272.506	Sand Patch (<2mm)
854	8/15/2001	7721964.606	602701.434	272.633	Sand Patch (<2mm)
855	8/15/2001	7721962.297	602695.827	272.798	Sand Patch (<2mm)
856	8/15/2001	7721954.688	602690.161	272.441	Sand Patch (<2mm)
857	8/15/2001	7721948.303	602685.187	272.186	Sand Patch (<2mm)
858	8/15/2001	7721943.721	602677.680	272.458	Sand Patch (<2mm)
859	8/15/2001	7721938.865	602670.193	272.617	Sand Patch (<2mm)
860	8/15/2001	7721933.536	602663.394	272.781	Sand Patch (<2mm)
861	8/15/2001	7721928.153	602657.206	272.794	Sand Patch (<2mm)
862	8/15/2001	7721922.933	602650.638	272.855	Sand Patch (<2mm)
863	8/15/2001	7721917.831	602640.813	273.235	Sand Patch (<2mm)
864	8/15/2001	7721913.447	602633.052	273.578	Sand Patch (<2mm)
865	8/15/2001	7721909.250	602625.194	273.988	Sand Patch (<2mm)
866	8/15/2001	7721904.027	602614.915	274.537	Sand Patch (<2mm)
867	8/15/2001	7721900.298	602603.896	275.294	Sand Patch (<2mm)
868	8/15/2001	7721895.187	602591.937	275.766	Sand Patch (<2mm)
869	8/15/2001	7721890.438	602582.052	275.921	Sand Patch (<2mm)
870	8/15/2001	7721887.500	602577.475	275.920	Sand Patch (<2mm)
871	8/15/2001	7721883.940	602571.473	276.019	Sand Patch (<2mm)
872	8/15/2001	7721881.518	602566.811	276.157	Sand Patch (<2mm)
873	8/15/2001	7721879.487	602565.220	275.984	Sand Patch (<2mm)
874	8/15/2001	7721875.599	602563.397	275.833	Sand Patch (<2mm)
875	8/15/2001	7721873.004	602565.917	275.535	Sand Patch (<2mm)
876	8/15/2001	7721874.894	602569.719	275.508	Sand Patch (<2mm)
877	8/15/2001	7721876.242	602574.298	275.350	Sand Patch (<2mm)
878	8/15/2001	7721875.558	602578.668	275.129	Sand Patch (<2mm)
879	8/15/2001	7721872.176	602576.917	274.890	Sand Patch (<2mm)

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
880	8/15/2001	7721869.365	602576.262	274.788	Sand Patch (<2mm)
881	8/15/2001	7721871.685	602582.341	274.931	Sand Patch (<2mm)
882	8/15/2001	7721869.252	602583.480	274.386	Sand Patch (<2mm)
883	8/15/2001	7721865.225	602584.813	273.982	Sand Patch (<2mm)
884	8/15/2001	7721868.891	602590.208	273.904	Sand Patch (<2mm)
885	8/15/2001	7721872.475	602590.950	274.236	Sand Patch (<2mm)
886	8/15/2001	7721875.467	602595.872	274.145	Sand Patch (<2mm)
887	8/15/2001	7721879.119	602600.998	274.054	Sand Patch (<2mm)
888	8/15/2001	7721884.380	602606.107	274.073	Sand Patch (<2mm)
889	8/15/2001	7721889.525	602611.174	273.989	Sand Patch (<2mm)
890	8/15/2001	7721894.109	602616.466	273.661	Sand Patch (<2mm)
891	8/15/2001	7721899.138	602624.948	273.378	Sand Patch (<2mm)
892	8/15/2001	7721906.136	602629.758	273.434	Sand Patch (<2mm)
893	8/15/2001	7721911.248	602633.862	273.451	Sand Patch (<2mm)
894	8/15/2001	7721912.401	602638.844	273.094	Sand Patch (<2mm)
895	8/15/2001	7721914.004	602643.645	272.795	Sand Patch (<2mm)
896	8/15/2001	7721916.112	602648.598	272.425	Sand Patch (<2mm)
897	8/15/2001	7721914.474	602652.485	272.187	Sand Patch (<2mm)
898	8/15/2001	7721912.743	602657.096	271.823	Sand Patch (<2mm)
899	8/15/2001	7721905.427	602652.917	271.505	Sand Patch (<2mm)
900	8/15/2001	7721898.275	602646.029	271.820	Sand Patch (<2mm)
901	8/15/2001	7721887.163	602642.087	271.354	Sand Patch (<2mm)
902	8/15/2001	7721889.293	602653.009	270.477	Edge of Water
903	8/15/2001	7721894.785	602661.003	270.497	Edge of Water
904	8/15/2001	7721905.676	602667.737	270.483	Edge of Water
905	8/15/2001	7721917.067	602677.368	270.546	Edge of Water
906	8/15/2001	7721923.723	602684.064	270.533	Edge of Water
907	8/15/2001	7721930.421	602690.156	270.526	Edge of Water
908	8/15/2001	7721936.674	602696.671	270.468	Edge of Water
909	8/15/2001	7721945.001	602702.900	270.585	Edge of Water
910	8/15/2001	7721954.394	602707.734	270.553	Edge of Water
911	8/15/2001	7721961.531	602715.275	270.576	Edge of Water
912	8/15/2001	7721970.738	602723.978	270.518	Edge of Water
913	8/15/2001	7721980.676	602733.045	270.526	Edge of Water
914	8/15/2001	7721989.146	602742.542	270.481	Edge of Water
915	8/15/2001	7721997.804	602750.357	270.553	Edge of Water
916	8/15/2001	7722004.333	602758.105	270.646	Edge of Water
917	8/15/2001	7722012.970	602765.495	270.662	Edge of Water
918	8/15/2001	7721837.135	602566.620	273.107	D11 Patch
919	8/15/2001	7721839.778	602571.828	272.824	D11 Patch
920	8/15/2001	7721842.457	602577.604	272.697	D11 Patch
921	8/15/2001	7721845.082	602581.577	272.647	D11 Patch
922	8/15/2001	7721847.753	602581.461	272.648	D11 Patch
923	8/15/2001	7721847.834	602577.338	273.159	D11 Patch
924	8/15/2001	7721845.714	602572.347	273.306	D11 Patch
925	8/15/2001	7721842.354	602568.283	273.366	D11 Patch
926	8/15/2001	7721840.238	602565.433	273.487	D11 Patch
927	8/15/2001	7721836.161	602564.490	273.200	D11 Patch

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
928	8/15/2001	7721836.947	602566.527	273.094	D11 Patch
929	8/15/2001	7721829.565	602559.959	273.127	D16 Patch
930	8/15/2001	7721833.613	602564.028	273.154	D16 Patch
931	8/15/2001	7721837.843	602570.771	272.871	D16 Patch
932	8/15/2001	7721841.337	602576.598	272.699	D16 Patch
933	8/15/2001	7721845.405	602585.420	272.471	D16 Patch
934	8/15/2001	7721848.668	602592.538	272.256	D16 Patch
935	8/15/2001	7721853.108	602600.734	271.927	D16 Patch
936	8/15/2001	7721856.645	602605.129	271.835	D16 Patch
937	8/15/2001	7721859.642	602609.130	271.801	D16 Patch
938	8/15/2001	7721861.075	602613.686	271.760	D16 Patch
939	8/15/2001	7721863.468	602619.298	271.520	D16 Patch
940	8/15/2001	7721866.255	602625.943	271.234	D16 Patch
941	8/15/2001	7721867.049	602629.472	271.119	D16 Patch
942	8/15/2001	7721862.098	602623.180	271.379	D16 Patch
943	8/15/2001	7721857.500	602615.234	271.579	D16 Patch
944	8/15/2001	7721851.324	602604.915	271.867	D16 Patch
945	8/15/2001	7721846.317	602595.759	272.144	D16 Patch
946	8/15/2001	7721842.244	602586.872	272.517	D16 Patch
947	8/15/2001	7721836.296	602583.484	272.289	D16 Patch
948	8/15/2001	7721832.731	602578.499	272.252	D16 Patch
949	8/15/2001	7721831.797	602571.030	272.579	D16 Patch
950	8/15/2001	7721829.539	602564.570	272.994	D16 Patch
951	8/15/2001	7721828.595	602558.903	273.170	D16 Patch
952	8/15/2001	7721825.936	602551.005	273.679	D16 Patch
953	8/15/2001	7721826.331	602545.369	273.942	D16 Patch
954	8/15/2001	7721880.654	602405.135	278.501	Misc Sand Patches
955	8/15/2001	7721874.109	602404.379	278.487	Misc Sand Patches
956	8/15/2001	7721878.724	602378.944	278.514	Misc Sand Patches
957	8/15/2001	7721881.681	602355.401	278.623	Misc Sand Patches
958	8/15/2001	7721878.920	602330.894	278.727	Misc Sand Patches
959	8/15/2001	7721879.842	602325.844	278.659	D32 Patch
960	8/15/2001	7721879.586	602314.288	278.601	D32 Patch
961	8/15/2001	7721878.710	602305.588	278.825	D32 Patch
962	8/15/2001	7721877.846	602297.599	278.752	D32 Patch
T_CO	8/15/2001	7721733.343	602720.728	273.472	Cross Section
963	8/15/2001	7721735.161	602718.500	272.644	Cross Section
964	8/15/2001	7721736.913	602716.166	272.351	Cross Section
965	8/15/2001	7721739.510	602714.122	272.274	Cross Section
966	8/15/2001	7721740.470	602712.973	272.479	Cross Section
967	8/15/2001	7721741.470	602711.783	273.709	Cross Section
968	8/15/2001	7721743.256	602710.491	272.685	Cross Section
969	8/15/2001	7721744.552	602709.012	272.536	Cross Section
970	8/15/2001	7721746.313	602707.912	272.127	Cross Section
971	8/15/2001	7721748.475	602706.631	271.357	Cross Section
972	8/15/2001	7721750.135	602705.223	271.171	Cross Section
973	8/15/2001	7721752.402	602703.617	270.863	Cross Section
974	8/15/2001	7721754.572	602701.945	270.845	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
975	8/15/2001	7721757.373	602700.415	270.705	Cross Section
976	8/15/2001	7721759.826	602698.361	270.433	Cross Section
977	8/15/2001	7721762.062	602696.738	269.950	Cross Section
978	8/15/2001	7721763.055	602696.263	269.217	Cross Section
979	8/15/2001	7721764.775	602695.039	269.111	Cross Section
980	8/15/2001	7721766.771	602693.733	269.451	Cross Section
981	8/15/2001	7721768.344	602692.204	269.973	Cross Section
982	8/15/2001	7721769.817	602690.739	269.855	Cross Section
983	8/15/2001	7721771.446	602689.696	268.947	Cross Section
984	8/15/2001	7721772.309	602688.245	267.649	Cross Section
985	8/15/2001	7721774.296	602686.542	267.196	Cross Section
986	8/15/2001	7721776.782	602684.465	267.213	Cross Section
987	8/15/2001	7721778.919	602682.520	266.539	Cross Section
988	8/15/2001	7721782.633	602680.013	265.949	Cross Section
989	8/15/2001	7721785.173	602677.679	265.668	Cross Section
990	8/15/2001	7721789.138	602675.078	264.869	Cross Section
991	8/15/2001	7721798.527	602676.407	264.996	Cross Section
992	8/15/2001	7721803.351	602671.484	264.971	Cross Section
993	8/15/2001	7721809.646	602666.861	265.465	Cross Section
994	8/15/2001	7721812.516	602662.633	265.930	Cross Section
995	8/15/2001	7721815.943	602658.407	266.337	Cross Section
996	8/15/2001	7721821.351	602653.204	266.672	Cross Section
997	8/15/2001	7721824.499	602648.285	267.102	Cross Section
998	8/15/2001	7721827.813	602644.182	267.214	Cross Section
999	8/15/2001	7721830.350	602640.560	267.566	Cross Section
1000	8/15/2001	7721833.279	602636.743	268.123	Cross Section
1001	8/15/2001	7721835.928	602633.834	268.655	Cross Section
1002	8/15/2001	7721838.954	602629.955	269.240	Cross Section
1003	8/15/2001	7721842.134	602626.689	269.474	Cross Section
1004	8/15/2001	7721845.844	602622.796	269.754	Cross Section
1005	8/15/2001	7721850.845	602618.073	270.687	Edge of Water
1006	8/15/2001	7721855.029	602614.011	271.543	Cross Section
1007	8/15/2001	7721858.153	602610.297	271.772	Cross Section
1008	8/15/2001	7721861.315	602605.741	272.109	Cross Section
1009	8/15/2001	7721863.695	602603.505	272.562	Cross Section
1010	8/15/2001	7721867.388	602599.536	273.346	Cross Section
1011	8/15/2001	7721869.344	602596.363	273.580	Cross Section
1012	8/15/2001	7721871.656	602593.372	274.192	Cross Section
1013	8/15/2001	7721874.315	602590.519	274.410	Cross Section
1014	8/15/2001	7721877.075	602587.100	274.976	Cross Section
1015	8/15/2001	7721879.941	602583.792	275.070	Cross Section
1016	8/15/2001	7721882.536	602580.328	275.351	Cross Section
1017	8/15/2001	7721884.836	602576.954	275.684	Cross Section
1018	8/15/2001	7721887.863	602573.587	276.382	Cross Section
1019	8/15/2001	7721890.516	602570.149	277.120	Cross Section
1020	8/15/2001	7721894.173	602566.851	277.094	Cross Section
1021	8/15/2001	7721897.776	602563.041	277.513	Cross Section
1022	8/15/2001	7721900.811	602559.703	277.574	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1023	8/15/2001	7721903.244	602556.470	277.687	Cross Section
1024	8/15/2001	7721906.011	602552.667	277.161	Cross Section
1025	8/15/2001	7721909.399	602549.300	277.318	Cross Section
1026	8/15/2001	7721915.914	602544.639	276.724	Cross Section
1027	8/15/2001	7721919.679	602542.129	276.437	Cross Section
1028	8/15/2001	7721922.879	602539.268	276.497	Cross Section
1029	8/15/2001	7721926.920	602535.800	276.232	Cross Section
1030	8/15/2001	7721929.881	602534.089	276.158	Cross Section
1031	8/15/2001	7721934.154	602531.524	276.329	Cross Section
1032	8/15/2001	7721937.217	602530.214	276.734	Cross Section
1033	8/15/2001	7721940.685	602528.265	277.035	Cross Section
1034	8/15/2001	7721944.042	602526.007	277.312	Cross Section
1035	8/15/2001	7721947.082	602524.254	277.466	Cross Section
1036	8/15/2001	7721950.593	602523.135	278.173	Cross Section
1037	8/15/2001	7721951.647	602522.496	278.699	Cross Section
1038	8/15/2001	7721954.510	602520.419	278.882	Cross Section
1039	8/15/2001	7721957.359	602519.149	279.234	Cross Section
1040	8/15/2001	7721959.489	602517.901	279.902	Cross Section
1041	8/15/2001	7721961.605	602516.554	280.926	Cross Section
1042	8/15/2001	7721966.232	602514.672	282.146	Cross Section
1043	8/15/2001	7721969.384	602512.509	282.791	Cross Section
1044	8/15/2001	7721973.919	602509.796	282.678	Cross Section
1045	8/15/2001	7721976.133	602505.856	282.581	Cross Section
1047	8/15/2001	7721982.755	602498.429	282.249	Cross Section
1048	8/15/2001	7721988.950	602492.708	282.331	Cross Section
1049	8/15/2001	7721993.318	602488.459	281.299	Cross Section
1050	8/15/2001	7722000.530	602482.622	281.021	Cross Section
1051	8/15/2001	7722004.230	602479.508	279.597	Cross Section
1052	8/15/2001	7722008.470	602476.441	279.242	Cross Section
1053	8/15/2001	7722016.328	602470.122	278.922	Cross Section
1054	8/15/2001	7722021.263	602467.982	280.322	Cross Section
1055	8/15/2001	7722023.276	602466.195	280.211	Cross Section
1056	8/15/2001	7722028.426	602462.734	281.022	Cross Section
1057	8/15/2001	7722030.472	602460.310	282.335	Cross Section
1058	8/15/2001	7722031.951	602459.201	282.982	Cross Section
1059	8/15/2001	7722033.906	602457.240	283.880	Cross Section
1060	8/15/2001	7722035.728	602455.912	284.117	Cross Section
1061	8/15/2001	7722039.200	602452.987	283.929	Cross Section
1062	8/15/2001	7722042.249	602450.340	283.206	Cross Section
1063	8/15/2001	7722043.989	602448.356	283.544	Cross Section
1064	8/15/2001	7722047.549	602445.738	282.590	Cross Section
1065	8/15/2001	7722049.973	602442.934	281.903	Cross Section
1066	8/15/2001	7722053.367	602440.637	282.187	Cross Section
1067	8/15/2001	7722057.405	602436.232	283.595	Cross Section
1068	8/15/2001	7722057.401	602436.236	283.593	Cross Section
1069	8/15/2001	7722069.749	602431.794	286.693	Cross Section
1070	8/15/2001	7721858.870	602609.597	271.774	Control Point PWCP0002
1071	8/15/2001	7721858.872	602609.617	271.771	Control Point PWCP0002

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1072	8/15/2001	7721872.220	602848.171	273.399	Backsite of CP4012
1073	8/16/2001	7716121.448	614555.287	209.330	Cross Section in Water
1074	8/16/2001	7716124.536	614555.025	208.609	Cross Section in Water
1075	8/16/2001	7716129.336	614555.268	208.283	Cross Section in Water
1076	8/16/2001	7716133.803	614555.502	208.009	Cross Section in Water
1077	8/16/2001	7716137.940	614555.291	207.850	Cross Section in Water
1078	8/16/2001	7716141.143	614554.805	207.890	Cross Section in Water
1079	8/16/2001	7716145.708	614554.762	207.841	Cross Section in Water
1080	8/16/2001	7716152.001	614555.270	208.419	Cross Section in Water
1081	8/16/2001	7716159.801	614553.158	209.712	Cross Section in Water
1082	8/16/2001	7716165.886	614553.081	210.180	Cross Section in Water
1083	8/16/2001	7716170.939	614552.710	210.692	Cross Section in Water
1084	8/16/2001	7716176.208	614551.995	210.722	Cross Section in Water
1085	8/16/2001	7716182.658	614551.576	211.487	Cross Section in Water
1086	8/16/2001	7716187.674	614550.300	212.128	Cross Section in Water
1087	8/16/2001	7716192.724	614549.952	212.482	Cross Section in Water
1088	8/16/2001	7716198.074	614549.099	212.694	Cross Section in Water
1089	8/16/2001	7716203.496	614548.649	212.608	Cross Section in Water
1090	8/16/2001	7716207.340	614548.237	212.875	Cross Section in Water
1091	8/16/2001	7716211.313	614547.590	213.094	Edge of Water
1092	8/16/2001	7716220.526	614546.625	213.761	Cross Section
1093	8/16/2001	7716230.789	614546.360	213.775	Cross Section
1094	8/16/2001	7716242.160	614547.080	214.092	Cross Section
1095	8/16/2001	7716254.252	614548.699	213.976	Cross Section
1096	8/16/2001	7716264.648	614549.242	213.897	Cross Section
1097	8/16/2001	7716272.837	614549.055	214.061	Cross Section
1098	8/16/2001	7716282.309	614548.560	214.112	Cross Section
1099	8/16/2001	7716292.159	614549.653	214.265	Cross Section
1100	8/16/2001	7716301.455	614551.005	214.282	Cross Section
1101	8/16/2001	7716309.615	614554.104	214.575	Cross Section
1102	8/16/2001	7716317.118	614556.811	215.203	Edge of Vegetation
1103	8/16/2001	7716110.358	614554.573	210.445	Cross Section in Water
1104	8/16/2001	7716107.044	614555.141	210.690	Cross Section in Water
1105	8/16/2001	7716100.288	614555.654	211.460	Cross Section in Water
1106	8/16/2001	7716095.151	614557.722	212.174	Cross Section in Water
1107	8/16/2001	7716090.120	614560.402	213.041	Cross Section in Water
1108	8/16/2001	7716086.907	614562.426	213.342	Cross Section
1109	8/16/2001	7716080.653	614563.419	213.722	Cross Section
1110	8/16/2001	7715972.699	614442.212	224.601	PWCP0003 interim point near 4030
1111	8/16/2001	7716047.530	614463.262	224.735	Check backsite of CP4030
1112	8/16/2001	7715963.583	614443.958	223.969	Cross Section
1113	8/16/2001	7715957.585	614444.594	222.770	Cross Section in Water
1114	8/16/2001	7715946.631	614446.284	222.137	Cross Section in Water
1115	8/16/2001	7715934.928	614446.635	220.300	Cross Section in Water
1116	8/16/2001	7715922.296	614444.577	219.448	Cross Section in Water
1117	8/16/2001	7715918.408	614445.721	219.751	Cross Section in Water
1118	8/16/2001	7715912.817	614447.942	219.431	Cross Section in Water
1119	8/16/2001	7715907.920	614449.668	219.336	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1120	8/16/2001	7715903.999	614450.762	219.164	Cross Section in Water
1121	8/16/2001	7715901.012	614452.455	218.327	Cross Section in Water
1122	8/16/2001	7715896.819	614453.975	216.966	Cross Section in Water
1123	8/16/2001	7715893.327	614456.317	217.258	Cross Section in Water
1124	8/16/2001	7715889.694	614459.370	218.183	Cross Section in Water
1125	8/16/2001	7715887.278	614460.697	217.975	Cross Section in Water
1126	8/16/2001	7716047.533	614463.360	224.714	Check backsite of 4030
1127	8/16/2001	7716047.505	614463.336	224.725	Check backsite of 4030
1128	8/16/2001	7716568.577	615609.058	212.379	Cross Section - Mudstone
1129	8/16/2001	7716571.537	615608.228	211.394	Cross Section - Mudstone
1130	8/16/2001	7716574.661	615607.346	210.744	Cross Section - Mudstone
1131	8/16/2001	7716575.696	615607.163	211.676	Cross Section - Mudstone
1132	8/16/2001	7716577.735	615606.617	210.860	Cross Section - Mudstone
1133	8/16/2001	7716580.528	615605.739	210.143	Cross Section in Water
1134	8/16/2001	7716581.621	615605.582	209.269	Cross Section in Water
1135	8/16/2001	7716585.648	615604.384	208.590	Cross Section in Water
1136	8/16/2001	7716588.197	615603.642	208.012	Cross Section in Water
1137	8/16/2001	7716591.552	615602.360	207.962	Edge of mudstone under water
1138	8/16/2001	7716595.506	615600.854	209.012	Cross Section in Water
1139	8/16/2001	7716598.230	615599.910	208.913	Cross Section in Water
1140	8/16/2001	7716603.886	615598.376	208.909	Cross Section in Water
1141	8/16/2001	7716608.535	615596.517	208.585	Cross Section in Water
1142	8/16/2001	7716614.980	615595.471	208.432	Cross Section in Water
1143	8/16/2001	7716621.053	615594.238	208.371	Cross Section in Water
1144	8/16/2001	7716626.295	615593.212	208.372	Cross Section in Water
1145	8/16/2001	7716632.073	615591.956	208.230	Cross Section in Water
1146	8/16/2001	7716638.003	615590.312	208.249	Cross Section in Water
1147	8/16/2001	7716643.032	615588.431	208.165	Cross Section in Water
1148	8/16/2001	7716649.352	615587.138	208.216	Cross Section in Water
1149	8/16/2001	7716655.731	615585.540	208.164	Cross Section in Water
1150	8/16/2001	7716663.881	615583.039	208.188	Cross Section in Water
1151	8/16/2001	7716670.055	615582.125	208.052	Cross Section in Water
1152	8/16/2001	7716677.296	615580.597	208.157	Cross Section in Water
1153	8/16/2001	7716683.255	615579.428	208.105	Cross Section in Water
1154	8/16/2001	7716690.656	615578.247	208.469	Cross Section in Water
1155	8/16/2001	7716697.270	615576.054	208.478	Cross Section in Water
1156	8/16/2001	7716703.673	615573.613	208.810	Cross Section in Water
1157	8/16/2001	7716710.479	615571.597	209.079	Cross Section in Water
1158	8/16/2001	7716718.294	615569.954	209.498	Cross Section in Water
1159	8/16/2001	7716726.596	615567.636	209.712	Cross Section in Water
1160	8/16/2001	7716734.388	615565.962	209.791	Cross Section in Water
1161	8/16/2001	7716740.761	615565.151	210.275	Cross Section in Water
1162	8/16/2001	7716745.845	615563.794	210.611	Edge of Water
1163	8/16/2001	7716753.769	615562.356	211.166	Cross Section
1164	8/16/2001	7716759.930	615561.648	211.766	Cross Section
1165	8/16/2001	7716766.087	615561.347	212.506	Cross Section
1166	8/16/2001	7716773.792	615559.827	212.860	Cross Section
1167	8/16/2001	7716779.343	615559.042	213.416	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1168	8/16/2001	7716785.267	615556.753	214.183	Cross Section
1169	8/16/2001	7716790.541	615555.594	214.511	Cross Section
1170	8/16/2001	7716795.290	615554.977	215.130	Cross Section
1171	8/16/2001	7716800.212	615554.187	215.285	Cross Section
1172	8/16/2001	7716804.614	615553.975	215.919	Cross Section
1173	8/16/2001	7716809.254	615552.774	216.238	Cross Section
1174	8/16/2001	7716809.450	615558.477	216.003	Cross Section
1175	8/16/2001	7716814.478	615563.754	216.435	Cross Section
1176	8/16/2001	7716820.123	615568.981	216.422	Cross Section
1177	8/16/2001	7716825.630	615575.444	216.886	Cross Section
1178	8/16/2001	7716830.424	615582.584	216.866	Cross Section
1179	8/16/2001	7716837.088	615589.994	217.267	Cross Section
1180	8/16/2001	7716842.148	615598.465	217.667	Cross Section
1181	8/16/2001	7716847.901	615606.360	217.625	Cross Section
1182	8/16/2001	7716851.832	615614.204	217.995	Cross Section
1183	8/16/2001	7716853.908	615621.674	218.365	Cross Section
1184	8/16/2001	7716856.435	615630.131	218.279	Cross Section
1185	8/16/2001	7716862.020	615641.507	218.371	Cross Section
1186	8/16/2001	7716866.597	615651.739	218.300	Cross Section
1187	8/16/2001	7716870.430	615660.115	218.110	Cross Section
1188	8/16/2001	7716879.833	615666.186	218.976	Cross Section
1189	8/16/2001	7716884.420	615674.072	219.142	Cross Section
1190	8/16/2001	7716888.424	615681.419	219.017	Cross Section
1191	8/16/2001	7716891.374	615689.717	218.809	Cross Section
1192	8/16/2001	7716893.484	615696.487	218.588	Cross Section
1193	8/16/2001	7722778.165	600562.230	291.635	Shot of PWCP0004
1194	8/16/2001	7722852.855	600567.426	293.891	Shot of PWCP0004
1195	8/20/2001	7722778.146	600562.225	294.370	Interim Nail Control PWCP0004
1196	8/20/2001	7722852.810	600567.399	299.401	Backsite of CP4005
1197	8/20/2001	7722774.169	600551.510	298.583	Cross Section
1198	8/20/2001	7722773.440	600552.985	295.961	Cross Section
1199	8/20/2001	7722772.439	600555.695	295.087	Cross Section
1200	8/20/2001	7722771.905	600558.244	294.044	Cross Section
1201	8/20/2001	7722771.142	600560.271	293.117	Cross Section
1202	8/20/2001	7722770.132	600562.790	292.382	Cross Section
1203	8/20/2001	7722769.903	600563.873	291.577	Edge of Water
1204	8/20/2001	7722768.546	600567.200	290.780	Cross Section in Water
1205	8/20/2001	7722767.797	600569.497	289.587	Cross Section in Water
1206	8/20/2001	7722766.813	600572.334	289.032	Cross Section in Water
1207	8/20/2001	7722765.615	600575.728	288.939	Cross Section in Water
1208	8/20/2001	7722764.131	600578.996	287.043	Cross Section in Water
1209	8/20/2001	7722766.648	600572.759	289.163	Cross Section in Water
1210	8/20/2001	7722765.872	600574.225	288.501	Cross Section in Water
1211	8/20/2001	7722763.906	600578.685	286.998	Cross Section in Water
1212	8/20/2001	7722762.535	600582.144	285.907	Cross Section in Water
1213	8/20/2001	7722762.138	600584.217	286.207	Cross Section in Water
1214	8/20/2001	7722761.016	600587.295	282.046	Cross Section in Water
1215	8/20/2001	7722758.660	600592.800	277.831	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1216	8/20/2001	7722757.108	600596.705	277.302	Cross Section in Water
1217	8/20/2001	7722755.373	600601.749	276.193	Cross Section in Water
1218	8/20/2001	7722753.908	600604.679	275.754	Cross Section in Water
1219	8/20/2001	7722752.963	600607.472	275.765	Cross Section in Water
1220	8/20/2001	7722750.377	600616.364	276.015	Cross Section in Water
1221	8/20/2001	7722752.535	600613.981	275.763	Cross Section in Water
1222	8/20/2001	7722739.491	600624.142	274.510	Cross Section in Water
1223	8/20/2001	7722740.018	600632.408	280.245	Cross Section in Water
1224	8/20/2001	7722739.504	600637.541	284.911	Cross Section in Water
1225	8/20/2001	7722740.260	600638.912	289.262	Cross Section in Water
1226	8/20/2001	7722740.323	600640.512	291.077	Cross Section in Water
1227	8/20/2001	7722739.843	600642.043	290.064	Cross Section in Water
1228	8/20/2001	7722739.982	600642.884	291.160	Cross Section in Water
1229	8/20/2001	7722739.511	600643.754	291.021	Edge of Water
1230	8/20/2001	7722739.284	600644.701	291.822	Cross Section
1231	8/20/2001	7722738.816	600646.776	291.983	Cross Section
1232	8/20/2001	7722738.676	600647.546	291.125	Edge of Water
1233	8/20/2001	7722738.555	600649.795	291.293	Cross Section in Water
1234	8/20/2001	7722738.425	600652.641	290.970	Cross Section in Water
1235	8/20/2001	7722737.712	600655.103	290.358	Cross Section in Water
1236	8/20/2001	7722738.045	600657.191	289.441	Cross Section in Water
1237	8/20/2001	7722736.897	600659.555	289.354	Cross Section in Water
1238	8/20/2001	7722736.472	600661.622	288.862	Cross Section in Water
1239	8/20/2001	7722736.292	600663.777	291.524	Cross Section in Water
1240	8/20/2001	7722735.683	600666.420	291.284	Cross Section in Water
1241	8/20/2001	7722735.584	600668.380	290.757	Cross Section in Water
1242	8/20/2001	7722734.702	600671.397	290.867	Cross Section in Water
1243	8/20/2001	7722734.394	600672.175	291.653	Edge of Water
1244	8/20/2001	7722733.159	600674.558	291.855	Cross Section
1245	8/20/2001	7722731.549	600678.600	292.029	Cross Section
1246	8/20/2001	7722729.390	600682.119	292.508	Cross Section
1247	8/20/2001	7722727.404	600684.910	293.023	Cross Section
1248	8/20/2001	7722725.337	600687.877	293.484	Cross Section
1249	8/20/2001	7722724.511	600691.851	293.964	Cross Section
1250	8/20/2001	7722725.047	600692.600	296.787	Top of Rhod. Fmt
1251	8/20/2001	7722841.338	600564.194	298.433	Interim Point on Trail
1252	8/20/2001	7722852.841	600567.426	299.399	Check Backsite of CP4005
1253	8/20/2001	7722798.277	600539.222	298.407	Cross Section
1255	8/20/2001	7722804.529	600524.974	298.667	Cross Section
1256	8/20/2001	7722813.324	600510.824	300.078	Cross Section
1257	8/20/2001	7722818.971	600501.081	300.538	Cross Section
1258	8/20/2001	7722823.935	600483.115	301.031	Cross Section
1259	8/20/2001	7722842.904	600458.716	301.159	Cross Section
1260	8/20/2001	7722849.933	600446.201	301.718	Cross Section
1261	8/20/2001	7722874.100	600440.593	300.723	Cross Section
1262	8/20/2001	7722887.332	600420.344	301.665	Cross Section
1264	8/21/2001	7718109.095	611273.967	229.855	Check of 4026
1265	8/21/2001	7718109.147	611273.978	229.854	Check of 4026

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1266	8/21/2001	7717836.112	613377.595	224.537	Interim Control
1267	8/21/2001	7717651.868	613513.775	224.683	Cross Section
1268	8/21/2001	7717649.555	613511.422	224.089	Cross Section
1269	8/21/2001	7717648.085	613509.666	222.965	Cross Section
1270	8/21/2001	7717647.013	613508.148	222.081	Cross Section
1271	8/21/2001	7717645.223	613506.760	221.099	Cross Section
1272	8/21/2001	7717643.897	613505.109	220.467	Cross Section
1273	8/21/2001	7717642.580	613504.050	220.097	Cross Section
1274	8/21/2001	7717641.927	613503.385	219.700	Edge of Water
1275	8/21/2001	7717640.161	613501.109	219.004	Cross Section in Water
1276	8/21/2001	7717639.169	613500.210	218.675	Cross Section in Water
1277	8/21/2001	7717637.187	613498.363	218.353	Cross Section in Water
1278	8/21/2001	7717635.526	613496.307	218.112	Cross Section in Water
1279	8/21/2001	7717633.780	613494.759	218.006	Cross Section in Water
1280	8/21/2001	7717632.472	613492.749	217.906	Cross Section in Water
1281	8/21/2001	7717631.055	613490.629	217.433	Cross Section in Water
1282	8/21/2001	7717629.371	613488.873	217.641	Cross Section in Water
1283	8/21/2001	7717628.244	613486.942	217.677	Cross Section in Water
1284	8/21/2001	7717626.820	613485.301	217.287	Cross Section in Water
1285	8/21/2001	7717625.962	613483.769	217.193	Cross Section in Water
1286	8/21/2001	7717624.933	613481.789	217.165	Cross Section in Water
1287	8/21/2001	7717623.713	613480.929	217.078	Cross Section in Water
1288	8/21/2001	7717622.256	613479.942	216.923	Cross Section in Water
1289	8/21/2001	7717621.230	613478.879	217.148	Cross Section in Water
1290	8/21/2001	7717620.755	613477.461	217.135	Cross Section in Water
1291	8/21/2001	7717619.250	613475.863	217.005	Cross Section in Water
1292	8/21/2001	7717617.078	613474.666	217.086	Cross Section in Water
1293	8/21/2001	7717615.688	613472.299	217.138	Cross Section in Water
1294	8/21/2001	7717614.775	613470.170	217.218	Cross Section in Water
1295	8/21/2001	7717613.697	613468.482	217.286	Cross Section in Water
1296	8/21/2001	7717612.596	613466.202	217.387	Cross Section in Water
1297	8/21/2001	7717611.326	613464.219	217.380	Cross Section in Water
1298	8/21/2001	7717610.871	613462.040	217.222	Cross Section in Water
1299	8/21/2001	7717610.840	613459.750	217.292	Cross Section in Water
1300	8/21/2001	7717610.219	613457.349	217.599	Cross Section in Water
1301	8/21/2001	7717608.780	613455.632	217.670	Cross Section in Water
1302	8/21/2001	7717607.605	613453.705	217.552	Cross Section in Water
1303	8/21/2001	7717606.058	613451.837	218.101	Cross Section in Water
1304	8/21/2001	7717603.147	613449.937	218.252	Cross Section in Water
1305	8/21/2001	7717600.888	613447.998	218.980	Cross Section in Water
1306	8/21/2001	7717598.463	613447.328	219.500	Edge of Water
1307	8/21/2001	7717597.642	613446.526	219.877	Cross Section
1308	8/21/2001	7717595.995	613445.204	221.053	Cross Section
1309	8/21/2001	7717594.636	613443.744	221.764	Cross Section
1310	8/21/2001	7717593.312	613442.499	223.037	Cross Section
1311	8/21/2001	7717590.433	613439.875	223.903	Cross Section
1312	8/21/2001	7717587.939	613436.778	224.279	Cross Section
1313	8/21/2001	7717585.950	613434.688	225.027	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1314	8/21/2001	7717580.685	613429.662	225.726	Cross Section
1315	8/21/2001	7717576.599	613426.293	226.114	Cross Section
1316	8/21/2001	7717573.564	613423.779	226.540	Cross Section
1317	8/21/2001	7717569.251	613420.174	226.260	Cross Section
1318	8/21/2001	7717565.817	613416.437	227.152	Edge of 38 channel
1319	8/21/2001	7717564.546	613414.758	228.007	Cross Section
1320	8/21/2001	7717563.568	613412.348	228.682	Cross Section
1321	8/21/2001	7717563.283	613408.123	230.279	Cross Section
1322	8/21/2001	7717561.830	613405.110	231.508	Cross Section
1323	8/21/2001	7717561.763	613403.564	231.466	Cross Section
1324	8/21/2001	7717439.995	613557.477	224.148	Downstream limit of dead trees on Bank
1325	8/21/2001	7717448.209	613553.387	224.037	Cross Section (Downstream of 1st)
1326	8/21/2001	7717449.844	613554.507	222.449	Cross Section
1327	8/21/2001	7717451.367	613555.875	221.119	Cross Section
1328	8/21/2001	7717452.925	613557.026	220.054	Cross Section
1329	8/21/2001	7717454.153	613558.444	219.465	Cross Section
1330	8/21/2001	7717455.198	613559.124	219.110	Edge of Water
1331	8/21/2001	7717456.909	613560.322	218.263	Cross Section in Water
1332	8/21/2001	7717459.458	613561.990	217.689	Cross Section in Water
1333	8/21/2001	7717462.043	613564.295	216.255	Cross Section in Water
1334	8/21/2001	7717464.260	613565.802	216.385	Cross Section in Water
1335	8/21/2001	7717466.684	613567.613	216.634	Cross Section in Water
1336	8/21/2001	7717468.677	613569.422	216.561	Cross Section in Water
1337	8/21/2001	7717470.471	613570.099	216.445	Cross Section in Water
1338	8/21/2001	7717473.241	613571.447	216.425	Cross Section in Water
1339	8/21/2001	7717474.492	613572.659	216.574	Cross Section in Water
1340	8/21/2001	7717477.157	613573.041	216.769	Cross Section in Water
1341	8/21/2001	7717479.001	613573.837	216.652	Cross Section in Water
1342	8/21/2001	7717480.583	613574.854	216.626	Cross Section in Water
1343	8/21/2001	7717482.218	613575.585	216.669	Cross Section in Water
1344	8/21/2001	7717484.628	613576.552	216.629	Cross Section in Water
1345	8/21/2001	7717487.360	613576.575	216.666	Cross Section in Water
1346	8/21/2001	7717487.913	613578.342	216.529	Cross Section in Water
1347	8/21/2001	7717489.189	613579.312	216.723	Cross Section in Water
1348	8/21/2001	7717490.931	613580.626	216.756	Cross Section in Water
1349	8/21/2001	7717492.216	613582.340	216.978	Cross Section in Water
1350	8/21/2001	7717493.149	613583.809	217.172	Cross Section in Water
1351	8/21/2001	7717495.395	613586.597	217.249	Cross Section in Water
1352	8/21/2001	7717497.833	613589.175	217.434	Cross Section in Water
1353	8/21/2001	7717499.467	613593.060	217.653	Cross Section in Water
1354	8/21/2001	7717501.240	613595.614	217.878	Cross Section in Water
1355	8/21/2001	7717503.758	613598.626	218.178	Cross Section in Water
1356	8/21/2001	7717506.032	613601.831	218.044	Cross Section in Water
1357	8/21/2001	7717509.710	613606.314	218.716	Cross Section in Water
1358	8/21/2001	7717512.638	613609.225	218.915	Cross Section in Water
1359	8/21/2001	7717515.509	613611.641	219.130	Edge of Water
1360	8/21/2001	7717517.835	613613.896	219.644	Cross Section
1361	8/21/2001	7718393.241	613022.303	228.298	Contact between silt and gravel

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1362	8/21/2001	7718379.365	613076.350	227.599	Contact between silt and gravel
1363	8/21/2001	7718359.649	613149.726	227.833	Contact between silt and gravel
1364	8/21/2001	7718355.905	613162.184	228.707	Contact between silt and gravel
1365	8/21/2001	7718333.302	613218.967	228.879	Contact between silt and gravel
1366	8/21/2001	7718329.847	613227.315	229.680	Contact between silt and gravel
1367	8/21/2001	7718327.292	613235.947	230.392	Contact between silt and gravel
1368	8/21/2001	7718326.730	613245.133	231.716	Contact between silt and gravel
1369	8/21/2001	7718329.859	613247.527	233.408	Contact between silt and gravel
1370	8/21/2001	7718333.585	613252.421	234.633	Contact between silt and gravel
1371	8/21/2001	7718334.833	613256.836	235.302	Contact between silt and gravel
1372	8/21/2001	7718332.176	613267.501	236.501	Contact between silt and gravel
1373	8/21/2001	7718328.103	613279.478	236.359	Contact between silt and gravel
1374	8/21/2001	7718322.586	613295.340	236.525	Contact between silt and gravel
1375	8/21/2001	7718316.391	613314.894	236.121	Contact between silt and gravel
1376	8/21/2001	7718307.440	613339.572	236.480	Contact between silt and gravel
1377	8/21/2001	7718295.034	613371.025	236.107	Contact between silt and gravel
1378	8/21/2001	7718285.281	613379.274	231.809	Contact between silt and gravel
1379	8/21/2001	7718283.252	613385.695	231.445	Contact between silt and gravel
1380	8/21/2001	7718279.317	613387.782	229.759	Contact between silt and gravel
1381	8/21/2001	7718274.563	613396.964	230.361	Contact between silt and gravel
1382	8/21/2001	7718271.222	613405.340	230.751	Contact between silt and gravel
1383	8/21/2001	7718271.765	613412.312	232.501	Contact between silt and gravel
1384	8/21/2001	7718272.787	613413.896	235.212	Loc of Wood in silt to date
1385	8/21/2001	7718265.141	613424.354	232.695	Contact between silt and gravel
1386	8/21/2001	7718257.454	613433.271	232.098	Contact between silt and gravel
1387	8/21/2001	7718254.305	613438.201	232.025	Contact between silt and gravel
1388	8/21/2001	7718252.872	613441.448	232.327	Contact between silt and gravel
1389	8/21/2001	7718245.398	613459.191	232.227	Contact between silt and gravel
1390	8/21/2001	7718240.469	613471.192	232.957	Contact between silt and gravel
1391	8/21/2001	7718235.920	613485.236	233.306	Contact between silt and gravel
1392	8/21/2001	7718228.164	613503.017	233.306	Contact between silt and gravel
1393	8/21/2001	7718218.141	613524.236	233.196	Contact between silt and gravel
1394	8/21/2001	7718211.486	613538.926	232.662	Contact between silt and gravel
1395	8/21/2001	7718205.864	613553.767	232.542	Contact between silt and gravel
1396	8/21/2001	7718197.676	613574.133	232.752	Contact between silt and gravel
1397	8/21/2001	7718188.738	613593.798	232.756	Contact between silt and gravel
1398	8/21/2001	7718176.296	613614.099	230.695	Contact between silt and gravel
1399	8/21/2001	7718164.490	613639.249	230.553	Contact between silt and gravel
1400	8/21/2001	7718151.518	613661.098	229.996	Contact between silt and gravel
1401	8/21/2001	7718141.163	613678.981	230.033	Contact between silt and gravel
1402	8/21/2001	7718133.117	613691.327	229.947	Contact between silt and gravel
1403	8/21/2001	7718127.413	613700.067	229.385	Contact between silt and gravel
1404	8/21/2001	7718120.915	613700.144	227.451	Contact between silt and gravel
1405	8/21/2001	7718119.943	613700.426	226.817	Contact between silt and gravel
1406	8/21/2001	7718393.662	613089.521	237.052	Check of 4027
1407	8/21/2001	7716903.874	614093.911	215.499	Edge of Water
1408	8/21/2001	7716901.736	614090.141	215.180	Cross Section in Water
1409	8/21/2001	7716900.251	614085.926	215.124	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastng (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1410	8/21/2001	7716899.137	614080.899	215.340	Cross Section in Water
1411	8/21/2001	7716896.672	614075.735	215.092	Cross Section in Water
1412	8/21/2001	7716895.360	614070.886	214.956	Cross Section in Water
1413	8/21/2001	7716893.312	614066.760	213.351	Cross Section in Water
1414	8/21/2001	7716892.581	614062.977	212.864	Cross Section in Water
1415	8/21/2001	7716891.360	614060.768	212.419	Cross Section in Water
1416	8/21/2001	7716890.918	614058.647	213.645	Cross Section in Water
1417	8/21/2001	7716889.388	614056.907	212.753	Cross Section in Water
1418	8/21/2001	7716887.163	614052.088	213.263	Cross Section in Water
1419	8/21/2001	7716885.914	614048.556	214.071	Cross Section in Water
1420	8/21/2001	7716883.928	614043.093	215.343	Cross Section in Water
1421	8/21/2001	7716881.408	614038.796	215.686	Cross Section in Water
1422	8/21/2001	7716879.692	614033.313	216.055	Cross Section in Water
1423	8/21/2001	7716875.581	614027.548	215.741	Cross Section in Water
1424	8/21/2001	7716871.680	614021.062	215.611	Cross Section in Water
1425	8/21/2001	7716868.135	614014.380	215.280	Cross Section in Water
1426	8/21/2001	7716864.660	614008.399	214.644	Cross Section in Water
1427	8/21/2001	7716862.059	614001.868	214.619	Cross Section in Water
1428	8/21/2001	7716862.188	614001.672	214.622	Cross Section in Water
1429	8/21/2001	7716859.758	613995.726	214.657	Cross Section in Water
1430	8/21/2001	7716856.992	613988.879	214.936	Cross Section in Water
1431	8/21/2001	7716854.427	613983.427	214.970	Cross Section in Water
1432	8/21/2001	7716851.251	613976.815	214.972	Cross Section in Water
1433	8/21/2001	7716848.930	613970.961	214.455	Cross Section in Water
1434	8/21/2001	7716846.925	613965.400	214.097	Cross Section in Water
1435	8/21/2001	7716846.827	613961.209	214.175	Cross Section in Water
1436	8/21/2001	7716844.342	613955.591	213.561	Cross Section in Water
1437	8/21/2001	7716843.691	613951.072	213.808	Cross Section in Water
1438	8/21/2001	7716841.376	613944.772	214.009	Cross Section in Water
1439	8/21/2001	7716841.169	613936.944	213.916	Cross Section in Water
1440	8/21/2001	7716838.188	613929.394	214.215	Cross Section in Water
1441	8/21/2001	7716836.172	613921.272	213.796	Cross Section in Water
1442	8/21/2001	7716834.335	613913.600	214.068	Cross Section in Water
1443	8/21/2001	7716830.576	613904.493	213.459	Cross Section in Water
1444	8/21/2001	7716829.420	613898.888	213.584	Cross Section in Water
1445	8/21/2001	7716828.199	613894.868	215.282	Cross Section in Water
1446	8/21/2001	7716826.987	613891.660	216.418	Edge of Water
1447	8/21/2001	7716825.286	613888.646	217.723	Cross Section
1448	8/21/2001	7716823.764	613884.496	219.762	Cross Section
1449	8/21/2001	7716822.715	613881.815	221.808	Cross Section
1450	8/21/2001	7716822.090	613879.018	223.403	Cross Section
1451	8/21/2001	7716820.831	613876.772	225.601	Cross Section
1452	8/21/2001	7716819.863	613874.793	229.838	Cross Section
1453	8/21/2001	7716819.182	613867.670	230.194	Cross Section
1454	8/21/2001	7716819.760	613861.804	230.115	Cross Section
1455	8/21/2001	7716818.944	613858.039	230.398	Cross Section
1456	8/21/2001	7716820.390	613850.143	230.309	Cross Section
1457	8/21/2001	7716815.268	613843.595	229.451	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1458	8/21/2001	7716810.045	613837.666	228.909	Cross Section
1459	8/21/2001	7716797.735	613835.166	229.554	Cross Section
1460	8/21/2001	7716788.706	613832.504	229.799	Cross Section
1461	8/21/2001	7716786.924	613820.195	229.781	Cross Section
1462	8/21/2001	7716771.379	613810.857	229.683	Cross Section
1463	8/21/2001	7716759.916	613803.104	230.513	Cross Section
4002	8/27 & 8/28	7725000.640	601157.760	313.300	Brass Cap at Gaging Station
4003	8/27 & 8/28	7724834.610	601213.480	306.500	MAG Nail in Rock Near Gaging Station
4011	8/27 & 8/28	7721535.310	601970.710	281.700	Mag Nail
4012	8/27 & 8/28	7721872.230	602848.160	273.300	IR?
4013	8/27 & 8/28	7722785.460	603742.610	272.100	IR?
4014	8/27 & 8/28	7722491.300	604447.480	271.800	IR?
4015	8/27 & 8/28	7721814.730	604608.270	269.700	IR?
4016	8/27 & 8/28	7721040.030	604132.460	262.900	IR?
4017	8/27 & 8/28	7718717.440	605652.640	261.800	IR?
5000	8/27 & 8/28	7722329.750	603367.778	270.492	SET NAIL
5001	8/27 & 8/28	7722568.699	603150.218	283.316	SET IR CNRB
5002	8/27 & 8/28	7722291.687	603402.485	286.995	SET IR CNLB
5010	8/27 & 8/28	7722580.859	603138.915	283.185	GS
5011	8/27 & 8/28	7722562.253	603155.877	282.371	GS
5012	8/27 & 8/28	7722558.412	603158.914	280.827	BREAK
5013	8/27 & 8/28	7722540.593	603176.776	276.165	BREAK
5014	8/27 & 8/28	7722534.402	603182.293	274.177	BREAK
5015	8/27 & 8/28	7722532.342	603184.670	272.943	BREAK
5016	8/27 & 8/28	7722524.996	603189.406	270.857	BREAK
5017	8/27 & 8/28	7722508.865	603204.120	271.408	BREAK
5018	8/27 & 8/28	7722501.156	603210.904	270.810	BREAK
5019	8/27 & 8/28	7722489.561	603220.953	270.371	EDGE WATER
5020	8/27 & 8/28	7722466.784	603241.670	269.086	IN WATER
5021	8/27 & 8/28	7722460.923	603247.844	268.532	IN WATER
5022	8/27 & 8/28	7722441.686	603265.009	268.626	IN WATER
5023	8/27 & 8/28	7722429.024	603276.281	267.689	IN WATER
5024	8/27 & 8/28	7722420.382	603286.276	267.213	IN WATER
5025	8/27 & 8/28	7722403.175	603297.710	266.431	IN WATER
5026	8/27 & 8/28	7722385.012	603316.823	265.268	IN WATER
5027	8/27 & 8/28	7722375.569	603329.759	265.206	IN WATER
5028	8/27 & 8/28	7722362.124	603338.173	267.864	IN WATER
5029	8/27 & 8/28	7722358.928	603340.337	268.402	IN WATER
5030	8/27 & 8/28	7722354.543	603344.103	267.878	IN WATER
5031	8/27 & 8/28	7722350.254	603348.407	267.948	IN WATER
5032	8/27 & 8/28	7722346.720	603351.838	268.171	IN WATER
5033	8/27 & 8/28	7722345.576	603353.327	266.808	IN WATER
5034	8/27 & 8/28	7722340.031	603357.761	268.356	IN WATER
5035	8/27 & 8/28	7722314.494	603381.598	270.281	EDGE WATER
5036	8/27 & 8/28	7722308.759	603387.066	271.805	BREAK
5037	8/27 & 8/28	7722305.177	603390.697	273.151	BREAK
5038	8/27 & 8/28	7722300.811	603394.428	276.736	BREAK
5039	8/27 & 8/28	7722296.362	603398.704	286.554	TOP BANK

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
6000	8/27 & 8/28	7722558.712	604390.341	270.323	SET IR IN MUD STONE .3 ABOVE WL
6001	8/27 & 8/28	7722580.495	604421.130	308.949	SET IR W CAP CLRB
6002	8/27 & 8/28	7722400.623	604010.483	275.531	SET IR W P TAG
6003	8/27 & 8/28	7722807.651	604714.359	277.006	SET IR W CAP CLLB
6010	8/27 & 8/28	7722577.020	604416.154	300.635	BREAK
6011	8/27 & 8/28	7722572.434	604411.303	292.651	BREAK
6012	8/27 & 8/28	7722568.019	604404.338	284.634	TOP BANK
6013	8/27 & 8/28	7722565.212	604400.676	276.465	BREAK
6014	8/27 & 8/28	7722560.793	604394.364	269.899	EDGE WATER
6015	8/27 & 8/28	7722554.237	604378.343	265.532	IN WATER
6016	8/27 & 8/28	7722548.245	604367.422	264.416	IN WATER
6017	8/27 & 8/28	7722544.320	604358.108	264.055	IN WATER
6018	8/27 & 8/28	7722543.505	604355.408	263.971	EDGE MUDSTONE
6019	8/27 & 8/28	7722541.714	604352.382	259.976	IN WATER
6020	8/27 & 8/28	7722530.184	604335.977	250.286	IN WATER
6021	8/27 & 8/28	7722529.357	604319.849	251.934	IN WATER
6022	8/27 & 8/28	7722520.282	604293.071	260.797	IN WATER
6023	8/27 & 8/28	7722521.060	604278.306	265.286	IN WATER
6024	8/27 & 8/28	7722515.033	604275.376	266.588	IN WATER
6025	8/27 & 8/28	7722510.661	604269.010	268.860	IN WATER
6026	8/27 & 8/28	7722504.191	604259.340	269.928	EDGE WATER
6027	8/27 & 8/28	7722499.431	604246.722	271.545	GROUND
6028	8/27 & 8/28	7722493.942	604235.268	272.462	GROUND
6029	8/27 & 8/28	7722490.140	604224.406	273.057	GROUND
6030	8/27 & 8/28	7722484.158	604211.523	273.550	GROUND
6031	8/27 & 8/28	7722477.638	604196.688	273.698	GROUND
6032	8/27 & 8/28	7722472.521	604183.763	273.932	GROUND
6033	8/27 & 8/28	7722467.179	604171.240	273.376	GROUND
6034	8/27 & 8/28	7722460.783	604155.815	273.627	GROUND
6035	8/27 & 8/28	7722455.187	604141.235	273.164	GROUND
6036	8/27 & 8/28	7722450.173	604129.998	273.219	GROUND
6037	8/27 & 8/28	7722447.003	604121.249	273.572	GROUND
6038	8/27 & 8/28	7722442.810	604111.851	274.357	GROUND
6039	8/27 & 8/28	7722437.507	604099.875	274.812	GROUND
6040	8/27 & 8/28	7722433.863	604090.655	274.219	GROUND
6041	8/27 & 8/28	7722431.322	604083.589	274.274	GROUND
6042	8/27 & 8/28	7722427.675	604074.821	274.574	GROUND
6043	8/27 & 8/28	7722423.682	604065.324	274.543	GROUND
6044	8/27 & 8/28	7722417.524	604050.359	275.648	GROUND
6045	8/27 & 8/28	7722412.751	604039.567	275.933	GROUND
6046	8/27 & 8/28	7722406.946	604026.163	275.716	GROUND
6047	8/27 & 8/28	7722403.234	604017.492	273.719	GROUND
6052	8/27 & 8/28	7722567.642	604454.710	270.295	GROUND
6053	8/27 & 8/28	7722569.832	604464.508	269.703	GROUND
6054	8/27 & 8/28	7722570.025	604472.463	268.188	GROUND
6055	8/27 & 8/28	7722571.529	604482.285	265.363	GROUND
6056	8/27 & 8/28	7722572.761	604492.820	265.280	GROUND
6057	8/27 & 8/28	7722575.809	604507.352	265.567	GROUND

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
6058	8/27 & 8/28	7722577.991	604519.065	265.666	GROUND
6059	8/27 & 8/28	7722579.711	604530.957	266.235	GROUND
6060	8/27 & 8/28	7722581.599	604543.131	267.630	GROUND
6061	8/27 & 8/28	7722583.538	604554.166	267.696	GROUND
6062	8/27 & 8/28	7722584.496	604564.238	267.974	GROUND
6063	8/27 & 8/28	7722586.497	604574.342	266.667	GROUND
6064	8/27 & 8/28	7722587.537	604583.702	267.920	GROUND
6065	8/27 & 8/28	7722589.037	604596.217	267.885	GROUND
6066	8/27 & 8/28	7722590.822	604605.961	267.898	GROUND
6067	8/27 & 8/28	7722591.802	604615.016	268.053	GROUND
6068	8/27 & 8/28	7722594.119	604626.096	268.076	GROUND
6069	8/27 & 8/28	7722594.650	604637.542	268.251	GROUND
6070	8/27 & 8/28	7722595.969	604647.254	268.674	GROUND
6071	8/27 & 8/28	7722596.910	604654.688	266.827	GROUND
6072	8/27 & 8/28	7722599.144	604668.718	263.114	GROUND
6073	8/27 & 8/28	7722601.240	604679.933	263.070	GROUND
6074	8/27 & 8/28	7722603.606	604691.168	263.830	GROUND
6075	8/27 & 8/28	7722603.982	604701.538	264.734	EDGE OLD BANK
6076	8/27 & 8/28	7722607.201	604711.799	276.556	TOP BANK
16000	8/27 & 8/28	7722151.035	603797.973	282.220	IR AL CAP 6003
16001	8/27 & 8/28	7722351.691	603967.496	275.510	GRD
16002	8/27 & 8/28	7722358.653	603973.218	275.220	GRD
16003	8/27 & 8/28	7722362.107	603975.609	274.990	GRD
16004	8/27 & 8/28	7722365.564	603978.692	275.460	GRD
16005	8/27 & 8/28	7722370.192	603982.711	275.090	GRD
16006	8/27 & 8/28	7722379.675	603991.402	274.980	GRD
16007	8/27 & 8/28	7722384.287	603996.300	275.680	GRD
16008	8/27 & 8/28	7722392.456	604003.296	274.720	GRD
16009	8/27 & 8/28	7722403.009	604017.415	273.610	GRD CK 6047
16010	8/27 & 8/28	7722151.119	603798.044	282.220	SET IR W CAP CLLB
16011	8/27 & 8/28	7722400.623	604010.483	275.530	SET IR W P TAG
16052	8/27 & 8/28	7722351.656	603967.760	275.500	GROUND
16053	8/27 & 8/28	7722343.575	603961.802	274.910	GROUND
16054	8/27 & 8/28	7722338.210	603955.925	273.400	GROUND
16055	8/27 & 8/28	7722330.631	603949.499	270.570	GROUND
16056	8/27 & 8/28	7722322.791	603942.356	270.490	GROUND
16057	8/27 & 8/28	7722310.957	603933.387	270.780	GROUND
16058	8/27 & 8/28	7722301.625	603925.979	270.880	GROUND
16059	8/27 & 8/28	7722292.526	603918.132	271.440	GROUND
16060	8/27 & 8/28	7722283.114	603910.182	272.840	GROUND
16061	8/27 & 8/28	7722274.411	603903.126	272.910	GROUND
16062	8/27 & 8/28	7722267.080	603896.154	273.180	GROUND
16063	8/27 & 8/28	7722258.942	603889.840	271.880	GROUND
16064	8/27 & 8/28	7722252.016	603883.458	273.130	GROUND
16065	8/27 & 8/28	7722242.673	603874.997	273.090	GROUND
16066	8/27 & 8/28	7722234.934	603868.814	273.110	GROUND
16067	8/27 & 8/28	7722228.254	603862.623	273.260	GROUND
16068	8/27 & 8/28	7722219.236	603855.781	273.290	GROUND

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
16069	8/27 & 8/28	7722211.327	603847.491	273.460	GROUND
16070	8/27 & 8/28	7722203.960	603841.026	273.880	GROUND
16071	8/27 & 8/28	7722198.373	603836.033	272.040	GROUND
16072	8/27 & 8/28	7722187.482	603826.909	268.320	GROUND
16073	8/27 & 8/28	7722178.543	603819.821	268.280	GROUND
16074	8/27 & 8/28	7722169.387	603812.893	269.040	GROUND
16075	8/27 & 8/28	7722162.299	603805.313	269.940	EDGE OLD BANK
16076	8/27 & 8/28	7722153.139	603799.681	281.770	TOP BANK
7000	8/27 & 8/28	7720210.103	604829.478	264.259	SET IR W/CAP CIMP 0.2 AG
7001	8/27 & 8/28	7720243.675	604922.157	271.193	SET NATIVE STOB 1.2 AG
7002	8/27 & 8/28	7720307.428	605097.580	264.459	SET IR C/RB
7003	8/27 & 8/28	7720101.575	604528.252	270.523	SET IR CILB
7010	8/27 & 8/28	7720246.864	604931.212	270.227	GROUND
7011	8/27 & 8/28	7720249.150	604936.850	269.630	TOP BANK
7012	8/27 & 8/28	7720250.599	604940.315	262.591	BOT BANK
7013	8/27 & 8/28	7720281.310	604966.223	261.695	GROUND
7014	8/27 & 8/28	7720266.079	604973.327	261.816	EDGE WATER
7015	8/27 & 8/28	7720271.457	604986.395	261.248	IN WATER
7016	8/27 & 8/28	7720278.592	605000.877	260.706	IN WATER
7017	8/27 & 8/28	7720283.247	605009.430	260.374	IN WATER
7018	8/27 & 8/28	7720282.767	605026.233	260.345	IN WATER
7019	8/27 & 8/28	7720284.522	605040.542	260.678	IN WATER
7020	8/27 & 8/28	7720289.150	605051.400	261.639	EDGE WATER
7021	8/27 & 8/28	7720239.406	604911.405	269.699	GROUND
7022	8/27 & 8/28	7720235.411	604900.802	268.563	GROUND
7023	8/27 & 8/28	7720230.588	604891.427	268.721	GROUND
7024	8/27 & 8/28	7720227.527	604880.369	269.109	GROUND
7025	8/27 & 8/28	7720225.375	604870.715	268.901	GROUND
7026	8/27 & 8/28	7720221.441	604857.509	266.643	GROUND
7027	8/27 & 8/28	7720216.295	604846.386	264.186	GROUND
7028	8/27 & 8/28	7720212.541	604836.278	263.563	GROUND
7029	8/27 & 8/28	7720209.120	604826.421	263.911	GROUND
7030	8/27 & 8/28	7720204.096	604812.928	261.663	GROUND
7031	8/27 & 8/28	7720199.455	604800.195	260.473	GROUND
7032	8/27 & 8/28	7720194.234	604785.854	259.384	GROUND
7033	8/27 & 8/28	7720189.795	604773.381	259.619	GROUND
7034	8/27 & 8/28	7720185.710	604764.204	258.023	GROUND
7035	8/27 & 8/28	7720181.731	604751.664	258.349	GROUND
7036	8/27 & 8/28	7720175.078	604734.585	258.277	GROUND
7037	8/27 & 8/28	7720168.487	604714.189	258.150	EDGE WATER
7038	8/27 & 8/28	7720162.381	604698.013	257.497	IN WATER
7039	8/27 & 8/28	7720155.925	604681.857	256.876	IN WATER
7040	8/27 & 8/28	7720152.938	604671.268	256.033	IN WATER
7041	8/27 & 8/28	7720150.168	604660.737	254.691	IN WATER
7042	8/27 & 8/28	7720146.118	604649.539	254.540	IN WATER
7043	8/27 & 8/28	7720143.599	604637.329	255.309	IN WATER
7044	8/27 & 8/28	7720137.343	604623.809	255.766	IN WATER
7045	8/27 & 8/28	7720133.313	604615.300	257.387	IN WATER

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
7046	8/27 & 8/28	7720129.050	604606.061	258.382	EDGE WATER
7047	8/27 & 8/28	7720123.204	604591.782	258.703	GROUND
7048	8/27 & 8/28	7720116.613	604574.481	258.905	GROUND
7049	8/27 & 8/28	7720110.307	604562.513	259.100	GROUND
7050	8/27 & 8/28	7720108.838	604551.322	259.410	GROUND
7051	8/27 & 8/28	7720101.267	604530.490	270.489	TOP BANK
7052	8/27 & 8/28	7720090.536	604510.248	270.555	GROUND
7053	8/27 & 8/28	7720292.863	605058.098	262.638	GROUND
7054	8/27 & 8/28	7720297.620	605071.244	264.732	GROUND
7055	8/27 & 8/28	7720302.806	605086.386	264.659	GROUND
7056	8/27 & 8/28	7720307.124	605097.891	264.021	GROUND
7057	8/27 & 8/28	7720311.816	605109.790	263.292	GROUND
7058	8/27 & 8/28	7720314.438	605116.508	263.576	GROUND
7059	8/27 & 8/28	7720317.894	605125.182	265.024	WOOD DEBRIS
7060	8/27 & 8/28	7720396.388	605213.117	257.725	EDGE WATER
7061	8/27 & 8/28	7720399.998	605221.556	255.362	IN WATER
7062	8/27 & 8/28	7720403.644	605223.510	253.371	MUD STONE
8000	8/27 & 8/28	7725025.169	601149.937	316.057	SET MAG NAIL
8001	8/27 & 8/28	7725229.313	600970.744	307.824	SET IR CULB
8002	8/27 & 8/28	7725294.230	601321.671	313.293	SET IR CURB
8003	8/27 & 8/28	7725235.162	600966.103	307.019	SET MAG NAIL IN GRAV
8010	8/27 & 8/28	7725231.351	600973.186	306.511	GROUND
8011	8/27 & 8/28	7725236.024	600979.543	304.353	GROUND
8012	8/27 & 8/28	7725241.182	600987.188	303.435	EDGE WATER
8013	8/27 & 8/28	7725245.747	600996.127	302.307	IN WATER
8014	8/27 & 8/28	7725250.795	601003.450	302.291	IN WATER
8015	8/27 & 8/28	7725256.822	601011.716	301.183	IN WATER
8016	8/27 & 8/28	7725266.304	601019.951	300.754	IN WATER
8017	8/27 & 8/28	7725271.939	601034.226	301.031	IN WATER
8018	8/27 & 8/28	7725279.643	601041.386	301.083	IN WATER
8019	8/27 & 8/28	7725283.794	601051.833	302.071	IN WATER
8020	8/27 & 8/28	7725291.668	601068.906	302.903	IN WATER
8021	8/27 & 8/28	7725238.878	600989.829	302.863	EDGE WATER
8022	8/27 & 8/28	7725240.468	601001.293	302.863	IN WATER
8023	8/27 & 8/28	7725242.646	601014.183	301.795	IN WATER
8024	8/27 & 8/28	7725246.845	601025.315	300.626	IN WATER
8025	8/27 & 8/28	7725247.458	601046.485	300.502	IN WATER
8026	8/27 & 8/28	7725251.244	601058.962	300.731	IN WATER
8027	8/27 & 8/28	7725252.331	601069.392	301.257	IN WATER
8028	8/27 & 8/28	7725255.492	601081.406	300.993	IN WATER
8029	8/27 & 8/28	7725257.531	601095.061	301.963	IN WATER
8030	8/27 & 8/28	7725258.118	601109.959	302.040	IN WATER
8031	8/27 & 8/28	7725261.313	601122.252	302.118	IN WATER
8032	8/27 & 8/28	7725262.654	601133.386	302.113	IN WATER
8033	8/27 & 8/28	7725265.423	601146.468	302.393	IN WATER
8034	8/27 & 8/28	7725268.013	601160.375	302.103	IN WATER
8035	8/27 & 8/28	7725269.987	601174.015	302.647	IN WATER
8036	8/27 & 8/28	7725271.176	601183.064	303.182	IN WATER

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastng (ft)	Northng (ft)	Elevation (ft) NAVD88	Comment
8037	8/27 & 8/28	7725271.806	601188.738	304.115	EDGE WATER
8038	8/27 & 8/28	7725272.969	601198.550	305.373	GRDUND
8039	8/27 & 8/28	7725275.138	601211.578	306.243	GRDUND
8040	8/27 & 8/28	7725277.576	601225.771	306.012	GRDUND
8041	8/27 & 8/28	7725280.967	601238.514	305.382	GRDUND
8042	8/27 & 8/28	7725281.646	601253.104	305.865	GRDUND
8043	8/27 & 8/28	7725285.092	601267.881	306.820	GRDUND
8044	8/27 & 8/28	7725287.160	601282.739	307.101	GRDUND
8045	8/27 & 8/28	7725289.143	601295.176	308.642	GRDUND
8046	8/27 & 8/28	7725289.734	601306.572	309.953	GRDUND
8047	8/27 & 8/28	7725291.848	601317.439	311.206	GRDUND
10000	8/27 & 8/28	7722301.090	603394.009	0.000	CNLB
10001	8/27 & 8/28	7722550.663	603167.106	0.000	CNRB
10002	8/27 & 8/28	7722130.188	603780.223	0.000	CLLB
10003	8/27 & 8/28	7722401.050	604010.240	0.000	CLMP
10004	8/27 & 8/28	7722567.056	604402.128	0.000	CLRB
10005	8/27 & 8/28	7720099.789	604524.862	0.000	CILB
10006	8/27 & 8/28	7720372.607	605276.960	0.000	CIRB
10007	8/27 & 8/28	7720099.790	604524.860	0.000	CILB
10008	8/27 & 8/28	7720372.610	605276.960	0.000	CIRB
10009	8/27 & 8/28	7725237.780	600982.240	0.000	CULB
10010	8/27 & 8/28	7725286.370	601275.370	0.000	CURB
1071	8/30/2001	7718226.191	610066.898	235.864	BAD PDINT
1072	8/30/2001	7718226.157	610067.657	235.838	Magnail for interim point on line CD
1073	8/30/2001	7718521.090	610018.434	245.733	Endpoint of CDLB IRWCAP
1074	8/30/2001	7718538.813	610015.422	248.010	Cross Section
1075	8/30/2001	7718529.136	610017.075	247.639	Cross Section
1076	8/30/2001	7718519.327	610018.720	245.217	Cross Section
1077	8/30/2001	7718508.327	610020.829	240.295	Cross Section
1078	8/30/2001	7718500.583	610021.676	237.483	Cross Section
1079	8/30/2001	7718498.245	610021.864	234.487	Edge of Water
1080	8/30/2001	7718484.129	610023.546	229.334	Cross Section in water
1081	8/30/2001	7718233.219	610066.341	234.184	Cross Section in water
1082	8/30/2001	7718250.757	610063.519	233.504	Cross Section in water
1083	8/30/2001	7718266.806	610060.677	233.322	Cross Section in water
1084	8/30/2001	7718287.335	610057.095	233.030	Cross Section in water
1085	8/30/2001	7718306.679	610053.772	232.976	Cross Section in water
1086	8/30/2001	7718326.294	610051.291	232.706	Cross Section in water
1087	8/30/2001	7718345.389	610046.896	232.925	Cross Section in water
1088	8/30/2001	7718366.279	610044.342	232.149	Cross Section in water
1089	8/30/2001	7718386.753	610040.432	232.253	Cross Section in water
1090	8/30/2001	7718403.471	610037.740	232.383	Cross Section in water
1091	8/30/2001	7718421.875	610034.596	231.936	Cross Section in water
1092	8/30/2001	7718441.990	610032.194	231.413	Cross Section in water
1093	8/30/2001	7718456.940	610029.063	230.681	Cross Section in water
1094	8/30/2001	7718473.826	610025.920	230.568	Cross Section in water
1095	8/30/2001	7718068.138	610093.988	241.480	Endpoint of CDRB IRWCAP
1096	8/30/2001	7718029.322	610100.540	245.037	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
1097	8/30/2001	7718056.703	610096.073	241.825	Cross Section
1098	8/30/2001	7718075.464	610091.807	239.213	Cross Section
1099	8/30/2001	7718087.300	610089.348	237.686	Cross Section
1100	8/30/2001	7718089.578	610090.931	236.167	Top of Bank
1101	8/30/2001	7718102.626	610088.167	231.867	Edge of Water
1102	8/30/2001	7718110.873	610088.233	230.269	Cross Section in water
1103	8/30/2001	7718123.244	610085.227	230.410	Cross Section in water
1104	8/30/2001	7718135.228	610083.433	231.811	Edge of Water
1105	8/30/2001	7718146.499	610081.223	237.544	Cross Section
1106	8/30/2001	7718167.738	610077.447	238.323	Cross Section
1107	8/30/2001	7718171.491	610077.125	237.561	Cross Section
1108	8/30/2001	7718188.087	610074.334	237.438	Cross Section
1109	8/30/2001	7718197.043	610072.590	238.432	Cross Section
1110	8/30/2001	7718207.657	610071.300	237.928	Cross Section
1111	8/30/2001	7718470.751	609730.576	241.408	Cross Section
1112	8/30/2001	7718224.610	612855.891	226.882	Inkspot on rock interim point on line CC
1113	8/30/2001	7718458.710	612927.545	238.621	Endpoint CCRB IRWCAP
1114	8/30/2001	7718478.983	612934.117	239.536	Cross Section
1115	8/30/2001	7718450.699	612925.378	248.016	Cross Section
1116	8/30/2001	7718238.005	612859.843	226.321	Edge of Water
1117	8/30/2001	7718250.141	612863.515	225.410	Cross Section in water
1118	8/30/2001	7718261.048	612866.935	224.497	Cross Section in water
1119	8/30/2001	7718270.422	612869.770	223.291	Cross Section in water
1120	8/30/2001	7718283.920	612873.881	222.467	Cross Section in water
1121	8/30/2001	7718298.769	612878.395	221.720	Cross Section in water
1122	8/30/2001	7718311.424	612882.237	221.162	Cross Section in water
1123	8/30/2001	7718335.781	612889.544	220.713	Cross Section in water
1124	8/30/2001	7718354.872	612897.029	220.525	Cross Section in water
1125	8/30/2001	7718371.090	612901.247	221.407	Cross Section in water
1126	8/30/2001	7718372.083	612901.436	221.317	Cross Section in water
1127	8/30/2001	7718379.246	612903.367	221.811	Cross Section in water
1128	8/30/2001	7718392.317	612906.270	223.193	Cross Section in water
1129	8/30/2001	7718398.141	612908.196	224.290	Cross Section in water
1130	8/30/2001	7718401.160	612910.069	226.849	Edge of Water
1131	8/30/2001	7718410.239	612912.812	227.816	Cross Section
1132	8/30/2001	7718418.489	612914.006	232.350	Cross Section
1133	8/30/2001	7718218.432	612853.916	227.361	Cross Section
1134	8/30/2001	7718196.624	612847.560	228.667	Cross Section
1135	8/30/2001	7718182.203	612842.734	229.761	Cross Section
1136	8/30/2001	7718172.324	612839.900	230.437	Cross Section
1137	8/30/2001	7718155.236	612834.972	230.217	Cross Section
1138	8/30/2001	7718138.851	612829.881	230.072	Cross Section
1139	8/30/2001	7718125.207	612825.441	229.951	Cross Section
1140	8/30/2001	7718110.655	612821.146	230.060	Cross Section
1141	8/30/2001	7718097.001	612816.629	230.288	Cross Section
1142	8/30/2001	7718093.493	612815.538	229.503	Cross Section
1143	8/30/2001	7718077.496	612811.028	229.025	Cross Section
1144	8/30/2001	7718067.883	612808.062	229.905	Endpoint CCLB IRWCAP

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastng (ft)	Northng (ft)	Elevation (ft) NAVD88	Comment
1145	8/30/2001	7718054.534	612804.077	228.912	Cross Section
1146	8/30/2001	7718393.566	613089.759	237.148	Check of Backsite CP4027
1147	8/30/2001	7716733.589	614128.269	216.268	Inkspot on rock interim pt
1148	8/30/2001	7716595.570	613983.495	229.674	Endpoint CBLB IRWCAP
1149	8/30/2001	7716605.012	613993.344	229.540	Top of Bank
1150	8/30/2001	7716608.915	613998.129	223.548	Cross Section
1151	8/30/2001	7716621.180	614010.451	215.615	Edge of Water
1152	8/30/2001	7716629.192	614018.541	212.180	Cross Section in water
1153	8/30/2001	7716641.807	614031.132	212.624	Cross Section in water
1154	8/30/2001	7716651.306	614041.533	212.699	Cross Section in water
1155	8/30/2001	7716662.522	614052.367	213.131	Cross Section in water
1156	8/30/2001	7716671.743	614064.325	212.981	Cross Section in water
1157	8/30/2001	7716682.983	614075.379	213.361	Cross Section in water
1158	8/30/2001	7716696.889	614089.902	214.370	Cross Section in water
1159	8/30/2001	7716713.944	614106.925	215.356	Edge of Water
1160	8/30/2001	7716726.277	614120.625	215.939	Cross Section
1161	8/30/2001	7716747.442	614142.723	216.001	Cross Section
1162	8/30/2001	7716760.365	614156.516	216.410	Cross Section
1163	8/30/2001	7716774.083	614170.587	219.418	Cross Section
1164	8/30/2001	7716787.875	614184.783	223.217	Cross Section
1165	8/30/2001	7716801.328	614199.106	225.585	Cross Section
1166	8/30/2001	7716813.935	614212.645	226.247	Cross Section
1167	8/30/2001	7716824.392	614223.248	224.707	Cross Section
1168	8/30/2001	7716832.810	614231.894	224.158	Cross Section
1169	8/30/2001	7716842.447	614242.411	225.194	Cross Section
1170	8/30/2001	7716850.158	614250.499	225.496	Cross Section
1171	8/30/2001	7716855.955	614256.629	228.952	Cross Section
1172	8/30/2001	7716861.767	614262.546	230.441	Cross Section
1173	8/30/2001	7716862.032	614262.814	230.668	Endpoint CBRB IRWCAP
1174	8/30/2001	7716904.886	614095.772	217.001	Check of Backsite CP4029
2000	8/31/2001	7721549.196	599744.659	292.099	BAD POINT
2001	8/31/2001	7721520.514	599801.809	292.429	BAD POINT
2002	8/31/2001	7721549.197	599744.649	291.871	Interim setup on CR (CRLB Endpoint)
2003	8/31/2001	7721520.526	599801.788	292.209	Check backsite of 4009
2004	8/31/2001	7721557.349	599754.402	291.162	Cross Section
2005	8/31/2001	7721563.963	599762.252	290.594	Edge of Water
2006	8/31/2001	7721571.323	599771.471	287.204	Cross Section in water
2007	8/31/2001	7721581.228	599782.204	280.174	Cross Section in water
2008	8/31/2001	7721604.187	599805.797	269.845	Cross Section in water
2009	8/31/2001	7721605.159	599808.632	269.482	Cross Section in water
2010	8/31/2001	7721626.038	599833.987	273.430	Cross Section in water
2011	8/31/2001	7721641.899	599856.452	283.441	Cross Section in water
2012	8/31/2001	7721651.587	599867.146	287.421	Cross Section in water
2013	8/31/2001	7721668.214	599886.499	289.904	Cross Section in water
2014	8/31/2001	7721682.592	599904.200	289.993	Cross Section in water
2015	8/31/2001	7721694.410	599918.008	290.127	Cross Section in water
2016	8/31/2001	7721708.153	599933.829	290.125	Cross Section in water
2017	8/31/2001	7721726.993	599956.675	291.229	Edge of Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
2018	8/31/2001	7721735.168	599966.299	292.894	Cross Section
2019	8/31/2001	7721743.567	599976.367	298.028	Top of Bank
2020	8/31/2001	7721752.423	599987.011	298.694	Cross Section
2021	8/31/2001	7721755.713	599990.905	299.064	Cross Section
2022	8/31/2001	7721758.456	599994.378	299.670	Cross Section
2023	8/31/2001	7721759.923	599996.578	301.530	Cross Section
2024	8/31/2001	7721760.829	599998.067	305.199	Cross Section
2025	8/31/2001	7721766.174	600004.240	306.637	Cross Section
2026	8/31/2001	7721769.249	600008.143	308.396	Cross Section
2027	8/31/2001	7721771.990	600009.751	309.243	Cross Section
2028	8/31/2001	7721778.921	600019.163	311.607	Iron rod at CRRB Endpoint
2029	8/31/2001	7721520.531	599801.805	292.208	Check backsite of 4009
2030	8/31/2001	7721436.576	601821.239	280.918	Ink spot interim point on CP
2031	8/31/2001	7721422.584	601823.389	280.860	Cross Section
2032	8/31/2001	7721403.950	601826.252	281.773	Cross Section
2033	8/31/2001	7721389.984	601828.398	280.766	Cross Section
2034	8/31/2001	7721353.970	601833.932	279.068	Cross Section
2035	8/31/2001	7721346.963	601835.009	284.198	Top of Bank
2036	8/31/2001	7721329.890	601837.651	284.715	Cross Section
2037	8/31/2001	7721315.264	601840.044	284.309	Cross Section
2038	8/31/2001	7721302.998	601841.634	282.519	Cross Section
2039	8/31/2001	7721288.970	601843.566	281.126	Cross Section
2040	8/31/2001	7721279.872	601845.462	279.462	Cross Section
2041	8/31/2001	7721271.919	601846.852	278.921	Cross Section
2042	8/31/2001	7721264.326	601847.135	278.963	Cross Section
2043	8/31/2001	7721255.634	601849.099	279.091	Cross Section
2044	8/31/2001	7721247.924	601850.211	279.285	Cross Section
2045	8/31/2001	7721244.312	601850.695	279.955	Cross Section
2046	8/31/2001	7721240.332	601851.600	281.245	Cross Section
2047	8/31/2001	7721230.115	601852.965	281.278	Cross Section
2048	8/31/2001	7721224.656	601853.581	280.488	Cross Section
2049	8/31/2001	7721221.283	601854.004	283.594	Cross Section
2050	8/31/2001	7721218.768	601854.231	285.019	Cross Section
2051	8/31/2001	7721210.386	601856.283	286.376	Cross Section
2052	8/31/2001	7721205.716	601857.082	287.584	Cross Section
2053	8/31/2001	7721202.458	601856.996	288.869	Cross Section
2054	8/31/2001	7721195.666	601858.394	291.170	Cross Section
2055	8/31/2001	7721185.097	601859.995	291.909	Cross Section
2056	8/31/2001	7721178.439	601860.884	291.890	Iron rod at CPLB Endpoint
2057	8/31/2001	7721451.974	601818.768	280.247	Cross Section
2058	8/31/2001	7721469.635	601816.345	279.880	Cross Section
2059	8/31/2001	7721494.100	601812.484	280.028	Cross Section
2060	8/31/2001	7721513.750	601809.524	279.080	Cross Section
2061	8/31/2001	7721532.762	601806.911	279.254	Cross Section
2062	8/31/2001	7721552.873	601803.693	278.629	Cross Section
2063	8/31/2001	7721570.692	601800.924	277.900	Edge of Water
2064	8/31/2001	7721590.167	601797.211	276.575	Cross Section in water
2065	8/31/2001	7721604.723	601796.097	276.311	Cross Section in water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
2066	8/31/2001	7721607.105	601794.024	275.573	Cross Section in water
2067	8/31/2001	7721606.622	601790.029	275.033	Cross Section in water
2068	8/31/2001	7721633.529	601791.712	276.815	Cross Section in water
2069	8/31/2001	7721639.213	601790.860	276.752	Cross Section in water
2070	8/31/2001	7721644.573	601789.507	276.633	Cross Section in water
2071	8/31/2001	7721649.931	601788.605	278.282	Edge of Water
2072	8/31/2001	7721654.631	601787.376	280.552	Cross Section
2073	8/31/2001	7721658.147	601786.737	282.023	Cross Section
2074	8/31/2001	7721662.463	601786.276	285.091	Cross Section
2075	8/31/2001	7721669.633	601785.499	288.541	Cross Section
2076	8/31/2001	7721674.351	601784.020	292.524	Cross Section
2077	8/31/2001	7721677.711	601784.484	294.923	Cross Section
2078	8/31/2001	7721679.177	601784.485	296.540	Cross Section
2079	8/31/2001	7721683.959	601783.927	296.884	Cross Section
2080	8/31/2001	7721689.214	601782.893	296.436	Cross Section
2081	8/31/2001	7721688.109	601782.443	297.209	Iron Rod endpoint CPRB
2082	8/31/2001	7721697.821	601781.511	296.550	Cross Section
2083	8/31/2001	7721709.827	601780.460	296.622	Cross Section
2084	8/31/2001	7721717.423	601778.954	297.424	Cross Section
2085	8/31/2001	7721535.299	601970.668	281.703	Check backsite of 4011
CA0001	9/4/2001	7716439.647	615079.127	213.181	Inkspot Interim Point on line CA
CA0002	9/4/2001	7716301.748	615139.502	219.979	Iron Rod with Cap CARB
CA0003	9/4/2001	7716298.433	615141.185	227.135	Cross Section
CA0004	9/4/2001	7716299.123	615140.300	220.179	Cross Section
CA0005	9/4/2001	7716303.786	615138.853	219.320	Cross Section
CA0006	9/4/2001	7716305.671	615137.372	213.195	Cross Section
CA0007	9/4/2001	7716313.578	615134.818	211.581	Edge of Water
CA0008	9/4/2001	7716322.643	615130.242	209.807	Cross Section in water
CA0009	9/4/2001	7716334.345	615124.215	208.462	Cross Section in water
CA0010	9/4/2001	7716340.845	615120.800	205.059	Cross Section in water
CA0011	9/4/2001	7716347.769	615119.206	205.881	Cross Section in water
CA0012	9/4/2001	7716362.316	615112.097	205.541	Cross Section in water
CA0013	9/4/2001	7716369.036	615110.130	206.238	Cross Section in water
CA0014	9/4/2001	7716382.229	615104.308	208.998	Cross Section in water
CA0015	9/4/2001	7716392.390	615099.354	210.827	Cross Section in water
CA0016	9/4/2001	7716399.291	615096.725	211.396	Edge of Water
CA0017	9/4/2001	7716406.524	615093.669	212.160	Cross Section
CA0018	9/4/2001	7716415.335	615090.148	212.391	Cross Section
CA0019	9/4/2001	7716425.384	615085.591	212.472	Cross Section
CA0020	9/4/2001	7716459.748	615070.215	213.020	Cross Section
CA0021	9/4/2001	7716473.560	615064.171	212.906	Cross Section
CA0022	9/4/2001	7716486.333	615058.822	213.247	Cross Section
CA0023	9/4/2001	7716504.488	615050.843	214.147	Cross Section
CA0024	9/4/2001	7716513.419	615047.004	215.349	Cross Section
CA0025	9/4/2001	7716525.998	615041.860	217.684	Cross Section
CA0026	9/4/2001	7716535.800	615037.221	220.909	Cross Section
CA0027	9/4/2001	7716541.479	615034.969	224.291	Top of Bank
CA0028	9/4/2001	7716554.804	615029.294	225.005	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastings (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CA0029	9/4/2001	7716563.743	615025.465	224.624	Cross Section
CA0030	9/4/2001	7716574.930	615020.469	224.009	Cross Section
CA0031	9/4/2001	7716584.151	615016.441	224.448	Cross Section
CA0032	9/4/2001	7716594.674	615011.715	224.546	Cross Section
CA0033	9/4/2001	7716562.304	615025.791	224.975	Cross Section
CA0034	9/4/2001	7716439.575	615079.174	213.202	Backsite to point CA0001
CA0035	9/4/2001	7716599.068	615009.811	224.148	Cross Section
CA0036	9/4/2001	7716609.596	615005.228	223.189	Cross Section
CA0037	9/4/2001	7716612.813	615003.828	221.942	Cross Section
CA0038	9/4/2001	7716618.201	615001.563	220.650	Cross Section
CA0039	9/4/2001	7716627.128	614997.571	220.408	Cross Section
CA0040	9/4/2001	7716636.493	614993.939	221.119	Cross Section
CA0041	9/4/2001	7716646.652	614989.507	218.781	Cross Section
CA0042	9/4/2001	7716659.297	614984.140	219.175	Cross Section
CA0043	9/4/2001	7716666.468	614980.228	221.842	Cross Section
CA0044	9/4/2001	7716677.628	614975.254	223.688	Cross Section
CA0045	9/4/2001	7716685.279	614972.339	224.222	Cross Section
CA0046	9/4/2001	7716720.018	614957.042	225.391	Cross Section
CA0047	9/4/2001	7716773.198	614933.596	227.193	Cross Section
CA0048	9/4/2001	7716849.775	614900.550	226.461	Cross Section
CA0049	9/4/2001	7716708.153	614962.338	225.173	Iron Rod with Cap CALB
BZ0001	9/4/2001	7717601.663	615543.802	213.295	Inkspot interim Point on line BZ in "64" channel
BZ0002	9/4/2001	7716963.068	616196.707	209.597	Inkspot interim Point on line BZ on LB bar
BZ0003	9/4/2001	7717362.436	615566.111	214.182	Inkspot interim Point on line BZ (backsite point)
BZ0004	9/4/2001	7717433.799	615715.681	214.145	BAD POINT
BZ0005	9/4/2001	7717841.490	615530.087	214.150	BAD POINT
BZ0006	9/4/2001	7717841.697	615529.984	214.141	BAD POINT
BZ0007	9/4/2001	7717362.449	615566.338	214.152	BAD POINT
BZ0008	9/4/2001	7717745.525	615721.544	217.393	Cross Section
BZ0009	9/4/2001	7717753.494	615718.266	215.890	Cross Section
BZ0010	9/4/2001	7717766.011	615709.698	216.125	Cross Section
BZ0011	9/4/2001	7717778.857	615702.448	216.655	Cross Section
BZ0012	9/4/2001	7717788.135	615697.474	215.693	Cross Section
BZ0013	9/4/2001	7717801.590	615690.006	216.336	Cross Section
BZ0014	9/4/2001	7717820.039	615679.749	216.205	Cross Section
BZ0015	9/4/2001	7717838.358	615669.965	215.928	Cross Section
BZ0016	9/4/2001	7717856.097	615660.049	215.244	Cross Section
BZ0017	9/4/2001	7717868.364	615653.620	215.347	Cross Section
BZ0018	9/4/2001	7717884.263	615643.574	213.466	Cross Section
BZ0019	9/4/2001	7717899.084	615636.338	209.358	Cross Section
BZ0020	9/4/2001	7717913.235	615627.180	208.887	Cross Section
BZ0021	9/4/2001	7717918.491	615624.204	209.097	Cross Section
BZ0022	9/4/2001	7717936.586	615614.613	209.236	Cross Section
BZ0023	9/4/2001	7717881.022	615645.563	214.108	Iron rod with cap point BZRB
BZ0024	9/4/2001	7716895.179	616244.107	211.329	Iron rod with cap point BZLB
BZ0025	9/4/2001	7716893.945	616244.859	211.272	Cross Section
BZ0026	9/4/2001	7716904.216	616237.715	209.598	Cross Section
BZ0027	9/4/2001	7716913.599	616230.701	207.804	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BZ0028	9/4/2001	7716923.226	616224.759	209.127	Cross Section
BZ0029	9/4/2001	7716945.898	616208.487	209.544	Cross Section
BZ0030	9/4/2001	7716977.752	616186.285	208.698	Edge of Water
BZ0031	9/4/2001	7717000.449	616170.364	206.727	Cross Section in water
BZ0032	9/4/2001	7717017.750	616158.989	205.592	Cross Section in water
BZ0033	9/4/2001	7717033.890	616146.618	205.316	Cross Section in water
BZ0034	9/4/2001	7717047.464	616137.592	205.344	Cross Section in water
BZ0035	9/4/2001	7717062.301	616127.348	206.327	Cross Section in water
BZ0036	9/4/2001	7717071.679	616121.000	207.076	Cross Section in water
BZ0037	9/4/2001	7717080.439	616115.319	208.614	Edge of Water
BZ0038	9/4/2001	7717093.740	616105.662	212.341	Cross Section
BZ0039	9/4/2001	7717101.227	616100.359	214.545	Cross Section
BZ0040	9/4/2001	7717108.056	616095.113	215.879	Cross Section
BZ0041	9/4/2001	7717118.731	616087.907	216.478	Cross Section
BZ0042	9/4/2001	7717132.840	616077.972	216.666	Cross Section
BZ0043	9/4/2001	7717149.671	616066.149	217.252	Cross Section
BZ0044	9/4/2001	7717169.761	616052.665	217.447	Cross Section
BZMP	9/4/2001	7717214.178	616020.340	218.048	Iron Rod with Cap on Point BZMP
BZ0045	9/4/2001	7717221.444	616015.053	218.314	Wood Staub
BZ0046	9/4/2001	7717207.062	616025.415	217.947	Cross Section
BZ0047	9/4/2001	7717198.287	616031.642	217.343	Cross Section
BZ0048	9/4/2001	7717192.048	616036.706	218.430	Cross Section
BZ0049	9/4/2001	7717179.666	616045.542	219.630	Iron rod with cap on Point BZLB
BZ0050	9/4/2001	7716559.089	615811.338	214.400	Check Backsite CP4031
ECA001	9/10/2001	7717816.818	619936.674	208.502	Iron Rod interim point to shoot line ECA
ECA002	9/10/2001	7717397.664	619612.025	201.301	Check Backsite of CP4035
ECA003	9/10/2001	7718229.480	619624.854	204.315	Inkspot on line ECA to setup on
ECA004	9/10/2001	7718223.239	619610.935	203.589	Cross-section
ECA005	9/10/2001	7718220.111	619603.699	203.580	Cross-section
ECA006	9/10/2001	7718216.789	619596.550	203.592	Cross-section
ECA007	9/10/2001	7718211.185	619584.049	203.177	Cross-section
ECA008	9/10/2001	7718203.299	619566.391	207.670	Cross-section
ECA009	9/10/2001	7718201.079	619561.472	208.380	Cross-section
ECA010	9/10/2001	7718195.861	619549.797	207.288	Cross-section
ECA011	9/10/2001	7718190.899	619539.010	208.225	Cross-section
ECA012	9/10/2001	7718186.349	619528.997	208.644	Cross-section
ECA013	9/10/2001	7718185.459	619526.586	208.777	Iron Rod with Cap
ECA014	9/10/2001	7718232.209	619630.941	203.661	Edge of Water
ECA015	9/10/2001	7718233.842	619634.580	203.187	Cross-section in water
ECA016	9/10/2001	7718238.493	619644.790	202.442	Cross-section in water
ECA017	9/10/2001	7718243.188	619655.427	202.304	Cross-section in water
ECA018	9/10/2001	7718248.765	619667.810	202.022	Cross-section in water
ECA019	9/10/2001	7718253.730	619678.933	202.311	Cross-section in water
ECA020	9/10/2001	7718258.005	619688.469	203.146	Cross-section in water
ECA021	9/10/2001	7718262.417	619698.312	203.836	Edge of Water
ECA022	9/10/2001	7718264.614	619703.259	204.700	Cross-section
ECA023	9/10/2001	7718266.639	619707.720	205.912	Cross-section
ECA024	9/10/2001	7718294.190	619745.228	208.150	Cross-section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ECA025	9/10/2001	7718295.060	619747.069	208.129	Iron Rod with Cap ECARB
ECA026	9/10/2001	7717816.684	619936.308	208.412	Check Backsite to ECA001
4032RP	9/10/2001	7716809.213	615592.121	215.620	Reshot of Control Point near location of CP4032
1996INT	9/10/2001	7717350.167	616526.442	211.581	Iron Bar located in 1996 channel for Interim control
BW001	9/12/2001	7717686.189	618406.092	204.846	Check Backsite of CP4034
BW002	9/12/2001	7717704.623	618381.272	203.983	Inkspot near CP4034
BW003	9/12/2001	7717623.119	618485.188	205.857	Inkspot on Line BW
BW004	9/12/2001	7717704.614	618381.255	203.975	Check Backsite of inkspot near CP4034
BW005	9/12/2001	7717609.641	618487.376	206.043	Cross-section
BW006	9/12/2001	7717606.561	618487.661	205.784	Top of Bank
BW007	9/12/2001	7717602.644	618488.373	203.313	Cross-section
BW008	9/12/2001	7717598.479	618489.081	201.894	Edge of Water
BW009	9/12/2001	7717588.420	618490.014	199.813	Cross-section in water
BW010	9/12/2001	7717584.233	618491.256	199.555	Cross-section in water
BW011	9/12/2001	7717579.004	618490.193	199.374	Cross-section in water
BW012	9/12/2001	7717574.322	618487.698	199.274	Cross-section in water
BW013	9/12/2001	7717559.454	618494.634	199.866	Cross-section in water
BW014	9/12/2001	7717552.066	618495.436	199.650	Cross-section in water
BW015	9/12/2001	7717544.607	618497.740	200.424	Cross-section in water
BW016	9/12/2001	7717537.747	618498.993	201.373	Edge of Water
BW017	9/12/2001	7717534.554	618498.985	201.857	Cross-section
BW018	9/12/2001	7717526.349	618500.352	202.358	Cross-section
BW019	9/12/2001	7717505.998	618503.884	202.809	Cross-section
BW020	9/12/2001	7717482.206	618507.461	203.613	Cross-section
BW021	9/12/2001	7717460.786	618510.197	204.076	Cross-section
BW022	9/12/2001	7717423.032	618516.891	203.424	Cross-section
BW023	9/12/2001	7717389.329	618522.058	203.521	Cross-section
BW024	9/12/2001	7717372.119	618524.798	203.162	Edge of Water
BW025	9/12/2001	7717356.790	618527.696	202.741	Cross-section in water
BW026	9/12/2001	7717336.283	618530.370	202.177	Cross-section in water
BW027	9/12/2001	7717326.470	618531.777	208.157	Iron Rod with Cap BWLB
BW028	9/12/2001	7717635.488	618483.258	205.294	Cross-section
BW029	9/12/2001	7717647.470	618481.311	205.516	Cross-section
BW030	9/12/2001	7717660.730	618479.348	204.482	Cross-section
BW031	9/12/2001	7717683.630	618475.619	201.854	Cross-section
BW032	9/12/2001	7717696.128	618473.496	200.939	Edge of Water
BW033	9/12/2001	7717711.506	618471.321	200.659	Cross-section in water
BW034	9/12/2001	7717726.201	618469.059	200.042	Cross-section in water
BW035	9/12/2001	7717742.572	618466.633	199.564	Cross-section in water
BW036	9/12/2001	7717762.748	618463.194	199.858	Cross-section in water
BW037	9/12/2001	7717784.241	618459.897	200.111	Cross-section in water
BW038	9/12/2001	7717801.941	618457.004	200.623	Cross-section in water
BW039	9/12/2001	7717818.754	618454.446	201.200	Edge of Water
BW040	9/12/2001	7717831.443	618452.728	201.956	Cross-section
BW041	9/12/2001	7717838.715	618451.248	203.212	Cross-section
BW042	9/12/2001	7717844.151	618450.687	206.968	Cross-section
BW043	9/12/2001	7717910.876	618439.995	209.802	Iron Rod with Cap BWRB
BS001	9/12/2001	7718378.239	621546.433	191.363	Iron Rod Interim point

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BS003	9/12/2001	7718398.041	621685.771	189.258	Iron Rod CP4038 which we were unable to GPS
BS004	9/13/2001	7717698.832	622750.397	185.488	Magnail in Mudstone on line BS
BS005	9/13/2001	7717694.632	622747.685	185.272	Cross-Section
BS006	9/13/2001	7717692.633	622746.109	184.200	Edge of Water
BS007	9/13/2001	7717689.890	622744.319	181.004	Cross-Section in water
BS008	9/13/2001	7717687.677	622742.984	181.031	Cross-Section in water
BS009	9/13/2001	7717685.742	622741.387	180.081	Cross-Section in water
BS010	9/13/2001	7717680.279	622738.026	179.549	Cross-Section in water
BS011	9/13/2001	7717677.245	622735.215	177.576	Cross-Section in water
BS012	9/13/2001	7717663.850	622725.595	178.585	Cross-Section in water
BS013	9/13/2001	7717653.607	622719.159	178.906	Cross-Section in water
BS014	9/13/2001	7717644.293	622713.344	178.307	Cross-Section in water
BS015	9/13/2001	7717636.478	622706.723	178.611	Cross-Section in water
BS016	9/13/2001	7717621.366	622697.997	179.089	Cross-Section in water
BS017	9/13/2001	7717612.498	622691.488	179.480	Cross-Section in water
BS018	9/13/2001	7717602.813	622685.246	179.759	Cross-Section in water
BS019	9/13/2001	7717588.439	622674.788	179.894	Cross-Section in water
BS020	9/13/2001	7717581.749	622670.329	180.567	Cross-Section in water
BS021	9/13/2001	7717574.120	622665.131	182.584	Cross-Section in water
BS022	9/13/2001	7717570.476	622662.698	184.104	Edge of Water
BS023	9/13/2001	7717565.277	622659.239	186.548	Cross-section
BS024	9/13/2001	7717704.679	622754.398	185.880	Cross-section
BS025	9/13/2001	7717712.312	622759.620	189.080	Cross-section
BS026	9/13/2001	7717715.614	622761.878	191.994	Cross-section
BS027	9/13/2001	7717717.750	622763.340	193.881	Cross-section
BS028	9/13/2001	7717721.222	622765.713	199.122	Cross-section
BS030	9/13/2001	7717732.920	622773.716	209.799	Cross-section
BS031	9/13/2001	7717742.845	622780.218	219.050	Iron Rod with Cap
BS032	9/13/2001	7717563.834	622658.243	187.494	Cross-section
BS033	9/13/2001	7717561.865	622656.498	189.241	Cross-section
BS034	9/13/2001	7717559.452	622654.779	191.378	Cross-section
BS035	9/13/2001	7717554.494	622651.655	194.774	Cross-section
BS036	9/13/2001	7717551.016	622649.300	195.973	Cross-section
BS037	9/13/2001	7717548.319	622647.454	197.222	Cross-section
BS038	9/13/2001	7717544.021	622644.594	198.637	Cross-section
BS039	9/13/2001	7717535.942	622638.850	199.409	Cross-section
BS040	9/13/2001	7717529.569	622634.591	199.410	Iron Rod with Cap
BS041	9/13/2001	7717510.726	622621.701	199.663	Cross-section
BS042	9/13/2001	7717631.523	622910.753	187.303	Check Backsite of CP4039
BR001	9/13/2001	7716574.906	623954.933	181.499	Inkspot on Line BR
BR002	9/13/2001	7716511.556	623888.543	185.617	Cross-section
BR003	9/13/2001	7716514.636	623891.809	184.703	Cross-section
BR004	9/13/2001	7716518.142	623895.521	184.186	Cross-section
BR005	9/13/2001	7716521.933	623899.440	183.379	Cross-section
BR006	9/13/2001	7716525.217	623902.885	182.788	Cross-section
BR007	9/13/2001	7716529.844	623907.730	182.314	Cross-section
BR008	9/13/2001	7716534.255	623912.278	182.115	Cross-section
BR009	9/13/2001	7716538.595	623916.788	181.935	Cross-section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BR010	9/13/2001	7716478.795	623854.280	197.378	Iron Rod with Cap (BRLB)
BR011	9/13/2001	7716486.998	623862.684	197.480	Cross-section
BR012	9/13/2001	7716491.881	623867.753	197.277	Cross-section
BR013	9/13/2001	7716542.604	623921.017	181.661	Cross-section
BR014	9/13/2001	7716545.448	623924.076	181.789	Cross-section
BR015	9/13/2001	7716549.230	623928.037	181.611	Cross-section
BR016	9/13/2001	7716553.199	623932.163	181.616	Cross-section
BR017	9/13/2001	7716563.159	623942.561	181.600	Cross-section (edge of water)
BR018	9/13/2001	7716592.534	623973.303	180.912	Cross-section in water
BR019	9/13/2001	7716604.177	623985.685	180.474	Cross-section in water
BR020	9/13/2001	7716618.395	624000.743	180.303	Cross-section in water
BR021	9/13/2001	7716635.482	624018.520	179.643	Cross-section in water
BR022	9/13/2001	7716649.454	624033.376	179.120	Cross-section in water
BR023	9/13/2001	7716664.961	624049.423	178.851	Cross-section in water
BR024	9/13/2001	7716677.229	624062.057	178.452	Cross-section in water
BR025	9/13/2001	7716690.631	624076.156	178.883	Cross-section in water
BR026	9/13/2001	7716701.644	624087.501	180.187	Cross-section in water
BR027	9/13/2001	7716709.024	624095.350	181.399	Edge of Water
BR028	9/13/2001	7716709.926	624096.411	186.321	Iron Rod with Cap (BRRB)
BR029	9/13/2001	7716464.848	624304.142	184.886	Check Backsite of CP4040
BP001	9/14/2001	7715039.297	625323.411	177.827	Inkspot on Line BP
BP002	9/14/2001	7715308.311	625171.304	182.072	Check backsite of CP4041
BP003	9/14/2001	7715308.278	625171.153	182.080	Check backsite of CP4041
BP004	9/14/2001	7715049.615	625329.738	177.878	Cross-section
BP005	9/14/2001	7715067.221	625340.536	178.328	Cross-section
BP006	9/14/2001	7715084.314	625350.909	180.046	Cross-section
BP007	9/14/2001	7715100.162	625360.758	182.913	Cross-section
BP008	9/14/2001	7715110.002	625366.553	185.754	Cross-section
BP009	9/14/2001	7715115.195	625369.370	187.328	Cross-section
BP010	9/14/2001	7715121.498	625373.076	187.116	Cross-section
BP012	9/14/2001	7715121.187	625373.522	186.944	Cross-section
BP013	9/14/2001	7715128.559	625377.657	187.692	Cross-section
BP014	9/14/2001	7715136.848	625383.214	187.115	Cross-section
BP015	9/14/2001	7715161.012	625398.004	186.601	Iron Rod with Cap (BPRB)
BP016	9/14/2001	7715024.239	625314.176	177.739	Cross-section
BP017	9/14/2001	7715017.823	625310.242	177.538	Edge of Water
BP018	9/14/2001	7715002.307	625300.726	176.923	Cross-Section in water
BP019	9/14/2001	7714989.744	625293.022	176.635	Cross-Section in water
BP020	9/14/2001	7714978.458	625286.101	176.064	Cross-Section in water
BP021	9/14/2001	7714967.598	625279.441	175.678	Cross-Section in water
BP022	9/14/2001	7714957.533	625273.269	175.789	Cross-Section in water
BP023	9/14/2001	7714947.016	625267.135	175.789	Cross-Section in water
BP024	9/14/2001	7714936.140	625260.147	175.681	Cross-Section in water
BP025	9/14/2001	7714922.497	625251.715	174.750	Cross-Section in water
BP026	9/14/2001	7714908.155	625242.993	174.776	Cross-Section in water
BP027	9/14/2001	7714895.795	625235.411	174.611	Cross-Section in water
BP028	9/14/2001	7714884.129	625228.419	174.542	Cross-Section in water
BP029	9/14/2001	7714872.597	625221.180	174.048	Cross-Section in water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BP030	9/14/2001	7714863.966	625216.245	172.746	Cross-Section in water
BP031	9/14/2001	7714850.146	625209.091	172.693	Cross-Section in water
BP032	9/14/2001	7714843.139	625203.322	173.306	Cross-Section in water
BP033	9/14/2001	7714835.831	625198.624	174.366	Cross-Section in water
BP034	9/14/2001	7714830.850	625195.570	175.853	Cross-Section in water
BP035	9/14/2001	7714826.187	625192.543	177.640	Edge of Water
BP036	9/14/2001	7714824.666	625191.538	178.085	Cross-section
BP037	9/14/2001	7714819.279	625188.649	179.607	Cross-section
BP038	9/14/2001	7714816.459	625186.817	181.899	Cross-section
BP039	9/14/2001	7714813.807	625184.243	184.555	Cross-section
BP040	9/14/2001	7714812.260	625183.951	189.950	Top of Bank
BP041	9/14/2001	7714806.960	625181.142	191.044	Cross-section
BP042	9/14/2001	7714811.825	625183.433	190.235	Cross-section
BP043	9/14/2001	7714807.389	625180.885	190.976	Cross-section
BP044	9/14/2001	7714801.344	625177.475	191.130	Cross-section
BP045	9/14/2001	7714794.495	625173.269	190.049	Cross-section
BP046	9/14/2001	7714789.298	625169.974	189.298	Cross-section
BP047	9/14/2001	7714781.737	625165.402	189.022	Cross-section
BP048	9/14/2001	7714774.748	625160.926	189.215	Iron Rod with Cap (BPLB)
BP049	9/14/2001	7715308.038	625171.069	182.037	Check Backsite of CP4041
BF001	9/20/2001	7707095.775	633831.804	137.459	Inkspot on line BFRB
BF003	9/20/2001	7707117.723	633867.372	147.766	Iron Rod with Cap
BF004	9/20/2001	7707116.671	633865.767	145.660	Cross Section
BF005	9/20/2001	7707115.823	633864.210	144.099	Cross Section
BF006	9/20/2001	7707115.145	633863.176	142.011	Cross Section
BF007	9/20/2001	7707113.964	633861.331	139.828	Cross Section
BF008	9/20/2001	7707112.623	633859.045	138.978	Cross Section
BF009	9/20/2001	7707110.899	633856.206	138.334	Cross Section
BF010	9/20/2001	7707109.226	633853.587	136.846	Cross Section
BF011	9/20/2001	7707106.097	633848.522	136.792	Cross Section
BF012	9/20/2001	7707100.664	633839.636	136.921	Cross Section
BF013	9/20/2001	7707088.508	633820.034	137.046	Cross Section
BF014	9/20/2001	7707082.606	633810.475	136.418	Cross Section
BF015	9/20/2001	7707075.569	633799.079	136.209	Cross Section
BF016	9/20/2001	7707071.838	633793.036	135.616	Edge of Water
BF017	9/20/2001	7707067.366	633785.792	135.212	Cross Section in water
BF018	9/20/2001	7707062.959	633778.713	134.923	Cross Section in water
BF019	9/20/2001	7707058.730	633771.717	134.575	Cross Section in water
BF020	9/20/2001	7707055.979	633767.376	134.433	Cross Section in water
BF021	9/20/2001	7707053.740	633763.823	134.326	Cross Section in water
BF022	9/20/2001	7707051.325	633759.874	133.984	Cross Section in water
BF023	9/20/2001	7707048.589	633755.419	133.790	Cross Section in water
BF024	9/20/2001	7707046.105	633751.225	133.385	Cross Section in water
BF025	9/20/2001	7707043.173	633746.648	133.275	Cross Section in water
BF026	9/20/2001	7707040.847	633742.853	133.117	Cross Section in water
BF027	9/20/2001	7707038.267	633738.733	132.805	Cross Section in water
BF028	9/20/2001	7707035.673	633734.573	132.648	Cross Section in water
BF029	9/20/2001	7707033.783	633731.483	132.417	Cross Section in water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BF030	9/20/2001	7707031.819	633728.118	132.123	Cross Section in water
BF031	9/20/2001	7707029.215	633723.725	131.975	Cross Section in water
BF032	9/20/2001	7707026.174	633718.564	131.981	Cross Section in water
BF033	9/20/2001	7707022.182	633712.822	132.078	Cross Section in water
BF034	9/20/2001	7707019.300	633706.670	132.211	Cross Section in water
BF035	9/20/2001	7707015.785	633701.658	132.173	Cross Section in water
BF036	9/20/2001	7707009.191	633691.381	132.222	Cross Section in water
BF037	9/20/2001	7707007.809	633688.699	132.596	Cross Section in water
BF038	9/20/2001	7707006.647	633687.727	133.150	Cross Section in water
BF039	9/20/2001	7707005.724	633685.914	133.245	Cross Section in water
BF040	9/20/2001	7707004.770	633684.258	133.607	Cross Section in water
BF041	9/20/2001	7707003.157	633681.848	133.383	Cross Section in water
BF042	9/20/2001	7707001.523	633678.725	133.913	Cross Section in water
BF043	9/20/2001	7706998.623	633673.993	133.684	Cross Section in water
BF044	9/20/2001	7706995.984	633669.822	134.194	Cross Section in water
BF045	9/20/2001	7706992.938	633665.128	134.710	Cross Section in water
BF046	9/20/2001	7706989.603	633659.812	135.496	Edge of Water
BF047	9/20/2001	7706985.408	633653.287	136.951	Cross Section
BF048	9/20/2001	7706982.679	633649.060	138.124	Cross Section
BF049	9/20/2001	7706979.548	633643.505	139.605	Cross Section
BF050	9/20/2001	7706976.609	633638.800	140.746	Cross Section
BF051	9/20/2001	7706973.476	633633.987	141.866	Cross Section
BF052	9/20/2001	7706970.118	633628.504	142.551	Cross Section
BF053	9/20/2001	7706964.453	633618.960	143.962	Cross Section
BF054	9/20/2001	7706960.067	633611.990	144.949	Cross Section
BF055	9/20/2001	7706957.038	633607.168	146.037	Cross Section
BF056	9/20/2001	7706953.818	633601.933	148.348	Cross Section
BF057	9/20/2001	7706948.101	633592.733	150.608	Cross Section
BF058	9/20/2001	7706945.823	633588.909	151.961	Iron rod with Cap (BFLB)
BF059	9/20/2001	7706940.949	633581.288	151.890	Cross Section
BF060	9/20/2001	7706938.828	633577.943	151.138	Cross Section
BF061	9/20/2001	7706935.883	633572.922	151.645	Cross Section
BF062	9/20/2001	7706932.592	633567.431	152.305	Cross Section
BF063	9/20/2001	7706929.733	633563.033	151.219	Cross Section
BF064	9/20/2001	7706925.608	633556.428	150.863	Dirt Road Edge
BF065	9/20/2001	7706920.805	633548.552	151.008	Cross Section
BF066	9/20/2001	7706916.647	633541.788	151.308	Cross Section
BF067	9/20/2001	7707408.903	633548.431	142.933	Check Backsite of CP4050
BD001	9/20/2001	7704574.219	632658.820	128.320	Inkspot on line BD
BD004	9/20/2001	7704564.726	632669.791	127.719	Cross Section
BD005	9/20/2001	7704556.742	632679.020	127.561	Cross Section
BD006	9/20/2001	7704548.344	632688.725	127.430	Cross Section in water
BD007	9/20/2001	7704540.054	632698.307	127.201	Cross Section in water
BD008	9/20/2001	7704532.665	632706.783	126.855	Cross Section in water
BD009	9/20/2001	7704524.125	632716.773	125.925	Cross Section in water
BD010	9/20/2001	7704518.236	632723.508	126.420	Cross Section in water
BD011	9/20/2001	7704514.715	632727.584	127.490	Edge of Water
BD012	9/20/2001	7704514.320	632728.121	128.873	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
BD013	9/20/2001	7704510.199	632732.967	129.617	Cross Section
BD014	9/20/2001	7704507.839	632735.653	130.563	Cross Section
BD015	9/20/2001	7704506.510	632737.120	132.540	Cross Section
BD016	9/20/2001	7704505.046	632738.539	139.494	Cross Section
BD017	9/20/2001	7704503.674	632740.094	140.435	Cross Section
BD018	9/20/2001	7704501.116	632743.102	142.008	Cross Section
BD019	9/20/2001	7704498.825	632745.837	144.050	Cross Section
BD020	9/20/2001	7704496.976	632747.865	147.367	Cross Section
BD021	9/20/2001	7704493.604	632751.973	147.886	Cross Section
BD022	9/20/2001	7704490.599	632755.166	149.309	Iron Rod with cap (BDRB)
BD023	9/20/2001	7704582.440	632649.427	128.182	Cross Section
BD024	9/20/2001	7704587.526	632643.440	128.234	Edge of Water
BD025	9/20/2001	7704592.709	632637.452	127.978	Cross Section in water
BD026	9/20/2001	7704598.219	632631.141	127.719	Cross Section in water
BD027	9/20/2001	7704604.116	632624.444	127.363	Cross Section in water
BD028	9/20/2001	7704609.683	632617.926	127.180	Cross Section in water
BD029	9/20/2001	7704615.589	632610.955	127.079	Cross Section in water
BD030	9/20/2001	7704618.856	632607.112	126.878	Cross Section in water
BD031	9/20/2001	7704622.587	632602.756	126.615	Cross Section in water
BD032	9/20/2001	7704626.987	632598.017	126.379	Cross Section in water
BD033	9/20/2001	7704631.327	632592.645	126.430	Cross Section in water
BD034	9/20/2001	7704635.523	632588.034	126.283	Cross Section in water
BD035	9/20/2001	7704640.034	632583.002	125.938	Cross Section in water
BD036	9/20/2001	7704644.320	632578.229	125.765	Cross Section in water
BD037	9/20/2001	7704648.791	632572.475	125.611	Cross Section in water
BD038	9/20/2001	7704655.442	632564.963	125.333	Cross Section in water
BD039	9/20/2001	7704659.601	632560.870	125.507	Cross Section in water
BD040	9/20/2001	7704664.079	632554.947	125.705	Cross Section in water
BD041	9/20/2001	7704668.266	632550.058	125.443	Cross Section in water
BD042	9/20/2001	7704671.346	632546.750	125.457	Cross Section in water
BD043	9/20/2001	7704673.925	632543.555	125.679	Cross Section in water
BD044	9/20/2001	7704677.889	632538.908	126.263	Cross Section in water
BD045	9/20/2001	7704680.517	632536.455	127.472	Cross Section in water
BD046	9/20/2001	7704682.943	632532.978	128.595	Edge of Water
BD047	9/20/2001	7704685.320	632530.044	130.586	Cross Section
BD048	9/20/2001	7704687.185	632528.173	133.541	Cross Section
BD049	9/20/2001	7704689.366	632525.867	135.886	Cross Section
BD050	9/20/2001	7704691.982	632522.734	137.441	Cross Section
BD051	9/20/2001	7704695.198	632519.111	139.449	Cross Section
BD052	9/20/2001	7704699.544	632513.988	142.412	Cross Section
BD053	9/20/2001	7704703.517	632509.321	143.725	Cross Section
BD054	9/20/2001	7704707.281	632505.332	143.294	Cross Section
BD055	9/20/2001	7704706.688	632505.958	143.601	Iron Rod with Cap (BOLB)
BD056	9/20/2001	7704712.536	632499.100	143.490	Cross Section
BD057	9/20/2001	7704718.929	632492.195	143.755	Cross Section
BD058	9/20/2001	7704727.345	632482.448	143.641	Cross Section
BD059	9/20/2001	7704735.586	632473.193	143.762	Cross Section
BD060	9/20/2001	7704765.845	632935.362	131.854	Check Backsite of CP4053

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
AX001	9/20/2001	7698985.640	632445.456	117.241	Inkspot on line AX
AX002	9/20/2001	7698984.559	632434.595	116.249	Cross Section in water
AX003	9/20/2001	7698983.582	632424.885	115.698	Cross Section in water
AX004	9/20/2001	7698982.603	632415.260	115.572	Cross Section in water
AX005	9/20/2001	7698981.529	632404.550	115.477	Cross Section in water
AX006	9/20/2001	7698980.380	632392.628	115.376	Cross Section in water
AX007	9/20/2001	7698979.169	632380.768	115.168	Cross Section in water
AX008	9/20/2001	7698977.916	632368.234	114.832	Cross Section in water
AX009	9/20/2001	7698976.856	632357.117	114.785	Cross Section in water
AX010	9/20/2001	7698975.327	632342.331	114.796	Cross Section in water
AX011	9/20/2001	7698974.076	632329.742	114.396	Cross Section in water
AX012	9/20/2001	7698972.890	632317.970	114.295	Cross Section in water
AX013	9/20/2001	7698971.953	632308.601	113.499	Cross Section in water
AX014	9/20/2001	7698970.815	632297.237	113.795	Cross Section in water
AX015	9/20/2001	7698969.771	632286.793	113.572	Cross Section in water
AX016	9/20/2001	7698968.751	632277.275	113.267	Cross Section in water
AX017	9/20/2001	7698967.623	632264.882	113.002	Cross Section in water
AX018	9/20/2001	7698966.658	632254.563	113.035	Cross Section in water
AX019	9/20/2001	7698965.517	632245.095	112.852	Cross Section in water
AX020	9/20/2001	7698964.764	632236.650	113.121	Cross Section in water
AX021	9/20/2001	7698964.006	632227.654	113.173	Cross Section in water
AX022	9/20/2001	7698962.803	632217.113	113.455	Cross Section in water
AX023	9/20/2001	7698961.698	632206.996	114.359	Cross Section in water
AX024	9/20/2001	7698960.697	632195.972	115.004	Cross Section in water
AX025	9/20/2001	7698959.580	632185.653	115.364	Cross Section in water
AX026	9/20/2001	7698958.460	632173.678	115.765	Cross Section in water
AX027	9/20/2001	7698957.526	632164.347	116.474	Edge of Water
AX028	9/20/2001	7698956.622	632154.555	117.296	Cross Section
AX029	9/20/2001	7698955.985	632149.864	118.252	Cross Section
AX030	9/20/2001	7698955.978	632148.193	119.987	Cross Section
AX031	9/20/2001	7698955.682	632145.787	121.526	Cross Section
AX032	9/20/2001	7698955.314	632141.934	122.583	Cross Section
AX033	9/20/2001	7698954.796	632136.994	123.450	Cross Section
AX034	9/20/2001	7698954.285	632131.682	123.801	Cross Section
AX035	9/20/2001	7698953.338	632122.757	124.015	Iron Rod with Cap (AXLB)
AX036	9/20/2001	7698986.857	632457.625	118.354	Cross Section
AX037	9/20/2001	7698987.906	632468.118	119.311	Cross Section
AX038	9/20/2001	7698988.943	632478.479	119.364	Cross Section
AX039	9/20/2001	7698989.951	632488.560	119.677	Cross Section
AX040	9/20/2001	7698991.012	632499.171	120.695	Cross Section
AX041	9/20/2001	7698991.519	632503.327	122.438	Cross Section
AX042	9/20/2001	7698992.233	632511.858	126.263	Cross Section
AX043	9/20/2001	7698993.338	632522.527	131.955	Cross Section
AX044	9/20/2001	7698995.024	632536.412	134.903	Iron Rod with Cap (AXRB) ~ 1.6 ft above grnd
AX045	9/20/2001	7699338.386	632140.190	121.295	Check Backsite of CP4058
BM001	9/22/2001	7713519.380	628365.751	214.641	Endpoint of Line Iron Rod with Cap BMLB
GPSS1004	9/22/2001	7713235.650	628289.118	230.709	Aerial Photo Survey Control pt 1004
BM002	9/22/2001	7713573.118	628402.782	211.570	Iron Rod on line BM

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOGAMIBAPK	9/22/2001	7710695.205	631064.048	159.913	DOGAMI rod with RPC at Barton boat launch
AU001	9/27/2001	7695751.112	633926.231	108.316	Inkspot on line AU
AU002	9/27/2001	7695745.054	633925.429	108.107	Cross Section in water
AU003	9/27/2001	7695619.864	633908.857	107.224	Cross Section in water
AU004	9/27/2001	7695624.757	633909.505	106.782	Cross Section in water
AU005	9/27/2001	7695635.499	633910.927	105.999	Cross Section in water
AU006	9/27/2001	7695645.570	633912.260	105.973	Cross Section in water
AU007	9/27/2001	7695655.866	633913.623	106.289	Cross Section in water
AU008	9/27/2001	7695667.692	633915.188	106.316	Cross Section in water
AU009	9/27/2001	7695677.243	633916.453	106.382	Cross Section in water
AU010	9/27/2001	7695687.109	633917.759	106.513	Cross Section in water
AU011	9/27/2001	7695698.663	633919.288	106.896	Cross Section in water
AU012	9/27/2001	7695710.147	633920.808	106.748	Cross Section in water
AU013	9/27/2001	7695720.634	633922.196	106.787	Cross Section in water
AU014	9/27/2001	7695731.790	633923.673	107.614	Cross Section in water
AU015	9/27/2001	7695607.919	633907.276	108.109	Edge of Water
AU016	9/27/2001	7695603.789	633906.732	108.960	Cross Section
AU017	9/27/2001	7695599.300	633906.137	109.926	Cross Section
AU018	9/27/2001	7695597.127	633905.849	111.698	Cross Section
AU019	9/27/2001	7695592.387	633905.223	116.093	Cross Section
AU020	9/27/2001	7695587.303	633904.550	118.442	Cross Section
AU021	9/27/2001	7695587.179	633904.534	118.548	Cross Section
AU022	9/27/2001	7695581.156	633903.737	121.943	Cross Section
AU023	9/27/2001	7695577.218	633903.217	124.480	Cross Section
AU024	9/27/2001	7695575.064	633902.931	130.018	Cross Section
AU025	9/27/2001	7695572.106	633902.539	131.080	Iron Rod with Cap AULB
AU026	9/27/2001	7695567.915	633901.987	133.339	Cross Section
AU027	9/27/2001	7695563.008	633900.504	138.970	Cross Section
AU029	9/27/2001	7695762.490	633927.706	107.759	Cross Section
AU030	9/27/2001	7695773.610	633929.208	107.619	Cross Section
AU031	9/27/2001	7695787.954	633931.106	107.618	Cross Section
AU032	9/27/2001	7695809.488	633933.955	107.480	Cross Section
AU033	9/27/2001	7695835.202	633937.358	106.808	Cross Section
AU034	9/27/2001	7695861.891	633940.889	106.008	Cross Section
AU035	9/27/2001	7695877.721	633942.984	105.775	Cross Section
AU036	9/27/2001	7695900.337	633945.976	104.877	Cross Section
AU037	9/27/2001	7695916.982	633948.181	104.386	Cross Section in water
AU038	9/27/2001	7695935.643	633950.649	103.840	Cross Section in water
AU039	9/27/2001	7695947.451	633952.212	103.231	Cross Section in water
AU040	9/27/2001	7695951.227	633952.713	102.733	Cross Section in water
AU041	9/27/2001	7695954.359	633952.322	101.900	Cross Section in water
AU042	9/27/2001	7695956.481	633950.952	101.659	Cross Section in water
AU043	9/27/2001	7695955.055	633949.846	101.663	Cross Section in water
AU044	9/27/2001	7695954.983	633953.674	101.620	Cross Section in water
AU045	9/27/2001	7695957.835	633954.682	100.874	Cross Section in water
AU046	9/27/2001	7695982.923	633958.926	99.385	Cross Section in water
AU047	9/27/2001	7695990.780	633958.422	104.640	Edge of Water
AU048	9/27/2001	7695998.019	633958.850	110.132	Iron Rod with Cap AURB

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
AU049	9/27/2001	7695956.417	633065.859	110.226	Check of Backsite CP4061
CP04066RP	9/27/2001	7692301.885	635193.374	98.165	Iron Rod with Cap to replace CP4066
AP001	9/27/2001	7691730.432	635398.305	91.838	Inkspot on line AP
AP002	9/27/2001	7691766.373	635491.326	101.588	Iron Rod with Cap (APRB)
AP003	9/27/2001	7691763.810	635484.421	101.596	Cross Section
AP004	9/27/2001	7691758.732	635470.630	101.125	Cross Section
AP005	9/27/2001	7691754.036	635460.239	101.507	Cross Section
AP006	9/27/2001	7691751.628	635453.066	101.732	Cross Section
AP007	9/27/2001	7691746.295	635439.363	102.711	Cross Section
AP008	9/27/2001	7691742.716	635430.035	102.159	Cross Section
AP009	9/27/2001	7691740.704	635424.837	100.848	Cross Section
AP010	9/27/2001	7691738.912	635420.051	100.084	Cross Section
AP011	9/27/2001	7691736.828	635414.283	96.506	Cross Section
AP012	9/27/2001	7691735.113	635410.408	94.468	Cross Section
AP013	9/27/2001	7691728.512	635393.345	90.828	Edge of Water
AP014	9/27/2001	7691725.404	635385.314	88.967	Cross Section in water
AP015	9/27/2001	7691720.526	635372.711	88.533	Cross Section in water
AP016	9/27/2001	7691716.117	635361.317	87.510	Cross Section in water
AP017	9/27/2001	7691712.523	635352.031	86.788	Cross Section in water
AP018	9/27/2001	7691710.988	635347.382	86.182	Cross Section in water
AP019	9/27/2001	7691707.559	635340.150	85.655	Cross Section in water
AP020	9/27/2001	7691707.161	635341.976	85.528	Cross Section in water
AP021	9/27/2001	7691705.577	635339.518	85.637	Cross Section in water
AP022	9/27/2001	7691698.788	635313.782	84.161	Cross Section in water
AP023	9/27/2001	7691690.725	635299.722	83.944	Cross Section in water
AP024	9/27/2001	7691683.156	635278.165	84.356	Cross Section in water
AP025	9/27/2001	7691674.424	635254.818	85.072	Cross Section in water
AP026	9/27/2001	7691666.955	635236.946	83.790	Cross Section in water
AP027	9/27/2001	7691664.490	635226.834	84.119	Cross Section in water
AP028	9/27/2001	7691658.599	635211.877	85.126	Cross Section in water
AP029	9/27/2001	7691655.885	635205.718	90.832	Edge of Water
AP030	9/27/2001	7691654.806	635202.926	91.216	Cross Section
AP031	9/27/2001	7691653.488	635199.522	91.724	Cross Section
AP032	9/27/2001	7691652.041	635195.871	92.471	Cross Section
AP033	9/27/2001	7691651.230	635193.680	98.267	Cross Section
AP034	9/27/2001	7691651.168	635193.526	102.134	Cross Section
AP035	9/27/2001	7691651.344	635193.090	109.827	Cross Section
AP036	9/27/2001	7691652.386	635196.693	92.667	Iron Rod with Cap (APLB)
AP037	9/27/2001	7692302.374	635194.060	98.187	Check Backsite of CP4066RP
RIVIS001	9/27/2001	7713407.293	626721.193	190.936	DOGAMI Control point DOG6 RPC on iron rod
RIVIS002	9/27/2001	7713407.307	626721.227	190.938	DOGAMI Control point DOG6 RPC on iron rod
RIVIS003	9/27/2001	7713725.937	627916.132	180.948	DOGAMI Control point DOG3 RPC on iron rod
RIVIS004	9/27/2001	7713725.936	627916.132	180.948	DOGAMI Control point DOG3 RPC on iron rod
DGI001	10/2/2001	7717454.695	623140.868	185.552	Nail in Mudstone
DGI002	10/2/2001	7717631.869	622910.702	187.402	Check Backsite CP4039
DGI003	10/2/2001	7717448.853	623137.868	179.488	Edge of Water
DGI004	10/2/2001	7717435.122	623131.148	179.282	Cross Section in Water
DGI005	10/2/2001	7717427.518	623127.373	178.089	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DGI006	10/2/2001	7717421.848	623123.984	178.158	Cross Section in Water
DGI007	10/2/2001	7717232.173	623030.375	195.133	Top of Bank
DGI008	10/2/2001	7717236.873	623032.918	193.088	Cross Section
DGI009	10/2/2001	7717252.137	623040.311	187.362	Cross Section
DGI010	10/2/2001	7717278.157	623053.197	186.128	Cross Section
DGI011	10/2/2001	7717296.122	623062.116	184.058	Edge of Water
DGI012	10/2/2001	7717308.228	623068.129	183.122	Cross Section in Water
DGI013	10/2/2001	7717325.047	623076.481	181.818	Cross Section in Water
DGI014	10/2/2001	7717339.327	623083.576	180.778	Cross Section in Water
DGI015	10/2/2001	7717365.091	623096.366	180.279	Cross Section in Water
DGI016	10/2/2001	7717375.297	623101.435	179.851	Cross Section in Water
DGI017	10/2/2001	7717390.727	623109.098	179.624	Cross Section in Water
DGI018	10/2/2001	7717399.238	623113.333	179.594	Cross Section in Water
DGI019	10/2/2001	7717405.060	623116.217	179.425	Cross Section in Water
DGH001	10/2/2001	7715893.312	624498.732	180.568	Inkspot
DGH002	10/2/2001	7718464.594	624304.269	184.919	Check Backsite CP4040
DGH003	10/2/2001	7716025.635	624695.196	186.132	Cross Section
DGH004	10/2/2001	7716020.963	624688.259	181.593	Cross Section
DGH005	10/2/2001	7716016.732	624681.975	178.940	Edge of Water
DGH006	10/2/2001	7716004.811	624664.280	177.298	Cross Section in Water
DGH007	10/2/2001	7715993.942	624648.136	176.731	Cross Section in Water
DGH008	10/2/2001	7715978.729	624625.548	176.556	Cross Section in Water
DGH009	10/2/2001	7715966.235	624606.999	176.796	Cross Section in Water
DGH010	10/2/2001	7715966.269	624607.051	176.795	Cross Section in Water
DGH011	10/2/2001	7715955.491	624591.048	176.514	Cross Section in Water
DGH012	10/2/2001	7715946.753	624578.077	176.788	Cross Section in Water
DGH013	10/2/2001	7715939.055	624566.646	176.682	Cross Section in Water
DGH014	10/2/2001	7715932.287	624556.598	177.421	Cross Section in Water
DGH015	10/2/2001	7715922.685	624542.347	178.417	Cross Section in Water
DGH016	10/2/2001	7715915.694	624531.964	179.285	Edge of Water
DGH017	10/2/2001	7715872.654	624468.060	183.105	Cross Section
DGH018	10/2/2001	7715840.564	624361.883	192.659	Check Backsite DOG9
DGG001	10/2/2001	7715325.830	625134.315	179.210	Inkspot
DGG002	10/2/2001	7715305.071	625112.154	178.318	Cross Section
DGG003	10/2/2001	7715288.283	625094.233	177.409	Edge of Water
DGG004	10/2/2001	7715258.468	625062.405	176.837	Cross Section in Water
DGG005	10/2/2001	7715234.583	625036.906	175.961	Cross Section in Water
DGG006	10/2/2001	7715217.391	625018.560	174.998	Cross Section in Water
DGG007	10/2/2001	7715201.858	625001.978	174.626	Cross Section in Water
DGG008	10/2/2001	7715193.485	624993.042	174.000	Cross Section in Water
DGG009	10/2/2001	7715150.977	624947.654	177.893	Cross Section in Water
DGG010	10/2/2001	7715127.110	624922.185	183.837	Top of Bank
DGG011	10/2/2001	7715141.931	624937.994	181.078	Cross Section
DGG012	10/2/2001	7715164.498	624962.086	176.748	Cross Section in Water
DGG013	10/2/2001	7715175.022	624973.325	175.227	Cross Section in Water
DGG014	10/2/2001	7715177.704	624976.187	174.801	Cross Section in Water
DGF001	10/2/2001	7714944.110	625404.040	177.752	Inkspot
DGF002	10/2/2001	7714992.452	625454.063	181.060	Cross Section

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Eastng (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DGF003	10/2/2001	7714979.440	625440.599	177.972	Cross Section
DGF004	10/2/2001	7714968.829	625429.619	177.447	Cross Section
DGF005	10/2/2001	7714932.197	625391.712	176.914	Cross Section
DGF006	10/2/2001	7714908.382	625367.067	176.197	Cross Section in Water
DGF007	10/2/2001	7714886.846	625344.782	175.533	Cross Section in Water
DGF008	10/2/2001	7714862.952	625320.054	174.631	Cross Section in Water
DGF009	10/2/2001	7714845.044	625301.521	173.927	Cross Section in Water
DGF010	10/2/2001	7714836.377	625292.550	173.685	Cross Section in Water
DGF011	10/2/2001	7714827.037	625282.898	173.342	Cross Section in Water
DGF012	10/2/2001	7714816.706	625272.207	173.484	Cross Section in Water
DGF013	10/2/2001	7714807.875	625263.073	174.112	Cross Section in Water
DGF014	10/2/2001	7714802.845	625257.864	175.016	Cross Section in Water
DGF015	10/2/2001	7714795.497	625250.260	175.220	Cross Section in Water
DGF016	10/2/2001	7714786.675	625241.134	176.371	Cross Section in Water
DGF017	10/2/2001	7714778.388	625232.557	177.490	Edge of Water
DGF018	10/2/2001	7714772.368	625226.328	180.545	Cross Section
DGF019	10/2/2001	7714768.634	625222.466	183.678	Cross Section
DGF020	10/2/2001	7714768.580	625222.407	189.917	Top of Bank
DGF021	10/2/2001	7715308.230	625171.186	181.989	Check Backsite CP4041
DGE001	10/5/2001	7714696.158	625830.512	177.865	Inkspot
DGE002	10/5/2001	7714361.908	625650.821	176.411	Edge of Water
DGE003	10/5/2001	7714356.002	625647.454	181.432	Cross Section
DGE004	10/5/2001	7714359.054	625649.083	177.915	Cross Section
DGE005	10/5/2001	7714121.559	625990.080	190.841	Check Backsite CP4042
DGE006	10/5/2001	7714368.295	625654.054	173.415	Cross Section in Water
DGE007	10/5/2001	7714375.054	625657.690	172.995	Cross Section in Water
DGE008	10/5/2001	7714386.375	625663.784	173.978	Cross Section in Water
DGE009	10/5/2001	7714396.230	625669.096	174.661	Cross Section in Water
DGE010	10/5/2001	7714414.150	625678.732	175.028	Cross Section in Water
DGE011	10/5/2001	7714430.087	625687.309	174.949	Cross Section in Water
DGE012	10/5/2001	7714454.220	625700.302	175.381	Cross Section in Water
DGE013	10/5/2001	7714477.636	625712.910	175.209	Cross Section in Water
DGE014	10/5/2001	7714522.034	625736.803	175.318	Cross Section in Water
DGE015	10/5/2001	7714561.409	625757.993	175.703	Cross Section in Water
DGE016	10/5/2001	7714594.431	625775.765	175.692	Cross Section in Water
DGE017	10/5/2001	7714625.889	625792.695	175.787	Cross Section in Water
DGE018	10/5/2001	7714647.840	625804.508	176.495	Cross Section in Water
DGE019	10/5/2001	7714676.555	625819.962	176.893	Edge of Water
DGE020	10/5/2001	7714709.148	625837.503	179.297	Cross Section
DGE021	10/5/2001	7714724.486	625845.758	180.058	Cross Section
DGE022	10/5/2001	7714744.341	625856.445	180.659	Cross Section
DGE023	10/5/2001	7714121.675	625990.092	190.848	Check Backsite CP4042
DGD001	10/5/2001	7714072.621	626872.615	173.913	Inkspot
DGD002	10/5/2001	7714092.846	626866.820	173.058	Cross Section
DGD003	10/5/2001	7714112.766	626860.963	172.455	Edge of Water
DGD004	10/5/2001	7714133.954	626854.815	171.892	Cross Section in Water
DGD005	10/5/2001	7714167.477	626845.447	170.557	Cross Section in Water
DGD006	10/5/2001	7714191.854	626838.466	169.905	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DGD007	10/5/2001	7714205.919	626829.079	169.717	Cross Section in Water
DGD008	10/5/2001	7714232.287	626826.783	170.010	Cross Section in Water
DGD009	10/5/2001	7714240.522	626824.548	170.884	Cross Section in Water
DGD010	10/5/2001	7714249.887	626821.867	171.876	Edge of Water
DGD011	10/5/2001	7714292.921	626809.585	174.134	Cross Section
DGD012	10/5/2001	7714331.576	626798.310	174.829	Cross Section
DGD013	10/5/2001	7714033.601	626883.790	173.598	Cross Section
DGD014	10/5/2001	7714007.565	626891.247	172.926	Edge of Water
DGD015	10/5/2001	7713982.305	626898.481	172.208	Cross Section in Water
DGD016	10/5/2001	7713958.265	626905.367	172.022	Cross Section in Water
DGD017	10/5/2001	7713907.435	626919.925	172.726	Edge of Water
DGD018	10/5/2001	7713865.700	626931.878	174.703	Cross Section
DGD019	10/5/2001	7713822.756	626944.176	175.938	Cross Section
DGD020	10/5/2001	7713770.411	626959.169	173.385	Cross Section
DGD021	10/5/2001	7713758.229	626962.656	170.490	Cross Section
DGD022	10/5/2001	7713407.245	626721.329	190.922	Check Backsite DOG6
CK4042	10/5/2001	7714121.757	625990.020	190.734	Check Backsite CP4042
CK4043	10/5/2001	7713822.495	627950.674	183.660	Check Backsite CP4043
DGC001	10/16/2001	7713871.073	628775.680	165.162	Nail on Line DGC
DGC002	10/16/2001	7713923.732	628827.830	169.444	Nail on Line DGC
DGC003	10/16/2001	7713822.538	627951.119	183.413	Check Backsite
DGC004	10/16/2001	7713822.622	627950.944	183.807	Check Backsite CP4043
DGC005	10/16/2001	7713615.189	628522.386	162.399	Edge of Water
DGC006	10/16/2001	7713629.165	628536.245	163.046	Cross Section
DGC007	10/16/2001	7713634.207	628541.217	162.810	Edge of Water
DGC008	10/16/2001	7713649.130	628555.991	161.360	Cross Section in Water
DGC009	10/16/2001	7713659.819	628566.570	160.302	Cross Section in Water
DGC010	10/16/2001	7713670.607	628577.250	159.510	Cross Section in Water
DGC011	10/16/2001	7713680.276	628586.822	158.885	Cross Section in Water
DGC012	10/16/2001	7713687.382	628593.858	158.814	Cross Section in Water
DGC013	10/16/2001	7713695.730	628602.113	159.842	Cross Section in Water
DGC014	10/16/2001	7713703.719	628610.025	161.084	Cross Section in Water
DGC015	10/16/2001	7713709.011	628615.270	162.733	Edge of Water
DGC016	10/16/2001	7713715.889	628622.075	163.987	Cross Section
DGC017	10/16/2001	7713723.558	628629.673	162.761	Edge of Water
DGC018	10/16/2001	7713736.825	628641.563	161.387	Cross Section in Water
DGC019	10/16/2001	7713735.722	628641.535	161.358	Cross Section in Water
DGC020	10/16/2001	7713778.833	628684.404	163.246	Cross Section in Water
DGC021	10/16/2001	7713800.680	628706.029	163.596	Cross Section in Water
DGC022	10/16/2001	7713826.260	628731.347	163.991	Cross Section in Water
DGC023	10/16/2001	7713852.347	628757.169	164.613	Cross Section in Water
DGC024	10/16/2001	7713860.724	628765.461	165.079	Edge of Water
DGC025	10/16/2001	7713870.960	628775.591	165.215	Cross Section in Water
DGC026	10/16/2001	7713884.732	628789.224	164.096	Edge of Water
DGC027	10/16/2001	7713900.498	628804.830	162.866	Cross Section in Water
DGC028	10/16/2001	7713915.067	628819.252	163.973	Edge of Water
DGC029	10/16/2001	7714264.017	629094.246	164.131	Edge of Pond
DGC030	10/16/2001	7714249.900	629150.716	164.147	Cross Section in Water

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DGC031	10/16/2001	7714237.795	629138.727	161.749	Cross Section in Water
DGC032	10/16/2001	7714219.134	629120.062	161.006	Cross Section in Water
DGC033	10/16/2001	7714182.783	629084.118	160.096	Cross Section in Water
DGC034	10/16/2001	7714151.738	629052.919	159.592	Cross Section in Water
DGC035	10/16/2001	7714119.375	629021.495	160.434	Cross Section in Water
DGC036	10/16/2001	7714091.569	628993.667	160.731	Cross Section in Water
DGC037	10/16/2001	7714032.627	628935.623	158.471	Cross Section in Water
DGC038	10/16/2001	7714000.869	628903.542	159.653	Cross Section in Water
DGC039	10/16/2001	7713980.438	628883.970	163.440	Cross Section in Water
DGC040	10/16/2001	7713963.649	628867.578	164.378	Edge of Pond
DGC041	10/16/2001	7713950.331	628854.159	167.242	Cross Section Topo
DGC042	10/16/2001	7713936.763	628840.729	169.588	Cross Section Topo
DGC043	10/16/2001	7714017.769	628797.314	165.739	Cross Section Topo
DGC044	10/16/2001	7714116.362	628743.647	172.942	Cross Section Topo
DGC045	10/16/2001	7714291.000	628732.868	187.374	Cross Section Topo
DGC046	10/16/2001	7714314.016	628799.624	182.017	Cross Section Topo
DGC047	10/16/2001	7714289.693	628831.997	171.482	Cross Section Topo
DGC048	10/16/2001	7714293.224	628860.882	164.707	Cross Section Topo
DGC049	10/16/2001	7714284.352	628909.661	167.292	Cross Section Topo
DGC050	10/16/2001	7714240.336	628913.040	166.356	Cross Section Topo
DGC051	10/16/2001	7714215.465	628933.075	164.252	Edge of Pond
DGC052	10/16/2001	7714166.659	628913.626	163.996	Edge of Pond
DGC053	10/16/2001	7714201.807	628879.329	168.630	Cross Section Topo
DGC054	10/16/2001	7714190.526	628850.876	164.256	Edge of Pond
DGC055	10/16/2001	7714164.560	628835.665	164.235	Edge of Pond
DGC056	10/16/2001	7714089.209	628851.871	166.783	Cross Section Topo
DGC057	10/16/2001	7714052.994	628867.614	164.211	Edge of Pond
DGC058	10/16/2001	7713946.061	628772.957	167.975	Top of Bank
DGC059	10/16/2001	7713977.906	628683.738	167.745	Top of Bank
DGB001	10/16/2001	7711842.436	629661.704	155.738	Inkspot on Line DGB
DGB002	10/16/2001	7711294.819	629823.914	156.438	Check Backsite
DGB003	10/16/2001	7711294.773	629823.915	154.584	Check Backsite
DGB004	10/16/2001	7711845.279	629673.622	158.818	Cross Section
DGB005	10/16/2001	7711847.921	629684.691	159.849	Cross Section
DGB006	10/16/2001	7711851.845	629701.351	160.847	Cross Section
DGB007	10/16/2001	7711778.016	629391.112	162.246	Cross Section
DGB008	10/16/2001	7711780.879	629403.719	158.618	Cross Section
DGB009	10/16/2001	7711793.798	629457.864	158.947	Cross Section
DGB010	10/16/2001	7711803.459	629498.355	157.561	Cross Section
DGB011	10/16/2001	7711808.286	629518.584	154.223	Edge of Water
DGB012	10/16/2001	7711813.786	629541.624	150.519	Cross Section in Water
DGB013	10/16/2001	7711816.012	629558.632	150.215	Cross Section in Water
DGB014	10/16/2001	7711822.633	629578.711	150.797	Cross Section in Water
DGB015	10/16/2001	7711828.499	629603.296	151.954	Cross Section in Water
DGB016	10/16/2001	7711832.975	629622.074	152.673	Cross Section in Water
DGB017	10/16/2001	7711837.665	629641.703	153.131	Cross Section in Water
DGB018	10/16/2001	7711840.469	629653.461	154.123	Edge of Water
DGA001	10/16/2001	7711027.558	631113.694	163.490	Check Backsite

Table F.1 Total station survey data 2001 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DGA002	10/16/2001	7710594.627	631238.398	158.285	Nail on Line DGA
DGA003	10/16/2001	7710694.170	631063.747	158.089	Check Backsite DOG22 BAD POINT
DGA004	10/16/2001	7710694.223	631063.789	159.957	Check Backsite DOG22
DGA005	10/16/2001	7710581.700	631215.217	155.801	Cross Section
DGA006	10/16/2001	7710541.559	631200.789	150.925	Cross Section in Water
DGA007	10/16/2001	7710528.601	631191.447	145.065	Cross Section in Water
DGA008	10/16/2001	7710508.858	631175.426	142.999	Cross Section in Water
DGA009	10/16/2001	7710458.353	631137.904	144.876	Cross Section in Water
DGA010	10/16/2001	7710456.155	631135.558	144.609	Cross Section in Water
DGA011	10/16/2001	7710427.596	631116.358	143.438	Cross Section in Water
DGA012	10/16/2001	7710403.946	631103.482	146.372	Cross Section in Water
DGA013	10/16/2001	7710385.220	631090.410	150.324	Cross Section in Water
DGA014	10/16/2001	7710527.765	631235.697	152.149	Cross Section in Water

Table F.2 Total station survey data 2002 on the lower Clackamas River.

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TR2002_001	7/10/2002	7722785.597	603742.679	272.555	Check backsite
TR2002_002	7/10/2002	7722043.628	602784.759	274.243	Tracer Rock
TR2002_003	7/10/2002	7722042.958	602781.438	274.690	Tracer Rock
TR2002_004	7/10/2002	7722045.171	602779.334	275.407	Tracer Rock
TR2002_005	7/10/2002	7722043.603	602776.797	275.771	Tracer Rock
TR2002_006	7/10/2002	7722042.555	602775.659	275.239	Tracer Rock
TR2002_007	7/10/2002	7722049.031	602773.252	276.161	Tracer Rock
TR2002_008	7/10/2002	7722046.839	602770.216	276.240	Tracer Rock
TR2002_009	7/10/2002	7722044.040	602769.702	276.188	Tracer Rock
TR2002_010	7/10/2002	7722050.255	602766.646	276.980	Tracer Rock
TR2002_011	7/10/2002	7722052.846	602764.984	277.103	Tracer Rock
TR2002_012	7/10/2002	7722059.751	602758.737	278.409	Tracer Rock
TR2002_013	7/10/2002	7722065.746	602755.734	278.806	Tracer Rock
TR2002_014	7/10/2002	7722071.437	602749.119	278.901	Iron Rod with Cap
TR2002_015	7/10/2002	7722054.567	602744.962	277.702	Sample Location
TR2002_016	7/10/2002	7721768.226	602733.938	271.812	Nail
TR2002_017	7/10/2002	7721855.975	602860.041	280.726	Iron Rod with Cap
CP2002_001	7/10/2002	7721436.647	601821.212	281.439	Inkspot
CP2002_002	7/10/2002	7721436.581	601821.348	281.343	Check backsite
CP2002_003	7/10/2002	7721436.325	601819.604	281.409	Check backsite
CP2002_004	7/10/2002	7721436.575	601821.193	281.350	Check backsite
CP2002_005	7/10/2002	7721172.550	601861.788	291.871	Cross Section Topography
CP2002_006	7/10/2002	7721165.096	601862.933	291.605	Cross Section Topography
CP2002_007	7/10/2002	7721159.623	601863.774	290.869	Cross Section Topography
CP2002_008	7/10/2002	7721157.441	601864.109	290.143	Cross Section Topography
CP2002_009	7/10/2002	7721152.812	601864.820	289.330	Cross Section Topography
CP2002_010	7/10/2002	7721147.615	601865.618	288.606	Cross Section Topography
CP2002_011	7/10/2002	7721143.172	601866.301	287.387	Cross Section Topography
CP2002_012	7/10/2002	7721138.972	601866.946	286.128	Cross Section Topography
CP2002_013	7/10/2002	7721134.177	601867.682	284.915	Cross Section Topography
CP2002_014	7/10/2002	7721129.584	601868.387	285.272	Cross Section Topography
CP2002_015	7/10/2002	7721124.640	601869.146	285.166	Cross Section Topography
CP2002_016	7/10/2002	7721119.588	601869.923	285.063	Cross Section Topography
CP2002_017	7/10/2002	7721113.158	601870.909	285.078	Cross Section Topography
CP2002_018	7/10/2002	7721108.108	601871.686	285.184	Cross Section Topography
CP2002_019	7/10/2002	7721103.372	601872.413	285.629	Cross Section Topography
CP2002_020	7/10/2002	7721096.563	601873.459	285.877	Cross Section Topography
CP2002_021	7/10/2002	7721094.692	601873.746	284.991	Cross Section Topography
CP2002_022	7/10/2002	7721088.745	601874.659	284.827	Cross Section Topography
CP2002_023	7/10/2002	7721082.488	601875.620	285.269	Cross Section Topography
CP2002_024	7/10/2002	7721077.166	601876.436	285.402	Cross Section Topography
CP2002_025	7/10/2002	7721069.798	601877.568	285.015	Cross Section Topography
CP2002_026	7/10/2002	7721064.330	601878.408	285.542	Cross Section Topography
CP2002_027	7/10/2002	7721059.019	601879.223	285.468	Cross Section Topography
CP2002_028	7/10/2002	7721053.402	601880.086	284.651	Cross Section Topography
CP2002_029	7/10/2002	7721046.253	601881.184	283.466	Cross Section Topography
CP2002_030	7/10/2002	7721040.357	601882.089	282.410	Cross Section Topography
CP2002_031	7/10/2002	7721035.033	601882.907	281.898	Cross Section Topography

Note: Northings and Eastings are in NAD83 Oregon North State Plane Projection.
Elevations are relative to the NAVD88 vertical datum.

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CP2002_032	7/10/2002	7721028.035	601883.982	281.448	Cross Section Topography
CP2002_033	7/10/2002	7721021.446	601884.994	280.983	Cross Section Topography
CP2002_034	7/10/2002	7721014.793	601886.015	280.533	Cross Section Topography
CP2002_035	7/10/2002	7721009.229	601886.869	280.077	Cross Section Topography
CP2002_036	7/10/2002	7721004.696	601887.566	279.709	Cross Section Topography
CP2002_037	7/10/2002	7720998.306	601888.547	279.936	Cross Section Topography
CP2002_038	7/10/2002	7720992.678	601889.411	279.990	Cross Section Topography
CP2002_039	7/10/2002	7720987.720	601890.173	279.601	Cross Section Topography
CP2002_040	7/10/2002	7720981.235	601891.167	279.563	Cross Section Topography
CP2002_041	7/10/2002	7720976.031	601891.966	279.402	Cross Section Topography
CP2002_042	7/10/2002	7720971.929	601892.598	278.903	Cross Section Topography
CP2002_043	7/10/2002	7720967.565	601893.266	278.718	Edge of Water
CP2002_044	7/10/2002	7720958.009	601894.846	278.205	Cross section in Water
CP2002_045	7/10/2002	7720950.476	601895.890	276.782	Cross section in Water
CP2002_046	7/10/2002	7720948.153	601896.247	275.953	Cross section in Water
CP2002_047	7/10/2002	7720942.979	601897.043	274.668	Cross section in Water
CP2002_048	7/10/2002	7720942.608	601897.010	274.050	Cross section in Water
CP2002_049	7/10/2002	7720939.167	601897.491	273.116	Cross section in Water
CP2002_050	7/10/2002	7720938.064	601897.785	272.738	Cross section in Water
CP2002_051	7/10/2002	7720934.831	601898.281	274.254	Cross section in Water
CP2002_052	7/10/2002	7720931.274	601899.071	272.832	Cross section in Water
CP2002_053	7/10/2002	7720925.989	601900.766	273.401	Cross section in Water
CP2002_054	7/10/2002	7720919.779	601901.028	273.085	Cross section in Water
CP2002_055	7/10/2002	7720918.155	601900.601	272.870	Cross section in Water
CP2002_056	7/10/2002	7720917.345	601900.700	276.670	Cross section in Water
CP2002_057	7/10/2002	7720912.090	601901.371	277.432	Cross section in Water
CP2002_058	7/10/2002	7720906.391	601902.712	277.755	Cross section in Water
CP2002_059	7/10/2002	7720903.241	601902.756	278.796	Edge of Water
CP2002_060	7/10/2002	7720899.181	601903.931	279.135	Cross Section Topography
CP2002_061	7/10/2002	7720895.854	601904.296	279.655	Cross Section Topography
CP2002_062	7/10/2002	7720897.386	601904.081	279.292	Nail
CP2002_063	7/10/2002	7721436.546	601821.248	281.344	Check backsite
TERRACE_001	7/11/2002	7723391.318	600931.449	300.223	Magnetic Nail
TERRACE_002	7/11/2002	7722836.387	600583.764	293.543	Nail
TERRACE_003	7/11/2002	7722852.799	600567.417	299.451	Check backsite
TERRACE_004	7/11/2002	7722922.380	600767.283	299.319	Top of Bank
TERRACE_005	7/11/2002	7722927.118	600767.623	300.385	Top of Bank
TERRACE_006	7/11/2002	7722930.397	600766.820	300.452	Top of Bank
TERRACE_007	7/11/2002	7722942.343	600764.650	300.961	Top of Bank
TERRACE_008	7/11/2002	7722945.464	600764.489	301.037	Top of Bank
TERRACE_009	7/11/2002	7722948.957	600763.828	301.434	Top of Bank
TERRACE_010	7/11/2002	7722958.331	600762.615	301.335	Top of Bank
TERRACE_011	7/11/2002	7722962.602	600763.510	301.876	Top of Bank
TERRACE_012	7/11/2002	7722966.574	600764.113	302.007	Top of Bank
TERRACE_013	7/11/2002	7722969.444	600764.450	301.953	Top of Bank
TERRACE_014	7/11/2002	7722972.283	600765.016	302.000	Top of Bank
TERRACE_015	7/11/2002	7722975.761	600766.220	302.061	Top of Bank
TERRACE_016	7/11/2002	7722978.540	600766.849	301.973	Top of Bank

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_017	7/11/2002	7722981.212	600767.570	302.087	Top of Bank
TERRACE_018	7/11/2002	7722984.644	600768.511	301.922	Top of Bank
TERRACE_019	7/11/2002	7722988.960	600769.392	302.105	Top of Bank
TERRACE_020	7/11/2002	7722992.112	600770.833	301.919	Top of Bank
TERRACE_021	7/11/2002	7722996.703	600771.396	301.787	Top of Bank
TERRACE_022	7/11/2002	7723003.213	600771.389	301.826	Top of Bank
TERRACE_023	7/11/2002	7723007.174	600772.678	301.621	Top of Bank
TERRACE_024	7/11/2002	7723013.058	600774.679	301.955	Top of Bank
TERRACE_025	7/11/2002	7723018.751	600776.227	301.560	Top of Bank
TERRACE_026	7/11/2002	7723022.085	600776.939	301.364	Top of Bank
TERRACE_027	7/11/2002	7723025.970	600778.852	300.990	Top of Bank
TERRACE_028	7/11/2002	7723029.676	600780.734	301.699	Top of Bank
TERRACE_029	7/11/2002	7723033.691	600781.060	301.895	Top of Bank
TERRACE_030	7/11/2002	7723037.063	600781.427	301.699	Top of Bank
TERRACE_031	7/11/2002	7723040.108	600781.772	301.812	Top of Bank
TERRACE_032	7/11/2002	7723044.284	600782.464	302.139	Top of Bank
TERRACE_033	7/11/2002	7723048.342	600782.521	301.569	Top of Bank
TERRACE_034	7/11/2002	7723051.165	600783.320	301.438	Top of Bank
TERRACE_035	7/11/2002	7723055.173	600783.738	301.206	Top of Bank
TERRACE_036	7/11/2002	7723059.936	600784.375	301.240	Top of Bank
TERRACE_037	7/11/2002	7723065.861	600786.215	301.408	Top of Bank
TERRACE_038	7/11/2002	7723071.094	600787.330	300.031	Top of Bank
TERRACE_039	7/11/2002	7723075.224	600788.351	300.281	Top of Bank
TERRACE_040	7/11/2002	7723080.067	600790.046	299.967	Top of Bank
TERRACE_041	7/11/2002	7723085.280	600791.154	299.535	Top of Bank
TERRACE_042	7/11/2002	7723089.730	600790.136	298.889	Top of Bank
TERRACE_043	7/11/2002	7723092.386	600793.981	299.864	Top of Bank
TERRACE_044	7/11/2002	7723097.264	600797.655	300.033	Top of Bank
TERRACE_045	7/11/2002	7723097.606	600797.871	300.103	Top of Bank
TERRACE_046	7/11/2002	7723102.854	600799.264	300.272	Top of Bank
TERRACE_047	7/11/2002	7723109.671	600802.121	300.078	Top of Bank
TERRACE_048	7/11/2002	7723116.518	600805.585	299.703	Top of Bank
TERRACE_049	7/11/2002	7723123.030	600805.999	299.188	Top of Bank
TERRACE_050	7/11/2002	7723132.087	600807.745	299.416	Top of Bank
TERRACE_051	7/11/2002	7723139.211	600811.758	299.097	Top of Bank
TERRACE_052	7/11/2002	7723151.227	600815.891	299.169	Top of Bank
TERRACE_053	7/11/2002	7723161.307	600818.703	299.087	Top of Bank
TERRACE_054	7/11/2002	7723171.268	600823.943	299.389	Top of Bank
TERRACE_055	7/11/2002	7723391.302	600931.457	300.216	Top of Bank
TERRACE_056	7/11/2002	7723243.639	600845.178	298.523	Edge of Water
TERRACE_057	7/11/2002	7723215.449	600836.267	298.472	Edge of Water
TERRACE_058	7/11/2002	7723201.871	600823.379	298.261	Edge of Water
TERRACE_059	7/11/2002	7723186.449	600816.867	298.019	Edge of Water
TERRACE_060	7/11/2002	7723166.435	600804.919	296.954	Edge of Water
TERRACE_061	7/11/2002	7723146.066	600799.021	295.893	Edge of Water
TERRACE_062	7/11/2002	7723130.675	600795.407	295.832	Edge of Water
TERRACE_063	7/11/2002	7723117.380	600791.350	295.716	Edge of Water
TERRACE_064	7/11/2002	7723104.766	600789.528	295.699	Edge of Water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_065	7/11/2002	7723065.073	600781.421	294.467	Edge of Water
TERRACE_066	7/11/2002	7723050.366	600778.411	293.357	Edge of Water
TERRACE_067	7/11/2002	7723037.967	600778.069	293.558	Edge of Water
TERRACE_068	7/11/2002	7723026.944	600773.204	293.481	Edge of Water
TERRACE_069	7/11/2002	7723009.075	600768.235	293.382	Edge of Water
TERRACE_070	7/11/2002	7722998.002	600763.594	293.536	Edge of Water
TERRACE_071	7/11/2002	7722986.955	600761.010	293.463	Edge of Water
TERRACE_072	7/11/2002	7722976.247	600759.520	293.235	Edge of Water
TERRACE_073	7/11/2002	7722955.388	600755.544	293.090	Edge of Water
TERRACE_074	7/11/2002	7722946.865	600753.456	292.953	Edge of Water
TERRACE_075	7/11/2002	7722930.408	600752.209	293.039	Edge of Water
TERRACE_076	7/11/2002	7722923.196	600753.304	292.733	Edge of Water
TERRACE_077	7/11/2002	7722918.400	600754.842	292.690	Edge of Water
TERRACE_078	7/11/2002	7722913.037	600757.376	292.525	Edge of Water
TERRACE_079	7/11/2002	7722903.280	600761.658	292.122	Edge of Water
TERRACE_080	7/11/2002	7722893.485	600766.763	292.236	Edge of Water
TERRACE_081	7/11/2002	7722883.897	600768.741	292.161	Edge of Water
TERRACE_082	7/11/2002	7722874.311	600772.316	292.219	Edge of Water
TERRACE_083	7/11/2002	7722867.579	600776.897	292.103	Edge of Water
TERRACE_084	7/11/2002	7722860.094	600782.098	292.276	Edge of Water
TERRACE_085	7/11/2002	7722854.103	600786.529	292.096	Edge of Water
TERRACE_086	7/11/2002	7722848.670	600791.838	292.225	Edge of Water
TERRACE_087	7/11/2002	7722845.830	600801.219	292.142	Edge of Water
TERRACE_088	7/11/2002	7722844.682	600813.713	292.133	Edge of Water
TERRACE_089	7/11/2002	7722843.052	600824.117	292.297	Edge of Water
TERRACE_090	7/11/2002	7722842.282	600838.403	292.203	Edge of Water
TERRACE_091	7/11/2002	7722846.600	600846.443	292.100	Edge of Water
TERRACE_092	7/11/2002	7722861.574	600859.584	292.243	Sardine Formation Outcrop
TERRACE_093	7/11/2002	7722855.222	600851.303	292.133	Sardine Formation Outcrop
TERRACE_094	7/11/2002	7722850.171	600846.818	292.240	Sardine Formation Outcrop
TERRACE_095	7/11/2002	7723063.478	600776.234	293.541	Sardine Formation Outcrop
TERRACE_096	7/11/2002	7723063.429	600772.960	293.516	Sardine Formation Outcrop
TERRACE_097	7/11/2002	7723064.319	600770.143	293.887	Sardine Formation Outcrop
TERRACE_098	7/11/2002	7723068.950	600780.200	294.072	Sardine Formation Outcrop
TERRACE_099	7/11/2002	7723074.198	600781.643	294.510	Sardine Formation Outcrop
TERRACE_100	7/11/2002	7723075.241	600776.076	294.060	Sardine Formation Outcrop
TERRACE_101	7/11/2002	7723078.960	600778.747	293.975	Sardine Formation Outcrop
TERRACE_102	7/11/2002	7723082.597	600779.679	294.029	Sardine Formation Outcrop
TERRACE_103	7/11/2002	7723094.957	600781.783	293.937	Sardine Formation Outcrop
TERRACE_104	7/11/2002	7723098.265	600784.588	294.241	Sardine Formation Outcrop
TERRACE_105	7/11/2002	7723103.451	600784.664	293.636	Sardine Formation Outcrop
TERRACE_106	7/11/2002	7723108.020	600785.517	294.056	Sardine Formation Outcrop
TERRACE_107	7/11/2002	7723116.086	600785.306	294.102	Sardine Formation Outcrop
TERRACE_108	7/11/2002	7723122.226	600786.545	294.016	Sardine Formation Outcrop
TERRACE_109	7/11/2002	7723125.976	600787.768	293.823	Sardine Formation Outcrop
TERRACE_110	7/11/2002	7723131.046	600787.956	294.137	Sardine Formation Outcrop
TERRACE_111	7/11/2002	7723137.155	600785.043	293.821	Sardine Formation Outcrop
TERRACE_112	7/11/2002	7723140.977	600789.655	293.864	Sardine Formation Outcrop

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_113	7/11/2002	7723146.125	600791.566	294.076	Sardine Formation Outcrop
TERRACE_114	7/11/2002	7723166.722	600791.072	294.511	Sardine Formation Outcrop
TERRACE_115	7/11/2002	7723223.548	600806.923	294.922	Sardine Formation Outcrop
TERRACE_116	7/11/2002	7722923.183	600948.380	292.815	Sardine Formation Outcrop
TERRACE_117	7/11/2002	7722919.465	600940.254	292.959	Sardine Formation Outcrop
TERRACE_118	7/11/2002	7722914.074	600934.478	292.878	Sardine Formation Outcrop
TERRACE_119	7/11/2002	7722910.604	600927.942	292.753	Sardine Formation Outcrop
TERRACE_120	7/11/2002	7722907.076	600926.294	292.345	Sardine Formation Outcrop
TERRACE_121	7/11/2002	7722910.114	600913.111	292.499	Sardine Formation Outcrop
TERRACE_122	7/11/2002	7722854.015	600927.291	300.817	Fault in Sardine Formation
TERRACE_123	7/11/2002	7722854.797	600928.566	302.022	Fault in Sardine Formation
TERRACE_124	7/11/2002	7722856.422	600930.998	304.243	Fault in Sardine Formation
TERRACE_125	7/11/2002	7722859.781	600936.472	307.120	Fault in Sardine Formation
TERRACE_126	7/11/2002	7722862.756	600939.794	309.382	Fault in Sardine Formation
TERRACE_127	7/11/2002	7722861.964	600938.946	310.276	Contact between SRM and Sardine FMT
TERRACE_128	7/11/2002	7722863.229	600939.928	309.873	Contact between SRM and Sardine FMT
TERRACE_129	7/11/2002	7722866.062	600940.999	309.952	Contact between SRM and Sardine FMT
TERRACE_130	7/11/2002	7722869.911	600942.885	309.978	Contact between SRM and Sardine FMT
TERRACE_131	7/11/2002	7722902.400	600966.270	307.336	Contact between SRM and Sardine FMT
TERRACE_132	7/11/2002	7722917.516	600976.058	306.084	Contact between SRM and Sardine FMT
TERRACE_133	7/11/2002	7722924.134	600978.367	305.284	Contact between SRM and Sardine FMT
TERRACE_134	7/11/2002	7722839.082	600919.653	310.903	Contact between SRM and Sardine FMT
TERRACE_135	7/11/2002	7722819.406	600841.964	292.094	Sardine Formation Outcrop
TERRACE_136	7/11/2002	7722818.391	600839.008	292.132	Sardine Formation Outcrop
TERRACE_137	7/11/2002	7722810.677	600815.364	291.973	Sardine Formation Outcrop
TERRACE_138	7/11/2002	7722815.613	600811.341	291.260	Sardine Formation Outcrop
TERRACE_139	7/11/2002	7722824.441	600802.177	289.348	Sardine Formation Outcrop
TERRACE_140	7/11/2002	7722824.076	600786.039	287.968	Sardine Formation Outcrop
TERRACE_141	7/11/2002	7722820.596	600774.056	289.798	Sardine Formation Outcrop
TERRACE_142	7/11/2002	7722824.989	600763.902	290.103	Sardine Formation Outcrop
TERRACE_143	7/11/2002	7722821.530	600763.432	289.843	Sardine Formation Outcrop
TERRACE_144	7/11/2002	7722819.955	600759.606	289.933	Sardine Formation Outcrop
TERRACE_145	7/11/2002	7722818.323	600753.453	290.043	Sardine Formation Outcrop
TERRACE_146	7/11/2002	7722820.149	600747.469	289.352	Sardine Formation Outcrop
TERRACE_147	7/11/2002	7722841.958	600733.779	291.410	Sardine Formation Outcrop
TERRACE_148	7/11/2002	7722841.241	600726.229	291.618	Sardine Formation Outcrop
TERRACE_149	7/11/2002	7722836.213	600720.897	291.785	Sardine Formation Outcrop
TERRACE_150	7/11/2002	7722826.504	600712.352	291.470	Sardine Formation Outcrop
TERRACE_151	7/11/2002	7722818.915	600704.623	291.416	Sardine Formation Outcrop
TERRACE_152	7/11/2002	7722801.683	600695.588	291.056	Sardine Formation Outcrop
TERRACE_153	7/11/2002	7722790.455	600688.417	290.086	Sardine Formation Outcrop
TERRACE_154	7/11/2002	7722783.771	600687.012	288.690	Sardine Formation Outcrop
TERRACE_155	7/11/2002	7722778.621	600672.794	290.750	Sardine Formation Outcrop
TERRACE_156	7/11/2002	7722770.844	600664.014	291.671	Sardine Formation Outcrop
TERRACE_157	7/11/2002	7722765.448	600653.640	291.802	Sardine Formation Outcrop
TERRACE_158	7/11/2002	7722757.979	600653.780	291.387	Sardine Formation Outcrop
TERRACE_159	7/11/2002	7722746.463	600652.077	291.681	Sardine Formation Outcrop
TERRACE_160	7/11/2002	7722752.338	600630.186	291.990	Sardine Formation Outcrop

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_161	7/11/2002	7722748.813	600633.769	291.966	Sardine Formation Outcrop
TERRACE_162	7/11/2002	7722750.502	600624.207	291.689	Sardine Formation Outcrop
TERRACE_163	7/11/2002	7722748.407	600621.467	291.737	Sardine Formation Outcrop
TERRACE_164	7/11/2002	7722742.127	600617.204	290.590	Sardine Formation Outcrop
TERRACE_165	7/11/2002	7722738.001	600604.183	291.320	Sardine Formation Outcrop
TERRACE_166	7/11/2002	7722730.959	600594.955	290.987	Sardine Formation Outcrop
TERRACE_167	7/11/2002	7722724.076	600587.990	289.671	Sardine Formation Outcrop
TERRACE_168	7/11/2002	7722718.244	600582.754	290.644	Sardine Formation Outcrop
TERRACE_169	7/11/2002	7722715.320	600577.943	290.570	Sardine Formation Outcrop
TERRACE_170	7/11/2002	7722707.231	600567.411	290.464	Sardine Formation Outcrop
TERRACE_171	7/11/2002	7722701.968	600564.597	291.504	Sardine Formation Outcrop
TERRACE_172	7/11/2002	7722695.877	600562.202	291.461	Sardine Formation Outcrop
TERRACE_173	7/11/2002	7722685.835	600560.828	291.171	Sardine Formation Outcrop
TERRACE_174	7/11/2002	7722666.688	600539.538	291.075	Sardine Formation Outcrop
PGE4006	7/11/2002	7722645.252	600593.110	290.541	Check backsite
TERRACE_175	7/11/2002	7722731.229	600684.595	302.349	Check backsite
TERRACE_176	7/11/2002	7722812.436	601011.949	405.495	Tread surface
TERRACE_177	7/11/2002	7722782.349	600930.787	383.209	Tread surface
TERRACE_178	7/11/2002	7722788.718	600943.635	387.146	Tread surface
TERRACE_179	7/11/2002	7722771.387	600907.025	383.471	Tread surface
TERRACE_180	7/11/2002	7722771.458	600906.977	383.498	Tread surface
TERRACE_181	7/11/2002	7722765.255	600900.266	383.930	Tread surface
TERRACE_182	7/11/2002	7722759.543	600889.272	383.853	Tread surface
TERRACE_183	7/11/2002	7722745.545	600824.885	381.896	Tread surface
TERRACE_184	7/11/2002	7722724.731	600782.507	383.121	Tread surface
TERRACE_185	7/11/2002	7722724.641	600783.403	384.097	Tread surface
TERRACE_186	7/11/2002	7722710.837	600751.845	383.777	Tread surface
TERRACE_187	7/11/2002	7722692.380	600714.269	384.800	Tread surface
TERRACE_188	7/11/2002	7722657.205	600693.499	385.392	Tread surface
TERRACE_189	7/11/2002	7722648.261	600687.094	384.075	Tread surface
TERRACE_190	7/11/2002	7722634.817	600669.444	378.404	Tread surface
TERRACE_191	7/11/2002	7722603.000	600630.880	361.735	Tread surface
TERRACE_192	7/11/2002	7722599.492	600622.034	359.361	Tread surface
TERRACE_193	7/11/2002	7722595.513	600613.951	357.199	Tread surface
TERRACE_194	7/11/2002	7722590.098	600608.853	353.497	Tread surface
TERRACE_195	7/11/2002	7722587.750	600603.681	349.733	Tread surface
TERRACE_196	7/11/2002	7722583.842	600569.928	346.494	Tread surface
TERRACE_197	7/11/2002	7722582.903	600558.789	345.563	Tread surface
TERRACE_198	7/11/2002	7722581.277	600551.873	343.911	Tread surface
TERRACE_199	7/11/2002	7722580.872	600544.834	342.587	Tread surface
TERRACE_200	7/11/2002	7722581.921	600536.796	341.274	Tread surface
TERRACE_201	7/11/2002	7722582.234	600530.575	340.510	Tread surface
TERRACE_202	7/11/2002	7722580.954	600519.885	337.141	Tread surface
TERRACE_203	7/11/2002	7722581.210	600514.792	337.069	Tread surface
TERRACE_204	7/11/2002	7722579.317	600506.141	334.401	Tread surface
TERRACE_205	7/11/2002	7722576.049	600496.035	330.385	Tread surface
TERRACE_206	7/11/2002	7722568.746	600483.920	324.180	Tread surface
TERRACE_207	7/11/2002	7722570.163	600476.118	322.396	Tread surface

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_208	7/11/2002	7722569.831	600470.890	322.129	Tread surface
TERRACE_209	7/11/2002	7722568.496	600459.888	320.496	Tread surface
TERRACE_210	7/11/2002	7722564.895	600457.105	320.382	Tread surface
CS2002_001	7/11/2002	7722785.395	600535.776	292.150	Cross section in Water
CS2002_002	7/11/2002	7722780.401	600539.363	289.554	Cross section in Water
CS2002_003	7/11/2002	7722775.705	600538.853	288.345	Cross section in Water
CS2002_004	7/11/2002	7722769.310	600545.049	286.631	Cross section in Water
CS2002_005	7/11/2002	7722770.580	600557.191	276.707	Cross section in Water
CS2002_006	7/11/2002	7722746.170	600563.790	275.902	Cross section in Water
CS2002_007	7/11/2002	7722728.324	600592.333	287.671	Cross section in Water
CS2002_008	7/11/2002	7722727.891	600594.978	291.464	Cross section in Water
CS2002_009	7/11/2002	7722722.927	600599.445	291.906	Cross section in Water
CS2002_010	7/11/2002	7722720.473	600603.185	291.481	Cross section in Water
CS2002_011	7/11/2002	7722720.025	600603.990	290.831	Cross section in Water
CS2002_012	7/11/2002	7722719.808	600605.096	291.672	Cross section in Water
CS2002_013	7/11/2002	7722719.089	600606.414	290.126	Cross section in Water
CS2002_014	7/11/2002	7722716.612	600608.607	291.983	Cross section in Water
CS2002_015	7/11/2002	7722714.302	600611.616	291.640	Cross section in Water
CS2002_016	7/11/2002	7722713.090	600611.655	290.109	Cross section in Water
CS2002_017	7/11/2002	7722711.048	600612.571	291.749	Cross section in Water
CS2002_018	7/11/2002	7722704.743	600617.410	291.657	Cross section in Water
CS2002_019	7/11/2002	7722697.855	600621.334	292.178	Cross section in Water
CS2002_020	7/11/2002	7722852.810	600567.419	299.453	Check backsite
TERRACE_211	7/11/2002	7722867.510	600607.980	293.011	Nail
TERRACE_212	7/11/2002	7722852.824	600567.438	299.443	Check backsite
TERRACE_213	7/11/2002	7722877.034	600624.568	292.086	Sardine Formation Outcrop
TERRACE_214	7/11/2002	7722881.916	600623.600	291.179	Sardine Formation Outcrop
TERRACE_215	7/11/2002	7722887.425	600625.592	291.230	Sardine Formation Outcrop
TERRACE_216	7/11/2002	7722890.061	600628.469	290.445	Sardine Formation Outcrop
TERRACE_217	7/11/2002	7722897.701	600627.842	290.248	Sardine Formation Outcrop
TERRACE_218	7/11/2002	7722901.389	600631.302	289.978	Sardine Formation Outcrop
TERRACE_219	7/11/2002	7722920.835	600630.862	290.645	Sardine Formation Outcrop
TERRACE_220	7/11/2002	7722933.102	600633.661	290.770	Sardine Formation Outcrop
TERRACE_221	7/11/2002	7722940.402	600633.386	291.064	Sardine Formation Outcrop
TERRACE_222	7/11/2002	7723021.493	600645.146	293.267	Sardine Formation Outcrop
TERRACE_223	7/11/2002	7723022.107	600649.225	291.654	Sardine Formation Outcrop
TERRACE_224	7/11/2002	7723023.547	600652.208	291.811	Sardine Formation Outcrop
TERRACE_225	7/11/2002	7723026.582	600655.346	291.637	Sardine Formation Outcrop
TERRACE_226	7/11/2002	7723036.944	600659.596	293.013	Sardine Formation Outcrop
TERRACE_227	7/11/2002	7723038.451	600656.715	293.266	Sardine Formation Outcrop
TERRACE_228	7/11/2002	7723045.498	600653.968	292.697	Sardine Formation Outcrop
TERRACE_229	7/11/2002	7723050.310	600655.839	292.444	Sardine Formation Outcrop
TERRACE_230	7/11/2002	7723055.240	600651.523	293.693	Sardine Formation Outcrop
TERRACE_231	7/11/2002	7723058.312	600654.821	292.681	Sardine Formation Outcrop
TERRACE_232	7/11/2002	7723059.845	600656.698	292.020	Sardine Formation Outcrop
TERRACE_233	7/11/2002	7723063.275	600664.304	292.489	Sardine Formation Outcrop
TERRACE_234	7/11/2002	7723067.770	600664.994	292.885	Sardine Formation Outcrop
TERRACE_235	7/11/2002	7723071.975	600663.752	292.779	Sardine Formation Outcrop

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_236	7/11/2002	7723081.441	600665.938	292.888	Sardine Formation Outcrop
TERRACE_237	7/11/2002	7723082.042	600671.179	292.625	Sardine Formation Outcrop
TERRACE_238	7/11/2002	7723081.804	600665.093	293.847	Sardine Formation Outcrop
TERRACE_239	7/11/2002	7723079.829	600659.026	293.871	Sardine Formation Outcrop
TERRACE_240	7/11/2002	7723076.098	600656.662	293.487	Sardine Formation Outcrop
TERRACE_241	7/11/2002	7723073.482	600652.883	294.464	Sardine Formation Outcrop
TERRACE_242	7/11/2002	7723071.454	600651.961	293.115	Sardine Formation Outcrop
TERRACE_243	7/11/2002	7723067.903	600652.274	293.329	Sardine Formation Outcrop
TERRACE_244	7/11/2002	7723063.703	600651.839	293.209	Sardine Formation Outcrop
TERRACE_245	7/11/2002	7723061.023	600646.778	294.091	Sardine Formation Outcrop
TERRACE_246	7/11/2002	7723062.802	600642.530	294.814	Sardine Formation Outcrop
TERRACE_247	7/11/2002	7723055.168	600642.365	294.336	Sardine Formation Outcrop
TERRACE_248	7/11/2002	7723051.338	600640.853	294.561	Sardine Formation Outcrop
TERRACE_249	7/11/2002	7723049.508	600636.911	295.132	Sardine Formation Outcrop
TERRACE_250	7/11/2002	7723041.833	600634.627	295.091	Sardine Formation Outcrop
TERRACE_251	7/11/2002	7723034.455	600635.174	294.679	Sardine Formation Outcrop
TERRACE_252	7/11/2002	7723030.977	600634.062	294.727	Sardine Formation Outcrop
TERRACE_253	7/11/2002	7723025.057	600634.626	294.727	Sardine Formation Outcrop
TERRACE_254	7/11/2002	7723023.621	600638.584	293.927	Sardine Formation Outcrop
TERRACE_255	7/11/2002	7723104.296	600676.282	291.999	Sardine Formation Outcrop
TERRACE_256	7/11/2002	7723111.233	600682.571	292.702	Sardine Formation Outcrop
TERRACE_257	7/11/2002	7723124.427	600677.606	294.356	Sardine Formation Outcrop
TERRACE_258	7/11/2002	7723128.910	600677.412	294.211	Sardine Formation Outcrop
TERRACE_259	7/11/2002	7723129.520	600689.119	293.177	Sardine Formation Outcrop
TERRACE_260	7/11/2002	7723182.785	600675.847	297.179	Edge of Water
TERRACE_261	7/11/2002	7723170.695	600663.987	296.863	Edge of Water
TERRACE_262	7/11/2002	7723132.418	600658.032	295.137	Edge of Water
TERRACE_263	7/11/2002	7723118.257	600655.665	294.941	Edge of Water
TERRACE_264	7/11/2002	7723095.325	600655.533	294.207	Edge of Water
TERRACE_265	7/11/2002	7723073.473	600651.241	293.883	Edge of Water
TERRACE_266	7/11/2002	7723048.024	600646.640	294.121	Edge of Water
TERRACE_267	7/11/2002	7723040.852	600642.680	294.035	Edge of Water
TERRACE_268	7/11/2002	7723014.521	600639.906	293.338	Edge of Water
TERRACE_269	7/11/2002	7722994.997	600634.516	293.317	Edge of Water
TERRACE_270	7/11/2002	7722968.154	600631.796	293.071	Edge of Water
TERRACE_271	7/11/2002	7722947.893	600627.705	293.234	Edge of Water
TERRACE_272	7/11/2002	7722923.119	600623.713	293.125	Edge of Water
TERRACE_273	7/11/2002	7722907.217	600618.977	292.975	Edge of Water
TERRACE_274	7/11/2002	7722891.011	600614.032	293.012	Edge of Water
TERRACE_275	7/11/2002	7722959.926	600637.512	291.655	Cross section in water
TERRACE_276	7/11/2002	7722960.689	600641.531	290.429	Cross section in water
TERRACE_277	7/11/2002	7722962.269	600644.714	289.986	Cross section in water
TERRACE_278	7/11/2002	7722963.425	600648.113	289.554	Cross section in water
TERRACE_279	7/11/2002	7722964.878	600650.737	289.516	Cross section in water
TERRACE_280	7/11/2002	7722965.787	600653.936	289.300	Cross section in water
TERRACE_281	7/11/2002	7722899.980	600935.988	293.622	Nail
TERRACE_282	7/11/2002	7722942.090	600748.408	291.358	Cross section in water
TERRACE_283	7/11/2002	7722943.022	600745.448	290.439	Cross section in water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TERRACE_284	7/11/2002	7722944.331	600742.135	289.762	Cross section in water
TERRACE_285	7/11/2002	7722945.825	600738.507	289.716	Cross section in water
TERRACE_286	7/11/2002	7722922.064	600749.397	291.609	Cross section in water
TERRACE_287	7/11/2002	7722913.818	600751.993	291.624	Cross section in water
TERRACE_288	7/11/2002	7722901.490	600752.103	291.097	Cross section in water
TERRACE_289	7/11/2002	7722891.764	600746.352	291.328	Cross section in water
TERRACE_290	7/11/2002	7722883.254	600740.018	291.021	Cross section in water
TERRACE_291	7/11/2002	7722878.196	600733.796	290.666	Cross section in water
TERRACE_292	7/11/2002	7722873.451	600727.977	290.663	Cross section in water
TERRACE_293	7/11/2002	7722859.329	600718.799	289.886	Cross section in water
TERRACE_294	7/11/2002	7722853.718	600709.578	289.467	Cross section in water
TERRACE_295	7/11/2002	7722852.428	600701.481	289.630	Cross section in water
TERRACE_296	7/11/2002	7722848.980	600694.345	288.343	Cross section in water
TERRACE_297	7/11/2002	7722850.849	600688.538	288.861	Cross section in water
TERRACE_298	7/11/2002	7722852.611	600681.779	288.531	Cross section in water
TERRACE_299	7/11/2002	7722852.809	600567.431	299.437	Check Backsite
PJW1001	7/22/2002	7721823.727	602866.616	293.255	Nail
PJW1002	7/22/2002	7721752.212	602963.462	294.852	Nail
PJW1003	7/22/2002	7721703.404	603013.161	295.216	Magnetic Nail
PJW1004	7/22/2002	7722270.816	603628.225	287.154	Nail
CK2002_001	7/23/2002	7721752.167	602963.466	294.851	Check Backsite
CK2002_002	7/23/2002	7721703.378	603013.166	295.232	Check Backsite
CK2002_003	7/23/2002	7722291.990	603402.239	287.063	Check Backsite
CK2002_004	7/23/2002	7722147.808	603802.287	282.127	Check Backsite
CK2002_005	7/23/2002	7721809.511	603326.029	291.695	Nail
CK2002_006	7/23/2002	7721711.222	603762.623	287.820	Iron Rod with Cap
CK2002_007	7/23/2002	7721872.563	603723.577	296.500	Miscellaneous
CK2002_008	7/23/2002	7721875.759	603722.785	291.771	Topographic Point
CK2002_009	7/23/2002	7721884.894	603720.748	291.260	Topographic Point
CK2002_010	7/23/2002	7721890.327	603719.849	290.900	Topographic Point
CK2002_011	7/23/2002	7721894.639	603718.975	290.539	Topographic Point
CK2002_012	7/23/2002	7721899.696	603718.073	290.133	Topographic Point
CK2002_013	7/23/2002	7721904.519	603717.164	289.754	Topographic Point
CK2002_014	7/23/2002	7721907.588	603716.606	289.478	Topographic Point
CK2002_015	7/23/2002	7721910.857	603715.856	289.336	Topographic Point
CK2002_016	7/23/2002	7721914.264	603715.086	289.048	Topographic Point
CK2002_017	7/23/2002	7721917.823	603714.288	288.779	Topographic Point
CK2002_018	7/23/2002	7721922.123	603713.316	288.391	Topographic Point
CK2002_019	7/23/2002	7721925.700	603712.487	288.181	Topographic Point
CK2002_020	7/23/2002	7721929.807	603711.636	287.992	Topographic Point
CK2002_021	7/23/2002	7721934.533	603710.556	287.712	Topographic Point
CK2002_022	7/23/2002	7721939.003	603709.394	287.479	Topographic Point
CK2002_023	7/23/2002	7721943.358	603708.290	287.334	Topographic Point
CK2002_024	7/23/2002	7721948.981	603707.101	286.991	Topographic Point
CK2002_025	7/23/2002	7721953.692	603705.944	286.855	Topographic Point
CK2002_026	7/23/2002	7721958.782	603704.479	286.919	Topographic Point
CK2002_027	7/23/2002	7721963.259	603703.420	287.122	Topographic Point
CK2002_028	7/23/2002	7721968.046	603702.301	287.201	Topographic Point

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CK2002_029	7/23/2002	7721972.135	603701.268	287.355	Topographic Point
CK2002_030	7/23/2002	7721976.074	603700.293	287.301	Topographic Point
CK2002_031	7/23/2002	7721980.587	603699.304	287.163	Topographic Point
CK2002_032	7/23/2002	7721985.432	603698.412	286.828	Topographic Point
CK2002_033	7/23/2002	7721989.138	603697.336	286.572	Topographic Point
CK2002_034	7/23/2002	7721993.357	603696.459	286.330	Topographic Point
CK2002_035	7/23/2002	7721997.993	603695.223	285.914	Topographic Point
CK2002_036	7/23/2002	7722002.917	603694.158	286.051	Topographic Point
CK2002_037	7/23/2002	7722007.325	603693.129	286.271	Topographic Point
CK2002_038	7/23/2002	7722012.097	603692.146	286.371	Topographic Point
CK2002_039	7/23/2002	7722016.313	603691.281	286.766	Topographic Point
CK2002_040	7/23/2002	7722019.782	603690.465	287.193	Topographic Point
CK2002_041	7/23/2002	7722023.833	603689.614	287.196	Topographic Point
CK2002_042	7/23/2002	7722028.113	603688.672	287.085	Topographic Point
CK2002_043	7/23/2002	7722033.399	603687.556	286.861	Topographic Point
CK2002_044	7/23/2002	7722039.121	603686.291	286.896	Topographic Point
CK2002_045	7/23/2002	7722045.318	603684.866	286.910	Topographic Point
CK2002_046	7/23/2002	7722050.651	603683.532	286.954	Topographic Point
CK2002_047	7/23/2002	7722056.511	603681.995	286.623	Topographic Point
CK2002_048	7/23/2002	7722062.214	603680.591	286.584	Topographic Point
CK2002_049	7/23/2002	7722067.738	603678.893	286.828	Topographic Point
CK2002_050	7/23/2002	7722073.738	603677.658	286.975	Topographic Point
CK2002_051	7/23/2002	7722080.243	603676.158	287.060	Topographic Point
CK2002_052	7/23/2002	7722085.171	603675.148	287.230	Topographic Point
CK2002_053	7/23/2002	7722090.260	603673.874	287.417	Topographic Point
CK2002_054	7/23/2002	7722096.039	603672.234	287.666	Topographic Point
CK2002_055	7/23/2002	7722102.168	603671.062	287.853	Topographic Point
CK2002_056	7/23/2002	7722107.776	603669.588	287.818	Topographic Point
CK2002_057	7/23/2002	7722113.962	603668.026	287.978	Topographic Point
CK2002_058	7/23/2002	7722119.857	603666.527	287.857	Topographic Point
CK2002_059	7/23/2002	7722126.688	603665.098	287.569	Topographic Point
CK2002_060	7/23/2002	7722133.074	603663.498	287.633	Topographic Point
CK2002_061	7/23/2002	7722139.822	603661.937	287.750	Topographic Point
CK2002_062	7/23/2002	7722146.096	603660.542	287.670	Topographic Point
CM2002_001	7/23/2002	7722271.442	603750.029	286.189	Iron Rod
CM2002_002	7/23/2002	7722396.724	603629.010	286.911	Wood Stake
CM2002_003	7/23/2002	7722270.818	603628.227	287.161	Check backsite
CM2002_004	7/23/2002	7722292.036	603402.242	287.084	Unknown
CM2002_005	7/23/2002	7722275.619	603753.326	285.414	FEMA-CM
CM2002_006	7/23/2002	7722279.388	603756.302	284.794	FEMA-CM
CM2002_007	7/23/2002	7722282.156	603758.487	284.734	FEMA-CM
CM2002_008	7/23/2002	7722286.471	603761.894	284.565	FEMA-CM
CM2002_009	7/23/2002	7722291.891	603766.173	284.509	FEMA-CM
CM2002_010	7/23/2002	7722296.994	603770.201	284.096	FEMA-CM
CM2002_011	7/23/2002	7722300.722	603773.145	283.900	FEMA-CM
CM2002_012	7/23/2002	7722305.677	603777.057	283.275	FEMA-CM
CM2002_013	7/23/2002	7722309.637	603780.183	282.106	FEMA-CM
CM2002_014	7/23/2002	7722314.564	603784.074	276.825	FEMA-CM

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CM2002_015	7/23/2002	7722318.664	603787.355	274.724	FEMA-CM
CM2002_016	7/23/2002	7722330.116	603796.349	271.026	FEMA-CM
CM2002_017	7/23/2002	7722338.775	603803.186	270.490	FEMA-CM
CM2002_018	7/23/2002	7722347.265	603809.889	269.682	FEMA-CM
CM2002_019	7/23/2002	7722354.794	603815.862	271.712	FEMA-CM
CM2002_020	7/23/2002	7722360.812	603820.616	275.328	FEMA-CM
CM2002_021	7/23/2002	7722368.695	603826.802	276.169	FEMA-CM
CM2002_022	7/23/2002	7722377.183	603833.505	276.943	FEMA-CM
CM2002_023	7/23/2002	7722383.385	603838.399	277.562	FEMA-CM
CM2002_024	7/23/2002	7722388.971	603842.810	276.124	FEMA-CM
CM2002_025	7/23/2002	7722401.645	603852.815	274.815	FEMA-CM
CM2002_026	7/23/2002	7722410.110	603859.496	274.641	FEMA-CM
CM2002_027	7/23/2002	7722416.515	603864.554	274.119	FEMA-CM
CM2002_028	7/23/2002	7722423.018	603869.687	273.991	FEMA-CM
CM2002_029	7/23/2002	7722434.527	603878.343	274.450	FEMA-CM
CM2002_030	7/23/2002	7722271.430	603750.058	286.204	Check Backsite
CM2002_031	7/23/2002	7722439.691	603877.726	274.033	FEMA-CM
CM2002_032	7/23/2002	7722446.494	603876.913	274.157	FEMA-CM
CM2002_033	7/23/2002	7722452.872	603876.151	274.780	FEMA-CM
CM2002_034	7/23/2002	7722462.241	603875.032	274.878	FEMA-CM
CM2002_035	7/23/2002	7722470.357	603874.062	275.451	FEMA-CM
CM2002_036	7/23/2002	7722479.581	603872.959	275.454	FEMA-CM
CM2002_037	7/23/2002	7722488.295	603871.918	275.207	FEMA-CM
CM2002_038	7/23/2002	7722501.335	603870.361	274.732	FEMA-CM
CM2002_039	7/23/2002	7722514.573	603868.779	274.681	FEMA-CM
CM2002_040	7/23/2002	7722522.551	603867.826	274.668	FEMA-CM
CM2002_041	7/23/2002	7722528.563	603867.107	274.791	FEMA-CM
CM2002_042	7/23/2002	7722538.174	603865.959	273.960	FEMA-CM
CM2002_043	7/23/2002	7722554.828	603863.920	273.811	FEMA-CM
CM2002_044	7/23/2002	7722560.390	603863.312	273.582	FEMA-CM
CM2002_045	7/23/2002	7722575.665	603861.488	272.250	FEMA-CM
CM2002_046	7/23/2002	7722589.903	603859.786	271.506	FEMA-CM
CM2002_047	7/23/2002	7722603.386	603858.179	270.786	FEMA-CM
CM2002_048	7/23/2002	7722434.544	603878.384	274.515	Check Backsite
CM2002_049	7/23/2002	7722612.384	603857.025	270.539	FEMA-CM
CM2002_050	7/23/2002	7722618.957	603856.553	270.106	FEMA-CM
CM2002_051	7/23/2002	7722630.890	603854.997	269.090	FEMA-CM
CM2002_052	7/23/2002	7722642.026	603853.528	267.719	FEMA-CM
CM2002_053	7/23/2002	7722651.902	603852.154	267.066	FEMA-CM
CM2002_054	7/23/2002	7722662.406	603850.865	266.976	FEMA-CM
CM2002_055	7/23/2002	7722675.824	603849.529	266.608	FEMA-CM
CM2002_056	7/23/2002	7722684.612	603847.911	267.017	FEMA-CM
CM2002_057	7/23/2002	7722695.407	603847.507	266.889	FEMA-CM
CM2002_058	7/23/2002	7722708.379	603845.041	267.195	FEMA-CM
CM2002_059	7/23/2002	7722723.152	603843.989	267.051	FEMA-CM
CM2002_060	7/23/2002	7722732.708	603842.639	267.262	FEMA-CM
CM2002_061	7/23/2002	7722740.994	603841.843	267.259	FEMA-CM
CM2002_062	7/23/2002	7722751.389	603840.282	268.231	FEMA-CM

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CM2002_063	7/23/2002	7722763.079	603839.105	268.414	FEMA-CM
CM2002_064	7/23/2002	7722773.476	603837.623	268.260	FEMA-CM
CM2002_065	7/23/2002	7722781.980	603836.996	268.440	FEMA-CM
CM2002_066	7/23/2002	7722788.606	603835.970	269.094	FEMA-CM
CM2002_067	7/23/2002	7722793.618	603835.682	270.626	FEMA-CM
CM2002_068	7/23/2002	7722855.195	603828.151	273.342	FEMA-CM
CM2002_069	7/23/2002	7722855.168	603828.180	273.346	FEMA-CM
CM2002_070	7/23/2002	7722785.732	603742.658	272.544	Check Backsite
CM2002_071	7/23/2002	7722785.577	603742.774	272.564	Check Backsite
CM2002_072	7/23/2002	7722801.966	603834.541	273.678	FEMA-CM
CM2002_073	7/23/2002	7722809.003	603833.700	274.699	FEMA-CM
CM2002_074	7/23/2002	7722816.871	603832.758	275.219	FEMA-CM
CM2002_075	7/23/2002	7722824.206	603831.881	274.171	FEMA-CM
CM2002_076	7/23/2002	7722834.107	603830.698	274.025	FEMA-CM
CM2002_077	7/23/2002	7722842.484	603829.696	273.595	FEMA-CM
CM2002_078	7/23/2002	7722866.730	603820.908	272.051	FEMA-CM
CM2002_079	7/23/2002	7722876.533	603814.726	271.019	FEMA-CM
CM2002_080	7/23/2002	7722880.248	603812.386	270.625	FEMA-CM
CM2002_081	7/23/2002	7722880.906	603811.978	270.608	FEMA-CM
CM2002_082	7/23/2002	7722893.232	603804.217	270.272	FEMA-CM
CM2002_083	7/23/2002	7722900.686	603799.535	269.968	FEMA-CM
CM2002_084	7/23/2002	7722909.129	603794.197	269.248	FEMA-CM
CM2002_085	7/23/2002	7722915.149	603790.408	268.486	FEMA-CM
CM2002_086	7/23/2002	7722920.484	603787.047	268.009	FEMA-CM
CM2002_087	7/23/2002	7722926.786	603783.070	267.679	FEMA-CM
CM2002_088	7/23/2002	7722931.211	603780.291	267.568	FEMA-CM
CM2002_089	7/23/2002	7722936.658	603776.862	266.939	FEMA-CM
CM2002_090	7/23/2002	7722943.750	603772.396	266.492	FEMA-CM
CM2002_091	7/23/2002	7722950.928	603767.877	267.459	FEMA-CM
CM2002_092	7/23/2002	7722958.105	603763.352	267.996	FEMA-CM
CM2002_093	7/23/2002	7722966.760	603757.900	267.930	FEMA-CM
CM2002_094	7/23/2002	7722971.801	603754.726	268.763	FEMA-CM
CM2002_095	7/23/2002	7722977.624	603751.059	268.510	FEMA-CM
CM2002_096	7/23/2002	7722980.421	603749.298	269.030	FEMA-CM
CM2002_097	7/23/2002	7722984.198	603746.917	269.808	FEMA-CM
CM2002_098	7/23/2002	7722988.454	603744.237	269.983	FEMA-CM
CM2002_099	7/23/2002	7722990.097	603743.201	270.638	FEMA-CM
CM2002_100	7/23/2002	7722991.399	603742.390	271.157	FEMA-CM
CM2002_101	7/23/2002	7722998.620	603737.888	271.905	FEMA-CM
CM2002_102	7/23/2002	7723003.938	603734.491	272.644	FEMA-CM
CM2002_103	7/23/2002	7723014.678	603727.725	274.819	FEMA-CM
CM2002_104	7/23/2002	7723025.106	603721.152	276.045	FEMA-CM
CM2002_105	7/23/2002	7723031.341	603717.228	276.768	FEMA-CM
CM2002_106	7/23/2002	7723030.933	603717.531	277.369	FEMA-CM
CK2002_063	7/24/2002	7722270.816	603628.211	287.167	Check Backsite
CK2002_064	7/24/2002	7721647.660	603741.696	291.016	Iron Rod with Cap
CK2002_065	7/24/2002	7721723.027	603801.447	262.848	FEMA-CK
CK2002_066	7/24/2002	7721724.848	603807.436	261.448	FEMA-CK

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CK2002_067	7/24/2002	7721727.390	603815.780	259.632	FEMA-CK
CK2002_068	7/24/2002	7721730.899	603827.306	258.904	FEMA-CK
CK2002_069	7/24/2002	7721734.308	603838.513	259.604	FEMA-CK
CK2002_070	7/24/2002	7721737.965	603850.526	261.188	FEMA-CK
CK2002_071	7/24/2002	7721742.144	603864.263	260.964	FEMA-CK
CK2002_072	7/24/2002	7721743.924	603870.106	261.435	FEMA-CK
CK2002_073	7/24/2002	7721748.126	603883.917	262.668	FEMA-CK
CK2002_074	7/24/2002	7721751.111	603893.728	263.329	FEMA-CK
CK2002_075	7/24/2002	7721755.032	603906.605	263.711	FEMA-CK
CK2002_076	7/24/2002	7721758.607	603918.368	264.011	FEMA-CK
CK2002_077	7/24/2002	7721761.885	603929.145	264.954	FEMA-CK
CK2002_078	7/24/2002	7721766.356	603943.840	267.055	FEMA-CK
CK2002_079	7/24/2002	7721770.620	603957.851	268.651	FEMA-CK
CK2002_080	7/24/2002	7721775.516	603973.946	269.799	FEMA-CK
CK2002_081	7/24/2002	7721778.679	603984.339	270.928	FEMA-CK
CK2002_082	7/24/2002	7721782.172	603995.816	271.377	FEMA-CK
CK2002_083	7/24/2002	7721786.517	604010.099	271.773	FEMA-CK
CK2002_084	7/24/2002	7721791.164	604025.374	271.887	FEMA-CK
CK2002_085	7/24/2002	7721795.346	604039.104	272.357	FEMA-CK
CK2002_086	7/24/2002	7721800.559	604056.304	272.204	FEMA-CK
CK2002_087	7/24/2002	7721804.767	604070.153	271.898	FEMA-CK
CK2002_088	7/24/2002	7721711.203	603762.635	287.839	Check Backsite
CK2002_089	7/24/2002	7721713.510	603770.215	286.691	FEMA-CK
CK2002_090	7/24/2002	7721715.646	603777.233	283.506	FEMA-CK
CK2002_091	7/24/2002	7721807.060	604077.689	271.878	FEMA-CK
CK2002_092	7/24/2002	7721809.828	604086.785	272.470	FEMA-CK
CK2002_093	7/24/2002	7721812.508	604095.594	271.891	FEMA-CK
CK2002_094	7/24/2002	7721815.639	604105.884	272.091	FEMA-CK
CK2002_095	7/24/2002	7721818.899	604116.602	271.633	FEMA-CK
CK2002_096	7/24/2002	7721821.588	604125.436	271.364	FEMA-CK
CK2002_097	7/24/2002	7721826.152	604140.437	271.368	FEMA-CK
CK2002_098	7/24/2002	7721829.354	604150.962	271.323	FEMA-CK
CK2002_099	7/24/2002	7721833.469	604164.489	270.740	FEMA-CK
CK2002_100	7/24/2002	7721836.853	604175.610	270.049	FEMA-CK
CK2002_101	7/24/2002	7721840.525	604187.681	269.523	FEMA-CK
CK2002_102	7/24/2002	7721843.619	604197.854	270.190	FEMA-CK
CK2002_103	7/24/2002	7721846.476	604207.248	270.470	FEMA-CK
CK2002_104	7/24/2002	7721850.228	604219.577	270.928	FEMA-CK
CK2002_105	7/24/2002	7721855.189	604235.886	270.914	FEMA-CK
CK2002_106	7/24/2002	7721859.824	604251.123	271.885	FEMA-CK
CK2002_107	7/24/2002	7721867.420	604275.115	271.943	FEMA-CK
CK2002_108	7/24/2002	7721867.436	604275.244	272.095	FEMA-CK
CK2002_109	7/24/2002	7721863.555	604262.478	272.109	FEMA-CK
CK2002_110	7/24/2002	7721804.779	604070.155	272.014	Check Backsite
CK2002_111	7/24/2002	7721870.179	604284.261	272.045	FEMA-CK
CK2002_112	7/24/2002	7721873.557	604295.364	272.282	FEMA-CK
CK2002_113	7/24/2002	7721876.977	604306.606	273.644	FEMA-CK
CK2002_114	7/24/2002	7721880.545	604318.336	273.766	FEMA-CK

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CK2002_115	7/24/2002	7721884.158	604330.212	273.117	FEMA-CK
CK2002_116	7/24/2002	7721887.889	604342.476	272.119	FEMA-CK
CK2002_117	7/24/2002	7721891.907	604355.474	271.552	FEMA-CK
CK2002_118	7/24/2002	7721895.269	604366.731	271.889	FEMA-CK
CK2002_119	7/24/2002	7721900.767	604384.800	271.820	FEMA-CK
CK2002_120	7/24/2002	7721904.473	604396.996	272.290	FEMA-CK
CK2002_121	7/24/2002	7721907.794	604407.915	272.063	FEMA-CK
CK2002_122	7/24/2002	7721910.960	604418.327	271.345	FEMA-CK
CK2002_123	7/24/2002	7721913.874	604427.903	272.122	FEMA-CK
CK2002_124	7/24/2002	7721917.068	604438.405	271.820	FEMA-CK
CK2002_125	7/24/2002	7721920.165	604448.585	270.758	FEMA-CK
CK2002_126	7/24/2002	7721923.856	604460.717	269.780	FEMA-CK
CK2002_127	7/24/2002	7721927.106	604471.403	269.221	FEMA-CK
CK2002_128	7/24/2002	7721928.345	604475.463	268.776	FEMA-CK
CK2002_129	7/24/2002	7721867.996	604275.065	272.121	Check Backsite
CK2002_130	7/24/2002	7721814.859	604608.095	269.920	Check Backsite
CK2002_131	7/25/2002	7721927.885	604475.340	268.529	Check backsite
CK2002_132	7/25/2002	7721964.488	604595.441	268.306	FEMA-CK
CK2002_133	7/25/2002	7721908.923	604615.765	273.512	Top of Bank
CK2002_134	7/25/2002	7721893.636	604615.790	273.417	Top of Bank
CK2002_135	7/25/2002	7721882.821	604613.865	272.832	Top of Bank
CK2002_136	7/25/2002	7721874.627	604613.731	272.657	Top of Bank
CK2002_137	7/25/2002	7721868.506	604612.737	272.768	Top of Bank
CK2002_138	7/25/2002	7721864.486	604616.838	274.566	Top of Bank
CK2002_139	7/25/2002	7721854.705	604618.861	276.641	Top of Bank
CK2002_140	7/25/2002	7721845.086	604617.210	276.611	Top of Bank
CK2002_141	7/25/2002	7721828.520	604618.202	276.893	Top of Bank
CK2002_142	7/25/2002	7721815.987	604618.582	276.811	Top of Bank
CK2002_143	7/25/2002	7721798.635	604620.081	276.094	Top of Bank
CK2002_144	7/25/2002	7721777.633	604618.171	276.565	Top of Bank
CK2002_145	7/25/2002	7721765.280	604618.528	275.993	Top of Bank
CK2002_146	7/25/2002	7721730.047	604617.202	275.656	Top of Bank
CK2002_147	7/25/2002	7721712.729	604615.879	274.515	Top of Bank
CK2002_148	7/25/2002	7721696.510	604614.988	274.998	Top of Bank
CK2002_149	7/25/2002	7721680.791	604614.668	274.864	Top of Bank
CK2002_150	7/25/2002	7721685.562	604614.888	274.896	Top of Bank
CK2002_151	7/25/2002	7721674.172	604614.345	275.107	Top of Bank
CK2002_152	7/25/2002	7721664.986	604614.507	275.030	Top of Bank
CK2002_153	7/25/2002	7721498.420	604595.912	275.492	Top of Bank
CK2002_154	7/25/2002	7721489.448	604592.829	275.498	Top of Bank
CK2002_155	7/25/2002	7721478.851	604590.037	275.464	Top of Bank
CK2002_156	7/25/2002	7721466.938	604587.807	275.756	Top of Bank
CK2002_157	7/25/2002	7721453.033	604581.121	275.397	Top of Bank
CK2002_158	7/25/2002	7721431.033	604573.859	274.717	Top of Bank
CK2002_159	7/25/2002	7721405.710	604566.502	273.973	Top of Bank
CK2002_160	7/25/2002	7721364.219	604543.660	274.603	Top of Bank
CK2002_161	7/25/2002	7721332.409	604526.691	275.040	Top of Bank
CK2002_162	7/25/2002	7721305.722	604508.630	274.901	Top of Bank

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CK2002_163	7/25/2002	7721288.280	604501.869	274.776	Top of Bank
CK2002_164	7/25/2002	7721444.176	604566.364	267.084	Edge of water
CK2002_165	7/25/2002	7721446.808	604562.658	266.760	Top of Riffle
CK2002_166	7/25/2002	7721452.408	604552.731	266.242	Top of Riffle
CK2002_167	7/25/2002	7721460.768	604541.632	265.990	Top of Riffle
CK2002_168	7/25/2002	7721468.888	604533.350	265.921	Top of Riffle
CK2002_169	7/25/2002	7721482.007	604524.814	266.068	Top of Riffle
CK2002_170	7/25/2002	7721497.010	604514.284	266.396	Top of Riffle
CK2002_171	7/25/2002	7721510.419	604503.145	265.783	Top of Riffle
CK2002_172	7/25/2002	7721519.765	604494.921	265.649	Top of Riffle
CK2002_173	7/25/2002	7721524.979	604489.504	265.941	Top of Riffle
CK2002_174	7/25/2002	7721531.412	604483.818	265.577	Top of Riffle
CK2002_175	7/25/2002	7721538.048	604479.159	265.633	Top of Riffle
CK2002_176	7/25/2002	7721546.747	604472.889	265.646	Top of Riffle
CK2002_177	7/25/2002	7721561.052	604465.125	265.569	Top of Riffle
CK2002_178	7/25/2002	7721573.624	604461.027	265.870	Top of Riffle
CK2002_179	7/25/2002	7721586.429	604458.529	265.679	Top of Riffle
CK2002_180	7/25/2002	7721599.689	604455.377	266.607	Top of Riffle
CK2002_181	7/25/2002	7721612.511	604454.523	266.575	Top of Riffle
CK2002_182	7/25/2002	7721629.677	604454.451	266.447	Top of Riffle
CK2002_183	7/25/2002	7721648.912	604453.029	266.968	Top of Riffle
CK2002_184	7/25/2002	7721688.137	604447.487	267.393	Edge of water
CK2002_185	7/25/2002	7722491.237	604447.459	271.666	Check backsite
CK2002_186	7/25/2002	7721966.947	604603.523	266.320	FEMA-CK
CK2002_187	7/25/2002	7721966.652	604602.556	267.880	FEMA-CK
CK2002_188	7/25/2002	7721961.966	604587.101	267.715	FEMA-CK
CK2002_189	7/25/2002	7721959.184	604578.006	266.767	FEMA-CK
CK2002_190	7/25/2002	7721956.911	604570.534	266.281	FEMA-CK
CK2002_191	7/25/2002	7721953.133	604558.116	265.968	FEMA-CK
CK2002_192	7/25/2002	7721949.414	604544.957	266.309	FEMA-CK
CK2002_193	7/25/2002	7721946.888	604537.222	266.155	FEMA-CK
CK2002_194	7/25/2002	7721943.336	604525.910	266.163	FEMA-CK
CK2002_195	7/25/2002	7721940.344	604516.077	266.517	FEMA-CK
CK2002_196	7/25/2002	7721937.950	604508.207	267.238	FEMA-CK
CK2002_197	7/25/2002	7721934.443	604496.673	267.724	FEMA-CK
CK2002_198	7/25/2002	7721932.546	604490.436	268.046	FEMA-CK
CK2002_199	7/25/2002	7721930.716	604484.425	268.580	Edge of water
CK2002_200	7/25/2002	7721967.935	604606.772	268.948	FEMA-CK
CK2002_201	7/25/2002	7721969.436	604611.701	272.720	FEMA-CK
CK2002_202	7/25/2002	7721970.238	604614.343	274.664	FEMA-CK
CK2002_203	7/25/2002	7721972.668	604622.334	275.044	FEMA-CK
CK2002_204	7/25/2002	7721975.281	604630.924	274.793	FEMA-CK
CK2002_205	7/25/2002	7721977.624	604638.629	274.404	FEMA-CK
CK2002_206	7/25/2002	7721980.373	604647.666	274.451	FEMA-CK
CK2002_207	7/25/2002	7721983.394	604657.601	274.016	FEMA-CK
CK2002_208	7/25/2002	7721985.648	604664.305	273.364	FEMA-CK
CK2002_209	7/25/2002	7721964.051	604605.138	268.839	Bedrock
CK2002_210	7/25/2002	7721937.769	604609.703	269.316	Bedrock

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CK2002_211	7/25/2002	7721889.499	604602.009	267.101	Bedrock
CK2002_212	7/25/2002	7721841.681	604612.887	271.213	Bedrock
CK2002_213	7/25/2002	7721986.347	604594.858	268.758	Bedrock
CK2002_214	7/25/2002	7722082.359	604588.497	270.143	Bedrock
CK2002_215	7/25/2002	7722115.853	604575.099	270.601	Bedrock
CK2002_216	7/25/2002	7722154.307	604557.597	270.056	Bedrock
CK2002_217	7/25/2002	7722166.036	604556.692	270.175	Bedrock
CK2002_218	7/25/2002	7722193.397	604547.402	270.385	Bedrock
CK2002_219	7/25/2002	7722168.657	604527.589	268.452	Bedrock
CK2002_220	7/25/2002	7722155.351	604536.797	268.313	Bedrock
CK2002_221	7/25/2002	7722145.624	604535.730	268.144	Bedrock
CK2002_222	7/25/2002	7722112.315	604540.123	268.324	Bedrock
CK2002_223	7/25/2002	7721964.439	604595.336	271.029	Check backsite
CK2002_224	7/25/2002	7721964.457	604595.354	268.279	FEMA-CK
CK2002_225	7/25/2002	7721988.656	604674.193	273.321	FEMA-CK
CK2002_226	7/25/2002	7721991.369	604683.109	272.936	FEMA-CK
CK2002_227	7/25/2002	7721993.535	604690.226	273.208	FEMA-CK
CK2002_228	7/25/2002	7721995.336	604696.145	273.248	FEMA-CK
CK2002_229	7/25/2002	7721997.568	604703.476	274.184	FEMA-CK
CK2002_230	7/25/2002	7721999.857	604711.000	273.953	FEMA-CK
CK2002_231	7/25/2002	7722002.761	604720.548	271.560	FEMA-CK
CK2002_232	7/25/2002	7722004.829	604727.352	269.969	Edge of water
CK2002_233	7/25/2002	7722006.032	604731.302	269.892	FEMA-CK
CK2002_234	7/25/2002	7722006.020	604731.265	269.879	FEMA-CK
CK2002_235	7/25/2002	7722008.600	604739.747	269.614	FEMA-CK
CK2002_236	7/25/2002	7722011.778	604749.210	269.078	FEMA-CK
CK2002_237	7/25/2002	7722014.415	604757.854	269.274	FEMA-CK
CK2002_238	7/25/2002	7722018.754	604773.142	268.075	FEMA-CK
CK2002_239	7/25/2002	7722022.938	604786.895	267.583	FEMA-CK
CK2002_240	7/25/2002	7722025.820	604796.372	267.136	FEMA-CK
CK2002_241	7/25/2002	7722029.751	604809.286	266.916	FEMA-CK
CK2002_242	7/25/2002	7722032.761	604818.070	266.396	FEMA-CK
CK2002_243	7/25/2002	7722030.505	604811.503	-6.690	FEMA-CK
CK2002_244	7/25/2002	7722037.471	604833.509	-6.690	FEMA-CK
CK2002_245	7/25/2002	7722039.757	604830.974	262.922	FEMA-CK
CK2002_246	7/25/2002	7722055.295	604893.135	281.044	FEMA-CK
CK2002_247	7/25/2002	7722053.127	604885.948	273.137	FEMA-CK
CK2002_248	7/25/2002	7722051.618	604881.008	269.934	Edge of water
CK2002_249	7/25/2002	7722048.586	604871.197	265.508	FEMA-CK
CK2002_250	7/25/2002	7722046.465	604864.238	265.005	FEMA-CK
CK2002_251	7/25/2002	7722044.102	604856.469	264.921	FEMA-CK
CK2002_253	7/25/2002	7721814.819	604608.253	269.591	Check backsite
CJ2002_001	7/26/2002	7721051.562	604017.237	261.120	Nail
CJ2002_002	7/26/2002	7720947.114	604323.825	261.727	FEMA-CJ
CJ2002_003	7/26/2002	7721040.042	604132.465	262.870	Check backsite
CJ2002_004	7/26/2002	7720942.944	604313.536	260.505	FEMA-CJ
CJ2002_005	7/26/2002	7720937.338	604299.702	259.300	FEMA-CJ
CJ2002_006	7/26/2002	7720931.121	604284.361	257.456	FEMA-CJ

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_007	7/26/2002	7720925.043	604269.366	256.208	FEMA-CJ
CJ2002_008	7/26/2002	7720904.228	604218.009	254.840	FEMA-CJ
CJ2002_009	7/26/2002	7720902.493	604213.729	255.649	FEMA-CJ
CJ2002_010	7/26/2002	7720901.791	604211.995	257.193	FEMA-CJ
CJ2002_011	7/26/2002	7720897.449	604201.280	257.983	FEMA-CJ
CJ2002_012	7/26/2002	7720894.453	604193.888	257.631	FEMA-CJ
CJ2002_013	7/26/2002	7720892.906	604190.072	258.947	FEMA-CJ
CJ2002_014	7/26/2002	7720888.992	604180.413	260.596	FEMA-CJ
CJ2002_015	7/26/2002	7720887.853	604177.595	265.523	FEMA-CJ
CJ2002_016	7/26/2002	7720887.354	604176.374	267.667	FEMA-CJ
CJ2002_017	7/26/2002	7720888.102	604178.218	269.176	FEMA-CJ
CJ2002_018	7/26/2002	7720886.806	604175.009	272.895	FEMA-CJ
CJ2002_019	7/26/2002	7720879.007	604155.921	284.085	Nail
CJ2002_020	7/26/2002	7721022.745	604510.470	272.780	FEMA-CJ
CJ2002_021	7/26/2002	7721021.434	604507.216	272.320	FEMA-CJ
CJ2002_022	7/26/2002	7721020.058	604503.819	270.351	FEMA-CJ
CJ2002_023	7/26/2002	7721018.052	604498.876	267.571	FEMA-CJ
CJ2002_024	7/26/2002	7721014.336	604489.707	267.415	FEMA-CJ
CJ2002_025	7/26/2002	7721011.353	604482.340	266.411	FEMA-CJ
CJ2002_026	7/26/2002	7721007.657	604473.219	268.563	FEMA-CJ
CJ2002_027	7/26/2002	7721004.528	604465.502	267.032	FEMA-CJ
CJ2002_028	7/26/2002	7721000.538	604455.657	267.282	FEMA-CJ
CJ2002_029	7/26/2002	7720997.625	604448.468	266.982	FEMA-CJ
CJ2002_030	7/26/2002	7720996.054	604444.599	267.762	FEMA-CJ
CJ2002_031	7/26/2002	7720993.311	604437.832	267.498	FEMA-CJ
CJ2002_032	7/26/2002	7720989.952	604429.523	268.046	FEMA-CJ
CJ2002_033	7/26/2002	7720985.939	604419.622	268.108	FEMA-CJ
CJ2002_034	7/26/2002	7720982.472	604411.067	268.436	FEMA-CJ
CJ2002_035	7/26/2002	7720979.185	604402.957	267.771	FEMA-CJ
CJ2002_036	7/26/2002	7720975.401	604393.620	268.323	FEMA-CJ
CJ2002_037	7/26/2002	7720972.075	604385.414	268.064	FEMA-CJ
CJ2002_038	7/26/2002	7720969.176	604378.259	266.709	FEMA-CJ
CJ2002_039	7/26/2002	7720965.558	604369.334	265.409	FEMA-CJ
CJ2002_040	7/26/2002	7720962.014	604360.590	264.280	FEMA-CJ
CJ2002_041	7/26/2002	7720958.071	604350.861	263.477	FEMA-CJ
CJ2002_042	7/26/2002	7720954.073	604340.997	263.810	FEMA-CJ
CJ2002_043	7/26/2002	7720950.843	604333.025	262.748	FEMA-CJ
CJ2002_044	7/26/2002	7721175.773	604277.052	258.592	Bedrock (Sandy River Mudstone)
CJ2002_045	7/26/2002	7721183.947	604269.822	259.006	Bedrock (Sandy River Mudstone)
CJ2002_046	7/26/2002	7721192.635	604264.524	258.378	Bedrock (Sandy River Mudstone)
CJ2002_047	7/26/2002	7721199.824	604264.556	258.924	Bedrock (Sandy River Mudstone)
CJ2002_048	7/26/2002	7721328.413	604233.128	272.180	Top of Bank
CJ2002_049	7/26/2002	7721323.946	604230.598	272.631	Top of Bank
CJ2002_050	7/26/2002	7721318.256	604227.416	272.351	Top of Bank
CJ2002_051	7/26/2002	7721317.043	604224.973	272.841	Top of Bank
CJ2002_052	7/26/2002	7721313.201	604221.862	272.940	Top of Bank
CJ2002_053	7/26/2002	7721308.936	604219.854	272.788	Top of Bank
CJ2002_054	7/26/2002	7721305.041	604218.600	272.384	Top of Bank

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_055	7/26/2002	7721299.227	604216.853	271.942	Top of Bank
CJ2002_056	7/26/2002	7721292.667	604214.125	271.328	Top of Bank
CJ2002_057	7/26/2002	7721288.076	604212.072	270.674	Top of Bank
CJ2002_058	7/26/2002	7721282.648	604209.043	270.618	Top of Bank
CJ2002_059	7/26/2002	7721278.310	604208.889	270.416	Top of Bank
CJ2002_060	7/26/2002	7721273.709	604205.526	270.209	Top of Bank
CJ2002_061	7/26/2002	7721266.565	604199.969	268.755	Top of Bank
CJ2002_062	7/26/2002	7721266.576	604199.967	268.755	Top of Bank
CJ2002_063	7/26/2002	7721254.812	604186.403	267.983	Top of Bank
CJ2002_064	7/26/2002	7721237.999	604188.887	267.360	Root Mass of Tree
CJ2002_065	7/26/2002	7721201.022	604190.958	267.201	Root Mass of Tree
CJ2002_066	7/26/2002	7721172.078	604154.661	260.228	Top of Tree in River
CJ2002_067	7/26/2002	7721130.583	604189.364	260.461	Top of Tree in River
CJ2002_068	7/26/2002	7721124.498	604142.359	264.352	Top of Bank
CJ2002_069	7/26/2002	7721121.609	604139.352	264.134	Top of Bank
CJ2002_070	7/26/2002	7721098.843	604134.159	263.219	Top of Bank
CJ2002_071	7/26/2002	7721089.453	604136.405	264.405	Top of Bank
CJ2002_072	7/26/2002	7721084.094	604136.555	264.565	Top of Bank
CJ2002_073	7/26/2002	7721066.638	604138.869	263.823	Top of Bank
CJ2002_074	7/26/2002	7721059.809	604138.258	263.342	Top of Bank
CJ2002_075	7/26/2002	7721052.456	604136.324	263.140	Top of Bank
CJ2002_076	7/26/2002	7721046.198	604134.707	264.153	Top of Bank
CJ2002_077	7/26/2002	7721115.847	603947.508	275.293	Bedrock (Sandy River Mudstone)
CJ2002_078	7/26/2002	7721107.887	603953.398	275.408	Bedrock (Sandy River Mudstone)
CJ2002_079	7/26/2002	7721102.515	603957.264	275.211	Bedrock (Sandy River Mudstone)
CJ2002_080	7/26/2002	7721096.671	603961.056	276.911	Bedrock (Sandy River Mudstone)
CJ2002_081	7/26/2002	7721073.665	603973.669	274.433	Bedrock (Sandy River Mudstone)
CJ2002_082	7/26/2002	7721103.153	603975.524	261.251	Bedrock (Sandy River Mudstone)
CJ2002_083	7/26/2002	7721088.674	604002.072	259.976	Bedrock (Sandy River Mudstone)
CJ2002_084	7/26/2002	7721072.355	604030.688	259.692	Bedrock (Sandy River Mudstone)
CJ2002_085	7/26/2002	7721064.297	604044.789	258.787	Bedrock (Sandy River Mudstone)
CJ2002_086	7/26/2002	7721047.446	604061.771	258.651	Bedrock (Sandy River Mudstone)
CJ2002_087	7/26/2002	7721030.136	604069.547	258.057	Bedrock (Sandy River Mudstone)
CJ2002_088	7/26/2002	7720509.063	604481.008	260.958	Nail
CJ2002_089	7/26/2002	7720924.862	604266.755	255.552	FEMA-CJ
CJ2002_090	7/26/2002	7720914.498	604241.675	254.537	FEMA-CJ
CJ2002_091	7/26/2002	7720910.522	604231.979	254.022	FEMA-CJ
CJ2002_092	7/26/2002	7720908.549	604228.986	253.799	FEMA-CJ
CJ2002_093	7/26/2002	7720907.627	604226.195	253.917	FEMA-CJ
CJ2002_094	7/26/2002	7720906.550	604221.477	254.640	FEMA-CJ
CJ2002_095	7/26/2002	7720904.632	604220.087	255.027	FEMA-CJ
CJ2002_096	7/26/2002	7720947.130	604323.819	255.192	FEMA-CJ
CJ2002_097	7/26/2002	7720947.122	604323.828	261.745	Check backsite
CJ2002_098	7/26/2002	7721111.485	604729.494	272.726	FEMA-CJ
CJ2002_099	7/26/2002	7721107.629	604719.917	272.979	FEMA-CJ
CJ2002_100	7/26/2002	7721102.987	604708.466	272.733	FEMA-CJ
CJ2002_101	7/26/2002	7721098.636	604697.729	272.202	FEMA-CJ
CJ2002_102	7/26/2002	7721093.572	604685.222	272.118	FEMA-CJ

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_103	7/26/2002	7721088.159	604671.867	272.202	FEMA-CJ
CJ2002_104	7/26/2002	7721082.901	604658.891	272.343	FEMA-CJ
CJ2002_105	7/26/2002	7721077.676	604646.003	272.319	FEMA-CJ
CJ2002_106	7/26/2002	7721071.156	604629.913	272.348	FEMA-CJ
CJ2002_107	7/26/2002	7721064.806	604614.249	272.166	FEMA-CJ
CJ2002_108	7/26/2002	7721057.776	604596.903	272.457	FEMA-CJ
CJ2002_109	7/26/2002	7721051.774	604582.094	272.303	FEMA-CJ
CJ2002_110	7/26/2002	7721046.273	604568.521	272.383	FEMA-CJ
CJ2002_111	7/26/2002	7721041.082	604555.714	273.011	FEMA-CJ
CJ2002_112	7/26/2002	7721035.433	604541.774	273.290	FEMA-CJ
CJ2002_113	7/26/2002	7721030.412	604529.386	273.246	FEMA-CJ
CJ2002_114	7/26/2002	7721026.048	604518.619	273.124	FEMA-CJ
CJ2002_115	7/26/2002	7720947.140	604323.800	261.774	Check backsite
CJ2002_116	7/30/2002	7721022.746	604510.474	272.812	Check backsite
CJ2002_117	7/30/2002	7721114.006	604735.714	272.855	FEMA-CJ
CJ2002_118	7/30/2002	7721117.257	604743.738	272.787	FEMA-CJ
CJ2002_119	7/30/2002	7721118.585	604747.014	267.741	FEMA-CJ
CJ2002_120	7/30/2002	7721123.477	604759.086	264.693	FEMA-CJ
CJ2002_121	7/30/2002	7721129.202	604772.898	264.134	FEMA-CJ
CJ2002_122	7/30/2002	7721131.830	604779.697	263.473	FEMA-CJ
CJ2002_123	7/30/2002	7721137.978	604794.868	261.652	FEMA-CJ
CJ2002_124	7/30/2002	7721142.976	604807.201	260.280	FEMA-CJ
CJ2002_125	7/30/2002	7721189.435	604921.836	264.712	FEMA-CJ
CJ2002_126	7/30/2002	7721184.381	604909.367	262.877	FEMA-CJ
CJ2002_127	7/30/2002	7721177.066	604891.314	262.626	FEMA-CJ
CJ2002_128	7/30/2002	7721167.200	604866.976	262.239	FEMA-CJ
CJ2002_129	7/30/2002	7721159.221	604847.285	261.463	FEMA-CJ
CJ2002_130	7/30/2002	7721155.154	604835.805	261.583	FEMA-CJ
CJ2002_131	7/30/2002	7721152.950	604829.683	261.001	FEMA-CJ
CJ2002_132	7/30/2002	7721192.153	604928.395	265.221	FEMA-CJ
CJ2002_133	7/30/2002	7721272.322	605126.039	273.836	FEMA-CJ
CJ2002_134	7/30/2002	7721268.691	605117.230	273.839	FEMA-CJ
CJ2002_135	7/30/2002	7721262.919	605103.014	273.619	FEMA-CJ
CJ2002_136	7/30/2002	7721255.117	605083.764	273.837	FEMA-CJ
CJ2002_137	7/30/2002	7721250.656	605072.755	273.854	FEMA-CJ
CJ2002_138	7/30/2002	7721245.189	605059.259	273.779	FEMA-CJ
CJ2002_139	7/30/2002	7721239.891	605046.187	273.901	FEMA-CJ
CJ2002_140	7/30/2002	7721233.899	605031.397	273.882	FEMA-CJ
CJ2002_141	7/30/2002	7721227.872	605016.527	273.688	FEMA-CJ
CJ2002_142	7/30/2002	7721221.704	605001.305	273.368	FEMA-CJ
CJ2002_143	7/30/2002	7721216.426	604988.286	271.162	FEMA-CJ
CJ2002_144	7/30/2002	7721213.842	604981.913	268.773	FEMA-CJ
CJ2002_145	7/30/2002	7721211.570	604976.302	270.572	FEMA-CJ
CJ2002_146	7/30/2002	7721207.238	604965.613	269.870	FEMA-CJ
CJ2002_147	7/30/2002	7721204.284	604958.329	268.082	FEMA-CJ
CJ2002_148	7/30/2002	7721200.482	604948.948	267.142	FEMA-CJ
CJ2002_149	7/30/2002	7721195.850	604937.543	265.925	FEMA-CJ
CJ2002_150	7/30/2002	7721497.628	604892.300	266.686	Downstream edge of gravel sheet

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_151	7/30/2002	7721512.232	604894.870	267.295	Downstream edge of gravel sheet
CJ2002_152	7/30/2002	7721526.875	604902.082	267.205	Downstream edge of gravel sheet
CJ2002_153	7/30/2002	7721540.603	604909.273	267.072	Downstream edge of gravel sheet
CJ2002_154	7/30/2002	7721563.369	604920.575	267.326	Downstream edge of gravel sheet
CJ2002_155	7/30/2002	7721588.743	604933.272	267.095	Downstream edge of gravel sheet
CJ2002_156	7/30/2002	7721615.874	604947.179	267.135	Downstream edge of gravel sheet
CJ2002_157	7/30/2002	7721642.573	604962.423	267.297	Downstream edge of gravel sheet
CJ2002_158	7/30/2002	7721660.318	604972.488	267.531	Downstream edge of gravel sheet
CJ2002_159	7/30/2002	7721686.917	604983.336	267.497	Downstream edge of gravel sheet
CJ2002_160	7/30/2002	7721708.566	604992.858	267.304	Downstream edge of gravel sheet
CJ2002_161	7/30/2002	7721739.886	604999.335	267.213	Downstream edge of gravel sheet
CJ2002_162	7/30/2002	7721755.483	605006.479	267.866	Downstream edge of gravel sheet
CJ2002_163	7/30/2002	7721776.448	605011.226	268.117	Downstream edge of gravel sheet
CJ2002_164	7/30/2002	7721811.078	605009.055	267.347	Downstream edge of gravel sheet
CJ2002_165	7/30/2002	7721832.595	605031.179	276.459	Root Mass of Tree
CJ2002_166	7/30/2002	7721790.367	605039.216	268.322	Root Mass of Tree
CJ2002_167	7/30/2002	7721813.690	605043.391	280.340	Root Mass of Tree
CJ2002_168	7/30/2002	7721803.589	605049.502	279.191	Root Mass of Tree
CJ2002_169	7/30/2002	7721750.472	605036.354	268.943	Top of Tree in River
CJ2002_170	7/30/2002	7721818.121	605030.083	267.223	Bedrock (Sandy River Mudstone)
CJ2002_171	7/30/2002	7721848.223	605016.575	267.981	Bedrock (Sandy River Mudstone)
CJ2002_172	7/30/2002	7721877.907	604999.418	268.678	Bedrock (Sandy River Mudstone)
CJ2002_173	7/30/2002	7721528.124	604757.172	273.068	Top of Bank
CJ2002_174	7/30/2002	7721493.847	604750.803	272.548	Top of Bank
CJ2002_175	7/30/2002	7721460.008	604750.848	272.688	Top of Bank
CJ2002_176	7/30/2002	7721448.434	604747.022	272.090	Top of Bank
CJ2002_177	7/30/2002	7721379.294	604728.051	274.439	Top of Bank
CJ2002_178	7/30/2002	7721363.053	604723.856	274.774	Top of Bank
CJ2002_179	7/30/2002	7721346.123	604722.646	274.676	Top of Bank
CJ2002_180	7/30/2002	7721316.382	604722.162	274.402	Top of Bank
CJ2002_181	7/30/2002	7721305.777	604721.183	274.552	Top of Bank
CJ2002_182	7/30/2002	7721289.038	604722.538	274.200	Top of Bank
CJ2002_183	7/30/2002	7721273.207	604724.148	273.960	Top of Bank
CJ2002_184	7/30/2002	7721254.194	604728.237	273.438	Top of Bank
CJ2002_185	7/30/2002	7721236.296	604731.637	273.479	Top of Bank
CJ2002_186	7/30/2002	7721217.849	604734.800	273.233	Top of Bank
CJ2002_187	7/30/2002	7721195.775	604737.671	273.534	Top of Bank
CJ2002_188	7/30/2002	7721171.971	604738.346	273.815	Top of Bank
CJ2002_189	7/30/2002	7721149.362	604742.330	273.192	Top of Bank
CJ2002_190	7/30/2002	7721129.494	604742.964	273.099	Top of Bank
CJ2002_191	7/30/2002	7721084.569	604747.314	272.319	Top of Bank
CJ2002_192	7/30/2002	7721062.150	604747.254	272.454	Top of Bank
CJ2002_193	7/30/2002	7721030.901	604748.459	272.083	Top of Bank
CJ2002_194	7/30/2002	7720978.472	604746.651	271.401	Top of Bank
CJ2002_195	7/30/2002	7720948.921	604749.701	271.137	Top of Bank
CJ2002_196	7/30/2002	7720937.909	604750.436	270.765	Top of Bank
CJ2002_197	7/30/2002	7720927.320	604744.806	270.890	Top of Bank
CJ2002_198	7/30/2002	7720917.889	604744.625	270.611	Top of Bank

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_199	7/30/2002	7720896.574	604744.166	270.838	Top of Bank
CJ2002_200	7/30/2002	7720868.672	604747.360	270.875	Top of Bank
CJ2002_201	7/30/2002	7720843.300	604749.356	270.894	Top of Bank
CJ2002_202	7/30/2002	7720825.094	604753.066	270.721	Top of Bank
CJ2002_203	7/30/2002	7720797.503	604754.455	270.548	Top of Bank
CJ2002_204	7/30/2002	7720769.660	604756.012	270.557	Top of Bank
CJ2002_205	7/30/2002	7720750.927	604755.867	270.780	Top of Bank
CJ2002_206	7/30/2002	7720707.143	604757.940	267.590	Top of Bank
CJ2002_207	7/30/2002	7720684.607	604759.386	268.048	Top of Bank
CJ2002_208	7/30/2002	7720654.025	604758.327	268.697	Top of Bank
CJ2002_209	7/30/2002	7720652.867	604763.970	270.277	Root Mass of Tree
CJ2002_210	7/30/2002	7720599.689	604760.307	267.529	Top of Bank
CJ2002_211	7/30/2002	7720566.593	604752.381	268.825	Top of Bank
CJ2002_212	7/30/2002	7720581.796	604766.974	264.323	Top of Tree in River
CJ2002_213	7/30/2002	7720562.918	604763.021	264.220	Root Mass of Tree
CJ2002_214	7/30/2002	7720611.318	604820.790	260.037	Bedrock (Sandy River Mudstone)
CJ2002_215	7/30/2002	7720632.875	604816.890	259.958	Bedrock (Sandy River Mudstone)
CJ2002_216	7/30/2002	7720637.069	604827.039	260.311	Bedrock (Sandy River Mudstone)
CJ2002_217	7/30/2002	7720650.564	604817.036	260.623	Bedrock (Sandy River Mudstone)
CJ2002_218	7/30/2002	7720654.769	604826.227	260.286	Bedrock (Sandy River Mudstone)
CJ2002_219	7/30/2002	7720681.465	604830.244	260.348	Bedrock (Sandy River Mudstone)
CJ2002_220	7/30/2002	7720689.991	604844.133	260.157	Bedrock (Sandy River Mudstone)
CJ2002_221	7/30/2002	7720704.843	604842.167	260.362	Bedrock (Sandy River Mudstone)
CJ2002_222	7/30/2002	7720715.379	604845.319	260.042	Bedrock (Sandy River Mudstone)
CJ2002_223	7/30/2002	7720718.823	604838.359	259.693	Bedrock (Sandy River Mudstone)
CJ2002_224	7/30/2002	7720735.680	604840.912	259.514	Bedrock (Sandy River Mudstone)
CJ2002_225	7/30/2002	7720755.396	604846.583	258.416	Bedrock (Sandy River Mudstone)
CJ2002_226	7/30/2002	7720771.407	604849.020	258.616	Bedrock (Sandy River Mudstone)
CJ2002_227	7/30/2002	7720786.369	604850.202	258.889	Bedrock (Sandy River Mudstone)
CJ2002_228	7/30/2002	7720801.576	604854.627	258.029	Bedrock (Sandy River Mudstone)
CJ2002_229	7/30/2002	7720823.113	604860.579	257.599	Bedrock (Sandy River Mudstone)
CJ2002_230	7/30/2002	7720837.137	604862.849	258.758	Bedrock (Sandy River Mudstone)
CJ2002_231	7/30/2002	7720849.447	604864.053	258.993	Bedrock (Sandy River Mudstone)
CJ2002_232	7/30/2002	7720861.251	604862.560	258.859	Bedrock (Sandy River Mudstone)
CJ2002_233	7/30/2002	7720885.126	604855.107	259.219	Bedrock (Sandy River Mudstone)
CJ2002_234	7/30/2002	7720901.297	604847.431	258.332	Bedrock (Sandy River Mudstone)
CJ2002_235	7/30/2002	7720922.521	604843.484	258.757	Bedrock (Sandy River Mudstone)
CJ2002_236	7/30/2002	7721111.602	604729.461	272.758	Check backsite
CG2002_001	8/13/2002	7718380.377	605507.125	253.508	Check backsite
CG2002_002	8/13/2002	7718332.209	605532.589	252.853	BAD POINT
CG2002_003	8/13/2002	7718332.227	605532.603	252.850	FEMA-CG
CH2002_001	8/13/2002	7719369.165	605007.295	257.990	FEMA-CG
CH2002_002	8/13/2002	7718939.494	605328.049	252.803	Bottom of Riffle
CH2002_003	8/13/2002	7718947.539	605335.305	250.929	Bottom of Riffle
CH2002_004	8/13/2002	7718957.358	605343.245	251.030	Bottom of Riffle
CH2002_005	8/13/2002	7718968.361	605352.840	250.809	Bottom of Riffle
CH2002_006	8/13/2002	7718979.719	605360.829	250.670	Bottom of Riffle
CH2002_007	8/13/2002	7718993.965	605369.822	250.797	Bottom of Riffle

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CH2002_008	8/13/2002	7719010.015	605373.855	251.227	Bottom of Riffle
CH2002_009	8/13/2002	7719029.839	605373.121	251.753	Bottom of Riffle
CH2002_010	8/13/2002	7719045.876	605371.039	251.701	Bottom of Riffle
CH2002_011	8/13/2002	7718840.550	605550.324	246.457	Bedrock (Sandy River Mudstone)
CH2002_012	8/13/2002	7718858.012	605539.922	247.283	Bedrock (Sandy River Mudstone)
CH2002_013	8/13/2002	7718855.033	605528.939	247.414	Bedrock (Sandy River Mudstone)
CH2002_014	8/13/2002	7718843.286	605529.950	246.990	Bedrock (Sandy River Mudstone)
CH2002_015	8/13/2002	7718831.653	605535.836	247.123	Bedrock (Sandy River Mudstone)
CH2002_016	8/13/2002	7718826.844	605544.331	246.978	Bedrock (Sandy River Mudstone)
CH2002_017	8/13/2002	7718817.706	605550.429	246.396	Bedrock (Sandy River Mudstone)
CH2002_018	8/13/2002	7718811.233	605558.327	246.096	Bedrock (Sandy River Mudstone)
CH2002_019	8/13/2002	7718797.092	605564.310	247.446	Bedrock (Sandy River Mudstone)
CH2002_020	8/13/2002	7718768.717	605567.338	246.327	Bedrock (Sandy River Mudstone)
CH2002_021	8/13/2002	7718710.147	605616.979	247.132	Bedrock (Sandy River Mudstone)
CH2002_022	8/13/2002	7718699.775	605613.047	246.705	Bedrock (Sandy River Mudstone)
CH2002_023	8/13/2002	7718674.468	605635.129	246.573	Bedrock (Sandy River Mudstone)
CH2002_024	8/13/2002	7718715.886	605670.713	260.330	Nail
CH2002_025	8/13/2002	7719332.075	604925.407	266.641	Iron Rod with Cap
CH2002_026	8/13/2002	7719327.980	604916.147	265.883	FEMA-CH
CH2002_027	8/13/2002	7719334.775	604931.205	266.636	FEMA-CH
CH2002_028	8/13/2002	7719339.892	604942.527	261.040	FEMA-CH
CH2002_029	8/13/2002	7719343.560	604950.643	258.346	FEMA-CH
CH2002_030	8/13/2002	7719347.963	604960.381	257.397	FEMA-CH
CH2002_031	8/13/2002	7719352.901	604971.309	257.544	FEMA-CH
CH2002_032	8/13/2002	7719357.526	604981.545	257.686	FEMA-CH
CH2002_033	8/13/2002	7719362.918	604993.473	257.682	FEMA-CH
CH2002_034	8/13/2002	7719456.789	604936.349	258.422	Inkspot
CH2002_035	8/14/2002	7719332.079	604925.410	266.635	Check backsite
CH2002_036	8/14/2002	7719332.081	604925.419	266.628	Check backsite
CH2002_037	8/14/2002	7719376.893	605024.396	257.320	FEMA-CH
CH2002_038	8/14/2002	7719382.562	605036.939	257.591	FEMA-CH
CH2002_039	8/14/2002	7719394.843	605064.113	255.631	FEMA-CH
CH2002_040	8/14/2002	7719402.374	605080.780	255.128	FEMA-CH
CH2002_041	8/14/2002	7719410.973	605099.803	254.676	FEMA-CH
CH2002_042	8/14/2002	7719416.403	605111.822	255.290	FEMA-CH
CH2002_043	8/14/2002	7719423.291	605127.062	255.595	FEMA-CH
CH2002_044	8/14/2002	7719430.758	605143.584	256.104	FEMA-CH
CH2002_045	8/14/2002	7719438.572	605160.873	256.217	FEMA-CH
CH2002_046	8/14/2002	7719447.349	605180.295	256.057	FEMA-CH
CH2002_047	8/14/2002	7719455.849	605199.103	256.447	FEMA-CH
CH2002_048	8/14/2002	7719465.603	605220.685	257.299	FEMA-CH
CH2002_049	8/14/2002	7719469.514	605229.335	258.959	FEMA-CH
CH2002_050	8/14/2002	7719475.206	605241.936	259.751	FEMA-CH
CH2002_051	8/14/2002	7719482.384	605257.821	259.618	FEMA-CH
CH2002_052	8/14/2002	7719487.693	605269.561	259.611	FEMA-CH
CH2002_053	8/14/2002	7719493.617	605282.668	260.674	FEMA-CH
CH2002_054	8/14/2002	7719500.704	605298.348	260.749	FEMA-CH
CH2002_055	8/14/2002	7719506.566	605311.322	261.283	FEMA-CH

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CH2002_056	8/14/2002	7719511.952	605323.237	262.661	FEMA-CH
CH2002_057	8/14/2002	7719516.257	605332.702	264.171	FEMA-CH
CH2002_058	8/14/2002	7719602.290	605523.110	270.428	Iron Rod with Cap
CH2002_059	8/14/2002	7719599.486	605516.866	270.098	FEMA-CH
CH2002_060	8/14/2002	7719598.319	605514.285	262.681	FEMA-CH
CH2002_061	8/14/2002	7719595.051	605507.057	258.668	FEMA-CH
CH2002_062	8/14/2002	7719590.829	605497.715	255.908	FEMA-CH
CH2002_063	8/14/2002	7719586.789	605488.779	254.827	FEMA-CH
CH2002_064	8/14/2002	7719574.154	605492.066	255.776	Root Mass of Tree
CH2002_065	8/14/2002	7719581.960	605478.077	252.391	FEMA-CH
CH2002_066	8/14/2002	7719576.661	605466.354	253.054	FEMA-CH
CH2002_067	8/14/2002	7719571.077	605453.998	253.161	FEMA-CH
CH2002_068	8/14/2002	7719564.621	605439.714	253.509	FEMA-CH
CH2002_069	8/14/2002	7719555.729	605420.042	253.135	FEMA-CH
CH2002_070	8/14/2002	7719548.613	605404.297	251.315	FEMA-CH
CH2002_071	8/14/2002	7719543.022	605391.924	253.238	FEMA-CH
CH2002_072	8/14/2002	7719537.060	605378.736	252.684	FEMA-CH
CH2002_073	8/14/2002	7719532.970	605369.683	252.523	FEMA-CH
CH2002_074	8/14/2002	7719526.577	605355.539	254.687	FEMA-CH
CH2002_075	8/14/2002	7719520.514	605342.123	259.776	FEMA-CH
CH2002_076	8/14/2002	7719526.241	605320.118	263.729	FEMA-CH
CH2002_077	8/14/2002	7719541.365	605396.598	255.971	Root Mass of Tree
CH2002_078	8/14/2002	7719555.388	605393.638	255.067	Root Mass of Tree
CH2002_079	8/14/2002	7719518.566	605403.872	252.369	Top of Tree in River
CH2002_080	8/14/2002	7719534.700	605406.690	255.148	Top of Tree in River
CH2002_081	8/14/2002	7719657.479	605447.891	255.329	Nail
CH2002_082	8/14/2002	7719640.897	605446.234	251.151	Edge of mudstone
CH2002_083	8/14/2002	7719625.142	605449.988	251.971	Edge of mudstone
CH2002_084	8/14/2002	7719620.073	605452.768	252.329	Edge of mudstone
CH2002_085	8/14/2002	7719612.956	605457.014	252.594	Edge of mudstone
CH2002_086	8/14/2002	7719606.378	605463.879	252.816	Edge of mudstone
CH2002_087	8/14/2002	7719581.900	605384.620	254.289	Spawning Beds
CH2002_088	8/14/2002	7719588.820	605372.280	254.366	Spawning Beds
CH2002_089	8/14/2002	7719561.502	605376.838	254.226	Spawning Beds
CH2002_090	8/14/2002	7719560.887	605382.623	254.534	Spawning Beds
CH2002_091	8/14/2002	7719561.396	605388.726	253.932	Spawning Beds
CH2002_092	8/14/2002	7719544.665	605388.180	253.835	Spawning Beds
CH2002_093	8/14/2002	7719369.167	605007.282	258.000	Unknown
CH2002_094	8/14/2002	7719332.089	604925.397	266.613	Unknown
CG2002_004	8/14/2002	7718380.393	605507.121	253.501	Check backsite
CG2002_005	8/14/2002	7718326.405	605517.365	254.140	FEMA-CG
CG2002_006	8/14/2002	7718321.015	605503.257	255.493	FEMA-CG
CG2002_007	8/14/2002	7718316.093	605490.374	256.338	FEMA-CG
CG2002_008	8/14/2002	7718311.451	605478.225	255.397	FEMA-CG
CG2002_009	8/14/2002	7718307.192	605467.078	253.600	FEMA-CG
CG2002_010	8/14/2002	7718304.456	605459.918	252.795	FEMA-CG
CG2002_011	8/14/2002	7718300.501	605449.566	254.392	FEMA-CG
CG2002_012	8/14/2002	7718293.881	605432.237	257.829	FEMA-CG

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CG2002_013	8/14/2002	7718290.911	605424.297	262.630	FEMA-CG
CG2002_014	8/14/2002	7718290.501	605422.520	263.211	Iron Rod with Cap
CG2002_015	8/14/2002	7718335.803	605541.964	252.028	FEMA-CG
CG2002_016	8/14/2002	7718343.146	605561.184	251.191	FEMA-CG
CG2002_017	8/14/2002	7718350.857	605581.364	250.407	FEMA-CG
CG2002_018	8/14/2002	7718360.767	605607.304	250.140	FEMA-CG
CG2002_019	8/14/2002	7718369.308	605629.658	249.070	FEMA-CG
CG2002_020	8/14/2002	7718375.310	605645.369	247.666	FEMA-CG
CG2002_021	8/14/2002	7718382.078	605663.084	245.968	FEMA-CG
CG2002_022	8/14/2002	7718389.275	605683.379	245.555	FEMA-CG
CG2002_023	8/14/2002	7718399.029	605707.429	247.810	FEMA-CG
CG2002_024	8/14/2002	7718404.840	605722.632	248.498	FEMA-CG
CG2002_025	8/14/2002	7718411.327	605739.605	252.127	FEMA-CG
CG2002_026	8/14/2002	7718415.331	605754.133	259.719	Top of Bank
CG2002_027	8/14/2002	7718434.695	605747.100	259.737	Top of Bank
CG2002_028	8/14/2002	7718452.862	605739.616	259.498	Top of Bank
CG2002_029	8/14/2002	7718467.104	605735.512	260.339	Top of Bank
CG2002_030	8/14/2002	7718478.435	605731.773	260.654	Top of Bank
CG2002_031	8/14/2002	7718499.966	605723.500	260.894	Top of Bank
CG2002_032	8/14/2002	7718538.943	605714.074	259.627	Top of Bank
CG2002_033	8/14/2002	7718563.415	605704.307	259.777	Top of Bank
CG2002_034	8/14/2002	7718586.073	605695.114	260.754	Top of Bank
CG2002_035	8/14/2002	7718619.722	605686.964	260.995	Top of Bank
CG2002_036	8/14/2002	7718640.728	605678.112	261.156	Top of Bank
CG2002_037	8/14/2002	7718676.732	605664.205	260.582	Top of Bank
CG2002_038	8/14/2002	7718710.972	605652.088	261.811	Top of Bank
CG2002_039	8/14/2002	7718732.490	605641.703	261.622	Top of Bank
CG2002_040	8/14/2002	7718743.009	605636.031	261.616	Top of Bank
CG2002_041	8/14/2002	7718756.242	605628.142	261.429	Top of Bank
CG2002_042	8/14/2002	7718772.500	605619.856	261.185	Top of Bank
CG2002_043	8/14/2002	7718791.618	605610.859	259.721	Top of Bank
CG2002_044	8/14/2002	7718813.969	605599.059	260.322	Top of Bank
CG2002_045	8/14/2002	7718457.359	605860.315	256.584	BAD POINT
CG2002_046	8/14/2002	7718457.337	605860.329	259.337	Iron Rod
CG2002_047	8/14/2002	7718452.203	605846.636	259.140	FEMA-CG
CG2002_048	8/14/2002	7718447.645	605834.703	259.892	FEMA-CG
CG2002_049	8/14/2002	7718442.397	605820.960	260.361	FEMA-CG
CG2002_050	8/14/2002	7718437.367	605807.798	260.406	FEMA-CG
CG2002_051	8/14/2002	7718430.945	605790.989	261.552	FEMA-CG
CG2002_052	8/14/2002	7718426.600	605779.614	260.210	FEMA-CG
CG2002_053	8/14/2002	7718420.809	605764.459	259.558	FEMA-CG
CG2002_054	8/14/2002	7718416.797	605753.959	259.672	FEMA-CG
CG2002_055	8/14/2002	7718413.396	605745.061	254.112	FEMA-CG
CG2002_056	8/14/2002	7718332.242	605532.602	252.790	FEMA-CG
CG2002_057	8/14/2002	7718535.225	606064.283	262.752	FEMA-CG
CG2002_058	8/14/2002	7718534.121	606061.391	262.225	FEMA-CG
CG2002_059	8/14/2002	7718532.017	606055.885	260.643	FEMA-CG
CG2002_060	8/14/2002	7718527.703	606044.588	261.050	FEMA-CG

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CG2002_061	8/14/2002	7718521.637	606028.706	260.491	FEMA-CG
CG2002_062	8/14/2002	7718517.310	606017.374	260.399	FEMA-CG
CG2002_063	8/14/2002	7718512.594	606005.028	260.056	FEMA-CG
CG2002_064	8/14/2002	7718505.973	605987.688	260.112	FEMA-CG
CG2002_065	8/14/2002	7718495.699	605960.723	259.370	FEMA-CG
CG2002_066	8/14/2002	7718489.763	605945.187	259.253	FEMA-CG
CG2002_067	8/14/2002	7718481.758	605924.238	258.820	FEMA-CG
CG2002_068	8/14/2002	7718475.208	605907.098	258.069	FEMA-CG
CG2002_069	8/14/2002	7718468.696	605890.057	258.240	FEMA-CG
CG2002_070	8/14/2002	7718464.945	605880.238	258.579	FEMA-CG
CG2002_071	8/14/2002	7718461.654	605871.625	255.371	FEMA-CG
CG2002_072	8/15/2002	7718457.339	605860.336	259.356	Check backsite
CG2002_073	8/15/2002	7718608.979	606257.192	262.592	Iron Rod with Cap
CG2002_074	8/15/2002	7718603.634	606243.217	256.490	FEMA-CG
CG2002_075	8/15/2002	7718598.542	606229.904	251.425	FEMA-CG
CG2002_076	8/15/2002	7718591.529	606211.563	250.065	FEMA-CG
CG2002_077	8/15/2002	7718584.563	606193.341	250.348	FEMA-CG
CG2002_078	8/15/2002	7718576.699	606172.773	249.854	FEMA-CG
CG2002_079	8/15/2002	7718570.249	606155.900	249.937	FEMA-CG
CG2002_080	8/15/2002	7718562.980	606136.929	250.363	FEMA-CG
CG2002_081	8/15/2002	7718555.723	606118.197	251.489	FEMA-CG
CG2002_082	8/15/2002	7718549.279	606101.068	253.072	FEMA-CG
CG2002_083	8/15/2002	7718544.328	606088.111	256.076	FEMA-CG
CG2002_084	8/15/2002	7718539.322	606075.006	260.649	FEMA-CG
CG2002_085	8/15/2002	7718536.854	606068.548	262.070	FEMA-CG
CG2002_086	8/15/2002	7718514.911	606104.745	254.781	Iron Rod
CC2002_001	8/15/2002	7718458.663	612927.572	238.605	Check backsite
CC2002_002	8/15/2002	7718229.674	612857.562	227.004	FEMA-CC2002
CC2002_003	8/15/2002	7717836.066	613377.560	224.211	MS#6-2002
CC2002_004	8/15/2002	7718007.245	613389.545	226.030	Top of Riffle
CC2002_005	8/15/2002	7718021.513	613374.735	226.171	Top of Riffle
CC2002_006	8/15/2002	7718037.810	613351.875	225.734	Top of Riffle
CC2002_007	8/15/2002	7718046.816	613318.907	225.309	Top of Riffle
CC2002_008	8/15/2002	7718063.633	613289.028	225.221	Top of Riffle
CC2002_009	8/15/2002	7718055.170	613260.946	225.059	Top of Riffle
CC2002_010	8/15/2002	7718050.320	613238.441	224.795	Top of Riffle
CC2002_011	8/15/2002	7718038.630	613220.874	225.198	Top of Riffle
CC2002_012	8/15/2002	7718025.212	613209.000	225.170	Top of Riffle
CC2002_013	8/15/2002	7718247.492	612863.001	225.640	FEMA-CC2002
CC2002_014	8/15/2002	7718261.589	612867.305	224.418	FEMA-CC2002
CC2002_015	8/15/2002	7718274.553	612871.262	222.780	FEMA-CC2002
CC2002_016	8/15/2002	7718289.939	612875.959	221.622	FEMA-CC2002
CC2002_017	8/15/2002	7718304.100	612880.280	221.478	FEMA-CC2002
CC2002_018	8/15/2002	7718319.927	612885.111	220.733	FEMA-CC2002
CC2002_019	8/15/2002	7718349.916	612894.263	219.782	FEMA-CC2002
CC2002_020	8/15/2002	7718366.974	612899.525	221.154	FEMA-CC2002
CC2002_021	8/15/2002	7718373.868	612901.634	221.413	FEMA-CC2002
CC2002_022	8/15/2002	7718386.651	612905.543	222.449	FEMA-CC2002

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CC2002_023	8/15/2002	7718395.768	612908.329	223.556	FEMA-CC2002
CC2002_024	8/15/2002	7718401.120	612909.960	226.875	FEMA-CC2002
CC2002_025	8/15/2002	7718397.791	613036.073	237.096	Top of Bank
CC2002_026	8/15/2002	7718395.188	613051.412	237.459	Top of Bank
CC2002_027	8/15/2002	7718390.955	613070.081	236.998	Top of Bank
CC2002_028	8/15/2002	7718389.142	613085.498	236.902	Top of Bank
CC2002_029	8/15/2002	7718383.288	613102.268	236.759	Top of Bank
CC2002_030	8/15/2002	7718379.650	613119.687	236.873	Top of Bank
CC2002_031	8/15/2002	7718375.205	613133.345	236.911	Top of Bank
CC2002_032	8/15/2002	7718368.593	613150.654	236.958	Top of Bank
CC2002_033	8/15/2002	7718362.690	613165.108	236.569	Top of Bank
CC2002_034	8/15/2002	7718357.911	613178.546	236.590	Top of Bank
CC2002_035	8/15/2002	7718353.925	613188.318	236.804	Top of Bank
CC2002_036	8/15/2002	7718345.368	613201.701	236.647	Top of Bank
CC2002_037	8/15/2002	7718340.314	613216.451	236.693	Top of Bank
CC2002_038	8/15/2002	7718335.560	613235.286	237.526	Top of Bank
CC2002_039	8/15/2002	7718331.482	613245.920	237.333	Top of Bank
CC2002_040	8/15/2002	7718334.707	613260.933	237.884	Top of Bank
CC2002_041	8/15/2002	7718328.248	613279.514	237.884	Top of Bank
CC2002_042	8/15/2002	7718321.307	613298.523	237.834	Top of Bank
CC2002_043	8/15/2002	7718314.835	613320.599	238.137	Top of Bank
CC2002_044	8/15/2002	7718305.209	613345.834	237.767	Top of Bank
CC2002_045	8/15/2002	7718295.585	613368.761	237.494	Top of Bank
CC2002_046	8/15/2002	7718283.641	613394.367	237.027	Top of Bank
CC2002_047	8/15/2002	7718274.106	613411.791	236.893	Top of Bank
CC2002_048	8/15/2002	7718262.059	613432.589	236.772	Top of Bank
CC2002_049	8/15/2002	7718250.371	613456.633	237.112	Top of Bank
CC2002_050	8/15/2002	7718238.064	613482.111	236.904	Top of Bank
CC2002_051	8/15/2002	7718223.457	613513.845	236.826	Top of Bank
CC2002_052	8/15/2002	7718210.248	613548.539	236.612	Top of Bank
CC2002_053	8/15/2002	7718199.324	613574.312	236.465	Top of Bank
CC2002_054	8/15/2002	7718188.676	613595.774	235.945	Top of Bank
CC2002_055	8/15/2002	7718173.803	613627.625	235.597	Top of Bank
CC2002_056	8/15/2002	7718163.410	613648.420	235.229	Top of Bank
CC2002_057	8/15/2002	7718152.034	613669.322	235.108	Top of Bank
CC2002_058	8/15/2002	7718134.893	613695.212	234.731	Top of Bank
CC2002_059	8/15/2002	7718126.631	613714.832	234.627	Top of Bank
CC2002_060	8/15/2002	7718122.320	613734.797	234.563	Top of Bank
CC2002_061	8/15/2002	7718107.920	613757.269	234.329	Top of Bank
CC2002_062	8/15/2002	7718095.120	613782.754	234.364	Top of Bank
CC2002_063	8/15/2002	7718079.982	613805.012	234.255	Top of Bank
CC2002_064	8/15/2002	7718057.607	613820.904	234.780	Top of Bank
CC2002_065	8/15/2002	7718039.178	613837.079	234.833	Top of Bank
CC2002_066	8/15/2002	7718023.626	613848.997	234.244	Top of Bank
CC2002_067	8/15/2002	7718006.752	613861.443	234.367	Top of Bank
CC2002_068	8/15/2002	7717981.926	613871.585	234.813	Top of Bank
CC2002_069	8/15/2002	7717960.176	613888.902	234.984	Top of Bank
CC2002_070	8/15/2002	7717933.086	613900.917	235.371	Top of Bank

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CC2002_071	8/15/2002	7717918.646	613914.022	235.306	Top of Bank
CC2002_072	8/15/2002	7717906.111	613925.414	234.998	Top of Bank
CC2002_073	8/15/2002	7717886.554	613939.443	235.147	Top of Bank
CC2002_074	8/15/2002	7717862.339	613953.329	235.427	Top of Bank
CC2002_075	8/15/2002	7717844.351	613971.451	235.427	Top of Bank
CC2002_076	8/15/2002	7717827.261	613984.816	235.355	Top of Bank
CC2002_077	8/15/2002	7718393.394	613089.680	237.044	Check backsite
MS62002_002	8/15/2002	7718393.478	613089.641	237.124	Check backsite
MS62002_003	8/15/2002	7717651.740	613513.861	225.378	MS#6-2002
MS62002_004	8/15/2002	7717836.043	613377.533	224.431	Check backsite
MS62002_005	8/15/2002	7717646.375	613507.162	221.798	MS#6-2002
MS62002_006	8/15/2002	7717641.836	613501.493	219.541	MS#6-2002
MS62002_007	8/15/2002	7717635.456	613493.527	218.074	MS#6-2002
MS62002_008	8/15/2002	7717626.346	613482.154	217.151	MS#6-2002
MS62002_009	8/15/2002	7717618.338	613472.155	217.034	MS#6-2002
MS62002_010	8/15/2002	7717611.198	613463.241	216.914	MS#6-2002
MS62002_011	8/15/2002	7717603.036	613453.051	217.898	MS#6-2002
MS62002_012	8/15/2002	7717598.483	613447.366	219.490	MS#6-2002
MS62002_013	8/15/2002	7717592.698	613440.145	223.472	MS#6-2002
MS62002_014	8/15/2002	7717586.709	613432.669	225.267	MS#6-2002
MS62002_015	8/15/2002	7717578.859	613422.869	226.470	MS#6-2002
CU2002_001	8/20/2002	7724633.669	601208.596	296.954	BAD POINT
CU2002_002	8/20/2002	7725000.557	601157.785	313.321	Check backsite
CU2002_003	8/20/2002	7725229.196	600970.367	307.499	FEMA-CU
MCIVER_001	8/21/2002	7722852.817	600567.411	299.442	Check backsite
MCIVER_002	8/21/2002	7723515.322	600717.891	313.322	Iron Rod
MCIVER_003	8/21/2002	7723320.051	600918.801	299.964	Sample Location
MCIVER_004	8/21/2002	7723196.495	601009.968	309.750	Nail
MCIVER_005	8/21/2002	7723527.673	600610.175	314.854	Nail
MCIVER_006	8/21/2002	7720970.177	600876.662	288.901	FEMA-CQ
CQ2002_001	8/21/2002	7721089.199	600560.592	291.287	Check backsite
CQ2002_002	8/21/2002	7720978.209	600876.610	288.515	FEMA-CQ
CQ2002_003	8/21/2002	7720987.695	600876.548	287.877	FEMA-CQ
CQ2002_004	8/21/2002	7721002.308	600876.454	287.485	FEMA-CQ
CQ2002_005	8/21/2002	7721016.192	600876.364	286.817	FEMA-CQ
CQ2002_006	8/21/2002	7721031.266	600876.266	287.526	FEMA-CQ
CQ2002_007	8/21/2002	7721045.861	600876.172	288.204	FEMA-CQ
CQ2002_008	8/21/2002	7721053.629	600876.122	288.564	FEMA-CQ
CQ2002_009	8/21/2002	7721061.009	600876.074	287.032	FEMA-CQ
CQ2002_010	8/21/2002	7721070.594	600876.011	285.787	FEMA-CQ
CQ2002_011	8/21/2002	7721088.730	600875.893	284.790	FEMA-CQ
CQ2002_012	8/21/2002	7721110.183	600875.760	285.000	FEMA-CQ
CQ2002_013	8/21/2002	7721128.326	600875.645	285.132	FEMA-CQ
CQ2002_014	8/21/2002	7721144.012	600875.543	284.722	FEMA-CQ
CQ2002_015	8/21/2002	7721160.474	600875.438	284.986	FEMA-CQ
CQ2002_016	8/21/2002	7721178.067	600875.324	285.363	FEMA-CQ
CQ2002_017	8/21/2002	7721192.179	600875.231	285.858	FEMA-CQ
CQ2002_018	8/21/2002	7721205.661	600875.144	286.044	FEMA-CQ

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CQ2002_019	8/21/2002	7721225.995	600875.013	286.072	FEMA-CQ
CQ2002_020	8/21/2002	7721239.398	600874.925	286.203	FEMA-CQ
CQ2002_021	8/21/2002	7721255.539	600874.812	286.563	FEMA-CQ
CQ2002_022	8/21/2002	7721271.048	600874.712	286.943	FEMA-CQ
CQ2002_023	8/21/2002	7721286.005	600874.621	286.891	FEMA-CQ
CQ2002_024	8/21/2002	7721296.628	600874.552	287.187	FEMA-CQ
CQ2002_025	8/21/2002	7721305.717	600874.495	287.451	FEMA-CQ
CQ2002_026	8/21/2002	7721314.277	600874.432	288.100	FEMA-CQ
CQ2002_027	8/21/2002	7720870.386	600877.409	291.511	FEMA-CQ
CQ2002_028	8/21/2002	7720877.832	600877.259	291.101	FEMA-CQ
CQ2002_029	8/21/2002	7720890.439	600877.178	290.761	FEMA-CQ
CQ2002_030	8/21/2002	7720898.079	600877.129	291.757	FEMA-CQ
CQ2002_031	8/21/2002	7720910.882	600877.046	289.786	FEMA-CQ
CQ2002_032	8/21/2002	7720922.086	600876.973	287.249	FEMA-CQ
CQ2002_033	8/21/2002	7720936.031	600876.882	286.824	FEMA-CQ
CQ2002_034	8/21/2002	7720944.416	600876.828	287.503	FEMA-CQ
CQ2002_035	8/21/2002	7720952.918	600876.774	289.160	FEMA-CQ
CQ2002_036	8/21/2002	7720961.997	600876.715	289.127	FEMA-CQ
CQ2002_037	8/21/2002	7721089.266	600560.624	291.276	Check backsite
CQ2002_038	8/22/2002	7721387.177	600495.179	291.296	BAD POINT
CQ2002_039	8/22/2002	7721089.165	600560.620	291.297	Check backsite
CQ2002_040	8/22/2002	7721325.096	600874.362	287.710	FEMA-CQ
CQ2002_041	8/22/2002	7721342.794	600874.247	288.391	FEMA-CQ
CQ2002_042	8/22/2002	7721353.634	600874.177	288.835	FEMA-CQ
CQ2002_043	8/22/2002	7721361.552	600874.126	289.032	FEMA-CQ
CQ2002_044	8/22/2002	7721370.444	600874.068	288.504	FEMA-CQ
CQ2002_045	8/22/2002	7721379.835	600874.007	290.328	FEMA-CQ
CQ2002_046	8/22/2002	7721388.403	600873.952	289.512	FEMA-CQ
CQ2002_047	8/22/2002	7721397.257	600873.933	289.537	FEMA-CQ
CQ2002_048	8/22/2002	7721406.466	600873.596	292.060	FEMA-CQ
CQ2002_049	8/22/2002	7721419.505	600873.519	289.665	FEMA-CQ
CQ2002_050	8/22/2002	7721426.296	600873.710	285.634	FEMA-CQ
CQ2002_051	8/22/2002	7721441.282	600873.614	284.696	FEMA-CQ
CQ2002_052	8/22/2002	7721453.739	600873.533	285.371	FEMA-CQ
CQ2002_053	8/22/2002	7721467.195	600873.447	285.683	FEMA-CQ
CQ2002_054	8/22/2002	7721480.610	600873.466	288.229	FEMA-CQ
CQ2002_055	8/22/2002	7721494.224	600873.386	289.026	FEMA-CQ
CQ2002_056	8/22/2002	7721502.799	600872.565	293.404	FEMA-CQ
CQ2002_057	8/22/2002	7721506.375	600873.188	300.610	FEMA-CQ
CQ2002_058	8/22/2002	7721516.370	600873.124	305.438	FEMA-CQ
CQ2002_059	8/22/2002	7721527.716	600873.050	306.396	FEMA-CQ
CQ2002_060	8/22/2002	7721532.430	600873.082	306.310	FEMA-CQ
CJ2002_140	8/22/2002	7721203.332	604715.421	273.816	BAD POINT
CJ2002_141	8/22/2002	7721272.314	605126.016	273.819	Check backsite
CJ2002_142	8/22/2002	7721189.212	604921.137	264.612	FEMA-CJ
CJ2002_143	8/22/2002	7721186.088	604913.427	263.576	FEMA-CJ
CJ2002_144	8/22/2002	7721181.292	604901.591	262.934	FEMA-CJ
CJ2002_145	8/22/2002	7721172.713	604880.421	263.711	FEMA-CJ

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CJ2002_146	8/22/2002	7721167.476	604867.498	262.680	FEMA-CJ
CJ2002_147	8/22/2002	7721161.391	604852.483	261.881	FEMA-CJ
CJ2002_148	8/22/2002	7721156.594	604840.643	261.464	FEMA-CJ
CJ2002_149	8/22/2002	7721152.234	604827.763	261.053	FEMA-CJ
CJ2002_150	8/22/2002	7721134.638	604783.600	263.356	FEMA-CJ
CJ2002_151	8/22/2002	7721138.206	604792.496	262.026	FEMA-CJ
CJ2002_152	8/22/2002	7721132.903	604782.195	263.373	FEMA-CJ
CJ2002_153	8/22/2002	7721137.254	604792.925	262.038	FEMA-CJ
CJ2002_154	8/22/2002	7721141.831	604804.219	260.865	FEMA-CJ
CJ2002_155	8/22/2002	7721147.063	604813.397	260.359	FEMA-CJ
CJ2002_156	8/22/2002	7720986.125	604766.236	263.161	FEMA-CJ
CJ2002_157	8/22/2002	7720985.614	604774.004	261.949	Point Velocity
CJ2002_158	8/22/2002	7720985.433	604777.606	260.602	Point Velocity
CJ2002_159	8/22/2002	7720986.090	604784.429	260.604	Point Velocity
CJ2002_160	8/22/2002	7720987.119	604790.554	259.880	Point Velocity
CJ2002_161	8/22/2002	7720987.750	604796.861	260.018	Point Velocity
CJ2002_162	8/22/2002	7720987.222	604801.402	260.273	Point Velocity
CJ2002_163	8/22/2002	7720987.418	604808.847	260.636	Point Velocity
CJ2002_164	8/22/2002	7720985.454	604820.330	260.408	Point Velocity
CJ2002_165	8/22/2002	7720984.208	604829.306	259.686	Point Velocity
CJ2002_166	8/22/2002	7720981.707	604840.360	259.123	Point Velocity
CJ2002_167	8/22/2002	7720983.281	604848.093	259.435	Point Velocity
CJ2002_168	8/22/2002	7720984.456	604857.104	259.928	Point Velocity
CJ2002_169	8/22/2002	7720985.921	604866.690	260.669	Point Velocity
CJ2002_170	8/22/2002	7720986.200	604873.343	261.475	Point Velocity
CJ2002_171	8/22/2002	7720984.790	604886.286	263.189	Point Velocity
CE2002_001	8/22/2002	7716692.104	606981.436	239.738	Check backsite
CE2002_002	8/22/2002	7717218.054	607749.174	237.734	Check backsite
CD2002_001	8/22/2002	7718521.126	610018.274	245.634	Check backsite
CD2002_002	8/22/2002	7718470.769	609730.674	241.439	Check backsite
CD2002_003	8/22/2002	7718497.681	610022.362	234.560	FEMA-CD
CD2002_004	8/22/2002	7718461.070	610028.515	230.989	FEMA-CD
CD2002_005	8/22/2002	7718453.933	610029.713	231.020	FEMA-CD
CD2002_006	8/22/2002	7718447.527	610030.791	231.284	FEMA-CD
CD2002_007	8/22/2002	7718442.929	610031.562	231.508	FEMA-CD
CD2002_008	8/22/2002	7718434.746	610032.928	231.879	FEMA-CD
CD2002_009	8/22/2002	7718426.872	610034.252	231.958	FEMA-CD
CD2002_010	8/22/2002	7718417.985	610035.746	232.291	FEMA-CD
CD2002_011	8/22/2002	7718411.015	610036.916	232.318	FEMA-CD
CD2002_012	8/22/2002	7718400.128	610038.744	232.376	FEMA-CD
CD2002_013	8/22/2002	7718390.404	610040.378	232.492	FEMA-CD
CD2002_014	8/22/2002	7718379.271	610042.247	232.525	FEMA-CD
CD2002_015	8/22/2002	7718369.562	610043.878	232.478	FEMA-CD
CD2002_016	8/22/2002	7718361.283	610045.270	232.652	FEMA-CD
CD2002_017	8/22/2002	7718350.694	610047.048	232.875	FEMA-CD
CD2002_018	8/22/2002	7718339.093	610048.995	233.021	FEMA-CD
CD2002_019	8/22/2002	7718325.895	610051.211	232.963	FEMA-CD
CD2002_020	8/22/2002	7718326.154	610051.167	232.733	FEMA-CD

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CD2002_021	8/22/2002	7718309.754	610053.921	233.086	FEMA-CD
CD2002_022	8/22/2002	7718293.365	610056.673	232.963	FEMA-CD
CD2002_023	8/22/2002	7718275.381	610059.695	233.411	FEMA-CD
CD2002_024	8/22/2002	7718256.768	610062.821	233.486	FEMA-CD
CD2002_025	8/22/2002	7718242.211	610065.266	233.740	FEMA-CD
CD2002_026	8/22/2002	7718231.594	610067.049	234.495	FEMA-CD
CD2002_027	8/22/2002	7718469.649	610027.069	230.770	FEMA-CD
CD2002_028	8/22/2002	7718474.294	610026.289	230.686	FEMA-CD
CD2002_029	8/22/2002	7718481.504	610023.929	230.022	FEMA-CD
CD2002_030	8/22/2002	7718484.344	610024.603	231.538	FEMA-CD
CD2002_031	8/22/2002	7718491.828	610023.346	231.752	FEMA-CD
CD2002_032	8/22/2002	7718108.639	611274.287	229.989	Check backsite
CH2002_082	8/23/2002	7719657.468	605447.877	255.298	Check backsite
CH2002_083	8/23/2002	7719526.947	605356.359	254.840	FEMA-CH
CH2002_084	8/23/2002	7719530.933	605365.179	253.489	FEMA-CH
CH2002_085	8/23/2002	7719534.874	605373.899	252.446	FEMA-CH
CH2002_086	8/23/2002	7719539.512	605384.162	253.238	FEMA-CH
CH2002_087	8/23/2002	7719542.355	605390.451	253.761	FEMA-CH
CH2002_088	8/23/2002	7719545.402	605397.193	251.466	FEMA-CH
CH2002_089	8/23/2002	7719546.955	605400.629	251.163	FEMA-CH
CH2002_090	8/23/2002	7719549.277	605405.769	251.728	FEMA-CH
CH2002_091	8/23/2002	7719553.352	605414.783	252.861	FEMA-CH
CH2002_092	8/23/2002	7719558.295	605425.720	253.263	FEMA-CH
CH2002_093	8/23/2002	7719563.227	605436.634	253.577	FEMA-CH
CH2002_094	8/23/2002	7719568.373	605448.020	253.392	FEMA-CH
CH2002_095	8/23/2002	7719576.298	605465.555	253.273	FEMA-CH
CH2002_096	8/23/2002	7719581.089	605476.157	252.666	FEMA-CH
CH2002_097	8/23/2002	7719585.471	605485.854	253.806	FEMA-CH
CH2002_098	8/23/2002	7719586.839	605488.880	254.900	FEMA-CH
CH2002_099	8/23/2002	7719464.595	605218.388	257.112	FEMA-CH
CH2002_100	8/23/2002	7719459.776	605207.725	256.892	FEMA-CH
CH2002_101	8/23/2002	7719446.645	605178.672	256.710	FEMA-CH
CH2002_102	8/23/2002	7719440.277	605164.580	256.640	FEMA-CH
CH2002_103	8/23/2002	7719434.909	605152.703	256.535	FEMA-CH
CH2002_104	8/23/2002	7719429.674	605141.119	256.324	FEMA-CH
CH2002_105	8/23/2002	7719424.542	605129.765	255.825	FEMA-CH
CH2002_106	8/23/2002	7719418.954	605117.398	255.773	FEMA-CH
CH2002_107	8/23/2002	7719413.412	605105.136	255.283	FEMA-CH
CH2002_108	8/23/2002	7719408.032	605093.233	254.848	FEMA-CH
CH2002_109	8/23/2002	7719403.667	605083.552	254.974	FEMA-CH
CH2002_110	8/23/2002	7719399.108	605073.488	255.060	FEMA-CH
CH2002_111	8/23/2002	7719394.794	605063.940	255.775	FEMA-CH
CH2002_112	8/23/2002	7719389.006	605051.134	256.694	FEMA-CH
CH2002_113	8/23/2002	7719384.488	605041.158	257.425	FEMA-CH
CH2002_114	8/23/2002	7719351.374	604967.857	257.488	FEMA-CH
CH2002_115	8/23/2002	7719348.948	604962.490	257.507	FEMA-CH
CG2002_083	8/23/2002	7718514.917	606104.729	254.780	Check backsite
CG2002_084	8/23/2002	7718556.622	606129.285	251.520	FEMA-CG

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
CG2002_085	8/23/2002	7718560.721	606131.013	250.926	FEMA-CG
CG2002_086	8/23/2002	7718564.106	606139.873	250.649	FEMA-CG
CG2002_087	8/23/2002	7718567.993	606150.046	260.585	FEMA-CG
CG2002_088	8/23/2002	7718572.320	606161.379	250.147	FEMA-CG
CG2002_089	8/23/2002	7718576.569	606172.501	250.060	FEMA-CG
CG2002_090	8/23/2002	7718580.204	606182.017	250.515	FEMA-CG
CG2002_091	8/23/2002	7718583.133	606189.681	250.574	FEMA-CG
CG2002_092	8/23/2002	7718586.209	606197.733	250.675	FEMA-CG
CG2002_093	8/23/2002	7718591.257	606210.925	250.490	FEMA-CG
CG2002_094	8/23/2002	7718593.625	606217.122	249.578	FEMA-CG
CG2002_095	8/23/2002	7718596.350	606224.260	249.375	FEMA-CG
CG2002_096	8/23/2002	7718597.813	606228.078	251.190	FEMA-CG
ADP2002_001	8/28/2002	7723527.667	600610.178	314.861	ADP Endpoint
ADP2002_002	8/28/2002	7723463.095	600798.805	1.700	ADP Endpoint
ADP2002_003	8/28/2002	7723434.168	600905.230	1.700	ADP Endpoint
ADP2002_004	8/28/2002	7723423.575	600774.445	295.955	ADP Endpoint
ADP2002_005	8/28/2002	7723429.745	600772.048	297.634	ADP Endpoint
ADP2002_006	8/28/2002	7723355.778	600878.346	297.589	ADP Endpoint
ADP2002_007	8/28/2002	7723468.948	600794.454	297.651	ADP Endpoint
ADP2002_008	8/28/2002	7723461.290	600925.401	297.640	ADP Endpoint
ADP2002_009	8/28/2002	7723509.510	600795.556	297.702	ADP Endpoint
ADP2002_010	8/28/2002	7723437.779	600762.507	297.599	ADP Endpoint
ADP2002_011	8/28/2002	7723437.139	600772.723	297.581	ADP Endpoint
ADP2002_012	8/28/2002	7723437.779	600773.568	297.672	ADP Endpoint
ADP2002_013	8/28/2002	7723473.238	600810.383	297.693	ADP Endpoint
ADP2002_014	8/28/2002	7723490.205	600799.382	297.725	ADP Endpoint
ADP2002_015	8/28/2002	7723519.656	600823.834	297.729	ADP Endpoint
ADP2002_016	8/28/2002	7723573.989	600836.082	297.772	ADP Endpoint
ADP2002_017	8/28/2002	7723396.185	600762.850	297.710	ADP Endpoint
ADP2002_018	8/28/2002	7723345.279	600875.747	297.684	ADP Endpoint
ADP2002_019	8/28/2002	7723339.233	600747.031	297.721	ADP Endpoint
ADP2002_020	8/28/2002	7723527.698	600610.178	314.858	ADP Endpoint
ADP2002_021	8/29/2002	7722798.831	600552.406	292.707	ADP Endpoint
ADP2002_022	8/29/2002	7722852.830	600567.393	299.445	ADP Endpoint
ADP2002_023	8/29/2002	7722842.119	600631.918	291.329	ADP Endpoint
ADP2002_024	8/29/2002	7722842.323	600622.329	291.268	ADP Endpoint
ADP2002_025	8/29/2002	7722791.876	600558.017	291.270	ADP Endpoint
ADP2002_026	8/29/2002	7722771.121	600523.912	291.313	ADP Endpoint
ADP2002_027	8/29/2002	7722740.854	600494.450	291.269	ADP Endpoint
ADP2002_028	8/29/2002	7722716.475	600465.343	291.301	ADP Endpoint
ADP2002_029	8/29/2002	7722716.538	600469.604	291.269	ADP Endpoint
ADP2002_030	8/29/2002	7722692.862	600424.445	291.296	ADP Endpoint
ADP2002_031	8/29/2002	7722854.157	600379.091	291.299	ADP Endpoint
ADP2002_032	8/29/2002	7722632.621	600345.628	291.288	ADP Endpoint
ADP2002_033	8/29/2002	7722600.807	600302.895	291.289	ADP Endpoint
ADP2002_034	8/29/2002	7722564.225	600236.334	291.242	ADP Endpoint
ADP2002_035	8/29/2002	7722524.748	600186.608	291.260	ADP Endpoint
ADP2002_036	8/29/2002	7722852.827	600567.384	299.450	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_037	8/29/2002	7722156.402	600102.903	293.451	ADP Endpoint
ADP2002_038	8/29/2002	7722053.484	599659.105	291.889	ADP Endpoint
ADP2002_039	8/29/2002	7722083.581	599636.934	295.307	ADP Endpoint
ADP2002_040	8/29/2002	7722083.585	599636.944	295.314	ADP Endpoint
ADP2002_041	8/29/2002	7722100.241	599731.295	1.700	ADP Endpoint
ADP2002_042	8/29/2002	7722065.826	599700.951	1.700	ADP Endpoint
ADP2002_043	8/29/2002	7722024.327	599609.717	1.700	ADP Endpoint
ADP2002_044	8/29/2002	7721874.287	599615.622	1.700	ADP Endpoint
ADP2002_045	8/29/2002	7721812.777	599644.025	1.700	ADP Endpoint
ADP2002_046	8/29/2002	7721738.484	599658.411	1.700	ADP Endpoint
ADP2002_047	8/29/2002	7721684.406	599697.654	1.700	ADP Endpoint
ADP2002_048	8/29/2002	7721647.692	599752.121	1.700	ADP Endpoint
ADP2002_049	8/29/2002	7721546.524	599820.035	1.700	ADP Endpoint
ADP2002_050	8/29/2002	7721476.190	599899.144	1.700	ADP Endpoint
ADP2002_051	8/29/2002	7721511.965	599929.912	1.700	ADP Endpoint
ADP2002_052	8/29/2002	7722018.332	599656.753	1.700	ADP Endpoint
BARTON	?	7710487.943	631277.464	160.781	
BARTON	?	7710915.704	630865.541	160.832	
BARTON1	9/4/2002	7711027.379	631113.737	163.483	Check backsite
BARTON2	9/4/2002	7710686.224	631087.168	159.815	Nail
BARTON3	9/4/2002	7710607.785	631231.205	158.945	Nail
TRC2002_001	9/11/2002	7722836.779	600591.177	293.326	Inkspot
TRC2002_002	9/11/2002	7722852.828	600567.406	299.444	Check backsite
TRC2002_003	9/11/2002	7722899.997	600935.965	293.643	Check backsite
TRC2002_004	9/11/2002	7722869.202	600864.538	292.879	Incipient Motion Painted Square
TRC2002_005	9/11/2002	7722867.038	600864.416	293.006	Incipient Motion Painted Square
TRC2002_006	9/11/2002	7722869.196	600866.687	293.166	Incipient Motion Painted Square
TRC2002_007	9/11/2002	7722871.762	600864.619	293.165	Incipient Motion Painted Square
TRC2002_008	9/11/2002	7722869.456	600862.136	293.103	Incipient Motion Painted Square
TRC2002_009	9/11/2002	7722885.408	600841.397	294.778	Incipient Motion Painted Square
TRC2002_010	9/11/2002	7722885.255	600843.666	294.685	Incipient Motion Painted Square
TRC2002_011	9/11/2002	7722883.228	600841.070	294.802	Incipient Motion Painted Square
TRC2002_012	9/11/2002	7722887.872	600841.705	294.839	Incipient Motion Painted Square
TRC2002_013	9/11/2002	7722885.911	600839.003	294.897	Incipient Motion Painted Square
TRC2002_014	9/11/2002	7722852.312	600862.601	291.877	Edge of water
TRC2002_015	9/11/2002	7722848.844	600852.001	291.986	Edge of water
TRC2002_016	9/11/2002	7722841.473	600841.389	292.017	Edge of water
TRC2002_017	9/11/2002	7722841.350	600828.356	292.033	Edge of water
TRC2002_018	9/11/2002	7722841.841	600817.843	291.976	Edge of water
TRC2002_019	9/11/2002	7722844.561	600807.609	291.748	Edge of water
TRC2002_020	9/11/2002	7722846.099	600796.167	291.979	Edge of water
TRC2002_021	9/11/2002	7722851.872	600786.425	291.993	Edge of water
TRC2002_022	9/11/2002	7722861.027	600779.627	291.912	Edge of water
TRC2002_023	9/11/2002	7722868.615	600774.886	291.891	Edge of water
TRC2002_024	9/11/2002	7722875.314	600768.402	291.948	Edge of water
TRC2002_025	9/11/2002	7722885.680	600767.693	292.053	Edge of water
TRC2002_026	9/11/2002	7722895.602	600764.852	291.814	Edge of water
TRC2002_027	9/11/2002	7722907.023	600759.021	292.042	Edge of water

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_028	9/11/2002	7722917.110	600755.050	292.259	Edge of water
TRC2002_029	9/11/2002	7722932.485	600750.786	292.821	Edge of water
TRC2002_030	9/11/2002	7722948.857	600752.586	292.852	Edge of water
TRC2002_031	9/11/2002	7722964.658	600755.443	292.916	Edge of water
TRC2002_032	9/11/2002	7722979.963	600759.665	293.237	Edge of water
TRC2002_033	9/11/2002	7722996.145	600762.393	293.299	Edge of water
TRC2002_034	9/11/2002	7723012.772	600767.589	293.320	Edge of water
TRC2002_035	9/11/2002	7723028.726	600773.673	293.169	Edge of water
TRC2002_036	9/11/2002	7723049.163	600778.231	293.085	Edge of water
TRC2002_037	9/11/2002	7723060.348	600777.815	293.464	Edge of water
TRC2002_038	9/11/2002	7723062.949	600778.408	294.495	Edge of water
TRC2002_039	9/11/2002	7723074.576	600782.183	294.543	Edge of water
TRC2002_040	9/11/2002	7723085.999	600783.721	294.914	Edge of water
TRC2002_041	9/11/2002	7723100.142	600788.071	295.388	Edge of water
TRC2002_042	9/11/2002	7723114.464	600790.478	295.531	Edge of water
TRC2002_043	9/11/2002	7723133.879	600795.239	295.346	Edge of water
TRC2002_044	9/11/2002	7723152.484	600801.956	296.377	Edge of water
TRC2002_045	9/11/2002	7723169.226	600804.780	296.683	Edge of water
TRC2002_046	9/11/2002	7723186.675	600809.279	297.802	Edge of water
TRC2002_047	9/11/2002	7723197.380	600813.727	297.698	Edge of water
TRC2002_048	9/11/2002	7723207.320	600824.115	298.197	Edge of water
TRC2002_049	9/11/2002	7723218.738	600833.226	298.142	Edge of water
TRC2002_050	9/11/2002	7723237.774	600840.510	298.232	Edge of water
TRC2002_051	9/11/2002	7723252.296	600848.113	298.293	Edge of water
TRC2002_052	9/11/2002	7723059.312	600782.848	296.980	Incipient Motion Painted Square
TRC2002_053	9/11/2002	7723058.733	600789.405	302.064	Incipient Motion Painted Square
TRC2002_054	9/11/2002	7723059.481	600783.832	301.696	Incipient Motion Painted Square
TRC2002_055	9/11/2002	7723060.433	600778.678	295.431	Incipient Motion Painted Square
TRC2002_056	9/11/2002	7721104.393	600523.411	290.249	Tracer Rock
TRC2002_057	9/11/2002	7721104.813	600525.259	290.179	Tracer Rock
TRC2002_058	9/11/2002	7721104.283	600527.230	289.932	Tracer Rock
TRC2002_059	9/11/2002	7721103.970	600529.464	290.012	Tracer Rock
TRC2002_060	9/11/2002	7721103.699	600530.666	289.861	Tracer Rock
TRC2002_061	9/11/2002	7721103.781	600531.646	289.941	Tracer Rock
TRC2002_062	9/11/2002	7721103.904	600532.403	289.735	Tracer Rock
TRC2002_063	9/11/2002	7721102.470	600414.256	290.706	Tracer Rock
TRC2002_064	9/11/2002	7721104.784	600415.273	290.329	Tracer Rock
TRC2002_065	9/11/2002	7721106.527	600416.498	290.118	Tracer Rock
TRC2002_066	9/11/2002	7721107.698	600417.767	290.299	Tracer Rock
TRC2002_067	9/11/2002	7721109.120	600419.113	290.350	Tracer Rock
TRC2002_068	9/11/2002	7721109.864	600420.263	290.385	Tracer Rock
TRC2002_069	9/11/2002	7721057.173	600526.823	290.954	Tracer Rock
TRC2002_070	9/11/2002	7721056.831	600529.581	290.886	Tracer Rock
TRC2002_071	9/11/2002	7721056.610	600531.313	290.620	Tracer Rock
TRC2002_072	9/11/2002	7721056.551	600532.962	290.450	Tracer Rock
TRC2002_073	9/11/2002	7721056.342	600535.135	290.525	Tracer Rock
TRC2002_074	9/11/2002	7721055.668	600537.357	290.507	Tracer Rock
TRC2002_075	9/11/2002	7721055.031	600538.186	290.530	Tracer Rock

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_076	9/11/2002	7721057.418	600518.905	290.891	Tracer Rock
TRC2002_077	9/11/2002	7721104.725	600514.706	290.329	Tracer Rock
TRC2002_078	9/11/2002	7721090.679	600532.256	292.081	Tracer Rock
TRC2002_079	9/11/2002	7721083.627	600530.143	291.206	Tracer Rock
TRC2002_080	9/11/2002	7721083.895	600540.439	291.580	Tracer Rock
TRC2002_081	9/11/2002	7720950.908	600273.476	309.276	Nail
TRC2002_082	9/11/2002	7721520.745	599801.709	292.115	Check backsite
TRC2002_083	9/11/2002	7721520.785	599801.736	292.126	Check backsite
TRC2002_084	9/11/2002	7721111.548	604729.569	272.728	Check backsite
TRC2002_085	9/11/2002	7721358.067	604804.673	267.556	Tracer Rock
TRC2002_086	9/11/2002	7721356.024	604804.844	267.462	Tracer Rock
TRC2002_087	9/11/2002	7721354.673	604804.990	267.230	Tracer Rock
TRC2002_088	9/11/2002	7721352.852	604804.671	267.164	Tracer Rock
TRC2002_089	9/11/2002	7721351.696	604805.218	267.166	Tracer Rock
TRC2002_090	9/11/2002	7721351.636	604804.091	267.048	Tracer Rock
TRC2002_091	9/11/2002	7721350.512	604804.093	267.017	Tracer Rock
TRC2002_092	9/11/2002	7721350.594	604804.955	267.009	Tracer Rock
TRC2002_093	9/11/2002	7721365.031	604818.619	267.144	Tracer Rock
TRC2002_094	9/11/2002	7721363.425	604818.703	267.070	Tracer Rock
TRC2002_095	9/11/2002	7721362.251	604818.322	266.962	Tracer Rock
TRC2002_096	9/11/2002	7721360.877	604817.874	266.861	Tracer Rock
TRC2002_097	9/11/2002	7721360.994	604818.623	266.889	Tracer Rock
TRC2002_098	9/11/2002	7721359.453	604819.053	266.736	Tracer Rock
TRC2002_099	9/11/2002	7721359.345	604818.221	266.852	Tracer Rock
TRC2002_100	9/11/2002	7721325.077	604836.289	266.087	Tracer Rock
TRC2002_101	9/11/2002	7721323.604	604836.272	265.982	Tracer Rock
TRC2002_102	9/11/2002	7721322.554	604835.904	265.819	Tracer Rock
TRC2002_103	9/11/2002	7721321.047	604835.792	265.729	Tracer Rock
TRC2002_104	9/11/2002	7721319.995	604834.728	265.566	Tracer Rock
TRC2002_105	9/11/2002	7721319.769	604835.581	265.560	Tracer Rock
TRC2002_106	9/11/2002	7721318.640	604835.646	265.517	Tracer Rock
TRC2002_107	9/11/2002	7721318.919	604834.970	265.583	Tracer Rock
TRC2002_108	9/12/2002	7721089.087	600560.471	292.197	Check backsite
TRC2002_109	9/12/2002	7721089.086	600560.441	291.342	Check backsite
TRC2002_110	9/12/2002	7721089.189	600560.423	291.348	Check backsite
TRC2002_111	9/12/2002	7721089.291	600560.439	291.303	Check backsite
TRC2002_112	9/12/2002	7721585.226	601936.709	279.010	Tracer Rock
TRC2002_113	9/12/2002	7721586.452	601937.958	279.308	Tracer Rock
TRC2002_114	9/12/2002	7721586.982	601939.027	278.843	Tracer Rock
TRC2002_115	9/12/2002	7721588.092	601940.942	278.945	Tracer Rock
TRC2002_116	9/12/2002	7721588.503	601939.890	279.041	Tracer Rock
TRC2002_117	9/12/2002	7721589.394	601941.222	278.460	Tracer Rock
TRC2002_118	9/12/2002	7721588.463	601942.238	278.359	Tracer Rock
TRC2002_119	9/12/2002	7721589.589	601943.238	278.831	Tracer Rock
TRC2002_120	9/12/2002	7721590.647	601942.284	278.883	Tracer Rock
TRC2002_121	9/12/2002	7721591.165	601943.363	278.657	Tracer Rock
TRC2002_122	9/12/2002	7721590.448	601944.872	278.690	Tracer Rock
TRC2002_123	9/12/2002	7721591.948	601945.147	278.484	Tracer Rock

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_124	9/12/2002	7721592.646	601944.342	278.514	Tracer Rock
TRC2002_125	9/12/2002	7721565.945	601939.790	279.474	Tracer Rock
TRC2002_126	9/12/2002	7721567.111	601941.436	279.223	Tracer Rock
TRC2002_127	9/12/2002	7721567.242	601944.865	279.334	Tracer Rock
TRC2002_128	9/12/2002	7721568.202	601944.083	279.211	Tracer Rock
TRC2002_129	9/12/2002	7721568.832	601947.263	278.924	Tracer Rock
TRC2002_130	9/12/2002	7721570.049	601947.104	279.075	Tracer Rock
TRC2002_131	9/12/2002	7721571.585	601948.864	278.801	Tracer Rock
TRC2002_132	9/12/2002	7721570.420	601949.710	278.831	Tracer Rock
TRC2002_133	9/12/2002	7721573.535	601952.107	278.615	Tracer Rock
TRC2002_134	9/12/2002	7721572.478	601952.999	278.605	Tracer Rock
TRC2002_135	9/12/2002	7721574.414	601952.879	278.674	Tracer Rock
TRC2002_136	9/12/2002	7721573.393	601954.290	278.632	Tracer Rock
TRC2002_137	9/12/2002	7721814.776	604608.259	269.825	Check backsite
TRC2002_138	9/12/2002	7721814.776	604608.264	269.930	Check backsite
TRC2002_139	9/12/2002	7722473.560	604246.568	272.809	Nail
TRC2002_140	9/12/2002	7719657.472	605447.889	255.306	Tracer Rock
TRC2002_141	9/12/2002	7719588.379	605378.197	254.185	Tracer Rock
TRC2002_142	9/12/2002	7719586.739	605378.065	254.407	Tracer Rock
TRC2002_143	9/12/2002	7719585.422	605377.698	254.384	Tracer Rock
TRC2002_144	9/12/2002	7719583.947	605377.296	254.565	Tracer Rock
TRC2002_145	9/12/2002	7719584.162	605376.679	254.534	Tracer Rock
TRC2002_146	9/12/2002	7719582.856	605376.921	254.458	Tracer Rock
TRC2002_147	9/12/2002	7719582.960	605376.221	254.390	Tracer Rock
TRC2002_148	9/12/2002	7719588.480	605378.224	254.198	Tracer Rock
TRC2002_149	9/12/2002	7719586.613	605377.938	254.432	Tracer Rock
TRC2002_150	9/12/2002	7719585.353	605377.751	254.375	Tracer Rock
TRC2002_151	9/12/2002	7719583.958	605377.342	254.561	Tracer Rock
TRC2002_152	9/12/2002	7719584.152	605376.672	254.535	Tracer Rock
TRC2002_153	9/12/2002	7719582.774	605376.977	254.445	Tracer Rock
TRC2002_154	9/12/2002	7719582.911	605376.090	254.408	Tracer Rock
TRC2002_155	9/12/2002	7719587.016	605383.628	253.642	Tracer Rock
TRC2002_156	9/12/2002	7719584.934	605383.008	254.157	Tracer Rock
TRC2002_157	9/12/2002	7719582.573	605382.421	254.433	Tracer Rock
TRC2002_158	9/12/2002	7719581.550	605381.189	254.544	Tracer Rock
TRC2002_159	9/12/2002	7719581.205	605381.974	254.464	Tracer Rock
TRC2002_160	9/12/2002	7719579.740	605381.635	254.354	Tracer Rock
TRC2002_161	9/12/2002	7719579.988	605380.778	254.292	Tracer Rock
TRC2002_162	9/12/2002	7719587.326	605390.288	253.947	Tracer Rock
TRC2002_163	9/12/2002	7719585.717	605390.847	253.890	Tracer Rock
TRC2002_164	9/12/2002	7719584.179	605391.202	253.727	Tracer Rock
TRC2002_165	9/12/2002	7719582.940	605391.206	253.553	Tracer Rock
TRC2002_166	9/12/2002	7719582.876	605391.895	253.556	Tracer Rock
TRC2002_167	9/12/2002	7719581.511	605391.142	253.347	Tracer Rock
TRC2002_168	9/12/2002	7719581.245	605392.004	253.467	Tracer Rock
TRC2002_169	9/12/2002	7719587.832	605395.394	254.014	Tracer Rock
TRC2002_170	9/12/2002	7719586.141	605395.266	253.798	Tracer Rock
TRC2002_171	9/12/2002	7719584.934	605395.235	253.628	Tracer Rock

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_172	9/12/2002	7719583.061	605394.768	253.467	Tracer Rock
TRC2002_173	9/12/2002	7719583.232	605395.493	253.503	Tracer Rock
TRC2002_174	9/12/2002	7719581.922	605395.185	253.448	Tracer Rock
TRC2002_175	9/12/2002	7719581.995	605396.071	253.470	Tracer Rock
TRC2002_176	9/13/2002	7719526.256	605320.147	263.744	Tracer Rock
TRC2002_177	9/13/2002	7718380.398	605507.065	253.526	Tracer Rock
TRC2002_178	9/13/2002	7717773.618	606005.499	249.017	Tracer Rock
TRC2002_179	9/13/2002	7717804.477	606148.540	252.992	Tracer Rock
TRC2002_180	9/13/2002	7717928.944	605905.557	252.857	Tracer Rock
TRC2002_181	9/13/2002	7717926.098	605907.954	252.382	Tracer Rock
TRC2002_182	9/13/2002	7717924.223	605909.536	252.128	Tracer Rock
TRC2002_183	9/13/2002	7717923.066	605910.384	251.745	Tracer Rock
TRC2002_184	9/13/2002	7717922.115	605911.122	251.712	Tracer Rock
TRC2002_185	9/13/2002	7717920.677	605911.844	251.676	Tracer Rock
TRC2002_186	9/13/2002	7717919.780	605912.224	251.599	Tracer Rock
TRC2002_187	9/13/2002	7717913.143	605896.352	252.542	Tracer Rock
TRC2002_188	9/13/2002	7717910.518	605899.176	252.418	Tracer Rock
TRC2002_189	9/13/2002	7717908.911	605901.236	251.851	Tracer Rock
TRC2002_190	9/13/2002	7717907.337	605902.655	251.621	Tracer Rock
TRC2002_191	9/13/2002	7717906.116	605903.147	251.534	Tracer Rock
TRC2002_192	9/13/2002	7717905.802	605903.688	251.410	Tracer Rock
TRC2002_193	9/13/2002	7717898.701	605884.045	253.077	Tracer Rock
TRC2002_194	9/13/2002	7717896.305	605887.803	252.629	Tracer Rock
TRC2002_195	9/13/2002	7717894.969	605890.381	252.569	Tracer Rock
TRC2002_196	9/13/2002	7717893.911	605891.944	252.048	Tracer Rock
TRC2002_197	9/13/2002	7717893.398	605892.644	252.012	Tracer Rock
TRC2002_198	9/13/2002	7717892.830	605893.384	251.826	Tracer Rock
TRC2002_199	9/13/2002	7717892.010	605894.645	251.712	Tracer Rock
TRC2002_200	9/13/2002	7717888.010	605883.102	252.988	Topographic Point
TRC2002_201	9/13/2002	7717894.363	605887.833	252.133	Topographic Point
TRC2002_202	9/13/2002	7717900.370	605891.865	251.826	Topographic Point
TRC2002_203	9/13/2002	7717907.599	605896.834	251.418	Topographic Point
TRC2002_204	9/13/2002	7717913.598	605901.383	251.605	Topographic Point
TRC2002_205	9/13/2002	7717917.855	605904.419	251.269	Topographic Point
TRC2002_206	9/13/2002	7717925.439	605908.220	251.685	Topographic Point
TRC2002_207	9/13/2002	7717933.234	605912.591	251.855	Topographic Point
TRC2002_208	9/13/2002	7717944.282	605917.027	252.022	Topographic Point
TRC2002_209	9/13/2002	7717994.882	605835.717	252.028	Topographic Point
TRC2002_210	9/13/2002	7717986.454	605843.169	252.131	Topographic Point
TRC2002_211	9/13/2002	7717976.079	605850.478	252.005	Topographic Point
TRC2002_212	9/13/2002	7717963.149	605860.652	251.995	Topographic Point
TRC2002_213	9/13/2002	7717951.633	605868.959	252.269	Topographic Point
TRC2002_214	9/13/2002	7717934.101	605882.868	251.606	Topographic Point
TRC2002_215	9/13/2002	7717915.826	605896.640	251.285	Topographic Point
TRC2002_216	9/13/2002	7717900.237	605908.691	251.071	Topographic Point
TRC2002_217	9/13/2002	7717882.670	605922.164	250.866	Topographic Point
TRC2002_218	9/13/2002	7717867.141	605934.175	250.273	Topographic Point
TRC2002_219	9/13/2002	7717851.772	605945.954	250.163	Topographic Point

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_220	9/13/2002	7717836.542	605957.572	249.690	Topographic Point
TRC2002_221	9/13/2002	7717821.941	605968.609	249.448	Topographic Point
TRC2002_222	9/13/2002	7717805.435	605981.203	249.400	Topographic Point
TRC2002_223	9/13/2002	7717803.432	605998.178	248.969	Topographic Point
TRC2002_224	9/13/2002	7717802.812	606012.450	248.323	Topographic Point
TRC2002_225	9/13/2002	7717802.550	606020.481	246.907	Topographic Point
TRC2002_226	9/13/2002	7717802.623	606025.629	245.760	Topographic Point
ADP2002_200	9/16/2002	7718717.487	605652.656	261.860	Check backsite
ADP2002_201	9/16/2002	7718382.529	605733.491	251.912	ADP Endpoint
ADP2002_202	9/16/2002	7718342.148	605643.360	251.926	ADP Endpoint
ADP2002_203	9/16/2002	7718393.556	605727.961	251.944	ADP Endpoint
ADP2002_204	9/16/2002	7718421.139	605724.065	251.905	ADP Endpoint
ADP2002_205	9/16/2002	7718388.786	605618.624	251.969	ADP Endpoint
ADP2002_206	9/16/2002	7718416.914	605614.173	251.892	ADP Endpoint
ADP2002_207	9/16/2002	7718471.225	605702.930	251.950	ADP Endpoint
ADP2002_208	9/16/2002	7718505.762	605697.282	251.864	ADP Endpoint
ADP2002_209	9/16/2002	7718442.606	605607.854	251.923	ADP Endpoint
ADP2002_210	9/16/2002	7718481.717	605586.419	251.921	ADP Endpoint
ADP2002_211	9/16/2002	7718537.196	605683.062	251.912	ADP Endpoint
ADP2002_212	9/16/2002	7718590.049	605668.763	251.958	ADP Endpoint
ADP2002_213	9/16/2002	7718542.239	605558.724	251.922	ADP Endpoint
ADP2002_214	9/16/2002	7718614.042	605658.430	251.947	ADP Endpoint
ADP2002_215	9/16/2002	7718664.804	605642.913	251.957	ADP Endpoint
ADP2002_216	9/16/2002	7718605.191	605545.399	251.939	ADP Endpoint
ADP2002_217	9/16/2002	7718639.834	605521.459	251.955	ADP Endpoint
ADP2002_218	9/16/2002	7718698.496	605625.609	252.005	ADP Endpoint
ADP2002_219	9/16/2002	7718743.176	605602.438	251.954	ADP Endpoint
ADP2002_220	9/16/2002	7718669.828	605501.123	251.897	ADP Endpoint
ADP2002_221	9/16/2002	7718725.044	605481.759	251.954	ADP Endpoint
ADP2002_222	9/16/2002	7718796.057	605574.084	251.958	ADP Endpoint
ADP2002_223	9/16/2002	7718838.731	605546.744	251.966	ADP Endpoint
ADP2002_224	9/16/2002	7718788.186	605446.743	251.984	ADP Endpoint
ADP2002_225	9/16/2002	7718821.681	605422.198	251.973	ADP Endpoint
ADP2002_226	9/16/2002	7718901.198	605499.869	251.950	ADP Endpoint
ADP2002_227	9/16/2002	7718919.632	605484.883	251.937	ADP Endpoint
ADP2002_228	9/16/2002	7718894.239	605435.899	251.963	ADP Endpoint
ADP2002_229	9/16/2002	7718999.944	605448.725	251.947	ADP Endpoint
ADP2002_230	9/16/2002	7719034.992	605418.191	251.977	ADP Endpoint
ADP2002_231	9/16/2002	7718416.097	605682.838	251.979	ADP Endpoint
ADP2002_232	9/16/2002	7717804.487	606148.534	252.985	Check backsite
ADP2002_233	9/16/2002	7717902.679	606066.874	245.252	ADP Endpoint
ADP2002_234	9/16/2002	7717848.996	606118.979	245.222	ADP Endpoint
ADP2002_235	9/16/2002	7717841.884	606119.314	245.232	ADP Endpoint
ADP2002_236	9/16/2002	7717852.245	606051.495	245.230	ADP Endpoint
ADP2002_237	9/16/2002	7717816.861	606037.537	245.308	ADP Endpoint
ADP2002_238	9/16/2002	7717811.352	606106.627	245.190	ADP Endpoint
ADP2002_239	9/16/2002	7717783.566	606122.080	245.270	ADP Endpoint
ADP2002_240	9/16/2002	7717788.501	606026.101	245.279	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_241	9/16/2002	7717764.969	606041.816	245.285	ADP Endpoint
ADP2002_242	9/16/2002	7717772.094	606123.581	245.243	ADP Endpoint
ADP2002_243	9/16/2002	7717755.766	606132.215	245.233	ADP Endpoint
ADP2002_244	9/16/2002	7717719.448	606048.739	245.306	ADP Endpoint
ADP2002_245	9/17/2002	7717967.700	611309.268	243.658	Iron Rod
ADP2002_246	9/17/2002	7718166.139	611749.415	227.986	ADP Endpoint
ADP2002_247	9/17/2002	7718323.371	611743.697	227.976	ADP Endpoint
ADP2002_248	9/17/2002	7718299.543	611674.939	227.941	ADP Endpoint
ADP2002_249	9/17/2002	7718177.366	611705.097	227.991	ADP Endpoint
ADP2002_250	9/17/2002	7718179.174	611628.729	227.971	ADP Endpoint
ADP2002_251	9/17/2002	7718289.448	611618.690	228.003	ADP Endpoint
ADP2002_252	9/17/2002	7718278.042	611558.953	227.982	ADP Endpoint
ADP2002_253	9/17/2002	7718153.560	611566.334	228.013	ADP Endpoint
ADP2002_254	9/17/2002	7718144.907	611486.168	228.065	ADP Endpoint
ADP2002_255	9/17/2002	7718268.715	611481.360	228.016	ADP Endpoint
ADP2002_256	9/17/2002	7718288.104	611382.841	228.034	ADP Endpoint
ADP2002_257	9/17/2002	7718156.327	611401.351	228.043	ADP Endpoint
ADP2002_258	9/17/2002	7718193.801	611300.367	228.026	ADP Endpoint
ADP2002_259	9/17/2002	7718280.466	611297.977	228.096	ADP Endpoint
ADP2002_260	9/17/2002	7718273.703	611202.279	228.099	ADP Endpoint
ADP2002_261	9/17/2002	7718147.512	611219.426	228.071	ADP Endpoint
ADP2002_262	9/17/2002	7718155.581	611150.364	228.089	ADP Endpoint
ADP2002_263	9/17/2002	7718248.813	611148.909	228.000	ADP Endpoint
ADP2002_264	9/17/2002	7718244.172	611093.808	228.017	ADP Endpoint
ADP2002_265	9/17/2002	7718181.599	611105.556	228.098	ADP Endpoint
ADP2002_266	9/17/2002	7718206.824	611070.488	228.011	ADP Endpoint
ADP2002_267	9/17/2002	7718204.558	611612.135	227.995	ADP Endpoint
ADP2002_268	9/17/2002	7718084.800	611269.630	234.113	ADP Endpoint
ADP2002_269	9/17/2002	7710915.696	630865.563	160.824	ADP Endpoint
ADP2002_270	9/17/2002	7710552.887	631040.012	150.456	ADP Endpoint
ADP2002_271	9/17/2002	7710595.137	631097.856	150.348	ADP Endpoint
ADP2002_272	9/17/2002	7710581.961	631138.176	150.415	ADP Endpoint
ADP2002_273	9/17/2002	7710456.277	631042.723	150.442	ADP Endpoint
ADP2002_274	9/17/2002	7710427.834	631074.786	150.455	ADP Endpoint
ADP2002_275	9/17/2002	7710511.339	631183.862	150.432	ADP Endpoint
ADP2002_276	9/17/2002	7710409.012	631110.380	150.457	ADP Endpoint
ADP2002_277	9/17/2002	7710388.211	631127.760	150.459	ADP Endpoint
ADP2002_278	9/17/2002	7710478.150	631211.251	150.418	ADP Endpoint
ADP2002_279	9/17/2002	7710408.275	631269.022	150.456	ADP Endpoint
ADP2002_280	9/17/2002	7710314.721	631198.858	150.430	ADP Endpoint
ADP2002_281	9/17/2002	7710286.071	631220.989	150.389	ADP Endpoint
ADP2002_282	9/17/2002	7710371.752	631286.117	150.455	ADP Endpoint
ADP2002_283	9/17/2002	7710275.909	631336.482	150.438	ADP Endpoint
ADP2002_284	9/17/2002	7710600.769	631011.645	150.453	ADP Endpoint
ADP2002_285	9/17/2002	7710603.764	631127.027	150.377	ADP Endpoint
ADP2002_286	9/17/2002	7710694.308	631063.568	160.023	Check backsite
ADP2002_287	9/17/2002	7721834.814	602864.102	293.248	Check backsite
ADP2002_288	9/17/2002	7721823.735	602866.613	293.249	Check backsite

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_289	9/17/2002	7721848.573	602665.950	270.583	ADP Endpoint
ADP2002_290	9/17/2002	7721814.670	602725.935	270.569	ADP Endpoint
ADP2002_291	9/17/2002	7721871.868	602690.445	270.574	ADP Endpoint
ADP2002_292	9/17/2002	7721822.068	602738.476	270.567	ADP Endpoint
ADP2002_293	9/17/2002	7721906.134	602719.578	270.563	ADP Endpoint
ADP2002_294	9/17/2002	7721884.528	602753.521	270.530	ADP Endpoint
ADP2002_295	9/17/2002	7721925.405	602734.922	270.559	ADP Endpoint
ADP2002_296	9/17/2002	7721909.719	602775.893	270.546	ADP Endpoint
ADP2002_297	9/17/2002	7721947.710	602749.474	270.545	ADP Endpoint
ADP2002_298	9/17/2002	7721938.108	602823.322	270.530	ADP Endpoint
ADP2002_299	9/17/2002	7721994.614	602795.754	270.505	ADP Endpoint
ADP2002_300	9/17/2002	7721951.619	602879.481	270.432	ADP Endpoint
ADP2002_301	9/17/2002	7722040.622	602877.779	270.533	ADP Endpoint
ADP2002_302	9/17/2002	7721981.952	602960.779	270.488	ADP Endpoint
ADP2002_303	9/17/2002	7722086.294	602944.233	270.443	ADP Endpoint
ADP2002_304	9/17/2002	7722051.199	603018.605	270.413	ADP Endpoint
ADP2002_305	9/17/2002	7722091.233	602949.703	270.450	ADP Endpoint
ADP2002_306	9/17/2002	7722036.874	602880.303	270.498	ADP Endpoint
ADP2002_307	9/17/2002	7721926.826	602880.337	270.542	ADP Endpoint
ADP2002_308	9/17/2002	7722491.310	604447.466	271.796	Check backsight
ADP2002_309	9/17/2002	7722409.213	604507.603	269.755	ADP Endpoint
ADP2002_310	9/17/2002	7722320.521	604378.779	269.759	ADP Endpoint
ADP2002_311	9/17/2002	7722347.465	604362.034	269.766	ADP Endpoint
ADP2002_312	9/17/2002	7722436.633	604470.263	269.754	ADP Endpoint
ADP2002_313	9/17/2002	7722457.981	604441.021	269.724	ADP Endpoint
ADP2002_314	9/17/2002	7722376.074	604335.203	269.777	ADP Endpoint
ADP2002_315	9/17/2002	7722421.162	604316.187	269.824	ADP Endpoint
ADP2002_316	9/17/2002	7722486.613	604411.353	269.754	ADP Endpoint
ADP2002_317	9/17/2002	7722518.384	604378.700	269.768	ADP Endpoint
ADP2002_318	9/17/2002	7722488.481	604277.816	269.779	ADP Endpoint
ADP2002_319	9/17/2002	7722547.416	604376.524	269.800	ADP Endpoint
ADP2002_320	9/17/2002	7722582.921	604371.346	269.811	ADP Endpoint
ADP2002_321	9/17/2002	7722538.342	604243.656	269.752	ADP Endpoint
ADP2002_322	9/17/2002	7722593.663	604369.691	269.767	ADP Endpoint
ADP2002_323	9/17/2002	7722622.629	604379.552	269.825	ADP Endpoint
ADP2002_324	9/17/2002	7722673.990	604232.615	269.835	ADP Endpoint
ADP2002_325	9/17/2002	7722794.377	604235.919	269.814	ADP Endpoint
ADP2002_326	9/17/2002	7722669.704	604360.407	269.822	ADP Endpoint
ADP2002_327	9/17/2002	7722704.309	604398.986	269.826	ADP Endpoint
ADP2002_328	9/17/2002	7722810.158	604309.961	269.814	ADP Endpoint
ADP2002_329	9/17/2002	7722854.585	604332.742	269.787	ADP Endpoint
ADP2002_330	9/17/2002	7722845.595	604391.201	269.775	ADP Endpoint
ADP2002_331	9/17/2002	7722863.295	604357.364	269.850	ADP Endpoint
ADP2002_332	9/17/2002	7722058.200	604822.179	269.570	ADP Endpoint
ADP2002_333	9/17/2002	7722041.349	604854.326	269.556	ADP Endpoint
ADP2002_334	9/17/2002	7722026.669	604816.887	269.577	ADP Endpoint
ADP2002_335	9/17/2002	7722052.184	604785.239	269.574	ADP Endpoint
ADP2002_336	9/17/2002	7722085.512	604824.497	269.515	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_337	9/17/2002	7722107.494	604818.734	269.549	ADP Endpoint
ADP2002_338	9/17/2002	7722080.108	604761.572	269.551	ADP Endpoint
ADP2002_339	9/17/2002	7722124.636	604731.845	269.544	ADP Endpoint
ADP2002_340	9/17/2002	7722170.755	604763.460	269.525	ADP Endpoint
ADP2002_341	9/17/2002	7722192.822	604756.249	269.506	ADP Endpoint
ADP2002_342	9/17/2002	7722156.351	604711.515	269.528	ADP Endpoint
ADP2002_343	9/17/2002	7722211.333	604676.306	269.555	ADP Endpoint
ADP2002_344	9/17/2002	7722262.308	604707.345	269.578	ADP Endpoint
ADP2002_345	9/17/2002	7722295.213	604677.012	269.656	ADP Endpoint
ADP2002_346	9/17/2002	7722270.253	604645.793	269.615	ADP Endpoint
ADP2002_347	9/17/2002	7722294.687	604664.172	269.645	ADP Endpoint
ADP2002_348	9/17/2002	7722325.619	604642.670	269.636	ADP Endpoint
ADP2002_349	9/17/2002	7722342.916	604620.053	269.674	ADP Endpoint
ADP2002_350	9/17/2002	7722317.737	604556.788	269.694	ADP Endpoint
ADP2002_351	9/17/2002	7722457.366	604424.192	269.767	ADP Endpoint
ADP2002_352	9/17/2002	7722764.442	604358.569	269.839	ADP Endpoint
ADP2002_353	9/17/2002	7722544.679	604269.360	269.812	ADP Endpoint
ADP2002_354	9/17/2002	7722545.010	604213.445	270.415	Edge of water
ADP2002_355	9/18/2002	7722852.846	600567.400	299.449	Check Backsite
ADP2002_356	9/18/2002	7722847.591	600637.821	291.447	ADP Endpoint
ADP2002_357	9/18/2002	7722798.595	600676.209	291.479	ADP Endpoint
ADP2002_358	9/18/2002	7722818.055	600615.941	291.396	ADP Endpoint
ADP2002_359	9/18/2002	7722799.382	600583.926	291.428	ADP Endpoint
ADP2002_360	9/18/2002	7722756.220	600613.869	291.398	ADP Endpoint
ADP2002_361	9/18/2002	7722736.825	600584.933	291.387	ADP Endpoint
ADP2002_362	9/18/2002	7722770.904	600553.781	291.442	ADP Endpoint
ADP2002_363	9/18/2002	7722746.304	600522.976	291.483	ADP Endpoint
ADP2002_364	9/18/2002	7722715.707	600561.929	291.470	ADP Endpoint
ADP2002_365	9/18/2002	7722692.771	600534.790	291.495	ADP Endpoint
ADP2002_366	9/18/2002	7722733.879	600484.329	291.437	ADP Endpoint
ADP2002_367	9/18/2002	7722718.679	600453.640	291.444	ADP Endpoint
ADP2002_368	9/18/2002	7722653.407	600487.573	291.447	ADP Endpoint
ADP2002_369	9/18/2002	7722637.948	600467.113	291.471	ADP Endpoint
ADP2002_370	9/18/2002	7722691.951	600415.787	291.446	ADP Endpoint
ADP2002_371	9/18/2002	7722665.813	600385.325	291.421	ADP Endpoint
ADP2002_372	9/18/2002	7722598.976	600434.162	291.462	ADP Endpoint
ADP2002_373	9/18/2002	7722560.284	600423.791	291.440	ADP Endpoint
ADP2002_374	9/18/2002	7722643.153	600348.134	291.467	ADP Endpoint
ADP2002_375	9/18/2002	7722619.230	600316.986	291.442	ADP Endpoint
ADP2002_376	9/18/2002	7722539.692	600389.297	291.464	ADP Endpoint
ADP2002_377	9/18/2002	7722518.649	600353.397	291.454	ADP Endpoint
ADP2002_378	9/18/2002	7722593.713	600285.127	291.428	ADP Endpoint
ADP2002_379	9/18/2002	7722563.073	600237.783	291.446	ADP Endpoint
ADP2002_380	9/18/2002	7722467.284	600307.356	291.425	ADP Endpoint
ADP2002_381	9/18/2002	7722446.219	600277.728	291.409	ADP Endpoint
ADP2002_382	9/18/2002	7722548.577	600213.255	291.446	ADP Endpoint
ADP2002_383	9/18/2002	7722520.432	600166.515	291.410	ADP Endpoint
ADP2002_384	9/18/2002	7722429.443	600242.966	291.391	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_385	9/18/2002	7722442.741	600232.310	291.387	ADP Endpoint
ADP2002_386	9/18/2002	7722800.842	600638.441	291.414	ADP Endpoint
ADP2002_387	9/18/2002	7722768.494	600648.970	291.397	ADP Endpoint
ADP2002_388	9/18/2002	7722769.122	600649.453	291.469	ADP Endpoint
ADP2002_389	9/18/2002	7722083.600	599636.955	295.324	Check backsight
ADP2002_390	9/18/2002	7722091.101	599722.442	290.519	ADP Endpoint
ADP2002_391	9/18/2002	7722057.280	599810.965	290.465	ADP Endpoint
ADP2002_392	9/18/2002	7722044.277	599806.889	290.482	ADP Endpoint
ADP2002_393	9/18/2002	7722089.189	599720.429	290.568	ADP Endpoint
ADP2002_394	9/18/2002	7722059.565	599713.026	290.477	ADP Endpoint
ADP2002_395	9/18/2002	7722017.105	599799.711	290.480	ADP Endpoint
ADP2002_396	9/18/2002	7721979.018	599782.512	290.463	ADP Endpoint
ADP2002_397	9/18/2002	7722045.574	599683.461	290.525	ADP Endpoint
ADP2002_398	9/18/2002	7722027.996	599639.051	290.527	ADP Endpoint
ADP2002_399	9/18/2002	7721939.043	599771.959	290.487	ADP Endpoint
ADP2002_400	9/18/2002	7721920.840	599766.994	290.484	ADP Endpoint
ADP2002_401	9/18/2002	7722007.238	599598.459	290.505	ADP Endpoint
ADP2002_402	9/18/2002	7721956.147	599608.031	290.495	ADP Endpoint
ADP2002_403	9/18/2002	7721908.175	599764.417	290.507	ADP Endpoint
ADP2002_404	9/18/2002	7721879.972	599760.136	290.506	ADP Endpoint
ADP2002_405	9/18/2002	7721841.932	599639.235	290.554	ADP Endpoint
ADP2002_406	9/18/2002	7721818.931	599647.809	290.479	ADP Endpoint
ADP2002_407	9/18/2002	7721838.218	599780.464	290.462	ADP Endpoint
ADP2002_408	9/18/2002	7721815.111	599783.436	290.529	ADP Endpoint
ADP2002_409	9/18/2002	7721763.510	599659.682	290.513	ADP Endpoint
ADP2002_410	9/18/2002	7721735.748	599666.006	290.493	ADP Endpoint
ADP2002_411	9/18/2002	7721778.148	599797.454	290.488	ADP Endpoint
ADP2002_412	9/18/2002	7721755.424	599797.465	290.523	ADP Endpoint
ADP2002_413	9/18/2002	7721697.142	599673.285	290.486	ADP Endpoint
ADP2002_414	9/18/2002	7721672.684	599707.450	290.504	ADP Endpoint
ADP2002_415	9/18/2002	7721736.532	599807.502	290.508	ADP Endpoint
ADP2002_416	9/18/2002	7721719.359	599818.808	290.529	ADP Endpoint
ADP2002_417	9/18/2002	7721674.690	599700.694	290.509	ADP Endpoint
ADP2002_418	9/18/2002	7721660.306	599751.524	290.494	ADP Endpoint
ADP2002_419	9/18/2002	7721706.386	599822.517	290.523	ADP Endpoint
ADP2002_420	9/18/2002	7721674.938	599839.432	290.488	ADP Endpoint
ADP2002_421	9/18/2002	7721638.363	599761.109	290.510	ADP Endpoint
ADP2002_422	9/18/2002	7721623.412	599776.324	290.497	ADP Endpoint
ADP2002_423	9/18/2002	7721674.594	599845.031	290.531	ADP Endpoint
ADP2002_424	9/18/2002	7721654.646	599856.247	290.491	ADP Endpoint
ADP2002_425	9/18/2002	7721590.154	599772.055	290.501	ADP Endpoint
ADP2002_426	9/18/2002	7721556.719	599782.071	290.520	ADP Endpoint
ADP2002_427	9/18/2002	7721597.714	599898.349	290.536	ADP Endpoint
ADP2002_428	9/18/2002	7721574.109	599919.587	290.512	ADP Endpoint
ADP2002_429	9/18/2002	7721515.490	599849.496	290.486	ADP Endpoint
ADP2002_430	9/18/2002	7721483.306	599882.623	290.522	ADP Endpoint
ADP2002_431	9/18/2002	7721524.039	599957.520	290.536	ADP Endpoint
ADP2002_432	9/18/2002	7721486.901	599987.173	290.518	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_433	9/18/2002	7721409.982	599906.491	290.551	ADP Endpoint
ADP2002_434	9/18/2002	7721361.438	599925.070	290.539	ADP Endpoint
ADP2002_435	9/18/2002	7721436.014	600040.120	290.560	ADP Endpoint
ADP2002_436	9/18/2002	7721398.815	600054.726	290.530	ADP Endpoint
ADP2002_437	9/18/2002	7721331.027	599951.701	290.531	ADP Endpoint
ADP2002_438	9/18/2002	7721281.795	599969.650	290.527	ADP Endpoint
ADP2002_439	9/18/2002	7721356.340	600064.522	290.565	ADP Endpoint
ADP2002_440	9/18/2002	7721329.585	600083.180	290.571	ADP Endpoint
ADP2002_441	9/18/2002	7721211.899	600024.447	290.590	ADP Endpoint
ADP2002_442	9/18/2002	7721184.428	600064.582	290.535	ADP Endpoint
ADP2002_443	9/18/2002	7721254.309	600135.846	290.598	ADP Endpoint
ADP2002_444	9/18/2002	7721216.025	600138.439	290.552	ADP Endpoint
ADP2002_445	9/18/2002	7721966.103	599646.992	290.514	ADP Endpoint
ADP2002_446	9/18/2002	7721051.586	604017.240	261.107	Check backsite
ADP2002_447	9/18/2002	7720737.361	604341.244	260.086	ADP Endpoint
ADP2002_448	9/18/2002	7720722.917	604280.206	260.055	ADP Endpoint
ADP2002_449	9/18/2002	7720744.713	604271.640	260.050	ADP Endpoint
ADP2002_450	9/18/2002	7720811.342	604314.209	260.074	ADP Endpoint
ADP2002_451	9/18/2002	7720840.150	604308.749	260.036	ADP Endpoint
ADP2002_452	9/18/2002	7720814.331	604234.240	260.143	ADP Endpoint
ADP2002_453	9/18/2002	7720836.989	604222.542	260.099	ADP Endpoint
ADP2002_454	9/18/2002	7720882.446	604288.407	260.062	ADP Endpoint
ADP2002_455	9/18/2002	7720920.520	604287.830	260.094	ADP Endpoint
ADP2002_456	9/18/2002	7720919.124	604217.436	260.105	ADP Endpoint
ADP2002_457	9/18/2002	7720937.639	604279.288	260.102	ADP Endpoint
ADP2002_458	9/18/2002	7720948.803	604173.804	260.145	ADP Endpoint
ADP2002_459	9/18/2002	7721028.206	604243.397	260.157	ADP Endpoint
ADP2002_460	9/18/2002	7720845.045	604231.106	260.123	ADP Endpoint
ADP2002_461	9/18/2002	7720930.954	604280.521	260.132	ADP Endpoint
ADP2002_462	9/18/2002	7720924.675	604204.455	260.090	ADP Endpoint
ADP2002_463	9/18/2002	7720900.512	604212.511	260.074	ADP Endpoint
ADP2002_464	9/18/2002	7720935.218	604284.457	260.094	ADP Endpoint
ADP2002_465	9/18/2002	7720901.033	604212.641	260.117	ADP Endpoint
ADP2002_466	9/18/2002	7720982.021	604133.896	260.087	ADP Endpoint
ADP2002_467	9/18/2002	7716778.781	607258.188	241.516	Check backsite
ADP2002_468	9/18/2002	7716646.035	606903.870	237.164	ADP Endpoint
ADP2002_469	9/18/2002	7716586.443	607190.653	236.565	ADP Endpoint
ADP2002_470	9/18/2002	7716653.847	607172.495	236.674	ADP Endpoint
ADP2002_471	9/18/2002	7716600.621	607215.096	236.623	ADP Endpoint
ADP2002_472	9/18/2002	7716663.601	607184.102	236.658	ADP Endpoint
ADP2002_473	9/18/2002	7716612.815	607232.206	236.698	ADP Endpoint
ADP2002_474	9/18/2002	7716625.329	607249.576	236.681	ADP Endpoint
ADP2002_475	9/18/2002	7716692.136	607217.149	236.626	ADP Endpoint
ADP2002_476	9/18/2002	7716699.595	607228.837	236.660	ADP Endpoint
ADP2002_477	9/18/2002	7716638.517	607280.524	236.601	ADP Endpoint
ADP2002_478	9/18/2002	7716654.830	607298.234	236.635	ADP Endpoint
ADP2002_479	9/18/2002	7716702.097	607263.861	236.667	ADP Endpoint
ADP2002_480	9/18/2002	7716692.107	606981.432	239.737	Check backsite

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_481	9/18/2002	7716712.588	607251.712	236.524	ADP Endpoint
ADP2002_482	9/18/2002	7716650.414	607296.261	236.509	ADP Endpoint
ADP2002_483	9/18/2002	7716664.890	607327.653	236.499	ADP Endpoint
ADP2002_484	9/18/2002	7716736.735	607270.388	236.550	ADP Endpoint
ADP2002_485	9/18/2002	7716765.781	607286.096	236.566	ADP Endpoint
ADP2002_486	9/18/2002	7716688.427	607349.600	236.545	ADP Endpoint
ADP2002_487	9/18/2002	7716702.852	607363.088	236.524	ADP Endpoint
ADP2002_488	9/18/2002	7716774.179	607302.314	236.554	ADP Endpoint
ADP2002_489	9/18/2002	7716802.489	607314.642	236.576	ADP Endpoint
ADP2002_490	9/18/2002	7716752.347	607404.139	236.602	ADP Endpoint
ADP2002_491	9/18/2002	7716769.234	607427.622	236.608	ADP Endpoint
ADP2002_492	9/18/2002	7716833.362	607350.899	236.501	ADP Endpoint
ADP2002_493	9/18/2002	7716865.324	607389.859	236.533	ADP Endpoint
ADP2002_494	9/18/2002	7716822.971	607472.069	236.536	ADP Endpoint
ADP2002_495	9/18/2002	7716841.870	607479.554	236.524	ADP Endpoint
ADP2002_496	9/18/2002	7716908.168	607410.612	236.532	ADP Endpoint
ADP2002_497	9/18/2002	7716934.716	607429.766	236.517	ADP Endpoint
ADP2002_498	9/18/2002	7716904.278	607516.203	236.557	ADP Endpoint
ADP2002_499	9/18/2002	7716931.893	607523.096	236.494	ADP Endpoint
ADP2002_500	9/18/2002	7716926.866	607531.260	236.536	ADP Endpoint
ADP2002_501	9/18/2002	7716981.275	607448.862	236.522	ADP Endpoint
ADP2002_502	9/18/2002	7717015.260	607470.362	236.482	ADP Endpoint
ADP2002_503	9/18/2002	7716981.179	607552.550	236.581	ADP Endpoint
ADP2002_504	9/18/2002	7717021.161	607569.774	236.502	ADP Endpoint
ADP2002_505	9/18/2002	7717023.494	607577.147	236.538	ADP Endpoint
ADP2002_506	9/18/2002	7717089.080	607521.886	236.504	ADP Endpoint
ADP2002_507	9/18/2002	7717120.766	607548.170	236.452	ADP Endpoint
ADP2002_508	9/18/2002	7717091.905	607620.246	236.521	ADP Endpoint
ADP2002_509	9/18/2002	7717125.838	607643.815	236.504	ADP Endpoint
ADP2002_510	9/18/2002	7717168.113	607592.510	236.465	ADP Endpoint
ADP2002_511	9/18/2002	7717225.924	607627.343	236.401	ADP Endpoint
ADP2002_512	9/18/2002	7717193.535	607689.150	236.438	ADP Endpoint
ADP2002_513	9/18/2002	7717203.944	607670.861	236.418	ADP Endpoint
ADP2002_514	9/18/2002	7716743.622	607320.404	236.480	ADP Endpoint
ADP2002_515	9/19/2002	0.000	0.000	0.000	ADP Endpoint
ADP2002_516	9/19/2002	7717589.520	618414.174	204.852	ADP Endpoint
ADP2002_517	9/19/2002	7717686.141	618406.056	204.853	ADP Endpoint
ADP2002_518	9/19/2002	7717686.140	618406.047	204.878	ADP Endpoint
ADP2002_519	9/19/2002	7717718.955	617599.361	212.378	Nail
ADP2002_520	9/19/2002	7717423.037	617860.287	207.214	Nail
ADP2002_521	9/19/2002	7717329.256	617898.106	208.412	Nail
ADP2002_522	9/19/2002	7717589.462	617835.513	208.777	ADP Endpoint
ADP2002_523	9/19/2002	7717428.715	618032.623	204.259	ADP Endpoint
ADP2002_524	9/19/2002	7717379.723	618058.736	204.233	ADP Endpoint
ADP2002_525	9/19/2002	7717423.040	618006.947	204.285	ADP Endpoint
ADP2002_526	9/19/2002	7717351.508	618007.955	204.282	ADP Endpoint
ADP2002_527	9/19/2002	7717350.600	617984.602	204.281	ADP Endpoint
ADP2002_528	9/19/2002	7717417.999	617964.757	204.259	ADP Endpoint

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
ADP2002_529	9/19/2002	7717406.721	617938.381	204.308	ADP Endpoint
ADP2002_530	9/19/2002	7717347.350	617948.261	204.308	ADP Endpoint
ADP2002_531	9/19/2002	7717344.594	617930.136	204.258	ADP Endpoint
ADP2002_532	9/19/2002	7717397.674	617906.217	204.282	ADP Endpoint
ADP2002_533	9/19/2002	7717387.322	617870.520	204.341	ADP Endpoint
ADP2002_534	9/19/2002	7717334.691	617880.970	204.295	ADP Endpoint
ADP2002_535	9/19/2002	7717369.938	617840.519	204.308	ADP Endpoint
ADP2002_536	9/19/2002	7717323.297	617839.225	204.266	ADP Endpoint
ADP2002_537	9/19/2002	7717364.336	617807.528	204.317	ADP Endpoint
ADP2002_538	9/19/2002	7717321.790	617828.013	204.318	ADP Endpoint
ADP2002_539	9/19/2002	7717311.129	617689.125	204.253	ADP Endpoint
ADP2002_540	9/19/2002	7717366.477	618000.568	204.301	ADP Endpoint
ADP2002_541	9/19/2002	7717369.588	617865.789	204.332	ADP Endpoint
ADP2002_542	9/19/2002	7717307.492	617735.471	204.267	ADP Endpoint
ADP2002_543	9/19/2002	7717340.327	617854.032	204.323	ADP Endpoint
ADP2002_544	9/19/2002	7717366.449	617792.659	204.816	Edge of water
ADP2002_545	9/19/2002	7717371.737	617806.321	204.798	Edge of water
ADP2002_546	9/19/2002	7717378.008	617820.615	204.841	Edge of water
ADP2002_547	9/19/2002	7717383.803	617841.459	204.816	Edge of water
ADP2002_548	9/19/2002	7717391.820	617867.225	204.789	Edge of water
ADP2002_549	9/19/2002	7717403.218	617902.110	204.872	Edge of water
ADP2002_550	9/19/2002	7717412.516	617920.626	204.703	Edge of water
ADP2002_551	9/19/2002	7717422.026	617940.695	204.785	Edge of water
ADP2002_552	9/19/2002	7717429.634	617966.336	204.816	Edge of water
ADP2002_553	9/19/2002	7717438.115	617996.324	204.733	Edge of water
ADP2002_554	9/19/2002	7717445.564	618028.925	204.712	Edge of water
DOG2002_001	9/23/2002	7718378.295	621546.349	191.356	Check backsite
DOG2002_002	9/23/2002	7717831.288	622199.505	186.952	Check backsite
DOG2002_003	9/23/2002	7717477.678	623153.250	191.010	Check backsite
DOG2002_004	9/23/2002	7717188.723	622963.189	193.588	Check backsite
DOG2002_005	9/23/2002	7717238.245	623033.570	2.750	Top of Bank
DOG2002_006	9/23/2002	7717240.295	623034.585	2.750	DOGAMI Transect
DOG2002_007	9/23/2002	7717241.994	623035.430	2.750	DOGAMI Transect
DOG2002_008	9/23/2002	7717243.558	623036.207	191.823	DOGAMI Transect
DOG2002_009	9/23/2002	7717245.195	623037.020	191.141	DOGAMI Transect
DOG2002_010	9/23/2002	7717246.783	623037.809	190.651	DOGAMI Transect
DOG2002_011	9/23/2002	7717249.125	623038.971	189.634	DOGAMI Transect
DOG2002_012	9/23/2002	7717253.124	623040.956	188.473	DOGAMI Transect
DOG2002_013	9/23/2002	7717259.979	623044.359	186.749	DOGAMI Transect
DOG2002_014	9/23/2002	7717267.080	623047.886	185.425	DOGAMI Transect
DOG2002_015	9/23/2002	7717272.318	623050.488	185.404	DOGAMI Transect
DOG2002_016	9/23/2002	7717278.274	623053.449	185.682	DOGAMI Transect
DOG2002_017	9/23/2002	7717283.807	623056.196	185.467	DOGAMI Transect
DOG2002_018	9/23/2002	7717290.972	623059.755	184.842	DOGAMI Transect
DOG2002_019	9/23/2002	7717300.455	623064.463	184.379	DOGAMI Transect
DOG2002_020	9/23/2002	7717305.698	623067.068	183.530	DOGAMI Transect
DOG2002_021	9/23/2002	7717311.214	623069.807	183.123	DOGAMI Transect
DOG2002_022	9/23/2002	7717316.948	623072.654	181.909	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOG2002_023	9/23/2002	7717320.650	623074.492	181.969	DOGAMI Transect
DOG2002_024	9/23/2002	7717325.992	623077.148	181.699	DOGAMI Transect
DOG2002_025	9/23/2002	7717328.228	623078.259	181.327	DOGAMI Transect
DOG2002_026	9/23/2002	7717333.262	623080.758	181.019	DOGAMI Transect
DOG2002_027	9/23/2002	7717340.331	623084.269	180.974	DOGAMI Transect
DOG2002_028	9/23/2002	7717347.015	623087.589	180.823	DOGAMI Transect
DOG2002_029	9/23/2002	7717353.047	623090.584	180.543	DOGAMI Transect
DOG2002_030	9/23/2002	7717357.971	623093.030	180.338	DOGAMI Transect
DOG2002_031	9/23/2002	7717353.374	623090.746	180.662	DOGAMI Transect
DOG2002_032	9/23/2002	7717358.878	623093.478	180.558	DOGAMI Transect
DOG2002_033	9/23/2002	7717363.769	623095.909	180.415	DOGAMI Transect
DOG2002_034	9/23/2002	7717369.679	623098.845	180.282	DOGAMI Transect
DOG2002_035	9/23/2002	7717375.038	623101.506	180.097	DOGAMI Transect
DOG2002_036	9/23/2002	7717380.456	623104.196	180.152	DOGAMI Transect
DOG2002_037	9/23/2002	7717385.824	623106.863	179.980	DOGAMI Transect
DOG2002_038	9/23/2002	7717392.113	623109.986	179.926	DOGAMI Transect
DOG2002_039	9/23/2002	7717399.243	623113.527	179.938	DOGAMI Transect
DOG2002_040	9/23/2002	7717404.337	623116.057	179.489	DOGAMI Transect
DOG2002_041	9/23/2002	7717414.285	623120.998	179.262	DOGAMI Transect
DOG2002_042	9/23/2002	7717421.633	623124.647	179.001	DOGAMI Transect
DOG2002_043	9/23/2002	7717431.906	623129.750	178.155	DOGAMI Transect
DOG2002_044	9/23/2002	7717435.075	623131.314	178.980	DOGAMI Transect
DOG2002_045	9/23/2002	7717440.023	623133.772	179.029	DOGAMI Transect
DOG2002_046	9/23/2002	7717444.780	623136.136	179.090	DOGAMI Transect
DOG2002_047	9/23/2002	7717449.599	623138.532	182.441	DOGAMI Transect
DOG2002_048	9/23/2002	7717452.582	623140.013	184.060	DOGAMI Transect
DOG2002_049	9/23/2002	7717456.672	623142.046	184.862	DOGAMI Transect
DOG2002_050	9/23/2002	7717462.098	623144.742	186.009	DOGAMI Transect
DOG2002_051	9/23/2002	7717449.293	623155.750	186.347	Nail
DOG2002_052	9/23/2002	7715900.810	624510.122	180.403	Inkspot
DOG2002_053	9/23/2002	7715308.103	625171.033	181.845	Check backsite
DOG2002_054	9/23/2002	7716464.751	624304.254	184.867	Check backsite
DOG2002_055	9/23/2002	7716025.957	624695.929	186.204	DOGAMI Transect
DOG2002_056	9/23/2002	7716024.171	624693.276	184.883	DOGAMI Transect
DOG2002_057	9/23/2002	7716022.527	624690.837	183.036	DOGAMI Transect
DOG2002_058	9/23/2002	7716020.045	624687.153	181.357	DOGAMI Transect
DOG2002_059	9/23/2002	7716016.884	624682.429	179.770	DOGAMI Transect
DOG2002_060	9/23/2002	7716014.957	624679.594	-0.415	DOGAMI Transect
DOG2002_061	9/23/2002	7716011.479	624674.442	177.728	DOGAMI Transect
DOG2002_062	9/23/2002	7716007.587	624668.684	177.785	DOGAMI Transect
DOG2002_063	9/23/2002	7716003.749	624662.967	177.584	DOGAMI Transect
DOG2002_064	9/23/2002	7715999.523	624656.693	177.324	DOGAMI Transect
DOG2002_065	9/23/2002	7715994.858	624649.769	177.242	DOGAMI Transect
DOG2002_066	9/23/2002	7715990.471	624643.254	176.915	DOGAMI Transect
DOG2002_067	9/23/2002	7715986.122	624636.805	176.737	DOGAMI Transect
DOG2002_068	9/23/2002	7715982.151	624630.906	176.629	DOGAMI Transect
DOG2002_069	9/23/2002	7715977.947	624624.665	176.763	DOGAMI Transect
DOG2002_070	9/23/2002	7715972.957	624617.255	176.605	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOG2002_071	9/23/2002	7715968.025	624609.930	176.513	DOGAMI Transect
DOG2002_072	9/23/2002	7715963.438	624603.123	176.539	DOGAMI Transect
DOG2002_073	9/23/2002	7715959.262	624596.960	176.303	DOGAMI Transect
DOG2002_074	9/23/2002	7715953.431	624588.283	176.212	DOGAMI Transect
DOG2002_075	9/23/2002	7715949.107	624581.864	176.331	DOGAMI Transect
DOG2002_076	9/23/2002	7715944.712	624575.337	176.696	DOGAMI Transect
DOG2002_077	9/23/2002	7715939.980	624568.309	176.812	DOGAMI Transect
DOG2002_078	9/23/2002	7715936.030	624562.458	177.107	DOGAMI Transect
DOG2002_079	9/23/2002	7715931.705	624555.992	177.553	DOGAMI Transect
DOG2002_080	9/23/2002	7715927.778	624550.161	177.959	DOGAMI Transect
DOG2002_081	9/23/2002	7715923.370	624543.598	178.461	DOGAMI Transect
DOG2002_082	9/23/2002	7715919.076	624537.247	178.756	DOGAMI Transect
DOG2002_083	9/23/2002	7715914.946	624531.113	179.311	DOGAMI Transect
DOG2002_084	9/23/2002	7715909.961	624523.711	179.475	DOGAMI Transect
DOG2002_085	9/23/2002	7715891.665	624496.541	180.772	DOGAMI Transect
DOG2002_086	9/23/2002	7715881.443	624481.360	181.601	DOGAMI Transect
DOG2002_087	9/23/2002	7715321.051	625128.809	178.197	Inkspot
DOG2002_088	9/23/2002	7714929.286	625389.072	178.046	Inkspot
DOG2002_089	9/23/2002	7715308.435	625171.161	182.075	Check backsite
DOG2002_090	9/23/2002	7715308.452	625171.107	182.069	Check backsite
DOG2002_091	9/24/2002	7715304.634	625111.285	178.199	DOGAMI Transect
DOG2002_092	9/24/2002	7715297.846	625104.039	177.691	DOGAMI Transect
DOG2002_093	9/24/2002	7715289.327	625094.946	177.307	DOGAMI Transect
DOG2002_094	9/24/2002	7715280.841	625085.887	177.491	DOGAMI Transect
DOG2002_095	9/24/2002	7715271.901	625076.344	177.169	DOGAMI Transect
DOG2002_096	9/24/2002	7715260.032	625063.673	176.767	DOGAMI Transect
DOG2002_097	9/24/2002	7715251.128	625054.169	176.695	DOGAMI Transect
DOG2002_098	9/24/2002	7715240.919	625043.271	176.696	DOGAMI Transect
DOG2002_099	9/24/2002	7715232.867	625034.678	176.009	DOGAMI Transect
DOG2002_100	9/24/2002	7715224.522	625025.771	175.924	DOGAMI Transect
DOG2002_101	9/24/2002	7715217.292	625018.053	175.611	DOGAMI Transect
DOG2002_102	9/24/2002	7715208.752	625008.936	175.328	DOGAMI Transect
DOG2002_103	9/24/2002	7715201.639	625001.344	174.472	DOGAMI Transect
DOG2002_104	9/24/2002	7715197.199	624998.297	174.368	DOGAMI Transect
DOG2002_105	9/24/2002	7715195.544	624997.314	174.192	DOGAMI Transect
DOG2002_106	9/24/2002	7715203.650	625003.482	174.559	DOGAMI Transect
DOG2002_107	9/24/2002	7715199.680	624999.244	174.150	DOGAMI Transect
DOG2002_108	9/24/2002	7715195.465	624993.293	173.748	DOGAMI Transect
DOG2002_109	9/24/2002	7715127.634	624922.347	183.796	DOGAMI Transect
DOG2002_110	9/24/2002	7715135.120	624930.341	181.537	DOGAMI Transect
DOG2002_111	9/24/2002	7715143.979	624939.796	180.237	DOGAMI Transect
DOG2002_112	9/24/2002	7715151.344	624947.658	177.920	DOGAMI Transect
DOG2002_113	9/24/2002	7715153.040	624949.465	177.846	DOGAMI Transect
DOG2002_114	9/24/2002	7715161.689	624958.699	176.633	DOGAMI Transect
DOG2002_115	9/24/2002	7715168.854	624966.347	176.227	DOGAMI Transect
DOG2002_116	9/24/2002	7715173.902	624971.737	175.246	DOGAMI Transect
DOG2002_117	9/24/2002	7715178.272	624976.402	174.409	DOGAMI Transect
DOG2002_118	9/24/2002	7715183.266	624978.503	173.586	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOG2002_119	9/24/2002	7714918.412	625377.819	177.430	DOGAMI Transect
DOG2002_120	9/24/2002	7714908.956	625368.034	176.924	DOGAMI Transect
DOG2002_121	9/24/2002	7714899.307	625358.048	176.193	DOGAMI Transect
DOG2002_122	9/24/2002	7714890.932	625349.382	175.909	DOGAMI Transect
DOG2002_123	9/24/2002	7714882.334	625340.485	175.534	DOGAMI Transect
DOG2002_124	9/24/2002	7714874.369	625332.242	175.454	DOGAMI Transect
DOG2002_125	9/24/2002	7714865.712	625323.282	175.261	DOGAMI Transect
DOG2002_126	9/24/2002	7714855.406	625312.618	174.546	DOGAMI Transect
DOG2002_127	9/24/2002	7714848.115	625305.073	174.289	DOGAMI Transect
DOG2002_128	9/24/2002	7714839.830	625296.499	173.965	DOGAMI Transect
DOG2002_129	9/24/2002	7714833.918	625290.381	173.754	DOGAMI Transect
DOG2002_130	9/24/2002	7714829.645	625285.959	173.537	DOGAMI Transect
DOG2002_131	9/24/2002	7714819.742	625278.272	173.444	DOGAMI Transect
DOG2002_132	9/24/2002	7714813.998	625269.780	173.839	DOGAMI Transect
DOG2002_133	9/24/2002	7714807.728	625263.294	174.667	DOGAMI Transect
DOG2002_134	9/24/2002	7714803.358	625258.771	174.938	DOGAMI Transect
DOG2002_135	9/24/2002	7714795.280	625250.414	175.521	DOGAMI Transect
DOG2002_136	9/24/2002	7714787.723	625242.593	176.185	DOGAMI Transect
DOG2002_137	9/24/2002	7714778.848	625233.411	177.713	DOGAMI Transect
DOG2002_138	9/24/2002	7714773.936	625228.332	179.048	DOGAMI Transect
DOG2002_139	9/24/2002	7714769.410	625223.655	183.033	DOGAMI Transect
DOG2002_140	9/24/2002	7714942.827	625403.085	177.482	DOGAMI Transect
DOG2002_141	9/24/2002	7714953.423	625414.050	177.656	DOGAMI Transect
DOG2002_142	9/24/2002	7714966.958	625428.057	177.820	DOGAMI Transect
DOG2002_143	9/24/2002	7714977.607	625439.076	177.723	DOGAMI Transect
DOG2002_144	9/24/2002	7714988.082	625449.917	179.737	DOGAMI Transect
DOG2002_145	9/24/2002	7714992.571	625454.566	181.047	DOGAMI Transect
DOG2002_146	9/24/2002	7714671.546	625816.536	177.550	Inkspot
DOG2002_147	9/24/2002	7714121.207	625990.086	190.838	Check backsite
DOG2002_148	9/24/2002	7714703.500	625833.733	178.450	DOGAMI Transect
DOG2002_149	9/24/2002	7714695.286	625829.312	177.777	DOGAMI Transect
DOG2002_150	9/24/2002	7714683.211	625822.814	177.139	DOGAMI Transect
DOG2002_151	9/24/2002	7714677.625	625819.808	176.980	DOGAMI Transect
DOG2002_152	9/24/2002	7714654.882	625807.567	176.372	DOGAMI Transect
DOG2002_153	9/24/2002	7714640.144	625799.636	176.081	DOGAMI Transect
DOG2002_154	9/24/2002	7714622.034	625789.888	175.745	DOGAMI Transect
DOG2002_155	9/24/2002	7714603.584	625779.958	175.711	DOGAMI Transect
DOG2002_156	9/24/2002	7714584.948	625769.928	175.952	DOGAMI Transect
DOG2002_157	9/24/2002	7714563.372	625758.305	175.689	DOGAMI Transect
DOG2002_158	9/24/2002	7714540.863	625746.188	175.785	DOGAMI Transect
DOG2002_159	9/24/2002	7714518.984	625734.400	175.619	DOGAMI Transect
DOG2002_160	9/24/2002	7714499.740	625724.054	175.183	DOGAMI Transect
DOG2002_161	9/24/2002	7714476.147	625711.352	175.423	DOGAMI Transect
DOG2002_162	9/24/2002	7714452.015	625698.362	175.217	DOGAMI Transect
DOG2002_163	9/24/2002	7714432.711	625687.969	175.168	DOGAMI Transect
DOG2002_164	9/24/2002	7714413.352	625677.548	174.927	DOGAMI Transect
DOG2002_165	9/24/2002	7714393.822	625667.036	174.511	DOGAMI Transect
DOG2002_166	9/24/2002	7714379.073	625659.095	173.718	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOG2002_167	9/24/2002	7714368.326	625653.310	174.201	DOGAMI Transect
DOG2002_168	9/24/2002	7714363.398	625650.656	175.549	DOGAMI Transect
DOG2002_169	9/24/2002	7714361.584	625648.594	176.624	DOGAMI Transect
DOG2002_170	9/24/2002	7714355.590	625646.359	179.528	Top of Bank
DOG2002_171	9/24/2002	7714363.106	625627.430	182.020	Top of Bank
DOG2002_172	9/24/2002	7714357.775	625638.264	181.721	Top of Bank
DOG2002_173	9/24/2002	7714351.788	625648.917	182.739	Top of Bank
DOG2002_174	9/24/2002	7714345.317	625664.099	183.381	Top of Bank
DOG2002_175	9/24/2002	7714340.830	625673.222	183.781	Top of Bank
DOG2002_176	9/24/2002	7714333.717	625684.362	183.076	Top of Bank
DOG2002_177	9/24/2002	7714322.638	625700.989	184.526	Top of Bank
DOG2002_178	9/24/2002	7714310.630	625720.826	185.977	Top of Bank
DOG2002_179	9/24/2002	7714298.568	625732.733	187.516	Top of Bank
DOG2002_180	9/24/2002	7714283.948	625751.997	187.078	Top of Bank
DOG2002_181	9/24/2002	7714269.577	625767.735	188.805	Top of Bank
DOG2002_182	9/24/2002	7714250.974	625795.671	188.321	Top of Bank
DOG2002_183	9/24/2002	7714239.813	625815.521	187.317	Top of Bank
DOG2002_184	9/24/2002	7714217.806	625839.705	188.487	Top of Bank
DOG2002_185	9/24/2002	7714195.990	625864.859	190.008	Top of Bank
DOG2002_186	9/24/2002	7714176.214	625899.522	190.476	Top of Bank
DOG2002_187	9/24/2002	7714166.817	625924.896	189.985	Top of Bank
DOG2002_188	9/24/2002	7714155.805	625955.414	190.399	Top of Bank
DOG2002_189	9/24/2002	7714145.334	625982.761	188.597	Top of Bank
DOG2002_190	9/24/2002	7714140.332	626002.098	186.876	Top of Bank
DOG2002_191	9/24/2002	7714129.899	626028.931	185.972	Top of Bank
DOG2002_192	9/24/2002	7714116.279	626062.476	185.692	Top of Bank
DOG2002_193	9/24/2002	7714105.368	626095.601	184.852	Top of Bank
DOG2002_194	9/24/2002	7714091.844	626130.915	184.461	Top of Bank
DOG2002_195	9/24/2002	7714077.596	626167.678	184.181	Top of Bank
DOG2002_196	9/24/2002	7714062.155	626201.520	184.214	Top of Bank
DOG2002_197	9/24/2002	7714044.708	626240.280	184.784	Top of Bank
DOG2002_198	9/24/2002	7714027.814	626280.879	184.914	Top of Bank
DOG2002_199	9/24/2002	7714014.375	626319.483	186.010	Top of Bank
DOG2002_200	9/24/2002	7713999.439	626360.023	186.704	Top of Bank
DOG2002_201	9/24/2002	7713985.038	626401.733	187.644	Top of Bank
DOG2002_202	9/24/2002	7713975.863	626433.602	188.176	Top of Bank
DOG2002_203	9/24/2002	7713967.494	626470.644	187.719	Top of Bank
DOG2002_204	9/24/2002	7713952.390	626518.381	188.646	Top of Bank
DOG2002_205	9/24/2002	7713940.090	626571.450	188.452	Top of Bank
DOG2002_206	9/24/2002	7713930.951	626620.168	188.205	Top of Bank
DOG2002_207	9/24/2002	7713928.050	626668.089	187.753	Top of Bank
DOG2002_208	9/24/2002	7713921.022	626697.771	183.803	Top of Bank
DOG2002_209	9/24/2002	7713915.845	626720.042	181.582	Top of Bank
DOG2002_210	9/24/2002	7713810.568	628142.126	180.012	Nail
DOG2002_211	9/24/2002	7714055.840	626877.634	173.889	Inkspot
DOG2002_212	9/24/2002	7714121.720	625990.120	190.789	Check backsite
DOG2002_213	9/24/2002	7713706.972	626977.558	171.953	DOGAMI Transect
DOG2002_214	9/24/2002	7713707.030	626977.534	171.950	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
DOG2002_215	9/24/2002	7713721.907	626973.276	171.260	DOGAMI Transect
DOG2002_216	9/24/2002	7713742.823	626967.285	170.810	DOGAMI Transect
DOG2002_217	9/24/2002	7713768.341	626959.976	170.434	DOGAMI Transect
DOG2002_218	9/24/2002	7713788.783	626954.123	172.927	DOGAMI Transect
DOG2002_219	9/24/2002	7713804.283	626949.686	174.169	DOGAMI Transect
DOG2002_220	9/24/2002	7713820.769	626944.965	176.354	DOGAMI Transect
DOG2002_221	9/24/2002	7713841.445	626939.041	175.277	DOGAMI Transect
DOG2002_222	9/24/2002	7713862.742	626932.941	174.856	DOGAMI Transect
DOG2002_223	9/24/2002	7713878.971	626928.290	173.627	DOGAMI Transect
DOG2002_224	9/24/2002	7713904.367	626921.016	172.537	DOGAMI Transect
DOG2002_225	9/24/2002	7713913.879	626918.291	172.308	DOGAMI Transect
DOG2002_226	9/24/2002	7713930.022	626913.668	172.091	DOGAMI Transect
DOG2002_227	9/24/2002	7713945.661	626909.190	172.132	DOGAMI Transect
DOG2002_228	9/24/2002	7713962.093	626904.485	172.228	DOGAMI Transect
DOG2002_229	9/24/2002	7713980.185	626899.303	172.087	DOGAMI Transect
DOG2002_230	9/24/2002	7713996.207	626894.713	172.236	DOGAMI Transect
DOG2002_231	9/24/2002	7714006.615	626891.733	172.616	DOGAMI Transect
DOG2002_232	9/24/2002	7714028.602	626885.436	173.617	DOGAMI Transect
DOG2002_233	9/24/2002	7714078.955	626870.991	173.516	DOGAMI Transect
DOG2002_234	9/24/2002	7714098.386	626865.407	172.733	DOGAMI Transect
DOG2002_235	9/24/2002	7714116.094	626860.318	171.953	DOGAMI Transect
DOG2002_236	9/24/2002	7714131.843	626855.865	171.679	DOGAMI Transect
DOG2002_237	9/24/2002	7714149.875	626850.700	170.697	DOGAMI Transect
DOG2002_238	9/24/2002	7714168.531	626845.357	169.723	DOGAMI Transect
DOG2002_239	9/24/2002	7714174.736	626843.580	169.410	DOGAMI Transect
DOG2002_240	9/24/2002	7714179.158	626842.313	169.722	DOGAMI Transect
DOG2002_241	9/24/2002	7714189.106	626836.314	169.134	DOGAMI Transect
DOG2002_242	9/24/2002	7714195.810	626838.870	168.860	DOGAMI Transect
DOG2002_243	9/24/2002	7714324.143	626800.791	174.381	DOGAMI Transect
DOG2002_244	9/24/2002	7714305.928	626806.009	174.699	DOGAMI Transect
DOG2002_245	9/24/2002	7714284.846	626812.046	173.512	DOGAMI Transect
DOG2002_246	9/24/2002	7714265.940	626817.461	172.737	DOGAMI Transect
DOG2002_247	9/24/2002	7714250.643	626821.842	171.354	DOGAMI Transect
DOG2002_248	9/24/2002	7714246.666	626822.980	170.763	DOGAMI Transect
DOG2002_249	9/24/2002	7714236.146	626825.992	169.233	DOGAMI Transect
DOG2002_250	9/24/2002	7714230.424	626827.630	169.624	DOGAMI Transect
DOG2002_251	9/24/2002	7714155.307	626849.148	170.602	DOGAMI Transect
DOG2002_252	9/24/2002	7714163.223	626844.499	169.797	DOGAMI Transect
DOG2002_253	9/24/2002	7714170.668	626843.305	169.341	DOGAMI Transect
DOG2002_254	9/24/2002	7713924.730	626828.278	167.448	DOGAMI Transect
TRC2002_400	9/26/2002	7718393.451	613089.636	237.033	Check backsite
TRC2002_401	9/26/2002	7717874.410	613395.955	225.426	Incipient Motion Painted Square
TRC2002_402	9/26/2002	7717875.855	613393.160	225.218	Incipient Motion Painted Square
TRC2002_403	9/26/2002	7717873.176	613391.275	225.257	Incipient Motion Painted Square
TRC2002_404	9/26/2002	7717871.518	613394.075	225.211	Incipient Motion Painted Square
TRC2002_405	9/26/2002	7717873.952	613393.938	225.326	Incipient Motion Painted Square
TRC2002_406	9/26/2002	7717879.321	613427.077	226.046	Incipient Motion Painted Square
TRC2002_407	9/26/2002	7717881.323	613424.489	226.196	Incipient Motion Painted Square

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_408	9/26/2002	7717878.710	613422.230	225.834	Incipient Motion Painted Square
TRC2002_409	9/26/2002	7717876.596	613424.990	226.302	Incipient Motion Painted Square
TRC2002_410	9/26/2002	7717878.708	613424.542	226.030	Incipient Motion Painted Square
TRC2002_411	9/26/2002	7717849.369	613415.162	225.341	Incipient Motion Painted Square
TRC2002_412	9/26/2002	7717851.037	613412.382	225.103	Incipient Motion Painted Square
TRC2002_413	9/26/2002	7717848.251	613410.393	225.086	Incipient Motion Painted Square
TRC2002_414	9/26/2002	7717846.517	613413.239	225.058	Incipient Motion Painted Square
TRC2002_415	9/26/2002	7717848.200	613412.891	225.254	Incipient Motion Painted Square
TRC2002_416	9/26/2002	7717901.966	613390.515	224.651	Topographic Point
TRC2002_417	9/26/2002	7717898.734	613398.242	225.313	Topographic Point
TRC2002_418	9/26/2002	7717894.109	613406.423	225.827	Topographic Point
TRC2002_419	9/26/2002	7717888.364	613414.283	225.904	Topographic Point
TRC2002_420	9/26/2002	7717884.162	613423.344	226.068	Topographic Point
TRC2002_421	9/26/2002	7717878.043	613429.984	226.283	Topographic Point
TRC2002_422	9/26/2002	7717872.252	613436.907	226.215	Topographic Point
TRC2002_423	9/26/2002	7717864.108	613444.640	226.637	Topographic Point
TRC2002_424	9/26/2002	7717857.510	613451.590	226.749	Topographic Point
TRC2002_425	9/26/2002	7717846.998	613456.432	226.901	Topographic Point
TRC2002_426	9/26/2002	7717835.786	613443.293	226.115	Topographic Point
TRC2002_427	9/26/2002	7717842.462	613437.350	225.942	Topographic Point
TRC2002_428	9/26/2002	7717849.451	613432.332	226.087	Topographic Point
TRC2002_429	9/26/2002	7717858.323	613426.826	225.912	Topographic Point
TRC2002_430	9/26/2002	7717865.878	613419.376	225.846	Topographic Point
TRC2002_431	9/26/2002	7717872.932	613412.431	225.611	Topographic Point
TRC2002_432	9/26/2002	7717879.429	613405.580	225.509	Topographic Point
TRC2002_433	9/26/2002	7717885.486	613397.611	225.392	Topographic Point
TRC2002_434	9/26/2002	7717890.309	613387.747	224.859	Topographic Point
TRC2002_435	9/26/2002	7717880.132	613378.625	224.525	Topographic Point
TRC2002_436	9/26/2002	7717873.243	613386.511	225.115	Topographic Point
TRC2002_437	9/26/2002	7717866.952	613392.968	225.072	Topographic Point
TRC2002_438	9/26/2002	7717860.501	613398.499	225.262	Topographic Point
TRC2002_439	9/26/2002	7717852.576	613404.410	225.050	Topographic Point
TRC2002_440	9/26/2002	7717844.623	613410.068	225.054	Topographic Point
TRC2002_441	9/26/2002	7717837.138	613416.033	225.213	Topographic Point
TRC2002_442	9/26/2002	7717828.407	613421.689	225.148	Topographic Point
TRC2002_443	9/26/2002	7717820.317	613426.862	225.167	Topographic Point
TRC2002_444	9/26/2002	7717808.953	613418.348	224.508	Topographic Point
TRC2002_445	9/26/2002	7717815.933	613412.437	224.750	Topographic Point
TRC2002_446	9/26/2002	7717824.224	613406.473	224.618	Topographic Point
TRC2002_447	9/26/2002	7717831.669	613400.965	224.527	Topographic Point
TRC2002_448	9/26/2002	7717839.832	613396.054	224.483	Topographic Point
TRC2002_449	9/26/2002	7717847.695	613389.872	224.753	Topographic Point
TRC2002_450	9/26/2002	7717854.555	613383.311	224.641	Topographic Point
TRC2002_451	9/26/2002	7717861.483	613374.974	224.541	Topographic Point
TRC2002_452	9/26/2002	7717868.903	613366.774	223.960	Topographic Point
TRC2002_453	9/26/2002	7717856.838	613353.497	223.352	Topographic Point
TRC2002_454	9/26/2002	7717849.015	613358.751	223.453	Topographic Point
TRC2002_455	9/26/2002	7717840.078	613363.698	223.208	Topographic Point

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_456	9/26/2002	7717831.736	613370.277	223.325	Topographic Point
TRC2002_457	9/26/2002	7717823.680	613375.973	223.473	Topographic Point
TRC2002_458	9/26/2002	7717816.147	613383.025	223.324	Topographic Point
TRC2002_459	9/26/2002	7717808.115	613390.436	223.507	Topographic Point
TRC2002_460	9/26/2002	7717800.288	613397.247	223.687	Topographic Point
TRC2002_461	9/26/2002	7717793.035	613404.669	223.430	Topographic Point
TRC2002_462	9/26/2002	7717775.188	613385.331	220.504	Topographic Point
TRC2002_463	9/26/2002	7717781.350	613379.978	220.499	Topographic Point
TRC2002_464	9/26/2002	7717788.028	613374.706	220.812	Topographic Point
TRC2002_465	9/26/2002	7717794.735	613368.789	220.575	Topographic Point
TRC2002_466	9/26/2002	7717802.759	613363.446	220.865	Topographic Point
TRC2002_467	9/26/2002	7717811.467	613357.310	221.024	Topographic Point
TRC2002_468	9/26/2002	7717817.656	613349.033	220.984	Topographic Point
TRC2002_469	9/26/2002	7717826.394	613342.179	221.197	Topographic Point
TRC2002_470	9/26/2002	7717834.001	613338.090	221.144	Topographic Point
TRC2002_471	9/26/2002	7717843.994	613333.895	221.134	Topographic Point
TRC2002_472	9/26/2002	7717423.030	617860.284	207.207	Check backsight
TRC2002_473	9/26/2002	7717534.411	617842.939	210.249	Incipient Motion Painted Square
TRC2002_474	9/26/2002	7717537.458	617842.244	210.397	Incipient Motion Painted Square
TRC2002_475	9/26/2002	7717536.661	617838.758	210.299	Incipient Motion Painted Square
TRC2002_476	9/26/2002	7717533.688	617839.384	210.518	Incipient Motion Painted Square
TRC2002_477	9/26/2002	7717535.346	617840.909	210.113	Incipient Motion Painted Square
TRC2002_478	9/26/2002	7717563.623	617825.784	209.012	Incipient Motion Painted Square
TRC2002_479	9/26/2002	7717567.081	617825.510	209.362	Incipient Motion Painted Square
TRC2002_480	9/26/2002	7717566.285	617821.748	209.021	Incipient Motion Painted Square
TRC2002_481	9/26/2002	7717563.026	617822.529	209.446	Incipient Motion Painted Square
TRC2002_482	9/26/2002	7717564.654	617823.729	208.846	Incipient Motion Painted Square
TRC2002_483	9/26/2002	7717580.564	617815.341	208.570	Incipient Motion Painted Square
TRC2002_484	9/26/2002	7717583.994	617815.163	208.546	Incipient Motion Painted Square
TRC2002_485	9/26/2002	7717583.408	617812.033	208.005	Incipient Motion Painted Square
TRC2002_486	9/26/2002	7717580.397	617812.435	208.591	Incipient Motion Painted Square
TRC2002_487	9/26/2002	7717582.039	617813.659	208.106	Incipient Motion Painted Square
TRC2002_488	9/26/2002	7717593.203	617789.833	207.649	Topographic Point
TRC2002_489	9/26/2002	7717597.582	617796.551	207.457	Topographic Point
TRC2002_490	9/26/2002	7717601.825	617804.300	207.822	Topographic Point
TRC2002_491	9/26/2002	7717606.148	617811.762	207.690	Topographic Point
TRC2002_492	9/26/2002	7717610.863	617820.741	207.405	Topographic Point
TRC2002_493	9/26/2002	7717615.277	617829.852	207.299	Topographic Point
TRC2002_494	9/26/2002	7717618.620	617838.189	207.268	Topographic Point
TRC2002_495	9/26/2002	7717623.688	617848.387	207.119	Topographic Point
TRC2002_496	9/26/2002	7717627.903	617857.749	207.140	Topographic Point
TRC2002_497	9/26/2002	7717597.085	617874.567	208.473	Topographic Point
TRC2002_498	9/26/2002	7717593.187	617866.769	208.169	Topographic Point
TRC2002_499	9/26/2002	7717588.491	617859.067	208.397	Topographic Point
TRC2002_500	9/26/2002	7717584.154	617850.127	208.534	Topographic Point
TRC2002_501	9/26/2002	7717580.337	617841.441	208.474	Topographic Point
TRC2002_502	9/26/2002	7717577.155	617833.993	208.725	Topographic Point
TRC2002_503	9/26/2002	7717574.000	617825.207	208.855	Topographic Point

**Table F.2 Total station survey data 2002 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2002_504	9/26/2002	7717570.640	617815.993	209.052	Topographic Point
TRC2002_505	9/26/2002	7717565.446	617807.553	209.067	Topographic Point
TRC2002_506	9/26/2002	7717560.610	617798.931	209.005	Topographic Point
TRC2002_507	9/26/2002	7717535.362	617809.997	209.904	Topographic Point
TRC2002_508	9/26/2002	7717539.606	617817.984	209.791	Topographic Point
TRC2002_509	9/26/2002	7717543.218	617826.574	210.085	Topographic Point
TRC2002_510	9/26/2002	7717546.475	617836.159	209.932	Topographic Point
TRC2002_511	9/26/2002	7717550.886	617844.411	209.835	Topographic Point
TRC2002_512	9/26/2002	7717554.872	617853.459	209.926	Topographic Point
TRC2002_513	9/26/2002	7717559.544	617863.156	209.856	Topographic Point
TRC2002_514	9/26/2002	7717564.590	617872.009	209.637	Topographic Point
TRC2002_515	9/26/2002	7717568.784	617880.793	209.621	Topographic Point
TRC2002_516	9/26/2002	7717574.047	617890.185	209.508	Topographic Point
TRC2002_517	9/26/2002	7717544.566	617900.252	210.676	Topographic Point
TRC2002_518	9/26/2002	7717540.615	617893.758	210.640	Topographic Point
TRC2002_519	9/26/2002	7717535.440	617885.027	210.492	Topographic Point
TRC2002_520	9/26/2002	7717530.287	617876.425	210.510	Topographic Point
TRC2002_521	9/26/2002	7717526.570	617867.613	210.560	Topographic Point
TRC2002_522	9/26/2002	7717522.184	617858.759	210.498	Topographic Point
TRC2002_523	9/26/2002	7717517.808	617849.262	210.330	Topographic Point
TRC2002_524	9/26/2002	7717513.539	617839.843	210.554	Topographic Point
TRC2002_525	9/26/2002	7717508.432	617830.263	210.255	Topographic Point
TRC2002_526	9/26/2002	7717502.696	617822.136	209.984	Topographic Point
PGE4037B	9/26/2002	7718249.725	621613.365	202.353	Iron Rod with Cap
TRC2002_528	9/27/2002	7718378.275	621546.422	191.267	Check backsite
RIVIS_001	9/27/2002	7718232.436	621610.198	200.202	Topographic Point
RIVIS_002	9/27/2002	7718225.091	621610.874	197.131	Topographic Point
RIVIS_003	9/27/2002	7718215.143	621612.077	195.933	Topographic Point
RIVIS_004	9/27/2002	7718207.636	621612.749	192.209	Topographic Point
RIVIS_005	9/27/2002	7718198.758	621612.103	189.510	Topographic Point
RIVIS_006	9/27/2002	7718188.047	621609.232	190.886	Topographic Point
RIVIS_007	9/27/2002	7718177.832	621606.543	191.107	Topographic Point
RIVIS_008	9/27/2002	7718166.416	621606.045	190.762	Topographic Point
RIVIS_009	9/27/2002	7718156.719	621606.086	189.915	Topographic Point
RIVIS_010	9/27/2002	7718147.324	621606.630	189.133	Topographic Point
RIVIS_011	9/27/2002	7718135.754	621608.935	189.461	Topographic Point
RIVIS_012	9/27/2002	7718135.702	621609.032	188.616	Cross section in Water
RIVIS_013	9/27/2002	7718127.439	621609.848	188.381	Cross section in Water
RIVIS_014	9/27/2002	7718118.568	621611.986	188.548	Cross section in Water
RIVIS_015	9/27/2002	7718099.488	621614.143	187.872	Cross section in Water
RIVIS_016	9/27/2002	7718091.498	621616.008	187.461	Cross section in Water
RIVIS_017	9/27/2002	7718079.982	621616.856	187.611	Cross section in Water
RIVIS_018	9/27/2002	7718072.253	621618.394	187.785	Cross section in Water
RIVIS_019	9/27/2002	7718063.814	621619.839	187.430	Cross section in Water
RIVIS_020	9/27/2002	7718055.266	621620.856	187.285	Cross section in Water
RIVIS_021	9/27/2002	7718045.970	621621.602	187.613	Cross section in Water
RIVIS_022	9/27/2002	7718037.285	621622.318	187.341	Cross section in Water
RIVIS_023	9/27/2002	7718027.665	621622.504	187.301	Cross section in Water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_024	9/27/2002	7718016.511	621624.009	187.991	Cross section in Water
RIVIS_025	9/27/2002	7718006.810	621625.851	187.878	Cross section in Water
RIVIS_026	9/27/2002	7717996.021	621624.545	188.917	Cross section in Water
RIVIS_027	9/27/2002	7717993.233	621626.153	189.551	Edge of water
RIVIS_028	9/27/2002	7717985.201	621626.472	190.789	Topographic Point
RIVIS_029	9/27/2002	7717974.837	621626.050	191.911	Topographic Point
RIVIS_030	9/27/2002	7717965.316	621626.376	192.271	Topographic Point
RIVIS_031	9/27/2002	7717955.554	621626.669	192.509	Topographic Point
RIVIS_032	9/27/2002	7717945.307	621626.740	192.765	Topographic Point
RIVIS_033	9/27/2002	7717935.985	621626.529	192.805	Topographic Point
RIVIS_034	9/27/2002	7717994.101	621627.715	189.613	Edge of water
RIVIS_035	9/27/2002	7718006.962	621661.426	189.676	Edge of water
RIVIS_036	9/27/2002	7718012.090	621675.785	189.604	Edge of water
RIVIS_037	9/27/2002	7718015.714	621691.391	189.065	Edge of water
RIVIS_038	9/27/2002	7718021.648	621707.890	188.124	Edge of water
RIVIS_039	9/27/2002	7718021.709	621708.354	189.060	Top of Bank
RIVIS_040	9/27/2002	7718021.922	621722.062	189.666	Top of Bank
RIVIS_041	9/27/2002	7718022.414	621743.340	190.142	Top of Bank
RIVIS_042	9/27/2002	7718018.942	621757.828	190.535	Top of Bank
RIVIS_043	9/27/2002	7718017.469	621771.430	190.673	Top of Bank
RIVIS_044	9/27/2002	7718016.985	621794.040	190.341	Top of Bank
RIVIS_045	9/27/2002	7718016.121	621809.988	190.680	Top of Bank
RIVIS_046	9/27/2002	7718013.844	621825.437	190.620	Top of Bank
RIVIS_047	9/27/2002	7718010.612	621842.903	190.842	Top of Bank
RIVIS_048	9/27/2002	7718009.021	621853.708	190.885	Top of Bank
RIVIS_049	9/27/2002	7718006.394	621871.091	190.588	Top of Bank
RIVIS_050	9/27/2002	7718003.568	621889.684	190.249	Top of Bank
RIVIS_051	9/27/2002	7718001.049	621905.658	189.330	Top of Bank
RIVIS_052	9/27/2002	7717997.274	621922.763	189.153	Top of Bank
RIVIS_053	9/27/2002	7717994.371	621940.293	188.403	Top of Bank
RIVIS_054	9/27/2002	7717991.982	621958.257	187.865	Top of Bank
RIVIS_055	9/27/2002	7717989.854	621975.669	186.902	Top of Bank
RIVIS_056	9/27/2002	7717993.759	621973.491	185.410	Edge of water
RIVIS_057	9/27/2002	7718018.349	621691.725	188.990	Edge of water
RIVIS_058	9/27/2002	7717922.036	621567.349	192.926	Top of Bank
RIVIS_059	9/27/2002	7717929.596	621562.784	192.864	Top of Bank
RIVIS_060	9/27/2002	7717938.015	621559.299	192.503	Top of Bank
RIVIS_061	9/27/2002	7717946.379	621555.938	191.862	Top of Bank
RIVIS_062	9/27/2002	7717955.838	621551.952	190.942	Top of Bank
RIVIS_063	9/27/2002	7717962.200	621548.448	189.762	Edge of water
RIVIS_064	9/27/2002	7717971.847	621543.515	188.143	Cross section in Water
RIVIS_065	9/27/2002	7717978.931	621538.440	187.631	Cross section in Water
RIVIS_066	9/27/2002	7717986.409	621533.270	187.421	Cross section in Water
RIVIS_067	9/27/2002	7717992.610	621529.310	187.051	Cross section in Water
RIVIS_068	9/27/2002	7717999.874	621524.636	186.639	Cross section in Water
RIVIS_069	9/27/2002	7718033.216	621505.782	186.946	Cross section in Water
RIVIS_070	9/27/2002	7718037.776	621502.537	187.293	Cross section in Water
RIVIS_071	9/27/2002	7718045.397	621498.934	187.593	Cross section in Water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_072	9/27/2002	7718053.657	621495.133	189.740	Edge of water
RIVIS_073	9/27/2002	7718059.422	621492.564	191.054	Topographic Point
RIVIS_074	9/27/2002	7718082.434	621508.735	192.595	Nail
RIVIS_075	9/27/2002	7718249.678	621613.303	202.350	Check backsite
RIVIS_076	9/27/2002	7718163.006	621620.263	189.006	Edge of water
RIVIS_077	9/27/2002	7718159.018	621629.795	188.194	Cross section in Water
RIVIS_078	9/27/2002	7718156.632	621637.949	188.142	Cross section in Water
RIVIS_079	9/27/2002	7718153.105	621647.648	188.246	Cross section in Water
RIVIS_080	9/27/2002	7718150.067	621656.483	187.649	Cross section in Water
RIVIS_081	9/27/2002	7718148.223	621665.626	187.971	Cross section in Water
RIVIS_082	9/27/2002	7718146.353	621675.362	188.100	Cross section in Water
RIVIS_083	9/27/2002	7718142.771	621684.639	188.194	Cross section in Water
RIVIS_084	9/27/2002	7718140.588	621694.241	188.480	Cross section in Water
RIVIS_085	9/27/2002	7718137.740	621705.703	188.853	Edge of water
RIVIS_086	9/27/2002	7718138.019	621716.954	188.974	Edge of water
RIVIS_087	9/27/2002	7718161.281	621722.881	188.214	Edge of water
RIVIS_088	9/27/2002	7718179.899	621732.823	187.676	Edge of water
RIVIS_089	9/27/2002	7718201.198	621739.567	186.719	Edge of water
RIVIS_090	9/27/2002	7718221.633	621744.369	185.862	Edge of water
RIVIS_091	9/27/2002	7718235.594	621752.344	184.450	Edge of water
RIVIS_092	9/27/2002	7718216.700	621670.666	187.535	Edge of water
RIVIS_093	9/27/2002	7718197.088	621648.238	188.583	Edge of water
RIVIS_094	9/27/2002	7718175.768	621631.178	188.847	Edge of water
RIVIS_095	9/27/2002	7718155.449	621613.076	189.334	Edge of water
RIVIS_096	9/27/2002	7718131.115	621596.201	189.565	Edge of water
RIVIS_097	9/27/2002	7718113.465	621577.720	189.685	Edge of water
RIVIS_098	9/27/2002	7718093.040	621555.354	189.750	Edge of water
RIVIS_099	9/27/2002	7718079.395	621533.830	189.656	Edge of water
RIVIS_100	9/27/2002	7718065.523	621512.175	189.956	Edge of water
RIVIS_101	9/27/2002	7718051.191	621490.307	189.981	Edge of water
RIVIS_102	9/27/2002	7718037.848	621468.854	189.739	Edge of water
RIVIS_103	9/27/2002	7718022.782	621443.123	189.946	Edge of water
RIVIS_104	9/27/2002	7718012.085	621422.603	189.911	Edge of water
RIVIS_105	9/27/2002	7717999.637	621395.994	190.006	Edge of water
RIVIS_106	9/27/2002	7717985.901	621374.926	189.949	Edge of water
RIVIS_107	9/27/2002	7717973.274	621350.113	189.934	Edge of water
RIVIS_108	9/27/2002	7717960.347	621326.565	189.894	Edge of water
RIVIS_109	9/27/2002	7717944.817	621302.437	190.094	Edge of water
RIVIS_110	9/27/2002	7717929.904	621280.397	189.991	Edge of water
RIVIS_111	9/27/2002	7717917.557	621259.768	190.030	Edge of water
RIVIS_112	9/27/2002	7717901.703	621235.078	190.005	Edge of water
RIVIS_113	9/27/2002	7717888.737	621211.186	190.216	Edge of water
RIVIS_114	9/27/2002	7717874.353	621187.141	190.177	Edge of water
RIVIS_115	9/27/2002	7717859.762	621163.453	190.089	Edge of water
RIVIS_116	9/27/2002	7717844.278	621140.378	190.146	Edge of water
RIVIS_117	9/27/2002	7717831.634	621113.735	189.994	Edge of water
RIVIS_118	9/27/2002	7717817.504	621088.543	189.990	Edge of water
RIVIS_119	9/27/2002	7717805.237	621061.226	190.303	Edge of water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_120	9/27/2002	7717795.575	621035.620	190.700	Edge of water
RIVIS_121	9/27/2002	7717787.543	621012.050	190.855	Edge of water
RIVIS_122	9/27/2002	7717778.095	620987.529	190.988	Edge of water
RIVIS_123	9/27/2002	7717769.137	620966.239	191.073	Edge of water
RIVIS_124	9/27/2002	7717759.054	620944.723	191.352	Edge of water
RIVIS_125	9/27/2002	7717747.949	620921.788	191.596	Edge of water
RIVIS_126	9/27/2002	7717734.535	620903.674	191.581	Edge of water
RIVIS_127	9/27/2002	7717716.987	620883.970	191.541	Edge of water
RIVIS_128	9/27/2002	7717705.502	620861.617	192.113	Edge of water
RIVIS_129	9/27/2002	7717699.850	620837.468	193.861	Edge of water
RIVIS_130	9/27/2002	7717700.964	620809.444	194.238	Edge of water
RIVIS_131	9/27/2002	7717686.149	620806.277	192.993	Cross section in Water
RIVIS_132	9/27/2002	7717676.346	620809.240	192.569	Cross section in Water
RIVIS_133	9/27/2002	7717666.387	620813.028	192.856	Cross section in Water
RIVIS_134	9/27/2002	7717653.705	620819.695	192.935	Cross section in Water
RIVIS_135	9/27/2002	7717645.038	620828.104	192.999	Cross section in Water
RIVIS_136	9/27/2002	7717636.636	620837.040	193.273	Cross section in Water
RIVIS_137	9/27/2002	7717629.261	620848.993	193.289	Cross section in Water
RIVIS_138	9/27/2002	7717624.156	620863.183	193.463	Cross section in Water
RIVIS_139	9/27/2002	7717620.974	620879.135	193.234	Cross section in Water
RIVIS_140	9/27/2002	7717621.168	620894.852	193.393	Cross section in Water
RIVIS_141	9/27/2002	7717622.489	620910.480	193.569	Cross section in Water
RIVIS_142	9/27/2002	7717625.556	620925.674	193.722	Cross section in Water
RIVIS_143	9/27/2002	7717632.056	620940.625	194.025	Cross section in Water
RIVIS_144	9/27/2002	7717637.354	620956.717	194.105	Cross section in Water
RIVIS_145	9/27/2002	7717645.113	620969.536	194.293	Cross section in Water
RIVIS_146	9/27/2002	7717654.004	620979.053	194.722	Edge of water
RIVIS_147	9/27/2002	7717664.477	620974.327	194.204	Edge of water
RIVIS_148	9/27/2002	7717676.415	620971.798	193.418	Edge of water
RIVIS_149	9/27/2002	7717688.650	620970.766	192.817	Edge of water
RIVIS_150	9/27/2002	7717701.699	620974.870	192.035	Edge of water
RIVIS_151	9/27/2002	7717709.010	620975.701	191.132	Edge of water
RIVIS_152	9/27/2002	7717717.310	621004.263	191.076	Edge of water
RIVIS_153	9/27/2002	7717727.758	621031.536	190.813	Edge of water
RIVIS_154	9/27/2002	7717739.544	621057.032	190.615	Edge of water
RIVIS_155	9/27/2002	7717750.843	621082.654	190.247	Edge of water
RIVIS_156	9/27/2002	7717762.522	621107.869	190.075	Edge of water
RIVIS_157	9/27/2002	7717774.954	621135.056	190.110	Edge of water
RIVIS_158	9/27/2002	7717787.740	621160.120	190.131	Edge of water
RIVIS_159	9/27/2002	7717798.868	621184.485	190.165	Edge of water
RIVIS_160	9/27/2002	7717808.134	621203.938	190.080	Edge of water
RIVIS_161	9/27/2002	7717813.611	621225.529	190.131	Edge of water
RIVIS_162	9/27/2002	7717821.950	621246.351	190.010	Edge of water
RIVIS_163	9/27/2002	7717832.777	621273.469	190.060	Edge of water
RIVIS_164	9/27/2002	7717842.473	621297.536	190.089	Edge of water
RIVIS_165	9/27/2002	7717853.408	621324.071	190.014	Edge of water
RIVIS_166	9/27/2002	7717866.151	621352.584	189.846	Edge of water
RIVIS_167	9/27/2002	7717875.446	621375.551	189.836	Edge of water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_168	9/27/2002	7717886.452	621401.621	189.843	Edge of water
RIVIS_169	9/27/2002	7717899.726	621425.214	189.876	Edge of water
RIVIS_170	9/27/2002	7717911.074	621447.804	189.820	Edge of water
RIVIS_171	9/27/2002	7717924.374	621470.966	189.836	Edge of water
RIVIS_172	9/27/2002	7717935.288	621492.100	189.947	Edge of water
RIVIS_173	9/27/2002	7717945.856	621515.546	189.803	Edge of water
RIVIS_174	9/27/2002	7717957.599	621539.410	189.828	Edge of water
RIVIS_175	9/27/2002	7717967.212	621562.946	189.763	Edge of water
RIVIS_176	10/8/2002	7713822.463	627951.289	183.714	Check backsite
RIVIS_177	10/8/2002	7713794.065	627792.508	180.228	Top of Bank
RIVIS_178	10/8/2002	7713777.842	627788.242	182.025	Top of Bank
RIVIS_179	10/8/2002	7713767.945	627788.125	181.957	Top of Bank
RIVIS_180	10/8/2002	7713747.282	627781.322	181.821	Top of Bank
RIVIS_181	10/8/2002	7713741.783	627754.558	181.696	Top of Bank
RIVIS_182	10/8/2002	7713705.113	627764.759	181.457	Top of Bank
RIVIS_183	10/8/2002	7713690.216	627747.635	181.068	Top of Bank
RIVIS_184	10/8/2002	7713676.248	627720.146	181.380	Top of Bank
RIVIS_185	10/8/2002	7713663.681	627689.528	178.561	Top of Bank
RIVIS_186	10/8/2002	7714082.149	628200.719	168.250	Tracer Rock
RIVIS_187	10/8/2002	7714079.662	628204.247	168.220	Tracer Rock
RIVIS_188	10/8/2002	7714077.881	628205.517	168.069	Tracer Rock
RIVIS_189	10/8/2002	7714080.894	628196.838	168.539	Tracer Rock
RIVIS_190	10/8/2002	7714080.445	628198.270	168.311	Tracer Rock
RIVIS_191	10/8/2002	7714079.983	628199.093	168.293	Tracer Rock
RIVIS_192	10/8/2002	7714079.781	628199.551	168.193	Tracer Rock
RIVIS_193	10/8/2002	7714078.430	628195.381	168.494	Tracer Rock
RIVIS_194	10/8/2002	7714077.716	628197.322	168.546	Tracer Rock
RIVIS_195	10/8/2002	7714077.257	628198.311	168.498	Tracer Rock
RIVIS_196	10/8/2002	7714076.464	628199.179	168.394	Tracer Rock
RIVIS_197	10/8/2002	7714075.938	628200.385	168.433	Tracer Rock
RIVIS_198	10/8/2002	7714075.077	628201.366	168.462	Tracer Rock
RIVIS_199	10/8/2002	7714075.807	628194.184	168.666	Tracer Rock
RIVIS_200	10/8/2002	7714084.982	628184.761	168.626	Tracer Rock
RIVIS_201	10/8/2002	7714084.921	628184.720	168.613	Incipient Motion Painted Square
RIVIS_202	10/8/2002	7714082.326	628182.634	168.569	Incipient Motion Painted Square
RIVIS_203	10/8/2002	7714080.277	628185.155	168.684	Incipient Motion Painted Square
RIVIS_204	10/8/2002	7714083.009	628187.135	168.748	Incipient Motion Painted Square
RIVIS_205	10/8/2002	7714082.840	628184.959	168.640	Incipient Motion Painted Square
RIVIS_206	10/8/2002	7714112.421	628194.280	167.146	Topographic Point
RIVIS_207	10/8/2002	7714108.030	628199.583	167.277	Topographic Point
RIVIS_208	10/8/2002	7714103.255	628205.439	167.221	Topographic Point
RIVIS_209	10/8/2002	7714099.103	628210.706	167.161	Topographic Point
RIVIS_210	10/8/2002	7714094.794	628217.120	167.035	Topographic Point
RIVIS_211	10/8/2002	7714091.439	628222.416	167.179	Topographic Point
RIVIS_212	10/8/2002	7714087.551	628228.277	167.217	Topographic Point
RIVIS_213	10/8/2002	7714084.871	628234.632	167.024	Topographic Point
RIVIS_214	10/8/2002	7714082.027	628240.053	166.803	Topographic Point
RIVIS_215	10/8/2002	7714078.713	628245.355	166.778	Topographic Point

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_216	10/8/2002	7714104.660	628189.919	167.469	Topographic Point
RIVIS_217	10/8/2002	7714101.047	628194.519	167.546	Topographic Point
RIVIS_218	10/8/2002	7714097.918	628198.286	167.696	Topographic Point
RIVIS_219	10/8/2002	7714094.224	628202.831	167.512	Topographic Point
RIVIS_220	10/8/2002	7714090.445	628208.689	167.328	Topographic Point
RIVIS_221	10/8/2002	7714085.994	628214.059	167.313	Topographic Point
RIVIS_222	10/8/2002	7714081.537	628218.796	167.387	Topographic Point
RIVIS_223	10/8/2002	7714077.453	628223.686	167.331	Topographic Point
RIVIS_224	10/8/2002	7714072.867	628229.215	167.398	Topographic Point
RIVIS_225	10/8/2002	7714069.253	628235.166	167.533	Topographic Point
RIVIS_226	10/8/2002	7714066.827	628240.420	167.384	Topographic Point
RIVIS_227	10/8/2002	7714097.499	628184.979	168.003	Topographic Point
RIVIS_228	10/8/2002	7714092.952	628190.236	167.857	Topographic Point
RIVIS_229	10/8/2002	7714087.595	628193.704	168.026	Topographic Point
RIVIS_230	10/8/2002	7714084.133	628199.445	167.962	Topographic Point
RIVIS_231	10/8/2002	7714080.006	628205.078	167.920	Topographic Point
RIVIS_232	10/8/2002	7714075.484	628211.274	167.838	Topographic Point
RIVIS_233	10/8/2002	7714071.306	628217.563	167.714	Topographic Point
RIVIS_234	10/8/2002	7714066.244	628223.751	167.791	Topographic Point
RIVIS_235	10/8/2002	7714060.674	628229.284	167.813	Topographic Point
RIVIS_236	10/8/2002	7714055.014	628234.776	167.648	Topographic Point
RIVIS_237	10/8/2002	7714091.592	628179.989	168.454	Topographic Point
RIVIS_238	10/8/2002	7714087.467	628184.252	168.446	Topographic Point
RIVIS_239	10/8/2002	7714083.556	628189.697	168.409	Topographic Point
RIVIS_240	10/8/2002	7714079.245	628195.314	168.328	Topographic Point
RIVIS_241	10/8/2002	7714074.505	628200.642	168.365	Topographic Point
RIVIS_242	10/8/2002	7714069.426	628205.928	168.205	Topographic Point
RIVIS_243	10/8/2002	7714064.737	628212.388	168.206	Topographic Point
RIVIS_244	10/8/2002	7714060.017	628218.862	168.088	Topographic Point
RIVIS_245	10/8/2002	7714055.268	628225.324	168.081	Topographic Point
RIVIS_246	10/8/2002	7714050.218	628230.553	167.952	Topographic Point
RIVIS_247	10/8/2002	7714084.030	628177.085	168.699	Topographic Point
RIVIS_248	10/8/2002	7714079.886	628181.888	168.696	Topographic Point
RIVIS_249	10/8/2002	7714075.912	628187.120	168.739	Topographic Point
RIVIS_250	10/8/2002	7714072.013	628191.931	168.680	Topographic Point
RIVIS_251	10/8/2002	7714067.678	628197.229	168.567	Topographic Point
RIVIS_252	10/8/2002	7714063.842	628202.280	168.496	Topographic Point
RIVIS_253	10/8/2002	7714060.056	628207.940	168.492	Topographic Point
RIVIS_254	10/8/2002	7714057.021	628213.968	168.360	Topographic Point
RIVIS_255	10/8/2002	7714050.917	628220.305	168.352	Topographic Point
RIVIS_256	10/8/2002	7714045.460	628226.097	168.240	Topographic Point
RIVIS_257	10/8/2002	7714076.522	628172.136	169.046	Topographic Point
RIVIS_258	10/8/2002	7714070.710	628178.258	169.000	Topographic Point
RIVIS_259	10/8/2002	7714065.500	628184.804	168.829	Topographic Point
RIVIS_260	10/8/2002	7714060.653	628190.212	168.927	Topographic Point
RIVIS_261	10/8/2002	7714056.073	628195.437	168.814	Topographic Point
RIVIS_262	10/8/2002	7714051.288	628201.070	168.855	Topographic Point
RIVIS_263	10/8/2002	7714046.162	628207.080	168.750	Topographic Point

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_264	10/8/2002	7714041.580	628212.413	168.702	Topographic Point
RIVIS_265	10/8/2002	7714037.788	628217.611	168.731	Topographic Point
RIVIS_266	10/8/2002	7714032.667	628222.737	168.791	Topographic Point
RIVIS_267	10/8/2002	7713930.465	628834.026	169.531	Nail
RIVIS_268	10/8/2002	7714452.711	628056.629	179.276	Top of Bank
RIVIS_269	10/8/2002	7714443.817	628075.792	179.231	Top of Bank
RIVIS_270	10/8/2002	7714438.841	628091.311	179.981	Top of Bank
RIVIS_271	10/8/2002	7714421.379	628113.997	180.126	Top of Bank
RIVIS_272	10/8/2002	7714415.652	628129.360	179.898	Top of Bank
RIVIS_273	10/8/2002	7714405.987	628143.426	180.472	Top of Bank
RIVIS_274	10/8/2002	7714393.908	628155.342	180.745	Top of Bank
RIVIS_275	10/8/2002	7714384.072	628167.459	180.825	Top of Bank
RIVIS_276	10/8/2002	7714374.820	628175.889	180.788	Top of Bank
RIVIS_277	10/8/2002	7714365.065	628191.439	180.883	Top of Bank
RIVIS_278	10/8/2002	7714349.924	628209.266	180.583	Top of Bank
RIVIS_279	10/8/2002	7714332.961	628230.209	180.673	Top of Bank
RIVIS_280	10/8/2002	7714322.243	628244.657	180.892	Top of Bank
RIVIS_281	10/8/2002	7714313.636	628265.687	179.728	Top of Bank
RIVIS_282	10/8/2002	7714304.800	628280.480	180.163	Top of Bank
RIVIS_283	10/8/2002	7714304.543	628288.744	178.938	Top of Bank
RIVIS_284	10/8/2002	7714295.444	628298.844	180.734	Top of Bank
RIVIS_285	10/8/2002	7714285.382	628303.250	182.195	Top of Bank
RIVIS_286	10/8/2002	7714264.189	628326.263	181.827	Top of Bank
RIVIS_287	10/8/2002	7714252.098	628345.987	180.566	Top of Bank
RIVIS_288	10/8/2002	7714236.719	628364.456	178.135	Top of Bank
RIVIS_289	10/8/2002	7714208.209	628404.815	181.648	Top of Bank
RIVIS_290	10/8/2002	7714181.067	628439.158	176.446	Top of Bank
RIVIS_291	10/8/2002	7714167.526	628450.997	177.154	Top of Bank
RIVIS_292	10/8/2002	7714147.768	628476.244	184.131	Top of Bank
RIVIS_293	10/8/2002	7714141.049	628491.902	186.267	Top of Bank
RIVIS_294	10/8/2002	7714126.369	628514.382	186.751	Top of Bank
RIVIS_295	10/8/2002	7714115.143	628540.304	188.222	Top of Bank
RIVIS_296	10/8/2002	7714097.805	628556.273	190.511	Top of Bank
RIVIS_297	10/8/2002	7714076.810	628572.542	192.308	Top of Bank
RIVIS_298	10/8/2002	7714062.933	628603.803	198.945	Top of Bank
RIVIS_299	10/8/2002	7714049.316	628623.038	199.513	Top of Bank
RIVIS_300	10/8/2002	7714038.416	628631.797	189.769	Top of Bank
RIVIS_301	10/8/2002	7714027.049	628641.991	180.748	Top of Bank
RIVIS_302	10/8/2002	7714006.997	628643.350	176.579	Top of Bank
RIVIS_303	10/8/2002	7713962.490	628699.219	165.301	Edge of water
RIVIS_304	10/8/2002	7713953.678	628690.241	164.453	Cross section in Water
RIVIS_305	10/8/2002	7713946.839	628682.261	163.391	Cross section in Water
RIVIS_306	10/8/2002	7713940.829	628674.450	162.705	Cross section in Water
RIVIS_307	10/8/2002	7713929.303	628660.821	162.059	Cross section in Water
RIVIS_308	10/8/2002	7713918.520	628646.016	161.946	Cross section in Water
RIVIS_309	10/8/2002	7713906.251	628630.508	161.529	Cross section in Water
RIVIS_310	10/8/2002	7713894.122	628613.895	162.181	Cross section in Water
RIVIS_311	10/8/2002	7713882.995	628594.832	162.864	Cross section in Water

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_312	10/8/2002	7713870.863	628573.576	163.872	Cross section in Water
RIVIS_313	10/8/2002	7713859.857	628556.249	164.386	Cross section in Water
RIVIS_314	10/8/2002	7713849.170	628539.892	164.791	Cross section in Water
RIVIS_315	10/8/2002	7713835.764	628520.049	164.628	Cross section in Water
RIVIS_316	10/8/2002	7713816.549	628487.717	163.591	Cross section in Water
RIVIS_317	10/8/2002	7713816.586	628487.689	163.627	Edge of water
RIVIS_318	10/8/2002	7713822.540	627951.281	183.757	Check backsite
RIVIS_319	10/8/2002	7713606.906	628513.717	164.962	DOGAMI Transect
RIVIS_320	10/8/2002	7713611.094	628517.859	163.744	DOGAMI Transect
RIVIS_321	10/8/2002	7713615.286	628522.012	162.297	DOGAMI Transect
RIVIS_322	10/8/2002	7713618.108	628524.805	161.827	DOGAMI Transect
RIVIS_323	10/8/2002	7713620.732	628527.402	162.232	DOGAMI Transect
RIVIS_324	10/8/2002	7713624.242	628530.874	162.655	DOGAMI Transect
RIVIS_325	10/8/2002	7713628.778	628535.365	162.936	DOGAMI Transect
RIVIS_326	10/8/2002	7713633.402	628539.943	162.729	DOGAMI Transect
RIVIS_327	10/8/2002	7713636.345	628542.854	162.473	DOGAMI Transect
RIVIS_328	10/8/2002	7713640.955	628547.422	161.993	DOGAMI Transect
RIVIS_329	10/8/2002	7713646.903	628553.308	161.458	DOGAMI Transect
RIVIS_330	10/8/2002	7713653.956	628560.293	160.699	DOGAMI Transect
RIVIS_331	10/8/2002	7713659.871	628566.147	159.987	DOGAMI Transect
RIVIS_332	10/8/2002	7713664.679	628570.908	159.893	DOGAMI Transect
RIVIS_333	10/8/2002	7713671.100	628577.262	159.889	DOGAMI Transect
RIVIS_334	10/8/2002	7713677.866	628583.963	159.781	DOGAMI Transect
RIVIS_335	10/8/2002	7713684.847	628590.872	160.213	DOGAMI Transect
RIVIS_336	10/8/2002	7713692.176	628598.129	160.697	DOGAMI Transect
RIVIS_337	10/8/2002	7713697.366	628603.267	160.849	DOGAMI Transect
RIVIS_338	10/8/2002	7713699.082	628604.964	162.023	DOGAMI Transect
RIVIS_339	10/8/2002	7713700.624	628606.490	162.524	DOGAMI Transect
RIVIS_340	10/8/2002	7713703.472	628609.310	162.657	DOGAMI Transect
RIVIS_341	10/8/2002	7713707.409	628613.208	162.258	DOGAMI Transect
RIVIS_342	10/8/2002	7713713.303	628619.039	161.365	DOGAMI Transect
RIVIS_343	10/8/2002	7713727.801	628633.394	161.715	DOGAMI Transect
RIVIS_344	10/8/2002	7713750.439	628655.805	162.247	DOGAMI Transect
RIVIS_345	10/8/2002	7713766.259	628671.467	162.969	DOGAMI Transect
RIVIS_346	10/8/2002	7713787.706	628692.698	163.232	DOGAMI Transect
RIVIS_347	10/8/2002	7713811.354	628716.111	163.333	DOGAMI Transect
RIVIS_348	10/8/2002	7713825.573	628730.185	163.463	DOGAMI Transect
RIVIS_349	10/8/2002	7713841.116	628745.572	163.593	DOGAMI Transect
RIVIS_350	10/8/2002	7713856.533	628760.835	164.328	DOGAMI Transect
RIVIS_351	10/8/2002	7713872.000	628776.147	165.010	DOGAMI Transect
RIVIS_352	10/8/2002	7713885.449	628789.460	164.690	DOGAMI Transect
RIVIS_353	10/8/2002	7713892.580	628796.519	163.895	DOGAMI Transect
RIVIS_354	10/8/2002	7713904.907	628808.721	162.837	DOGAMI Transect
RIVIS_355	10/8/2002	7713912.609	628816.346	163.197	DOGAMI Transect
RIVIS_356	10/8/2002	7713916.373	628820.073	164.135	DOGAMI Transect
RIVIS_357	10/8/2002	7713921.431	628825.081	166.160	DOGAMI Transect
RIVIS_358	10/8/2002	7713924.600	628828.219	167.380	DOGAMI Transect
RIVIS_359	10/8/2002	7713946.433	628849.833	168.553	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_360	10/8/2002	7713954.631	628857.948	166.238	DOGAMI Transect
RIVIS_361	10/8/2002	7710528.365	631235.881	152.734	Check backsite
RIVIS_362	10/8/2002	7710694.500	631063.726	160.553	Check backsite
RIVIS_363	10/8/2002	7711842.546	629662.539	156.541	Inkspot
RIVIS_364	10/8/2002	7711812.888	629667.146	154.689	Edge of water
RIVIS_365	10/8/2002	7711797.573	629671.752	154.662	Edge of water
RIVIS_366	10/8/2002	7711775.772	629678.543	154.703	Edge of water
RIVIS_367	10/8/2002	7711758.930	629685.117	154.624	Edge of water
RIVIS_368	10/8/2002	7711734.962	629693.439	154.537	Edge of water
RIVIS_369	10/8/2002	7711710.954	629702.778	154.511	Edge of water
RIVIS_370	10/8/2002	7711683.176	629710.120	154.337	Edge of water
RIVIS_371	10/8/2002	7711652.241	629724.312	154.282	Edge of water
RIVIS_372	10/8/2002	7711615.376	629742.376	154.188	Edge of water
RIVIS_373	10/8/2002	7711580.214	629760.610	153.852	Edge of water
RIVIS_374	10/8/2002	7711544.279	629778.214	153.677	Edge of water
RIVIS_375	10/8/2002	7711500.630	629798.363	153.141	Edge of water
RIVIS_376	10/8/2002	7711466.676	629827.325	153.224	Edge of water
RIVIS_377	10/8/2002	7711436.336	629865.980	153.230	Edge of water
RIVIS_378	10/8/2002	7711414.175	629898.634	153.179	Edge of water
RIVIS_379	10/8/2002	7711295.427	629823.766	155.329	Check backsite
RIVIS_380	10/8/2002	7711305.902	629820.144	154.677	Bedrock (Sandy River Mudstone)
RIVIS_381	10/8/2002	7711313.022	629794.060	155.751	Bedrock (Sandy River Mudstone)
RIVIS_382	10/8/2002	7711331.129	629767.405	154.915	Bedrock (Sandy River Mudstone)
RIVIS_383	10/8/2002	7711360.927	629741.783	154.467	Bedrock (Sandy River Mudstone)
RIVIS_384	10/8/2002	7711383.886	629729.766	153.599	Bedrock (Sandy River Mudstone)
RIVIS_385	10/8/2002	7711403.303	629685.103	153.427	Bedrock (Sandy River Mudstone)
RIVIS_386	10/8/2002	7711438.786	629640.610	153.434	Bedrock (Sandy River Mudstone)
RIVIS_387	10/8/2002	7711779.737	629399.300	160.643	DOGAMI Transect
RIVIS_388	10/8/2002	7711787.401	629431.414	159.923	DOGAMI Transect
RIVIS_389	10/8/2002	7711795.430	629465.068	159.570	DOGAMI Transect
RIVIS_390	10/8/2002	7711802.386	629494.221	158.914	DOGAMI Transect
RIVIS_391	10/8/2002	7711806.358	629510.868	156.350	DOGAMI Transect
RIVIS_392	10/8/2002	7711808.317	629519.076	154.939	DOGAMI Transect
RIVIS_393	10/8/2002	7711810.525	629528.329	153.024	DOGAMI Transect
RIVIS_394	10/8/2002	7711813.421	629540.465	151.700	DOGAMI Transect
RIVIS_395	10/8/2002	7711817.490	629557.518	151.437	DOGAMI Transect
RIVIS_396	10/8/2002	7711820.761	629571.228	151.563	DOGAMI Transect
RIVIS_397	10/8/2002	7711824.361	629586.315	151.498	DOGAMI Transect
RIVIS_398	10/8/2002	7711828.944	629605.523	152.130	DOGAMI Transect
RIVIS_399	10/8/2002	7711833.325	629623.886	152.977	DOGAMI Transect
RIVIS_400	10/8/2002	7711836.951	629639.087	153.481	DOGAMI Transect
RIVIS_401	10/8/2002	7711840.488	629653.910	154.596	DOGAMI Transect
RIVIS_402	10/8/2002	7711846.621	629679.205	160.122	DOGAMI Transect
RIVIS_403	10/8/2002	7710528.235	631235.519	152.174	Check backsite
RIVIS_404	10/8/2002	7710684.097	631299.082	164.072	DOGAMI Transect
RIVIS_405	10/8/2002	7710662.141	631284.204	162.953	DOGAMI Transect
RIVIS_406	10/8/2002	7710634.669	631265.304	160.701	DOGAMI Transect
RIVIS_407	10/8/2002	7710612.299	631249.994	159.587	DOGAMI Transect

Table F.2 Total station survey data 2002 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RIVIS_408	10/8/2002	7710591.429	631235.519	157.903	DOGAMI Transect
RIVIS_409	10/8/2002	7710567.743	631219.059	156.015	DOGAMI Transect
RIVIS_410	10/8/2002	7710554.304	631210.088	154.477	DOGAMI Transect
RIVIS_411	10/8/2002	7710541.759	631201.485	150.477	DOGAMI Transect
RIVIS_412	10/8/2002	7710532.445	631194.819	143.625	DOGAMI Transect
RIVIS_413	10/8/2002	7710522.953	631184.211	142.693	DOGAMI Transect
RIVIS_414	10/8/2002	7710500.858	631171.613	143.992	DOGAMI Transect
RIVIS_415	10/8/2002	7710465.292	631144.869	146.528	DOGAMI Transect
RIVIS_416	10/8/2002	7710469.292	631143.940	146.755	DOGAMI Transect
RIVIS_417	10/8/2002	7710445.054	631131.354	144.846	DOGAMI Transect
RIVIS_418	10/8/2002	7710426.071	631120.549	143.675	DOGAMI Transect
RIVIS_419	10/8/2002	7710408.032	631104.966	143.796	DOGAMI Transect
RIVIS_420	10/8/2002	7710401.188	631104.626	147.033	DOGAMI Transect
RIVIS_421	10/8/2002	7710391.632	631098.914	149.591	DOGAMI Transect
RIVIS_422	10/8/2002	7710384.286	631092.141	150.429	DOGAMI Transect
RIVIS_423	10/8/2002	7710382.015	631090.172	151.975	DOGAMI Transect
RIVIS_424	10/8/2002	7710378.857	631087.315	156.192	DOGAMI Transect
RIVIS_425	10/8/2002	7710421.576	631117.129	142.970	Cross section in Water
RIVIS_426	10/8/2002	7710440.545	631103.699	143.886	Cross section in Water
RIVIS_427	10/8/2002	7710437.055	631080.557	143.183	Cross section in Water
RIVIS_428	10/8/2002	7710447.715	631089.228	143.975	Cross section in Water
RIVIS_429	10/8/2002	7710464.371	631102.304	145.685	Cross section in Water
RIVIS_430	10/8/2002	7710476.811	631115.387	147.793	Cross section in Water
RIVIS_431	10/8/2002	7710498.653	631134.034	146.556	Cross section in Water
RIVIS_432	10/8/2002	7710523.871	631157.491	143.989	Cross section in Water
RIVIS_433	10/8/2002	7710694.435	631063.493	159.970	Check backsite

Table F.3 Total station survey data 2003 on the lower Clackamas River.

Point	Date	Eastings (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_001	1/7/2003	7723409.574	600693.919	314.857	CHKBKST
MCV2003_002	1/7/2003	7723409.596	600693.862	314.857	CHKBKST
MCV2003_003	1/7/2003	7723713.981	600864.484	300.235	CHKBKST
MCV2003_004	1/7/2003	7723391.287	600931.481	300.235	CHKBKST
MCV2003_005	1/7/2003	7723385.857	600953.855	300.543	EDGWATER
MCV2003_006	1/8/2003	7723385.772	600954.064	300.508	EDGWATER
MCV2003_007	1/8/2003	7723371.491	600945.765	300.558	EDGWATER
MCV2003_008	1/8/2003	7723355.223	600940.585	300.603	EDGWATER
MCV2003_009	1/8/2003	7723332.512	600947.406	300.617	EDGWATER
MCV2003_010	1/8/2003	7723324.279	600930.633	300.467	EDGWATER
MCV2003_011	1/8/2003	7723313.859	600918.884	300.619	EDGWATER
MCV2003_012	1/8/2003	7723296.327	600916.268	300.523	EDGWATER
MCV2003_013	1/8/2003	7723275.574	600908.331	300.466	EDGWATER
MCV2003_014	1/8/2003	7723262.258	600893.011	300.460	EDGWATER
MCV2003_015	1/8/2003	7723245.419	600880.297	300.504	EDGWATER
MCV2003_016	1/8/2003	7723232.166	600871.697	300.553	EDGWATER
MCV2003_017	1/8/2003	7723218.754	600856.388	300.273	EDGWATER
MCV2003_018	1/8/2003	7723200.407	600845.493	300.279	EDGWATER
MCV2003_019	1/8/2003	7723186.405	600832.618	300.049	EDGWATER
MCV2003_020	1/8/2003	7723170.909	600819.818	298.748	EDGWATER
MCV2003_021	1/8/2003	7723151.342	600809.881	297.652	EDGWATER
MCV2003_022	1/8/2003	7723132.500	600800.693	297.071	EDGWATER
MCV2003_023	1/8/2003	7723115.918	600795.816	297.081	EDGWATER
MCV2003_024	1/8/2003	7723096.522	600788.755	297.053	EDGWATER
MCV2003_025	1/8/2003	7723078.059	600783.325	296.211	EDGWATER
MCV2003_026	1/8/2003	7723063.360	600781.663	294.687	EDGWATER
MCV2003_027	1/8/2003	7723082.683	600790.808	299.850	TOPBANK
MCV2003_028	1/8/2003	7723071.933	600787.953	300.840	TOPBANK
MCV2003_029	1/8/2003	7723059.189	600784.061	301.898	TOPBANK
MCV2003_030	1/8/2003	7723046.849	600784.383	302.081	TOPBANK
MCV2003_031	1/8/2003	7723036.068	600783.185	302.316	TOPBANK
MCV2003_032	1/8/2003	7723013.929	600776.530	301.825	TOPBANK
MCV2003_033	1/8/2003	7723002.357	600771.706	301.835	TOPBANK
MCV2003_034	1/8/2003	7722982.788	600767.597	302.183	TOPBANK
MCV2003_035	1/8/2003	7722964.649	600763.476	301.954	TOPBANK
MCV2003_036	1/8/2003	7722943.570	600764.904	301.024	TOPBANK
MCV2003_037	1/8/2003	7723123.532	600832.325	301.606	FLOTSAM
MCV2003_038	1/8/2003	7723135.138	600837.103	301.034	FLOTSAM
MCV2003_039	1/8/2003	7723150.942	600850.213	300.933	FLOTSAM
MCV2003_040	1/8/2003	7723144.770	600860.541	301.308	FLOTSAM
MCV2003_041	1/8/2003	7723151.465	600874.881	301.267	FLOTSAM
MCV2003_042	1/8/2003	7723155.987	600881.405	301.344	FLOTSAM
MCV2003_043	1/8/2003	7723175.709	600834.807	300.822	FLOTSAM
MCV2003_044	1/8/2003	7723163.421	600835.027	301.757	FLOTSAM
MCV2003_045	1/8/2003	7723200.540	600857.594	300.979	TOPO
MCV2003_046	1/8/2003	7723215.089	600869.341	300.963	TOPO
MCV2003_047	1/8/2003	7723229.917	600884.732	300.903	TOPO
MCV2003_048	1/8/2003	7723253.277	600903.853	300.975	TOPO
MCV2003_049	1/8/2003	7723267.419	600919.737	300.126	TOPO

Note: Northings and Eastings are in NAD83 Oregon North State Plane Projection. Elevations are relative to the NAVD88 vertical datum.

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_050	1/8/2003	7723286.793	600940.916	300.535	TOPO
MCV2003_051	1/8/2003	7723306.126	600942.409	300.715	TOPO
MCV2003_052	1/8/2003	7723314.364	600962.230	301.594	TOPO
MCV2003_053	1/8/2003	7723358.718	600973.847	302.145	TOPO
MCV2003_054	1/8/2003	7723384.276	600995.328	302.455	FLOTSAM
MCV2003_055	1/8/2003	7723363.983	600992.068	302.514	FLOTSAM
MCV2003_056	1/8/2003	7723348.650	600992.519	302.493	FLOTSAM
MCV2003_057	1/8/2003	7723334.074	600989.714	302.817	FLOTSAM
MCV2003_058	1/8/2003	7723315.495	600983.772	302.460	FLOTSAM
MCV2003_059	1/8/2003	7723299.251	600984.201	302.238	FLOTSAM
MCV2003_060	1/8/2003	7723280.878	600983.650	300.887	FLOTSAM
MCV2003_061	1/8/2003	7723265.624	600985.414	300.467	FLOTSAM
MCV2003_062	1/8/2003	7723255.255	600988.776	299.533	FLOTSAM
MCV2003_063	1/8/2003	7723223.786	600992.801	299.428	FLOTSAM
MCV2003_064	1/8/2003	7723195.963	600998.054	299.398	FLOTSAM
MCV2003_065	1/8/2003	7723153.045	601023.356	298.870	FLOTSAM
MCV2003_066	1/8/2003	7723120.812	601030.693	298.863	FLOTSAM
MCV2003_067	1/8/2003	7723107.138	601026.408	299.195	FLOTSAM
MCV2003_068	1/8/2003	7723067.467	601024.233	299.298	FLOTSAM
MCV2003_069	1/8/2003	7723013.018	601008.862	298.717	FLOTSAM
MCV2003_070	1/8/2003	7723014.280	600993.248	293.591	TOPO
MCV2003_071	1/8/2003	7723023.497	601001.856	293.375	TOPO
MCV2003_072	1/8/2003	7723034.926	601003.418	293.493	TOPO
MCV2003_073	1/8/2003	7723046.304	600998.772	293.003	TOPO
MCV2003_074	1/8/2003	7723060.917	601001.798	293.109	TOPO
MCV2003_075	1/8/2003	7723073.713	601006.337	292.770	TOPO
MCV2003_076	1/8/2003	7723086.635	601010.961	292.705	TOPO
MCV2003_077	1/8/2003	7723109.503	601011.186	293.468	TOPO
MCV2003_078	1/8/2003	7723127.567	601012.854	293.852	TOPO
MCV2003_079	1/8/2003	7723144.980	601006.383	293.422	TOPO
MCV2003_080	1/8/2003	7723159.602	600992.835	293.983	TOPO
MCV2003_081	1/8/2003	7723183.744	600984.678	293.683	TOPO
MCV2003_082	1/8/2003	7723197.134	600979.130	293.846	TOPO
MCV2003_083	1/8/2003	7723218.367	600985.126	294.735	TOPO
MCV2003_084	1/8/2003	7723218.329	600985.067	294.780	TOPO
MCV2003_085	1/8/2003	7723236.000	600984.003	295.616	TOPO
MCV2003_086	1/8/2003	7723256.678	600982.251	297.384	TOPO
MCV2003_087	1/8/2003	7723276.927	600976.419	298.276	TOPO
MCV2003_088	1/8/2003	7723297.675	600974.121	299.241	TOPO
MCV2003_089	1/8/2003	7723320.546	600979.339	300.385	TOPO
MCV2003_090	1/8/2003	7723341.117	600985.270	301.114	TOPO
MCV2003_091	1/8/2003	7723372.376	600987.446	301.978	TOPO
MCV2003_092	1/8/2003	7723371.956	600968.090	301.737	TOPO
MCV2003_093	1/8/2003	7723352.176	600967.618	302.004	TOPO
MCV2003_094	1/8/2003	7723328.759	600964.033	302.035	TOPO
MCV2003_095	1/8/2003	7723309.261	600964.399	301.355	TOPO
MCV2003_096	1/8/2003	7723289.667	600954.806	300.473	TOPO
MCV2003_097	1/8/2003	7723271.157	600951.622	299.464	TOPO
MCV2003_098	1/8/2003	7723248.923	600958.506	298.528	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_099	1/8/2003	7723227.539	600959.736	297.494	TOPO
MCV2003_100	1/8/2003	7723206.261	600957.779	296.980	TOPO
MCV2003_101	1/8/2003	7723177.472	600959.316	298.060	TOPO
MCV2003_102	1/8/2003	7723153.895	600959.350	299.263	TOPO
MCV2003_103	1/8/2003	7723138.481	600956.320	297.810	TOPO
MCV2003_104	1/8/2003	7723123.416	600954.553	295.634	TOPO
MCV2003_105	1/8/2003	7723119.224	600987.185	296.633	TOPO
MCV2003_106	1/8/2003	7723099.875	600990.841	297.086	TOPO
MCV2003_107	1/8/2003	7723076.148	600989.677	295.373	TOPO
MCV2003_108	1/8/2003	7723068.460	600981.819	293.822	TOPO
MCV2003_109	1/8/2003	7723090.572	600978.704	294.152	TOPO
MCV2003_110	1/8/2003	7723090.358	600978.811	294.147	TOPO
MCV2003_111	1/8/2003	7723034.489	600943.539	296.073	TOPO
MCV2003_112	1/8/2003	7723035.751	600921.997	299.308	TOPO
MCV2003_113	1/8/2003	7723054.215	600916.591	299.247	TOPO
MCV2003_114	1/8/2003	7723073.803	600914.789	299.096	TOPO
MCV2003_115	1/8/2003	7723094.835	600916.298	299.049	TOPO
MCV2003_116	1/8/2003	7723115.209	600906.529	299.766	TOPO
MCV2003_117	1/8/2003	7723136.875	600899.689	299.671	TOPO
MCV2003_118	1/8/2003	7723158.987	600897.922	299.976	TOPO
MCV2003_119	1/8/2003	7723184.153	600890.537	300.456	TOPO
MCV2003_120	1/8/2003	7723205.492	600881.167	300.775	TOPO
MCV2003_121	1/8/2003	7723391.260	600931.420	300.208	CHKBKST
MCV2003_122	1/8/2003	7723438.718	600709.173	301.853	FLOTSAM
MCV2003_123	1/8/2003	7723446.162	600713.317	302.614	FLOTSAM
MCV2003_124	1/8/2003	7723451.281	600718.306	302.914	FLOTSAM
MCV2003_125	1/8/2003	7723458.771	600726.112	303.294	FLOTSAM
MCV2003_126	1/8/2003	7723527.599	600610.357	314.860	CHKBKST
MCV2003_127	1/8/2003	7722852.731	600567.335	299.404	CHKBKST
MCV2003_128	1/8/2003	7722869.437	600828.056	294.863	CHKBKST
MCV2003_129	1/8/2003	7722875.994	600832.590	294.875	CHKBKST
MCV2003_130	1/8/2003	7722876.595	600832.073	294.896	CHKBKST
MCV2003_131	1/8/2003	7722875.491	600833.548	294.824	CHKBKST
MCV2003_132	1/8/2003	7722885.848	600839.096	294.964	IMCLAST
MCV2003_133	1/8/2003	7722887.695	600841.685	294.910	IMCLAST
MCV2003_134	1/8/2003	7722885.209	600843.649	294.779	IMCLAST
MCV2003_135	1/8/2003	7722883.335	600840.974	294.806	IMCLAST
MCV2003_136	1/8/2003	7722885.372	600841.333	294.846	IMCLAST
MCV2003_137	1/8/2003	7722883.091	600837.041	294.988	IMCLAST
MCV2003_138	1/8/2003	7722881.744	600834.907	294.929	IMCLAST
MCV2003_139	1/8/2003	7722878.935	600834.653	294.962	IMCLAST
MCV2003_140	1/8/2003	7722876.156	600833.357	294.896	IMCLAST
MCV2003_141	1/8/2003	7722875.282	600834.586	294.772	IMCLAST
MCV2003_142	1/8/2003	7722878.691	600837.109	294.778	IMCLAST
MCV2003_143	1/8/2003	7722879.038	600839.145	294.760	IMCLAST
MCV2003_144	1/8/2003	7722882.604	600841.715	294.707	IMCLAST
MCV2003_145	1/8/2003	7722896.046	600771.609	293.740	EDGWATER
MCV2003_146	1/8/2003	7722883.275	600783.754	293.740	EDGWATER
MCV2003_147	1/8/2003	7722867.288	600787.413	293.695	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_148	1/8/2003	7722854.587	600800.392	293.573	EDGWATER
MCV2003_149	1/8/2003	7722853.809	600819.306	293.693	EDGWATER
MCV2003_150	1/8/2003	7722860.763	600836.219	293.609	EDGWATER
MCV2003_151	1/8/2003	7722870.648	600851.392	293.715	EDGWATER
MCV2003_152	1/8/2003	7722885.283	600865.442	293.816	EDGWATER
MCV2003_153	1/8/2003	7722899.494	600881.659	293.811	EDGWATER
MCV2003_154	1/8/2003	7722911.322	600899.430	293.795	EDGWATER
MCV2003_155	1/8/2003	7722924.026	600917.563	293.808	EDGWATER
MCV2003_156	1/8/2003	7722937.842	600931.398	293.745	EDGWATER
MCV2003_157	1/8/2003	7722969.285	600953.203	293.538	TOPO
MCV2003_158	1/8/2003	7722962.065	600974.985	295.315	TOPO
MCV2003_159	1/8/2003	7722961.253	600990.746	298.630	FLOTSAM
MCV2003_160	1/8/2003	7722989.120	600999.379	298.999	FLOTSAM
MCV2003_161	1/8/2003	7722997.241	600983.371	293.314	TOPO
MCV2003_162	1/8/2003	7723008.863	600962.397	294.665	TOPO
MCV2003_163	1/8/2003	7723035.594	600968.916	294.733	TOPO
MCV2003_164	1/8/2003	7723031.156	600989.515	293.566	TOPO
MCV2003_165	1/8/2003	7723016.360	601010.796	298.790	FLOTSAM
MCV2003_166	1/8/2003	7723077.704	600955.806	297.346	FLOTSAM
MCV2003_167	1/8/2003	7723051.781	600950.217	296.933	FLOTSAM
MCV2003_168	1/8/2003	7723035.475	600929.442	297.818	FLOTSAM
MCV2003_169	1/8/2003	7723020.553	600920.386	298.344	FLOTSAM
MCV2003_170	1/8/2003	7722988.972	600904.265	296.348	FLOTSAM
MCV2003_171	1/8/2003	7722976.206	600888.702	297.568	FLOTSAM
MCV2003_172	1/8/2003	7722958.345	600875.773	297.190	FLOTSAM
MCV2003_173	1/8/2003	7722938.307	600864.933	297.055	FLOTSAM
MCV2003_174	1/8/2003	7722928.372	600853.528	297.095	FLOTSAM
MCV2003_175	1/8/2003	7722910.657	600834.714	296.451	FLOTSAM
MCV2003_176	1/8/2003	7722908.796	600817.106	297.376	FLOTSAM
MCV2003_177	1/8/2003	7722908.388	600796.072	297.458	FLOTSAM
MCV2003_178	1/8/2003	7722905.978	600780.544	297.653	FLOTSAM
MCV2003_179	1/8/2003	7722864.555	600877.029	291.937	TOPO
MCV2003_180	1/8/2003	7722881.621	600882.836	292.322	TOPO
MCV2003_181	1/8/2003	7722892.608	600896.045	292.554	TOPO
MCV2003_182	1/8/2003	7722911.522	600912.502	292.205	TOPO
MCV2003_183	1/8/2003	7722927.128	600929.585	293.030	TOPO
MCV2003_184	1/8/2003	7722951.110	600944.313	293.460	TOPO
MCV2003_185	1/8/2003	7722972.699	600956.844	293.967	TOPO
MCV2003_186	1/8/2003	7722994.442	600980.615	293.398	TOPO
MCV2003_187	1/8/2003	7723023.381	600989.088	293.543	TOPO
MCV2003_188	1/8/2003	7723042.684	600958.347	295.821	TOPO
MCV2003_189	1/8/2003	7723030.367	600945.162	296.209	TOPO
MCV2003_190	1/8/2003	7723011.978	600934.875	296.864	TOPO
MCV2003_191	1/8/2003	7722991.885	600937.490	296.457	TOPO
MCV2003_192	1/8/2003	7722973.777	600925.595	296.230	TOPO
MCV2003_193	1/8/2003	7722953.466	600907.348	294.316	TOPO
MCV2003_194	1/8/2003	7722937.083	600906.906	295.910	TOPO
MCV2003_195	1/8/2003	7722922.466	600878.561	295.440	TOPO
MCV2003_196	1/8/2003	7722945.347	600882.091	295.703	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_197	1/8/2003	7722965.038	600897.462	296.821	TOPO
MCV2003_198	1/8/2003	7722983.419	600909.899	295.137	TOPO
MCV2003_199	1/8/2003	7722997.024	600909.083	296.827	TOPO
MCV2003_200	1/8/2003	7722997.828	600918.913	295.962	TOPO
MCV2003_201	1/8/2003	7723027.465	600925.511	297.686	TOPO
MCV2003_202	1/8/2003	7723027.647	600937.890	295.395	TOPO
MCV2003_203	1/8/2003	7723038.940	600954.553	295.797	TOPO
MCV2003_204	1/8/2003	7723091.282	600958.627	297.281	TOPO
MCV2003_205	1/8/2003	7723095.634	600975.645	293.982	TOPO
MCV2003_206	1/8/2003	7723099.894	600988.743	296.916	TOPO
MCV2003_207	1/8/2003	7723069.769	600989.394	294.915	TOPO
MCV2003_208	1/8/2003	7723050.793	600983.309	293.966	TOPO
MCV2003_209	1/8/2003	7723033.513	600978.862	294.005	TOPO
MCV2003_210	1/8/2003	7723009.231	600973.140	294.246	TOPO
MCV2003_211	1/8/2003	7722984.974	600967.317	293.954	TOPO
MCV2003_212	1/10/2003	7722852.833	600567.418	299.385	CHKBKST
MCV2003_213	1/10/2003	7722871.559	600864.635	292.937	IMCLAST
MCV2003_214	1/10/2003	7722869.269	600866.834	292.855	IMCLAST
MCV2003_215	1/10/2003	7722866.947	600864.823	292.946	IMCLAST
MCV2003_216	1/10/2003	7722869.506	600862.230	293.003	IMCLAST
MCV2003_217	1/10/2003	7722869.477	600864.457	292.869	IMCLAST
MCV2003_218	1/10/2003	7722844.327	600832.660	292.274	IMCLAST
MCV2003_219	1/10/2003	7722843.349	600832.912	292.267	IMCLAST
MCV2003_220	1/10/2003	7722840.625	600835.527	292.206	IMCLAST
MCV2003_221	1/10/2003	7722842.352	600835.850	292.383	IMCLAST
MCV2003_222	1/10/2003	7722841.195	600837.596	292.247	IMCLAST
MCV2003_223	1/10/2003	7722847.717	600838.215	292.474	IMCLAST
MCV2003_224	1/10/2003	7722847.703	600838.795	292.598	IMCLAST
MCV2003_225	1/10/2003	7722845.176	600839.409	292.632	IMCLAST
MCV2003_226	1/10/2003	7722844.031	600840.259	292.376	IMCLAST
MCV2003_227	1/10/2003	7722842.377	600842.074	292.029	IMCLAST
MCV2003_228	1/10/2003	7722842.748	600842.999	291.965	IMCLAST
MCV2003_229	1/10/2003	7722843.458	600843.237	292.108	IMCLAST
MCV2003_230	1/10/2003	7722844.692	600842.432	292.304	IMCLAST
MCV2003_231	1/10/2003	7722845.883	600843.014	292.483	IMCLAST
MCV2003_232	1/10/2003	7722843.219	600844.547	291.835	IMCLAST
MCV2003_233	1/10/2003	7722844.496	600845.279	292.185	IMCLAST
MCV2003_234	1/10/2003	7722848.442	600847.013	292.168	IMCLAST
MCV2003_234	1/10/2003	7722848.442	600847.013	292.168	IMCLAST
MCV2003_235	1/10/2003	7722850.558	600846.485	292.443	IMCLAST
MCV2003_236	1/10/2003	7722847.223	600848.524	291.934	IMCLAST
MCV2003_237	1/10/2003	7722853.199	600847.396	292.582	IMCLAST
MCV2003_238	1/10/2003	7722852.875	600848.799	292.334	IMCLAST
MCV2003_239	1/10/2003	7722852.591	600849.756	292.318	IMCLAST
MCV2003_240	1/10/2003	7722853.474	600850.215	292.063	IMCLAST
MCV2003_241	1/10/2003	7722854.182	600849.574	292.240	IMCLAST
MCV2003_242	1/10/2003	7722856.286	600848.129	292.355	IMCLAST
MCV2003_243	1/10/2003	7722858.184	600848.661	292.803	IMCLAST
MCV2003_244	1/10/2003	7722855.362	600850.879	292.139	IMCLAST

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_245	1/10/2003	7722853.611	600852.072	292.018	IMCLAST
MCV2003_246	1/10/2003	7722861.744	600854.549	292.826	IMCLAST
MCV2003_247	1/10/2003	7722862.104	600855.381	292.949	IMCLAST
MCV2003_248	1/10/2003	7722862.951	600854.985	293.239	IMCLAST
MCV2003_249	1/10/2003	7722863.235	600855.298	293.291	IMCLAST
MCV2003_250	1/10/2003	7722861.505	600855.732	292.593	IMCLAST
MCV2003_251	1/10/2003	7722860.457	600856.497	292.281	IMCLAST
MCV2003_252	1/10/2003	7722858.241	600859.019	292.225	IMCLAST
MCV2003_253	1/10/2003	7722856.176	600860.376	292.045	IMCLAST
MCV2003_254	1/10/2003	7722861.696	600856.799	292.730	IMCLAST
MCV2003_255	1/10/2003	7722863.574	600856.501	293.177	IMCLAST
MCV2003_256	1/10/2003	7722863.006	600857.582	293.054	IMCLAST
MCV2003_257	1/10/2003	7722864.651	600857.159	293.165	IMCLAST
MCV2003_258	1/10/2003	7722864.214	600857.925	293.209	IMCLAST
MCV2003_259	1/10/2003	7722863.639	600858.562	293.042	IMCLAST
MCV2003_260	1/10/2003	7722864.725	600858.460	293.097	IMCLAST
MCV2003_261	1/10/2003	7722865.168	600858.599	293.163	IMCLAST
MCV2003_262	1/10/2003	7722864.920	600859.131	293.041	IMCLAST
MCV2003_263	1/10/2003	7722865.621	600859.031	293.124	IMCLAST
MCV2003_264	1/10/2003	7722865.456	600859.280	293.205	IMCLAST
MCV2003_265	1/10/2003	7722864.575	600859.656	293.076	IMCLAST
MCV2003_266	1/10/2003	7722863.772	600859.672	292.859	IMCLAST
MCV2003_267	1/10/2003	7722862.642	600860.226	292.591	IMCLAST
MCV2003_268	1/10/2003	7722861.016	600862.187	292.254	IMCLAST
MCV2003_269	1/10/2003	7722861.729	600862.356	292.351	IMCLAST
MCV2003_270	1/10/2003	7722861.046	600863.993	292.319	IMCLAST
MCV2003_271	1/10/2003	7722862.125	600863.208	292.458	IMCLAST
MCV2003_272	1/10/2003	7722864.125	600863.244	292.911	IMCLAST
MCV2003_273	1/10/2003	7722864.718	600860.224	293.198	IMCLAST
MCV2003_274	1/10/2003	7722866.141	600860.259	293.174	IMCLAST
MCV2003_275	1/10/2003	7722865.807	600860.808	293.096	IMCLAST
MCV2003_276	1/10/2003	7722865.738	600861.303	293.115	IMCLAST
MCV2003_277	1/10/2003	7722866.207	600861.324	293.062	IMCLAST
MCV2003_278	1/10/2003	7722867.000	600861.003	293.050	IMCLAST
MCV2003_279	1/10/2003	7722867.976	600861.109	293.069	IMCLAST
MCV2003_280	1/10/2003	7722866.865	600861.742	292.962	IMCLAST
MCV2003_281	1/10/2003	7722867.820	600861.630	292.887	IMCLAST
MCV2003_282	1/10/2003	7722867.713	600861.941	292.981	IMCLAST
MCV2003_283	1/10/2003	7722868.215	600862.554	293.017	IMCLAST
MCV2003_284	1/10/2003	7722867.722	600862.680	293.010	IMCLAST
MCV2003_285	1/10/2003	7722867.331	600862.849	293.032	IMCLAST
MCV2003_286	1/10/2003	7722869.237	600861.925	293.170	IMCLAST
MCV2003_287	1/10/2003	7722864.956	600866.415	292.849	IMCLAST
MCV2003_288	1/10/2003	7722872.551	600778.311	293.065	EDGWATER
MCV2003_289	1/10/2003	7722861.978	600786.241	293.043	EDGWATER
MCV2003_290	1/10/2003	7722852.114	600794.771	293.099	EDGWATER
MCV2003_291	1/10/2003	7722849.921	600809.694	293.147	EDGWATER
MCV2003_292	1/10/2003	7722851.721	600824.563	293.192	EDGWATER
MCV2003_293	1/10/2003	7722859.220	600843.146	293.318	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_294	1/10/2003	7722868.461	600859.266	293.220	EDGWATER
MCV2003_295	1/10/2003	7722883.918	600872.012	293.099	EDGWATER
MCV2003_296	1/10/2003	7722892.901	600880.344	293.149	EDGWATER
MCV2003_297	1/10/2003	7722899.137	600889.176	293.293	EDGWATER
MCV2003_298	1/10/2003	7722865.884	600896.182	293.173	EDGWATER
MCV2003_299	1/10/2003	7722838.254	600884.426	293.214	EDGWATER
MCV2003_300	1/10/2003	7722818.513	600850.545	293.153	EDGWATER
MCV2003_301	1/10/2003	7723025.884	601010.504	295.441	MAGNAIL
MCV2003_302	1/10/2003	7723106.373	601021.586	295.012	MAGNAIL
MCV2003_303	1/10/2003	7720950.849	600273.471	309.286	CHKBKST
MCV2003_304	1/10/2003	7721057.264	600526.823	290.967	TRACER
MCV2003_305	1/10/2003	7721056.990	600529.573	290.843	TRACER
MCV2003_306	1/10/2003	7721057.332	600531.475	290.489	TRACER
MCV2003_307	1/10/2003	7721056.521	600532.945	290.442	TRACER
MCV2003_308	1/10/2003	7721104.191	600523.268	290.205	TRACER
MCV2003_309	1/10/2003	7721105.382	600525.329	290.118	TRACER
MCV2003_310	1/10/2003	7721104.431	600527.337	289.876	TRACER
MCV2003_311	1/10/2003	7721104.000	600529.333	289.958	TRACER
MCV2003_312	1/10/2003	7721103.402	600530.918	289.524	TRACER
MCV2003_313	1/10/2003	7721104.023	600532.322	289.757	TRACER
MCV2003_314	1/10/2003	7721104.334	600532.648	289.756	TRACER
MCV2003_315	1/10/2003	7721103.840	600416.532	290.384	TRACER
MCV2003_316	1/10/2003	7721105.225	600416.247	290.248	TRACER
MCV2003_317	1/10/2003	7721106.484	600416.390	290.136	TRACER
MCV2003_318	1/10/2003	7721107.929	600418.267	290.228	TRACER
MCV2003_319	1/10/2003	7721104.871	600514.706	290.355	TRACER
MCV2003_320	1/10/2003	7721057.498	600518.798	290.846	TRACER
MCV2003_321	1/10/2003	7721033.833	600765.035	291.973	MAGNAIL
MCV2003_322	1/10/2003	7721585.312	601936.743	279.005	TRACER
MCV2003_323	1/10/2003	7721586.627	601937.971	279.298	TRACER
MCV2003_324	1/10/2003	7721586.930	601939.049	278.839	TRACER
MCV2003_325	1/10/2003	7721589.179	601940.070	278.940	TRACER
MCV2003_326	1/10/2003	7721588.035	601941.052	278.911	TRACER
MCV2003_327	1/10/2003	7721589.419	601941.189	278.498	TRACER
MCV2003_328	1/10/2003	7721588.595	601942.352	278.354	TRACER
MCV2003_329	1/10/2003	7721591.519	601942.327	278.502	TRACER
MCV2003_330	1/10/2003	7721591.896	601942.989	278.591	TRACER
MCV2003_331	1/10/2003	7721591.333	601944.086	278.649	TRACER
MCV2003_332	1/10/2003	7721592.116	601944.110	278.315	TRACER
MCV2003_333	1/10/2003	7721605.332	601914.313	278.766	TRACER
MCV2003_334	1/10/2003	7721565.927	601940.298	279.377	TRACER
MCV2003_335	1/10/2003	7721569.025	601944.784	279.310	TRACER
MCV2003_336	1/10/2003	7721568.059	601946.394	279.180	TRACER
MCV2003_337	1/10/2003	7721570.737	601947.357	279.020	TRACER
MCV2003_338	1/10/2003	7721570.901	601948.138	279.121	TRACER
MCV2003_339	1/10/2003	7721570.326	601949.102	279.047	TRACER
MCV2003_340	1/10/2003	7721572.813	601952.574	278.258	TRACER
MCV2003_341	1/10/2003	7721573.668	601953.061	278.486	TRACER
MCV2003_342	1/10/2003	7721611.525	601902.203	277.666	TRACER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_343	1/10/2003	7717866.617	613506.632	227.718	MAGNAIL
MCV2003_344	1/10/2003	7717869.979	613489.839	229.396	MAGNAIL
MCV2003_345	1/10/2003	7717866.610	613506.614	227.707	MAGNAIL
MCV2003_346	1/10/2003	7717898.618	613436.441	228.018	MAGNAIL
MCV2003_347	1/10/2003	7717898.609	613436.459	227.995	CHKBKST
MCV2003_348	1/10/2003	7717808.860	613383.107	223.292	IMCLAST
MCV2003_349	1/10/2003	7717814.185	613388.658	223.523	IMCLAST
MCV2003_350	1/10/2003	7717817.018	613384.178	223.442	IMCLAST
MCV2003_351	1/10/2003	7717816.920	613383.549	223.524	IMCLAST
MCV2003_352	1/10/2003	7717818.392	613385.763	223.524	IMCLAST
MCV2003_353	1/10/2003	7717814.185	613388.688	223.524	IMCLAST
MCV2003_354	1/10/2003	7717818.448	613386.747	223.522	IMCLAST
MCV2003_355	1/10/2003	7717820.297	613387.286	223.662	IMCLAST
MCV2003_356	1/10/2003	7717823.048	613381.086	223.847	IMCLAST
MCV2003_357	1/10/2003	7717822.113	613387.679	223.705	IMCLAST
MCV2003_358	1/10/2003	7717824.994	613383.495	223.816	IMCLAST
MCV2003_359	1/10/2003	7717822.717	613386.352	223.863	IMCLAST
MCV2003_360	1/10/2003	7717825.648	613384.509	223.774	IMCLAST
MCV2003_361	1/10/2003	7717826.311	613385.341	223.748	IMCLAST
MCV2003_362	1/10/2003	7717829.031	613385.468	224.081	IMCLAST
MCV2003_363	1/10/2003	7717826.642	613387.056	223.741	IMCLAST
MCV2003_364	1/10/2003	7717825.794	613391.808	224.050	IMCLAST
MCV2003_365	1/10/2003	7717826.752	613390.895	224.143	IMCLAST
MCV2003_366	1/10/2003	7717826.357	613392.693	223.941	IMCLAST
MCV2003_367	1/10/2003	7717827.985	613391.986	224.071	IMCLAST
MCV2003_368	1/10/2003	7717823.900	613397.708	224.295	IMCLAST
MCV2003_369	1/10/2003	7717828.660	613393.542	224.254	IMCLAST
MCV2003_370	1/10/2003	7717829.794	613390.960	224.078	IMCLAST
MCV2003_371	1/10/2003	7717832.007	613389.806	224.113	IMCLAST
MCV2003_372	1/10/2003	7717830.666	613391.587	224.109	IMCLAST
MCV2003_373	1/10/2003	7717831.213	613392.424	224.228	IMCLAST
MCV2003_374	1/10/2003	7717829.310	613395.596	224.163	IMCLAST
MCV2003_375	1/10/2003	7717830.384	613395.662	224.167	IMCLAST
MCV2003_376	1/10/2003	7717830.875	613394.847	224.218	IMCLAST
MCV2003_377	1/10/2003	7717831.017	613395.281	224.155	IMCLAST
MCV2003_378	1/10/2003	7717830.395	613397.081	224.641	IMCLAST
MCV2003_379	1/10/2003	7717832.051	613395.803	224.327	IMCLAST
MCV2003_380	1/10/2003	7717831.672	613396.946	224.514	IMCLAST
MCV2003_380	1/10/2003	7717831.672	613396.946	224.514	IMCLAST
MCV2003_380	1/10/2003	7717831.672	613396.946	224.514	IMCLAST
MCV2003_381	1/10/2003	7717831.401	613397.711	224.364	IMCLAST
MCV2003_382	1/10/2003	7717832.144	613397.586	224.565	IMCLAST
MCV2003_383	1/10/2003	7717833.452	613395.864	224.634	IMCLAST
MCV2003_384	1/10/2003	7717835.535	613395.659	224.387	IMCLAST
MCV2003_385	1/10/2003	7717835.847	613397.244	224.316	IMCLAST
MCV2003_386	1/10/2003	7717829.186	613401.145	224.513	IMCLAST
MCV2003_387	1/10/2003	7717833.177	613401.171	224.465	IMCLAST
MCV2003_388	1/10/2003	7717833.333	613400.820	224.458	IMCLAST
MCV2003_389	1/10/2003	7717835.698	613400.128	225.034	IMCLAST

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_390	1/10/2003	7717836.845	613398.900	224.750	IMCLAST
MCV2003_391	1/10/2003	7717838.210	613399.484	224.508	IMCLAST
MCV2003_392	1/10/2003	7717837.277	613401.522	224.768	IMCLAST
MCV2003_393	1/10/2003	7717837.218	613401.900	224.723	IMCLAST
MCV2003_394	1/10/2003	7717834.974	613401.990	224.356	IMCLAST
MCV2003_395	1/10/2003	7717835.377	613402.440	224.368	IMCLAST
MCV2003_396	1/10/2003	7717835.965	613402.172	224.446	IMCLAST
MCV2003_397	1/10/2003	7717837.449	613403.312	224.777	IMCLAST
MCV2003_397	1/10/2003	7717837.449	613403.312	224.777	IMCLAST
MCV2003_398	1/10/2003	7717838.656	613401.584	224.567	IMCLAST
MCV2003_399	1/10/2003	7717838.721	613401.822	224.572	IMCLAST
MCV2003_400	1/10/2003	7717839.214	613402.195	224.588	IMCLAST
MCV2003_400	1/10/2003	7717839.214	613402.195	224.588	IMCLAST
MCV2003_401	1/10/2003	7717838.565	613402.732	224.516	IMCLAST
MCV2003_402	1/10/2003	7717839.425	613403.025	224.636	IMCLAST
MCV2003_403	1/10/2003	7717842.977	613400.411	224.586	IMCLAST
MCV2003_404	1/10/2003	7717842.798	613400.722	224.584	IMCLAST
MCV2003_405	1/10/2003	7717841.917	613401.430	224.720	IMCLAST
MCV2003_406	1/10/2003	7717841.688	613401.749	224.783	IMCLAST
MCV2003_407	1/10/2003	7717841.353	613402.489	224.620	IMCLAST
MCV2003_408	1/10/2003	7717841.147	613403.834	224.617	IMCLAST
MCV2003_409	1/10/2003	7717841.533	613404.339	224.494	IMCLAST
MCV2003_410	1/10/2003	7717839.417	613404.921	224.672	IMCLAST
MCV2003_410	1/10/2003	7717839.417	613404.921	224.672	IMCLAST
MCV2003_411	1/10/2003	7717839.396	613404.534	224.655	IMCLAST
MCV2003_412	1/10/2003	7717838.723	613406.038	224.624	IMCLAST
MCV2003_413	1/10/2003	7717837.143	613405.696	224.776	IMCLAST
MCV2003_414	1/10/2003	7717837.772	613407.265	224.762	IMCLAST
MCV2003_415	1/10/2003	7717836.936	613407.213	224.810	IMCLAST
MCV2003_416	1/10/2003	7717841.864	613404.938	224.420	IMCLAST
MCV2003_417	1/10/2003	7717842.592	613405.530	224.588	IMCLAST
MCV2003_418	1/10/2003	7717843.138	613406.009	224.783	IMCLAST
MCV2003_419	1/10/2003	7717843.387	613406.344	224.772	IMCLAST
MCV2003_420	1/10/2003	7717843.065	613406.779	224.844	IMCLAST
MCV2003_421	1/10/2003	7717842.480	613407.527	224.896	IMCLAST
MCV2003_422	1/10/2003	7717843.746	613406.886	224.788	IMCLAST
MCV2003_423	1/10/2003	7717845.703	613405.995	224.797	IMCLAST
MCV2003_424	1/10/2003	7717847.041	613405.766	224.819	IMCLAST
MCV2003_425	1/10/2003	7717844.319	613408.209	225.174	IMCLAST
MCV2003_426	1/10/2003	7717844.737	613408.079	224.728	IMCLAST
MCV2003_426	1/10/2003	7717844.737	613408.079	224.728	IMCLAST
MCV2003_427	1/10/2003	7717843.053	613409.699	224.808	IMCLAST
MCV2003_428	1/10/2003	7717843.154	613410.127	224.819	IMCLAST
MCV2003_429	1/10/2003	7717844.481	613408.968	224.860	IMCLAST
MCV2003_429	1/10/2003	7717844.481	613408.968	224.860	IMCLAST
MCV2003_430	1/10/2003	7717845.455	613408.862	224.777	IMCLAST
MCV2003_431	1/10/2003	7717845.408	613409.307	224.910	IMCLAST
MCV2003_432	1/10/2003	7717845.599	613409.842	225.047	IMCLAST
MCV2003_433	1/10/2003	7717847.022	613405.804	224.814	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_434	1/10/2003	7717849.459	613406.064	224.862	IMCLAST
MCV2003_435	1/10/2003	7717845.700	613410.786	225.193	IMCLAST
MCV2003_436	1/10/2003	7717847.225	613410.762	225.179	IMCLAST
MCV2003_437	1/10/2003	7717847.736	613410.977	225.171	IMCLAST
MCV2003_438	1/10/2003	7717846.442	613412.010	225.216	IMCLAST
MCV2003_439	1/10/2003	7717845.810	613412.703	225.394	IMCLAST
MCV2003_440	1/10/2003	7717846.646	613413.547	225.083	IMCLAST
MCV2003_441	1/10/2003	7717849.321	613415.490	225.332	IMCLAST
MCV2003_442	1/10/2003	7717851.299	613412.575	225.070	IMCLAST
MCV2003_443	1/10/2003	7717848.793	613410.949	225.229	IMCLAST
MCV2003_444	1/10/2003	7717848.861	613413.118	224.884	IMCLAST
MCV2003_445	1/10/2003	7717869.249	613410.726	225.350	IMCLAST
MCV2003_446	1/10/2003	7717874.892	613418.844	225.562	IMCLAST
MCV2003_447	1/10/2003	7717876.964	613419.445	225.626	IMCLAST
MCV2003_448	1/10/2003	7717875.968	613420.289	225.827	IMCLAST
MCV2003_449	1/10/2003	7717875.527	613421.430	225.802	IMCLAST
MCV2003_450	1/10/2003	7717874.307	613422.245	225.860	IMCLAST
MCV2003_451	1/10/2003	7717875.791	613422.744	225.915	IMCLAST
MCV2003_452	1/10/2003	7717876.839	613425.216	226.277	IMCLAST
MCV2003_453	1/10/2003	7717879.583	613427.510	225.985	IMCLAST
MCV2003_454	1/10/2003	7717881.398	613424.736	226.199	IMCLAST
MCV2003_455	1/10/2003	7717878.911	613422.662	225.958	IMCLAST
MCV2003_456	1/10/2003	7717879.188	613424.991	226.011	IMCLAST
MCV2003_457	1/10/2003	7717860.871	613386.323	224.730	IMCLAST
MCV2003_458	1/10/2003	7717861.175	613387.153	224.832	IMCLAST
MCV2003_459	1/10/2003	7717863.810	613386.257	225.180	IMCLAST
MCV2003_460	1/10/2003	7717862.974	613388.380	225.007	IMCLAST
MCV2003_461	1/10/2003	7717863.841	613388.879	225.451	IMCLAST
MCV2003_462	1/10/2003	7717865.523	613388.719	225.079	IMCLAST
MCV2003_463	1/10/2003	7717865.643	613389.041	225.168	IMCLAST
MCV2003_464	1/10/2003	7717866.244	613388.750	225.110	IMCLAST
MCV2003_465	1/10/2003	7717866.135	613389.319	225.066	IMCLAST
MCV2003_466	1/10/2003	7717866.256	613389.646	225.290	IMCLAST
MCV2003_467	1/10/2003	7717865.902	613389.961	225.121	IMCLAST
MCV2003_468	1/10/2003	7717865.045	613391.493	224.988	IMCLAST
MCV2003_469	1/10/2003	7717868.654	613390.286	225.188	IMCLAST
MCV2003_469	1/10/2003	7717868.654	613390.286	225.188	IMCLAST
MCV2003_470	1/10/2003	7717868.393	613390.785	225.421	IMCLAST
MCV2003_471	1/10/2003	7717869.312	613389.472	225.443	IMCLAST
MCV2003_472	1/10/2003	7717869.457	613389.520	225.468	IMCLAST
MCV2003_473	1/10/2003	7717869.527	613389.949	225.300	IMCLAST
MCV2003_474	1/10/2003	7717869.578	613390.219	225.470	IMCLAST
MCV2003_475	1/10/2003	7717870.694	613389.808	225.273	IMCLAST
MCV2003_476	1/10/2003	7717870.824	613390.349	225.445	IMCLAST
MCV2003_477	1/10/2003	7717870.788	613390.497	225.331	IMCLAST
MCV2003_478	1/10/2003	7717869.805	613391.160	225.404	IMCLAST
MCV2003_479	1/10/2003	7717868.451	613391.920	225.290	IMCLAST
MCV2003_480	1/10/2003	7717870.507	613391.779	225.436	IMCLAST
MCV2003_481	1/10/2003	7717870.271	613391.708	225.316	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_482	1/10/2003	7717870.921	613391.508	225.374	IMCLAST
MCV2003_483	1/10/2003	7717870.344	613392.643	225.359	IMCLAST
MCV2003_484	1/10/2003	7717870.089	613392.880	225.334	IMCLAST
MCV2003_485	1/10/2003	7717870.522	613392.935	225.334	IMCLAST
MCV2003_486	1/10/2003	7717871.543	613392.308	225.421	IMCLAST
MCV2003_487	1/10/2003	7717872.922	613390.888	225.285	IMCLAST
MCV2003_488	1/10/2003	7717872.861	613391.024	225.295	IMCLAST
MCV2003_489	1/10/2003	7717871.906	613392.638	225.489	IMCLAST
MCV2003_490	1/10/2003	7717872.080	613392.795	225.411	IMCLAST
MCV2003_491	1/10/2003	7717871.615	613393.014	225.341	IMCLAST
MCV2003_492	1/10/2003	7717871.591	613393.251	225.281	IMCLAST
MCV2003_493	1/10/2003	7717871.486	613393.306	225.265	IMCLAST
MCV2003_494	1/10/2003	7717871.740	613393.329	225.296	IMCLAST
MCV2003_495	1/10/2003	7717871.706	613394.541	225.184	IMCLAST
MCV2003_496	1/10/2003	7717874.353	613396.235	225.404	IMCLAST
MCV2003_497	1/10/2003	7717876.143	613393.520	225.138	IMCLAST
MCV2003_498	1/10/2003	7717873.445	613391.467	225.141	IMCLAST
MCV2003_499	1/10/2003	7717873.960	613394.185	225.466	IMCLAST
MCV2003_500	1/10/2003	7717836.235	613377.856	224.209	IMCLAST
MCV2003_501	1/10/2003	7717803.010	613375.350	222.591	IMCLAST
MCV2003_502	1/10/2003	7717805.996	613380.869	222.663	IMCLAST
MCV2003_503	1/10/2003	7717808.852	613383.238	223.260	IMCLAST
MCV2003_504	1/10/2003	7717808.866	613381.614	223.056	IMCLAST
MCV2003_505	1/10/2003	7717809.180	613381.825	223.039	IMCLAST
MCV2003_506	1/10/2003	7717811.452	613382.833	223.106	IMCLAST
MCV2003_507	1/10/2003	7717811.086	613385.616	223.174	IMCLAST
MCV2003_508	1/10/2003	7717813.723	613386.469	223.372	IMCLAST
MCV2003_509	1/10/2003	7717814.181	613388.602	223.609	IMCLAST
MCV2003_510	1/10/2003	7717816.636	613383.959	223.277	IMCLAST
MCV2003_511	1/10/2003	7717816.903	613383.656	223.297	IMCLAST
MCV2003_512	2/6/2003	7723527.649	600610.174	314.841	CHKBKST
MCV2003_513	2/6/2003	7723398.156	601007.318	305.062	FLOTSAM
MCV2003_514	2/6/2003	7723374.135	601004.952	305.816	FLOTSAM
MCV2003_515	2/6/2003	7723357.739	600999.672	305.462	FLOTSAM
MCV2003_516	2/6/2003	7723333.071	600995.066	305.415	FLOTSAM
MCV2003_517	2/6/2003	7723311.572	600987.063	304.754	FLOTSAM
MCV2003_518	2/6/2003	7723270.915	600989.267	303.785	FLOTSAM
MCV2003_519	2/6/2003	7723025.986	601010.190	295.529	CHKBKST
MCV2003_520	2/6/2003	7722964.740	600766.153	301.839	TOPBANK
MCV2003_521	2/6/2003	7722983.582	600770.451	301.875	TOPBANK
MCV2003_522	2/6/2003	7722997.348	600772.693	301.831	TOPBANK
MCV2003_523	2/6/2003	7723010.952	600776.343	302.002	TOPBANK
MCV2003_524	2/6/2003	7723019.634	600777.848	301.661	TOPBANK
MCV2003_525	2/6/2003	7723045.251	600787.233	302.289	TOPBANK
MCV2003_526	2/6/2003	7723058.900	600786.950	301.380	TOPBANK
MCV2003_527	2/6/2003	7723072.627	600789.906	300.624	TOPBANK
MCV2003_528	2/6/2003	7723087.686	600787.257	297.208	EDGWATER
MCV2003_529	2/6/2003	7723110.985	600795.164	297.352	EDGWATER
MCV2003_530	2/6/2003	7723132.073	600802.121	297.301	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_531	2/6/2003	7723154.560	600815.916	298.043	EDGWATER
MCV2003_532	2/6/2003	7723181.229	600828.607	300.196	EDGWATER
MCV2003_533	2/6/2003	7723204.905	600848.038	300.547	EDGWATER
MCV2003_534	2/6/2003	7723233.331	600879.799	300.815	EDGWATER
MCV2003_535	2/6/2003	7723258.221	600900.471	300.922	TOPO
MCV2003_536	2/6/2003	7723273.475	600927.931	300.435	TOPO
MCV2003_537	2/6/2003	7723300.321	600944.411	300.565	TOPO
MCV2003_538	2/6/2003	7723332.152	600948.268	300.890	TOPO
MCV2003_539	2/6/2003	7723376.880	600955.699	300.945	EDGWATER
MCV2003_540	2/6/2003	7723423.662	600968.929	300.791	EDGWATER
MCV2003_541	2/6/2003	7723448.487	600983.940	300.989	EDGWATER
MCV2003_542	2/6/2003	7723479.937	600719.880	306.101	FLOTSAM
MCV2003_543	2/6/2003	7723475.488	600715.572	306.130	FLOTSAM
MCV2003_544	2/6/2003	7723471.026	600711.104	306.189	FLOTSAM
MCV2003_545	2/6/2003	7723467.548	600707.546	306.183	FLOTSAM
MCV2003_546	2/6/2003	7723465.763	600705.955	306.238	FLOTSAM
MCV2003_547	2/6/2003	7723462.354	600709.694	305.522	TOPO
MCV2003_548	2/6/2003	7723459.613	600712.684	304.836	TOPO
MCV2003_549	2/6/2003	7723456.900	600715.604	304.270	TOPO
MCV2003_550	2/6/2003	7723453.532	600719.069	303.543	TOPO
MCV2003_551	2/6/2003	7723449.802	600722.984	302.698	TOPO
MCV2003_552	2/6/2003	7723446.509	600726.610	301.986	TOPO
MCV2003_553	2/6/2003	7723443.350	600730.266	301.229	TOPO
MCV2003_554	2/6/2003	7723441.137	600732.435	300.812	EDGWATER
MCV2003_555	2/6/2003	7723444.807	600735.715	300.763	EDGWATER
MCV2003_556	2/6/2003	7723449.380	600739.629	300.762	EDGWATER
MCV2003_557	2/6/2003	7723453.558	600743.187	300.798	EDGWATER
MCV2003_558	2/6/2003	7723456.264	600744.964	300.863	EDGWATER
MCV2003_559	2/6/2003	7723459.369	600741.791	301.546	TOPO
MCV2003_560	2/6/2003	7723461.589	600739.540	302.017	TOPO
MCV2003_561	2/6/2003	7723464.056	600736.905	302.556	TOPO
MCV2003_562	2/6/2003	7723466.389	600734.153	303.083	TOPO
MCV2003_563	2/6/2003	7723469.142	600731.381	303.671	TOPO
MCV2003_564	2/6/2003	7723471.794	600728.369	304.281	TOPO
MCV2003_565	2/6/2003	7723474.779	600725.552	304.884	TOPO
MCV2003_566	2/6/2003	7723515.032	600718.150	313.194	CHKBKST
MCV2003_567	2/6/2003	7723515.175	600717.969	313.207	CHKBKST
MCV2003_568	2/6/2003	7723106.408	601021.496	294.977	CHKBKST
MCV2003_569	2/6/2003	7722882.909	600841.191	294.518	IMCLAST
MCV2003_570	2/6/2003	7722884.804	600843.763	294.650	IMCLAST
MCV2003_571	2/6/2003	7722887.275	600842.164	294.760	IMCLAST
MCV2003_572	2/6/2003	7722885.744	600839.921	294.806	IMCLAST
MCV2003_573	2/6/2003	7722885.183	600841.806	294.652	IMCLAST
MCV2003_574	2/6/2003	7722884.786	600838.569	294.967	IMCLAST
MCV2003_575	2/6/2003	7722884.007	600832.279	294.836	IMCLAST
MCV2003_576	2/6/2003	7722881.294	600826.850	294.699	IMCLAST
MCV2003_577	2/6/2003	7722876.394	600818.305	294.893	IMCLAST
MCV2003_578	2/6/2003	7722870.262	600816.646	294.878	IMCLAST
MCV2003_579	2/6/2003	7722848.753	600799.385	292.766	IMCLAST

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003_580	2/6/2003	7722859.210	600813.557	294.345	IMCLAST
MCV2003_581	2/6/2003	7722862.913	600817.534	294.635	IMCLAST
MCV2003_582	2/6/2003	7722866.581	600823.758	294.634	IMCLAST
MCV2003_583	2/6/2003	7722873.390	600829.882	294.613	IMCLAST
MCV2003_584	2/6/2003	7722879.280	600836.352	294.630	IMCLAST
MCV2003_585	2/6/2003	7722882.678	600840.942	294.492	IMCLAST
MCV2003_586	2/6/2003	7722846.726	600833.936	292.525	IMCLAST
MCV2003_587	2/6/2003	7722840.488	600833.608	291.744	IMCLAST
MCV2003_588	2/6/2003	7722867.093	600865.164	292.931	IMCLAST
MCV2003_589	2/6/2003	7722869.053	600866.458	292.848	IMCLAST
MCV2003_590	2/6/2003	7722871.176	600864.325	293.126	IMCLAST
MCV2003_591	2/6/2003	7722869.626	600862.550	292.721	IMCLAST
MCV2003_592	2/6/2003	7722869.362	600864.381	292.777	IMCLAST
MCV2003_593	2/6/2003	7722903.738	600827.254	296.909	TOPO
MCV2003_594	2/6/2003	7722896.692	600833.703	295.150	TOPO
MCV2003_595	2/6/2003	7722886.920	600843.767	294.607	TOPO
MCV2003_596	2/6/2003	7722878.256	600852.130	294.518	TOPO
MCV2003_597	2/6/2003	7722868.683	600860.979	292.968	TOPO
MCV2003_598	2/6/2003	7722859.284	600870.225	292.269	TOPO
MCV2003_599	2/6/2003	7722849.277	600879.549	292.325	TOPO
MCV2003_600	2/6/2003	7722838.857	600891.248	293.806	TOPO
MCV2003_601	2/6/2003	7723012.804	601003.293	295.065	TOPO
MCV2003_602	2/6/2003	7723018.942	600995.718	293.006	TOPO
MCV2003_603	2/6/2003	7723023.735	600987.432	293.695	TOPO
MCV2003_604	2/6/2003	7723028.663	600976.096	293.586	TOPO
MCV2003_605	2/6/2003	7723037.107	600967.976	294.638	TOPO
MCV2003_606	2/6/2003	7723048.932	600963.873	295.111	TOPO
MCV2003_607	2/6/2003	7723059.264	600959.078	295.477	TOPO
MCV2003_608	2/6/2003	7723069.208	600956.498	296.384	TOPO
MCV2003_609	2/6/2003	7723079.075	600954.246	298.087	TOPO
GAB2003_001	2/12/2003	7717767.203	613418.934	223.523	MAGNAIL
GAB2003_002	2/12/2003	7717770.666	613437.847	225.318	MAGNAIL
GAB2003_003	2/12/2003	7717851.423	613504.828	229.415	MAGNAIL
GAB2003_004	2/12/2003	7717423.041	617860.260	207.204	CHKBKST
GAB2003_005	2/12/2003	7717587.625	617816.762	208.506	IMCLAST
GAB2003_006	2/12/2003	7717590.685	617824.573	208.198	IMCLAST
GAB2003_007	2/12/2003	7717595.821	617830.930	208.243	IMCLAST
GAB2003_008	2/12/2003	7717593.178	617832.224	208.152	IMCLAST
GAB2003_009	2/12/2003	7717601.490	617838.596	208.111	IMCLAST
GAB2003_010	2/12/2003	7717598.813	617851.062	208.116	IMCLAST
GAB2003_011	2/12/2003	7717610.799	617856.883	207.733	IMCLAST
GAB2003_012	2/12/2003	7717612.556	617873.486	207.718	IMCLAST
GAB2003_013	2/12/2003	7717614.050	617877.467	207.668	IMCLAST
GAB2003_014	2/12/2003	7717614.295	617879.162	207.785	IMCLAST
GAB2003_015	2/12/2003	7717615.869	617876.926	207.572	IMCLAST
GAB2003_016	2/12/2003	7717613.113	617890.629	207.660	IMCLAST
GAB2003_017	2/12/2003	7717625.235	617893.215	207.071	IMCLAST
GAB2003_018	2/12/2003	7717626.238	617895.342	206.902	IMCLAST
GAB2003_019	2/12/2003	7717599.008	617891.151	208.354	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_020	2/12/2003	7717599.878	617892.617	208.320	IMCLAST
GAB2003_021	2/12/2003	7717601.388	617893.149	208.206	IMCLAST
GAB2003_022	2/12/2003	7717601.273	617891.759	208.317	IMCLAST
GAB2003_023	2/12/2003	7717599.461	617894.835	208.567	IMCLAST
GAB2003_024	2/12/2003	7717598.396	617889.196	208.350	IMCLAST
GAB2003_025	2/12/2003	7717594.923	617894.881	208.486	IMCLAST
GAB2003_026	2/12/2003	7717600.080	617884.042	208.195	IMCLAST
GAB2003_027	2/12/2003	7717597.827	617881.439	208.220	IMCLAST
GAB2003_028	2/12/2003	7717593.761	617881.314	208.497	IMCLAST
GAB2003_029	2/12/2003	7717587.227	617867.096	208.982	IMCLAST
GAB2003_030	2/12/2003	7717591.191	617867.240	208.387	IMCLAST
GAB2003_031	2/12/2003	7717581.606	617854.650	208.854	IMCLAST
GAB2003_032	2/12/2003	7717581.961	617859.092	208.738	IMCLAST
GAB2003_033	2/12/2003	7717581.065	617859.694	208.972	IMCLAST
GAB2003_034	2/12/2003	7717576.419	617856.968	209.099	IMCLAST
GAB2003_035	2/12/2003	7717574.893	617854.604	209.210	IMCLAST
GAB2003_036	2/12/2003	7717579.053	617850.064	208.793	IMCLAST
GAB2003_037	2/12/2003	7717577.281	617847.277	208.911	IMCLAST
GAB2003_038	2/12/2003	7717577.215	617846.869	208.855	IMCLAST
GAB2003_039	2/12/2003	7717580.142	617847.802	208.694	IMCLAST
GAB2003_040	2/12/2003	7717576.130	617852.515	208.821	IMCLAST
GAB2003_041	2/12/2003	7717577.783	617842.999	208.900	IMCLAST
GAB2003_042	2/12/2003	7717579.858	617843.528	208.638	IMCLAST
GAB2003_043	2/12/2003	7717574.533	617845.775	209.026	IMCLAST
GAB2003_044	2/12/2003	7717570.767	617841.551	209.302	IMCLAST
GAB2003_045	2/12/2003	7717571.654	617839.686	209.074	IMCLAST
GAB2003_046	2/12/2003	7717572.452	617837.973	209.018	IMCLAST
GAB2003_047	2/12/2003	7717571.337	617836.140	209.506	IMCLAST
GAB2003_048	2/12/2003	7717575.574	617842.438	208.833	IMCLAST
GAB2003_049	2/12/2003	7717572.569	617841.518	208.870	IMCLAST
GAB2003_050	2/12/2003	7717570.499	617832.729	209.246	IMCLAST
GAB2003_051	2/12/2003	7717568.761	617829.190	209.164	IMCLAST
GAB2003_052	2/12/2003	7717569.084	617828.652	209.291	IMCLAST
GAB2003_053	2/12/2003	7717570.521	617829.302	209.183	IMCLAST
GAB2003_054	2/12/2003	7717566.549	617830.609	209.137	IMCLAST
GAB2003_055	2/12/2003	7717567.054	617830.230	209.352	IMCLAST
GAB2003_056	2/12/2003	7717566.993	617829.481	209.279	IMCLAST
GAB2003_057	2/12/2003	7717566.526	617830.321	209.049	IMCLAST
GAB2003_058	2/12/2003	7717567.628	617826.535	209.132	IMCLAST
GAB2003_059	2/12/2003	7717567.789	617825.972	208.918	IMCLAST
GAB2003_060	2/12/2003	7717566.452	617825.646	209.102	IMCLAST
GAB2003_061	2/12/2003	7717566.761	617825.243	209.098	IMCLAST
GAB2003_062	2/12/2003	7717568.086	617825.325	209.417	IMCLAST
GAB2003_063	2/12/2003	7717566.808	617829.564	209.000	IMCLAST
GAB2003_064	2/12/2003	7717567.520	617836.279	209.151	IMCLAST
GAB2003_065	2/12/2003	7717574.469	617847.359	209.010	IMCLAST
GAB2003_066	2/12/2003	7717620.818	617905.343	207.448	IMCLAST
GAB2003_067	2/12/2003	7717613.467	617920.421	207.804	IMCLAST
GAB2003_068	2/12/2003	7717615.273	617926.945	207.437	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_069	2/12/2003	7717622.499	617932.464	207.395	IMCLAST
GAB2003_070	2/12/2003	7717644.661	617939.999	206.903	IMCLAST
GAB2003_071	2/12/2003	7717605.196	617853.137	208.057	IMCLAST
GAB2003_072	2/12/2003	7717639.669	617973.199	207.151	IMCLAST
GAB2003_073	2/12/2003	7717620.663	617943.068	207.504	IMCLAST
GAB2003_074	2/12/2003	7717638.669	617987.923	207.198	IMCLAST
GAB2003_075	2/12/2003	7717644.000	618004.131	207.245	IMCLAST
GAB2003_076	2/12/2003	7717628.011	617983.600	207.411	IMCLAST
GAB2003_077	2/12/2003	7717651.842	617999.056	207.208	IMCLAST
GAB2003_078	2/12/2003	7717621.255	617935.970	207.306	IMCLAST
GAB2003_079	2/12/2003	7717643.603	618016.034	206.987	IMCLAST
GAB2003_080	2/12/2003	7717646.651	618045.121	207.185	IMCLAST
GAB2003_081	2/12/2003	7717646.330	618045.010	207.062	IMCLAST
GAB2003_082	2/12/2003	7717647.299	618047.842	207.074	IMCLAST
GAB2003_083	2/12/2003	7717631.785	618024.308	207.059	IMCLAST
GAB2003_084	2/12/2003	7717644.100	618051.417	207.465	IMCLAST
GAB2003_085	2/12/2003	7717657.325	618057.897	207.194	IMCLAST
GAB2003_086	2/12/2003	7717659.651	618055.884	207.062	IMCLAST
GAB2003_087	2/12/2003	7717646.471	618057.193	207.270	IMCLAST
GAB2003_088	2/12/2003	7717645.446	618053.036	207.085	IMCLAST
GAB2003_089	2/12/2003	7717653.975	618070.161	207.180	IMCLAST
GAB2003_090	2/12/2003	7717652.610	618068.507	207.074	IMCLAST
GAB2003_091	2/12/2003	7717649.664	618065.263	207.084	IMCLAST
GAB2003_092	2/12/2003	7717666.332	618069.576	206.849	IMCLAST
GAB2003_093	2/12/2003	7717653.281	618055.865	206.862	IMCLAST
GAB2003_094	2/12/2003	7717642.489	618068.858	206.646	IMCLAST
GAB2003_095	2/12/2003	7717664.320	618089.021	206.865	IMCLAST
GAB2003_096	2/12/2003	7717676.056	618110.216	206.862	IMCLAST
GAB2003_097	2/12/2003	7717658.047	618101.840	206.539	IMCLAST
GAB2003_098	2/12/2003	7717686.802	618150.520	206.437	IMCLAST
GAB2003_099	2/12/2003	7717646.839	618076.369	206.855	IMCLAST
GAB2003_100	2/12/2003	7717637.398	618051.296	207.127	IMCLAST
GAB2003_101	2/12/2003	7717640.440	618047.026	207.340	IMCLAST
GAB2003_102	2/12/2003	7717640.775	618037.567	207.029	IMCLAST
GAB2003_103	2/12/2003	7717634.178	618035.720	207.319	IMCLAST
GAB2003_104	2/12/2003	7717630.455	618036.447	206.487	IMCLAST
GAB2003_105	2/12/2003	7717631.967	618033.824	206.795	IMCLAST
GAB2003_106	2/12/2003	7717621.610	618027.652	206.269	IMCLAST
GAB2003_107	2/12/2003	7717634.792	618043.083	207.150	IMCLAST
GAB2003_108	2/12/2003	7717644.640	618053.876	207.353	IMCLAST
GAB2003_109	2/12/2003	7717649.206	618045.146	206.858	IMCLAST
GAB2003_110	2/12/2003	7717638.259	618016.399	207.131	IMCLAST
GAB2003_111	2/12/2003	7717618.336	618010.800	205.052	IMCLAST
GAB2003_112	2/12/2003	7717624.287	618024.110	205.841	IMCLAST
GAB2003_113	2/12/2003	7717646.262	618037.504	206.893	IMCLAST
GAB2003_114	2/12/2003	7717650.615	617983.091	206.813	IMCLAST
GAB2003_115	2/12/2003	7717644.978	617983.272	206.798	IMCLAST
GAB2003_116	2/12/2003	7717622.352	617943.622	207.228	IMCLAST
GAB2003_117	2/12/2003	7717634.199	617975.930	207.515	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_118	2/12/2003	7717636.719	618014.709	207.136	IMCLAST
GAB2003_119	2/12/2003	7717650.463	618014.786	207.096	IMCLAST
GAB2003_120	2/12/2003	7717669.229	618051.596	206.802	IMCLAST
GAB2003_121	2/12/2003	7717656.860	618053.578	206.953	IMCLAST
GAB2003_122	2/12/2003	7717668.193	618079.444	206.936	IMCLAST
GAB2003_123	2/12/2003	7717673.596	618103.965	206.726	IMCLAST
GAB2003_124	2/12/2003	7717664.842	618108.507	206.579	IMCLAST
GAB2003_125	2/12/2003	7717638.036	618012.263	207.308	IMCLAST
GAB2003_126	2/12/2003	7717648.234	617979.168	206.793	IMCLAST
GAB2003_127	2/12/2003	7717655.468	617973.992	206.735	IMCLAST
GAB2003_128	2/12/2003	7717636.563	617954.368	206.941	IMCLAST
GAB2003_129	2/12/2003	7717641.269	617952.295	207.148	IMCLAST
GAB2003_130	2/12/2003	7717630.643	617909.689	207.133	IMCLAST
GAB2003_131	2/12/2003	7717612.750	617876.786	207.729	IMCLAST
GAB2003_132	2/12/2003	7717592.575	617863.871	208.248	IMCLAST
GAB2003_133	2/12/2003	7717595.186	617861.697	208.187	IMCLAST
GAB2003_134	2/12/2003	7717585.698	617851.788	208.408	IMCLAST
GAB2003_135	2/12/2003	7717583.965	617850.411	208.507	IMCLAST
GAB2003_136	2/12/2003	7717575.525	617847.771	209.015	IMCLAST
GAB2003_137	2/12/2003	7717580.394	617841.506	208.447	IMCLAST
GAB2003_138	2/12/2003	7717605.037	617847.767	207.995	IMCLAST
GAB2003_139	2/12/2003	7717646.997	617920.233	206.872	IMCLAST
GAB2003_140	2/12/2003	7717648.031	617981.413	206.729	IMCLAST
GAB2003_141	2/12/2003	7717649.040	617987.420	206.877	IMCLAST
GAB2003_142	2/12/2003	7717644.483	617992.404	207.112	IMCLAST
GAB2003_143	2/12/2003	7717620.563	617998.176	207.306	IMCLAST
GAB2003_144	2/12/2003	7717615.296	617975.053	207.739	IMCLAST
GAB2003_145	2/12/2003	7717588.088	617818.413	208.097	IMCLAST
GAB2003_146	2/12/2003	7717533.031	617843.607	210.433	IMCLAST
GAB2003_147	2/12/2003	7717533.951	617843.245	210.511	IMCLAST
GAB2003_148	2/12/2003	7717533.711	617846.081	210.290	IMCLAST
GAB2003_149	2/12/2003	7717536.426	617845.348	210.338	IMCLAST
GAB2003_150	2/12/2003	7717536.851	617848.021	210.478	IMCLAST
GAB2003_151	2/12/2003	7717536.642	617848.316	210.475	IMCLAST
GAB2003_152	2/12/2003	7717535.469	617849.445	210.368	IMCLAST
GAB2003_153	2/12/2003	7717540.262	617847.767	210.443	IMCLAST
GAB2003_154	2/12/2003	7717538.326	617846.295	210.556	IMCLAST
GAB2003_155	2/12/2003	7717539.794	617846.879	210.356	IMCLAST
GAB2003_156	2/12/2003	7717539.741	617847.957	210.347	IMCLAST
GAB2003_157	2/12/2003	7717537.767	617849.359	210.429	IMCLAST
GAB2003_158	2/12/2003	7717538.779	617851.454	210.511	IMCLAST
GAB2003_159	2/12/2003	7717538.927	617851.808	210.555	IMCLAST
GAB2003_160	2/12/2003	7717535.522	617851.125	210.319	IMCLAST
GAB2003_161	2/12/2003	7717534.970	617851.137	210.446	IMCLAST
GAB2003_162	2/12/2003	7717538.075	617846.965	210.319	IMCLAST
GAB2003_163	2/12/2003	7717535.506	617848.303	210.275	IMCLAST
GAB2003_164	2/12/2003	7717535.565	617848.147	210.197	IMCLAST
GAB2003_165	2/12/2003	7717535.554	617848.359	210.177	IMCLAST
GAB2003_166	2/12/2003	7717536.820	617851.213	210.220	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_167	2/12/2003	7717540.006	617853.220	210.476	IMCLAST
GAB2003_168	2/12/2003	7717541.453	617853.356	210.397	IMCLAST
GAB2003_169	2/12/2003	7717536.386	617852.320	210.321	IMCLAST
GAB2003_170	2/12/2003	7717536.153	617852.774	210.373	IMCLAST
GAB2003_171	2/12/2003	7717536.130	617853.138	210.392	IMCLAST
GAB2003_172	2/12/2003	7717535.565	617853.339	210.387	IMCLAST
GAB2003_173	2/12/2003	7717534.984	617853.487	210.394	IMCLAST
GAB2003_174	2/12/2003	7717536.994	617854.211	210.424	IMCLAST
GAB2003_175	2/12/2003	7717538.286	617854.247	210.543	IMCLAST
GAB2003_176	2/12/2003	7717540.003	617854.152	210.726	IMCLAST
GAB2003_177	2/12/2003	7717536.660	617851.874	210.337	IMCLAST
GAB2003_178	2/12/2003	7717537.925	617855.859	210.492	IMCLAST
GAB2003_179	2/12/2003	7717538.120	617856.097	210.601	IMCLAST
GAB2003_180	2/12/2003	7717538.823	617855.270	210.483	IMCLAST
GAB2003_181	2/12/2003	7717536.387	617856.390	210.563	IMCLAST
GAB2003_182	2/12/2003	7717536.136	617854.887	210.520	IMCLAST
GAB2003_183	2/12/2003	7717536.896	617854.787	210.465	IMCLAST
GAB2003_184	2/12/2003	7717537.939	617857.623	210.590	IMCLAST
GAB2003_185	2/12/2003	7717537.882	617857.603	210.629	IMCLAST
GAB2003_186	2/12/2003	7717538.000	617857.473	210.490	IMCLAST
GAB2003_187	2/12/2003	7717537.843	617858.667	210.627	IMCLAST
GAB2003_188	2/12/2003	7717538.955	617859.390	210.529	IMCLAST
GAB2003_189	2/12/2003	7717538.546	617858.872	210.570	IMCLAST
GAB2003_190	2/12/2003	7717541.002	617858.787	210.385	IMCLAST
GAB2003_191	2/12/2003	7717541.449	617859.610	210.426	IMCLAST
GAB2003_192	2/12/2003	7717537.173	617859.732	210.587	IMCLAST
GAB2003_193	2/12/2003	7717538.026	617859.944	210.532	IMCLAST
GAB2003_194	2/12/2003	7717537.836	617859.311	210.464	IMCLAST
GAB2003_195	2/12/2003	7717536.094	617859.717	210.584	IMCLAST
GAB2003_196	2/12/2003	7717536.335	617859.753	210.345	IMCLAST
GAB2003_197	2/12/2003	7717535.180	617859.303	210.444	IMCLAST
GAB2003_198	2/12/2003	7717538.512	617853.800	210.472	IMCLAST
GAB2003_199	2/12/2003	7717538.723	617853.569	210.471	IMCLAST
GAB2003_200	2/12/2003	7717538.663	617853.835	210.461	IMCLAST
GAB2003_201	2/12/2003	7717539.034	617853.979	210.518	IMCLAST
GAB2003_202	2/12/2003	7717539.834	617851.283	210.507	IMCLAST
GAB2003_203	2/12/2003	7717539.708	617854.565	210.540	IMCLAST
GAB2003_204	2/12/2003	7717537.140	617857.138	210.501	IMCLAST
GAB2003_205	2/12/2003	7717537.156	617857.060	210.341	IMCLAST
GAB2003_206	2/12/2003	7717540.417	617860.464	210.393	IMCLAST
GAB2003_207	2/12/2003	7717541.097	617862.116	210.439	IMCLAST
GAB2003_208	2/12/2003	7717541.298	617862.209	210.423	IMCLAST
GAB2003_209	2/12/2003	7717544.252	617861.519	210.477	IMCLAST
GAB2003_210	2/12/2003	7717542.464	617863.862	210.723	IMCLAST
GAB2003_211	2/12/2003	7717541.108	617862.735	210.534	IMCLAST
GAB2003_212	2/12/2003	7717542.608	617864.203	210.498	IMCLAST
GAB2003_213	2/12/2003	7717542.649	617864.549	210.585	IMCLAST
GAB2003_214	2/12/2003	7717538.484	617866.311	210.490	IMCLAST
GAB2003_215	2/12/2003	7717539.836	617864.411	210.372	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_216	2/12/2003	7717537.277	617865.943	210.375	IMCLAST
GAB2003_217	2/12/2003	7717539.132	617861.157	210.865	IMCLAST
GAB2003_218	2/12/2003	7717538.944	617862.301	210.620	IMCLAST
GAB2003_219	2/12/2003	7717538.451	617861.795	210.604	IMCLAST
GAB2003_220	2/12/2003	7717535.756	617864.127	210.528	IMCLAST
GAB2003_221	2/12/2003	7717534.277	617865.170	210.637	IMCLAST
GAB2003_222	2/12/2003	7717538.065	617863.066	210.539	IMCLAST
GAB2003_223	2/12/2003	7717538.344	617863.313	210.638	IMCLAST
GAB2003_224	2/12/2003	7717538.577	617863.229	210.577	IMCLAST
GAB2003_225	2/12/2003	7717541.722	617869.452	210.398	IMCLAST
GAB2003_226	2/12/2003	7717540.981	617869.926	210.395	IMCLAST
GAB2003_227	2/12/2003	7717541.450	617870.408	210.322	IMCLAST
GAB2003_228	2/12/2003	7717542.155	617870.040	210.411	IMCLAST
GAB2003_229	2/12/2003	7717543.678	617870.830	210.596	IMCLAST
GAB2003_230	2/12/2003	7717545.547	617869.997	210.416	IMCLAST
GAB2003_231	2/12/2003	7717546.722	617869.261	210.199	IMCLAST
GAB2003_232	2/12/2003	7717546.923	617871.498	210.460	IMCLAST
GAB2003_233	2/12/2003	7717542.141	617873.263	210.496	IMCLAST
GAB2003_234	2/12/2003	7717541.886	617873.113	210.507	IMCLAST
GAB2003_235	2/12/2003	7717541.519	617874.137	210.468	IMCLAST
GAB2003_236	2/12/2003	7717540.086	617870.996	210.583	IMCLAST
GAB2003_237	2/12/2003	7717540.267	617870.448	210.443	IMCLAST
GAB2003_238	2/12/2003	7717538.324	617872.509	210.554	IMCLAST
GAB2003_239	2/12/2003	7717538.368	617874.139	210.509	IMCLAST
GAB2003_240	2/12/2003	7717539.759	617875.075	210.582	IMCLAST
GAB2003_241	2/12/2003	7717537.511	617874.714	210.534	IMCLAST
GAB2003_242	2/12/2003	7717536.543	617876.885	210.974	IMCLAST
GAB2003_243	2/12/2003	7717535.960	617877.930	210.708	IMCLAST
GAB2003_244	2/12/2003	7717535.602	617878.456	210.672	IMCLAST
GAB2003_245	2/12/2003	7717534.695	617876.047	210.588	IMCLAST
GAB2003_246	2/12/2003	7717535.636	617878.439	210.614	IMCLAST
GAB2003_247	2/12/2003	7717540.365	617877.182	210.725	IMCLAST
GAB2003_248	2/12/2003	7717542.492	617876.966	210.547	IMCLAST
GAB2003_249	2/12/2003	7717542.621	617876.895	210.414	IMCLAST
GAB2003_250	2/12/2003	7717543.384	617876.757	210.553	IMCLAST
GAB2003_251	2/12/2003	7717546.245	617875.943	210.401	IMCLAST
GAB2003_252	2/12/2003	7717543.604	617878.328	210.647	IMCLAST
GAB2003_253	2/12/2003	7717543.857	617879.305	210.630	IMCLAST
GAB2003_254	2/12/2003	7717543.871	617880.282	210.564	IMCLAST
GAB2003_255	2/12/2003	7717545.540	617879.712	210.554	IMCLAST
GAB2003_256	2/12/2003	7717546.927	617879.484	210.562	IMCLAST
GAB2003_257	2/12/2003	7717546.386	617878.583	210.515	IMCLAST
GAB2003_258	2/12/2003	7717545.685	617878.717	210.470	IMCLAST
GAB2003_259	2/12/2003	7717546.763	617881.860	210.473	IMCLAST
GAB2003_260	2/12/2003	7717547.336	617882.582	210.539	IMCLAST
GAB2003_261	2/12/2003	7717546.744	617882.959	210.516	IMCLAST
GAB2003_262	2/12/2003	7717546.627	617882.957	210.546	IMCLAST
GAB2003_263	2/12/2003	7717547.691	617884.084	210.520	IMCLAST
GAB2003_264	2/12/2003	7717547.916	617886.037	210.640	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_265	2/12/2003	7717549.159	617888.325	210.632	IMCLAST
GAB2003_266	2/12/2003	7717549.234	617888.662	210.603	IMCLAST
GAB2003_267	2/12/2003	7717551.251	617888.382	210.552	IMCLAST
GAB2003_268	2/12/2003	7717552.555	617888.785	210.549	IMCLAST
GAB2003_269	2/12/2003	7717552.588	617887.357	210.519	IMCLAST
GAB2003_270	2/12/2003	7717554.687	617887.934	210.456	IMCLAST
GAB2003_271	2/12/2003	7717557.213	617889.885	210.514	IMCLAST
GAB2003_272	2/12/2003	7717550.219	617893.156	210.691	IMCLAST
GAB2003_273	2/12/2003	7717553.051	617895.232	210.725	IMCLAST
GAB2003_274	2/12/2003	7717551.076	617899.075	210.683	IMCLAST
GAB2003_275	2/12/2003	7717551.159	617899.538	210.679	IMCLAST
GAB2003_276	2/12/2003	7717551.930	617891.275	210.607	IMCLAST
GAB2003_277	2/12/2003	7717547.638	617896.190	210.694	IMCLAST
GAB2003_278	2/12/2003	7717547.937	617895.357	210.511	IMCLAST
GAB2003_279	2/12/2003	7717546.504	617893.377	210.562	IMCLAST
GAB2003_280	2/12/2003	7717545.206	617890.453	210.472	IMCLAST
GAB2003_281	2/12/2003	7717545.572	617887.938	210.534	IMCLAST
GAB2003_282	2/12/2003	7717546.393	617886.341	210.724	IMCLAST
GAB2003_283	2/12/2003	7717544.497	617885.105	210.739	IMCLAST
GAB2003_284	2/12/2003	7717543.696	617884.145	210.686	IMCLAST
GAB2003_285	2/12/2003	7717543.200	617883.262	210.563	IMCLAST
GAB2003_286	2/12/2003	7717544.890	617881.700	210.533	IMCLAST
GAB2003_287	2/12/2003	7717541.544	617884.031	210.714	IMCLAST
GAB2003_288	2/12/2003	7717540.598	617884.954	210.855	IMCLAST
GAB2003_289	2/12/2003	7717540.492	617885.208	210.983	IMCLAST
GAB2003_290	2/12/2003	7717540.141	617884.098	210.826	IMCLAST
GAB2003_291	2/12/2003	7717539.841	617884.018	210.716	IMCLAST
GAB2003_292	2/12/2003	7717539.551	617883.869	210.718	IMCLAST
GAB2003_293	2/12/2003	7717539.426	617882.778	210.544	IMCLAST
GAB2003_294	2/12/2003	7717540.502	617881.324	210.678	IMCLAST
GAB2003_295	2/12/2003	7717540.439	617880.182	210.673	IMCLAST
GAB2003_296	2/12/2003	7717539.312	617881.294	210.506	IMCLAST
GAB2003_297	2/12/2003	7717538.463	617881.928	210.579	IMCLAST
GAB2003_298	2/12/2003	7717535.697	617881.863	210.865	IMCLAST
GAB2003_299	2/12/2003	7717536.783	617882.339	210.484	IMCLAST
GAB2003_300	2/12/2003	7717537.423	617882.498	210.692	IMCLAST
GAB2003_301	2/12/2003	7717537.553	617881.850	210.424	IMCLAST
GAB2003_302	2/12/2003	7717536.102	617883.046	210.585	IMCLAST
GAB2003_303	2/12/2003	7717536.729	617884.314	210.743	IMCLAST
GAB2003_304	2/12/2003	7717532.590	617886.364	210.787	IMCLAST
GAB2003_305	2/12/2003	7717536.806	617888.039	210.575	IMCLAST
GAB2003_306	2/12/2003	7717538.706	617889.273	210.732	IMCLAST
GAB2003_307	2/12/2003	7717539.427	617889.250	210.892	IMCLAST
GAB2003_308	2/12/2003	7717542.734	617889.565	210.705	IMCLAST
GAB2003_309	2/12/2003	7717543.067	617889.803	210.590	IMCLAST
GAB2003_310	2/12/2003	7717539.674	617886.660	210.739	IMCLAST
GAB2003_311	2/12/2003	7717539.794	617886.521	210.715	IMCLAST
GAB2003_312	2/12/2003	7717541.759	617886.199	210.536	IMCLAST
GAB2003_313	2/12/2003	7717542.064	617885.976	210.758	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
GAB2003_314	2/12/2003	7717545.539	617884.593	210.538	IMCLAST
GAB2003_315	2/12/2003	7717542.919	617888.477	210.648	IMCLAST
GAB2003_316	2/12/2003	7717542.357	617890.523	210.611	IMCLAST
GAB2003_317	2/12/2003	7717542.478	617892.935	210.721	IMCLAST
GAB2003_318	2/12/2003	7717544.228	617888.365	210.373	IMCLAST
GAB2003_319	2/12/2003	7717545.218	617893.577	210.448	IMCLAST
GAB2003_320	2/12/2003	7717548.978	617893.872	210.582	IMCLAST
GAB2003_321	2/12/2003	7717547.676	617899.132	210.586	IMCLAST
GAB2003_322	2/12/2003	7717548.756	617897.355	210.550	IMCLAST
GAB2003_323	2/12/2003	7717545.969	617901.821	210.569	IMCLAST
GAB2003_324	2/12/2003	7717546.531	617900.127	210.551	IMCLAST
GAB2003_325	2/12/2003	7717540.066	617897.751	210.752	IMCLAST
GAB2003_326	2/12/2003	7717541.205	617896.431	210.769	IMCLAST
GAB2003_327	2/12/2003	7717540.716	617895.866	210.727	IMCLAST
GAB2003_328	2/12/2003	7717539.450	617895.215	210.790	IMCLAST
GAB2003_329	2/12/2003	7717538.268	617894.620	210.578	IMCLAST
GAB2003_330	2/12/2003	7717538.184	617896.588	210.592	IMCLAST
GAB2003_331	2/12/2003	7717536.964	617896.168	210.652	IMCLAST
GAB2003_332	2/12/2003	7717538.182	617891.041	210.842	IMCLAST
GAB2003_333	2/12/2003	7717538.793	617892.709	210.613	IMCLAST
GAB2003_334	2/12/2003	7717540.492	617888.307	210.563	IMCLAST
GAB2003_335	2/12/2003	7717541.102	617887.001	210.590	IMCLAST
GAB2003_336	2/12/2003	7717541.304	617886.790	210.576	IMCLAST
GAB2003_337	2/12/2003	7717542.147	617886.689	210.706	IMCLAST
GAB2003_338	2/12/2003	7717540.486	617891.158	210.791	IMCLAST
GAB2003_339	2/12/2003	7717544.165	617893.794	210.421	IMCLAST
GAB2003_340	2/12/2003	7717537.392	617885.649	210.597	IMCLAST
GAB2003_341	2/12/2003	7717538.171	617883.495	210.583	IMCLAST
GAB2003_342	2/12/2003	7717538.527	617883.618	210.514	IMCLAST
GAB2003_343	2/12/2003	7717540.548	617879.580	210.692	IMCLAST
GAB2003_344	2/12/2003	7717548.651	617878.980	210.369	IMCLAST
GAB2003_345	2/12/2003	7717540.701	617885.345	210.718	IMCLAST
GAB2003_346	2/12/2003	7717530.852	617882.086	210.582	IMCLAST
GAB2003_347	2/12/2003	7717530.041	617879.173	210.608	IMCLAST
GAB2003_348	2/12/2003	7717531.864	617880.619	210.587	IMCLAST
GAB2003_349	2/12/2003	7717531.756	617859.931	210.414	IMCLAST
GAB2003_350	2/12/2003	7717543.857	617866.735	210.316	IMCLAST
GAB2003_351	2/12/2003	7717542.988	617871.359	210.504	IMCLAST
GAB2003_352	2/12/2003	7717543.816	617872.408	210.380	IMCLAST
GAB2003_353	2/12/2003	7717543.709	617872.126	210.446	IMCLAST
GAB2003_354	2/12/2003	7717628.328	618012.567	207.932	TREE
GAB2003_355	2/12/2003	7717624.954	618009.361	207.832	TREE
GAB2003_356	2/12/2003	7717622.141	618007.381	207.621	TREE
GAB2003_357	2/12/2003	7717617.876	618003.734	207.551	TREE
GAB2003_358	2/12/2003	7717614.783	618001.283	207.580	TREE
GAB2003_359	2/12/2003	7717422.948	617860.217	207.207	CHKBKST
MINE2003_001	02/14/2003	7721520.544	599801.581	292.095	CHKBKST
MINE2003_002	02/14/2003	7721519.726	599774.195	292.567	MAGNAIL
MINE2003_003	02/14/2003	7720950.993	600273.704	309.362	MAGNAIL

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MINE2003_004	02/14/2003	7720950.990	600273.700	309.361	CHKBKST
MINE2003_005	02/14/2003	7721074.105	600555.294	291.174	MAGNAIL
MINE2003_006	02/14/2003	7721106.027	600416.153	290.227	TRACER
MINE2003_007	02/14/2003	7721106.410	600416.658	290.132	TRACER
MINE2003_008	02/14/2003	7721105.378	600420.641	290.744	TRACER
MINE2003_009	02/14/2003	7721108.278	600418.105	290.216	TRACER
MINE2003_010	02/14/2003	7721057.523	600518.939	290.879	TRACER
MINE2003_011	02/14/2003	7721057.768	600527.426	290.895	TRACER
MINE2003_012	02/14/2003	7721057.253	600531.443	290.455	TRACER
MINE2003_013	02/14/2003	7721056.584	600533.802	290.335	TRACER
MINE2003_014	02/14/2003	7721057.692	600557.653	290.699	TRACER
MINE2003_015	02/14/2003	7721104.794	600514.762	290.341	TRACER
MINE2003_016	02/14/2003	7721104.235	600523.542	290.161	TRACER
MINE2003_017	02/14/2003	7721107.152	600526.506	289.976	TRACER
MINE2003_018	02/14/2003	7721104.370	600527.602	289.910	TRACER
MINE2003_019	02/14/2003	7721103.956	600529.349	289.971	TRACER
MINE2003_020	02/14/2003	7721103.360	600530.874	289.612	TRACER
MINE2003_021	02/14/2003	7721104.230	600532.557	289.682	TRACER
MINE2003_022	02/14/2003	7721605.958	601914.294	278.681	TRACER
MINE2003_023	02/14/2003	7721588.534	601940.098	278.840	TRACER
MINE2003_024	02/14/2003	7721588.595	601941.450	278.503	TRACER
MINE2003_025	02/14/2003	7721586.682	601940.132	278.713	TRACER
MINE2003_026	02/14/2003	7721593.554	601944.081	278.551	TRACER
MINE2003_027	02/14/2003	7721592.608	601944.324	278.637	TRACER
MINE2003_028	02/14/2003	7721591.951	601944.133	278.363	TRACER
MINE2003_029	02/14/2003	7721590.953	601944.766	278.691	TRACER
MINE2003_030	02/14/2003	7721589.283	601946.217	278.658	TRACER
MINE2003_031	02/14/2003	7721591.482	601952.156	279.223	TRACER
MINE2003_032	02/14/2003	7721595.717	601952.559	279.132	TRACER
MINE2003_033	02/14/2003	7721566.089	601940.412	279.328	TRACER
MINE2003_034	02/14/2003	7721568.825	601944.810	279.225	TRACER
MINE2003_035	02/14/2003	7721571.963	601949.985	278.738	TRACER
MINE2003_036	02/14/2003	7721571.719	601951.836	278.571	TRACER
MINE2003_037	02/14/2003	7721572.912	601952.593	278.381	TRACER
MINE2003_038	02/14/2003	7721576.722	601950.020	278.444	TRACER
MINE2003_039	02/14/2003	7721578.153	601956.203	279.028	TRACER
MINE2003_040	02/14/2003	7721491.756	601949.612	281.430	MAGNAIL
MINE2003_041	02/14/2003	7717981.109	606214.596	252.410	CHKBKST
LWMCV2003_001	02/14/2003	7717874.059	605888.690	254.101	MAGNAIL
LWMCV2003_002	02/14/2003	7717828.821	605935.210	251.983	MAGNAIL
LWMCV2003_003	02/14/2003	7717804.472	606148.547	252.973	CHKBKST
LWMCV2003_004	02/14/2003	7717928.992	605906.061	252.919	TRACER
LWMCV2003_005	02/14/2003	7717925.810	605908.330	252.247	TRACER
LWMCV2003_006	02/14/2003	7717924.270	605909.588	252.131	TRACER
LWMCV2003_007	02/14/2003	7717923.219	605910.899	251.657	TRACER
LWMCV2003_008	02/14/2003	7717921.549	605911.173	251.657	TRACER
LWMCV2003_009	02/14/2003	7717915.299	605917.019	251.601	TRACER
LWMCV2003_010	02/14/2003	7717912.288	605897.151	252.200	TRACER
LWMCV2003_011	02/14/2003	7717910.689	605899.740	252.057	TRACER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
LWMCV2003_012	02/14/2003	7717907.333	605902.782	251.606	TRACER
LWMCV2003_013	02/14/2003	7717907.039	605902.892	251.635	TRACER
LWMCV2003_014	02/14/2003	7717907.027	605902.468	251.353	TRACER
LWMCV2003_015	02/14/2003	7717898.228	605884.090	253.033	TRACER
LWMCV2003_016	02/14/2003	7717895.430	605888.916	252.363	TRACER
LWMCV2003_017	02/14/2003	7717893.114	605895.020	252.143	TRACER
LWMCV2003_018	02/14/2003	7717891.370	605895.476	251.491	TRACER
LWMCV2003_019	02/14/2003	7717891.541	605896.325	252.107	TRACER
LWMCV2003_020	02/14/2003	7717888.890	605899.700	251.865	TRACER
LWMCV2003_021	02/14/2003	7717887.550	605902.336	251.583	TRACER
LWMCV2003_022	02/14/2003	7717902.664	605918.822	251.075	TRACER
LWMCV2003_023	02/14/2003	7717890.151	605874.346	253.976	MAGNAIL
GAB2003_360	02/14/2003	7717423.040	617860.272	207.194	CHKBKST
GAB2003_361	02/14/2003	7717500.830	617931.318	210.027	WSE
GAB2003_362	02/14/2003	7717563.962	617911.935	210.186	WSE
GAB2003_363	02/14/2003	7717551.093	617901.620	210.392	WSE
GAB2003_364	02/14/2003	7717536.985	617899.055	210.620	WSE
GAB2003_365	02/14/2003	7717532.438	617918.826	211.647	FLOTSAM
GAB2003_366	02/14/2003	7717527.042	617923.425	211.230	FLOTSAM
GAB2003_367	02/14/2003	7717547.018	617924.638	211.838	FLOTSAM
GAB2003_368	02/14/2003	7717558.538	617919.090	211.476	FLOTSAM
GAB2003_369	02/14/2003	7717558.077	617927.217	211.705	FLOTSAM
GAB2003_370	02/14/2003	7717569.458	617923.655	211.102	FLOTSAM
GAB2003_371	02/14/2003	7717581.026	617921.725	210.756	FLOTSAM
GAB2003_372	02/14/2003	7717589.182	617911.063	211.001	FLOTSAM
GAB2003_373	02/14/2003	7717596.358	617939.455	210.179	FLOTSAM
GAB2003_374	02/14/2003	7717774.942	617717.265	211.592	FLOTSAM
GAB2003_375	02/14/2003	7717778.895	617726.889	212.003	FLOTSAM
GAB2003_376	02/14/2003	7717754.165	617676.505	211.516	FLOTSAM
GAB2003_377	02/14/2003	7717728.048	617595.574	213.660	FLOTSAM
TRC2003_002	5/27/2003	7720951.034	600273.728	309.421	CHKBKST
TRC2003_003	5/27/2003	7720951.016	600273.736	309.382	CHKBKST
TRC2003_004	5/27/2003	7721074.095	600555.307	291.179	CHKBKST
TRC2003_005	5/27/2003	7721057.958	600527.290	290.840	TRACER
TRC2003_006	5/27/2003	7721057.320	600531.438	290.470	TRACER
TRC2003_007	5/27/2003	7721056.788	600534.033	290.306	TRACER
TRC2003_008	5/27/2003	7721057.550	600557.657	290.636	TRACER
TRC2003_009	5/27/2003	7721103.490	600530.818	289.555	TRACER
TRC2003_010	5/27/2003	7721104.077	600529.306	290.017	TRACER
TRC2003_011	5/27/2003	7721104.325	600527.694	289.895	TRACER
TRC2003_012	5/27/2003	7721103.335	600533.476	289.856	TRACER
TRC2003_013	5/27/2003	7721107.103	600526.492	290.007	TRACER
TRC2003_014	5/27/2003	7721104.360	600523.432	290.163	TRACER
TRC2003_015	5/27/2003	7721105.585	600420.601	290.787	TRACER
TRC2003_016	5/27/2003	7721106.112	600416.032	290.208	TRACER
TRC2003_017	5/27/2003	7721106.416	600416.502	290.163	TRACER
TRC2003_018	5/27/2003	7721108.253	600418.189	290.119	TRACER
TRC2003_019	5/27/2003	7721491.777	601949.590	281.444	CHKBKST
TRC2003_020	5/27/2003	7721571.837	601951.932	278.615	TRACER

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
TRC2003_021	5/27/2003	7721572.855	601952.525	278.435	TRACER
TRC2003_022	5/27/2003	7721571.974	601949.815	278.653	TRACER
TRC2003_023	5/27/2003	7721567.936	601943.286	279.195	TRACER
TRC2003_024	5/27/2003	7721566.238	601940.289	279.232	TRACER
TRC2003_025	5/27/2003	7721576.831	601950.038	278.498	TRACER
TRC2003_026	5/27/2003	7721578.220	601956.076	278.987	TRACER
TRC2003_027	5/27/2003	7721591.132	601952.168	279.267	TRACER
TRC2003_028	5/27/2003	7721595.277	601952.526	279.012	TRACER
TRC2003_029	5/27/2003	7721590.947	601944.744	278.690	TRACER
TRC2003_030	5/27/2003	7721588.707	601941.256	278.597	TRACER
TRC2003_031	5/27/2003	7721588.785	601940.520	278.603	TRACER
TRC2003_032	5/27/2003	7721586.450	601940.301	278.693	TRACER
MCV2003_001	09/02/2003	7723527.671	600610.174	314.818	CHKBKST
MCV2003F_002	09/02/2003	7723391.297	600931.438	300.199	CHKBKST
MCV2003F_003	09/02/2003	7723790.434	601027.476	298.209	EDGWATER
MCV2003F_004	09/02/2003	7723780.826	601025.491	297.972	EDGWATER
MCV2003F_005	09/02/2003	7723771.549	601021.761	297.882	EDGWATER
MCV2003F_006	09/02/2003	7723761.898	601013.978	297.972	EDGWATER
MCV2003F_007	09/02/2003	7723750.914	601013.706	298.041	EDGWATER
MCV2003F_008	09/02/2003	7723742.624	601008.535	298.075	EDGWATER
MCV2003F_009	09/02/2003	7723731.661	601004.656	297.903	EDGWATER
MCV2003F_010	09/02/2003	7723720.390	601001.281	298.052	EDGWATER
MCV2003F_011	09/02/2003	7723708.634	600999.354	298.072	EDGWATER
MCV2003F_012	09/02/2003	7723697.856	600998.334	298.015	EDGWATER
MCV2003F_013	09/02/2003	7723686.353	600996.362	297.999	EDGWATER
MCV2003F_014	09/02/2003	7723678.584	600990.395	298.122	EDGWATER
MCV2003F_015	09/02/2003	7723667.556	600988.784	298.021	EDGWATER
MCV2003F_016	09/02/2003	7723656.306	600987.048	298.052	EDGWATER
MCV2003F_017	09/02/2003	7723643.945	600984.854	298.084	EDGWATER
MCV2003F_018	09/02/2003	7723632.966	600981.780	298.090	EDGWATER
MCV2003F_019	09/02/2003	7723620.098	600980.002	298.085	EDGWATER
MCV2003F_020	09/02/2003	7723609.728	600976.869	298.082	EDGWATER
MCV2003F_021	09/02/2003	7723590.435	600972.275	297.872	EDGWATER
MCV2003F_022	09/02/2003	7723576.857	600969.564	298.065	EDGWATER
MCV2003F_023	09/02/2003	7723566.254	600965.886	298.084	EDGWATER
MCV2003F_024	09/02/2003	7723554.134	600965.350	298.065	EDGWATER
MCV2003F_025	09/02/2003	7723538.628	600960.512	297.998	EDGWATER
MCV2003F_026	09/02/2003	7723526.845	600957.505	297.922	EDGWATER
MCV2003F_027	09/02/2003	7723512.940	600955.855	298.033	EDGWATER
MCV2003F_028	09/02/2003	7723503.516	600954.056	298.063	EDGWATER
MCV2003F_029	09/02/2003	7723490.149	600952.251	298.066	EDGWATER
MCV2003F_030	09/02/2003	7723472.974	600947.358	298.089	EDGWATER
MCV2003F_031	09/02/2003	7723459.916	600942.854	297.999	EDGWATER
MCV2003F_032	09/02/2003	7723449.557	600938.761	298.032	EDGWATER
MCV2003F_033	09/02/2003	7723417.251	600928.651	298.098	EDGWATER
MCV2003F_034	09/02/2003	7723406.734	600922.690	298.038	EDGWATER
MCV2003F_035	09/02/2003	7723394.312	600920.447	298.084	EDGWATER
MCV2003F_036	09/02/2003	7723384.272	600917.009	298.034	EDGWATER
MCV2003F_037	09/02/2003	7723372.398	600913.567	298.046	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_038	09/02/2003	7723361.962	600907.353	298.006	EDGWATER
MCV2003F_039	09/02/2003	7723352.196	600902.781	298.103	EDGWATER
MCV2003F_040	09/02/2003	7723344.032	600895.613	298.007	EDGWATER
MCV2003F_041	09/02/2003	7723332.928	600888.049	297.988	EDGWATER
MCV2003F_042	09/02/2003	7723322.007	600883.822	298.144	EDGWATER
MCV2003F_043	09/02/2003	7723310.551	600874.965	298.018	EDGWATER
MCV2003F_044	09/02/2003	7723296.520	600869.824	298.024	EDGWATER
MCV2003F_045	09/02/2003	7723285.290	600866.150	298.295	EDGWATER
MCV2003F_046	09/02/2003	7723275.114	600858.902	298.050	EDGWATER
MCV2003F_047	09/02/2003	7723261.278	600854.090	297.991	EDGWATER
MCV2003F_048	09/02/2003	7723252.135	600846.525	297.981	EDGWATER
MCV2003F_049	09/02/2003	7723241.979	600841.111	297.970	EDGWATER
MCV2003F_050	09/02/2003	7723228.838	600835.239	297.925	EDGWATER
MCV2003F_051	09/02/2003	7723212.978	600832.101	297.905	EDGWATER
MCV2003F_052	09/02/2003	7723207.941	600820.768	297.911	EDGWATER
MCV2003F_053	09/02/2003	7723198.642	600813.951	297.527	EDGWATER
MCV2003F_054	09/02/2003	7723185.721	600807.164	297.370	EDGWATER
MCV2003F_055	09/02/2003	7723171.466	600801.556	296.553	EDGWATER
MCV2003F_056	09/02/2003	7723160.217	600799.303	296.576	EDGWATER
MCV2003F_057	09/02/2003	7723149.024	600795.771	295.728	EDGWATER
MCV2003F_058	09/02/2003	7723138.165	600794.079	295.509	EDGWATER
MCV2003F_059	09/02/2003	7723125.461	600791.152	295.127	EDGWATER
MCV2003F_060	09/02/2003	7723114.830	600789.062	295.179	EDGWATER
MCV2003F_061	09/02/2003	7723104.134	600787.733	295.190	EDGWATER
MCV2003F_062	09/02/2003	7723091.148	600784.111	295.231	EDGWATER
MCV2003F_063	09/02/2003	7723077.805	600780.939	294.698	EDGWATER
MCV2003F_064	09/02/2003	7723068.007	600781.095	293.866	EDGWATER
MCV2003F_065	09/02/2003	7723056.230	600779.349	293.121	EDGWATER
MCV2003F_066	09/02/2003	7723044.116	600776.760	292.766	EDGWATER
MCV2003F_067	09/02/2003	7723032.577	600773.318	292.803	EDGWATER
MCV2003F_068	09/02/2003	7723022.243	600768.380	292.749	EDGWATER
MCV2003F_069	09/02/2003	7723008.927	600766.393	292.811	EDGWATER
MCV2003F_070	09/02/2003	7722994.462	600762.171	292.777	EDGWATER
MCV2003F_071	09/02/2003	7722981.238	600758.524	292.806	EDGWATER
MCV2003F_072	09/02/2003	7722967.805	600755.858	292.769	EDGWATER
MCV2003F_073	09/02/2003	7722953.985	600752.746	292.761	EDGWATER
MCV2003F_074	09/02/2003	7722937.929	600751.730	292.575	EDGWATER
MCV2003F_075	09/02/2003	7722923.543	600751.472	292.593	EDGWATER
MCV2003F_076	09/02/2003	7722911.069	600756.212	291.849	EDGWATER
MCV2003F_077	09/02/2003	7722964.511	600766.136	301.821	TOPBANK
MCV2003F_078	09/02/2003	7722975.793	600768.841	301.996	TOPBANK
MCV2003F_079	09/02/2003	7722985.292	600770.536	301.914	TOPBANK
MCV2003F_080	09/02/2003	7722995.398	600773.197	302.142	TOPBANK
MCV2003F_081	09/02/2003	7723005.766	600774.705	302.173	TOPBANK
MCV2003F_082	09/02/2003	7723014.749	600776.733	301.405	TOPBANK
MCV2003F_083	09/02/2003	7723045.286	600786.635	301.817	TOPBANK
MCV2003F_084	09/02/2003	7723057.308	600787.964	301.263	TOPBANK
MCV2003F_085	09/02/2003	7723071.269	600790.142	300.837	TOPBANK
MCV2003F_086	09/02/2003	7723081.016	600791.978	299.988	TOPBANK

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_087	09/02/2003	7723095.303	600793.878	299.548	TOPBANK
MCV2003F_088	09/02/2003	7723102.447	600799.033	300.213	TOPBANK
MCV2003F_089	09/02/2003	7723112.393	600802.982	300.052	TOPBANK
MCV2003F_090	09/02/2003	7723118.900	600808.305	300.373	TOPBANK
MCV2003F_091	09/02/2003	7723126.637	600807.509	300.178	TOPBANK
MCV2003F_092	09/02/2003	7723213.964	601019.281	322.528	MAGNAIL
MCV2003F_093	09/02/2003	7723205.663	601020.211	320.633	MAGNAIL
MCV2003F_094	09/02/2003	7723810.968	601066.306	300.418	MAGNAIL
MCV2003F_095	09/02/2003	7723495.204	600675.392	311.733	MAGNAIL
MCV2003F_096	09/02/2003	7723604.012	600626.968	315.014	MAGNAIL
MCV2003F_097	09/02/2003	7723569.481	600734.290	314.629	TOPO
MCV2003F_098	09/02/2003	7723557.614	600736.699	314.345	TOPO
MCV2003F_099	09/02/2003	7723565.872	600744.856	313.896	TOPO
MCV2003F_100	09/02/2003	7723577.445	600743.147	314.072	TOPO
MCV2003F_101	09/02/2003	7722786.031	600759.498	293.205	TOPO
MCV2003F_102	09/02/2003	7723392.246	600719.666	297.700	EDGWATER
MCV2003F_103	09/02/2003	7723403.885	600730.514	297.742	EDGWATER
MCV2003F_104	09/02/2003	7723419.793	600740.172	297.746	EDGWATER
MCV2003F_105	09/02/2003	7723427.547	600746.739	297.850	EDGWATER
MCV2003F_106	09/02/2003	7723434.435	600752.909	297.856	EDGWATER
MCV2003F_107	09/02/2003	7723441.850	600760.303	297.816	EDGWATER
MCV2003F_108	09/02/2003	7723473.981	600762.501	297.853	EDGWATER
MCV2003F_109	09/02/2003	7723490.003	600764.583	297.703	EDGWATER
MCV2003F_110	09/02/2003	7723483.811	600773.682	296.314	TOPO
MCV2003F_111	09/02/2003	7723482.046	600779.101	295.529	TOPO
MCV2003F_112	09/02/2003	7723478.731	600784.908	294.603	TOPO
MCV2003F_113	09/02/2003	7723473.294	600791.064	293.586	TOPO
MCV2003F_114	09/02/2003	7723466.883	600794.777	293.356	TOPO
MCV2003F_115	09/02/2003	7723459.333	600788.276	293.572	TOPO
MCV2003F_116	09/02/2003	7723450.698	600784.749	293.022	TOPO
MCV2003F_117	09/02/2003	7723449.845	600780.885	294.212	TOPO
MCV2003F_118	09/02/2003	7723453.230	600776.987	294.868	TOPO
MCV2003F_119	09/02/2003	7723453.684	600770.721	296.257	TOPO
MCV2003F_120	09/02/2003	7723454.169	600763.660	297.433	TOPO
MCV2003F_121	09/02/2003	7723443.331	600771.291	295.684	TOPO
MCV2003F_122	09/02/2003	7723436.011	600776.423	294.394	TOPO
MCV2003F_123	09/02/2003	7723431.522	600778.465	292.961	TOPO
MCV2003F_124	09/02/2003	7723425.322	600773.798	292.927	TOPO
MCV2003F_125	09/02/2003	7723432.032	600768.399	295.754	TOPO
MCV2003F_126	09/02/2003	7723432.067	600768.381	295.762	TOPO
MCV2003F_127	09/02/2003	7723435.994	600763.638	296.566	TOPO
MCV2003F_128	09/02/2003	7723438.301	600762.010	296.888	TOPO
MCV2003F_129	09/02/2003	7723432.934	600756.939	297.008	TOPO
MCV2003F_130	09/02/2003	7723428.702	600760.936	296.202	TOPO
MCV2003F_131	09/02/2003	7723421.791	600765.004	294.879	TOPO
MCV2003F_132	09/02/2003	7723417.507	600768.601	293.661	TOPO
MCV2003F_133	09/02/2003	7723412.308	600772.591	293.134	TOPO
MCV2003F_134	09/02/2003	7723408.985	600770.862	295.419	TOPO
MCV2003F_135	09/02/2003	7723406.180	600768.831	294.728	TOPO

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_136	09/02/2003	7723409.960	600765.965	293.561	TOPO
MCV2003F_137	09/02/2003	7723416.444	600765.936	293.963	TOPO
MCV2003F_138	09/02/2003	7723419.168	600761.537	295.237	TOPO
MCV2003F_139	09/02/2003	7723422.997	600757.023	296.480	TOPO
MCV2003F_140	09/02/2003	7723426.212	600753.169	296.661	TOPO
MCV2003F_141	09/02/2003	7723425.612	600749.301	297.194	TOPO
MCV2003F_142	09/02/2003	7723418.637	600746.648	297.074	TOPO
MCV2003F_143	09/02/2003	7723413.230	600751.109	296.774	TOPO
MCV2003F_144	09/02/2003	7723408.104	600756.324	295.065	TOPO
MCV2003F_145	09/02/2003	7723401.586	600760.989	293.801	TOPO
MCV2003F_146	09/02/2003	7723396.701	600765.139	293.615	TOPO
MCV2003F_147	09/02/2003	7723389.026	600769.273	293.376	TOPO
MCV2003F_148	09/02/2003	7723382.571	600772.796	293.261	TOPO
MCV2003F_149	09/02/2003	7723375.200	600777.183	293.513	TOPO
MCV2003F_150	09/02/2003	7723364.848	600780.410	294.234	TOPO
MCV2003F_151	09/02/2003	7723366.367	600787.195	294.074	TOPO
MCV2003F_152	09/02/2003	7723367.229	600793.859	295.059	TOPO
MCV2003F_153	09/02/2003	7723373.076	600793.731	292.998	TOPO
MCV2003F_154	09/02/2003	7723375.311	600797.263	295.123	TOPO
MCV2003F_155	09/02/2003	7723373.702	600800.539	294.756	TOPO
MCV2003F_156	09/02/2003	7723364.803	600787.237	295.326	TOPO
MCV2003F_157	09/02/2003	7723360.193	600785.742	294.033	TOPO
MCV2003F_158	09/02/2003	7723357.440	600789.621	296.175	TOPO
MCV2003F_159	09/02/2003	7723354.814	600791.489	296.162	TOPO
MCV2003F_160	09/02/2003	7723352.279	600786.701	296.013	TOPO
MCV2003F_161	09/02/2003	7723353.759	600785.310	294.580	TOPO
MCV2003F_162	09/02/2003	7723350.182	600784.749	293.468	TOPO
MCV2003F_163	09/02/2003	7723343.854	600782.283	292.871	TOPO
MCV2003F_164	09/02/2003	7723335.784	600778.757	292.932	TOPO
MCV2003F_165	09/02/2003	7723335.490	600781.827	295.991	TOPO
MCV2003F_166	09/02/2003	7723335.581	600784.003	295.168	TOPO
MCV2003F_167	09/02/2003	7723333.016	600780.614	294.991	TOPO
MCV2003F_168	09/02/2003	7723328.911	600778.044	295.603	TOPO
MCV2003F_169	09/02/2003	7723328.228	600775.173	295.872	TOPO
MCV2003F_170	09/02/2003	7723323.955	600772.847	297.055	TOPO
MCV2003F_171	09/02/2003	7723328.127	600771.699	296.537	TOPO
MCV2003F_172	09/02/2003	7723322.631	600770.305	294.556	TOPO
MCV2003F_173	09/02/2003	7723313.885	600767.523	293.197	TOPO
MCV2003F_174	09/02/2003	7723309.457	600765.991	295.492	TOPO
MCV2003F_175	09/02/2003	7723300.988	600761.741	292.773	TOPO
MCV2003F_176	09/02/2003	7723291.844	600756.739	293.311	TOPO
MCV2003F_177	09/02/2003	7723279.674	600751.824	293.368	TOPO
MCV2003F_178	09/02/2003	7723262.666	600747.096	293.164	TOPO
MCV2003F_179	09/02/2003	7723248.582	600738.780	293.052	TOPO
MCV2003F_180	09/02/2003	7723232.121	600732.277	293.910	TOPO
MCV2003F_181	09/02/2003	7723223.750	600737.903	293.761	TOPO
MCV2003F_182	09/02/2003	7723220.462	600732.518	294.405	TOPO
MCV2003F_183	09/02/2003	7723223.338	600729.961	297.068	TOPO
MCV2003F_184	09/02/2003	7723222.340	600723.964	296.635	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_185	09/02/2003	7723229.170	600718.513	295.436	TOPO
MCV2003F_186	09/02/2003	7723234.114	600706.247	296.275	TOPO
MCV2003F_187	09/02/2003	7723208.832	600705.991	296.187	TOPO
MCV2003F_188	09/02/2003	7723204.767	600712.365	294.769	TOPO
MCV2003F_189	09/02/2003	7723199.429	600718.112	293.979	TOPO
MCV2003F_190	09/02/2003	7723184.774	600715.610	294.414	TOPO
MCV2003F_191	09/02/2003	7723171.429	600708.822	294.193	TOPO
MCV2003F_192	09/02/2003	7723159.816	600708.620	294.100	TOPO
MCV2003F_193	09/02/2003	7723140.559	600700.782	293.863	TOPO
MCV2003F_194	09/02/2003	7723126.257	600703.369	293.469	TOPO
MCV2003F_195	09/02/2003	7723117.366	600702.251	294.122	TOPO
MCV2003F_196	09/02/2003	7723120.803	600709.957	294.145	TOPO
MCV2003F_197	09/02/2003	7723105.471	600698.064	292.937	TOPO
MCV2003F_198	09/02/2003	7723086.246	600706.003	292.746	TOPO
MCV2003F_199	09/02/2003	7723074.428	600697.789	293.015	TOPO
MCV2003F_200	09/02/2003	7723067.087	600702.652	292.881	TOPO
MCV2003F_201	09/02/2003	7723071.403	600691.816	293.474	TOPO
MCV2003F_202	09/02/2003	7723056.220	600686.067	292.973	TOPO
MCV2003F_203	09/02/2003	7723056.652	600696.953	291.807	TOPO
MCV2003F_204	09/02/2003	7723091.679	600692.720	292.979	TOPO
MCV2003F_205	09/02/2003	7723107.021	600695.348	293.208	TOPO
MCV2003F_206	09/02/2003	7723124.219	600697.240	293.599	TOPO
MCV2003F_207	09/02/2003	7723140.955	600700.601	293.825	TOPO
MCV2003F_208	09/02/2003	7723155.598	600701.788	294.529	TOPO
MCV2003F_209	09/02/2003	7723167.942	600704.221	294.476	TOPO
MCV2003F_210	09/02/2003	7723182.235	600706.621	294.872	TOPO
MCV2003F_211	09/02/2003	7723197.900	600709.417	295.024	TOPO
MCV2003F_212	09/02/2003	7723214.603	600709.512	295.566	TOPO
MCV2003F_213	09/02/2003	7723229.723	600714.640	295.436	TOPO
MCV2003F_214	09/02/2003	7723237.702	600722.666	294.892	TOPO
MCV2003F_215	09/02/2003	7723236.627	600729.890	294.013	TOPO
MCV2003F_216	09/02/2003	7723245.476	600732.421	294.281	TOPO
MCV2003F_217	09/02/2003	7723250.471	600721.976	294.961	TOPO
MCV2003F_218	09/02/2003	7723259.913	600725.625	294.877	TOPO
MCV2003F_219	09/02/2003	7723259.202	600734.918	294.190	TOPO
MCV2003F_220	09/02/2003	7723262.852	600741.918	293.745	TOPO
MCV2003F_221	09/02/2003	7723268.157	600734.564	294.128	TOPO
MCV2003F_222	09/02/2003	7723274.732	600727.344	295.271	TOPO
MCV2003F_223	09/02/2003	7723281.115	600729.246	295.966	TOPO
MCV2003F_224	09/02/2003	7723279.198	600739.819	294.061	TOPO
MCV2003F_225	09/02/2003	7723280.270	600747.839	293.622	TOPO
MCV2003F_226	09/02/2003	7723287.892	600750.721	293.724	TOPO
MCV2003F_227	09/02/2003	7723291.530	600743.494	294.525	TOPO
MCV2003F_228	09/02/2003	7723297.045	600735.311	295.480	TOPO
MCV2003F_229	09/02/2003	7723306.481	600738.301	295.981	TOPO
MCV2003F_230	09/02/2003	7723305.555	600750.529	294.409	TOPO
MCV2003F_231	09/02/2003	7723306.759	600760.216	293.473	TOPO
MCV2003F_232	09/02/2003	7723317.798	600759.474	294.481	TOPO
MCV2003F_233	09/02/2003	7723323.595	600748.741	295.615	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_234	09/02/2003	7723328.314	600737.261	296.410	TOPO
MCV2003F_235	09/02/2003	7723342.845	600740.769	295.729	TOPO
MCV2003F_236	09/02/2003	7723342.884	600750.863	295.163	TOPO
MCV2003F_237	09/02/2003	7723342.974	600762.785	295.117	TOPO
MCV2003F_238	09/02/2003	7723353.543	600764.439	294.454	TOPO
MCV2003F_239	09/02/2003	7723359.018	600754.634	294.987	TOPO
MCV2003F_240	09/02/2003	7723364.736	600743.509	295.833	TOPO
MCV2003F_241	09/02/2003	7723375.546	600736.570	295.383	TOPO
MCV2003F_242	09/02/2003	7723377.715	600746.552	295.601	TOPO
MCV2003F_243	09/02/2003	7723376.059	600755.043	294.532	TOPO
MCV2003F_244	09/02/2003	7723377.466	600763.357	294.071	TOPO
MCV2003F_245	09/02/2003	7723377.470	600771.205	293.381	TOPO
MCV2003F_246	09/02/2003	7723377.229	600777.998	292.979	TOPO
MCV2003F_247	09/02/2003	7723383.917	600777.993	293.287	TOPO
MCV2003F_248	09/02/2003	7723387.722	600772.293	292.765	TOPO
MCV2003F_249	09/02/2003	7723389.949	600766.907	293.751	TOPO
MCV2003F_250	09/02/2003	7723394.339	600759.462	293.833	TOPO
MCV2003F_251	09/02/2003	7723397.751	600755.334	294.608	TOPO
MCV2003F_252	09/02/2003	7723398.511	600753.752	297.322	TOPO
MCV2003F_253	09/02/2003	7723401.434	600751.415	297.849	TOPO
MCV2003F_254	09/02/2003	7723403.082	600753.443	297.169	TOPO
MCV2003F_255	09/02/2003	7723400.215	600755.699	296.644	TOPO
MCV2003F_256	09/02/2003	7723406.052	600755.657	294.691	TOPO
MCV2003F_257	09/02/2003	7723402.613	600761.860	293.503	TOPO
MCV2003F_258	09/02/2003	7723399.988	600767.430	293.458	TOPO
MCV2003F_259	09/02/2003	7723402.627	600771.901	293.267	TOPO
MCV2003F_260	09/02/2003	7723407.594	600766.933	294.272	TOPO
MCV2003F_261	09/02/2003	7723417.217	600762.530	295.189	TOPO
MCV2003F_262	09/02/2003	7723419.532	600771.367	293.106	TOPO
MCV2003F_263	09/02/2003	7723424.248	600775.282	292.774	TOPO
MCV2003F_264	09/02/2003	7723427.666	600768.449	295.170	TOPO
MCV2003F_265	09/02/2003	7723527.664	600610.212	314.806	CHKBKST
MCV2003F_266	09/03/2003	7723515.319	600717.914	313.355	CHKBKST
UMIM2003_001	09/03/2003	7722887.304	600842.334	294.931	IMCLAST
UMIM2003_002	09/03/2003	7722883.598	600843.169	294.593	IMCLAST
UMIM2003_003	09/03/2003	7722882.388	600840.257	294.696	IMCLAST
UMIM2003_004	09/03/2003	7722884.821	600838.511	295.065	IMCLAST
UMIM2003_005	09/03/2003	7722880.277	600835.405	294.895	IMCLAST
UMIM2003_006	09/03/2003	7722880.116	600834.827	294.910	IMCLAST
UMIM2003_007	09/03/2003	7722880.593	600835.617	294.934	IMCLAST
UMIM2003_008	09/03/2003	7722880.307	600836.474	294.923	IMCLAST
UMIM2003_009	09/03/2003	7722880.233	600836.317	294.810	IMCLAST
UMIM2003_010	09/03/2003	7722879.770	600836.006	294.902	IMCLAST
UMIM2003_011	09/03/2003	7722880.003	600835.521	294.809	IMCLAST
UMIM2003_012	09/03/2003	7722882.307	600834.510	295.002	IMCLAST
UMIM2003_013	09/03/2003	7722882.367	600834.248	295.033	IMCLAST
UMIM2003_014	09/03/2003	7722882.497	600834.380	295.034	IMCLAST
UMIM2003_015	09/03/2003	7722882.292	600833.718	295.044	IMCLAST
UMIM2003_016	09/03/2003	7722881.004	600836.265	294.880	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
UMIM2003_017	09/03/2003	7722881.504	600835.986	294.897	IMCLAST
UMIM2003_018	09/03/2003	7722880.397	600837.628	294.802	IMCLAST
UMIM2003_019	09/03/2003	7722881.042	600837.631	294.918	IMCLAST
UMIM2003_020	09/03/2003	7722880.871	600838.000	294.793	IMCLAST
UMIM2003_021	09/03/2003	7722880.752	600838.055	294.751	IMCLAST
UMIM2003_022	09/03/2003	7722881.648	600838.202	294.850	IMCLAST
UMIM2003_023	09/03/2003	7722881.400	600838.203	294.807	IMCLAST
UMIM2003_024	09/03/2003	7722881.240	600837.818	294.848	IMCLAST
UMIM2003_025	09/03/2003	7722882.269	600838.354	294.879	IMCLAST
UMIM2003_026	09/03/2003	7722883.474	600835.155	295.056	IMCLAST
UMIM2003_027	09/03/2003	7722883.587	600835.738	295.059	IMCLAST
UMIM2003_028	09/03/2003	7722883.241	600835.369	295.000	IMCLAST
UMIM2003_029	09/03/2003	7722883.792	600834.221	295.138	IMCLAST
UMIM2003_030	09/03/2003	7722881.832	600837.034	294.941	IMCLAST
UMIM2003_031	09/03/2003	7722881.929	600837.117	294.903	IMCLAST
UMIM2003_032	09/03/2003	7722882.572	600836.186	294.988	IMCLAST
UMIM2003_033	09/03/2003	7722882.723	600836.860	294.965	IMCLAST
UMIM2003_034	09/03/2003	7722883.357	600837.205	295.011	IMCLAST
UMIM2003_035	09/03/2003	7722883.376	600837.740	294.972	IMCLAST
UMIM2003_036	09/03/2003	7722883.424	600837.577	294.961	IMCLAST
UMIM2003_037	09/03/2003	7722883.517	600837.569	294.970	IMCLAST
UMIM2003_038	09/03/2003	7722883.524	600837.346	294.998	IMCLAST
UMIM2003_039	09/03/2003	7722883.771	600838.177	295.003	IMCLAST
UMIM2003_040	09/03/2003	7722884.264	600837.345	295.057	IMCLAST
UMIM2003_041	09/03/2003	7722881.461	600835.186	294.928	IMCLAST
UMIM2003_042	09/03/2003	7722881.267	600835.674	294.911	IMCLAST
UMIM2003_043	09/03/2003	7722881.697	600835.732	294.919	IMCLAST
UMIM2003_044	09/03/2003	7722881.801	600835.767	294.900	IMCLAST
UMIM2003_045	09/03/2003	7722880.661	600834.601	294.901	IMCLAST
UMIM2003_046	09/03/2003	7722880.490	600834.925	294.885	IMCLAST
UMIM2003_047	09/03/2003	7722880.315	600834.931	294.883	IMCLAST
UMIM2003_048	09/03/2003	7722877.570	600835.980	294.912	IMCLAST
UMIM2003_049	09/03/2003	7722878.364	600834.170	294.854	IMCLAST
UMIM2003_050	09/03/2003	7722877.055	600833.338	294.912	IMCLAST
UMIM2003_051	09/03/2003	7722877.278	600833.392	294.914	IMCLAST
UMIM2003_052	09/03/2003	7722876.346	600833.103	294.930	IMCLAST
UMIM2003_053	09/03/2003	7722876.098	600832.918	294.883	IMCLAST
UMIM2003_054	09/03/2003	7722876.855	600832.522	294.954	IMCLAST
UMIM2003_055	09/03/2003	7722876.577	600832.426	294.917	IMCLAST
UMIM2003_056	09/03/2003	7722876.320	600832.220	294.904	IMCLAST
UMIM2003_057	09/03/2003	7722876.508	600832.748	294.896	IMCLAST
UMIM2003_058	09/03/2003	7722879.990	600834.197	294.875	IMCLAST
UMIM2003_059	09/03/2003	7722880.161	600833.926	294.919	IMCLAST
UMIM2003_060	09/03/2003	7722880.459	600833.858	294.940	IMCLAST
UMIM2003_061	09/03/2003	7722879.832	600832.378	295.026	IMCLAST
UMIM2003_062	09/03/2003	7722878.971	600832.498	295.023	IMCLAST
UMIM2003_063	09/03/2003	7722878.723	600832.118	295.024	IMCLAST
UMIM2003_064	09/03/2003	7722881.409	600834.980	294.946	IMCLAST
UMIM2003_065	09/03/2003	7722880.255	600834.326	294.918	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
UMIM2003_066	09/03/2003	7722880.903	600835.443	294.886	IMCLAST
UMIM2003_067	09/03/2003	7722880.260	600833.450	294.958	IMCLAST
UMIM2003_068	09/03/2003	7722880.892	600828.233	295.016	IMCLAST
UMIM2003_069	09/03/2003	7722880.181	600828.618	295.032	IMCLAST
UMIM2003_070	09/03/2003	7722879.668	600828.942	295.017	IMCLAST
UMIM2003_071	09/03/2003	7722881.770	600829.943	295.028	IMCLAST
UMIM2003_072	09/03/2003	7722880.140	600829.286	294.991	IMCLAST
UMIM2003_073	09/03/2003	7722877.850	600833.805	294.873	IMCLAST
UMIM2003_074	09/03/2003	7722878.159	600833.787	294.800	IMCLAST
UMIM2003_075	09/03/2003	7722877.142	600833.671	294.833	IMCLAST
UMIM2003_076	09/03/2003	7722878.461	600833.020	294.855	IMCLAST
UMIM2003_077	09/03/2003	7722875.078	600832.618	294.828	IMCLAST
UMIM2003_078	09/03/2003	7722877.357	600829.426	295.069	IMCLAST
UMIM2003_079	09/03/2003	7722877.139	600829.741	295.054	IMCLAST
UMIM2003_080	09/03/2003	7722875.341	600830.061	295.018	IMCLAST
UMIM2003_081	09/03/2003	7722875.739	600829.494	295.007	IMCLAST
UMIM2003_082	09/03/2003	7722875.911	600828.668	295.044	IMCLAST
UMIM2003_083	09/03/2003	7722875.917	600828.550	295.034	IMCLAST
UMIM2003_084	09/03/2003	7722876.320	600824.392	294.973	IMCLAST
UMIM2003_085	09/03/2003	7722875.904	600824.425	294.938	IMCLAST
UMIM2003_086	09/03/2003	7722875.813	600825.513	294.949	IMCLAST
UMIM2003_087	09/03/2003	7722876.036	600825.638	294.999	IMCLAST
UMIM2003_088	09/03/2003	7722875.559	600824.321	294.984	IMCLAST
UMIM2003_089	09/03/2003	7722875.695	600825.410	294.978	IMCLAST
UMIM2003_090	09/03/2003	7722874.956	600823.246	294.961	IMCLAST
UMIM2003_091	09/03/2003	7722867.424	600806.054	294.541	IMCLAST
UMIM2003_092	09/03/2003	7722867.234	600806.727	294.603	IMCLAST
UMIM2003_093	09/03/2003	7722867.221	600807.652	294.618	IMCLAST
UMIM2003_094	09/03/2003	7722866.924	600808.075	294.680	IMCLAST
UMIM2003_095	09/03/2003	7722867.449	600807.642	294.660	IMCLAST
UMIM2003_096	09/03/2003	7722865.758	600808.015	294.520	IMCLAST
UMIM2003_097	09/03/2003	7722865.233	600808.466	294.605	IMCLAST
UMIM2003_098	09/03/2003	7722864.410	600808.581	294.506	IMCLAST
UMIM2003_099	09/03/2003	7722864.818	600808.080	294.459	IMCLAST
UMIM2003_100	09/03/2003	7722864.227	600807.621	294.383	IMCLAST
UMIM2003_101	09/03/2003	7722864.982	600808.957	294.628	IMCLAST
UMIM2003_102	09/03/2003	7722864.932	600806.968	294.425	IMCLAST
UMIM2003_103	09/03/2003	7722862.620	600807.949	294.290	IMCLAST
UMIM2003_104	09/03/2003	7722862.701	600807.376	294.450	IMCLAST
UMIM2003_105	09/03/2003	7722863.703	600805.674	294.314	IMCLAST
UMIM2003_106	09/03/2003	7722861.553	600805.663	294.216	IMCLAST
UMIM2003_107	09/03/2003	7722860.435	600804.613	294.185	IMCLAST
UMIM2003_108	09/03/2003	7722858.960	600804.751	294.172	IMCLAST
UMIM2003_109	09/03/2003	7722859.483	600806.077	294.202	IMCLAST
UMIM2003_110	09/03/2003	7722863.366	600811.125	294.596	IMCLAST
UMIM2003_111	09/03/2003	7722863.068	600812.139	294.659	IMCLAST
UMIM2003_112	09/03/2003	7722861.483	600812.614	294.602	IMCLAST
UMIM2003_113	09/03/2003	7722860.991	600810.758	294.448	IMCLAST
UMIM2003_114	09/03/2003	7722873.459	600829.231	294.751	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
UMIM2003_115	09/03/2003	7722873.451	600828.364	295.016	IMCLAST
UMIM2003_116	09/03/2003	7722873.680	600828.399	294.895	IMCLAST
UMIM2003_117	09/03/2003	7722874.689	600829.247	294.895	IMCLAST
UMIM2003_118	09/03/2003	7722873.585	600827.441	294.930	IMCLAST
UMIM2003_119	09/03/2003	7722873.763	600827.321	294.959	IMCLAST
UMIM2003_120	09/03/2003	7722873.835	600827.152	295.036	IMCLAST
UMIM2003_121	09/03/2003	7722876.641	600828.697	295.022	IMCLAST
UMIM2003_122	09/03/2003	7722876.494	600828.474	295.123	IMCLAST
UMIM2003_123	09/03/2003	7722876.567	600827.569	294.989	IMCLAST
UMIM2003_124	09/03/2003	7722877.305	600827.629	294.972	IMCLAST
UMIM2003_125	09/03/2003	7722876.195	600828.154	295.017	IMCLAST
UMIM2003_126	09/03/2003	7722875.791	600827.792	294.989	IMCLAST
UMIM2003_127	09/03/2003	7722875.406	600827.878	295.030	IMCLAST
UMIM2003_128	09/03/2003	7722877.585	600827.386	294.996	IMCLAST
UMIM2003_129	09/03/2003	7722876.691	600828.733	295.015	IMCLAST
UMIM2003_130	09/03/2003	7722878.498	600828.631	294.970	IMCLAST
UMIM2003_131	09/03/2003	7722873.902	600825.387	294.904	IMCLAST
UMIM2003_132	09/03/2003	7722873.716	600825.803	294.938	IMCLAST
UMIM2003_133	09/03/2003	7722874.168	600824.019	294.910	IMCLAST
UMIM2003_134	09/03/2003	7722873.706	600823.963	294.932	IMCLAST
UMIM2003_135	09/03/2003	7722873.494	600823.916	294.906	IMCLAST
UMIM2003_136	09/03/2003	7722873.944	600823.170	294.965	IMCLAST
UMIM2003_137	09/03/2003	7722874.649	600823.982	294.922	IMCLAST
UMIM2003_138	09/03/2003	7722875.652	600822.283	294.878	IMCLAST
UMIM2003_139	09/03/2003	7722875.732	600821.383	294.893	IMCLAST
UMIM2003_140	09/03/2003	7722873.311	600823.681	294.888	IMCLAST
UMIM2003_141	09/03/2003	7722870.777	600825.846	294.937	IMCLAST
UMIM2003_142	09/03/2003	7722867.204	600820.414	294.770	IMCLAST
UMIM2003_143	09/03/2003	7722867.522	600820.179	294.807	IMCLAST
UMIM2003_144	09/03/2003	7722865.682	600818.402	294.855	IMCLAST
UMIM2003_145	09/03/2003	7722865.391	600819.517	294.680	IMCLAST
UMIM2003_146	09/03/2003	7722863.392	600815.486	294.603	IMCLAST
UMIM2003_147	09/03/2003	7722861.481	600815.893	294.570	IMCLAST
UMIM2003_148	09/03/2003	7722868.865	600814.466	294.750	IMCLAST
UMIM2003_149	09/03/2003	7722868.504	600813.749	294.699	IMCLAST
UMIM2003_150	09/03/2003	7722867.824	600812.616	294.757	IMCLAST
UMIM2003_151	09/03/2003	7722867.905	600811.786	294.658	IMCLAST
UMIM2003_152	09/03/2003	7722868.091	600811.099	294.701	IMCLAST
UMIM2003_153	09/03/2003	7722867.151	600812.081	294.708	IMCLAST
UMIM2003_154	09/03/2003	7722866.242	600813.108	294.673	IMCLAST
UMIM2003_155	09/03/2003	7722866.193	600811.447	294.673	IMCLAST
UMIM2003_156	09/03/2003	7722865.773	600811.511	294.652	IMCLAST
UMIM2003_157	09/03/2003	7722880.397	600831.076	294.926	IMCLAST
UMIM2003_158	09/03/2003	7722880.608	600831.156	294.965	IMCLAST
UMIM2003_159	09/03/2003	7722879.684	600831.105	294.959	IMCLAST
UMIM2003_160	09/03/2003	7722879.275	600830.293	294.946	IMCLAST
UMIM2003_161	09/03/2003	7722878.292	600831.721	294.998	IMCLAST
UMIM2003_162	09/03/2003	7722878.666	600831.418	295.058	IMCLAST
UMIM2003_163	09/03/2003	7722878.873	600828.296	294.969	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
UMIM2003_164	09/03/2003	7722879.014	600828.862	295.045	IMCLAST
UMIM2003_165	09/03/2003	7722879.443	600828.137	295.023	IMCLAST
UMIM2003_166	09/03/2003	7722879.069	600827.352	295.013	IMCLAST
UMIM2003_167	09/03/2003	7722878.828	600827.167	294.977	IMCLAST
UMIM2003_168	09/03/2003	7722878.561	600826.359	294.952	IMCLAST
UMIM2003_169	09/03/2003	7722878.557	600827.543	295.028	IMCLAST
UMIM2003_170	09/03/2003	7722879.688	600827.280	294.924	IMCLAST
UMIM2003_171	09/03/2003	7722878.037	600819.719	294.918	IMCLAST
UMIM2003_172	09/03/2003	7722874.322	600820.751	294.900	IMCLAST
UMIM2003_173	09/03/2003	7722874.439	600819.823	295.008	IMCLAST
UMIM2003_174	09/03/2003	7722873.551	600820.732	294.921	IMCLAST
UMIM2003_175	09/03/2003	7722873.454	600821.218	294.876	IMCLAST
UMIM2003_176	09/03/2003	7722872.504	600821.625	294.864	IMCLAST
UMIM2003_177	09/03/2003	7722875.521	600818.987	294.934	IMCLAST
UMIM2003_178	09/03/2003	7722874.166	600819.714	294.878	IMCLAST
UMIM2003_179	09/03/2003	7722873.337	600819.958	294.880	IMCLAST
UMIM2003_180	09/03/2003	7722874.255	600818.513	294.902	IMCLAST
UMIM2003_181	09/03/2003	7722871.939	600819.709	294.877	IMCLAST
UMIM2003_182	09/03/2003	7722872.173	600820.113	294.840	IMCLAST
UMIM2003_183	09/03/2003	7722871.567	600819.478	294.857	IMCLAST
UMIM2003_184	09/03/2003	7722872.812	600818.572	294.838	IMCLAST
UMIM2003_185	09/03/2003	7722872.701	600818.210	294.829	IMCLAST
UMIM2003_186	09/03/2003	7722872.468	600818.141	294.840	IMCLAST
UMIM2003_187	09/03/2003	7722872.718	600817.822	294.798	IMCLAST
UMIM2003_188	09/03/2003	7722873.470	600817.416	294.850	IMCLAST
UMIM2003_189	09/03/2003	7722872.559	600816.874	294.809	IMCLAST
UMIM2003_190	09/03/2003	7722871.850	600817.534	294.786	IMCLAST
UMIM2003_191	09/03/2003	7722871.641	600817.783	294.748	IMCLAST
UMIM2003_192	09/03/2003	7722872.675	600816.112	294.927	IMCLAST
UMIM2003_193	09/03/2003	7722872.003	600820.282	294.821	IMCLAST
UMIM2003_194	09/03/2003	7722871.673	600821.776	294.815	IMCLAST
UMIM2003_195	09/03/2003	7722871.219	600820.577	294.854	IMCLAST
UMIM2003_196	09/03/2003	7722870.850	600819.475	294.803	IMCLAST
UMIM2003_197	09/03/2003	7722871.049	600817.922	294.819	IMCLAST
UMIM2003_198	09/03/2003	7722870.692	600817.687	294.758	IMCLAST
UMIM2003_199	09/03/2003	7722863.155	600818.823	294.660	IMCLAST
UMIM2003_200	09/03/2003	7722857.529	600794.777	293.857	IMCLAST
UMIM2003_201	09/03/2003	7722856.973	600794.020	293.752	IMCLAST
UMIM2003_202	09/03/2003	7722857.416	600796.726	293.923	IMCLAST
UMIM2003_203	09/03/2003	7722856.330	600795.380	293.845	IMCLAST
UMIM2003_204	09/03/2003	7722855.399	600796.761	293.886	IMCLAST
UMIM2003_205	09/03/2003	7722857.623	600796.099	293.888	IMCLAST
UMIM2003_206	09/03/2003	7722858.028	600795.651	293.873	IMCLAST
UMIM2003_207	09/03/2003	7722853.640	600799.227	293.775	IMCLAST
UMIM2003_208	09/03/2003	7722857.974	600797.583	294.042	IMCLAST
UMIM2003_209	09/03/2003	7722860.608	600807.477	294.319	IMCLAST
UMIM2003_210	09/03/2003	7722866.158	600806.581	294.543	IMCLAST
UMIM2003_211	09/03/2003	7722865.855	600806.017	294.485	IMCLAST
UMIM2003_212	09/03/2003	7722865.504	600805.449	294.418	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
UMIM2003_213	09/03/2003	7722865.568	600805.356	294.418	IMCLAST
UMIM2003_214	09/03/2003	7722864.831	600805.019	294.476	IMCLAST
UMIM2003_215	09/03/2003	7722864.484	600806.341	294.375	IMCLAST
UMIM2003_216	09/03/2003	7722864.866	600805.487	294.379	IMCLAST
UMIM2003_217	09/03/2003	7722865.126	600809.888	294.628	IMCLAST
UMIM2003_218	09/03/2003	7722865.813	600810.265	294.593	IMCLAST
UMIM2003_219	09/03/2003	7722866.576	600810.234	294.637	IMCLAST
UMIM2003_220	09/03/2003	7722867.485	600810.241	294.685	IMCLAST
UMIM2003_221	09/03/2003	7722866.098	600809.903	294.626	IMCLAST
UMIM2003_222	09/03/2003	7722875.159	600816.262	294.933	IMCLAST
UMIM2003_223	09/03/2003	7722874.984	600815.694	294.916	IMCLAST
UMIM2003_224	09/03/2003	7722874.941	600817.489	294.981	IMCLAST
UMIM2003_225	09/03/2003	7722872.590	600827.754	294.825	IMCLAST
UMIM2003_226	09/03/2003	7722874.963	600825.993	294.982	IMCLAST
UMIM2003_227	09/03/2003	7722875.229	600826.601	295.046	IMCLAST
UMIM2003_228	09/03/2003	7722876.552	600826.797	294.978	IMCLAST
UMIM2003_229	09/03/2003	7722876.963	600826.747	294.993	IMCLAST
UMIM2003_230	09/03/2003	7722877.703	600827.606	295.026	IMCLAST
UMIM2003_231	09/03/2003	7722878.300	600829.410	294.990	IMCLAST
UMIM2003_232	09/03/2003	7722878.113	600829.070	295.017	IMCLAST
UMIM2003_233	09/03/2003	7722878.993	600830.453	294.955	IMCLAST
UMIM2003_234	09/03/2003	7722878.882	600830.313	294.978	IMCLAST
UMIM2003_235	09/03/2003	7722878.601	600831.318	295.010	IMCLAST
UMIM2003_236	09/03/2003	7722878.192	600831.359	294.998	IMCLAST
UMIM2003_237	09/03/2003	7722869.755	600821.384	294.796	IMCLAST
UMIM2003_238	09/03/2003	7722873.013	600821.536	294.822	IMCLAST
UMIM2003_239	09/03/2003	7722871.508	600823.697	294.965	IMCLAST
UMIM2003_240	09/03/2003	7722874.318	600830.719	294.825	IMCLAST
UMIM2003_241	09/03/2003	7722876.479	600829.295	295.038	IMCLAST
UMIM2003_242	09/03/2003	7722880.531	600836.693	294.748	IMCLAST
UMIM2003_243	09/03/2003	7722877.199	600827.458	294.934	IMCLAST
UMIM2003_244	09/03/2003	7722876.840	600825.695	294.951	IMCLAST
UMIM2003_245	09/03/2003	7722878.692	600823.374	294.836	IMCLAST
UMIM2003_246	09/03/2003	7722878.504	600821.451	294.865	IMCLAST
UMIM2003_247	09/03/2003	7722881.683	600838.891	294.778	IMCLAST
UMIM2003_248	09/03/2003	7722882.000	600838.964	294.733	IMCLAST
UMIM2003_249	09/03/2003	7722881.760	600839.189	294.884	IMCLAST
UMIM2003_250	09/03/2003	7722882.654	600838.934	294.757	IMCLAST
MCV2003F_268	09/03/2003	7722897.263	600749.637	290.863	TOPO
MCV2003F_269	09/03/2003	7722887.622	600747.386	290.863	TOPO
MCV2003F_270	09/03/2003	7722880.626	600739.094	290.499	TOPO
MCV2003F_271	09/03/2003	7722878.726	600728.298	290.295	TOPO
MCV2003F_272	09/03/2003	7722913.506	600745.751	291.076	TOPO
MCV2003F_273	09/03/2003	7722912.569	600734.249	290.944	TOPO
MCV2003F_274	09/03/2003	7722914.680	600718.913	290.109	TOPO
MCV2003F_275	09/03/2003	7722920.763	600707.011	290.342	TOPO
MCV2003F_276	09/03/2003	7722902.533	600701.917	290.735	TOPO
MCV2003F_277	09/03/2003	7722883.961	600704.390	290.393	TOPO
MCV2003F_278	09/03/2003	7722861.812	600709.570	289.321	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_279	09/03/2003	7722863.842	600717.536	289.196	TOPO
MCV2003F_280	09/03/2003	7722866.038	600725.284	288.579	TOPO
MCV2003F_281	09/03/2003	7722872.437	600719.800	290.052	TOPO
MCV2003F_282	09/03/2003	7722874.129	600694.742	290.417	TOPO
MCV2003F_283	09/03/2003	7722865.156	600684.226	289.611	TOPO
MCV2003F_284	09/03/2003	7722874.598	600678.192	289.025	TOPO
MCV2003F_285	09/03/2003	7722884.883	600683.950	289.730	TOPO
MCV2003F_286	09/03/2003	7722903.038	600687.755	289.959	TOPO
MCV2003F_287	09/03/2003	7722922.473	600690.138	289.947	TOPO
MCV2003F_288	09/03/2003	7722944.750	600696.498	289.815	TOPO
MCV2003F_289	09/03/2003	7722963.345	600704.413	291.061	TOPO
MCV2003F_290	09/03/2003	7722987.209	600707.793	290.537	TOPO
MCV2003F_291	09/03/2003	7723002.855	600711.371	290.615	TOPO
MCV2003F_292	09/03/2003	7723017.843	600713.447	290.232	TOPO
MCV2003F_293	09/03/2003	7723014.014	600723.178	290.342	TOPO
MCV2003F_294	09/03/2003	7723006.953	600728.023	289.644	TOPO
MCV2003F_295	09/03/2003	7722998.657	600736.047	289.429	TOPO
MCV2003F_296	09/03/2003	7722991.320	600748.135	289.314	TOPO
MCV2003F_297	09/03/2003	7722980.558	600743.442	290.279	TOPO
MCV2003F_298	09/03/2003	7722972.197	600739.867	289.404	TOPO
MCV2003F_299	09/03/2003	7722957.871	600737.467	289.558	TOPO
MCV2003F_300	09/03/2003	7722943.975	600731.675	289.213	TOPO
MCV2003F_301	09/03/2003	7722934.286	600733.247	289.433	TOPO
MCV2003F_302	09/03/2003	7722937.789	600725.203	289.553	TOPO
MCV2003F_303	09/03/2003	7722925.525	600725.664	290.053	TOPO
MCV2003F_304	09/03/2003	7722912.829	600733.644	290.720	TOPO
MCV2003F_305	09/03/2003	7722878.028	600749.219	288.113	TOPO
MCV2003F_306	09/03/2003	7722872.886	600747.923	287.377	TOPO
MCV2003F_307	09/03/2003	7722870.194	600747.772	286.870	TOPO
MCV2003F_308	09/03/2003	7722864.690	600738.326	287.133	TOPO
MCV2003F_309	09/03/2003	7722864.857	600738.133	287.100	TOPO
MCV2003F_310	09/03/2003	7722864.882	600730.692	288.117	TOPO
MCV2003F_311	09/03/2003	7722859.744	600732.885	287.200	TOPO
MCV2003F_312	09/03/2003	7722859.854	600727.994	287.018	TOPO
MCV2003F_313	09/03/2003	7722858.100	600722.459	287.404	TOPO
MCV2003F_314	09/03/2003	7722857.195	600715.888	287.093	TOPO
MCV2003F_315	09/03/2003	7722857.071	600709.209	287.422	TOPO
MCV2003F_316	09/03/2003	7722855.066	600701.342	287.202	TOPO
MCV2003F_317	09/03/2003	7722853.226	600692.046	287.037	TOPO
MCV2003F_318	09/03/2003	7722899.924	600935.876	293.651	CHKBKST
FELD2003F_001	09/04/2003	7717852.588	613419.480	225.312	MAGNAIL
FELD2003F_002	09/04/2003	7717767.271	613419.080	223.498	MAGNAIL
FELD2003F_003	09/04/2003	7718003.912	613386.266	225.989	RIFFLETP
FELD2003F_004	09/04/2003	7718012.150	613377.998	225.969	RIFFLETP
FELD2003F_005	09/04/2003	7718024.903	613371.405	225.942	RIFFLETP
FELD2003F_006	09/04/2003	7718028.955	613364.621	226.188	RIFFLETP
FELD2003F_007	09/04/2003	7718034.462	613358.148	225.657	RIFFLETP
FELD2003F_008	09/04/2003	7718038.265	613351.529	225.742	RIFFLETP
FELD2003F_009	09/04/2003	7718033.278	613341.958	225.867	RIFFLETP

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
FELD2003F_010	09/04/2003	7718037.880	613331.965	225.305	RIFFLETP
FELD2003F_011	09/04/2003	7718044.645	613322.803	225.649	RIFFLETP
FELD2003F_012	09/04/2003	7718051.556	613314.497	225.542	RIFFLETP
FELD2003F_013	09/04/2003	7718050.817	613306.743	225.261	RIFFLETP
FELD2003F_014	09/04/2003	7718055.931	613301.668	225.285	RIFFLETP
FELD2003F_015	09/04/2003	7718068.316	613293.170	225.624	RIFFLETP
FELD2003F_016	09/04/2003	7718064.432	613276.969	225.269	RIFFLETP
FELD2003F_017	09/04/2003	7718061.986	613267.863	224.966	RIFFLETP
FELD2003F_018	09/04/2003	7718065.020	613257.452	225.025	RIFFLETP
FELD2003F_019	09/04/2003	7718066.906	613248.681	225.144	RIFFLETP
FELD2003F_020	09/04/2003	7718070.882	613239.402	225.328	RIFFLETP
FELD2003F_021	09/04/2003	7718067.219	613226.194	225.466	RIFFLETP
FELD2003F_022	09/04/2003	7718066.241	613219.520	225.311	RIFFLETP
FELD2003F_023	09/04/2003	7718063.354	613209.568	225.342	RIFFLETP
FELD2003F_024	09/04/2003	7718065.185	613195.869	225.562	RIFFLETP
FELD2003F_025	09/04/2003	7718060.713	613190.077	225.314	RIFFLETP
FELD2003F_026	09/04/2003	7718038.930	613200.106	225.419	RIFFLETP
FELD2003F_027	09/04/2003	7718029.229	613202.111	225.347	RIFFLETP
FELD2003F_028	09/04/2003	7718022.257	613202.871	225.583	RIFFLETP
RI2003F_001	09/04/2003	7718378.287	621546.382	191.217	CHKBKST
RI2003F_002	09/04/2003	7718160.217	621702.074	190.951	MAGNAIL
RI2003F_003	09/04/2003	7718236.989	621650.352	202.040	MAGNAIL
MCV2003F_500	09/05/2003	7723515.283	600717.863	313.302	CHKBKST
MCV2003F_501	09/05/2003	7723610.442	600806.442	297.803	EDGWATER
MCV2003F_502	09/05/2003	7723621.157	600812.087	297.852	EDGWATER
MCV2003F_503	09/05/2003	7723630.466	600821.575	297.764	EDGWATER
MCV2003F_504	09/05/2003	7723646.605	600830.254	297.918	EDGWATER
MCV2003F_505	09/05/2003	7723661.724	600841.477	297.700	EDGWATER
MCV2003F_506	09/05/2003	7723681.725	600855.175	297.933	EDGWATER
MCV2003F_507	09/05/2003	7723691.191	600862.022	297.753	EDGWATER
MCV2003F_508	09/05/2003	7723710.613	600870.914	297.954	EDGWATER
MCV2003F_509	09/05/2003	7723719.606	600874.882	297.882	EDGWATER
MCV2003F_510	09/05/2003	7723734.041	600881.391	297.890	EDGWATER
MCV2003F_511	09/05/2003	7723752.999	600892.196	297.907	EDGWATER
MCV2003F_512	09/05/2003	7723764.564	600898.036	297.899	EDGWATER
MCV2003F_513	09/05/2003	7723771.794	600902.623	297.979	EDGWATER
MCV2003F_514	09/05/2003	7723785.365	600908.085	297.916	EDGWATER
MCV2003F_515	09/05/2003	7723803.717	600917.619	297.875	EDGWATER
MCV2003F_516	09/05/2003	7723814.077	600923.913	297.966	EDGWATER
MCV2003F_517	09/05/2003	7723830.366	600924.633	297.867	EDGWATER
MCV2003F_518	09/05/2003	7723844.208	600924.436	297.901	EDGWATER
MCV2003F_519	09/05/2003	7723856.993	600925.082	297.817	EDGWATER
MCV2003F_520	09/05/2003	7723875.924	600929.050	297.846	EDGWATER
MCV2003F_521	09/05/2003	7723890.239	600938.634	297.701	EDGWATER
MCV2003F_522	09/05/2003	7723916.929	600951.619	298.430	EDGWATER
MCV2003F_523	09/05/2003	7723936.931	600967.142	298.451	EDGWATER
MCV2003F_524	09/05/2003	7723961.266	600990.070	298.366	EDGWATER
MCV2003F_525	09/05/2003	7723995.152	601006.046	298.394	EDGWATER
MCV2003F_526	09/05/2003	7724024.552	601030.995	298.420	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_527	09/05/2003	7724044.742	601043.573	298.434	EDGWATER
MCV2003F_528	09/05/2003	7724075.968	601048.842	298.418	EDGWATER
MCV2003F_529	09/05/2003	7724105.728	601059.264	298.487	EDGWATER
MCV2003F_530	09/05/2003	7724136.617	601066.638	298.390	EDGWATER
MCV2003F_531	09/05/2003	7724168.038	601072.700	298.428	EDGWATER
MCV2003F_532	09/05/2003	7724194.254	601071.440	298.489	EDGWATER
MCV2003F_533	09/05/2003	7724215.332	601086.461	298.332	EDGWATER
MCV2003F_534	09/05/2003	7724214.539	601109.275	298.393	EDGWATER
MCV2003F_535	09/05/2003	7724223.197	601126.644	298.434	EDGWATER
MCV2003F_536	09/05/2003	7724239.665	601145.549	298.447	EDGWATER
MCV2003F_537	09/05/2003	7724239.208	601148.162	297.348	TOPO
MCV2003F_538	09/05/2003	7724237.880	601152.703	296.283	TOPO
MCV2003F_539	09/05/2003	7724236.636	601155.882	294.838	TOPO
MCV2003F_540	09/05/2003	7724230.904	601153.452	295.226	TOPO
MCV2003F_541	09/05/2003	7724232.239	601149.703	296.308	TOPO
MCV2003F_542	09/05/2003	7724233.051	601147.755	296.785	TOPO
MCV2003F_543	09/05/2003	7724229.352	601144.810	296.683	TOPO
MCV2003F_544	09/05/2003	7724227.085	601148.188	296.005	TOPO
MCV2003F_545	09/05/2003	7724225.438	601144.965	296.506	TOPO
MCV2003F_546	09/05/2003	7724225.208	601143.442	294.247	TOPO
MCV2003F_547	09/05/2003	7724226.825	601141.302	296.867	TOPO
MCV2003F_548	09/05/2003	7724227.619	601139.261	297.123	TOPO
MCV2003F_549	09/05/2003	7724223.872	601138.855	295.375	TOPO
MCV2003F_550	09/05/2003	7724225.325	601136.980	296.642	TOPO
MCV2003F_551	09/05/2003	7724223.430	601134.931	296.072	TOPO
MCV2003F_552	09/05/2003	7724221.555	601136.775	295.563	TOPO
MCV2003F_553	09/05/2003	7724220.545	601138.353	293.954	TOPO
MCV2003F_554	09/05/2003	7724219.544	601135.059	295.427	TOPO
MCV2003F_555	09/05/2003	7724221.788	601132.769	296.698	TOPO
MCV2003F_556	09/05/2003	7724217.203	601131.379	295.633	TOPO
MCV2003F_557	09/05/2003	7724216.076	601130.641	294.729	TOPO
MCV2003F_558	09/05/2003	7724219.353	601127.643	296.610	TOPO
MCV2003F_559	09/05/2003	7724220.862	601125.080	297.616	TOPO
MCV2003F_560	09/05/2003	7724215.546	601124.449	294.833	TOPO
MCV2003F_561	09/05/2003	7724217.663	601122.404	296.818	TOPO
MCV2003F_562	09/05/2003	7724212.231	601120.675	294.311	TOPO
MCV2003F_563	09/05/2003	7724214.692	601117.487	296.005	TOPO
MCV2003F_564	09/05/2003	7724217.727	601117.510	297.652	TOPO
MCV2003F_565	09/05/2003	7724209.891	601114.415	294.307	TOPO
MCV2003F_566	09/05/2003	7724213.019	601111.047	295.635	TOPO
MCV2003F_567	09/05/2003	7724213.451	601107.450	296.018	TOPO
MCV2003F_568	09/05/2003	7724209.180	601106.679	294.444	TOPO
MCV2003F_569	09/05/2003	7724214.714	601102.722	296.417	TOPO
MCV2003F_570	09/05/2003	7724208.134	601100.613	293.971	TOPO
MCV2003F_571	09/05/2003	7724212.137	601098.411	295.718	TOPO
MCV2003F_572	09/05/2003	7724216.230	601097.350	297.161	TOPO
MCV2003F_573	09/05/2003	7724217.905	601096.269	297.550	TOPO
MCV2003F_574	09/05/2003	7724214.021	601092.083	297.208	TOPO
MCV2003F_575	09/05/2003	7724208.945	601094.158	295.318	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_576	09/05/2003	7724206.730	601095.264	295.330	TOPO
MCV2003F_577	09/05/2003	7724204.696	601096.268	293.640	TOPO
MCV2003F_578	09/05/2003	7724203.939	601091.617	294.717	TOPO
MCV2003F_579	09/05/2003	7724207.351	601087.921	296.482	TOPO
MCV2003F_580	09/05/2003	7724208.562	601082.846	297.486	TOPO
MCV2003F_581	09/05/2003	7724202.722	601079.788	297.406	TOPO
MCV2003F_582	09/05/2003	7724198.330	601083.893	296.026	TOPO
MCV2003F_583	09/05/2003	7724193.986	601086.965	294.527	TOPO
MCV2003F_584	09/05/2003	7724191.362	601085.690	294.385	TOPO
MCV2003F_585	09/05/2003	7724190.379	601080.268	296.425	TOPO
MCV2003F_586	09/05/2003	7724190.284	601075.918	297.496	TOPO
MCV2003F_587	09/05/2003	7724185.061	601075.172	297.585	TOPO
MCV2003F_588	09/05/2003	7724184.026	601080.149	296.104	TOPO
MCV2003F_589	09/05/2003	7724181.985	601083.398	295.034	TOPO
MCV2003F_590	09/05/2003	7724181.090	601086.182	294.205	TOPO
MCV2003F_591	09/05/2003	7724175.993	601083.973	294.827	TOPO
MCV2003F_592	09/05/2003	7724176.721	601079.878	296.447	TOPO
MCV2003F_593	09/05/2003	7724177.937	601076.319	297.209	TOPO
MCV2003F_594	09/05/2003	7724173.482	601075.314	297.976	TOPO
MCV2003F_595	09/05/2003	7724171.746	601080.649	297.030	TOPO
MCV2003F_596	09/05/2003	7724171.140	601084.042	294.964	TOPO
MCV2003F_597	09/05/2003	7724166.327	601084.682	295.159	TOPO
MCV2003F_598	09/05/2003	7724165.334	601089.188	294.432	TOPO
MCV2003F_599	09/05/2003	7724162.185	601088.039	294.689	TOPO
MCV2003F_600	09/05/2003	7724161.773	601089.960	294.302	TOPO
MCV2003F_601	09/05/2003	7724159.138	601086.614	294.797	TOPO
MCV2003F_602	09/05/2003	7724160.849	601081.643	296.149	TOPO
MCV2003F_603	09/05/2003	7724161.324	601077.848	297.267	TOPO
MCV2003F_604	09/05/2003	7724162.465	601074.484	297.983	TOPO
MCV2003F_605	09/05/2003	7724166.720	601078.371	297.266	TOPO
MCV2003F_606	09/05/2003	7724168.112	601080.752	296.876	TOPO
MCV2003F_607	09/05/2003	7724166.799	601081.875	296.411	TOPO
MCV2003F_608	09/05/2003	7724165.051	601079.949	296.782	TOPO
MCV2003F_609	09/05/2003	7724162.984	601079.533	296.620	TOPO
MCV2003F_610	09/05/2003	7724158.313	601077.377	297.098	TOPO
MCV2003F_611	09/05/2003	7724155.307	601071.157	297.932	TOPO
MCV2003F_612	09/05/2003	7724154.078	601073.167	299.550	TOPO
MCV2003F_613	09/05/2003	7724153.409	601076.756	300.202	TOPO
MCV2003F_614	09/05/2003	7724150.281	601075.228	300.504	TOPO
MCV2003F_615	09/05/2003	7724151.562	601074.992	301.314	TOPO
MCV2003F_616	09/05/2003	7724153.090	601079.474	295.767	TOPO
MCV2003F_617	09/05/2003	7724152.318	601082.087	296.537	TOPO
MCV2003F_618	09/05/2003	7724150.630	601084.444	294.634	TOPO
MCV2003F_619	09/05/2003	7724149.701	601086.581	294.171	TOPO
MCV2003F_620	09/05/2003	7724146.463	601084.591	294.324	TOPO
MCV2003F_621	09/05/2003	7724146.864	601079.827	295.479	TOPO
MCV2003F_622	09/05/2003	7724147.951	601075.627	296.665	TOPO
MCV2003F_623	09/05/2003	7724148.500	601072.011	297.532	TOPO
MCV2003F_624	09/05/2003	7724144.500	601073.875	297.456	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_625	09/05/2003	7724140.347	601075.209	297.437	TOPO
MCV2003F_626	09/05/2003	7724138.587	601080.354	295.665	TOPO
MCV2003F_627	09/05/2003	7724137.534	601084.478	293.982	TOPO
MCV2003F_628	09/05/2003	7724135.920	601082.663	295.904	TOPO
MCV2003F_629	09/05/2003	7724135.517	601079.681	295.494	TOPO
MCV2003F_630	09/05/2003	7724133.129	601081.682	295.820	TOPO
MCV2003F_631	09/05/2003	7724131.611	601083.052	293.909	TOPO
MCV2003F_632	09/05/2003	7724135.223	601078.265	295.937	TOPO
MCV2003F_633	09/05/2003	7724135.644	601075.570	297.172	TOPO
MCV2003F_634	09/05/2003	7724136.226	601071.951	297.547	TOPO
MCV2003F_635	09/05/2003	7724135.204	601068.253	297.950	TOPO
MCV2003F_636	09/05/2003	7724130.872	601073.073	296.311	TOPO
MCV2003F_637	09/05/2003	7724128.135	601078.610	294.791	TOPO
MCV2003F_638	09/05/2003	7724124.754	601078.864	294.721	TOPO
MCV2003F_639	09/05/2003	7724124.686	601074.477	295.712	TOPO
MCV2003F_640	09/05/2003	7724125.217	601070.552	296.919	TOPO
MCV2003F_641	09/05/2003	7724126.197	601065.993	296.950	TOPO
MCV2003F_642	09/05/2003	7724123.818	601062.001	296.845	TOPO
MCV2003F_643	09/05/2003	7724121.784	601067.788	297.868	TOPO
MCV2003F_644	09/05/2003	7724121.473	601072.645	295.954	TOPO
MCV2003F_645	09/05/2003	7724119.258	601077.119	294.915	TOPO
MCV2003F_646	09/05/2003	7724115.712	601076.491	294.441	TOPO
MCV2003F_647	09/05/2003	7724116.058	601072.859	295.401	TOPO
MCV2003F_648	09/05/2003	7724116.158	601069.263	297.443	TOPO
MCV2003F_649	09/05/2003	7724117.014	601063.065	297.545	TOPO
MCV2003F_650	09/05/2003	7724109.721	601065.102	297.406	TOPO
MCV2003F_651	09/05/2003	7724108.653	601069.612	296.156	TOPO
MCV2003F_652	09/05/2003	7724106.999	601073.309	295.017	TOPO
MCV2003F_653	09/05/2003	7724105.328	601076.809	294.520	TOPO
MCV2003F_654	09/05/2003	7724100.305	601075.320	294.269	TOPO
MCV2003F_655	09/05/2003	7724101.293	601069.686	295.329	TOPO
MCV2003F_656	09/05/2003	7724102.580	601065.293	296.671	TOPO
MCV2003F_657	09/05/2003	7724102.062	601061.579	297.420	TOPO
MCV2003F_658	09/05/2003	7724097.166	601060.730	297.079	TOPO
MCV2003F_659	09/05/2003	7724095.399	601067.030	295.935	TOPO
MCV2003F_660	09/05/2003	7724094.508	601070.405	295.510	TOPO
MCV2003F_661	09/05/2003	7724092.736	601074.346	294.136	TOPO
MCV2003F_662	09/05/2003	7724088.408	601072.863	294.281	TOPO
MCV2003F_663	09/05/2003	7724091.284	601066.570	295.972	TOPO
MCV2003F_664	09/05/2003	7724093.149	601061.371	296.425	TOPO
MCV2003F_665	09/05/2003	7724093.227	601056.958	297.204	TOPO
MCV2003F_666	09/05/2003	7724086.933	601056.698	297.077	TOPO
MCV2003F_667	09/05/2003	7724084.759	601063.710	295.907	TOPO
MCV2003F_668	09/05/2003	7724082.774	601069.707	294.914	TOPO
MCV2003F_669	09/05/2003	7724080.663	601073.707	293.649	TOPO
MCV2003F_670	09/05/2003	7724074.772	601073.267	294.240	TOPO
MCV2003F_671	09/05/2003	7724076.624	601066.796	295.419	TOPO
MCV2003F_672	09/05/2003	7724079.635	601059.454	296.482	TOPO
MCV2003F_673	09/05/2003	7724079.941	601053.045	297.440	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_674	09/05/2003	7724072.251	601051.952	297.742	TOPO
MCV2003F_675	09/05/2003	7724070.501	601058.195	296.253	TOPO
MCV2003F_676	09/05/2003	7724069.885	601065.511	295.523	TOPO
MCV2003F_677	09/05/2003	7724068.879	601069.567	294.042	TOPO
MCV2003F_678	09/05/2003	7724063.734	601068.759	294.388	TOPO
MCV2003F_679	09/05/2003	7724064.207	601061.417	295.856	TOPO
MCV2003F_680	09/05/2003	7724064.250	601054.796	296.662	TOPO
MCV2003F_681	09/05/2003	7724063.817	601049.970	297.294	TOPO
MCV2003F_682	09/05/2003	7724057.418	601051.888	297.613	TOPO
MCV2003F_683	09/05/2003	7724055.963	601057.381	297.042	TOPO
MCV2003F_684	09/05/2003	7724054.989	601062.993	295.038	TOPO
MCV2003F_685	09/05/2003	7724053.533	601067.752	294.228	TOPO
MCV2003F_686	09/05/2003	7724048.537	601065.913	294.489	TOPO
MCV2003F_687	09/05/2003	7724049.451	601059.114	295.812	TOPO
MCV2003F_688	09/05/2003	7724049.268	601053.939	296.741	TOPO
MCV2003F_689	09/05/2003	7724049.373	601049.771	297.332	TOPO
MCV2003F_690	09/05/2003	7724051.276	601052.045	299.716	TOPO
MCV2003F_691	09/05/2003	7724052.840	601054.122	298.681	TOPO
MCV2003F_692	09/05/2003	7724054.791	601051.929	298.676	TOPO
MCV2003F_693	09/05/2003	7724047.164	601046.333	297.546	TOPO
MCV2003F_694	09/05/2003	7724045.857	601051.139	298.484	TOPO
MCV2003F_695	09/05/2003	7724042.503	601054.130	298.437	TOPO
MCV2003F_696	09/05/2003	7724042.516	601057.771	295.705	TOPO
MCV2003F_697	09/05/2003	7724040.553	601063.786	294.425	TOPO
MCV2003F_698	09/05/2003	7724036.303	601061.841	294.486	TOPO
MCV2003F_699	09/05/2003	7724038.194	601057.018	295.471	TOPO
MCV2003F_700	09/05/2003	7724039.620	601052.863	298.246	TOPO
MCV2003F_701	09/05/2003	7724041.571	601048.104	297.731	TOPO
MCV2003F_702	09/05/2003	7724036.857	601043.413	297.510	TOPO
MCV2003F_703	09/05/2003	7724033.046	601047.853	297.142	TOPO
MCV2003F_704	09/05/2003	7724030.711	601048.605	297.375	TOPO
MCV2003F_705	09/05/2003	7724032.290	601051.471	296.670	TOPO
MCV2003F_706	09/05/2003	7724032.481	601054.843	297.948	TOPO
MCV2003F_707	09/05/2003	7724030.063	601053.795	297.633	TOPO
MCV2003F_708	09/05/2003	7724026.169	601052.119	297.176	TOPO
MCV2003F_709	09/05/2003	7724031.322	601056.924	295.095	TOPO
MCV2003F_710	09/05/2003	7724029.742	601060.549	294.148	TOPO
MCV2003F_711	09/05/2003	7724026.882	601059.604	293.842	TOPO
MCV2003F_712	09/05/2003	7724028.172	601056.281	294.947	TOPO
MCV2003F_713	09/05/2003	7724024.735	601054.179	295.220	TOPO
MCV2003F_714	09/05/2003	7724022.361	601053.215	295.116	TOPO
MCV2003F_715	09/05/2003	7724020.525	601056.061	294.396	TOPO
MCV2003F_716	09/05/2003	7724024.190	601049.048	296.318	TOPO
MCV2003F_717	09/05/2003	7724027.292	601043.845	296.739	TOPO
MCV2003F_718	09/05/2003	7724026.492	601039.483	296.724	TOPO
MCV2003F_719	09/05/2003	7724023.523	601035.842	297.285	TOPO
MCV2003F_720	09/05/2003	7724017.671	601042.092	296.391	TOPO
MCV2003F_721	09/05/2003	7724012.165	601047.871	294.548	TOPO
MCV2003F_722	09/05/2003	7724007.744	601049.446	294.712	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_723	09/05/2003	7724010.395	601040.884	295.841	TOPO
MCV2003F_724	09/05/2003	7724014.583	601035.627	296.758	TOPO
MCV2003F_725	09/05/2003	7724018.217	601030.507	297.301	TOPO
MCV2003F_726	09/05/2003	7724013.395	601026.948	297.251	TOPO
MCV2003F_727	09/05/2003	7724012.178	601031.104	299.139	TOPO
MCV2003F_728	09/05/2003	7724006.934	601037.328	296.442	TOPO
MCV2003F_729	09/05/2003	7724003.089	601045.027	295.123	TOPO
MCV2003F_730	09/05/2003	7724001.169	601048.942	293.882	TOPO
MCV2003F_731	09/05/2003	7723996.960	601047.973	293.778	TOPO
MCV2003F_732	09/05/2003	7723998.500	601041.030	294.571	TOPO
MCV2003F_733	09/05/2003	7724000.101	601034.799	295.443	TOPO
MCV2003F_734	09/05/2003	7724003.289	601028.770	296.643	TOPO
MCV2003F_735	09/05/2003	7724005.744	601022.035	297.315	TOPO
MCV2003F_736	09/05/2003	7723999.918	601017.408	297.019	TOPO
MCV2003F_737	09/05/2003	7723994.793	601025.985	295.963	TOPO
MCV2003F_738	09/05/2003	7723991.422	601034.214	294.602	TOPO
MCV2003F_739	09/05/2003	7723987.594	601042.138	294.074	TOPO
MCV2003F_740	09/05/2003	7723981.658	601038.771	294.127	TOPO
MCV2003F_741	09/05/2003	7723983.094	601030.321	294.654	TOPO
MCV2003F_742	09/05/2003	7723985.489	601022.990	295.542	TOPO
MCV2003F_743	09/05/2003	7723988.366	601015.417	296.766	TOPO
MCV2003F_744	09/05/2003	7723985.968	601009.404	297.387	TOPO
MCV2003F_745	09/05/2003	7723981.081	601014.773	296.549	TOPO
MCV2003F_746	09/05/2003	7723975.866	601021.241	294.492	TOPO
MCV2003F_747	09/05/2003	7723972.613	601024.305	294.292	TOPO
MCV2003F_748	09/05/2003	7723968.319	601020.846	294.301	TOPO
MCV2003F_749	09/05/2003	7723964.276	601026.755	294.088	TOPO
MCV2003F_750	09/05/2003	7723961.223	601022.924	293.919	TOPO
MCV2003F_751	09/05/2003	7723965.523	601016.865	294.359	TOPO
MCV2003F_752	09/05/2003	7723969.552	601009.861	295.050	TOPO
MCV2003F_753	09/05/2003	7723971.158	601004.343	297.331	TOPO
MCV2003F_754	09/05/2003	7723965.734	601002.395	296.360	TOPO
MCV2003F_755	09/05/2003	7723962.327	601006.928	295.592	TOPO
MCV2003F_756	09/05/2003	7723958.141	601013.712	294.673	TOPO
MCV2003F_757	09/05/2003	7723953.254	601019.485	293.892	TOPO
MCV2003F_758	09/05/2003	7723948.386	601016.668	293.987	TOPO
MCV2003F_759	09/05/2003	7723950.672	601010.583	294.447	TOPO
MCV2003F_760	09/05/2003	7723954.837	601004.264	296.114	TOPO
MCV2003F_761	09/05/2003	7723957.641	600998.242	296.413	TOPO
MCV2003F_762	09/05/2003	7723957.995	600993.246	297.288	TOPO
MCV2003F_763	09/05/2003	7723951.689	600990.000	297.303	TOPO
MCV2003F_764	09/05/2003	7723947.711	600996.484	297.636	TOPO
MCV2003F_765	09/05/2003	7723946.745	600999.063	296.131	TOPO
MCV2003F_766	09/05/2003	7723945.790	601002.539	297.761	TOPO
MCV2003F_767	09/05/2003	7723944.403	601006.817	295.033	TOPO
MCV2003F_768	09/05/2003	7723941.347	601012.716	293.718	TOPO
MCV2003F_769	09/05/2003	7723936.070	601010.012	293.834	TOPO
MCV2003F_770	09/05/2003	7723937.945	601002.277	295.171	TOPO
MCV2003F_771	09/05/2003	7723940.944	601000.079	296.922	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_772	09/05/2003	7723943.423	601000.611	297.693	TOPO
MCV2003F_773	09/05/2003	7723942.974	600996.029	296.696	TOPO
MCV2003F_774	09/05/2003	7723942.973	600993.809	298.092	TOPO
MCV2003F_775	09/05/2003	7723943.207	600993.880	298.099	TOPO
MCV2003F_776	09/05/2003	7723941.153	600992.231	297.557	TOPO
MCV2003F_777	09/05/2003	7723944.563	600987.167	297.283	TOPO
MCV2003F_778	09/05/2003	7723939.884	600982.552	297.090	TOPO
MCV2003F_779	09/05/2003	7723935.158	600989.003	296.625	TOPO
MCV2003F_780	09/05/2003	7723934.007	600992.308	298.170	TOPO
MCV2003F_781	09/05/2003	7723936.411	600994.182	297.717	TOPO
MCV2003F_782	09/05/2003	7723932.075	600998.310	295.697	TOPO
MCV2003F_783	09/05/2003	7723928.302	601003.429	294.322	TOPO
MCV2003F_784	09/05/2003	7723931.650	601004.776	297.425	TOPO
MCV2003F_785	09/05/2003	7723928.175	601007.289	294.464	TOPO
MCV2003F_786	09/05/2003	7723923.342	601005.772	294.142	TOPO
MCV2003F_787	09/05/2003	7723924.800	600998.906	294.496	TOPO
MCV2003F_788	09/05/2003	7723926.486	600991.308	295.985	TOPO
MCV2003F_789	09/05/2003	7723931.713	600985.070	296.545	TOPO
MCV2003F_790	09/05/2003	7723934.153	600977.502	297.165	TOPO
MCV2003F_791	09/05/2003	7723926.977	600973.461	296.936	TOPO
MCV2003F_792	09/05/2003	7723921.951	600981.296	296.791	TOPO
MCV2003F_793	09/05/2003	7723917.677	600987.878	295.752	TOPO
MCV2003F_794	09/05/2003	7723914.910	600994.843	294.777	TOPO
MCV2003F_795	09/05/2003	7723911.393	601000.542	294.332	TOPO
MCV2003F_796	09/05/2003	7723906.203	601001.119	294.461	TOPO
MCV2003F_797	09/05/2003	7723907.847	600994.099	295.352	TOPO
MCV2003F_798	09/05/2003	7723910.382	600995.419	296.858	TOPO
MCV2003F_799	09/05/2003	7723912.119	600996.580	296.599	TOPO
MCV2003F_800	09/05/2003	7723912.942	600988.096	295.116	TOPO
MCV2003F_801	09/05/2003	7723916.587	600982.106	296.211	TOPO
MCV2003F_802	09/05/2003	7723922.121	600972.186	296.891	TOPO
MCV2003F_803	09/05/2003	7723916.794	600968.303	297.354	TOPO
MCV2003F_804	09/05/2003	7723911.194	600974.681	297.002	TOPO
MCV2003F_805	09/05/2003	7723905.938	600982.320	295.993	TOPO
MCV2003F_806	09/05/2003	7723902.084	600986.729	296.257	TOPO
MCV2003F_807	09/05/2003	7723904.431	600988.724	298.400	TOPO
MCV2003F_808	09/05/2003	7723899.846	600989.146	295.873	TOPO
MCV2003F_809	09/05/2003	7723897.703	600991.607	297.149	TOPO
MCV2003F_810	09/05/2003	7723898.651	600998.357	295.360	TOPO
MCV2003F_811	09/05/2003	7723894.712	601001.164	294.592	TOPO
MCV2003F_812	09/05/2003	7723889.815	600999.412	295.752	TOPO
MCV2003F_813	09/05/2003	7723885.837	600998.760	296.368	TOPO
MCV2003F_814	09/05/2003	7723885.281	601002.631	295.305	TOPO
MCV2003F_815	09/05/2003	7723881.790	601002.102	295.707	TOPO
MCV2003F_816	09/05/2003	7723880.399	600997.363	297.571	TOPO
MCV2003F_817	09/05/2003	7723875.374	600997.333	298.321	TOPO
MCV2003F_818	09/05/2003	7723872.300	600993.014	298.349	TOPO
MCV2003F_819	09/05/2003	7723876.042	600992.142	298.136	TOPO
MCV2003F_820	09/05/2003	7723875.554	600993.930	298.804	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_821	09/05/2003	7723870.947	600994.763	296.285	TOPO
MCV2003F_822	09/05/2003	7723868.729	600996.992	296.180	TOPO
MCV2003F_823	09/05/2003	7723868.358	601001.002	296.112	TOPO
MCV2003F_824	09/05/2003	7723870.037	601005.330	295.240	TOPO
MCV2003F_825	09/05/2003	7723865.832	601000.187	297.092	TOPO
MCV2003F_826	09/05/2003	7723861.102	601002.871	295.943	TOPO
MCV2003F_827	09/05/2003	7723861.982	601005.323	294.288	TOPO
MCV2003F_828	09/05/2003	7723859.701	600998.511	296.947	TOPO
MCV2003F_829	09/05/2003	7723858.124	600996.492	297.235	TOPO
MCV2003F_830	09/05/2003	7723861.560	600995.383	297.455	TOPO
MCV2003F_831	09/05/2003	7723862.123	600991.460	297.282	TOPO
MCV2003F_832	09/05/2003	7723859.925	600989.133	299.098	TOPO
MCV2003F_833	09/05/2003	7723855.431	600993.634	298.142	TOPO
MCV2003F_834	09/05/2003	7723848.625	600994.041	298.737	TOPO
MCV2003F_835	09/05/2003	7723841.448	600991.113	299.742	TOPO
MCV2003F_836	09/05/2003	7723836.558	600988.619	298.804	TOPO
MCV2003F_837	09/05/2003	7723828.732	600985.997	299.874	TOPO
MCV2003F_838	09/05/2003	7723820.987	600981.094	298.093	TOPO
MCV2003F_839	09/05/2003	7723816.085	600978.471	296.414	TOPO
MCV2003F_840	09/05/2003	7723823.986	600976.735	298.172	TOPO
MCV2003F_841	09/05/2003	7723829.657	600976.751	297.639	TOPO
MCV2003F_842	09/05/2003	7723833.603	600978.657	297.726	TOPO
MCV2003F_843	09/05/2003	7723840.214	600979.930	298.109	TOPO
MCV2003F_844	09/05/2003	7723845.324	600981.735	298.242	TOPO
MCV2003F_845	09/05/2003	7723851.049	600984.495	299.426	TOPO
MCV2003F_846	09/05/2003	7723855.869	600986.361	298.918	TOPO
MCV2003F_847	09/05/2003	7723859.948	600989.227	299.017	TOPO
MCV2003F_848	09/05/2003	7723853.276	600988.885	299.882	TOPO
MCV2003F_849	09/05/2003	7723846.410	600987.460	299.701	TOPO
MCV2003F_850	09/05/2003	7723837.890	600984.955	299.511	TOPO
MCV2003F_851	09/05/2003	7723832.923	600989.648	295.447	TOPO
MCV2003F_852	09/05/2003	7723834.984	600992.960	295.193	TOPO
MCV2003F_853	09/05/2003	7723838.608	600994.480	294.091	TOPO
MCV2003F_854	09/05/2003	7723843.893	600995.136	296.148	TOPO
MCV2003F_855	09/05/2003	7723847.656	600997.637	295.147	TOPO
MCV2003F_856	09/05/2003	7723835.020	600975.187	297.489	TOPO
MCV2003F_857	09/05/2003	7723839.922	600973.217	295.379	TOPO
MCV2003F_858	09/05/2003	7723841.129	600969.415	296.768	TOPO
MCV2003F_859	09/05/2003	7723848.959	600971.109	296.652	TOPO
MCV2003F_860	09/05/2003	7723854.697	600972.716	298.666	TOPO
MCV2003F_861	09/05/2003	7723856.281	600976.594	296.069	TOPO
MCV2003F_862	09/05/2003	7723860.619	600978.339	298.531	TOPO
MCV2003F_863	09/05/2003	7723860.646	600980.461	295.547	TOPO
MCV2003F_864	09/05/2003	7723866.598	600980.654	299.498	TOPO
MCV2003F_865	09/05/2003	7723866.832	600985.199	295.540	TOPO
MCV2003F_866	09/05/2003	7723872.068	600987.098	295.869	TOPO
MCV2003F_867	09/05/2003	7723879.400	600983.034	297.963	TOPO
MCV2003F_868	09/05/2003	7723885.620	600987.355	298.823	TOPO
MCV2003F_869	09/05/2003	7723888.292	600990.314	298.669	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_870	09/05/2003	7723885.213	600992.612	296.774	TOPO
MCV2003F_871	09/05/2003	7723884.316	600984.411	299.390	TOPO
MCV2003F_872	09/05/2003	7723868.921	600976.740	297.713	TOPO
MCV2003F_873	09/05/2003	7723863.519	600969.353	297.880	TOPO
MCV2003F_874	09/05/2003	7723857.986	600964.652	296.026	TOPO
MCV2003F_875	09/05/2003	7723865.141	600966.493	296.362	TOPO
MCV2003F_876	09/05/2003	7723873.602	600971.131	296.975	TOPO
MCV2003F_877	09/05/2003	7723883.426	600976.647	297.791	TOPO
MCV2003F_878	09/05/2003	7723893.088	600978.312	295.972	TOPO
MCV2003F_879	09/05/2003	7723899.429	600981.698	296.022	TOPO
MCV2003F_880	09/05/2003	7723896.590	600985.209	295.860	TOPO
MCV2003F_881	09/05/2003	7723904.292	600979.837	296.561	TOPO
MCV2003F_882	09/05/2003	7723911.408	600971.983	296.841	TOPO
MCV2003F_883	09/05/2003	7723914.311	600964.740	297.987	TOPO
MCV2003F_884	09/05/2003	7723891.726	600966.088	298.157	TOPO
MCV2003F_885	09/05/2003	7723892.243	600973.209	299.128	TOPO
MCV2003F_886	09/05/2003	7723888.547	600970.339	298.461	TOPO
MCV2003F_887	09/05/2003	7723878.432	600965.778	299.472	TOPO
MCV2003F_888	09/05/2003	7723872.066	600964.208	300.057	TOPO
MCV2003F_889	09/05/2003	7723863.797	600961.115	297.871	TOPO
MCV2003F_890	09/05/2003	7723870.786	600954.352	296.095	TOPO
MCV2003F_891	09/05/2003	7723877.159	600949.046	296.239	TOPO
MCV2003F_892	09/05/2003	7723874.656	600939.800	296.542	TOPO
MCV2003F_893	09/05/2003	7723868.662	600934.652	296.493	TOPO
MCV2003F_894	09/05/2003	7723861.439	600942.911	295.246	TOPO
MCV2003F_895	09/05/2003	7723855.878	600950.045	295.489	TOPO
MCV2003F_896	09/05/2003	7723849.806	600956.291	295.144	TOPO
MCV2003F_897	09/05/2003	7723844.682	600956.917	294.546	TOPO
MCV2003F_898	09/05/2003	7723848.503	600950.480	294.278	TOPO
MCV2003F_899	09/05/2003	7723852.592	600941.202	296.149	TOPO
MCV2003F_900	09/05/2003	7723855.948	600931.910	297.091	TOPO
MCV2003F_901	09/05/2003	7723846.659	600932.423	298.106	TOPO
MCV2003F_902	09/05/2003	7723843.896	600938.313	295.786	TOPO
MCV2003F_903	09/05/2003	7723841.503	600943.729	296.477	TOPO
MCV2003F_904	09/05/2003	7723839.584	600947.886	294.566	TOPO
MCV2003F_905	09/05/2003	7723834.788	600948.328	294.163	TOPO
MCV2003F_906	09/05/2003	7723835.668	600945.058	296.304	TOPO
MCV2003F_907	09/05/2003	7723837.129	600938.199	295.531	TOPO
MCV2003F_908	09/05/2003	7723837.775	600932.104	297.840	TOPO
MCV2003F_909	09/05/2003	7723836.482	600926.944	297.133	TOPO
MCV2003F_910	09/05/2003	7723830.406	600928.679	295.999	TOPO
MCV2003F_911	09/05/2003	7723827.960	600937.384	296.594	TOPO
MCV2003F_912	09/05/2003	7723824.588	600946.575	295.949	TOPO
MCV2003F_913	09/05/2003	7723818.576	600949.684	295.384	TOPO
MCV2003F_914	09/05/2003	7723817.393	600945.134	296.666	TOPO
MCV2003F_915	09/05/2003	7723820.424	600937.724	295.916	TOPO
MCV2003F_916	09/05/2003	7723818.239	600931.366	295.138	TOPO
MCV2003F_917	09/05/2003	7723815.055	600928.710	295.852	TOPO
MCV2003F_918	09/05/2003	7723812.135	600924.849	296.976	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_919	09/05/2003	7723808.728	600929.633	295.313	TOPO
MCV2003F_920	09/05/2003	7723806.892	600936.203	295.748	TOPO
MCV2003F_921	09/05/2003	7723806.432	600940.986	295.112	TOPO
MCV2003F_922	09/05/2003	7723805.374	600946.726	294.595	TOPO
MCV2003F_923	09/05/2003	7723803.294	600951.080	294.855	TOPO
MCV2003F_924	09/05/2003	7723800.209	600958.713	294.087	TOPO
MCV2003F_925	09/05/2003	7723793.186	600957.013	293.782	TOPO
MCV2003F_926	09/05/2003	7723794.929	600947.400	294.242	TOPO
MCV2003F_927	09/05/2003	7723798.244	600941.695	294.895	TOPO
MCV2003F_928	09/05/2003	7723796.251	600934.320	296.306	TOPO
MCV2003F_929	09/05/2003	7723797.465	600929.011	295.407	TOPO
MCV2003F_930	09/05/2003	7723796.532	600921.087	296.443	TOPO
MCV2003F_931	09/05/2003	7723788.399	600916.964	296.156	TOPO
MCV2003F_932	09/05/2003	7723783.082	600921.698	297.151	TOPO
MCV2003F_933	09/05/2003	7723781.226	600926.353	296.282	TOPO
MCV2003F_934	09/05/2003	7723781.221	600928.985	294.802	TOPO
MCV2003F_935	09/05/2003	7723779.010	600934.648	295.661	TOPO
MCV2003F_936	09/05/2003	7723778.371	600937.862	293.250	TOPO
MCV2003F_937	09/05/2003	7723775.808	600933.434	293.903	TOPO
MCV2003F_938	09/05/2003	7723775.003	600928.233	294.180	TOPO
MCV2003F_939	09/05/2003	7723773.675	600919.128	296.867	TOPO
MCV2003F_940	09/05/2003	7723774.758	600910.935	295.858	TOPO
MCV2003F_941	09/05/2003	7723764.294	600920.041	298.309	TOPO
MCV2003F_942	09/05/2003	7723766.165	600922.641	298.551	TOPO
MCV2003F_943	09/05/2003	7723768.487	600921.242	298.294	TOPO
MCV2003F_944	09/05/2003	7723767.402	600918.339	298.318	TOPO
MCV2003F_945	09/05/2003	7723766.703	600920.153	299.084	TOPO
MCV2003F_946	09/05/2003	7723764.490	600923.114	294.210	TOPO
MCV2003F_947	09/05/2003	7723763.001	600920.553	296.833	TOPO
MCV2003F_948	09/05/2003	7723760.891	600920.777	294.480	TOPO
MCV2003F_949	09/05/2003	7723757.541	600925.143	293.746	TOPO
MCV2003F_950	09/05/2003	7723757.496	600919.919	294.033	TOPO
MCV2003F_951	09/05/2003	7723759.282	600916.887	296.076	TOPO
MCV2003F_952	09/05/2003	7723760.811	600908.810	295.973	TOPO
MCV2003F_953	09/05/2003	7723754.203	600905.346	295.993	TOPO
MCV2003F_954	09/05/2003	7723751.019	600912.956	295.265	TOPO
MCV2003F_955	09/05/2003	7723749.880	600917.399	294.206	TOPO
MCV2003F_956	09/05/2003	7723746.355	600926.701	293.913	TOPO
MCV2003F_957	09/05/2003	7723740.913	600921.259	293.564	TOPO
MCV2003F_958	09/05/2003	7723744.783	600912.805	294.298	TOPO
MCV2003F_959	09/05/2003	7723743.984	600901.790	295.239	TOPO
MCV2003F_960	09/05/2003	7723743.207	600894.228	296.633	TOPO
MCV2003F_961	09/05/2003	7723736.100	600893.896	296.283	TOPO
MCV2003F_962	09/05/2003	7723731.391	600902.119	293.876	TOPO
MCV2003F_963	09/05/2003	7723729.030	600905.321	293.224	TOPO
MCV2003F_964	09/05/2003	7723727.252	600912.180	294.164	TOPO
MCV2003F_965	09/05/2003	7723725.240	600916.610	293.839	TOPO
MCV2003F_966	09/05/2003	7723719.961	600910.525	293.249	TOPO
MCV2003F_967	09/05/2003	7723724.931	600900.633	293.358	TOPO

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northling (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_968	09/05/2003	7723727.370	600891.411	295.084	TOPO
MCV2003F_969	09/05/2003	7723729.165	600886.064	296.777	TOPO
MCV2003F_970	09/05/2003	7723722.310	600881.647	296.822	TOPO
MCV2003F_971	09/05/2003	7723718.948	600889.685	294.791	TOPO
MCV2003F_972	09/05/2003	7723716.546	600896.468	293.207	TOPO
MCV2003F_973	09/05/2003	7723711.323	600894.830	293.265	TOPO
MCV2003F_974	09/05/2003	7723712.761	600886.885	294.918	TOPO
MCV2003F_975	09/05/2003	7723714.208	600879.245	296.668	TOPO
MCV2003F_976	09/05/2003	7723705.129	600876.362	296.774	TOPO
MCV2003F_977	09/05/2003	7723702.788	600882.767	294.447	TOPO
MCV2003F_978	09/05/2003	7723699.583	600887.540	294.557	TOPO
MCV2003F_979	09/05/2003	7723697.399	600891.504	292.790	TOPO
MCV2003F_980	09/05/2003	7723692.857	600889.243	293.273	TOPO
MCV2003F_981	09/05/2003	7723693.564	600885.180	294.355	TOPO
MCV2003F_982	09/05/2003	7723695.800	600878.729	294.558	TOPO
MCV2003F_983	09/05/2003	7723697.837	600871.783	296.806	TOPO
MCV2003F_984	09/05/2003	7723687.938	600870.673	296.515	TOPO
MCV2003F_985	09/05/2003	7723683.922	600879.872	294.614	TOPO
MCV2003F_986	09/05/2003	7723677.313	600877.034	295.503	TOPO
MCV2003F_987	09/05/2003	7723676.679	600873.405	296.861	TOPO
MCV2003F_988	09/05/2003	7723672.830	600877.658	296.182	TOPO
MCV2003F_989	09/05/2003	7723670.023	600876.257	293.827	TOPO
MCV2003F_990	09/05/2003	7723673.667	600868.680	295.486	TOPO
MCV2003F_991	09/05/2003	7723677.812	600860.882	296.902	TOPO
MCV2003F_992	09/05/2003	7723667.239	600857.792	296.453	TOPO
MCV2003F_993	09/05/2003	7723661.750	600865.044	294.944	TOPO
MCV2003F_994	09/05/2003	7723656.958	600868.715	293.347	TOPO
MCV2003F_995	09/05/2003	7723647.258	600862.507	293.973	TOPO
MCV2003F_996	09/05/2003	7723650.645	600853.865	295.500	TOPO
MCV2003F_997	09/05/2003	7723654.619	600846.363	296.720	TOPO
MCV2003F_998	09/05/2003	7723643.994	600843.647	296.173	TOPO
MCV2003F_999	09/05/2003	7723635.449	600848.927	294.603	TOPO
MCV2003F_999	09/05/2003	7723633.539	600848.523	294.727	TOPO
MCV2003F_999	09/05/2003	7723633.507	600848.540	294.725	TOPO
MCV2003F_1000	09/05/2003	7723842.696	601070.552	299.554	TOPO
MCV2003F_1001	09/05/2003	7723844.489	601066.799	296.393	TOPO
MCV2003F_1002	09/05/2003	7723836.669	601106.331	298.430	EDGWATER
MCV2003F_1003	09/05/2003	7723848.179	601114.724	297.999	EDGWATER
MCV2003F_1004	09/05/2003	7723866.377	601125.211	298.273	EDGWATER
MCV2003F_1005	09/05/2003	7723898.622	601153.787	298.454	EDGWATER
MCV2003F_1006	09/05/2003	7723959.919	601174.384	298.372	EDGWATER
MCV2003F_1007	09/05/2003	7723988.652	601197.820	298.424	EDGWATER
MCV2003F_1008	09/05/2003	7724016.145	601200.702	298.434	EDGWATER
MCV2003F_1009	09/05/2003	7724043.215	601186.266	298.361	EDGWATER
MCV2003F_1010	09/05/2003	7724073.128	601173.231	298.413	EDGWATER
MCV2003F_1011	09/05/2003	7724112.837	601171.641	298.430	EDGWATER
MCV2003F_1012	09/05/2003	7724138.993	601177.571	298.448	EDGWATER
MCV2003F_1013	09/05/2003	7724184.907	601214.857	298.384	EDGWATER
MCV2003F_1014	09/05/2003	7724477.826	601328.307	300.145	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1015	09/05/2003	7724509.412	601334.798	300.178	EDGWATER
MCV2003F_1016	09/05/2003	7724533.134	601333.269	300.320	EDGWATER
MCV2003F_1017	09/05/2003	7724685.346	601385.220	300.933	EDGWATER
MCV2003F_1018	09/05/2003	7724797.165	601357.002	301.008	EDGWATER
MCV2003F_1019	09/05/2003	7724809.615	601343.287	300.021	TOPO
MCV2003F_1020	09/05/2003	7724817.368	601331.527	299.404	TOPO
MCV2003F_1021	09/05/2003	7724813.695	601323.250	299.667	TOPO
MCV2003F_1022	09/05/2003	7724833.139	601317.539	302.243	TOPO
MCV2003F_1023	09/05/2003	7724831.703	601309.804	297.998	TOPO
MCV2003F_1024	09/05/2003	7724846.191	601306.264	297.882	TOPO
MCV2003F_1025	09/05/2003	7724858.740	601305.521	300.040	TOPO
MCV2003F_1026	09/05/2003	7724842.092	601295.647	301.953	TOPO
MCV2003F_1027	09/05/2003	7724857.537	601288.115	302.146	TOPO
MCV2003F_1028	09/05/2003	7724865.873	601280.680	301.823	TOPO
MCV2003F_1029	09/05/2003	7724880.712	601279.821	303.733	TOPO
MCV2003F_1030	09/05/2003	7724880.023	601274.185	301.754	TOPO
MCV2003F_1031	09/05/2003	7724886.426	601286.185	301.948	TOPO
MCV2003F_1032	09/05/2003	7724873.539	601294.150	302.064	TOPO
MCV2003F_1033	09/05/2003	7724875.772	601298.261	299.826	TOPO
MCV2003F_1034	09/05/2003	7724909.863	601286.208	302.058	TOPO
MCV2003F_1035	09/05/2003	7724915.164	601272.874	302.167	TOPO
MCV2003F_1036	09/05/2003	7724934.502	601267.395	301.912	TOPO
MCV2003F_1037	09/05/2003	7724950.318	601266.538	302.497	TOPO
MCV2003F_1038	09/05/2003	7724934.624	601282.783	302.141	TOPO
MCV2003F_1039	09/05/2003	7724918.300	601286.649	302.286	TOPO
MCV2003F_1040	09/05/2003	7724919.417	601288.769	300.408	TOPO
MCV2003F_1041	09/05/2003	7724908.929	601291.477	299.252	TOPO
MCV2003F_1042	09/05/2003	7724900.048	601291.697	298.323	TOPO
MCV2003F_1043	09/05/2003	7724913.192	601305.513	302.688	TOPO
MCV2003F_1044	09/05/2003	7724912.151	601311.051	300.374	TOPO
MCV2003F_1045	09/05/2003	7724907.599	601327.033	303.426	TOPO
MCV2003F_1046	09/05/2003	7724908.465	601342.001	302.876	TOPO
MCV2003F_1047	09/05/2003	7724884.467	601349.460	302.945	TOPO
MCV2003F_1048	09/05/2003	7724879.115	601345.788	304.586	TOPO
MCV2003F_1049	09/05/2003	7724885.577	601341.938	303.951	TOPO
MCV2003F_1050	09/05/2003	7724869.552	601334.438	302.273	TOPO
MCV2003F_1051	09/05/2003	7724850.071	601357.431	303.418	TOPO
MCV2003F_1052	09/05/2003	7724841.605	601347.246	301.898	TOPO
MCV2003F_1053	09/05/2003	7724835.553	601365.472	303.790	TOPO
MCV2003F_1054	09/05/2003	7724825.158	601352.412	302.135	TOPO
MCV2003F_1055	09/05/2003	7724816.251	601343.416	300.658	TOPO
MCV2003F_1056	09/05/2003	7724803.841	601333.779	301.095	TOPO
MCV2003F_1057	09/05/2003	7724801.810	601340.059	298.949	TOPO
MCV2003F_1058	09/05/2003	7724796.337	601332.902	299.361	TOPO
MCV2003F_1059	09/05/2003	7724788.233	601333.075	297.166	TOPO
MCV2003F_1060	09/05/2003	7724781.972	601340.459	298.811	TOPO
MCV2003F_1061	09/05/2003	7724775.996	601344.293	299.398	TOPO
MCV2003F_1062	09/05/2003	7724774.465	601348.105	301.240	TOPO
MCV2003F_1063	09/05/2003	7724770.804	601356.166	300.062	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1064	09/05/2003	7724766.687	601356.975	298.149	TOPO
MCV2003F_1065	09/05/2003	7724763.219	601359.352	299.310	TOPO
MCV2003F_1066	09/05/2003	7724758.233	601354.897	298.002	TOPO
MCV2003F_1067	09/05/2003	7724760.260	601350.887	300.068	TOPO
MCV2003F_1068	09/05/2003	7724756.042	601347.540	298.725	TOPO
MCV2003F_1069	09/05/2003	7724757.545	601340.443	297.178	TOPO
MCV2003F_1070	09/05/2003	7724752.840	601345.415	297.650	TOPO
MCV2003F_1071	09/05/2003	7724753.418	601350.277	298.856	TOPO
MCV2003F_1072	09/05/2003	7724751.963	601356.361	297.913	TOPO
MCV2003F_1073	09/05/2003	7724745.392	601359.648	298.889	TOPO
MCV2003F_1074	09/05/2003	7724742.955	601356.540	296.892	TOPO
MCV2003F_1075	09/05/2003	7724741.515	601352.915	298.743	TOPO
MCV2003F_1076	09/05/2003	7724735.595	601349.901	298.676	TOPO
MCV2003F_1077	09/05/2003	7724732.828	601354.133	299.086	TOPO
MCV2003F_1078	09/05/2003	7724725.326	601354.686	300.157	TOPO
MCV2003F_1079	09/05/2003	7724729.177	601359.906	300.192	TOPO
MCV2003F_1080	09/05/2003	7724728.261	601364.085	300.585	TOPO
MCV2003F_1081	09/05/2003	7724728.079	601366.164	299.712	TOPO
MCV2003F_1082	09/05/2003	7724730.743	601367.774	299.974	TOPO
MCV2003F_1083	09/05/2003	7724723.073	601369.441	300.424	TOPO
MCV2003F_1084	09/05/2003	7724717.871	601370.565	299.468	TOPO
MCV2003F_1085	09/05/2003	7724716.450	601367.054	297.993	TOPO
MCV2003F_1086	09/05/2003	7724716.430	601364.652	299.152	TOPO
MCV2003F_1087	09/05/2003	7724715.735	601361.635	297.409	TOPO
MCV2003F_1088	09/05/2003	7724720.775	601362.161	299.867	TOPO
MCV2003F_1089	09/05/2003	7724724.890	601354.498	300.241	TOPO
MCV2003F_1090	09/05/2003	7724719.947	601351.405	297.420	TOPO
MCV2003F_1091	09/05/2003	7724713.926	601351.814	298.263	TOPO
MCV2003F_1092	09/05/2003	7724708.933	601348.804	297.885	TOPO
MCV2003F_1093	09/05/2003	7724705.156	601346.793	297.377	TOPO
MCV2003F_1094	09/05/2003	7724710.298	601356.357	299.590	TOPO
MCV2003F_1095	09/05/2003	7724703.622	601353.713	299.342	TOPO
MCV2003F_1096	09/05/2003	7724699.064	601352.258	298.813	TOPO
MCV2003F_1097	09/05/2003	7724694.726	601351.118	298.177	TOPO
MCV2003F_1098	09/05/2003	7724697.393	601357.465	298.043	TOPO
MCV2003F_1099	09/05/2003	7724701.016	601362.982	300.044	TOPO
MCV2003F_1100	09/05/2003	7724714.248	601367.956	297.959	TOPO
MCV2003F_1101	09/05/2003	7724719.331	601375.131	297.819	TOPO
MCV2003F_1102	09/05/2003	7724710.949	601379.824	299.199	TOPO
MCV2003F_1103	09/05/2003	7724705.520	601385.475	299.334	TOPO
MCV2003F_1104	09/05/2003	7724698.973	601377.870	300.246	TOPO
MCV2003F_1105	09/05/2003	7724698.237	601370.146	300.275	TOPO
MCV2003F_1106	09/05/2003	7724699.000	601363.097	300.207	TOPO
MCV2003F_1107	09/05/2003	7724691.367	601359.477	298.429	TOPO
MCV2003F_1108	09/05/2003	7724687.614	601354.528	297.407	TOPO
MCV2003F_1109	09/05/2003	7724682.575	601356.708	297.640	TOPO
MCV2003F_1110	09/05/2003	7724681.740	601364.967	299.417	TOPO
MCV2003F_1111	09/05/2003	7724678.879	601371.950	297.882	TOPO
MCV2003F_1112	09/05/2003	7724678.919	601379.730	298.850	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1113	09/05/2003	7724672.324	601384.530	299.766	TOPO
MCV2003F_1114	09/05/2003	7724674.324	601378.298	301.128	TOPO
MCV2003F_1115	09/05/2003	7724671.130	601375.132	299.865	TOPO
MCV2003F_1116	09/05/2003	7724668.297	601367.829	298.695	TOPO
MCV2003F_1117	09/05/2003	7724668.189	601363.950	299.233	TOPO
MCV2003F_1118	09/05/2003	7724670.047	601359.714	299.289	TOPO
MCV2003F_1119	09/05/2003	7724674.194	601357.859	299.211	TOPO
MCV2003F_1120	09/05/2003	7724671.713	601354.595	298.419	TOPO
MCV2003F_1121	09/05/2003	7724668.397	601355.535	297.451	TOPO
MCV2003F_1122	09/05/2003	7724662.466	601358.965	296.824	TOPO
MCV2003F_1123	09/05/2003	7724661.521	601363.971	298.329	TOPO
MCV2003F_1124	09/05/2003	7724661.990	601369.493	296.585	TOPO
MCV2003F_1125	09/05/2003	7724660.199	601373.673	299.208	TOPO
MCV2003F_1126	09/05/2003	7724659.349	601378.972	297.942	TOPO
MCV2003F_1127	09/05/2003	7724656.659	601384.396	299.765	TOPO
MCV2003F_1128	09/05/2003	7724648.936	601384.880	300.798	TOPO
MCV2003F_1129	09/05/2003	7724649.607	601375.426	301.022	TOPO
MCV2003F_1130	09/05/2003	7724645.834	601367.720	299.632	TOPO
MCV2003F_1131	09/05/2003	7724645.834	601361.045	297.194	TOPO
MCV2003F_1132	09/05/2003	7724643.377	601356.044	297.652	TOPO
MCV2003F_1133	09/05/2003	7724639.222	601356.371	298.296	TOPO
MCV2003F_1134	09/05/2003	7724637.836	601359.976	298.890	TOPO
MCV2003F_1135	09/05/2003	7724634.056	601359.317	299.292	TOPO
MCV2003F_1136	09/05/2003	7724630.330	601366.280	299.929	TOPO
MCV2003F_1137	09/05/2003	7724626.173	601361.284	298.726	TOPO
MCV2003F_1138	09/05/2003	7724625.486	601357.515	298.936	TOPO
MCV2003F_1139	09/05/2003	7724622.488	601364.861	299.770	TOPO
MCV2003F_1140	09/05/2003	7724622.862	601369.445	300.051	TOPO
MCV2003F_1141	09/05/2003	7724626.477	601374.773	301.118	TOPO
MCV2003F_1142	09/05/2003	7724635.076	601381.439	301.213	TOPO
MCV2003F_1143	09/05/2003	7724616.579	601384.571	298.029	TOPO
MCV2003F_1144	09/05/2003	7724614.197	601378.617	299.675	TOPO
MCV2003F_1145	09/05/2003	7724614.689	601372.224	300.914	TOPO
MCV2003F_1146	09/05/2003	7724612.296	601368.095	299.002	TOPO
MCV2003F_1147	09/05/2003	7724610.055	601365.686	297.808	TOPO
MCV2003F_1148	09/05/2003	7724605.927	601368.174	296.999	TOPO
MCV2003F_1149	09/05/2003	7724604.970	601363.263	299.286	TOPO
MCV2003F_1150	09/05/2003	7724601.922	601358.376	298.285	TOPO
MCV2003F_1151	09/05/2003	7724600.426	601366.667	297.969	TOPO
MCV2003F_1152	09/05/2003	7724597.125	601372.254	299.379	TOPO
MCV2003F_1153	09/05/2003	7724594.734	601375.758	298.247	TOPO
MCV2003F_1154	09/05/2003	7724590.191	601382.255	300.135	TOPO
MCV2003F_1155	09/05/2003	7724605.290	601379.283	299.815	TOPO
MCV2003F_1156	09/05/2003	7724581.903	601383.700	299.984	TOPO
MCV2003F_1157	09/05/2003	7724573.147	601387.287	300.238	TOPO
MCV2003F_1158	09/05/2003	7724572.569	601379.711	299.660	TOPO
MCV2003F_1159	09/05/2003	7724573.794	601377.291	298.587	TOPO
MCV2003F_1160	09/05/2003	7724574.365	601374.163	299.611	TOPO
MCV2003F_1161	09/05/2003	7724570.603	601375.083	297.762	TOPO

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1162	09/05/2003	7724567.838	601380.934	299.600	TOPO
MCV2003F_1163	09/05/2003	7724563.758	601383.105	298.257	TOPO
MCV2003F_1164	09/05/2003	7724550.252	601369.894	299.158	TOPO
MCV2003F_1165	09/05/2003	7724544.264	601372.893	301.369	TOPO
MCV2003F_1166	09/05/2003	7724547.662	601345.922	299.788	TOPO
MCV2003F_1167	09/05/2003	7724555.467	601342.241	296.952	TOPO
MCV2003F_1168	09/05/2003	7724560.993	601342.100	301.603	TOPO
MCV2003F_1169	09/05/2003	7724560.760	601342.396	301.647	TOPO
MCV2003F_1170	09/05/2003	7724545.055	601337.596	298.556	TOPO
MCV2003F_1171	09/05/2003	7724541.924	601329.826	300.643	TOPO
MCV2003F_1172	09/05/2003	7724538.096	601323.064	300.039	TOPO
MCV2003F_1173	09/05/2003	7724531.384	601324.823	298.647	TOPO
MCV2003F_1174	09/05/2003	7724523.553	601326.189	297.771	TOPO
MCV2003F_1175	09/05/2003	7724513.770	601328.522	297.362	TOPO
MCV2003F_1176	09/05/2003	7724502.271	601329.779	297.294	TOPO
MCV2003F_1177	09/05/2003	7724490.266	601326.417	297.571	TOPO
MCV2003F_1178	09/05/2003	7724484.858	601322.707	300.491	TOPO
MCV2003F_1179	09/05/2003	7724490.120	601317.560	297.944	TOPO
MCV2003F_1180	09/05/2003	7724490.693	601311.385	300.894	TOPO
MCV2003F_1181	09/05/2003	7724495.079	601316.316	300.888	TOPO
MCV2003F_1182	09/05/2003	7724504.607	601316.141	301.028	TOPO
MCV2003F_1183	09/05/2003	7724513.026	601322.129	301.144	TOPO
MCV2003F_1184	09/05/2003	7724521.264	601317.559	301.652	TOPO
MCV2003F_1185	09/05/2003	7724509.663	601310.208	297.182	TOPO
MCV2003F_1186	09/05/2003	7724499.013	601308.756	298.014	TOPO
MCV2003F_1187	09/05/2003	7724490.017	601308.146	297.441	TOPO
MCV2003F_1188	09/05/2003	7724483.635	601304.532	297.498	TOPO
MCV2003F_1189	09/05/2003	7724477.629	601299.882	298.154	TOPO
MCV2003F_1190	09/05/2003	7724475.979	601296.916	300.744	TOPO
MCV2003F_1191	09/05/2003	7724478.015	601293.654	297.152	TOPO
MCV2003F_1192	09/05/2003	7724468.977	601296.065	301.446	TOPO
MCV2003F_1193	09/05/2003	7724462.589	601298.769	301.339	TOPO
MCV2003F_1194	09/05/2003	7724458.365	601296.330	299.182	TOPO
MCV2003F_1195	09/05/2003	7724457.910	601293.134	296.485	TOPO
MCV2003F_1196	09/05/2003	7724468.382	601306.067	297.223	TOPO
MCV2003F_1197	09/05/2003	7724468.613	601315.317	297.053	TOPO
MCV2003F_1198	09/05/2003	7724468.250	601322.835	297.711	TOPO
MCV2003F_1199	09/05/2003	7724459.954	601325.381	298.865	TOPO
MCV2003F_1200	09/05/2003	7724456.942	601320.202	297.163	TOPO
MCV2003F_1201	09/05/2003	7724449.321	601316.185	296.618	TOPO
MCV2003F_1202	09/05/2003	7724443.902	601315.258	297.109	TOPO
MCV2003F_1203	09/05/2003	7724453.727	601306.658	301.243	TOPO
MCV2003F_1204	09/05/2003	7724450.953	601306.527	298.653	TOPO
MCV2003F_1205	09/05/2003	7724443.844	601306.643	301.194	TOPO
MCV2003F_1206	09/05/2003	7724440.836	601301.699	297.968	TOPO
MCV2003F_1207	09/05/2003	7724435.092	601308.275	300.999	TOPO
MCV2003F_1208	09/05/2003	7724425.919	601307.629	297.429	TOPO
MCV2003F_1209	09/05/2003	7724434.484	601317.317	300.580	TOPO
MCV2003F_1210	09/05/2003	7724422.600	601317.687	300.668	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1211	09/05/2003	7724417.105	601314.716	298.368	TOPO
MCV2003F_1212	09/05/2003	7724411.650	601331.415	300.304	TOPO
MCV2003F_1213	09/05/2003	7724403.961	601330.435	300.134	TOPO
MCV2003F_1214	09/05/2003	7724396.671	601325.731	300.484	TOPO
MCV2003F_1215	09/05/2003	7724391.001	601336.123	300.264	TOPO
MCV2003F_1216	09/05/2003	7724320.132	601328.772	299.562	TOPO
MCV2003F_1217	09/05/2003	7724286.403	601319.750	299.558	TOPO
MCV2003F_1218	09/05/2003	7724284.481	601294.273	299.664	TOPO
MCV2003F_1219	09/05/2003	7724252.608	601282.993	299.696	TOPO
MCV2003F_1220	09/05/2003	7724205.820	601266.241	299.752	TOPO
MCV2003F_1221	09/05/2003	7724186.993	601242.943	299.947	TOPO
MCV2003F_1222	09/05/2003	7724155.345	601257.748	305.799	TOPO
MCV2003F_1223	09/05/2003	7724135.009	601254.006	308.180	TOPO
MCV2003F_1224	09/05/2003	7724129.464	601244.205	308.692	TOPO
MCV2003F_1225	09/05/2003	7724129.558	601223.731	305.423	TOPO
MCV2003F_1226	09/05/2003	7724133.584	601207.043	302.892	TOPO
MCV2003F_1227	09/05/2003	7724130.296	601189.526	300.277	TOPO
MCV2003F_1228	09/05/2003	7724119.518	601195.644	303.179	TOPO
MCV2003F_1229	09/05/2003	7724121.768	601190.672	302.679	TOPO
MCV2003F_1230	09/05/2003	7724125.748	601195.852	303.130	TOPO
MCV2003F_1231	09/05/2003	7724114.914	601196.370	305.198	TOPO
MCV2003F_1232	09/05/2003	7724063.794	601190.578	300.018	TOPO
MCV2003F_1233	09/05/2003	7723921.247	601167.784	296.713	TOPO
MCV2003F_1234	09/05/2003	7723922.788	601162.890	296.446	TOPO
MCV2003F_1235	09/05/2003	7723912.659	601158.908	297.349	TOPO
MCV2003F_1236	09/05/2003	7723905.654	601152.562	297.153	TOPO
MCV2003F_1237	09/05/2003	7723877.086	601126.174	295.386	TOPO
MCV2003F_1238	09/05/2003	7723866.998	601117.842	295.292	TOPO
MCV2003F_1239	09/05/2003	7723857.580	601107.067	295.195	TOPO
MCV2003F_1240	09/05/2003	7723855.014	601095.931	294.395	TOPO
MCV2003F_1241	09/05/2003	7723854.302	601080.601	296.177	TOPO
MCV2003F_1242	09/05/2003	7723855.519	601075.125	295.529	TOPO
MCV2003F_1243	09/05/2003	7723861.066	601063.903	296.594	TOPO
MCV2003F_1244	09/05/2003	7723850.221	601063.702	297.737	TOPO
MCV2003F_1245	09/05/2003	7723846.689	601062.321	299.917	TOPO
MCV2003F_1246	09/05/2003	7723842.084	601059.974	299.640	TOPO
MCV2003F_1247	09/05/2003	7723835.011	601051.883	296.290	TOPO
MCV2003F_1248	09/05/2003	7723846.950	601049.610	295.121	TOPO
MCV2003F_1249	09/05/2003	7723840.854	601044.037	300.179	TOPO
MCV2003F_1250	09/05/2003	7723832.885	601041.553	300.662	TOPO
MCV2003F_1251	09/05/2003	7723822.355	601037.552	299.088	TOPO
MCV2003F_1252	09/05/2003	7723814.158	601033.818	299.874	TOPO
MCV2003F_1253	09/05/2003	7723807.871	601024.072	298.154	TOPO
MCV2003F_1254	09/05/2003	7723822.303	601026.593	295.290	TOPO
MCV2003F_1255	09/05/2003	7724114.357	601196.189	305.194	CHKBKST
MCV2003F_1256	09/05/2003	7724139.212	601229.259	305.961	MAGNAIL
MCV2003F_1257	09/05/2003	7724426.939	601356.361	301.034	MAGNAIL
MCV2003F_1258	09/05/2003	7723515.397	600717.832	313.298	CHKBKST
MCV2003F_1259	09/08/2003	7723810.953	601066.284	300.275	CHKBKST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1260	09/08/2003	7723810.948	601066.315	300.376	CHKBKST
MCV2003F_1261	09/08/2003	7723676.883	600847.678	298.214	TOPO
MCV2003F_1262	09/08/2003	7723679.630	600842.720	299.606	TOPO
MCV2003F_1263	09/08/2003	7723682.843	600836.935	301.739	TOPO
MCV2003F_1264	09/08/2003	7723687.237	600830.634	303.234	TOPO
MCV2003F_1265	09/08/2003	7723689.496	600824.184	305.137	TOPO
MCV2003F_1266	09/08/2003	7723691.362	600820.601	306.148	TOPO
MCV2003F_1267	09/08/2003	7723694.602	600816.507	306.813	TOPO
MCV2003F_1268	09/08/2003	7723699.481	600810.331	307.499	TOPO
MCV2003F_1269	09/08/2003	7723708.758	600803.010	307.632	TOPO
MCV2003F_1270	09/08/2003	7723723.148	600792.523	307.066	TOPO
MCV2003F_1271	09/08/2003	7723713.737	600778.228	307.692	TOPO
MCV2003F_1272	09/08/2003	7723714.431	600770.850	309.032	TOPO
MCV2003F_1273	09/08/2003	7723714.568	600768.343	310.607	TOPO
MCV2003F_1274	09/08/2003	7723712.765	600765.024	312.343	TOPO
MCV2003F_1275	09/08/2003	7723715.830	600761.230	315.517	TOPO
MCV2003F_1276	09/08/2003	7723715.804	600758.938	317.237	TOPO
MCV2003F_1277	09/08/2003	7723717.700	600756.798	317.463	TOPO
MCV2003F_1278	09/08/2003	7723715.274	600757.430	317.621	TOPO
MCV2003F_1279	09/08/2003	7723757.912	600749.453	314.139	TOPO
MCV2003F_1280	09/08/2003	7723759.126	600752.185	315.499	TOPO
MCV2003F_1281	09/08/2003	7723760.726	600755.465	316.886	TOPO
MCV2003F_1282	09/08/2003	7723762.057	600760.182	314.671	TOPO
MCV2003F_1283	09/08/2003	7723761.972	600767.703	311.484	TOPO
MCV2003F_1284	09/08/2003	7723760.841	600781.913	308.182	TOPO
MCV2003F_1285	09/08/2003	7723761.107	600798.823	308.430	TOPO
MCV2003F_1286	09/08/2003	7723764.459	600811.414	308.179	TOPO
MCV2003F_1287	09/08/2003	7723760.777	600823.249	308.022	TOPO
MCV2003F_1288	09/08/2003	7723749.998	600822.086	308.451	TOPO
MCV2003F_1289	09/08/2003	7723757.320	600833.183	307.972	TOPO
MCV2003F_1290	09/08/2003	7723756.732	600844.297	306.415	TOPO
MCV2003F_1291	09/08/2003	7723755.398	600851.181	304.686	TOPO
MCV2003F_1292	09/08/2003	7723758.126	600858.005	302.655	TOPO
MCV2003F_1293	09/08/2003	7723754.627	600866.361	299.999	TOPO
MCV2003F_1294	09/08/2003	7723750.295	600878.537	299.521	TOPO
MCV2003F_1295	09/08/2003	7723745.806	600884.975	298.010	TOPO
MCV2003F_1296	09/08/2003	7723770.402	600891.371	298.195	TOPO
MCV2003F_1297	09/08/2003	7723778.554	600875.144	299.882	TOPO
MCV2003F_1298	09/08/2003	7723780.751	600868.831	301.190	TOPO
MCV2003F_1299	09/08/2003	7723787.648	600865.348	303.513	TOPO
MCV2003F_1300	09/08/2003	7723789.127	600863.347	304.730	TOPO
MCV2003F_1301	09/08/2003	7723791.454	600858.769	305.342	TOPO
MCV2003F_1302	09/08/2003	7723797.821	600851.804	306.246	TOPO
MCV2003F_1303	09/08/2003	7723801.053	600839.703	307.722	TOPO
MCV2003F_1304	09/08/2003	7723807.279	600834.234	307.486	TOPO
MCV2003F_1305	09/08/2003	7723814.984	600819.763	306.943	TOPO
MCV2003F_1306	09/08/2003	7723813.468	600803.815	308.095	TOPO
MCV2003F_1307	09/08/2003	7723830.634	600783.975	312.129	TOPO
MCV2003F_1308	09/08/2003	7723831.863	600778.941	313.656	TOPO

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1309	09/08/2003	7723818.637	600766.829	317.424	TOPO
MCV2003F_1310	09/08/2003	7723841.039	600787.101	312.566	TOPO
MCV2003F_1311	09/08/2003	7723846.946	600796.668	309.318	TOPO
MCV2003F_1312	09/08/2003	7723843.577	600804.954	307.993	TOPO
MCV2003F_1313	09/08/2003	7723849.145	600823.902	307.062	TOPO
MCV2003F_1314	09/08/2003	7723843.072	600832.567	306.529	TOPO
MCV2003F_1315	09/08/2003	7723835.253	600843.421	305.880	TOPO
MCV2003F_1316	09/08/2003	7723845.068	600855.066	307.240	TOPO
MCV2003F_1317	09/08/2003	7723839.696	600863.363	307.614	TOPO
MCV2003F_1318	09/08/2003	7723840.800	600874.621	306.371	TOPO
MCV2003F_1319	09/08/2003	7723838.954	600883.349	303.788	TOPO
MCV2003F_1320	09/08/2003	7723837.226	600888.185	301.932	TOPO
MCV2003F_1321	09/08/2003	7723834.430	600894.801	298.924	TOPO
MCV2003F_1322	09/08/2003	7723832.292	600901.182	298.149	TOPO
MCV2003F_1323	09/08/2003	7723827.127	600909.326	298.876	TOPO
MCV2003F_1324	09/08/2003	7723818.974	600920.451	298.042	TOPO
MCV2003F_1325	09/08/2003	7723833.598	600917.583	299.197	TOPO
MCV2003F_1326	09/08/2003	7723845.575	600907.055	297.818	TOPO
MCV2003F_1327	09/08/2003	7723849.894	600896.551	300.301	TOPO
MCV2003F_1328	09/08/2003	7723853.128	600892.256	303.950	TOPO
MCV2003F_1329	09/08/2003	7723896.392	600940.679	298.220	TOPO
MCV2003F_1330	09/08/2003	7723910.140	600931.947	299.551	TOPO
MCV2003F_1331	09/08/2003	7723917.327	600923.373	300.984	TOPO
MCV2003F_1332	09/08/2003	7723919.354	600921.672	302.960	TOPO
MCV2003F_1333	09/08/2003	7723923.277	600911.820	303.242	TOPO
MCV2003F_1334	09/08/2003	7723929.978	600897.935	303.449	TOPO
MCV2003F_1335	09/08/2003	7723933.551	600887.167	304.680	TOPO
MCV2003F_1336	09/08/2003	7723942.242	600874.169	305.785	TOPO
MCV2003F_1337	09/08/2003	7723944.891	600868.047	306.847	TOPO
MCV2003F_1338	09/08/2003	7723948.093	600863.846	307.469	TOPO
MCV2003F_1339	09/08/2003	7723951.249	600859.545	308.760	TOPO
MCV2003F_1340	09/08/2003	7723948.833	600851.737	311.132	TOPO
MCV2003F_1341	09/08/2003	7724012.136	600871.448	316.360	TOPO
MCV2003F_1342	09/08/2003	7724021.057	600885.674	311.983	TOPO
MCV2003F_1343	09/08/2003	7724025.867	600908.075	307.193	TOPO
MCV2003F_1344	09/08/2003	7724040.214	600924.015	307.058	TOPO
MCV2003F_1345	09/08/2003	7724047.429	600923.081	309.603	TOPO
MCV2003F_1346	09/08/2003	7724073.276	600907.489	323.278	TOPO
MCV2003F_1347	09/08/2003	7724087.716	600899.481	323.859	TOPO
MCV2003F_1348	09/08/2003	7724131.117	600984.799	312.742	TOPO
MCV2003F_1349	09/08/2003	7724136.106	600992.978	309.224	TOPO
MCV2003F_1350	09/08/2003	7724133.416	601003.750	305.054	TOPO
MCV2003F_1351	09/08/2003	7724132.165	601010.988	303.987	TOPO
MCV2003F_1352	09/08/2003	7724121.476	601025.590	302.185	TOPO
MCV2003F_1353	09/08/2003	7724108.200	601044.076	300.600	TOPO
MCV2003F_1354	09/08/2003	7724106.318	601058.570	298.831	TOPO
MCV2003F_1355	09/08/2003	7724030.242	601038.320	298.803	TOPO
MCV2003F_1356	09/08/2003	7724040.925	601011.732	300.366	TOPO
MCV2003F_1357	09/08/2003	7724052.756	600992.542	300.661	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1358	09/08/2003	7724061.901	600966.000	303.150	TOPO
MCV2003F_1359	09/08/2003	7724063.504	600946.421	308.170	TOPO
MCV2003F_1360	09/08/2003	7724068.864	600943.260	310.395	TOPO
MCV2003F_1361	09/08/2003	7724071.392	600942.368	313.738	TOPO
MCV2003F_1362	09/08/2003	7724048.041	600937.170	305.989	TOPO
MCV2003F_1363	09/08/2003	7724051.678	600933.931	308.124	TOPO
MCV2003F_1364	09/08/2003	7724053.378	600931.144	311.293	TOPO
MCV2003F_1365	09/08/2003	7724039.034	600935.882	304.991	TOPO
MCV2003F_1366	09/08/2003	7724031.038	600943.847	304.859	TOPO
MCV2003F_1367	09/08/2003	7724024.039	600951.226	304.928	TOPO
MCV2003F_1368	09/08/2003	7724021.570	600959.163	303.003	TOPO
MCV2003F_1369	09/08/2003	7724015.560	600983.145	301.162	TOPO
MCV2003F_1370	09/08/2003	7724000.106	600990.176	300.804	TOPO
MCV2003F_1371	09/08/2003	7724118.996	601047.829	300.527	TOPO
MCV2003F_1372	09/08/2003	7724138.679	601025.431	302.939	TOPO
MCV2003F_1373	09/08/2003	7724143.733	601016.442	303.698	TOPO
MCV2003F_1374	09/08/2003	7724144.802	601011.478	305.245	TOPO
MCV2003F_1375	09/08/2003	7724152.515	601026.143	303.116	TOPO
MCV2003F_1376	09/08/2003	7724154.928	601023.056	304.143	TOPO
MCV2003F_1377	09/08/2003	7724156.123	601020.666	305.793	TOPO
MCV2003F_1378	09/08/2003	7724157.243	601018.030	307.603	TOPO
MCV2003F_1379	09/08/2003	7724164.900	601014.828	308.660	TOPO
MCV2003F_1380	09/08/2003	7724162.920	601007.877	311.043	TOPO
MCV2003F_1381	09/08/2003	7724149.409	600991.184	316.950	TOPO
MCV2003F_1382	09/08/2003	7724160.041	600967.335	323.340	TOPO
MCV2003F_1383	09/08/2003	7724201.552	600996.941	323.235	TOPO
MCV2003F_1384	09/08/2003	7724195.704	601017.795	318.326	TOPO
MCV2003F_1385	09/08/2003	7724194.869	601019.587	316.252	TOPO
MCV2003F_1386	09/08/2003	7724183.857	601025.619	308.964	TOPO
MCV2003F_1387	09/08/2003	7724183.128	601031.560	307.052	TOPO
MCV2003F_1388	09/08/2003	7724181.350	601037.133	305.427	TOPO
MCV2003F_1389	09/08/2003	7724183.781	601045.007	304.568	TOPO
MCV2003F_1390	09/08/2003	7724183.602	601046.473	302.752	TOPO
MCV2003F_1391	09/08/2003	7724183.266	601048.987	301.311	TOPO
MCV2003F_1392	09/08/2003	7724125.471	601059.911	306.263	TOPO
MCV2003F_1393	09/08/2003	7724127.699	601056.103	305.510	TOPO
MCV2003F_1394	09/08/2003	7724124.264	601052.943	306.858	TOPO
MCV2003F_1395	09/08/2003	7724123.038	601055.969	306.831	TOPO
MCV2003F_1396	09/08/2003	7724122.519	601052.227	305.482	TOPO
MCV2003F_1397	09/08/2003	7724169.915	601064.171	301.197	TOPO
MCV2003F_1398	09/08/2003	7724168.707	601066.649	301.652	TOPO
MCV2003F_1399	09/08/2003	7724168.282	601069.489	301.559	TOPO
MCV2003F_1400	09/08/2003	7724200.508	601071.935	298.822	TOPO
MCV2003F_1401	09/08/2003	7724203.379	601067.584	299.447	TOPO
MCV2003F_1402	09/08/2003	7724206.417	601062.505	300.931	TOPO
MCV2003F_1403	09/08/2003	7724208.491	601057.745	302.995	TOPO
MCV2003F_1404	09/08/2003	7724211.162	601053.898	307.196	TOPO
MCV2003F_1405	09/08/2003	7724217.155	601047.234	309.778	TOPO
MCV2003F_1406	09/08/2003	7724223.111	601044.169	312.141	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1407	09/08/2003	7724228.754	601042.778	313.700	TOPO
MCV2003F_1408	09/08/2003	7724226.358	601036.492	318.614	TOPO
MCV2003F_1409	09/08/2003	7724255.899	601019.141	323.073	TOPO
MCV2003F_1410	09/08/2003	7724330.252	601048.946	322.821	TOPO
MCV2003F_1411	09/08/2003	7724316.697	601061.213	320.368	TOPO
MCV2003F_1412	09/08/2003	7724307.110	601070.804	317.927	TOPO
MCV2003F_1413	09/08/2003	7724302.177	601076.248	317.323	TOPO
MCV2003F_1414	09/08/2003	7724296.563	601081.359	313.820	TOPO
MCV2003F_1415	09/08/2003	7724290.928	601085.715	310.655	TOPO
MCV2003F_1416	09/08/2003	7724274.872	601096.093	308.464	TOPO
MCV2003F_1417	09/08/2003	7724264.245	601105.696	307.372	TOPO
MCV2003F_1418	09/08/2003	7724259.148	601110.433	305.756	TOPO
MCV2003F_1419	09/08/2003	7724250.965	601117.051	302.070	TOPO
MCV2003F_1420	09/08/2003	7724238.463	601129.359	299.994	TOPO
MCV2003F_1421	09/08/2003	7724229.748	601137.835	298.825	TOPO
MCV2003F_1422	09/08/2003	7724288.365	601152.200	298.909	TOPO
MCV2003F_1423	09/08/2003	7724291.228	601133.451	301.344	TOPO
MCV2003F_1424	09/08/2003	7724295.006	601126.408	303.934	TOPO
MCV2003F_1425	09/08/2003	7724297.857	601122.075	306.002	TOPO
MCV2003F_1426	09/08/2003	7724310.337	601110.149	308.061	TOPO
MCV2003F_1427	09/08/2003	7724318.540	601096.352	310.685	TOPO
MCV2003F_1428	09/08/2003	7724318.718	601087.404	313.857	TOPO
MCV2003F_1429	09/08/2003	7724319.874	601083.891	317.435	TOPO
MCV2003F_1430	09/08/2003	7724332.017	601073.285	318.799	TOPO
MCV2003F_1431	09/08/2003	7724331.257	601087.954	317.415	TOPO
MCV2003F_1432	09/08/2003	7724343.490	601093.730	317.110	TOPO
MCV2003F_1433	09/08/2003	7724340.681	601097.361	313.741	TOPO
MCV2003F_1434	09/08/2003	7724339.898	601102.852	310.629	TOPO
MCV2003F_1435	09/08/2003	7724334.226	601124.735	306.773	TOPO
MCV2003F_1436	09/08/2003	7724332.022	601136.088	303.494	TOPO
MCV2003F_1437	09/08/2003	7724326.372	601139.717	302.012	TOPO
MCV2003F_1438	09/08/2003	7724324.620	601142.388	300.402	TOPO
MCV2003F_1439	09/08/2003	7724319.465	601164.855	298.989	TOPO
MCV2003F_1440	09/08/2003	7724369.630	601173.230	299.051	TOPO
MCV2003F_1441	09/08/2003	7724369.533	601173.295	299.069	TOPO
MCV2003F_1442	09/08/2003	7724371.384	601157.286	300.914	TOPO
MCV2003F_1443	09/08/2003	7724375.158	601143.898	305.153	TOPO
MCV2003F_1444	09/08/2003	7724396.113	601133.909	307.394	TOPO
MCV2003F_1445	09/08/2003	7724475.484	601162.809	304.335	TOPO
MCV2003F_1446	09/08/2003	7724617.005	601168.126	305.708	TOPO
MCV2003F_1447	09/08/2003	7724703.143	601168.660	308.761	TOPO
MCV2003F_1448	09/08/2003	7724702.476	601173.893	306.658	TOPO
MCV2003F_1449	09/08/2003	7724702.885	601187.759	302.028	TOPO
MCV2003F_1450	09/08/2003	7724701.395	601204.981	301.829	TOPO
MCV2003F_1451	09/08/2003	7724788.316	601178.879	309.528	TOPO
MCV2003F_1452	09/08/2003	7724787.489	601186.342	306.614	TOPO
MCV2003F_1453	09/08/2003	7724785.701	601193.785	303.131	TOPO
MCV2003F_1454	09/08/2003	7724785.193	601213.015	301.674	TOPO
MCV2003F_1455	09/08/2003	7724841.678	601226.069	302.278	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1456	09/08/2003	7724841.499	601201.838	302.970	TOPO
MCV2003F_1457	09/08/2003	7724838.916	601182.459	304.667	TOPO
MCV2003F_1458	09/08/2003	7724862.665	601179.662	306.145	TOPO
MCV2003F_1459	09/08/2003	7724865.251	601193.457	304.514	TOPO
MCV2003F_1460	09/08/2003	7724865.454	601204.482	303.957	TOPO
MCV2003F_1461	09/08/2003	7724867.500	601216.731	302.507	TOPO
MCV2003F_1462	09/08/2003	7724905.234	601206.960	302.916	TOPO
MCV2003F_1463	09/08/2003	7724903.636	601190.326	302.287	TOPO
MCV2003F_1464	09/08/2003	7724905.750	601180.499	303.699	TOPO
MCV2003F_1465	09/08/2003	7724955.562	601174.358	308.516	TOPO
MCV2003F_1466	09/08/2003	7724955.834	601181.500	305.479	TOPO
MCV2003F_1467	09/08/2003	7724959.391	601193.963	302.945	TOPO
MCV2003F_1468	09/08/2003	7724972.133	601200.048	301.296	EDGWATER
MCV2003F_1469	09/08/2003	7724955.877	601201.344	301.217	EDGWATER
MCV2003F_1470	09/08/2003	7724942.785	601206.493	301.240	EDGWATER
MCV2003F_1471	09/08/2003	7724927.153	601212.608	301.310	EDGWATER
MCV2003F_1472	09/08/2003	7724907.742	601214.815	301.368	EDGWATER
MCV2003F_1473	09/08/2003	7724884.667	601217.683	301.259	EDGWATER
MCV2003F_1474	09/08/2003	7724865.959	601222.001	301.224	EDGWATER
MCV2003F_1475	09/08/2003	7724847.550	601228.371	301.333	EDGWATER
MCV2003F_1476	09/08/2003	7724819.979	601228.144	301.316	EDGWATER
MCV2003F_1477	09/08/2003	7724801.933	601225.084	301.189	EDGWATER
MCV2003F_1478	09/08/2003	7724783.638	601211.979	301.290	EDGWATER
MCV2003F_1479	09/08/2003	7724765.077	601216.148	301.275	EDGWATER
MCV2003F_1480	09/08/2003	7724740.884	601212.932	301.273	EDGWATER
MCV2003F_1481	09/08/2003	7724717.568	601212.976	301.278	EDGWATER
MCV2003F_1482	09/08/2003	7724679.894	601191.417	301.260	EDGWATER
MCV2003F_1483	09/08/2003	7724648.282	601183.291	301.176	EDGWATER
MCV2003F_1484	09/08/2003	7724606.302	601194.522	301.282	EDGWATER
MCV2003F_1485	09/08/2003	7724586.597	601196.263	301.224	EDGWATER
MCV2003F_1486	09/08/2003	7724518.587	601198.616	300.271	EDGWATER
MCV2003F_1487	09/08/2003	7724493.916	601187.710	300.361	EDGWATER
MCV2003F_1488	09/08/2003	7724460.465	601177.301	300.093	EDGWATER
MCV2003F_1489	09/08/2003	7724405.657	601173.477	299.363	EDGWATER
MCV2003F_1490	09/08/2003	7724384.083	601165.280	299.077	EDGWATER
MCV2003F_1491	09/08/2003	7724314.855	601161.531	298.887	EDGWATER
MCV2003F_1492	09/08/2003	7724285.291	601150.783	298.838	EDGWATER
MCV2003F_1493	09/08/2003	7724256.607	601143.665	298.887	EDGWATER
MCV2003F_1494	09/08/2003	7724236.300	601140.623	298.892	EDGWATER
MCV2003F_1495	09/08/2003	7724224.267	601129.847	298.848	EDGWATER
MCV2003F_1496	09/08/2003	7724231.771	601145.503	296.807	TOPOW
MCV2003F_1497	09/08/2003	7724228.395	601148.970	296.791	TOPOW
MCV2003F_1498	09/08/2003	7724226.857	601149.473	294.202	TOPOW
MCV2003F_1499	09/08/2003	7724230.663	601153.056	295.496	TOPOW
MCV2003F_1500	09/08/2003	7724236.817	601151.057	296.393	TOPOW
MCV2003F_1501	09/08/2003	7724244.156	601148.076	297.723	TOPOW
MCV2003F_1502	09/08/2003	7724242.237	601154.710	296.141	TOPOW
MCV2003F_1503	09/08/2003	7724240.189	601157.794	294.404	TOPOW
MCV2003F_1504	09/08/2003	7724243.888	601161.293	294.536	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1505	09/08/2003	7724249.826	601157.414	296.348	TOPOW
MCV2003F_1506	09/08/2003	7724255.217	601152.683	297.485	TOPOW
MCV2003F_1507	09/08/2003	7724260.812	601153.568	297.569	TOPOW
MCV2003F_1508	09/08/2003	7724257.862	601163.662	296.608	TOPOW
MCV2003F_1509	09/08/2003	7724254.848	601169.099	296.062	TOPOW
MCV2003F_1510	09/08/2003	7724251.629	601173.468	295.572	TOPOW
MCV2003F_1511	09/08/2003	7724253.999	601180.633	295.030	TOPOW
MCV2003F_1512	09/08/2003	7724259.367	601173.304	296.151	TOPOW
MCV2003F_1513	09/08/2003	7724266.602	601166.295	296.600	TOPOW
MCV2003F_1514	09/08/2003	7724272.919	601155.541	297.285	TOPOW
MCV2003F_1515	09/08/2003	7724280.156	601157.306	298.590	TOPOW
MCV2003F_1516	09/08/2003	7724279.838	601160.918	296.841	TOPOW
MCV2003F_1517	09/08/2003	7724278.184	601171.086	296.849	TOPOW
MCV2003F_1518	09/08/2003	7724281.225	601180.077	296.086	TOPOW
MCV2003F_1519	09/08/2003	7724283.830	601187.992	295.987	TOPOW
MCV2003F_1520	09/08/2003	7724285.372	601192.211	295.648	TOPOW
MCV2003F_1521	09/08/2003	7724287.365	601197.170	295.964	TOPOW
MCV2003F_1522	09/08/2003	7724288.794	601204.747	296.047	TOPOW
MCV2003F_1523	09/08/2003	7724292.413	601216.739	295.958	TOPOW
MCV2003F_1524	09/08/2003	7724292.743	601228.421	295.947	TOPOW
MCV2003F_1525	09/08/2003	7724290.056	601234.704	294.458	TOPOW
MCV2003F_1526	09/08/2003	7724297.337	601238.079	295.138	TOPOW
MCV2003F_1527	09/08/2003	7724301.192	601229.627	296.461	TOPOW
MCV2003F_1528	09/08/2003	7724304.795	601214.764	296.510	TOPOW
MCV2003F_1529	09/08/2003	7724315.438	601209.608	296.383	TOPOW
MCV2003F_1530	09/08/2003	7724313.685	601221.945	296.922	TOPOW
MCV2003F_1531	09/08/2003	7724309.661	601230.805	296.955	TOPOW
MCV2003F_1532	09/08/2003	7724307.096	601240.256	296.182	TOPOW
MCV2003F_1533	09/08/2003	7724310.095	601249.333	296.088	TOPOW
MCV2003F_1534	09/08/2003	7724314.075	601256.514	295.294	TOPOW
MCV2003F_1535	09/08/2003	7724313.894	601262.396	295.054	TOPOW
MCV2003F_1536	09/08/2003	7724324.553	601264.134	295.671	TOPOW
MCV2003F_1537	09/08/2003	7724323.189	601259.587	296.628	TOPOW
MCV2003F_1538	09/08/2003	7724326.108	601250.120	297.007	TOPOW
MCV2003F_1539	09/08/2003	7724329.181	601241.453	297.181	TOPOW
MCV2003F_1540	09/08/2003	7724330.526	601231.283	296.994	TOPOW
MCV2003F_1541	09/08/2003	7724332.155	601217.750	296.753	TOPOW
MCV2003F_1542	09/08/2003	7724337.009	601208.118	296.356	TOPOW
MCV2003F_1543	09/08/2003	7724349.504	601209.106	296.702	TOPOW
MCV2003F_1544	09/08/2003	7724346.818	601224.166	297.481	TOPOW
MCV2003F_1545	09/08/2003	7724342.316	601241.847	297.496	TOPOW
MCV2003F_1546	09/08/2003	7724345.478	601256.806	296.835	TOPOW
MCV2003F_1547	09/08/2003	7724359.026	601253.896	297.600	TOPOW
MCV2003F_1548	09/08/2003	7724360.886	601247.037	298.154	TOPOW
MCV2003F_1549	09/08/2003	7724365.629	601232.065	298.016	TOPOW
MCV2003F_1550	09/08/2003	7724376.055	601221.073	296.693	TOPOW
MCV2003F_1551	09/08/2003	7724389.487	601230.625	298.104	TOPOW
MCV2003F_1552	09/08/2003	7724379.082	601238.496	298.392	TOPOW
MCV2003F_1553	09/08/2003	7724375.911	601247.655	298.177	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1554	09/08/2003	7724384.397	601254.135	297.350	TOPOW
MCV2003F_1555	09/08/2003	7724391.684	601246.508	297.747	TOPOW
MCV2003F_1556	09/08/2003	7724402.978	601240.042	298.105	TOPOW
MCV2003F_1557	09/08/2003	7724413.848	601228.413	297.622	TOPOW
MCV2003F_1558	09/08/2003	7724425.799	601232.486	297.860	TOPOW
MCV2003F_1559	09/08/2003	7724427.923	601244.934	298.259	TOPOW
MCV2003F_1560	09/08/2003	7724434.254	601256.358	298.427	TOPOW
MCV2003F_1561	09/08/2003	7724445.937	601250.118	297.721	TOPOW
MCV2003F_1562	09/08/2003	7724456.600	601249.126	298.086	TOPOW
MCV2003F_1563	09/08/2003	7724472.397	601250.891	298.335	TOPOW
MCV2003F_1564	09/08/2003	7724483.089	601249.671	298.265	TOPOW
MCV2003F_1565	09/08/2003	7724493.101	601245.782	298.014	TOPOW
MCV2003F_1566	09/08/2003	7724500.170	601240.245	298.551	TOPOW
MCV2003F_1567	09/08/2003	7724506.766	601230.326	299.076	TOPOW
MCV2003F_1568	09/08/2003	7724512.450	601215.504	299.248	TOPOW
MCV2003F_1569	09/08/2003	7724516.866	601205.166	300.021	TOPOW
MCV2003F_1570	09/08/2003	7724529.718	601220.604	299.505	TOPOW
MCV2003F_1571	09/08/2003	7724528.323	601237.552	298.256	TOPOW
MCV2003F_1572	09/08/2003	7724525.913	601250.082	297.275	TOPOW
MCV2003F_1573	09/08/2003	7724528.324	601257.022	297.626	TOPOW
MCV2003F_1574	09/08/2003	7724538.894	601257.808	297.563	TOPOW
MCV2003F_1575	09/08/2003	7724543.861	601247.568	298.749	TOPOW
MCV2003F_1576	09/08/2003	7724548.140	601227.821	299.135	TOPOW
MCV2003F_1577	09/08/2003	7724549.209	601216.127	299.878	TOPOW
MCV2003F_1578	09/08/2003	7724567.924	601219.394	301.421	TOPOW
MCV2003F_1579	09/08/2003	7724566.253	601236.803	299.641	TOPOW
MCV2003F_1580	09/08/2003	7724567.585	601251.341	298.315	TOPOW
MCV2003F_1581	09/08/2003	7724567.786	601258.186	298.196	TOPOW
MCV2003F_1582	09/08/2003	7724562.514	601263.046	298.722	TOPOW
MCV2003F_1583	09/08/2003	7724559.954	601270.806	297.522	TOPOW
MCV2003F_1584	09/08/2003	7724566.039	601277.156	297.561	TOPOW
MCV2003F_1585	09/08/2003	7724562.807	601269.276	303.274	TOPOW
MCV2003F_1586	09/08/2003	7724562.998	601271.925	304.506	TOPOW
MCV2003F_1587	09/08/2003	7724565.725	601263.804	302.344	TOPOW
MCV2003F_1588	09/08/2003	7724570.598	601268.100	301.430	TOPOW
MCV2003F_1589	09/08/2003	7724579.094	601266.083	298.997	TOPOW
MCV2003F_1590	09/08/2003	7724584.295	601257.304	298.840	TOPOW
MCV2003F_1591	09/08/2003	7724586.603	601247.524	299.279	TOPOW
MCV2003F_1592	09/08/2003	7724592.200	601232.137	299.971	TOPOW
MCV2003F_1593	09/08/2003	7724585.625	601220.723	300.447	TOPOW
MCV2003F_1594	09/08/2003	7724584.368	601214.271	299.103	TOPOW
MCV2003F_1595	09/08/2003	7724586.059	601203.975	300.052	TOPOW
MCV2003F_1596	09/08/2003	7724597.071	601202.751	299.379	TOPOW
MCV2003F_1597	09/08/2003	7724597.529	601211.515	299.043	TOPOW
MCV2003F_1598	09/08/2003	7724598.890	601224.243	300.366	TOPOW
MCV2003F_1599	09/08/2003	7724598.908	601243.185	299.999	TOPOW
MCV2003F_1600	09/08/2003	7724600.567	601257.729	299.873	TOPOW
MCV2003F_1601	09/08/2003	7724598.394	601263.783	301.878	TOPOW
MCV2003F_1602	09/08/2003	7724595.055	601273.012	298.358	TOPOW

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1603	09/08/2003	7724594.551	601277.624	301.107	TOPOW
MCV2003F_1604	09/08/2003	7724604.329	601284.118	298.213	TOPOW
MCV2003F_1605	09/08/2003	7724613.031	601288.235	297.454	TOPOW
MCV2003F_1606	09/08/2003	7724622.530	601282.533	296.994	TOPOW
MCV2003F_1607	09/08/2003	7724623.302	601270.999	299.189	TOPOW
MCV2003F_1608	09/08/2003	7724616.932	601269.083	303.027	TOPOW
MCV2003F_1609	09/08/2003	7724624.963	601253.802	298.969	TOPOW
MCV2003F_1610	09/08/2003	7724625.964	601230.005	300.072	TOPOW
MCV2003F_1611	09/08/2003	7724625.381	601209.655	299.277	TOPOW
MCV2003F_1612	09/08/2003	7724626.469	601195.815	298.733	TOPOW
MCV2003F_1613	09/08/2003	7724625.478	601190.144	301.197	TOPOW
MCV2003F_1614	09/08/2003	7724635.631	601188.534	299.099	TOPOW
MCV2003F_1615	09/08/2003	7724637.389	601202.954	298.527	TOPOW
MCV2003F_1616	09/08/2003	7724639.295	601218.651	298.894	TOPOW
MCV2003F_1617	09/08/2003	7724641.621	601238.326	300.017	TOPOW
MCV2003F_1618	09/08/2003	7724645.862	601257.275	298.879	TOPOW
MCV2003F_1619	09/08/2003	7724648.324	601273.996	298.143	TOPOW
MCV2003F_1620	09/08/2003	7724654.136	601284.211	297.578	TOPOW
MCV2003F_1621	09/08/2003	7724660.755	601284.283	298.093	TOPOW
MCV2003F_1622	09/08/2003	7724670.211	601272.515	297.705	TOPOW
MCV2003F_1623	09/08/2003	7724671.890	601256.851	298.087	TOPOW
MCV2003F_1624	09/08/2003	7724673.332	601242.013	298.440	TOPOW
MCV2003F_1625	09/08/2003	7724671.794	601229.702	299.718	TOPOW
MCV2003F_1626	09/08/2003	7724674.819	601213.157	297.711	TOPOW
MCV2003F_1627	09/08/2003	7724675.838	601203.410	297.607	TOPOW
MCV2003F_1628	09/08/2003	7724676.873	601198.817	299.330	TOPOW
MCV2003F_1629	09/08/2003	7724677.054	601194.889	301.180	TOPOW
MCV2003F_1630	09/08/2003	7724689.144	601206.415	299.797	TOPOW
MCV2003F_1631	09/08/2003	7724687.091	601218.498	298.356	TOPOW
MCV2003F_1632	09/08/2003	7724688.780	601237.955	298.333	TOPOW
MCV2003F_1633	09/08/2003	7724691.194	601246.905	301.741	TOPOW
MCV2003F_1634	09/08/2003	7724691.791	601252.564	297.501	TOPOW
MCV2003F_1635	09/08/2003	7724696.827	601264.685	297.265	TOPOW
MCV2003F_1636	09/08/2003	7724702.071	601270.553	297.164	TOPOW
MCV2003F_1637	09/08/2003	7724712.106	601266.311	296.412	TOPOW
MCV2003F_1638	09/08/2003	7724714.440	601261.617	297.579	TOPOW
MCV2003F_1639	09/08/2003	7724715.394	601261.756	299.570	TOPOW
MCV2003F_1640	09/08/2003	7724709.484	601258.268	299.700	TOPOW
MCV2003F_1641	09/08/2003	7724711.633	601249.362	297.341	TOPOW
MCV2003F_1642	09/08/2003	7724710.803	601235.637	298.442	TOPOW
MCV2003F_1643	09/08/2003	7724709.712	601221.795	298.197	TOPOW
MCV2003F_1644	09/08/2003	7724712.220	601215.403	299.364	TOPOW
MCV2003F_1645	09/08/2003	7724713.535	601211.992	301.205	TOPOW
MCV2003F_1646	09/08/2003	7724724.118	601217.963	299.934	TOPOW
MCV2003F_1647	09/08/2003	7724723.846	601225.637	297.447	TOPOW
MCV2003F_1648	09/08/2003	7724725.433	601232.138	297.319	TOPOW
MCV2003F_1649	09/08/2003	7724726.618	601238.136	297.448	TOPOW
MCV2003F_1650	09/08/2003	7724736.262	601229.000	296.795	TOPOW
MCV2003F_1651	09/08/2003	7724738.450	601224.682	298.581	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1652	09/08/2003	7724748.503	601226.648	298.759	TOPOW
MCV2003F_1653	09/08/2003	7724753.907	601228.003	297.573	TOPOW
MCV2003F_1654	09/08/2003	7724761.296	601221.258	299.201	TOPOW
MCV2003F_1655	09/08/2003	7724764.655	601226.991	295.921	TOPOW
MCV2003F_1656	09/08/2003	7724776.431	601220.713	298.004	TOPOW
MCV2003F_1657	09/08/2003	7724791.589	601230.327	297.826	TOPOW
MCV2003F_1658	09/08/2003	7724820.409	601233.438	298.001	TOPOW
MCV2003F_1659	09/08/2003	7724830.532	601233.496	296.466	TOPOW
MCV2003F_1660	09/08/2003	7724838.485	601234.175	292.047	TOPOW
MCV2003F_1661	09/08/2003	7724844.781	601238.021	294.582	TOPOW
MCV2003F_1662	09/08/2003	7724856.996	601223.683	291.215	TOPOW
MCV2003F_1663	09/08/2003	7724863.420	601224.593	291.700	TOPOW
MCV2003F_1664	09/08/2003	7724888.387	601219.356	288.426	TOPOW
MCV2003F_1665	09/08/2003	7724492.472	601205.114	298.983	TOPOW
MCV2003F_1666	09/08/2003	7724473.967	601206.687	298.972	TOPOW
MCV2003F_1667	09/08/2003	7724461.176	601215.756	297.975	TOPOW
MCV2003F_1668	09/08/2003	7724433.994	601219.552	297.790	TOPOW
MCV2003F_1669	09/08/2003	7724436.617	601202.185	298.918	TOPOW
MCV2003F_1670	09/08/2003	7724419.712	601194.747	298.372	TOPOW
MCV2003F_1671	09/08/2003	7724404.530	601205.674	297.367	TOPOW
MCV2003F_1672	09/08/2003	7724400.435	601190.542	298.180	TOPOW
MCV2003F_1673	09/08/2003	7724379.948	601185.102	297.254	TOPOW
MCV2003F_1674	09/08/2003	7724372.951	601195.956	296.708	TOPOW
MCV2003F_1675	09/08/2003	7724356.314	601179.708	297.082	TOPOW
MCV2003F_1676	09/08/2003	7724335.919	601172.525	297.180	TOPOW
MCV2003F_1677	09/08/2003	7724331.521	601185.492	296.259	TOPOW
MCV2003F_1678	09/08/2003	7724313.534	601186.665	296.203	TOPOW
MCV2003F_1679	09/08/2003	7724314.903	601172.878	296.730	TOPOW
MCV2003F_1680	09/08/2003	7724314.864	601165.266	297.349	TOPOW
MCV2003F_1681	09/08/2003	7724301.041	601163.176	298.289	TOPOW
MCV2003F_1682	09/08/2003	7724296.295	601177.229	296.720	TOPOW
MCV2003F_1683	09/08/2003	7724281.198	601173.313	296.687	TOPOW
MCV2003F_1684	09/08/2003	7724279.793	601162.878	297.490	TOPOW
MCV2003F_1685	09/08/2003	7724240.187	601266.873	293.861	TOPOW
MCV2003F_1686	09/08/2003	7724255.327	601271.452	293.990	TOPOW
MCV2003F_1687	09/08/2003	7724261.826	601275.013	293.942	TOPOW
MCV2003F_1688	09/08/2003	7724273.313	601280.872	293.682	TOPOW
MCV2003F_1689	09/08/2003	7724283.072	601286.877	293.437	TOPOW
MCV2003F_1690	09/08/2003	7724288.744	601296.397	296.903	TOPOW
MCV2003F_1691	09/08/2003	7724297.091	601313.533	295.494	TOPOW
MCV2003F_1692	09/08/2003	7724317.180	601325.580	295.172	TOPOW
MCV2003F_1693	09/08/2003	7724197.973	601229.864	296.676	TOPOW
MCV2003F_1694	09/08/2003	7724182.547	601206.926	295.680	TOPOW
MCV2003F_1695	09/08/2003	7724426.973	601356.347	301.012	CHKBKST
MCV2003F_1696	09/08/2003	7725159.910	601288.688	309.659	TOPO
MCV2003F_1697	09/08/2003	7725159.688	601294.996	306.561	TOPO
MCV2003F_1698	09/08/2003	7725158.288	601307.825	306.950	TOPO
MCV2003F_1699	09/08/2003	7725164.895	601326.936	308.127	TOPO
MCV2003F_1700	09/08/2003	7725143.148	601325.308	307.255	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1701	09/08/2003	7725140.895	601306.121	306.860	TOPO
MCV2003F_1702	09/08/2003	7725136.606	601284.747	306.105	TOPO
MCV2003F_1703	09/08/2003	7725121.273	601276.579	306.649	TOPO
MCV2003F_1704	09/08/2003	7725123.097	601272.805	303.030	TOPO
MCV2003F_1705	09/08/2003	7725123.033	601288.838	306.640	TOPO
MCV2003F_1706	09/08/2003	7725127.643	601298.448	308.282	TOPO
MCV2003F_1707	09/08/2003	7725129.675	601302.208	310.856	TOPO
MCV2003F_1708	09/08/2003	7725129.250	601307.035	306.857	TOPO
MCV2003F_1709	09/08/2003	7725129.441	601323.097	307.758	TOPO
MCV2003F_1710	09/08/2003	7725120.102	601322.095	307.576	TOPO
MCV2003F_1711	09/08/2003	7725111.881	601320.386	312.330	TOPO
MCV2003F_1712	09/08/2003	7725116.257	601306.846	307.068	TOPO
MCV2003F_1713	09/08/2003	7725110.873	601285.808	305.498	TOPO
MCV2003F_1714	09/08/2003	7725112.106	601273.009	305.146	TOPO
MCV2003F_1715	09/08/2003	7725112.254	601268.736	302.855	TOPO
MCV2003F_1716	09/08/2003	7725108.106	601257.620	301.687	TOPO
MCV2003F_1717	09/08/2003	7725102.212	601244.962	301.022	TOPO
MCV2003F_1718	09/08/2003	7725094.394	601229.233	300.548	TOPO
MCV2003F_1719	09/08/2003	7725088.220	601217.160	299.294	TOPO
MCV2003F_1720	09/08/2003	7725077.541	601227.102	298.587	TOPO
MCV2003F_1721	09/08/2003	7725081.364	601239.186	300.303	TOPO
MCV2003F_1722	09/08/2003	7725081.651	601256.350	301.049	TOPO
MCV2003F_1723	09/08/2003	7725080.379	601268.141	301.573	TOPO
MCV2003F_1724	09/08/2003	7725082.094	601280.730	305.417	TOPO
MCV2003F_1725	09/08/2003	7725081.859	601296.974	305.003	TOPO
MCV2003F_1726	09/08/2003	7725079.719	601315.660	306.766	TOPO
MCV2003F_1727	09/08/2003	7725059.495	601317.529	306.259	TOPO
MCV2003F_1728	09/08/2003	7725061.817	601295.228	305.324	TOPO
MCV2003F_1729	09/08/2003	7725055.993	601272.410	303.294	TOPO
MCV2003F_1730	09/08/2003	7725057.363	601259.801	298.992	TOPO
MCV2003F_1731	09/08/2003	7725057.601	601253.819	301.752	TOPO
MCV2003F_1732	09/08/2003	7725058.049	601241.053	301.232	TOPO
MCV2003F_1733	09/08/2003	7725047.991	601251.921	301.749	TOPO
MCV2003F_1734	09/08/2003	7725036.171	601254.531	301.735	TOPO
MCV2003F_1735	09/08/2003	7725037.974	601264.554	298.841	TOPO
MCV2003F_1736	09/08/2003	7725037.272	601268.410	301.166	TOPO
MCV2003F_1737	09/08/2003	7725036.996	601277.827	302.133	TOPO
MCV2003F_1738	09/08/2003	7725036.389	601286.638	303.183	TOPO
MCV2003F_1739	09/08/2003	7725035.272	601296.463	307.508	TOPO
MCV2003F_1740	09/08/2003	7725033.260	601307.278	305.898	TOPO
MCV2003F_1741	09/08/2003	7725030.867	601316.907	306.106	TOPO
MCV2003F_1742	09/08/2003	7725020.531	601317.859	306.586	TOPO
MCV2003F_1743	09/08/2003	7725024.940	601302.282	304.833	TOPO
MCV2003F_1744	09/08/2003	7725026.685	601294.034	307.701	TOPO
MCV2003F_1745	09/08/2003	7725022.353	601293.624	307.161	TOPO
MCV2003F_1746	09/08/2003	7725029.759	601289.804	307.576	TOPO
MCV2003F_1747	09/08/2003	7725028.215	601286.820	303.796	TOPO
MCV2003F_1748	09/08/2003	7725025.764	601270.616	301.602	TOPO
MCV2003F_1749	09/08/2003	7725025.163	601267.051	298.328	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1750	09/08/2003	7725014.248	601280.540	301.106	TOPO
MCV2003F_1751	09/08/2003	7725009.041	601289.600	303.104	TOPO
MCV2003F_1752	09/08/2003	7725005.874	601304.800	304.243	TOPO
MCV2003F_1753	09/08/2003	7725005.235	601321.109	306.740	TOPO
MCV2003F_1754	09/08/2003	7725005.431	601335.084	308.841	TOPO
MCV2003F_1755	09/08/2003	7724985.972	601335.066	308.942	TOPO
MCV2003F_1756	09/08/2003	7724984.620	601320.105	306.480	TOPO
MCV2003F_1757	09/08/2003	7724982.657	601303.644	302.772	TOPO
MCV2003F_1758	09/08/2003	7724980.279	601288.795	302.348	TOPO
MCV2003F_1759	09/08/2003	7724978.584	601279.298	298.149	TOPO
MCV2003F_1760	09/08/2003	7724968.751	601281.967	299.073	TOPO
MCV2003F_1761	09/08/2003	7724970.161	601285.388	302.054	TOPO
MCV2003F_1762	09/08/2003	7724967.943	601302.795	302.648	TOPO
MCV2003F_1763	09/08/2003	7724969.065	601313.304	303.506	TOPO
MCV2003F_1764	09/08/2003	7724972.964	601324.463	305.680	TOPO
MCV2003F_1765	09/08/2003	7724973.771	601333.755	308.866	TOPO
MCV2003F_1766	09/08/2003	7724974.200	601338.037	311.483	TOPO
MCV2003F_1767	09/08/2003	7724964.408	601339.616	310.011	TOPO
MCV2003F_1768	09/08/2003	7724961.483	601332.422	306.476	TOPO
MCV2003F_1769	09/08/2003	7724958.393	601318.110	302.336	TOPO
MCV2003F_1770	09/08/2003	7724952.518	601300.354	301.442	TOPO
MCV2003F_1771	09/08/2003	7724953.490	601289.679	301.350	TOPO
MCV2003F_1772	09/08/2003	7724952.613	601289.241	298.079	TOPO
MCV2003F_1773	09/08/2003	7724938.004	601301.793	301.978	TOPO
MCV2003F_1774	09/08/2003	7724942.836	601318.353	303.375	TOPO
MCV2003F_1775	09/08/2003	7724947.162	601333.607	305.704	TOPO
MCV2003F_1776	09/08/2003	7724952.656	601338.562	307.953	TOPO
MCV2003F_1777	09/08/2003	7724934.947	601337.294	305.612	TOPO
MCV2003F_1778	09/08/2003	7724926.574	601331.804	303.078	TOPO
MCV2003F_1779	09/08/2003	7724919.665	601345.882	304.267	TOPO
MCV2003F_1780	09/08/2003	7724921.991	601349.157	308.753	TOPO
MCV2003F_1781	09/08/2003	7724917.648	601354.072	309.754	TOPO
MCV2003F_1782	09/08/2003	7724913.893	601349.867	306.208	TOPO
MCV2003F_1783	09/08/2003	7724907.215	601340.013	302.859	TOPO
MCV2003F_1784	09/08/2003	7724898.580	601358.858	311.180	TOPO
MCV2003F_1785	09/08/2003	7724898.269	601355.382	308.026	TOPO
MCV2003F_1786	09/08/2003	7724893.611	601360.179	311.606	TOPO
MCV2003F_1787	09/08/2003	7724885.607	601362.568	311.826	TOPO
MCV2003F_1788	09/08/2003	7724875.088	601368.247	311.747	TOPO
MCV2003F_1789	09/08/2003	7724869.055	601364.692	311.179	TOPO
MCV2003F_1790	09/08/2003	7724857.576	601368.776	308.735	TOPO
MCV2003F_1791	09/08/2003	7724893.310	601353.112	305.582	TOPO
MCV2003F_1792	09/08/2003	7724885.009	601355.573	307.378	TOPO
MCV2003F_1793	09/08/2003	7724876.950	601356.678	306.957	TOPO
MCV2003F_1794	09/08/2003	7724895.458	601347.640	303.174	TOPO
MCV2003F_1795	09/08/2003	7724878.008	601352.665	303.428	TOPO
MCV2003F_1796	09/08/2003	7724862.640	601357.351	303.787	TOPO
MCV2003F_1797	09/08/2003	7724844.527	601381.183	311.822	TOPO
MCV2003F_1798	09/08/2003	7724842.365	601377.808	308.409	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1799	09/08/2003	7724836.593	601370.940	305.407	TOPO
MCV2003F_1800	09/08/2003	7724815.320	601379.102	305.258	TOPO
MCV2003F_1801	09/08/2003	7724804.842	601392.388	310.756	TOPO
MCV2003F_1802	09/08/2003	7724801.304	601381.741	304.348	TOPO
MCV2003F_1803	09/08/2003	7724766.814	601400.502	305.520	TOPO
MCV2003F_1804	09/08/2003	7724761.516	601387.196	303.487	TOPO
MCV2003F_1805	09/08/2003	7724750.554	601402.262	307.415	TOPO
MCV2003F_1806	09/08/2003	7724727.308	601415.554	307.031	TOPO
MCV2003F_1807	09/08/2003	7724710.136	601409.403	305.232	TOPO
MCV2003F_1808	09/08/2003	7724702.492	601409.133	307.082	TOPO
MCV2003F_1809	09/08/2003	7724685.572	601403.088	303.052	TOPO
MCV2003F_1810	09/08/2003	7724668.755	601412.799	304.793	TOPO
MCV2003F_1811	09/08/2003	7724633.135	601414.612	303.501	TOPO
MCV2003F_1812	09/08/2003	7724599.172	601416.098	304.743	TOPO
MCV2003F_1813	09/08/2003	7724578.714	601419.267	304.008	TOPO
MCV2003F_1814	09/08/2003	7724501.715	601397.486	303.499	TOPO
MCV2003F_1815	09/08/2003	7724498.858	601406.920	307.512	TOPO
MCV2003F_1816	09/08/2003	7724481.344	601398.282	309.986	TOPO
MCV2003F_1817	09/08/2003	7724468.787	601389.938	303.666	TOPO
MCV2003F_1818	09/08/2003	7724442.635	601382.507	304.490	TOPO
MCV2003F_1819	09/08/2003	7724417.351	601377.385	302.356	TOPO
MCV2003F_1820	09/08/2003	7724403.253	601382.636	306.116	TOPO
MCV2003F_1821	09/08/2003	7724361.498	601383.511	303.100	TOPO
MCV2003F_1822	09/08/2003	7724302.637	601362.266	301.206	TOPO
MCV2003F_1823	09/08/2003	7724246.202	601342.448	301.543	TOPO
MCV2003F_1824	09/08/2003	7724236.152	601301.330	299.690	TOPO
MCV2003F_1825	09/08/2003	7724216.133	601281.689	299.815	TOPO
MCV2003F_1826	09/08/2003	7724176.568	601235.108	299.846	TOPO
MCV2003F_1827	09/08/2003	7724114.377	601196.115	305.197	CHKBKST
MCV2003F_1828	09/08/2003	7723515.339	600717.906	313.333	CHKBKST
MCV2003F_1829	09/08/2003	7723600.070	600803.116	296.981	TOPOW
MCV2003F_1830	09/08/2003	7723596.739	600811.070	295.322	TOPOW
MCV2003F_1831	09/08/2003	7723592.369	600816.825	293.915	TOPOW
MCV2003F_1832	09/08/2003	7723588.001	600821.245	293.577	TOPOW
MCV2003F_1833	09/08/2003	7723587.980	600823.175	295.659	TOPOW
MCV2003F_1834	09/08/2003	7723581.574	600826.094	292.622	TOPOW
MCV2003F_1835	09/08/2003	7723577.387	600828.793	293.880	TOPOW
MCV2003F_1836	09/08/2003	7723573.174	600822.702	293.976	TOPOW
MCV2003F_1837	09/08/2003	7723568.965	600817.108	293.829	TOPOW
MCV2003F_1838	09/08/2003	7723570.718	600807.616	293.223	TOPOW
MCV2003F_1839	09/08/2003	7723571.284	600797.846	294.870	TOPOW
MCV2003F_1840	09/08/2003	7723572.661	600790.045	296.731	TOPOW
MCV2003F_1841	09/08/2003	7723560.977	600788.408	297.417	TOPOW
MCV2003F_1842	09/08/2003	7723554.701	600798.061	294.174	TOPOW
MCV2003F_1843	09/08/2003	7723551.149	600800.814	293.207	TOPOW
MCV2003F_1844	09/08/2003	7723545.344	600801.897	293.205	TOPOW
MCV2003F_1845	09/08/2003	7723540.471	600802.999	294.645	TOPOW
MCV2003F_1846	09/08/2003	7723541.097	600794.189	295.540	TOPOW
MCV2003F_1847	09/08/2003	7723544.383	600782.525	297.908	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1848	09/08/2003	7723530.479	600778.938	297.809	TOPOW
MCV2003F_1849	09/08/2003	7723524.981	600786.701	295.463	TOPOW
MCV2003F_1850	09/08/2003	7723521.135	600791.681	294.015	TOPOW
MCV2003F_1851	09/08/2003	7723515.746	600795.731	293.672	TOPOW
MCV2003F_1852	09/08/2003	7723506.732	600793.364	293.766	TOPOW
MCV2003F_1853	09/08/2003	7723502.866	600795.042	293.767	TOPOW
MCV2003F_1854	09/08/2003	7723510.647	600783.238	294.911	TOPOW
MCV2003F_1855	09/08/2003	7723516.668	600777.915	297.315	TOPOW
MCV2003F_1856	09/08/2003	7723517.978	600770.758	297.911	TOPOW
MCV2003F_1857	09/08/2003	7723504.457	600767.809	297.818	TOPOW
MCV2003F_1858	09/08/2003	7723498.235	600776.179	295.952	TOPOW
MCV2003F_1859	09/08/2003	7723492.928	600784.526	294.835	TOPOW
MCV2003F_1860	09/08/2003	7723486.880	600787.366	297.386	TOPOW
MCV2003F_1861	09/08/2003	7723484.565	600794.037	293.361	TOPOW
MCV2003F_1862	09/08/2003	7723476.307	600788.434	293.848	TOPOW
MCV2003F_1863	09/08/2003	7723474.189	600791.919	293.387	TOPOW
MCV2003F_1864	09/08/2003	7723477.822	600776.765	296.323	TOPOW
MCV2003F_1865	09/08/2003	7723480.945	600765.357	297.522	TOPOW
MCV2003F_1866	09/08/2003	7723479.238	600758.653	298.074	TOPOW
MCV2003F_1867	09/08/2003	7723464.034	600760.542	297.619	TOPOW
MCV2003F_1868	09/08/2003	7723458.933	600770.152	296.754	TOPOW
MCV2003F_1869	09/08/2003	7723454.763	600778.348	295.167	TOPOW
MCV2003F_1870	09/08/2003	7723453.124	600783.952	293.747	TOPOW
MCV2003F_1871	09/08/2003	7723450.870	600786.891	292.814	TOPOW
MCV2003F_1872	09/08/2003	7723442.569	600781.743	293.003	TOPOW
MCV2003F_1873	09/08/2003	7723440.649	600784.883	291.993	TOPOW
MCV2003F_1874	09/08/2003	7723445.393	600771.539	295.938	TOPOW
MCV2003F_1875	09/08/2003	7723447.551	600761.857	297.210	TOPOW
MCV2003F_1876	09/08/2003	7723371.446	600911.339	297.771	TOPOW
MCV2003F_1877	09/08/2003	7723378.420	600894.554	295.651	TOPOW
MCV2003F_1878	09/08/2003	7723381.730	600883.820	293.694	TOPOW
MCV2003F_1879	09/08/2003	7723377.240	600872.267	292.957	TOPOW
MCV2003F_1880	09/08/2003	7723368.551	600872.610	295.028	TOPOW
MCV2003F_1881	09/08/2003	7723371.543	600865.568	293.524	TOPOW
MCV2003F_1882	09/08/2003	7723361.644	600880.572	296.976	TOPOW
MCV2003F_1883	09/08/2003	7723355.804	600891.447	295.975	TOPOW
MCV2003F_1884	09/08/2003	7723347.196	600901.045	297.580	TOPOW
MCV2003F_1885	09/08/2003	7723348.416	600874.589	295.730	TOPOW
MCV2003F_1886	09/08/2003	7723355.365	600859.477	294.246	TOPOW
MCV2003F_1887	09/08/2003	7723346.586	600861.514	293.849	TOPOW
MCV2003F_1888	09/08/2003	7723340.294	600862.822	294.157	TOPOW
MCV2003F_1889	09/08/2003	7723341.686	600858.833	292.862	TOPOW
MCV2003F_1890	09/08/2003	7723331.693	600870.246	296.131	TOPOW
MCV2003F_1891	09/08/2003	7723323.220	600882.981	297.818	TOPOW
MCV2003F_1892	09/08/2003	7723306.250	600871.550	297.966	TOPOW
MCV2003F_1893	09/08/2003	7723310.240	600859.944	294.613	TOPOW
MCV2003F_1894	09/08/2003	7723316.514	600850.954	292.877	TOPOW
MCV2003F_1895	09/08/2003	7723305.605	600851.357	294.163	TOPOW
MCV2003F_1896	09/08/2003	7723304.147	600846.099	292.914	TOPOW

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_1897	09/08/2003	7723291.932	600855.734	295.431	TOPOW
MCV2003F_1898	09/08/2003	7723281.298	600863.494	297.798	TOPOW
MCV2003F_1899	09/08/2003	7723244.348	600840.098	297.497	TOPOW
MCV2003F_1900	09/08/2003	7723248.012	600824.537	295.131	TOPOW
MCV2003F_1901	09/08/2003	7723253.750	600817.524	294.120	TOPOW
MCV2003F_1902	09/08/2003	7723515.325	600717.911	313.329	CHKBKST
RI2003F_001	09/09/2003	7713725.935	627916.094	180.951	CHKBKST
RI2003F_002	09/09/2003	7713785.984	627802.939	181.327	TOPBANK
RI2003F_003	09/09/2003	7713784.955	627802.614	181.215	TOPBANK
RI2003F_004	09/09/2003	7713779.984	627802.105	181.727	TOPBANK
RI2003F_005	09/09/2003	7713774.317	627799.821	181.873	TOPBANK
RI2003F_006	09/09/2003	7713767.900	627796.998	181.887	TOPBANK
RI2003F_007	09/09/2003	7713762.340	627794.534	181.889	TOPBANK
RI2003F_008	09/09/2003	7713756.139	627792.131	181.812	TOPBANK
RI2003F_009	09/09/2003	7713749.916	627789.649	181.805	TOPBANK
RI2003F_010	09/09/2003	7713745.562	627785.218	181.773	TOPBANK
RI2003F_011	09/09/2003	7713742.787	627778.809	181.907	TOPBANK
RI2003F_012	09/09/2003	7713741.487	627772.429	181.900	TOPBANK
RI2003F_013	09/09/2003	7713739.027	627766.761	181.850	TOPBANK
RI2003F_014	09/09/2003	7713737.234	627759.560	181.785	TOPBANK
RI2003F_015	09/09/2003	7713737.456	627755.985	181.675	TOPBANK
RI2003F_016	09/09/2003	7713731.134	627757.137	181.611	TOPBANK
RI2003F_017	09/09/2003	7713723.842	627760.044	181.752	TOPBANK
RI2003F_018	09/09/2003	7713716.819	627762.123	181.679	TOPBANK
RI2003F_019	09/09/2003	7713710.548	627765.020	181.541	TOPBANK
RI2003F_020	09/09/2003	7713703.936	627763.933	181.488	TOPBANK
RI2003F_021	09/09/2003	7713699.095	627759.306	181.242	TOPBANK
RI2003F_022	09/09/2003	7713694.444	627754.164	180.939	TOPBANK
RI2003F_023	09/09/2003	7713690.678	627747.601	181.055	TOPBANK
RI2003F_024	09/09/2003	7713685.731	627739.758	181.108	TOPBANK
RI2003F_025	09/09/2003	7713682.003	627733.749	181.334	TOPBANK
RI2003F_026	09/09/2003	7713677.018	627725.388	181.405	TOPBANK
RI2003F_027	09/09/2003	7713675.241	627717.822	181.561	TOPBANK
RI2003F_028	09/09/2003	7713674.163	627710.771	181.483	TOPBANK
RI2003F_029	09/09/2003	7713668.873	627701.560	179.778	TOPBANK
RI2003F_030	09/09/2003	7713666.981	627691.271	177.769	TOPBANK
RI2003F_031	09/09/2003	7713663.968	627684.981	177.224	TOPBANK
RI2003F_032	09/09/2003	7713659.322	627678.363	178.512	TOPBANK
RI2003F_033	09/09/2003	7713656.160	627673.117	179.315	TOPBANK
RI2003F_034	09/09/2003	7713652.418	627665.983	179.855	TOPBANK
RI2003F_035	09/09/2003	7713650.305	627659.078	179.690	TOPBANK
RI2003F_036	09/09/2003	7713648.974	627654.102	179.870	TOPBANK
RI2003F_037	09/09/2003	7713648.388	627648.138	179.823	TOPBANK
RI2003F_038	09/09/2003	7713646.125	627639.661	179.397	TOPBANK
RI2003F_039	09/09/2003	7713645.095	627632.235	178.998	TOPBANK
RI2003F_040	09/09/2003	7713644.031	627622.958	178.120	TOPBANK
RI2003F_041	09/09/2003	7713640.722	627610.964	178.649	TOPBANK
RI2003F_042	09/09/2003	7713643.095	627603.734	176.790	TOPBANK
RI2003F_043	09/09/2003	7713642.703	627597.176	176.479	TOPBANK

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northling (ft)	Elevation (ft) NAVD88	Comment
RI2003F_044	09/09/2003	7713641.346	627590.724	176.295	TOPBANK
RI2003F_045	09/09/2003	7713640.417	627584.527	176.132	TOPBANK
RI2003F_046	09/09/2003	7713637.985	627577.671	176.641	TOPBANK
RI2003F_047	09/09/2003	7713638.457	627570.748	175.437	TOPBANK
RI2003F_048	09/09/2003	7713636.709	627563.851	175.135	TOPBANK
RI2003F_049	09/09/2003	7713634.120	627555.843	175.007	TOPBANK
RI2003F_050	09/09/2003	7713632.911	627549.306	174.427	TOPBANK
RI2003F_051	09/09/2003	7713630.242	627539.021	174.089	TOPBANK
RI2003F_052	09/09/2003	7713620.712	627510.912	175.520	TOPBANK
RI2003F_053	09/09/2003	7713620.361	627504.208	175.011	TOPBANK
RI2003F_054	09/09/2003	7713619.570	627496.828	174.409	TOPBANK
RI2003F_055	09/09/2003	7713616.552	627489.278	175.880	TOPBANK
RI2003F_056	09/09/2003	7713614.693	627481.513	176.077	TOPBANK
RI2003F_057	09/09/2003	7713612.085	627473.074	177.000	TOPBANK
RI2003F_058	09/09/2003	7713541.526	627378.255	182.472	IR
RI2003F_059	09/09/2003	7713407.187	626721.176	190.978	CHKBKST
RI2003F_060	09/09/2003	7714460.920	628052.827	181.020	TOPBANK
RI2003F_061	09/09/2003	7714458.134	628060.495	179.175	TOPBANK
RI2003F_062	09/09/2003	7714451.698	628071.821	179.312	TOPBANK
RI2003F_063	09/09/2003	7714446.555	628082.699	179.531	TOPBANK
RI2003F_064	09/09/2003	7714441.377	628091.865	179.862	TOPBANK
RI2003F_065	09/09/2003	7714429.806	628114.316	179.863	TOPBANK
RI2003F_066	09/09/2003	7714421.489	628125.458	179.793	TOPBANK
RI2003F_067	09/09/2003	7714411.399	628141.378	180.407	TOPBANK
RI2003F_068	09/09/2003	7714406.145	628145.390	180.474	TOPBANK
RI2003F_069	09/09/2003	7714400.787	628153.991	180.772	TOPBANK
RI2003F_070	09/09/2003	7714391.762	628164.419	180.927	TOPBANK
RI2003F_071	09/09/2003	7714380.081	628176.984	180.930	TOPBANK
RI2003F_072	09/09/2003	7714372.307	628183.049	181.133	TOPBANK
RI2003F_073	09/09/2003	7714369.786	628190.150	180.767	TOPBANK
RI2003F_074	09/09/2003	7714363.876	628199.579	180.717	TOPBANK
RI2003F_075	09/09/2003	7714356.994	628206.117	180.738	TOPBANK
RI2003F_076	09/09/2003	7714353.062	628209.976	180.699	TOPBANK
RI2003F_077	09/09/2003	7714347.036	628218.877	180.584	TOPBANK
RI2003F_078	09/09/2003	7714334.942	628232.743	180.523	TOPBANK
RI2003F_079	09/09/2003	7714326.641	628243.845	180.820	TOPBANK
RI2003F_080	09/09/2003	7714320.202	628255.366	180.660	TOPBANK
RI2003F_081	09/09/2003	7714313.749	628265.521	179.678	TOPBANK
RI2003F_082	09/09/2003	7714310.847	628277.270	180.093	TOPBANK
RI2003F_083	09/09/2003	7714305.482	628285.730	179.563	TOPBANK
RI2003F_084	09/09/2003	7714298.311	628298.196	180.785	TOPBANK
RI2003F_085	09/09/2003	7714295.041	628305.367	181.313	TOPBANK
RI2003F_086	09/09/2003	7714285.882	628312.951	182.166	TOPBANK
RI2003F_087	09/09/2003	7714277.989	628316.457	182.357	TOPBANK
RI2003F_088	09/09/2003	7714273.369	628320.031	182.264	TOPBANK
RI2003F_089	09/09/2003	7714269.781	628327.967	181.984	TOPBANK
RI2003F_090	09/09/2003	7714261.440	628336.370	181.791	TOPBANK
RI2003F_091	09/09/2003	7714252.501	628347.055	180.650	TOPBANK
RI2003F_092	09/09/2003	7714245.359	628358.155	179.874	TOPBANK

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_093	09/09/2003	7714237.455	628369.313	178.516	TOPBANK
RI2003F_094	09/09/2003	7714184.190	628442.376	177.840	TOPBANK
RI2003F_095	09/09/2003	7714177.581	628451.121	178.488	TOPBANK
RI2003F_096	09/09/2003	7714161.679	628473.201	185.629	TOPBANK
RI2003F_097	09/09/2003	7714154.105	628481.384	184.457	TOPBANK
RI2003F_098	09/09/2003	7714149.675	628488.176	184.639	TOPBANK
RI2003F_099	09/09/2003	7714144.613	628495.346	187.661	TOPBANK
RI2003F_100	09/09/2003	7714143.758	628504.114	190.968	TOPBANK
RI2003F_101	09/09/2003	7714138.166	628513.761	187.389	TOPBANK
RI2003F_102	09/09/2003	7714128.461	628523.683	186.644	TOPBANK
RI2003F_103	09/09/2003	7714123.849	628531.835	186.831	TOPBANK
RI2003F_104	09/09/2003	7714120.983	628541.762	189.894	TOPBANK
RI2003F_105	09/09/2003	7714116.864	628551.585	191.163	TOPBANK
RI2003F_106	09/09/2003	7714113.776	628557.735	194.445	TOPBANK
RI2003F_107	09/09/2003	7714107.195	628565.460	196.159	TOPBANK
RI2003F_108	09/09/2003	7714101.845	628569.125	196.273	TOPBANK
RI2003F_109	09/09/2003	7714093.444	628570.954	193.799	TOPBANK
RI2003F_110	09/09/2003	7714081.910	628581.363	192.935	TOPBANK
RI2003F_111	09/09/2003	7714075.367	628592.952	198.211	TOPBANK
RI2003F_112	09/09/2003	7714070.936	628607.033	199.098	TOPBANK
RI2003F_113	09/09/2003	7714068.835	628615.132	200.803	TOPBANK
RI2003F_114	09/09/2003	7714070.341	628616.848	200.957	CHKBKST
RI2003F_115	09/09/2003	7714060.609	628623.148	200.027	TOPBANK
RI2003F_116	09/09/2003	7714126.530	628593.169	200.913	CHKBKST
RI2003F_117	09/09/2003	7713725.940	627916.056	180.939	CHKBKST
RI2003F_118	09/09/2003	7713805.351	626619.476	185.533	CHKBKST
MCV2003F_3000	09/10/2003	7722852.825	600567.370	299.447	CHKBKST
MCV2003F_3001	09/10/2003	7722578.677	600215.936	297.163	IR
MCV2003F_3002	09/10/2003	7722579.013	600216.007	297.371	CHKBKST
MCV2003F_3003	09/10/2003	7722251.853	600152.956	289.730	TOPOW
MCV2003F_3004	09/10/2003	7722260.336	600152.234	288.204	TOPOW
MCV2003F_3005	09/10/2003	7722265.814	600144.477	288.317	TOPOW
MCV2003F_3006	09/10/2003	7722272.110	600135.800	288.601	TOPOW
MCV2003F_3007	09/10/2003	7722280.561	600127.682	288.281	TOPOW
MCV2003F_3008	09/10/2003	7722289.767	600116.211	288.688	TOPOW
MCV2003F_3009	09/10/2003	7722295.429	600104.871	287.533	TOPOW
MCV2003F_3010	09/10/2003	7722288.820	600100.094	287.452	TOPOW
MCV2003F_3011	09/10/2003	7722280.314	600099.888	287.528	TOPOW
MCV2003F_3012	09/10/2003	7722267.014	600098.940	287.993	TOPOW
MCV2003F_3013	09/10/2003	7722259.256	600107.215	287.645	TOPOW
MCV2003F_3014	09/10/2003	7722258.425	600117.611	287.998	TOPOW
MCV2003F_3015	09/10/2003	7722251.414	600125.876	288.527	TOPOW
MCV2003F_3016	09/10/2003	7722243.969	600132.786	288.580	TOPOW
MCV2003F_3017	09/10/2003	7722238.927	600137.493	288.806	TOPOW
MCV2003F_3018	09/10/2003	7722234.014	600133.344	288.157	TOPOW
MCV2003F_3019	09/10/2003	7722238.688	600126.236	288.208	TOPOW
MCV2003F_3020	09/10/2003	7722240.523	600121.972	287.892	TOPOW
MCV2003F_3021	09/10/2003	7722244.164	600115.174	287.871	TOPOW
MCV2003F_3022	09/10/2003	7722245.521	600112.729	286.941	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3023	09/10/2003	7722240.556	600108.483	287.405	TOPOW
MCV2003F_3024	09/10/2003	7722235.374	600114.445	288.132	TOPOW
MCV2003F_3025	09/10/2003	7722233.603	600116.481	288.340	TOPOW
MCV2003F_3026	09/10/2003	7722231.227	600119.220	290.650	TOPOW
MCV2003F_3027	09/10/2003	7722225.850	600126.166	291.388	TOPOW
MCV2003F_3028	09/10/2003	7722222.947	600130.201	291.569	TOPOW
MCV2003F_3029	09/10/2003	7722209.073	600120.752	291.467	TOPOW
MCV2003F_3030	09/10/2003	7722215.113	600110.552	290.889	TOPOW
MCV2003F_3031	09/10/2003	7722219.125	600103.596	291.853	TOPOW
MCV2003F_3032	09/10/2003	7722222.143	600102.162	291.125	TOPOW
MCV2003F_3033	09/10/2003	7722223.469	600102.428	287.932	TOPOW
MCV2003F_3034	09/10/2003	7722220.720	600095.414	290.848	TOPOW
MCV2003F_3035	09/10/2003	7722221.877	600095.190	286.605	TOPOW
MCV2003F_3036	09/10/2003	7722217.116	600089.697	291.686	TOPOW
MCV2003F_3037	09/10/2003	7722217.911	600088.503	286.740	TOPOW
MCV2003F_3038	09/10/2003	7722209.185	600098.992	290.430	TOPOW
MCV2003F_3039	09/10/2003	7722199.559	600112.481	290.771	TOPOW
MCV2003F_3040	09/10/2003	7722186.241	600102.733	290.893	TOPOW
MCV2003F_3041	09/10/2003	7722192.975	600089.949	290.564	TOPOW
MCV2003F_3042	09/10/2003	7722198.685	600077.141	289.766	TOPOW
MCV2003F_3043	09/10/2003	7722207.044	600071.871	288.930	TOPOW
MCV2003F_3044	09/10/2003	7722217.830	600074.774	287.390	TOPOW
MCV2003F_3045	09/10/2003	7722210.671	600068.187	289.920	TOPOW
MCV2003F_3046	09/10/2003	7722213.223	600061.053	289.598	TOPOW
MCV2003F_3047	09/10/2003	7722215.678	600058.769	286.941	TOPOW
MCV2003F_3048	09/10/2003	7722206.499	600055.292	287.921	TOPOW
MCV2003F_3049	09/10/2003	7722202.392	600057.582	289.098	TOPOW
MCV2003F_3050	09/10/2003	7722196.806	600060.430	291.344	TOPOW
MCV2003F_3051	09/10/2003	7722191.764	600044.806	290.461	TOPOW
MCV2003F_3052	09/10/2003	7722202.971	600039.798	283.459	TOPOW
MCV2003F_3053	09/10/2003	7722194.505	600031.440	285.297	TOPOW
MCV2003F_3054	09/10/2003	7722186.724	600037.996	291.470	TOPOW
MCV2003F_3055	09/10/2003	7722180.156	600048.423	290.652	TOPOW
MCV2003F_3056	09/10/2003	7722170.907	600066.031	289.679	TOPOW
MCV2003F_3057	09/10/2003	7722148.023	600071.026	291.844	TOPOW
MCV2003F_3058	09/10/2003	7722155.502	600050.901	290.144	TOPOW
MCV2003F_3059	09/10/2003	7722162.713	600036.662	289.905	TOPOW
MCV2003F_3060	09/10/2003	7722170.885	600021.857	289.706	TOPOW
MCV2003F_3061	09/10/2003	7722172.869	600018.662	290.720	TOPOW
MCV2003F_3062	09/10/2003	7722178.660	600010.646	287.539	TOPOW
MCV2003F_3063	09/10/2003	7722184.598	600008.128	288.041	TOPOW
MCV2003F_3064	09/10/2003	7722193.886	600010.904	290.561	TOPOW
MCV2003F_3065	09/10/2003	7722203.019	600018.309	290.836	TOPOW
MCV2003F_3066	09/10/2003	7722202.994	600023.449	286.617	TOPOW
MCV2003F_3067	09/10/2003	7722211.432	600021.452	291.183	TOPOW
MCV2003F_3068	09/10/2003	7722215.279	600023.849	288.632	TOPOW
MCV2003F_3069	09/10/2003	7722217.131	600028.960	290.561	TOPOW
MCV2003F_3070	09/10/2003	7722219.133	600034.222	287.174	TOPOW
MCV2003F_3071	09/10/2003	7722226.626	600034.035	289.520	TOPOW

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3072	09/10/2003	7722228.122	600030.024	287.201	TOPOW
MCV2003F_3073	09/10/2003	7722218.043	600023.504	288.554	TOPOW
MCV2003F_3074	09/10/2003	7722218.933	600017.200	291.114	TOPOW
MCV2003F_3075	09/10/2003	7722228.635	600025.752	290.244	TOPOW
MCV2003F_3076	09/10/2003	7722230.813	600023.762	287.829	TOPOW
MCV2003F_3077	09/10/2003	7722221.092	600014.693	288.702	TOPOW
MCV2003F_3078	09/10/2003	7722220.362	600010.295	291.256	TOPOW
MCV2003F_3079	09/10/2003	7722213.351	600005.319	291.174	TOPOW
MCV2003F_3080	09/10/2003	7722231.454	600017.415	290.931	TOPOW
MCV2003F_3081	09/10/2003	7722236.712	600021.958	287.871	TOPOW
MCV2003F_3082	09/10/2003	7722243.908	600015.932	288.231	TOPOW
MCV2003F_3083	09/10/2003	7722253.267	600011.283	289.802	TOPOW
MCV2003F_3084	09/10/2003	7722262.852	600017.767	290.203	TOPOW
MCV2003F_3085	09/10/2003	7722259.001	600027.829	288.458	TOPOW
MCV2003F_3086	09/10/2003	7722255.699	600032.050	287.648	TOPOW
MCV2003F_3087	09/10/2003	7722265.804	600035.503	287.634	TOPOW
MCV2003F_3088	09/10/2003	7722278.328	600028.660	290.086	TOPOW
MCV2003F_3089	09/10/2003	7722289.861	600032.406	290.547	TOPOW
MCV2003F_3090	09/10/2003	7722284.031	600044.552	288.745	TOPOW
MCV2003F_3091	09/10/2003	7722296.183	600053.404	287.955	TOPOW
MCV2003F_3092	09/10/2003	7722304.670	600046.757	289.486	TOPOW
MCV2003F_3093	09/10/2003	7722317.467	600056.395	289.402	TOPOW
MCV2003F_3094	09/10/2003	7722319.370	600050.251	293.519	TOPOW
MCV2003F_3095	09/10/2003	7722331.695	600059.639	289.859	TOPOW
MCV2003F_3096	09/10/2003	7722328.961	600072.134	288.264	TOPOW
MCV2003F_3097	09/10/2003	7722340.247	600075.262	288.183	TOPOW
MCV2003F_3098	09/10/2003	7722346.241	600083.860	287.252	TOPOW
MCV2003F_3099	09/10/2003	7722354.039	600071.445	289.302	TOPOW
MCV2003F_3100	09/10/2003	7722361.226	600065.833	288.685	TOPOW
MCV2003F_3101	09/10/2003	7722350.130	600060.773	289.293	TOPOW
MCV2003F_3102	09/10/2003	7722340.293	600054.148	290.120	TOPOW
MCV2003F_3103	09/10/2003	7722324.764	600047.460	290.455	TOPOW
MCV2003F_3104	09/10/2003	7722307.852	600037.303	290.832	TOPOW
MCV2003F_3105	09/10/2003	7722292.795	600028.227	290.701	TOPOW
MCV2003F_3106	09/10/2003	7722278.935	600015.981	290.588	TOPOW
MCV2003F_3107	09/10/2003	7722259.805	600002.246	291.065	TOPOW
MCV2003F_3108	09/10/2003	7722243.607	599992.263	290.528	TOPOW
MCV2003F_3109	09/10/2003	7722229.345	599986.998	291.167	TOPOW
MCV2003F_3110	09/10/2003	7722213.934	599976.929	291.393	TOPOW
MCV2003F_3111	09/10/2003	7722184.307	599960.698	291.759	TOPOW
MCV2003F_3112	09/10/2003	7722162.324	599975.432	290.246	TOPOW
MCV2003F_3113	09/10/2003	7722146.736	599987.763	288.791	TOPOW
MCV2003F_3114	09/10/2003	7722141.006	599994.322	288.867	TOPOW
MCV2003F_3115	09/10/2003	7722136.863	600001.040	291.372	TOPOW
MCV2003F_3116	09/10/2003	7722132.055	600006.740	289.539	TOPOW
MCV2003F_3117	09/10/2003	7722127.094	600013.639	291.111	TOPOW
MCV2003F_3118	09/10/2003	7722121.602	600021.609	289.589	TOPOW
MCV2003F_3119	09/10/2003	7722116.814	600029.955	290.150	TOPOW
MCV2003F_3120	09/10/2003	7722108.681	600043.207	290.831	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3121	09/10/2003	7722107.358	600045.643	289.621	TOPOW
MCV2003F_3122	09/10/2003	7722099.878	600058.011	290.584	TOPOW
MCV2003F_3123	09/10/2003	7722090.378	600072.316	289.899	TOPOW
MCV2003F_3124	09/10/2003	7722074.189	600061.169	289.206	TOPOW
MCV2003F_3125	09/10/2003	7722085.039	600038.323	289.792	TOPOW
MCV2003F_3126	09/10/2003	7722091.606	600026.301	289.472	TOPOW
MCV2003F_3127	09/10/2003	7722101.956	600007.035	289.164	TOPOW
MCV2003F_3128	09/10/2003	7722102.685	600002.961	291.001	TOPOW
MCV2003F_3129	09/10/2003	7722108.120	600001.336	291.406	TOPOW
MCV2003F_3130	09/10/2003	7722115.098	599981.885	290.070	TOPOW
MCV2003F_3131	09/10/2003	7722115.263	599964.493	289.815	TOPOW
MCV2003F_3132	09/10/2003	7722086.411	599965.489	291.445	TOPOW
MCV2003F_3133	09/10/2003	7722071.419	599986.142	289.788	TOPOW
MCV2003F_3134	09/10/2003	7722064.178	599995.977	290.107	TOPOW
MCV2003F_3135	09/10/2003	7722054.955	600010.820	289.432	TOPOW
MCV2003F_3136	09/10/2003	7722045.780	600025.785	289.710	TOPOW
MCV2003F_3137	09/10/2003	7722035.843	600042.980	289.224	TOPOW
MCV2003F_3138	09/10/2003	7722033.253	600048.376	290.566	TOPOW
MCV2003F_3139	09/10/2003	7722014.169	600033.212	290.262	TOPOW
MCV2003F_3140	09/10/2003	7722015.152	600029.787	288.862	TOPOW
MCV2003F_3141	09/10/2003	7722021.096	600016.832	289.271	TOPOW
MCV2003F_3142	09/10/2003	7722030.989	599995.259	290.332	TOPOW
MCV2003F_3143	09/10/2003	7722038.141	599976.635	290.438	TOPOW
MCV2003F_3144	09/10/2003	7722045.130	599960.194	290.118	TOPOW
MCV2003F_3145	09/10/2003	7722014.037	599956.310	291.351	TOPOW
MCV2003F_3146	09/10/2003	7722005.644	599972.252	288.347	TOPOW
MCV2003F_3147	09/10/2003	7721999.822	599983.156	290.548	TOPOW
MCV2003F_3148	09/10/2003	7721990.006	600000.847	288.759	TOPOW
MCV2003F_3149	09/10/2003	7721986.795	600006.084	289.016	TOPOW
MCV2003F_3150	09/10/2003	7721985.982	600007.918	290.658	TOPOW
MCV2003F_3151	09/10/2003	7721980.446	600018.071	291.241	TOPOW
MCV2003F_3152	09/10/2003	7721977.950	600024.870	291.540	TOPOW
MCV2003F_3153	09/10/2003	7721956.229	600011.998	290.368	TOPOW
MCV2003F_3154	09/10/2003	7721964.868	599998.340	290.761	TOPOW
MCV2003F_3155	09/10/2003	7721971.776	599985.659	288.629	TOPOW
MCV2003F_3156	09/10/2003	7721976.977	599974.864	290.076	TOPOW
MCV2003F_3157	09/10/2003	7721984.637	599958.113	289.720	TOPOW
MCV2003F_3158	09/10/2003	7721987.334	599941.506	290.803	TOPOW
MCV2003F_3159	09/10/2003	7721963.820	599927.046	290.884	TOPOW
MCV2003F_3160	09/10/2003	7721954.629	599946.567	289.813	TOPOW
MCV2003F_3161	09/10/2003	7721946.750	599962.963	288.617	TOPOW
MCV2003F_3162	09/10/2003	7721938.393	599975.343	289.443	TOPOW
MCV2003F_3163	09/10/2003	7721931.034	599990.158	290.852	TOPOW
MCV2003F_3164	09/10/2003	7721906.457	599980.815	290.470	TOPOW
MCV2003F_3165	09/10/2003	7721911.983	599964.563	289.475	TOPOW
MCV2003F_3166	09/10/2003	7721912.658	599962.284	290.905	TOPOW
MCV2003F_3167	09/10/2003	7721918.728	599958.404	292.988	TOPOW
MCV2003F_3168	09/10/2003	7721920.419	599956.387	288.860	TOPOW
MCV2003F_3169	09/10/2003	7721926.371	599945.539	289.456	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Eastling (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3170	09/10/2003	7721935.025	599930.422	290.426	TOPOW
MCV2003F_3171	09/10/2003	7721936.481	599930.967	293.005	TOPOW
MCV2003F_3172	09/10/2003	7721941.879	599931.441	293.114	TOPOW
MCV2003F_3173	09/10/2003	7721944.452	599925.343	289.917	TOPOW
MCV2003F_3174	09/10/2003	7721919.649	599908.181	290.779	TOPOW
MCV2003F_3175	09/10/2003	7721912.415	599922.573	290.839	TOPOW
MCV2003F_3176	09/10/2003	7721906.462	599925.120	289.792	TOPOW
MCV2003F_3177	09/10/2003	7721904.987	599928.343	291.679	TOPOW
MCV2003F_3178	09/10/2003	7721898.477	599937.604	289.799	TOPOW
MCV2003F_3179	09/10/2003	7721888.986	599957.548	291.161	TOPOW
MCV2003F_3180	09/10/2003	7721859.093	599961.763	291.261	TOPOW
MCV2003F_3181	09/10/2003	7721874.699	599933.905	291.812	TOPOW
MCV2003F_3182	09/10/2003	7721885.933	599913.487	289.813	TOPOW
MCV2003F_3183	09/10/2003	7721895.544	599889.725	291.043	TOPOW
MCV2003F_3184	09/10/2003	7721855.633	599878.963	291.124	TOPOW
MCV2003F_3185	09/10/2003	7721848.985	599899.973	290.738	TOPOW
MCV2003F_3186	09/10/2003	7721844.195	599923.396	289.527	TOPOW
MCV2003F_3187	09/10/2003	7721834.865	599942.540	289.811	TOPOW
MCV2003F_3188	09/10/2003	7721825.737	599961.075	290.540	TOPOW
MCV2003F_3189	09/10/2003	7721795.030	599944.464	290.335	TOPOW
MCV2003F_3190	09/10/2003	7721801.857	599925.491	289.070	TOPOW
MCV2003F_3191	09/10/2003	7721810.684	599899.919	290.232	TOPOW
MCV2003F_3192	09/10/2003	7721821.376	599871.508	291.106	TOPOW
MCV2003F_3193	09/10/2003	7721782.997	599864.111	291.016	TOPOW
MCV2003F_3194	09/10/2003	7721772.539	599886.655	290.426	TOPOW
MCV2003F_3195	09/10/2003	7721765.923	599903.785	290.350	TOPOW
MCV2003F_3196	09/10/2003	7721760.381	599921.032	290.460	TOPOW
MCV2003F_3197	09/10/2003	7721758.268	599933.191	290.450	TOPOW
MCV2003F_3198	09/10/2003	7721727.592	599916.346	290.842	TOPOW
MCV2003F_3199	09/10/2003	7721735.519	599901.032	289.964	TOPOW
MCV2003F_3200	09/10/2003	7721744.415	599876.107	290.804	TOPOW
MCV2003F_3201	09/10/2003	7721706.728	599867.522	292.495	TOPOW
MCV2003F_3202	09/10/2003	7721698.168	599880.391	290.162	TOPOW
MCV2003F_3203	09/10/2003	7721686.683	599896.117	289.417	TOPOW
MCV2003F_3204	09/10/2003	7721676.533	599885.902	291.942	TOPOW
MCV2003F_3205	09/10/2003	7721654.857	599877.133	288.858	TOPOW
MCV2003F_3206	09/10/2003	7721649.911	599867.615	287.387	TOPOW
MCV2003F_3207	09/10/2003	7721658.289	599855.649	286.610	TOPOW
MCV2003F_3208	09/10/2003	7721669.832	599858.957	288.612	TOPOW
MCV2003F_3209	09/10/2003	7721682.637	599837.420	285.893	TOPOW
MCV2003F_3210	09/10/2003	7721693.721	599846.037	289.899	TOPOW
MCV2003F_3211	09/10/2003	7721706.805	599825.289	286.183	TOPOW
MCV2003F_3212	09/10/2003	7721719.778	599831.946	290.133	TOPOW
MCV2003F_3213	09/10/2003	7721725.267	599817.337	286.163	TOPOW
MCV2003F_3214	09/10/2003	7721738.351	599820.179	288.844	TOPOW
MCV2003F_3215	09/10/2003	7721747.183	599811.301	286.440	TOPOW
MCV2003F_3216	09/10/2003	7721759.809	599813.418	288.504	TOPOW
MCV2003F_3217	09/10/2003	7721762.869	599807.798	286.680	TOPOW
MCV2003F_3218	09/10/2003	7721771.270	599811.677	288.791	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3219	09/10/2003	7721794.134	599825.541	291.706	EDGWATER
MCV2003F_3220	09/10/2003	7721824.884	599836.169	291.812	EDGWATER
MCV2003F_3221	09/10/2003	7721861.133	599856.787	291.785	EDGWATER
MCV2003F_3222	09/10/2003	7721913.381	599880.061	291.731	EDGWATER
MCV2003F_3223	09/10/2003	7721963.771	599903.784	291.800	EDGWATER
MCV2003F_3224	09/10/2003	7722003.195	599940.458	291.859	EDGWATER
MCV2003F_3225	09/10/2003	7722054.479	599944.724	291.845	EDGWATER
MCV2003F_3226	09/10/2003	7722109.189	599947.037	291.777	EDGWATER
MCV2003F_3227	09/10/2003	7722147.628	599959.182	291.841	EDGWATER
MCV2003F_3228	09/10/2003	7721995.986	600031.791	291.606	EDGWATER
MCV2003F_3229	09/10/2003	7722022.169	600044.886	291.778	EDGWATER
MCV2003F_3230	09/10/2003	7722049.934	600060.016	291.873	EDGWATER
MCV2003F_3231	09/10/2003	7722087.665	600081.972	291.921	EDGWATER
MCV2003F_3232	09/10/2003	7722202.188	600121.054	291.941	EDGWATER
MCV2003F_3233	09/10/2003	7722239.927	600138.854	291.955	EDGWATER
MCV2003F_3234	09/10/2003	7722579.055	600216.044	297.352	CHKBKST
MCV2003F_3235	09/10/2003	7722202.852	600141.386	294.485	MAGNAIL
MCV2003F_3236	09/10/2003	7721872.222	602848.126	273.320	CHKBKST
MCV2003F_3237	09/10/2003	7722036.929	602789.609	270.715	EDGWATER
MCV2003F_3238	09/10/2003	7722065.431	602825.162	270.716	EDGWATER
MCV2003F_3239	09/10/2003	7722086.577	602858.079	270.713	EDGWATER
MCV2003F_3240	09/10/2003	7722107.639	602886.249	270.617	EDGWATER
MCV2003F_3241	09/10/2003	7722133.462	602914.781	270.641	EDGWATER
MCV2003F_3242	09/10/2003	7722161.706	602946.050	270.667	EDGWATER
MCV2003F_3243	09/10/2003	7722191.489	602967.638	270.644	EDGWATER
MCV2003F_3244	09/10/2003	7722226.592	602990.873	270.572	EDGWATER
MCV2003F_3245	09/10/2003	7722257.195	603010.027	270.570	EDGWATER
MCV2003F_3246	09/10/2003	7722271.686	602998.054	270.542	EDGWATER
MCV2003F_3247	09/10/2003	7722280.052	603002.292	270.295	TOPOW
MCV2003F_3248	09/10/2003	7722309.127	603028.397	269.901	TOPOW
MCV2003F_3249	09/10/2003	7722338.399	603062.967	270.020	TOPOW
MCV2003F_3250	09/10/2003	7722372.575	603100.956	269.797	TOPOW
MCV2003F_3251	09/10/2003	7722400.426	603137.236	269.925	TOPOW
MCV2003F_3252	09/10/2003	7722432.408	603164.397	269.955	TOPOW
MCV2003F_3253	09/10/2003	7722458.675	603194.919	269.888	TOPOW
MCV2003F_3254	09/10/2003	7722486.722	603230.995	269.911	TOPOW
MCV2003F_3255	09/10/2003	7722516.508	603265.545	269.884	TOPOW
MCV2003F_3256	09/10/2003	7722549.128	603303.778	269.831	TOPOW
MCV2003F_3257	09/10/2003	7722578.124	603343.915	269.505	TOPOW
MCV2003F_3258	09/10/2003	7722612.977	603386.581	269.194	TOPOW
MCV2003F_3259	09/10/2003	7722638.299	603436.623	269.051	TOPOW
MCV2003F_3260	09/10/2003	7722640.329	603437.830	271.149	TOPOW
MCV2003F_3261	09/10/2003	7722615.394	603456.603	268.432	TOPOW
MCV2003F_3262	09/10/2003	7722589.817	603477.185	269.185	TOPOW
MCV2003F_3263	09/10/2003	7722556.250	603509.265	268.589	TOPOW
MCV2003F_3264	09/10/2003	7722541.061	603524.186	267.062	TOPOW
MCV2003F_3265	09/10/2003	7722528.817	603507.485	266.895	TOPOW
MCV2003F_3266	09/10/2003	7722548.553	603471.929	269.017	TOPOW
MCV2003F_3267	09/10/2003	7722580.837	603435.595	268.925	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3268	09/10/2003	7722605.117	603405.790	268.425	TOPOW
MCV2003F_3269	09/10/2003	7722627.418	603384.348	268.914	TOPOW
MCV2003F_3270	09/10/2003	7722595.917	603356.208	269.452	TOPOW
MCV2003F_3271	09/10/2003	7722553.933	603373.634	268.626	TOPOW
MCV2003F_3272	09/10/2003	7722518.650	603394.421	268.472	TOPOW
MCV2003F_3273	09/10/2003	7722479.192	603414.310	267.947	TOPOW
MCV2003F_3274	09/10/2003	7722468.851	603418.137	266.860	TOPOW
MCV2003F_3275	09/10/2003	7722455.879	603394.972	266.840	TOPOW
MCV2003F_3276	09/10/2003	7722476.216	603369.455	267.934	TOPOW
MCV2003F_3277	09/10/2003	7722496.668	603334.844	268.002	TOPOW
MCV2003F_3278	09/10/2003	7722526.559	603303.340	269.177	TOPOW
MCV2003F_3279	09/10/2003	7722540.739	603285.660	269.923	TOPOW
MCV2003F_3280	09/10/2003	7722510.267	603259.458	269.761	TOPOW
MCV2003F_3281	09/10/2003	7722474.525	603277.723	268.389	TOPOW
MCV2003F_3282	09/10/2003	7722446.484	603292.405	267.434	TOPOW
MCV2003F_3283	09/10/2003	7722435.747	603297.857	266.941	TOPOW
MCV2003F_3284	09/10/2003	7722421.064	603307.974	266.826	TOPOW
MCV2003F_3285	09/10/2003	7722408.203	603292.240	266.764	TOPOW
MCV2003F_3286	09/10/2003	7722428.029	603265.420	267.969	TOPOW
MCV2003F_3287	09/10/2003	7722450.094	603231.766	269.041	TOPOW
MCV2003F_3288	09/10/2003	7722465.176	603208.794	269.799	TOPOW
MCV2003F_3289	09/10/2003	7722434.949	603174.694	270.012	TOPOW
MCV2003F_3290	09/10/2003	7722399.369	603187.063	268.473	TOPOW
MCV2003F_3291	09/10/2003	7722361.407	603204.590	268.647	TOPOW
MCV2003F_3292	09/10/2003	7722332.984	603216.563	268.130	TOPOW
MCV2003F_3293	09/10/2003	7722315.175	603221.164	266.594	TOPOW
MCV2003F_3294	09/10/2003	7722293.219	603200.337	267.267	TOPOW
MCV2003F_3295	09/10/2003	7722272.891	603203.536	266.532	TOPOW
MCV2003F_3296	09/10/2003	7722285.969	603175.941	267.509	TOPOW
MCV2003F_3297	09/10/2003	7722307.984	603144.251	268.649	TOPOW
MCV2003F_3298	09/10/2003	7722336.132	603114.862	268.965	TOPOW
MCV2003F_3299	09/10/2003	7722361.250	603085.418	269.952	TOPOW
MCV2003F_3300	09/10/2003	7722327.126	603052.641	269.954	TOPOW
MCV2003F_3301	09/10/2003	7722280.768	603071.206	269.415	TOPOW
MCV2003F_3302	09/10/2003	7722235.586	603087.459	268.263	TOPOW
MCV2003F_3303	09/10/2003	7722212.463	603098.117	266.977	TOPOW
MCV2003F_3304	09/10/2003	7722187.914	603082.741	266.784	TOPOW
MCV2003F_3305	09/10/2003	7722207.888	603055.437	268.422	TOPOW
MCV2003F_3306	09/10/2003	7722228.073	603026.201	269.795	TOPOW
MCV2003F_3307	09/10/2003	7722245.323	603004.044	270.572	TOPOW
MCV2003F_3308	09/10/2003	7722205.278	602986.690	270.435	TOPOW
MCV2003F_3309	09/10/2003	7722162.287	603006.192	268.715	TOPOW
MCV2003F_3310	09/10/2003	7722141.636	603018.212	267.170	TOPOW
MCV2003F_3311	09/10/2003	7722124.938	603001.655	267.032	TOPOW
MCV2003F_3312	09/10/2003	7722137.321	602980.958	268.902	TOPOW
MCV2003F_3313	09/10/2003	7722156.341	602957.753	269.916	TOPOW
MCV2003F_3314	09/10/2003	7722126.852	602928.152	270.012	TOPOW
MCV2003F_3315	09/10/2003	7722087.546	602943.038	268.248	TOPOW
MCV2003F_3316	09/10/2003	7722067.863	602946.818	266.424	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3317	09/10/2003	7722054.331	602929.213	266.633	TOPOW
MCV2003F_3318	09/10/2003	7722070.692	602911.415	268.696	TOPOW
MCV2003F_3319	09/10/2003	7722093.326	602885.558	270.050	TOPOW
MCV2003F_3320	09/10/2003	7722065.456	602848.338	269.833	TOPOW
MCV2003F_3321	09/10/2003	7722028.016	602860.087	267.551	TOPOW
MCV2003F_3322	09/10/2003	7722006.106	602866.282	266.667	TOPOW
MCV2003F_3323	09/10/2003	7721994.212	602846.723	266.814	TOPOW
MCV2003F_3324	09/10/2003	7722012.846	602830.434	268.272	TOPOW
MCV2003F_3325	09/10/2003	7722026.555	602811.019	268.827	TOPOW
MCV2003F_3326	09/10/2003	7722037.410	602792.104	270.580	TOPOW
MCV2003F_3327	09/10/2003	7722011.140	602766.976	270.124	TOPOW
MCV2003F_3328	09/10/2003	7721989.739	602780.982	267.631	TOPOW
MCV2003F_3329	09/10/2003	7721974.327	602788.484	267.106	TOPOW
MCV2003F_3330	09/10/2003	7721964.722	602774.380	266.230	TOPOW
MCV2003F_3331	09/10/2003	7721976.938	602762.704	267.499	TOPOW
MCV2003F_3332	09/10/2003	7721992.727	602749.037	269.690	TOPOW
MCV2003F_3333	09/10/2003	7721970.004	602722.809	270.491	TOPOW
MCV2003F_3334	09/10/2003	7721948.471	602731.764	268.754	TOPOW
MCV2003F_3335	09/10/2003	7721932.218	602737.214	266.429	TOPOW
MCV2003F_3336	09/10/2003	7721919.261	602726.496	266.226	TOPOW
MCV2003F_3337	09/10/2003	7721927.902	602712.100	269.203	TOPOW
MCV2003F_3338	09/10/2003	7721938.025	602695.882	270.735	TOPOW
MCV2003F_3339	09/10/2003	7721898.397	602678.020	270.267	TOPOW
MCV2003F_3340	09/10/2003	7721878.790	602684.546	268.018	TOPOW
MCV2003F_3341	09/10/2003	7721865.067	602687.092	266.534	TOPOW
MCV2003F_3342	09/10/2003	7721847.825	602670.898	266.896	TOPOW
MCV2003F_3343	09/10/2003	7721862.389	602652.834	269.211	TOPOW
MCV2003F_3344	09/10/2003	7721869.488	602635.807	270.636	TOPOW
MCV2003F_3345	09/10/2003	7721838.874	602606.782	270.528	TOPOW
MCV2003F_3346	09/10/2003	7721816.207	602615.515	268.548	TOPOW
MCV2003F_3347	09/10/2003	7721800.354	602618.873	267.062	TOPOW
MCV2003F_3348	09/10/2003	7721797.842	602619.747	266.785	TOPOW
MCV2003F_3349	09/10/2003	7721783.781	602601.738	267.100	TOPOW
MCV2003F_3350	09/10/2003	7721777.433	602603.869	266.927	TOPOW
MCV2003F_3351	09/10/2003	7721794.814	602585.948	269.077	TOPOW
MCV2003F_3352	09/10/2003	7721805.213	602570.720	270.497	TOPOW
MCV2003F_3353	09/10/2003	7721778.950	602547.847	270.108	TOPOW
MCV2003F_3354	09/10/2003	7721755.602	602559.641	269.215	TOPOW
MCV2003F_3355	09/10/2003	7721740.178	602565.231	268.335	TOPOW
MCV2003F_3356	09/10/2003	7721732.717	602566.908	266.626	TOPOW
MCV2003F_3357	09/10/2003	7721722.818	602553.042	267.869	TOPOW
MCV2003F_3358	09/10/2003	7721718.604	602555.598	266.227	TOPOW
MCV2003F_3359	09/10/2003	7721729.977	602544.349	269.700	TOPOW
MCV2003F_3360	09/10/2003	7721744.186	602528.639	270.103	TOPOW
MCV2003F_3361	09/10/2003	7721755.113	602514.748	270.414	TOPOW
MCV2003F_3362	09/10/2003	7721730.068	602487.821	270.996	TOPOW
MCV2003F_3363	09/10/2003	7721704.106	602499.246	270.785	TOPOW
MCV2003F_3364	09/10/2003	7721679.705	602511.464	269.377	TOPOW
MCV2003F_3365	09/10/2003	7721674.463	602515.046	267.102	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3366	09/10/2003	7721673.065	602516.485	266.582	TOPOW
MCV2003F_3367	09/10/2003	7721660.530	602500.436	267.708	TOPOW
MCV2003F_3368	09/10/2003	7721658.914	602501.828	267.989	TOPOW
MCV2003F_3369	09/10/2003	7721671.396	602492.431	270.512	TOPOW
MCV2003F_3370	09/10/2003	7721689.405	602472.639	271.074	TOPOW
MCV2003F_3371	09/10/2003	7721706.681	602456.634	271.337	TOPOW
MCV2003F_3372	09/10/2003	7721719.668	602446.312	272.139	TOPOW
MCV2003F_3373	09/10/2003	7721711.156	602417.341	272.717	TOPOW
MCV2003F_3374	09/10/2003	7721681.106	602420.426	272.359	TOPOW
MCV2003F_3375	09/10/2003	7721660.396	602416.592	271.990	TOPOW
MCV2003F_3376	09/10/2003	7721656.953	602401.301	272.209	TOPOW
MCV2003F_3377	09/10/2003	7721672.353	602389.314	272.995	TOPOW
MCV2003F_3378	09/10/2003	7721687.466	602385.376	272.627	TOPOW
MCV2003F_3379	09/10/2003	7721707.245	602380.018	273.797	TOPOW
MCV2003F_3380	09/10/2003	7721704.070	602343.428	274.008	TOPOW
MCV2003F_3381	09/10/2003	7721691.750	602329.209	273.151	TOPOW
MCV2003F_3382	09/10/2003	7721687.187	602320.957	273.108	TOPOW
MCV2003F_3383	09/10/2003	7721728.534	602463.332	271.788	EDGWATER
MCV2003F_3384	09/10/2003	7721740.450	602485.738	271.223	EDGWATER
MCV2003F_3385	09/10/2003	7721757.125	602511.042	270.879	EDGWATER
MCV2003F_3386	09/10/2003	7721777.845	602532.858	270.876	EDGWATER
MCV2003F_3387	09/10/2003	7721795.010	602549.225	270.769	EDGWATER
MCV2003F_3388	09/10/2003	7721810.407	602573.502	270.788	EDGWATER
MCV2003F_3389	09/10/2003	7721830.133	602592.464	270.861	EDGWATER
MCV2003F_3390	09/10/2003	7721849.955	602614.730	270.781	EDGWATER
MCV2003F_3391	09/10/2003	7721869.588	602634.355	270.795	EDGWATER
MCV2003F_3392	09/10/2003	7721893.093	602661.461	270.739	EDGWATER
MCV2003F_3393	09/10/2003	7721909.531	602681.469	270.769	EDGWATER
MCV2003F_3394	09/10/2003	7721936.071	602693.357	270.721	EDGWATER
MCV2003F_3395	09/10/2003	7721967.870	602719.229	270.776	EDGWATER
MCV2003F_3396	09/10/2003	7721992.720	602744.734	270.660	EDGWATER
MCV2003F_3397	09/10/2003	7722018.849	602770.574	270.750	EDGWATER
MCV2003F_3398	09/10/2003	7722029.426	602782.739	270.872	EDGWATER
MCV2003F_3399	09/10/2003	7721872.229	602848.125	273.313	CHKBKST
MCV2003F_3400	09/15/2003	7721033.837	600764.988	291.986	CHKBKST
MCV2003F_3401	09/15/2003	7721106.841	600619.961	289.529	INKSPOT
MCV2003F_3402	09/15/2003	7721089.093	600560.556	291.308	CHKBKST
MCV2003F_3403	09/15/2003	7721119.120	600382.223	289.475	TOPOW
MCV2003F_3404	09/15/2003	7721102.781	600375.954	289.373	TOPOW
MCV2003F_3405	09/15/2003	7721087.074	600351.696	289.443	TOPOW
MCV2003F_3406	09/15/2003	7721084.152	600325.118	288.716	TOPOW
MCV2003F_3407	09/15/2003	7721102.324	600327.875	289.091	TOPOW
MCV2003F_3408	09/15/2003	7721124.118	600332.278	289.289	TOPOW
MCV2003F_3409	09/15/2003	7721135.745	600306.863	289.778	TOPOW
MCV2003F_3410	09/15/2003	7721116.807	600290.234	288.586	TOPOW
MCV2003F_3411	09/15/2003	7721095.057	600269.831	287.598	TOPOW
MCV2003F_3412	09/15/2003	7721085.774	600248.697	287.945	TOPOW
MCV2003F_3413	09/15/2003	7721083.158	600211.810	289.099	TOPOW
MCV2003F_3414	09/15/2003	7721098.764	600223.862	287.364	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3415	09/15/2003	7721116.621	600233.500	287.323	TOPOW
MCV2003F_3416	09/15/2003	7721136.823	600244.032	287.455	TOPOW
MCV2003F_3417	09/15/2003	7721158.380	600253.511	288.983	TOPOW
MCV2003F_3418	09/15/2003	7721179.872	600262.196	288.323	TOPOW
MCV2003F_3419	09/15/2003	7721201.252	600269.542	287.933	TOPOW
MCV2003F_3420	09/15/2003	7721216.609	600273.804	288.148	TOPOW
MCV2003F_3421	09/15/2003	7721234.340	600275.835	288.275	TOPOW
MCV2003F_3422	09/15/2003	7721253.089	600278.586	288.163	TOPOW
MCV2003F_3423	09/15/2003	7721273.301	600283.516	288.481	TOPOW
MCV2003F_3424	09/15/2003	7721291.891	600287.215	288.266	TOPOW
MCV2003F_3425	09/15/2003	7721309.740	600292.703	288.722	TOPOW
MCV2003F_3426	09/15/2003	7721329.418	600293.719	289.791	TOPOW
MCV2003F_3427	09/15/2003	7721343.007	600295.765	290.022	TOPOW
MCV2003F_3428	09/15/2003	7721329.630	600252.013	289.968	TOPOW
MCV2003F_3429	09/15/2003	7721310.204	600241.983	288.557	TOPOW
MCV2003F_3430	09/15/2003	7721287.007	600236.035	287.758	TOPOW
MCV2003F_3431	09/15/2003	7721268.622	600232.210	287.637	TOPOW
MCV2003F_3432	09/15/2003	7721251.165	600230.446	286.862	TOPOW
MCV2003F_3433	09/15/2003	7721241.146	600227.632	287.775	TOPOW
MCV2003F_3434	09/15/2003	7721239.559	600218.669	288.975	TOPOW
MCV2003F_3435	09/15/2003	7721239.227	600215.935	291.142	TOPOW
MCV2003F_3436	09/15/2003	7721232.950	600217.637	288.258	TOPOW
MCV2003F_3437	09/15/2003	7721215.311	600212.593	288.327	TOPOW
MCV2003F_3438	09/15/2003	7721213.648	600203.476	286.485	TOPOW
MCV2003F_3439	09/15/2003	7721220.225	600190.563	286.851	TOPOW
MCV2003F_3440	09/15/2003	7721238.288	600191.522	287.834	TOPOW
MCV2003F_3441	09/15/2003	7721256.018	600194.299	286.293	TOPOW
MCV2003F_3442	09/15/2003	7721260.112	600203.222	286.827	TOPOW
MCV2003F_3443	09/15/2003	7721276.692	600208.291	287.606	TOPOW
MCV2003F_3444	09/15/2003	7721302.957	600213.686	287.309	TOPOW
MCV2003F_3445	09/15/2003	7721317.547	600218.293	288.596	TOPOW
MCV2003F_3446	09/15/2003	7721331.246	600220.783	289.837	TOPOW
MCV2003F_3447	09/15/2003	7721339.130	600184.519	289.413	TOPOW
MCV2003F_3448	09/15/2003	7721320.346	600172.439	287.695	TOPOW
MCV2003F_3449	09/15/2003	7721311.314	600160.777	286.484	TOPOW
MCV2003F_3450	09/15/2003	7721321.036	600145.713	286.418	TOPOW
MCV2003F_3451	09/15/2003	7721338.912	600151.544	288.755	TOPOW
MCV2003F_3452	09/15/2003	7721352.333	600159.380	289.553	TOPOW
MCV2003F_3453	09/15/2003	7721388.413	600119.037	290.611	TOPOW
MCV2003F_3454	09/15/2003	7721372.030	600102.543	287.873	TOPOW
MCV2003F_3455	09/15/2003	7721356.185	600084.876	286.752	TOPOW
MCV2003F_3456	09/15/2003	7721369.598	600067.504	286.277	TOPOW
MCV2003F_3457	09/15/2003	7721384.081	600080.699	287.125	TOPOW
MCV2003F_3458	09/15/2003	7721399.363	600092.758	288.831	TOPOW
MCV2003F_3459	09/15/2003	7721411.414	600100.655	289.885	TOPOW
MCV2003F_3460	09/15/2003	7721433.664	600066.458	289.172	TOPOW
MCV2003F_3461	09/15/2003	7721422.807	600049.757	287.187	TOPOW
MCV2003F_3462	09/15/2003	7721439.743	600032.387	286.582	TOPOW
MCV2003F_3463	09/15/2003	7721450.638	600040.787	287.680	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3464	09/15/2003	7721419.757	600099.672	290.599	EDGWATER
MCV2003F_3465	09/15/2003	7721400.903	600119.193	290.562	EDGWATER
MCV2003F_3466	09/15/2003	7721380.816	600146.708	290.588	EDGWATER
MCV2003F_3467	09/15/2003	7721360.650	600173.516	290.591	EDGWATER
MCV2003F_3468	09/15/2003	7721345.996	600206.885	290.576	EDGWATER
MCV2003F_3469	09/15/2003	7721338.915	600244.759	290.426	EDGWATER
MCV2003F_3470	09/15/2003	7721345.598	600281.088	290.363	EDGWATER
MCV2003F_3471	09/15/2003	7721355.868	600316.903	289.944	EDGWATER
MCV2003F_3472	09/15/2003	7721333.928	600328.864	289.393	TOPOW
MCV2003F_3473	09/15/2003	7721308.408	600335.517	288.457	TOPOW
MCV2003F_3474	09/15/2003	7721289.090	600342.427	289.140	TOPOW
MCV2003F_3475	09/15/2003	7721261.154	600349.225	288.435	TOPOW
MCV2003F_3476	09/15/2003	7721234.970	600352.229	288.350	TOPOW
MCV2003F_3477	09/15/2003	7721207.445	600354.093	288.624	TOPOW
MCV2003F_3478	09/15/2003	7721182.846	600352.728	287.847	TOPOW
MCV2003F_3479	09/15/2003	7721159.465	600351.658	289.051	TOPOW
MCV2003F_3480	09/15/2003	7721148.425	600369.315	288.365	TOPOW
MCV2003F_3481	09/15/2003	7721175.115	600384.074	288.678	TOPOW
MCV2003F_3482	09/15/2003	7721190.682	600384.232	287.987	TOPOW
MCV2003F_3483	09/15/2003	7721196.332	600382.764	288.144	TOPOW
MCV2003F_3484	09/15/2003	7721208.911	600385.071	288.343	TOPOW
MCV2003F_3485	09/15/2003	7721217.775	600388.373	289.063	TOPOW
MCV2003F_3486	09/15/2003	7721216.779	600395.641	290.141	TOPOW
MCV2003F_3487	09/15/2003	7721216.217	600404.001	290.114	TOPOW
MCV2003F_3488	09/15/2003	7721235.552	600389.206	289.182	TOPOW
MCV2003F_3489	09/15/2003	7721259.033	600393.308	289.116	TOPOW
MCV2003F_3490	09/15/2003	7721285.130	600397.188	288.432	TOPOW
MCV2003F_3491	09/15/2003	7721305.358	600403.393	287.520	TOPOW
MCV2003F_3492	09/15/2003	7721323.050	600409.657	288.353	TOPOW
MCV2003F_3493	09/15/2003	7721340.933	600415.796	289.159	TOPOW
MCV2003F_3494	09/15/2003	7721351.969	600418.373	289.778	TOPOW
MCV2003F_3495	09/15/2003	7721340.975	600448.379	289.549	TOPOW
MCV2003F_3496	09/15/2003	7721315.278	600442.925	288.721	TOPOW
MCV2003F_3497	09/15/2003	7721296.104	600439.718	287.801	TOPOW
MCV2003F_3498	09/15/2003	7721276.215	600435.583	287.374	TOPOW
MCV2003F_3499	09/15/2003	7721256.041	600431.455	288.801	TOPOW
MCV2003F_3500	09/15/2003	7721233.538	600429.827	288.551	TOPOW
MCV2003F_3501	09/15/2003	7721210.937	600430.514	287.422	TOPOW
MCV2003F_3502	09/15/2003	7721210.155	600442.239	287.048	TOPOW
MCV2003F_3503	09/15/2003	7721223.077	600455.514	288.027	TOPOW
MCV2003F_3504	09/15/2003	7721245.951	600472.458	287.966	TOPOW
MCV2003F_3505	09/15/2003	7721277.953	600493.167	287.823	TOPOW
MCV2003F_3506	09/15/2003	7721298.332	600505.502	288.153	TOPOW
MCV2003F_3507	09/15/2003	7721312.217	600515.597	288.968	TOPOW
MCV2003F_3508	09/15/2003	7721296.998	600544.930	288.354	TOPOW
MCV2003F_3509	09/15/2003	7721268.999	600547.472	287.487	TOPOW
MCV2003F_3510	09/15/2003	7721240.216	600544.297	287.266	TOPOW
MCV2003F_3511	09/15/2003	7721223.186	600543.420	286.360	TOPOW
MCV2003F_3512	09/15/2003	7721211.799	600541.415	286.335	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3513	09/15/2003	7721202.214	600562.634	286.474	TOPOW
MCV2003F_3514	09/15/2003	7721219.651	600575.550	286.268	TOPOW
MCV2003F_3515	09/15/2003	7721235.272	600582.665	286.587	TOPOW
MCV2003F_3516	09/15/2003	7721260.238	600590.151	287.612	TOPOW
MCV2003F_3517	09/15/2003	7721275.423	600593.936	287.683	TOPOW
MCV2003F_3518	09/15/2003	7721286.319	600630.805	288.050	TOPOW
MCV2003F_3519	09/15/2003	7721243.703	600630.398	286.633	TOPOW
MCV2003F_3520	09/15/2003	7721215.137	600628.016	286.712	TOPOW
MCV2003F_3521	09/15/2003	7721194.523	600625.923	286.133	TOPOW
MCV2003F_3522	09/15/2003	7721180.265	600622.891	285.683	TOPOW
MCV2003F_3523	09/15/2003	7721179.103	600644.794	285.325	TOPOW
MCV2003F_3524	09/15/2003	7721198.250	600653.611	286.278	TOPOW
MCV2003F_3525	09/15/2003	7721227.224	600663.458	286.469	TOPOW
MCV2003F_3526	09/15/2003	7721258.755	600667.077	287.175	TOPOW
MCV2003F_3527	09/15/2003	7721278.769	600668.047	288.226	TOPOW
MCV2003F_3528	09/15/2003	7721279.981	600716.096	287.821	TOPOW
MCV2003F_3529	09/15/2003	7721239.947	600712.375	286.602	TOPOW
MCV2003F_3530	09/15/2003	7721211.274	600709.021	286.278	TOPOW
MCV2003F_3531	09/15/2003	7721183.777	600703.193	286.320	TOPOW
MCV2003F_3532	09/15/2003	7721162.767	600697.228	286.121	TOPOW
MCV2003F_3533	09/15/2003	7721151.385	600691.182	285.630	TOPOW
MCV2003F_3534	09/15/2003	7721140.798	600683.470	286.065	TOPOW
MCV2003F_3535	09/15/2003	7721121.010	600679.205	287.099	TOPOW
MCV2003F_3536	09/15/2003	7721101.660	600676.374	287.934	TOPOW
MCV2003F_3537	09/15/2003	7721111.160	600692.801	287.444	TOPOW
MCV2003F_3538	09/15/2003	7721123.526	600713.279	286.695	TOPOW
MCV2003F_3539	09/15/2003	7721136.378	600730.947	286.121	TOPOW
MCV2003F_3540	09/15/2003	7721143.409	600744.766	286.147	TOPOW
MCV2003F_3541	09/15/2003	7721166.949	600752.624	286.479	TOPOW
MCV2003F_3542	09/15/2003	7721196.619	600758.738	286.445	TOPOW
MCV2003F_3543	09/15/2003	7721223.560	600765.173	285.872	TOPOW
MCV2003F_3544	09/15/2003	7721252.732	600768.565	286.374	TOPOW
MCV2003F_3545	09/15/2003	7721278.670	600773.478	287.405	TOPOW
MCV2003F_3546	09/15/2003	7721288.843	600810.270	287.402	TOPOW
MCV2003F_3547	09/15/2003	7721250.906	600804.379	286.193	TOPOW
MCV2003F_3548	09/15/2003	7721223.738	600801.401	286.097	TOPOW
MCV2003F_3549	09/15/2003	7721207.016	600797.697	286.634	TOPOW
MCV2003F_3550	09/15/2003	7721187.674	600792.852	285.789	TOPOW
MCV2003F_3551	09/15/2003	7721178.949	600788.582	286.144	TOPOW
MCV2003F_3552	09/15/2003	7721179.972	600783.747	288.197	TOPOW
MCV2003F_3553	09/15/2003	7721158.301	600782.522	286.140	TOPOW
MCV2003F_3554	09/15/2003	7721133.319	600783.099	286.336	TOPOW
MCV2003F_3555	09/15/2003	7721150.684	600797.826	286.181	TOPOW
MCV2003F_3556	09/15/2003	7721158.932	600808.590	287.321	TOPOW
MCV2003F_3557	09/15/2003	7721168.329	600821.267	286.305	TOPOW
MCV2003F_3558	09/15/2003	7721187.730	600838.431	286.003	TOPOW
MCV2003F_3559	09/15/2003	7721181.171	600846.813	287.679	TOPOW
MCV2003F_3560	09/15/2003	7721195.393	600854.192	285.400	TOPOW
MCV2003F_3561	09/15/2003	7721211.481	600866.782	285.396	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3562	09/15/2003	7721224.347	600879.926	285.984	TOPOW
MCV2003F_3563	09/15/2003	7721238.915	600893.297	285.972	TOPOW
MCV2003F_3564	09/15/2003	7721264.287	600907.143	286.188	TOPOW
MCV2003F_3565	09/15/2003	7721284.436	600914.267	286.339	TOPOW
MCV2003F_3566	09/15/2003	7721293.532	600952.454	286.228	TOPOW
MCV2003F_3567	09/15/2003	7721260.487	600953.565	285.740	TOPOW
MCV2003F_3568	09/15/2003	7721220.579	600946.693	284.812	TOPOW
MCV2003F_3569	09/15/2003	7721191.589	600945.572	284.662	TOPOW
MCV2003F_3570	09/15/2003	7721167.250	600946.194	284.347	TOPOW
MCV2003F_3571	09/15/2003	7721148.816	600944.681	284.136	TOPOW
MCV2003F_3572	09/15/2003	7721130.636	600939.519	283.728	TOPOW
MCV2003F_3573	09/15/2003	7721115.392	600937.205	283.997	TOPOW
MCV2003F_3574	09/15/2003	7721093.118	600937.415	285.055	TOPOW
MCV2003F_3575	09/15/2003	7721078.545	600939.037	285.360	TOPOW
MCV2003F_3576	09/15/2003	7721084.688	601006.445	285.315	TOPOW
MCV2003F_3577	09/15/2003	7721114.291	601011.315	284.016	TOPOW
MCV2003F_3578	09/15/2003	7721133.908	601012.097	283.887	TOPOW
MCV2003F_3579	09/15/2003	7721161.284	601016.492	283.902	TOPOW
MCV2003F_3580	09/15/2003	7721187.867	601016.837	284.222	TOPOW
MCV2003F_3581	09/15/2003	7721212.850	601015.530	284.378	TOPOW
MCV2003F_3582	09/15/2003	7721241.518	601014.068	284.429	TOPOW
MCV2003F_3583	09/15/2003	7721269.745	601008.504	285.504	TOPOW
MCV2003F_3584	09/15/2003	7721293.004	601004.462	285.582	TOPOW
MCV2003F_3585	09/15/2003	7721302.128	601066.351	285.174	TOPOW
MCV2003F_3586	09/15/2003	7721080.548	600745.723	286.187	TOPOW
MCV2003F_3587	09/15/2003	7721076.501	600776.027	285.582	TOPOW
MCV2003F_3588	09/15/2003	7721083.157	600814.561	285.201	TOPOW
MCV2003F_3589	09/15/2003	7721085.971	600845.669	284.923	TOPOW
MCV2003F_3590	09/15/2003	7721083.304	600885.929	284.345	TOPOW
MCV2003F_3591	09/15/2003	7721107.624	601063.146	284.807	TOPOW
MCV2003F_3592	09/15/2003	7721131.756	601064.726	283.888	TOPOW
MCV2003F_3593	09/15/2003	7721152.541	601064.759	283.252	TOPOW
MCV2003F_3594	09/15/2003	7721173.768	601067.268	284.259	TOPOW
MCV2003F_3595	09/15/2003	7721204.961	601065.174	283.889	TOPOW
MCV2003F_3596	09/15/2003	7721237.120	601060.772	283.951	TOPOW
MCV2003F_3597	09/15/2003	7721266.357	601053.544	285.024	TOPOW
MCV2003F_3598	09/15/2003	7721297.664	601034.979	286.027	TOPOW
MCV2003F_3599	09/15/2003	7721330.430	601083.462	285.160	TOPOW
MCV2003F_3600	09/15/2003	7721298.377	601101.367	284.944	TOPOW
MCV2003F_3601	09/15/2003	7721267.392	601113.350	284.758	TOPOW
MCV2003F_3602	09/15/2003	7721237.857	601122.793	283.785	TOPOW
MCV2003F_3603	09/15/2003	7721213.090	601130.101	283.580	TOPOW
MCV2003F_3604	09/15/2003	7721192.334	601136.822	283.541	TOPOW
MCV2003F_3605	09/15/2003	7721171.186	601143.828	283.273	TOPOW
MCV2003F_3606	09/15/2003	7721150.036	601148.918	283.743	TOPOW
MCV2003F_3607	09/15/2003	7721129.132	601155.745	283.853	TOPOW
MCV2003F_3608	09/15/2003	7721138.695	601206.980	284.774	TOPOW
MCV2003F_3609	09/15/2003	7721153.255	601207.488	284.727	TOPOW
MCV2003F_3610	09/15/2003	7721153.407	601222.894	285.712	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3611	09/15/2003	7721155.931	601223.352	283.687	TOPOW
MCV2003F_3612	09/15/2003	7721158.481	601225.774	285.580	TOPOW
MCV2003F_3613	09/15/2003	7721160.806	601238.007	284.485	TOPOW
MCV2003F_3614	09/15/2003	7721164.482	601238.239	282.427	TOPOW
MCV2003F_3615	09/15/2003	7721160.748	601222.631	282.938	TOPOW
MCV2003F_3616	09/15/2003	7721165.095	601218.933	285.500	TOPOW
MCV2003F_3617	09/15/2003	7721170.303	601224.789	282.134	TOPOW
MCV2003F_3618	09/15/2003	7721168.233	601238.003	285.045	TOPOW
MCV2003F_3619	09/15/2003	7721161.210	601250.638	285.198	TOPOW
MCV2003F_3620	09/15/2003	7721168.757	601256.712	285.626	TOPOW
MCV2003F_3621	09/15/2003	7721178.425	601268.629	286.861	TOPOW
MCV2003F_3622	09/15/2003	7721184.393	601265.960	282.006	TOPOW
MCV2003F_3623	09/15/2003	7721189.907	601264.169	284.326	TOPOW
MCV2003F_3624	09/15/2003	7721193.745	601248.475	285.373	TOPOW
MCV2003F_3625	09/15/2003	7721190.337	601232.974	284.936	TOPOW
MCV2003F_3626	09/15/2003	7721186.790	601219.033	285.025	TOPOW
MCV2003F_3627	09/15/2003	7721195.484	601204.953	286.161	TOPOW
MCV2003F_3628	09/15/2003	7721214.635	601204.310	283.362	TOPOW
MCV2003F_3629	09/15/2003	7721214.818	601198.251	285.946	TOPOW
MCV2003F_3630	09/15/2003	7721222.392	601196.410	284.472	TOPOW
MCV2003F_3631	09/15/2003	7721235.198	601194.838	283.408	TOPOW
MCV2003F_3632	09/15/2003	7721250.608	601190.987	283.583	TOPOW
MCV2003F_3633	09/15/2003	7721267.815	601188.062	284.162	TOPOW
MCV2003F_3634	09/15/2003	7721283.463	601186.811	286.291	TOPOW
MCV2003F_3635	09/15/2003	7721303.635	601190.368	285.206	TOPOW
MCV2003F_3636	09/15/2003	7721316.422	601192.467	283.188	TOPOW
MCV2003F_3637	09/15/2003	7721331.596	601187.960	284.764	TOPOW
MCV2003F_3638	09/15/2003	7721342.475	601161.125	288.844	TOPOW
MCV2003F_3639	09/15/2003	7721370.058	601202.497	284.633	TOPOW
MCV2003F_3640	09/15/2003	7721352.885	601213.059	285.661	TOPOW
MCV2003F_3641	09/15/2003	7721342.564	601215.638	283.162	TOPOW
MCV2003F_3642	09/15/2003	7721335.467	601214.936	288.053	TOPOW
MCV2003F_3643	09/15/2003	7721331.701	601223.635	281.779	TOPOW
MCV2003F_3644	09/15/2003	7721322.605	601230.544	284.560	TOPOW
MCV2003F_3645	09/15/2003	7721310.694	601240.996	284.361	TOPOW
MCV2003F_3646	09/15/2003	7721292.334	601248.943	283.794	TOPOW
MCV2003F_3647	09/15/2003	7721291.130	601253.664	282.096	TOPOW
MCV2003F_3648	09/15/2003	7721310.444	601270.480	284.068	TOPOW
MCV2003F_3649	09/15/2003	7721327.515	601274.222	283.870	TOPOW
MCV2003F_3650	09/15/2003	7721338.869	601278.192	282.085	TOPOW
MCV2003F_3651	09/15/2003	7721346.192	601293.632	286.684	TOPOW
MCV2003F_3652	09/15/2003	7721328.424	601309.268	281.339	TOPOW
MCV2003F_3653	09/15/2003	7721332.958	601316.884	284.854	TOPOW
MCV2003F_3654	09/15/2003	7721316.848	601324.873	282.777	TOPOW
MCV2003F_3655	09/15/2003	7721297.348	601301.648	283.996	TOPOW
MCV2003F_3656	09/15/2003	7721287.827	601310.057	282.360	TOPOW
MCV2003F_3657	09/15/2003	7721272.294	601318.290	283.309	TOPOW
MCV2003F_3658	09/15/2003	7721276.751	601335.675	286.564	TOPOW
MCV2003F_3659	09/15/2003	7721269.534	601347.710	281.191	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3660	09/15/2003	7721264.471	601355.121	283.277	TOPOW
MCV2003F_3661	09/15/2003	7721240.368	601349.150	282.547	TOPOW
MCV2003F_3662	09/15/2003	7721220.892	601348.047	282.792	TOPOW
MCV2003F_3663	09/15/2003	7721206.500	601341.877	284.291	TOPOW
MCV2003F_3664	09/15/2003	7721195.673	601337.991	284.444	EDGWATER
MCV2003F_3665	09/15/2003	7721179.698	601325.119	284.376	EDGWATER
MCV2003F_3666	09/15/2003	7721161.206	601285.192	285.334	EDGWATER
MCV2003F_3667	09/15/2003	7721133.629	601221.220	285.540	EDGWATER
MCV2003F_3668	09/15/2003	7721119.335	601171.074	285.435	EDGWATER
MCV2003F_3669	09/15/2003	7721092.545	601072.300	285.847	EDGWATER
MCV2003F_3670	09/15/2003	7721079.907	601023.703	286.137	EDGWATER
MCV2003F_3671	09/15/2003	7721066.069	600919.857	286.670	EDGWATER
MCV2003F_3672	09/15/2003	7721039.655	600854.975	288.529	EDGWATER
MCV2003F_3673	09/15/2003	7721064.345	600839.096	286.872	EDGWATER
MCV2003F_3674	09/15/2003	7721060.710	600808.307	286.994	EDGWATER
MCV2003F_3675	09/15/2003	7721042.818	600801.436	288.854	EDGWATER
MCV2003F_3676	09/15/2003	7721033.769	600765.026	291.982	CHKBKST
MCV2003F_3677	09/15/2003	7721604.011	601928.253	279.632	INKSPOT
MCV2003F_3678	09/15/2003	7721535.295	601970.676	281.750	CHKBKST
MCV2003F_3679	09/15/2003	7721285.114	601549.757	280.643	TOPOW
MCV2003F_3680	09/15/2003	7721304.957	601545.536	278.934	TOPOW
MCV2003F_3681	09/15/2003	7721324.403	601534.724	278.936	TOPOW
MCV2003F_3682	09/15/2003	7721344.364	601524.164	279.112	TOPOW
MCV2003F_3683	09/15/2003	7721359.180	601520.206	278.000	TOPOW
MCV2003F_3684	09/15/2003	7721366.114	601518.915	277.729	TOPOW
MCV2003F_3685	09/15/2003	7721376.330	601517.481	278.188	TOPOW
MCV2003F_3686	09/15/2003	7721419.037	601489.714	279.453	TOPOW
MCV2003F_3687	09/15/2003	7721457.878	601477.673	277.061	TOPOW
MCV2003F_3688	09/15/2003	7721495.101	601472.496	279.544	TOPOW
MCV2003F_3689	09/15/2003	7721509.745	601514.887	279.667	TOPOW
MCV2003F_3690	09/15/2003	7721472.377	601538.959	277.685	TOPOW
MCV2003F_3691	09/15/2003	7721438.650	601562.083	278.444	TOPOW
MCV2003F_3692	09/15/2003	7721403.215	601587.586	278.253	TOPOW
MCV2003F_3693	09/15/2003	7721375.915	601606.401	278.832	TOPOW
MCV2003F_3694	09/15/2003	7721352.718	601625.962	278.071	TOPOW
MCV2003F_3695	09/15/2003	7721343.716	601629.566	282.440	TOPOW
MCV2003F_3696	09/15/2003	7721330.850	601644.858	280.194	TOPOW
MCV2003F_3697	09/15/2003	7721358.219	601699.941	280.253	TOPOW
MCV2003F_3698	09/15/2003	7721393.247	601682.764	279.158	TOPOW
MCV2003F_3699	09/15/2003	7721421.352	601661.033	279.750	TOPOW
MCV2003F_3700	09/15/2003	7721449.907	601645.944	278.360	TOPOW
MCV2003F_3701	09/15/2003	7721483.963	601623.496	278.932	TOPOW
MCV2003F_3702	09/15/2003	7721514.857	601613.079	277.670	TOPOW
MCV2003F_3703	09/15/2003	7721516.096	601625.674	278.092	TOPOW
MCV2003F_3704	09/15/2003	7721522.040	601634.061	277.777	TOPOW
MCV2003F_3705	09/15/2003	7721502.751	601648.494	278.897	TOPOW
MCV2003F_3706	09/15/2003	7721467.982	601665.911	279.205	TOPOW
MCV2003F_3707	09/15/2003	7721440.746	601683.348	278.597	TOPOW
MCV2003F_3708	09/15/2003	7721432.868	601690.444	281.568	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3709	09/15/2003	7721396.861	601717.325	279.582	TOPOW
MCV2003F_3710	09/15/2003	7721425.264	601752.437	279.743	TOPOW
MCV2003F_3711	09/15/2003	7721459.690	601740.652	279.017	TOPOW
MCV2003F_3712	09/15/2003	7721488.327	601727.480	279.138	TOPOW
MCV2003F_3713	09/15/2003	7721521.838	601714.586	278.630	TOPOW
MCV2003F_3714	09/15/2003	7721553.133	601707.653	276.754	TOPOW
MCV2003F_3715	09/15/2003	7721558.946	601723.743	276.981	TOPOW
MCV2003F_3716	09/15/2003	7721546.808	601747.934	278.010	TOPOW
MCV2003F_3717	09/15/2003	7721529.297	601763.603	278.869	TOPOW
MCV2003F_3718	09/15/2003	7721498.530	601781.772	278.882	TOPOW
MCV2003F_3719	09/15/2003	7721480.538	601806.733	280.462	TOPOW
MCV2003F_3720	09/15/2003	7721472.182	601823.803	279.715	TOPOW
MCV2003F_3721	09/15/2003	7721508.650	601846.635	279.049	TOPOW
MCV2003F_3722	09/15/2003	7721534.751	601829.251	280.058	TOPOW
MCV2003F_3723	09/15/2003	7721545.241	601821.185	278.702	TOPOW
MCV2003F_3724	09/15/2003	7721567.368	601817.245	278.052	TOPOW
MCV2003F_3725	09/15/2003	7721591.086	601810.685	277.146	TOPOW
MCV2003F_3726	09/15/2003	7721603.426	601805.470	276.290	TOPOW
MCV2003F_3727	09/15/2003	7721612.759	601818.516	275.995	TOPOW
MCV2003F_3728	09/15/2003	7721604.417	601827.121	276.988	TOPOW
MCV2003F_3729	09/15/2003	7721580.537	601847.318	278.278	TOPOW
MCV2003F_3730	09/15/2003	7721605.663	601877.956	277.233	TOPOW
MCV2003F_3731	09/15/2003	7721626.130	601877.004	276.032	TOPOW
MCV2003F_3732	09/15/2003	7721637.262	601874.439	274.809	TOPOW
MCV2003F_3733	09/15/2003	7721640.547	601892.614	274.268	TOPOW
MCV2003F_3734	09/15/2003	7721630.397	601899.708	276.996	TOPOW
MCV2003F_3735	09/15/2003	7721618.308	601910.355	277.423	TOPOW
MCV2003F_3736	09/15/2003	7721638.068	601957.014	276.802	TOPOW
MCV2003F_3737	09/15/2003	7721657.572	601952.899	276.273	TOPOW
MCV2003F_3738	09/15/2003	7721671.426	601950.711	275.120	TOPOW
MCV2003F_3739	09/15/2003	7721681.411	601970.000	274.752	TOPOW
MCV2003F_3740	09/15/2003	7721665.908	601983.695	276.207	TOPOW
MCV2003F_3741	09/15/2003	7721644.174	602002.643	277.035	TOPOW
MCV2003F_3742	09/15/2003	7721660.768	602050.396	276.326	TOPOW
MCV2003F_3743	09/15/2003	7721680.210	602047.613	275.065	TOPOW
MCV2003F_3744	09/15/2003	7721698.553	602047.598	274.547	TOPOW
MCV2003F_3745	09/15/2003	7721706.837	602068.434	274.716	TOPOW
MCV2003F_3746	09/15/2003	7721727.301	602078.405	274.928	TOPOW
MCV2003F_3747	09/15/2003	7721746.774	602083.535	275.364	TOPOW
MCV2003F_3748	09/15/2003	7721773.502	602100.440	275.675	TOPOW
MCV2003F_3749	09/15/2003	7721803.270	602114.485	276.222	TOPOW
MCV2003F_3750	09/15/2003	7721835.930	602126.565	276.595	TOPOW
MCV2003F_3751	09/15/2003	7721716.133	602287.480	274.544	TOPOW
MCV2003F_3752	09/15/2003	7721709.339	602258.193	273.728	TOPOW
MCV2003F_3753	09/15/2003	7721706.212	602238.383	273.395	TOPOW
MCV2003F_3754	09/15/2003	7721702.589	602219.047	273.725	TOPOW
MCV2003F_3755	09/15/2003	7721698.157	602202.998	274.091	TOPOW
MCV2003F_3756	09/15/2003	7721691.071	602178.972	273.831	TOPOW
MCV2003F_3757	09/15/2003	7721685.226	602164.709	274.162	TOPOW

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
MCV2003F_3758	09/15/2003	7721681.423	602153.304	273.894	TOPOW
MCV2003F_3759	09/15/2003	7721679.351	602140.058	274.375	TOPOW
MCV2003F_3760	09/15/2003	7721673.171	602126.822	274.783	TOPOW
MCV2003F_3761	09/15/2003	7721669.330	602114.608	275.091	TOPOW
MCV2003F_3762	09/15/2003	7721662.279	602099.592	275.754	TOPOW
MCV2003F_3763	09/15/2003	7721660.708	602096.606	276.445	EDGWATER
MCV2003F_3764	09/15/2003	7721658.077	602062.110	276.927	EDGWATER
MCV2003F_3765	09/15/2003	7721651.245	602040.524	277.054	EDGWATER
MCV2003F_3766	09/15/2003	7721642.385	602011.485	277.353	EDGWATER
MCV2003F_3767	09/15/2003	7721633.548	601989.541	277.392	EDGWATER
MCV2003F_3768	09/15/2003	7721629.152	601962.305	277.480	EDGWATER
MCV2003F_3769	09/15/2003	7721621.666	601931.145	277.753	EDGWATER
MCV2003F_3770	09/15/2003	7721605.818	601914.597	278.847	TRACER
MCV2003F_3771	09/15/2003	7721593.630	601944.131	278.624	TRACER
MCV2003F_3772	09/15/2003	7721592.459	601944.373	278.614	TRACER
MCV2003F_3773	09/15/2003	7721589.628	601946.650	278.677	TRACER
MCV2003F_3774	09/15/2003	7721535.298	601970.689	281.748	CHKBKST
FELD2003F_010	09/19/2003	7718393.436	613089.638	237.042	CHKBKST
FELD2003F_011	09/19/2003	7717879.397	613427.630	226.014	IMCLAST
FELD2003F_012	09/19/2003	7717881.432	613424.867	226.241	IMCLAST
FELD2003F_013	09/19/2003	7717878.881	613422.375	225.809	IMCLAST
FELD2003F_014	09/19/2003	7717876.879	613425.329	226.298	IMCLAST
FELD2003F_015	09/19/2003	7717877.016	613423.615	226.269	IMCLAST
FELD2003F_016	09/19/2003	7717876.988	613424.051	225.980	IMCLAST
FELD2003F_017	09/19/2003	7717877.108	613424.470	226.044	IMCLAST
FELD2003F_018	09/19/2003	7717876.835	613424.976	225.964	IMCLAST
FELD2003F_019	09/19/2003	7717876.607	613425.059	225.856	IMCLAST
FELD2003F_020	09/19/2003	7717876.437	613425.294	225.938	IMCLAST
FELD2003F_021	09/19/2003	7717876.465	613425.513	226.014	IMCLAST
FELD2003F_022	09/19/2003	7717876.246	613425.345	225.839	IMCLAST
FELD2003F_023	09/19/2003	7717875.106	613425.492	225.991	IMCLAST
FELD2003F_024	09/19/2003	7717869.179	613427.044	225.914	IMCLAST
FELD2003F_025	09/19/2003	7717870.649	613423.502	225.845	IMCLAST
FELD2003F_026	09/19/2003	7717871.065	613422.003	225.873	IMCLAST
FELD2003F_027	09/19/2003	7717870.012	613421.275	225.921	IMCLAST
FELD2003F_028	09/19/2003	7717869.196	613421.781	226.324	IMCLAST
FELD2003F_029	09/20/2003	7717869.196	613421.781	226.324	IMCLAST
FELD2003F_030	09/19/2003	7717866.890	613417.804	225.885	IMCLAST
FELD2003F_030	09/19/2003	7717867.993	613416.020	225.816	IMCLAST
FELD2003F_031	09/19/2003	7717861.745	613423.254	225.545	IMCLAST
FELD2003F_032	09/19/2003	7717855.733	613423.112	225.403	IMCLAST
FELD2003F_033	09/19/2003	7717850.514	613422.012	225.342	IMCLAST
FELD2003F_034	09/19/2003	7717857.560	613414.430	225.259	IMCLAST
FELD2003F_035	09/19/2003	7717860.306	613413.917	225.332	IMCLAST
FELD2003F_036	09/19/2003	7717862.157	613414.732	225.689	IMCLAST
FELD2003F_037	09/19/2003	7717863.404	613413.423	225.617	IMCLAST
FELD2003F_038	09/19/2003	7717862.768	613407.472	225.362	IMCLAST
FELD2003F_039	09/19/2003	7717872.531	613413.216	225.604	IMCLAST
FELD2003F_040	09/19/2003	7717873.149	613410.985	225.679	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
FELD2003F_041	09/19/2003	7717871.255	613409.406	225.419	IMCLAST
FELD2003F_042	09/19/2003	7717858.930	613403.816	225.370	IMCLAST
FELD2003F_043	09/19/2003	7717849.142	613404.602	225.082	IMCLAST
FELD2003F_044	09/19/2003	7717849.178	613406.727	224.718	IMCLAST
FELD2003F_045	09/19/2003	7717849.476	613407.861	224.819	IMCLAST
FELD2003F_046	09/19/2003	7717847.617	613407.872	224.666	IMCLAST
FELD2003F_047	09/19/2003	7717847.419	613408.050	224.541	IMCLAST
FELD2003F_048	09/19/2003	7717848.950	613414.792	225.059	IMCLAST
FELD2003F_049	09/19/2003	7717849.315	613414.785	225.141	IMCLAST
FELD2003F_050	09/19/2003	7717849.000	613414.294	225.131	IMCLAST
FELD2003F_051	09/19/2003	7717848.716	613414.131	225.152	IMCLAST
FELD2003F_052	09/19/2003	7717848.340	613413.296	225.298	IMCLAST
FELD2003F_053	09/19/2003	7717848.467	613413.610	225.150	IMCLAST
FELD2003F_053	09/19/2003	7717848.467	613413.610	225.150	IMCLAST
FELD2003F_053	09/19/2003	7717848.467	613413.610	225.150	IMCLAST
FELD2003F_054	09/19/2003	7717850.168	613413.465	225.280	IMCLAST
FELD2003F_055	09/19/2003	7717850.131	613412.654	224.984	IMCLAST
FELD2003F_056	09/19/2003	7717848.783	613412.534	225.160	IMCLAST
FELD2003F_057	09/19/2003	7717847.661	613412.920	225.060	IMCLAST
FELD2003F_058	09/19/2003	7717847.617	613413.456	225.273	IMCLAST
FELD2003F_059	09/19/2003	7717847.166	613414.218	225.135	IMCLAST
FELD2003F_060	09/19/2003	7717847.112	613413.446	225.040	IMCLAST
FELD2003F_061	09/19/2003	7717846.075	613412.139	224.969	IMCLAST
FELD2003F_062	09/19/2003	7717845.518	613411.664	225.111	IMCLAST
FELD2003F_063	09/19/2003	7717846.252	613411.112	224.903	IMCLAST
FELD2003F_064	09/19/2003	7717846.419	613412.904	225.062	IMCLAST
FELD2003F_065	09/19/2003	7717846.780	613412.995	225.050	IMCLAST
FELD2003F_066	09/19/2003	7717844.753	613410.522	224.993	IMCLAST
FELD2003F_067	09/19/2003	7717844.161	613409.753	225.109	IMCLAST
FELD2003F_068	09/19/2003	7717846.669	613410.272	224.877	IMCLAST
FELD2003F_069	09/19/2003	7717849.460	613410.232	224.903	IMCLAST
FELD2003F_070	09/19/2003	7717849.188	613409.389	224.792	IMCLAST
FELD2003F_071	09/19/2003	7717845.112	613408.689	224.734	IMCLAST
FELD2003F_072	09/19/2003	7717845.524	613408.886	224.703	IMCLAST
FELD2003F_073	09/19/2003	7717847.234	613408.453	224.593	IMCLAST
FELD2003F_074	09/19/2003	7717846.015	613407.777	224.732	IMCLAST
FELD2003F_075	09/19/2003	7717844.078	613407.760	225.025	IMCLAST
FELD2003F_076	09/19/2003	7717842.960	613408.966	224.873	IMCLAST
FELD2003F_077	09/19/2003	7717842.562	613408.461	225.013	IMCLAST
FELD2003F_078	09/19/2003	7717841.380	613411.317	225.301	IMCLAST
FELD2003F_079	09/19/2003	7717837.308	613413.063	224.855	IMCLAST
FELD2003F_080	09/19/2003	7717839.292	613409.005	224.849	IMCLAST
FELD2003F_081	09/19/2003	7717840.422	613408.660	224.809	IMCLAST
FELD2003F_082	09/19/2003	7717845.404	613405.075	224.719	IMCLAST
FELD2003F_083	09/19/2003	7717844.943	613404.795	224.546	IMCLAST
FELD2003F_084	09/19/2003	7717842.330	613404.953	224.755	IMCLAST
FELD2003F_085	09/19/2003	7717841.784	613404.038	224.604	IMCLAST
FELD2003F_086	09/19/2003	7717841.318	613404.533	224.784	IMCLAST
FELD2003F_087	09/19/2003	7717840.557	613403.956	224.540	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
FELD2003F_088	09/19/2003	7717839.514	613404.886	224.651	IMCLAST
FELD2003F_089	09/19/2003	7717838.863	613405.307	224.673	IMCLAST
FELD2003F_090	09/19/2003	7717836.750	613405.231	224.782	IMCLAST
FELD2003F_091	09/19/2003	7717836.556	613404.319	224.719	IMCLAST
FELD2003F_092	09/19/2003	7717836.449	613401.870	224.814	IMCLAST
FELD2003F_093	09/19/2003	7717838.069	613403.152	224.720	IMCLAST
FELD2003F_094	09/19/2003	7717839.741	613401.961	224.638	IMCLAST
FELD2003F_095	09/19/2003	7717839.666	613402.007	224.574	IMCLAST
FELD2003F_096	09/19/2003	7717840.138	613400.575	224.499	IMCLAST
FELD2003F_097	09/19/2003	7717838.319	613397.595	224.446	IMCLAST
FELD2003F_098	09/19/2003	7717836.699	613398.760	224.643	IMCLAST
FELD2003F_099	09/19/2003	7717834.545	613398.682	224.592	IMCLAST
FELD2003F_100	09/19/2003	7717836.076	613395.981	224.633	IMCLAST
FELD2003F_101	09/19/2003	7717834.786	613401.025	224.646	IMCLAST
FELD2003F_102	09/19/2003	7717833.789	613402.160	224.624	IMCLAST
FELD2003F_103	09/19/2003	7717827.432	613402.977	224.862	IMCLAST
FELD2003F_104	09/19/2003	7717830.679	613400.416	224.632	IMCLAST
FELD2003F_105	09/19/2003	7717827.119	613398.486	224.390	IMCLAST
FELD2003F_106	09/19/2003	7717832.612	613398.325	224.691	IMCLAST
FELD2003F_107	09/19/2003	7717830.802	613394.769	224.203	IMCLAST
FELD2003F_108	09/19/2003	7717827.442	613393.903	224.242	IMCLAST
FELD2003F_109	09/19/2003	7717825.983	613396.624	224.674	IMCLAST
FELD2003F_110	09/19/2003	7717825.704	613398.725	224.346	IMCLAST
FELD2003F_111	09/19/2003	7717827.749	613391.152	224.257	IMCLAST
FELD2003F_112	09/19/2003	7717827.685	613388.209	224.839	IMCLAST
FELD2003F_113	09/19/2003	7717830.318	613386.170	224.752	IMCLAST
FELD2003F_114	09/19/2003	7717833.231	613385.293	224.303	IMCLAST
FELD2003F_115	09/19/2003	7717828.067	613382.246	224.232	IMCLAST
FELD2003F_116	09/19/2003	7717826.997	613377.089	223.589	IMCLAST
FELD2003F_117	09/19/2003	7717821.359	613379.885	223.761	IMCLAST
FELD2003F_118	09/19/2003	7717820.127	613385.548	223.977	IMCLAST
FELD2003F_119	09/19/2003	7717816.673	613380.640	223.764	IMCLAST
FELD2003F_120	09/19/2003	7717817.216	613385.939	223.459	IMCLAST
FELD2003F_121	09/19/2003	7717819.656	613398.281	224.223	IMCLAST
FELD2003F_122	09/19/2003	7717813.047	613396.434	224.117	IMCLAST
FELD2003F_123	09/19/2003	7717809.775	613397.471	224.251	IMCLAST
FELD2003F_124	09/19/2003	7717804.948	613395.781	223.785	IMCLAST
FELD2003F_125	09/19/2003	7717803.471	613399.076	223.981	IMCLAST
FELD2003F_126	09/19/2003	7717802.274	613401.537	224.077	IMCLAST
FELD2003F_127	09/19/2003	7717797.543	613403.899	224.028	IMCLAST
FELD2003F_128	09/19/2003	7717793.703	613404.176	223.858	IMCLAST
FELD2003F_129	09/19/2003	7717787.440	613400.469	223.597	IMCLAST
FELD2003F_130	09/19/2003	7717793.465	613386.569	223.010	IMCLAST
FELD2003F_131	09/19/2003	7717792.935	613378.507	221.801	IMCLAST
FELD2003F_132	09/19/2003	7717795.088	613377.182	222.061	IMCLAST
FELD2003F_133	09/19/2003	7717826.800	613379.213	224.170	IMCLAST
FELD2003F_134	09/19/2003	7717822.776	613384.768	224.246	IMCLAST
FELD2003F_135	09/19/2003	7717817.330	613385.717	223.611	IMCLAST
FELD2003F_136	09/19/2003	7717813.315	613389.093	223.735	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
FELD2003F_137	09/19/2003	7717811.745	613386.411	223.901	IMCLAST
FELD2003F_138	09/19/2003	7717811.748	613385.088	223.423	IMCLAST
FELD2003F_139	09/19/2003	7717809.390	613387.926	223.470	IMCLAST
FELD2003F_140	09/19/2003	7717807.006	613388.458	223.564	IMCLAST
FELD2003F_141	09/19/2003	7717806.767	613389.288	223.542	IMCLAST
FELD2003F_142	09/19/2003	7717808.364	613390.825	223.732	IMCLAST
FELD2003F_143	09/19/2003	7717806.979	613392.419	223.816	IMCLAST
FELD2003F_144	09/19/2003	7717806.002	613390.715	223.498	IMCLAST
FELD2003F_145	09/19/2003	7717811.575	613393.594	224.130	IMCLAST
FELD2003F_146	09/19/2003	7717813.693	613395.344	224.132	IMCLAST
FELD2003F_147	09/19/2003	7717813.474	613399.881	224.160	IMCLAST
FELD2003F_148	09/19/2003	7717804.667	613391.133	223.538	IMCLAST
FELD2003F_149	09/19/2003	7717802.704	613385.480	223.519	IMCLAST
FELD2003F_150	09/19/2003	7717795.656	613388.465	223.198	IMCLAST
FELD2003F_151	09/19/2003	7717791.889	613391.477	223.299	IMCLAST
FELD2003F_152	09/19/2003	7717791.950	613392.700	223.376	IMCLAST
FELD2003F_153	09/19/2003	7717789.622	613395.631	223.424	IMCLAST
FELD2003F_154	09/19/2003	7717787.838	613398.057	223.503	IMCLAST
FELD2003F_155	09/19/2003	7717789.449	613398.492	223.733	IMCLAST
FELD2003F_156	09/19/2003	7717791.062	613400.429	223.604	IMCLAST
FELD2003F_157	09/19/2003	7717783.914	613400.836	223.513	IMCLAST
FELD2003F_158	09/19/2003	7717780.832	613399.254	223.405	IMCLAST
FELD2003F_159	09/19/2003	7717781.278	613395.489	223.029	IMCLAST
FELD2003F_160	09/19/2003	7717781.510	613388.984	222.115	IMCLAST
FELD2003F_161	09/19/2003	7717771.708	613392.584	221.266	IMCLAST
FELD2003F_162	09/19/2003	7717771.068	613395.662	221.636	IMCLAST
FELD2003F_163	09/19/2003	7717770.800	613396.202	221.773	IMCLAST
FELD2003F_164	09/19/2003	7717772.581	613397.538	222.294	IMCLAST
FELD2003F_165	09/19/2003	7717774.870	613399.217	222.655	IMCLAST
FELD2003F_166	09/19/2003	7717776.723	613397.933	222.773	IMCLAST
FELD2003F_167	09/19/2003	7717773.981	613405.855	222.936	IMCLAST
FELD2003F_168	09/19/2003	7717766.723	613397.738	221.251	IMCLAST
FELD2003F_169	09/19/2003	7717767.246	613398.571	221.493	IMCLAST
FELD2003F_170	09/19/2003	7717768.554	613399.480	221.809	IMCLAST
FELD2003F_171	09/19/2003	7717766.033	613401.151	221.680	IMCLAST
FELD2003F_172	09/19/2003	7717763.116	613401.465	221.122	IMCLAST
FELD2003F_173	09/19/2003	7717766.729	613405.253	222.459	IMCLAST
FELD2003F_174	09/19/2003	7717766.067	613407.510	222.543	IMCLAST
FELD2003F_175	09/19/2003	7717765.086	613407.753	222.503	IMCLAST
FELD2003F_176	09/19/2003	7717767.839	613411.049	222.983	IMCLAST
FELD2003F_177	09/19/2003	7717760.207	613409.194	222.166	IMCLAST
FELD2003F_178	09/19/2003	7717759.588	613407.353	221.744	IMCLAST
FELD2003F_179	09/19/2003	7717757.036	613409.936	221.798	IMCLAST
FELD2003F_180	09/19/2003	7717757.472	613411.024	221.882	IMCLAST
FELD2003F_181	09/19/2003	7717756.078	613415.385	222.315	IMCLAST
FELD2003F_182	09/19/2003	7717740.177	613418.904	220.607	IMCLAST
FELD2003F_183	09/19/2003	7717754.133	613406.690	220.763	IMCLAST
FELD2003F_184	09/19/2003	7717722.194	613433.482	220.515	IMCLAST
FELD2003F_185	09/19/2003	7717810.932	613386.399	223.574	IMCLAST

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
FELD2003F_186	09/19/2003	7717849.393	613398.315	224.998	IMCLAST
FELD2003F_187	09/19/2003	7717855.686	613386.890	224.779	IMCLAST
FELD2003F_188	09/19/2003	7717856.622	613390.445	224.769	IMCLAST
FELD2003F_189	09/19/2003	7717860.913	613387.898	225.057	IMCLAST
FELD2003F_190	09/19/2003	7717864.713	613391.199	225.018	IMCLAST
FELD2003F_191	09/19/2003	7717865.704	613391.558	225.132	IMCLAST
FELD2003F_192	09/19/2003	7717861.490	613397.390	225.253	IMCLAST
FELD2003F_193	09/19/2003	7717860.976	613385.004	224.824	IMCLAST
FELD2003F_194	09/19/2003	7717843.820	613390.245	224.627	IMCLAST
FELD2003F_195	09/19/2003	7717821.576	613391.493	223.993	IMCLAST
FELD2003F_196	09/19/2003	7717820.985	613391.171	224.077	IMCLAST
FELD2003F_197	09/19/2003	7717816.462	613389.531	223.704	IMCLAST
FELD2003F_198	09/19/2003	7717820.327	613389.808	223.842	IMCLAST
FELD2003F_199	09/19/2003	7717814.220	613393.931	223.892	IMCLAST
FELD2003F_200	09/19/2003	7717809.144	613382.638	223.455	IMCLAST
FELD2003F_201	09/19/2003	7717789.740	613381.369	221.990	IMCLAST
FELD2003F_202	09/19/2003	7717802.196	613380.826	222.896	IMCLAST
FELD2003F_203	09/19/2003	7717785.566	613397.857	223.438	IMCLAST
FELD2003F_204	09/19/2003	7717786.314	613402.863	223.330	IMCLAST
FELD2003F_205	09/19/2003	7717787.430	613403.660	223.338	IMCLAST
FELD2003F_206	09/19/2003	7717766.547	613399.557	221.540	IMCLAST
FELD2003F_207	09/19/2003	7717768.233	613393.340	220.932	IMCLAST
FELD2003F_208	09/19/2003	7717758.005	613406.889	221.285	IMCLAST
FELD2003F_209	09/19/2003	7717759.947	613406.139	221.263	IMCLAST
FELD2003F_210	09/19/2003	7717756.586	613407.856	220.908	IMCLAST
FELD2003F_211	09/19/2003	7717755.632	613407.738	220.976	IMCLAST
FELD2003F_212	09/19/2003	7717756.039	613411.896	221.728	IMCLAST
FELD2003F_213	09/19/2003	7717756.313	613412.989	222.008	IMCLAST
FELD2003F_214	09/19/2003	7717747.167	613414.443	220.590	IMCLAST
FELD2003F_215	09/19/2003	7717743.740	613418.639	220.834	IMCLAST
FELD2003F_216	09/19/2003	7717731.195	613422.183	220.231	IMCLAST
FELD2003F_217	09/19/2003	7717750.749	613406.534	220.557	IMCLAST
FELD2003F_218	09/19/2003	7717749.922	613407.347	220.640	IMCLAST
FELD2003F_219	09/19/2003	7717802.375	613405.193	224.464	IMCLAST
FELD2003F_220	09/19/2003	7717801.495	613398.300	223.642	IMCLAST
FELD2003F_221	09/19/2003	7717782.303	613402.057	223.174	IMCLAST
FELD2003F_222	09/19/2003	7717762.984	613406.317	222.244	IMCLAST
FELD2003F_223	09/19/2003	7717797.281	613389.653	223.180	IMCLAST
FELD2003F_224	09/19/2003	7717804.553	613394.643	223.742	IMCLAST
FELD2003F_225	09/19/2003	7717811.365	613405.020	224.365	IMCLAST
FELD2003F_226	09/19/2003	7717767.225	613418.950	223.523	CHKBKST
RI2003F_603	09/30/2003	7718097.380	621526.267	192.286	TOPBANK
RI2003F_604	09/30/2003	7718079.238	621492.512	193.115	TOPBANK
RI2003F_605	09/30/2003	7718042.685	621421.985	193.955	TOPBANK
RI2003F_606	09/30/2003	7717993.197	621333.158	194.639	TOPBANK
RI2003F_607	09/30/2003	7717948.066	621261.694	194.778	TOPBANK
RI2003F_608	09/30/2003	7717895.839	621180.033	195.149	TOPBANK
RI2003F_609	09/30/2003	7717861.695	621104.122	195.408	TOPBANK
RI2003F_610	09/30/2003	7717831.810	621040.731	195.225	TOPBANK

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_611	09/30/2003	7717796.786	620983.204	194.712	TOPBANK
RI2003F_612	09/30/2003	7717759.200	620924.941	194.365	TOPBANK
RI2003F_613	09/30/2003	7717717.201	620864.794	193.824	TOPBANK
RI2003F_614	09/30/2003	7717699.336	620831.837	193.201	TOPBANK
RI2003F_615	09/30/2003	7717696.933	620810.886	193.990	EDGWATER
RI2003F_616	09/30/2003	7717687.948	620815.541	192.882	RIFFLE
RI2003F_617	09/30/2003	7717673.236	620820.755	192.352	RIFFLE
RI2003F_618	09/30/2003	7717664.285	620826.543	192.452	RIFFLE
RI2003F_619	09/30/2003	7717659.154	620833.058	192.662	RIFFLE
RI2003F_620	09/30/2003	7717653.911	620841.640	192.625	RIFFLE
RI2003F_621	09/30/2003	7717646.160	620849.443	192.795	RIFFLE
RI2003F_622	09/30/2003	7717633.406	620858.143	193.039	RIFFLE
RI2003F_623	09/30/2003	7717626.889	620869.716	193.211	RIFFLE
RI2003F_624	09/30/2003	7717627.573	620887.641	193.145	RIFFLE
RI2003F_625	09/30/2003	7717615.028	620902.870	193.857	RIFFLE
RI2003F_626	09/30/2003	7717625.479	620920.394	194.076	RIFFLE
RI2003F_627	09/30/2003	7717638.845	620946.791	194.208	RIFFLE
RI2003F_628	09/30/2003	7717648.556	620970.028	193.866	RIFFLE
RI2003F_629	09/30/2003	7717655.701	620996.760	194.147	EDGWATER
RI2003F_630	09/30/2003	7717687.904	621000.221	192.359	EDGWATER
RI2003F_631	09/30/2003	7717715.882	620998.329	191.025	EDGWATER
RI2003F_632	09/30/2003	7717724.072	620999.330	190.560	EDGWATER
RI2003F_633	09/30/2003	7717724.009	621011.879	190.545	EDGWATER
RI2003F_634	09/30/2003	7717733.935	621031.940	190.167	EDGWATER
RI2003F_635	09/30/2003	7717750.432	621069.052	190.151	EDGWATER
RI2003F_636	09/30/2003	7717760.438	621097.121	189.859	EDGWATER
RI2003F_637	09/30/2003	7717774.839	621124.639	189.753	EDGWATER
RI2003F_638	09/30/2003	7717780.860	621153.004	190.007	EDGWATER
RI2003F_639	09/30/2003	7717793.902	621183.822	190.006	EDGWATER
RI2003F_640	09/30/2003	7717808.454	621223.994	189.842	EDGWATER
RI2003F_641	09/30/2003	7717833.564	621263.729	189.801	EDGWATER
RI2003F_642	09/30/2003	7717851.727	621311.848	189.779	EDGWATER
RI2003F_643	09/30/2003	7717871.958	621361.416	189.618	EDGWATER
RI2003F_644	09/30/2003	7717897.303	621413.641	189.628	EDGWATER
RI2003F_645	09/30/2003	7717924.326	621470.026	189.586	EDGWATER
RI2003F_646	09/30/2003	7717954.237	621530.792	189.329	EDGWATER
RI2003F_647	09/30/2003	7717978.150	621591.838	189.179	EDGWATER
RI2003F_648	09/30/2003	7717999.387	621648.490	188.828	EDGWATER
RI2003F_649	09/30/2003	7718018.068	621712.142	188.001	EDGWATER
RI2003F_650	09/30/2003	7718010.244	621733.147	190.748	TOPBANK
RI2003F_651	09/30/2003	7718008.995	621775.898	190.708	TOPBANK
RI2003F_652	09/30/2003	7718004.375	621823.785	191.150	TOPBANK
RI2003F_653	09/30/2003	7717993.482	621874.379	190.610	TOPBANK
RI2003F_654	09/30/2003	7717974.150	621933.854	191.009	TOPBANK
RI2003F_655	09/30/2003	7717951.548	621988.167	189.442	TOPBANK
RI2003F_656	09/30/2003	7717918.651	622048.385	187.791	TOPBANK
RI2003F_657	09/30/2003	7717831.602	622199.898	186.708	CHKBKST
RI2003F_658	09/30/2003	7717970.624	621625.627	191.702	TOPO
RI2003F_659	09/30/2003	7717985.387	621625.187	190.767	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_660	09/30/2003	7717990.414	621624.469	189.034	EDGWATER
RI2003F_661	09/30/2003	7718000.153	621623.319	187.331	EDGWATER
RI2003F_662	09/30/2003	7718012.477	621622.927	186.874	TOPOW
RI2003F_663	09/30/2003	7718021.799	621623.700	186.505	TOPOW
RI2003F_664	09/30/2003	7718035.483	621623.896	186.868	TOPOW
RI2003F_665	09/30/2003	7718046.697	621623.989	187.374	TOPOW
RI2003F_666	09/30/2003	7718058.393	621621.956	187.431	TOPOW
RI2003F_667	09/30/2003	7718077.447	621621.933	188.132	TOPOW
RI2003F_668	09/30/2003	7718096.528	621620.929	188.588	TOPOW
RI2003F_669	09/30/2003	7718131.547	621619.192	188.629	TOPOW
RI2003F_670	09/30/2003	7718158.328	621620.574	188.395	TOPOW
RI2003F_671	09/30/2003	7718172.236	621619.886	188.570	EDGWATER
RI2003F_672	09/30/2003	7718182.772	621617.504	191.228	TOPO
RI2003F_673	09/30/2003	7718206.428	621614.792	191.677	TOPO
RI2003F_674	09/30/2003	7718217.150	621613.793	195.788	TOPO
RI2003F_675	09/30/2003	7718230.714	621611.716	199.310	TOPO
RI2003F_676	09/30/2003	7718249.720	621613.269	202.311	CHKBKST
RI2003F_677	09/30/2003	7717700.006	622750.990	185.042	CHKBKST
RI2003F_678	09/30/2003	7717460.015	623143.731	185.122	MAGNAIL
RI2003F_679	09/30/2003	7718249.583	621613.672	202.752	CHKBKST
RI2003F_680	09/30/2003	7717570.531	622662.611	184.155	EDGWATER
RI2003F_681	09/30/2003	7717566.322	622659.732	186.340	TOPO
RI2003F_682	09/30/2003	7717564.052	622658.178	187.502	TOPO
RI2003F_683	09/30/2003	7717573.660	622664.751	182.511	TOPOW
RI2003F_684	09/30/2003	7717577.308	622667.247	181.581	TOPOW
RI2003F_685	09/30/2003	7717586.460	622673.511	179.996	TOPOW
RI2003F_686	09/30/2003	7717601.277	622683.638	179.481	TOPOW
RI2003F_687	09/30/2003	7717624.607	622699.604	178.437	TOPOW
RI2003F_688	09/30/2003	7717650.479	622717.308	177.720	TOPOW
RI2003F_689	09/30/2003	7717667.604	622729.026	177.936	TOPOW
RI2003F_690	09/30/2003	7717678.481	622736.470	178.130	TOPOW
RI2003F_691	09/30/2003	7717686.213	622741.765	181.180	TOPOW
RI2003F_692	09/30/2003	7717691.792	622745.582	182.739	TOPOW
RI2003F_693	09/30/2003	7717692.702	622746.203	184.099	EDGWATER
RI2003F_694	09/30/2003	7717707.903	622756.604	186.120	TOPO
RI2003F_695	09/30/2003	7717710.974	622758.705	188.625	TOPO
RI2003F_696	09/30/2003	7717233.801	623035.710	194.738	CHKBKST
RI2003F_697	09/30/2003	7717291.643	623058.459	185.078	TOPO
RI2003F_698	09/30/2003	7717301.839	623063.581	183.978	EDGWATER
RI2003F_699	09/30/2003	7717316.137	623071.032	182.234	TOPOW
RI2003F_700	09/30/2003	7717335.334	623079.718	180.855	TOPOW
RI2003F_701	09/30/2003	7717352.416	623088.029	180.319	TOPOW
RI2003F_702	09/30/2003	7717368.877	623097.343	180.126	TOPOW
RI2003F_703	09/30/2003	7717381.871	623108.249	179.853	TOPOW
RI2003F_704	09/30/2003	7717402.561	623118.697	179.674	TOPOW
RI2003F_705	09/30/2003	7717425.375	623130.104	179.133	TOPOW
RI2003F_706	09/30/2003	7717441.672	623134.720	179.201	TOPOW
RI2003F_707	09/30/2003	7717450.168	623138.093	182.720	TOPOW
RI2003F_708	09/30/2003	7717452.373	623139.975	184.014	EDGWATER

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_709	09/30/2003	7717458.405	623142.814	185.609	TOPO
RI2003F_710	09/30/2003	7717471.255	623150.137	189.357	TOPO
RI2003F_711	09/30/2003	7717453.921	623139.201	186.044	TOPO
RI2003F_712	09/30/2003	7717284.489	623056.724	185.826	TOPO
RI2003F_713	09/30/2003	7717276.760	623051.910	185.842	TOPO
RI2003F_714	09/30/2003	7717270.322	623048.399	185.947	TOPO
RI2003F_715	09/30/2003	7715840.671	624361.542	192.809	CHKBKST
RI2003F_716	09/30/2003	7715895.649	624503.613	180.472	TOPO
RI2003F_717	09/30/2003	7715904.198	624515.701	180.070	TOPO
RI2003F_718	09/30/2003	7715910.839	624525.763	179.443	TOPO
RI2003F_719	09/30/2003	7715918.394	624535.109	179.024	EDGWATER
RI2003F_720	09/30/2003	7715926.682	624545.226	177.999	TOPOW
RI2003F_721	09/30/2003	7715933.362	624555.105	177.303	TOPOW
RI2003F_722	09/30/2003	7715943.090	624566.405	176.662	TOPOW
RI2003F_723	09/30/2003	7715946.756	624573.112	176.281	TOPOW
RI2003F_724	09/30/2003	7715955.846	624590.265	176.361	TOPOW
RI2003F_725	09/30/2003	7715972.807	624613.398	176.371	TOPOW
RI2003F_726	09/30/2003	7715984.709	624627.718	176.697	TOPOW
RI2003F_727	09/30/2003	7715997.341	624645.156	176.958	TOPOW
RI2003F_728	09/30/2003	7716005.317	624654.799	177.046	TOPOW
DGGLB	09/30/2003	7715330.143	625139.764	180.159	TOPOW
RI2003F_729	09/30/2003	7715148.347	624944.433	178.423	TOPO
RI2003F_730	09/30/2003	7715152.842	624948.498	177.628	EDGWATER
RI2003F_731	09/30/2003	7715168.223	624963.312	176.686	TOPOW
RI2003F_732	09/30/2003	7715177.976	624973.467	174.852	TOPOW
RI2003F_733	09/30/2003	7715181.044	624976.498	174.254	TOPOW
RI2003F_734	09/30/2003	7715190.998	624987.008	173.996	TOPOW
RI2003F_735	09/30/2003	7715197.054	624995.575	174.410	TOPOW
RI2003F_736	09/30/2003	7715214.442	625010.202	175.446	TOPOW
RI2003F_737	09/30/2003	7715242.755	625037.787	176.366	TOPOW
RI2003F_738	09/30/2003	7715270.764	625068.265	176.809	TOPOW
RI2003F_739	09/30/2003	7715295.833	625097.154	177.278	TOPOW
RI2003F_740	09/30/2003	7715311.779	625115.952	177.787	TOPO
RI2003F_741	09/30/2003	7715319.776	625126.083	177.658	TOPO
RI2003F_742	09/30/2003	7715328.070	625136.410	179.205	TOPO
RI2003F_743	09/30/2003	7715338.304	625149.256	182.114	TOPO
RI2003F_744	09/30/2003	7714121.536	625989.911	190.848	CHKBKST
RI2003F_745	10/01/2003	7713805.272	626619.662	185.313	CHKBKST
RI2003F_746	10/01/2003	7713805.262	626619.664	185.308	CHKBKST
RI2003F_747	10/01/2003	7713407.081	626721.375	190.874	CHKBKST
RI2003F_748	10/01/2003	7715308.686	625171.103	181.958	CHKBKST
RI2003F_749	10/01/2003	7715308.696	625170.965	181.964	CHKBKST
RI2003F_750	10/01/2003	7714774.934	625226.951	178.953	TOPO
RI2003F_751	10/01/2003	7714773.491	625225.416	179.909	TOPO
RI2003F_752	10/01/2003	7714777.486	625231.713	177.943	TOPO
RI2003F_753	10/01/2003	7714778.878	625233.224	177.270	EDGWATER
RI2003F_754	10/01/2003	7714789.609	625243.348	175.852	TOPOW
RI2003F_755	10/01/2003	7714800.451	625253.980	175.324	TOPOW
RI2003F_756	10/01/2003	7714814.932	625266.772	173.713	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_757	10/01/2003	7714991.792	625453.463	180.381	TOPO
RI2003F_758	10/01/2003	7714981.131	625443.480	178.328	TOPO
RI2003F_759	10/01/2003	7714971.561	625433.287	177.470	EDGWATER
RI2003F_760	10/01/2003	7714952.198	625412.456	177.454	TOPOW
RI2003F_761	10/01/2003	7714929.419	625389.592	177.137	TOPOW
RI2003F_762	10/01/2003	7714909.844	625367.805	176.574	TOPOW
RI2003F_763	10/01/2003	7714894.748	625350.521	176.328	TOPOW
RI2003F_764	10/01/2003	7714879.210	625330.584	175.088	TOPOW
RI2003F_765	10/01/2003	7714863.315	625317.246	175.214	TOPOW
RI2003F_766	10/01/2003	7714853.957	625307.333	174.685	TOPOW
RI2003F_767	10/01/2003	7714843.959	625295.900	173.896	TOPOW
RI2003F_768	10/01/2003	7714837.772	625287.991	173.606	TOPOW
RI2003F_769	10/01/2003	7714695.320	625829.454	177.640	TOPO
RI2003F_770	10/01/2003	7714704.294	625835.644	178.488	TOPO
RI2003F_771	10/01/2003	7714686.335	625824.610	177.292	TOPO
RI2003F_772	10/01/2003	7714679.370	625820.084	176.942	EDGWATER
RI2003F_773	10/01/2003	7714670.685	625815.921	176.573	TOPO
RI2003F_774	10/01/2003	7714645.333	625800.655	176.086	TOPOW
RI2003F_775	10/01/2003	7714614.485	625781.944	175.918	TOPOW
RI2003F_776	10/01/2003	7714577.138	625761.105	175.799	TOPOW
RI2003F_777	10/01/2003	7714537.702	625739.419	175.430	TOPOW
RI2003F_778	10/01/2003	7714488.904	625713.140	175.174	TOPOW
RI2003F_779	10/01/2003	7714451.076	625694.175	175.182	TOPOW
RI2003F_780	10/01/2003	7714423.610	625679.651	175.022	TOPOW
RI2003F_781	10/01/2003	7714404.906	625670.953	174.355	TOPOW
RI2003F_782	10/01/2003	7714390.046	625664.371	174.230	TOPOW
RI2003F_783	10/01/2003	7714383.065	625659.252	173.696	TOPOW
RI2003F_784	10/01/2003	7714374.168	625654.936	173.549	TOPOW
RI2003F_785	10/01/2003	7714365.816	625650.632	174.641	TOPOW
RI2003F_786	10/01/2003	7714363.473	625649.063	176.041	TOPOW
RI2003F_787	10/01/2003	7714362.000	625648.715	176.815	EDGWATER
RI2003F_788	10/01/2003	7714359.500	625647.232	177.461	EDGWATER
RI2003F_789	10/01/2003	7714357.010	625645.490	178.807	TOPO
RI2003F_790	10/01/2003	7714355.973	625644.243	180.067	TOPO
RI2003F_791	10/01/2003	7714355.856	625644.230	182.359	TOPO
RI2003F_792	10/01/2003	7714198.180	625850.004	189.510	TOPBANK
RI2003F_793	10/01/2003	7714186.034	625865.235	189.724	TOPBANK
RI2003F_794	10/01/2003	7714177.300	625878.831	190.077	TOPBANK
RI2003F_795	10/01/2003	7714169.926	625899.556	190.382	TOPBANK
RI2003F_796	10/01/2003	7714160.626	625917.014	190.421	TOPBANK
RI2003F_797	10/01/2003	7714154.119	625938.125	190.685	TOPBANK
RI2003F_798	10/01/2003	7714148.152	625963.745	190.598	TOPBANK
RI2003F_799	10/01/2003	7714145.530	625981.313	188.517	TOPBANK
RI2003F_800	10/01/2003	7714141.431	625999.107	187.090	TOPBANK
RI2003F_801	10/01/2003	7714133.397	626017.858	186.233	TOPBANK
RI2003F_802	10/01/2003	7714124.133	626039.743	186.095	TOPBANK
RI2003F_803	10/01/2003	7714114.720	626062.149	186.076	TOPBANK
RI2003F_804	10/01/2003	7714107.427	626083.256	185.892	TOPBANK
RI2003F_805	10/01/2003	7714100.314	626107.563	184.438	TOPBANK

**Table F.3 Total station survey data 2003 on the lower Clackamas River
(continued).**

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_806	10/01/2003	7714090.922	626127.366	184.723	TOPBANK
RI2003F_807	10/01/2003	7714079.475	626160.007	184.325	TOPBANK
RI2003F_808	10/01/2003	7714068.837	626183.064	184.078	TOPBANK
RI2003F_809	10/01/2003	7714058.945	626206.678	183.995	TOPBANK
RI2003F_810	10/01/2003	7714049.327	626229.837	184.339	TOPBANK
RI2003F_811	10/01/2003	7714040.500	626250.486	184.348	TOPBANK
RI2003F_812	10/01/2003	7714031.891	626271.263	184.363	TOPBANK
RI2003F_813	10/01/2003	7714021.822	626294.776	185.379	TOPBANK
RI2003F_814	10/01/2003	7714013.966	626319.006	185.714	TOPBANK
RI2003F_815	10/01/2003	7714005.089	626341.472	186.590	TOPBANK
RI2003F_816	10/01/2003	7713997.510	626362.557	186.555	TOPBANK
RI2003F_817	10/01/2003	7713989.836	626385.041	186.657	TOPBANK
RI2003F_818	10/01/2003	7713983.124	626407.489	187.413	TOPBANK
RI2003F_819	10/01/2003	7713976.949	626429.049	187.785	TOPBANK
RI2003F_820	10/01/2003	7713970.447	626452.821	187.817	TOPBANK
RI2003F_821	10/01/2003	7713964.005	626478.347	187.832	TOPBANK
RI2003F_822	10/01/2003	7713955.715	626502.478	188.352	TOPBANK
RI2003F_823	10/01/2003	7713950.023	626528.842	188.373	TOPBANK
RI2003F_824	10/01/2003	7713942.495	626556.162	188.112	TOPBANK
RI2003F_825	10/01/2003	7713936.630	626585.433	188.200	TOPBANK
RI2003F_826	10/01/2003	7713932.588	626612.289	188.169	TOPBANK
RI2003F_827	10/01/2003	7713926.834	626643.130	187.509	TOPBANK
RI2003F_828	10/01/2003	7713924.530	626672.170	187.056	TOPBANK
RI2003F_829	10/01/2003	7713920.995	626695.442	183.958	TOPBANK
RI2003F_830	10/01/2003	7713915.803	626718.465	181.493	TOPBANK
RI2003F_831	10/01/2003	7714278.356	626814.013	173.328	TOPO
RI2003F_832	10/01/2003	7714270.518	626816.385	173.005	TOPO
RI2003F_833	10/01/2003	7714256.494	626819.873	171.904	TOPO
RI2003F_834	10/01/2003	7714249.481	626821.682	170.553	EDGWATER
RI2003F_835	10/01/2003	7714242.688	626824.128	169.707	TOPOW
RI2003F_836	10/01/2003	7714230.707	626828.317	168.871	TOPOW
RI2003F_837	10/01/2003	7714126.034	626854.265	171.254	EDGWATER
RI2003F_838	10/01/2003	7714143.299	626848.268	169.812	TOPOW
RI2003F_839	10/01/2003	7714159.070	626841.215	169.525	TOPOW
RI2003F_840	10/01/2003	7714171.073	626837.862	169.227	TOPOW
RI2003F_841	10/01/2003	7714185.600	626836.600	168.783	TOPOW
RI2003F_842	10/01/2003	7714186.944	626837.130	168.515	TOPOW
RI2003F_843	10/01/2003	7714225.297	626827.486	168.511	TOPOW
RI2003F_844	10/01/2003	7714218.338	626828.305	168.521	TOPOW
RI2003F_845	10/01/2003	7714209.897	626827.554	168.517	TOPOW
RI2003F_846	10/01/2003	7714203.676	626832.270	168.842	TOPOW
RI2003F_847	10/01/2003	7714202.802	626834.019	168.701	TOPOW
RI2003F_848	10/01/2003	7714197.941	626838.284	168.894	TOPOW
RI2003F_849	10/01/2003	7714192.835	626841.358	168.581	TOPOW
RI2003F_850	10/01/2003	7714093.742	626866.985	172.467	TOPO
RI2003F_851	10/01/2003	7714079.790	626871.088	173.221	TOPO
RI2003F_852	10/01/2003	7714039.518	626883.742	173.332	TOPO
RI2003F_853	10/01/2003	7714003.394	626892.544	172.499	TOPO
RI2003F_854	10/01/2003	7713944.691	626912.213	171.901	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_855	10/01/2003	7713914.398	626918.173	172.501	TOPO
RI2003F_856	10/01/2003	7713863.076	626929.589	171.959	TOPO
RI2003F_857	10/01/2003	7713805.272	626619.712	185.304	CHKBKST
RI2003F_858	10/01/2003	7713407.255	626721.195	190.941	CHKBKST
RI2003F_859	10/01/2003	7713496.239	626794.486	165.806	EDGWATER
RI2003F_860	10/01/2003	7713496.227	626802.545	164.683	EDGWATER
RI2003F_861	10/01/2003	7713496.300	626817.173	163.757	EDGWATER
RI2003F_862	10/01/2003	7713493.485	626830.237	161.539	EDGWATER
RI2003F_863	10/01/2003	7713907.970	626745.449	174.864	TOPO
RI2003F_864	10/01/2003	7713894.614	626780.805	174.149	TOPO
RI2003F_865	10/01/2003	7713875.426	626809.903	174.108	TOPO
RI2003F_866	10/01/2003	7713847.445	626822.373	174.960	TOPO
RI2003F_867	10/01/2003	7713783.844	626834.591	174.634	TOPO
RI2003F_868	10/01/2003	7713740.065	626830.429	173.130	TOPO
RI2003F_869	10/01/2003	7713701.760	626824.284	169.735	TOPO
RI2003F_870	10/01/2003	7713672.533	626792.885	171.977	TOPO
RI2003F_871	10/01/2003	7713637.127	626811.871	168.674	TOPO
RI2003F_872	10/01/2003	7713555.698	626845.930	166.082	TOPO
RI2003F_873	10/01/2003	7713586.196	626878.421	166.392	EDGWATER
RI2003F_874	10/01/2003	7713613.030	626931.276	166.067	EDGWATER
RI2003F_875	10/01/2003	7713622.457	627012.187	172.527	EDGWATER
RI2003F_876	10/01/2003	7713602.412	627024.417	166.054	EDGWATER
RI2003F_877	10/01/2003	7713571.748	627076.273	165.946	EDGWATER
RI2003F_878	10/01/2003	7713577.126	627146.899	166.083	EDGWATER
RI2003F_879	10/01/2003	7713626.420	627196.703	165.860	EDGWATER
RI2003F_880	10/01/2003	7713643.353	627195.431	172.978	TOPO
RI2003F_881	10/01/2003	7713638.854	627248.668	165.959	TOPO
RI2003F_882	10/01/2003	7713645.849	627297.144	166.039	EDGWATER
RI2003F_883	10/01/2003	7713663.389	627358.682	165.666	EDGWATER
RI2003F_884	10/01/2003	7713674.023	627398.279	165.629	EDGWATER
RI2003F_885	10/01/2003	7713663.911	627450.213	165.895	EDGWATER
RI2003F_886	10/01/2003	7713768.981	627543.117	169.321	TOPO
RI2003F_887	10/01/2003	7713797.457	627635.160	168.454	TOPO
RI2003F_888	10/01/2003	7713799.393	627689.222	167.622	TOPO
RI2003F_889	10/01/2003	7713752.018	627644.505	167.045	TOPO
RI2003F_890	10/01/2003	7713709.421	627569.340	166.380	TOPO
RI2003F_891	10/01/2003	7713682.325	627506.012	167.243	TOPO
RI2003F_892	10/01/2003	7713685.552	627407.679	166.890	TOPO
RI2003F_893	10/01/2003	7713682.048	627366.691	171.733	TOPO
RI2003F_894	10/01/2003	7713684.757	627289.472	172.375	TOPO
RI2003F_895	10/01/2003	7713724.851	627258.712	171.794	TOPO
RI2003F_896	10/01/2003	7713654.421	627226.365	172.298	TOPO
RI2003F_897	10/01/2003	7713694.743	627181.195	173.272	TOPO
RI2003F_898	10/01/2003	7713754.054	627198.025	172.549	TOPO
RI2003F_899	10/01/2003	7713719.705	627137.664	173.729	TOPO
RI2003F_900	10/01/2003	7713784.857	627092.945	173.246	TOPO
RI2003F_901	10/01/2003	7713785.212	627051.116	173.948	TOPO
RI2003F_902	10/01/2003	7713824.006	626985.608	175.038	TOPO
RI2003F_903	10/01/2003	7713843.389	626962.380	174.388	TOPO

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_904	10/01/2003	7713812.404	626967.490	173.894	TOPO
RI2003F_905	10/01/2003	7713791.671	626998.615	175.552	TOPO
RI2003F_906	10/01/2003	7713734.671	627005.442	172.535	TOPO
RI2003F_907	10/01/2003	7713712.538	627052.015	173.030	TOPO
RI2003F_908	10/01/2003	7713666.295	627041.851	173.266	TOPO
RI2003F_909	10/01/2003	7713620.153	627061.709	173.726	TOPO
RI2003F_910	10/01/2003	7713622.221	627009.567	172.244	TOPO
RI2003F_911	10/01/2003	7713653.172	626981.403	171.779	TOPO
RI2003F_912	10/01/2003	7713626.106	626945.506	169.861	TOPO
RI2003F_913	10/01/2003	7713625.952	626945.371	169.854	TOPO
RI2003F_914	10/01/2003	7713644.226	626894.094	169.970	TOPO
RI2003F_915	10/01/2003	7713723.109	626879.931	172.263	TOPO
RI2003F_916	10/01/2003	7713785.533	626878.426	173.523	TOPO
RI2003F_917	10/01/2003	7713832.915	626851.032	172.970	TOPO
RI2003F_918	10/01/2003	7713846.834	626794.438	176.067	TOPO
RI2003F_919	10/01/2003	7713859.927	626764.939	176.796	TOPO
RI2003F_920	10/01/2003	7713890.709	626769.968	177.343	TOPO
RI2003F_921	10/01/2003	7713920.226	626784.475	172.558	TOPO
RI2003F_922	10/01/2003	7713958.524	626806.934	172.153	TOPO
RI2003F_923	10/01/2003	7714000.752	626857.172	172.243	TOPO
RI2003F_924	10/01/2003	7714024.055	626915.288	173.720	TOPO
RI2003F_925	10/01/2003	7713985.246	626985.750	174.115	TOPO
RI2003F_926	10/01/2003	7713934.690	626990.850	171.477	TOPO
RI2003F_927	10/01/2003	7713893.612	627031.668	170.077	TOPO
RI2003F_928	10/01/2003	7713921.813	627084.913	172.517	TOPO
RI2003F_929	10/01/2003	7713932.193	627152.274	175.523	TOPO
RI2003F_930	10/01/2003	7713890.427	627206.419	175.413	TOPO
RI2003F_931	10/01/2003	7713874.860	627197.217	174.552	TOPO
RI2003F_932	10/01/2003	7713832.396	627181.360	168.014	TOPO
RI2003F_933	10/01/2003	7713783.607	627168.295	169.100	TOPO
RI2003F_934	10/01/2003	7713756.946	627202.866	171.015	TOPO
RI2003F_935	10/01/2003	7713785.029	627215.557	167.589	TOPO
RI2003F_936	10/01/2003	7713835.045	627264.289	174.228	TOPO
RI2003F_937	10/01/2003	7713870.569	627279.360	174.771	TOPO
RI2003F_938	10/01/2003	7713810.214	627319.638	173.005	TOPO
RI2003F_939	10/01/2003	7713794.366	627311.763	167.710	TOPO
RI2003F_940	10/01/2003	7713768.840	627309.244	167.207	TOPO
RI2003F_941	10/01/2003	7713746.620	627355.902	166.738	TOPO
RI2003F_942	10/01/2003	7713780.042	627371.215	171.407	TOPO
RI2003F_943	10/01/2003	7713735.814	627383.587	166.755	TOPO
RI2003F_944	10/01/2003	7713713.484	627336.488	167.425	TOPO
RI2003F_945	10/01/2003	7713700.898	627327.497	171.259	TOPO
RI2003F_946	10/01/2003	7713482.723	626793.300	165.673	TOPOW
RI2003F_947	10/01/2003	7713486.313	626815.597	163.041	TOPOW
RI2003F_948	10/01/2003	7713485.656	626824.401	161.415	TOPOW
RI2003F_949	10/01/2003	7713484.568	626837.944	158.045	TOPOW
RI2003F_950	10/01/2003	7713486.177	626872.721	156.274	TOPOW
RI2003F_951	10/01/2003	7713490.008	626939.283	157.927	TOPOW
RI2003F_952	10/01/2003	7713504.098	627088.133	156.789	TOPOW

Table F.3 Total station survey data 2003 on the lower Clackamas River (continued).

Point	Date	Easting (ft)	Northing (ft)	Elevation (ft) NAVD88	Comment
RI2003F_953	10/01/2003	7713511.178	627169.011	154.507	TOPOW
RI2003F_954	10/01/2003	7713526.608	627249.841	157.491	TOPOW
RI2003F_955	10/01/2003	7713533.610	627298.809	158.991	TOPOW
RI2003F_956	10/01/2003	7713531.584	627321.686	164.443	TOPOW
RI2003F_957	10/01/2003	7713532.223	627325.827	165.591	EDGWATER
RI2003F_958	10/01/2003	7713549.103	627293.041	157.986	EDGWATER
RI2003F_959	10/01/2003	7713557.956	627246.778	154.170	EDGWATER
RI2003F_960	10/01/2003	7713570.592	627197.954	155.249	EDGWATER
RI2003F_961	10/01/2003	7713559.968	627146.354	160.052	EDGWATER
RI2003F_962	10/01/2003	7713553.204	627076.013	162.374	EDGWATER
RI2003F_963	10/01/2003	7713565.635	627020.807	159.090	EDGWATER
RI2003F_964	10/01/2003	7713577.777	626970.810	152.772	EDGWATER
RI2003F_965	10/01/2003	7713574.651	626947.918	153.524	EDGWATER
RI2003F_966	10/01/2003	7713573.266	626927.031	157.887	EDGWATER
RI2003F_967	10/01/2003	7713583.970	626906.156	157.639	EDGWATER
RI2003F_968	10/01/2003	7713593.681	626901.448	161.642	EDGWATER
RI2003F_969	10/01/2003	7713600.491	626894.063	165.398	EDGWATER
RI2003F_970	10/01/2003	7713536.590	626883.683	154.994	TOPOW
RI2003F_971	10/01/2003	7713526.863	626941.328	158.561	TOPOW
RI2003F_972	10/01/2003	7713526.957	627014.772	156.497	TOPOW
RI2003F_973	10/01/2003	7713533.186	627090.593	158.093	TOPOW
RI2003F_974	10/01/2003	7713561.649	627174.642	157.199	TOPOW
RI2003F_975	10/01/2003	7713590.931	627225.270	154.890	TOPOW
RI2003F_976	10/01/2003	7713603.230	627271.481	155.547	TOPOW
RI2003F_977	10/01/2003	7713625.165	627319.216	158.702	TOPOW
RI2003F_978	10/01/2003	7713637.184	627362.417	157.249	TOPOW
RI2003F_979	10/01/2003	7713649.671	627395.336	161.295	TOPOW
RI2003F_980	10/01/2003	7713662.509	627425.351	163.163	TOPOW
RI2003F_981	10/01/2003	7713725.863	627916.122	180.950	CHKBKST

Appendix G

Wolman Pebble Counts and Subsurface Grain-size Data

Table G.2 Subsurface grain-size data and statistics.

Sample#	CLK-0004a	CLK0004b	CLK-0005	CLK-0006	CLK-0007	CLK-0008	CLK-0009	CLK-0010	CLK-0011	CLK-0012	CLK-0013	CLK-0014	CLK-0015	CLK-0016	CLK-0017	CLK-0018	CLK-0019	CLK-0020	CLK-0021	CLK-0022	CLK-0023	CLK-0024	CLK-0025	CLK-0026	CLK-0027	CLK-0028	
Analyst:	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	PJW	
Distance Below River Mill Dam (ft)	3062	3062	3504	9877	22498	46371	4276	4498	7446	53971	70606	17322	24671	8531	7687	41438	27283	30289	32721	34047	43565	49991	55076	59000	64897	71435	
METHOD OF MOMENTS	MEAN ($\bar{x}$)	54.77	37.73	49.99	48.69	36.07	30.37	52.94	55.58	27.91	23.57	50.21	56.74	37.89	37.15	13.58	25.98	51.34	27.35	46.74	32.85	25.18	72.29	53.50	46.75	30.74	42.78
Arithmetic (mm)	SKURTOSIS (σ_x)	35.56	31.78	38.64	38.49	34.78	32.38	41.38	43.56	34.40	31.37	36.86	38.90	38.10	34.91	17.83	26.43	40.27	33.60	37.88	34.48	31.96	31.49	34.55	39.04	32.15	38.85
	SKURTOSIS (σ_y)	0.11	0.68	0.26	0.35	0.82	1.14	0.06	-0.03	1.14	1.42	0.25	-0.07	0.74	0.79	1.51	1.25	0.12	1.16	0.27	1.03	1.43	-0.35	-0.03	0.26	1.14	0.48
	KURTOSIS (K_x)	1.67	2.39	1.52	1.55	2.40	3.14	1.34	1.22	3.02	3.90	1.68	1.50	2.03	2.27	4.28	3.99	1.44	3.14	1.67	2.71	3.89	1.55	1.97	1.62	3.17	1.71
METHOD OF MOMENTS	MEAN ($\bar{y}$)	33.42	18.68	24.90	24.46	13.65	12.15	23.11	13.18	0.68	1.45	19.22	22.19	5.99	17.72	3.92	7.97	14.20	0.86	8.94	13.42	3.17	60.01	15.17	6.00	9.29	9.19
Geometric (mm)	SKURTOSIS (σ_z)	3.91	4.80	4.99	4.88	6.29	5.24	5.84	26.43	143.38	65.39	11.82	12.06	37.50	4.37	6.26	13.25	20.03	122.09	36.02	5.09	35.67	2.12	23.92	54.36	12.50	24.61
	SKURTOSIS (σ_z)	-2.10	-1.41	-1.52	-1.55	-0.93	-0.71	-1.26	-2.10	-0.47	-0.93	-2.55	-2.71	-1.66	-0.87	-0.19	-2.23	-2.24	-0.59	-1.83	-0.69	-1.41	-4.30	-2.23	-1.45	-2.19	-1.89
	KURTOSIS (K_z)	7.75	4.70	4.79	5.08	2.75	2.65	3.67	6.35	1.34	2.28	9.60	10.56	4.42	3.27	1.84	8.06	7.36	1.51	4.94	2.60	3.77	33.56	6.76	3.51	8.26	5.70
FOLK AND WARD METHOD (mm)	MEAN ($\bar{y}$)	41.11	20.50	29.98	28.75	13.07	12.19	25.56	43.58	21.27	13.51	39.93	44.07	30.64	18.78	4.13	16.13	35.37	18.87	44.10	13.83	18.86	64.09	55.80	52.99	17.73	28.80
	SKURTOSIS (σ_z)	3.075	4.411	4.387	4.292	6.622	5.632	5.367	2.672	0.816	2.381	3.877	3.657	2.666	4.288	6.663	4.546	3.400	1.081	2.417	5.456	3.628	1.741	2.498	2.289	4.992	3.638
	SKURTOSIS (σ_z)	-0.446	-0.414	-0.479	-0.402	-0.478	-0.353	-0.637	-1.556	-0.87	-2.540	-0.445	-0.579	-1.696	-0.276	-0.106	-0.326	-0.915	-33.529	-1.558	-0.312	-1.168	-0.399	-0.790	-1.676	-0.307	-0.943
	KURTOSIS (K_z)	1.404	1.193	1.245	1.268	0.921	0.869	0.961	0.549	-0.709	0.219	1.725	1.541	0.336	0.875	0.712	1.091	0.636	0.225	0.658	0.883	0.342	0.802	1.884	0.733	1.053	0.770
	D ₁₅ (mm)	5.59	2.13	2.40	2.51	0.86	0.97	1.30	4.96	9.24	1.16	1.73	3.16	2.96	2.18	0.30	1.30	2.50	5.13	4.16	1.10	1.30	27.40	4.15	1.17	1.36	1.02
	D ₃₀ (mm)	49.42	27.64	40.92	35.92	25.35	19.05	50.28	78.38	69.78	31.07	48.78	60.18	38.20	23.46	4.63	20.91	57.07	56.88	56.75	19.84	74.49	58.34	61.42	23.22	42.99	
	D ₆₀ (mm)	107.14	80.84	107.58	107.08	92.15	82.27	110.71	126.17	210.56	187.93	112.75	117.00	149.94	92.91	42.48	76.16	121.85	206.27	141.02	90.50	155.18	115.16	121.70	161.68	100.81	123.53
	(D ₆₀ / D ₁₀) (mm)	0.019	0.038	0.045	0.043	0.140	0.085	0.085	0.025	0.023	0.162	0.065	0.037	0.051	0.043	0.140	0.059	0.049	0.040	0.034	0.083	0.120	0.004	0.029	0.138	0.074	0.121
	(D ₆₀ - D ₃₀) (mm)	101.55	78.71	105.19	104.57	91.49	81.30	109.41	121.21	201.32	186.76	111.02	113.83	146.98	90.72	42.18	74.86	119.34	201.15	136.86	89.41	153.89	87.76	117.55	160.51	99.45	122.51
	(D ₃₀ / D ₁₀) (mm)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.03	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	(D ₃₀ - D ₁₀) (mm)	58.67	49.79	68.77	66.97	50.57	41.12	79.82	85.78	133.34	103.91	62.32	69.85	82.61	52.71	19.56	39.81	75.29	128.31	71.60	45.10	69.31	56.80	49.46	77.10	45.15	75.28
	% GRAVEL	94.6%	90.4%	90.5%	90.7%	80.3%	82.3%	87.6%	94.7%	95.8%	85.6%	89.9%	90.9%	92.6%	90.7%	61.6%	87.7%	91.1%	94.4%	92.0%	83.5%	86.9%	99.1%	90.5%	89.3%	87.8%	87.1%
	% SAND	5.4%	9.6%	9.5%	9.3%	19.7%	17.7%	12.4%	5.3%	4.2%	14.4%	10.1%	9.1%	7.4%	9.3%	38.4%	12.3%	8.9%	5.6%	8.0%	16.5%	13.1%	0.9%	9.5%	10.7%	12.2%	12.9%
	% MUD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% V COARSE GRAVEL	67.4%	46.3%	56.5%	53.4%	43.3%	34.2%	58.2%	66.7%	67.9%	49.4%	63.6%	69.5%	54.9%	42.6%	15.8%	36.0%	65.7%	65.1%	66.5%	36.0%	47.5%	84.7%	80.0%	71.3%	40.3%	56.6%
	% COARSE GRAVEL	15.3%	20.4%	16.6%	20.3%	17.9%	19.5%	10.9%	10.9%	15.6%	13.6%	18.4%	12.5%	16.7%	17.3%	13.8%	12.3%	14.1%	13.4%	16.6%	15.7%	13.9%	9.1%	14.4%	18.7%	16.2%	
	% MEDIUM GRAVEL	5.5%	10.9%	9.1%	8.7%	8.7%	11.5%	7.3%	7.8%	7.6%	9.3%	5.2%	5.6%	9.9%	12.5%	11.6%	15.0%	5.2%	7.4%	5.6%	13.0%	10.7%	0.4%	0.5%	2.8%	12.6%	8.5%
	% FINE GRAVEL	3.5%	7.4%	5.4%	5.4%	6.0%	9.5%	6.0%	6.0%	3.3%	7.4%	1.9%	2.0%	6.4%	10.6%	10.9%	9.6%	4.1%	4.8%	2.6%	8.8%	10.2%	0.0%	0.4%	9.7%	3.7%	
	% V FINE GRAVEL	3.0%	5.5%	2.9%	2.9%	4.4%	7.6%	5.2%	3.4%	1.4%	6.0%	0.8%	1.4%	4.8%	7.7%	9.5%	5.8%	3.8%	3.0%	1.8%	7.1%	8.7%	0.0%	0.5%	0.4%	6.5%	2.2%
	% V COARSE SAND	1.4%	2.6%	1.5%	1.9%	5.3%	7.3%	4.1%	1.3%	0.6%	5.9%	0.6%	2.6%	3.8%	4.8%	10.0%	4.4%	3.7%	1.6%	2.5%	7.5%	5.3%	0.0%	0.9%	1.1%	4.6%	3.1%
	% COARSE SAND	1.2%	2.3%	3.5%	3.5%	7.4%	6.5%	3.5%	1.2%	0.9%	5.3%	3.7%	3.7%	1.9%	2.4%	11.7%	4.0%	3.3%	1.5%	3.1%	5.6%	3.8%	0.0%	3.7%	4.1%	3.6%	5.7%
	% MEDIUM SAND	1.2%	2.1%	2.4%	1.9%	3.9%	2.3%	2.3%	1.2%	1.1%	2.0%	2.7%	1.7%	0.7%	1.1%	8.9%	2.0%	1.2%	1.1%	1.4%	2.1%	1.9%	0.3%	2.6%	2.9%	2.0%	2.5%
	% FINE SAND	1.0%	1.6%	1.4%	1.0%	2.1%	1.0%	1.5%	1.0%	1.0%	0.9%	1.8%	0.8%	0.4%	0.7%	6.1%	1.1%	0.4%	0.8%	0.7%	0.9%	1.2%	0.3%	1.6%	1.8%	1.2%	1.1%
	% V FINE SAND	0.6%	1.1%	0.7%	1.1%	1.0%	0.6%	1.0%	0.5%	0.6%	0.3%	1.3%	0.3%	0.5%	0.3%	1.8%	0.6%	0.2%	0.6%	0.5%	0.3%	1.0%	0.3%	0.8%	0.7%	0.7%	0.5%
	% V COARSE SILT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% COARSE SILT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% MEDIUM SILT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% FINE SILT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% V FINE SILT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	% CLAY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Sample statistics calculated using the GRADISTAT program (Blott, 2001).
Accompanying tables from Blott (2001)

(d) Logarithmic (Original) Folk and Ward (1957) Graphical Measures			
Mean	Standard Deviation	Skewness	Kurtosis
$M_L = \frac{\phi_{-1} + \phi_0 + \phi_{+1}}{3}$	$\sigma_L = \frac{\phi_{-1} - \phi_{+1}}{4}$	$SK_L = \frac{\phi_{-1} + \phi_{+1} - 2\phi_0}{2(\phi_{-1} - \phi_{+1})}$	$K_L = \frac{\phi_{-1} - \phi_{+1}}{2.44(\phi_{-1} - \phi_{+1})}$
Sorting (σ_L)			
Very well sorted	< 0.35	Very fine skewed	0.3 to 1.0
Well sorted	0.35 - 0.50	Fine skewed	1.0 to 1.3
Moderately well sorted	0.50 - 0.70	Symmetrical	0.1 to 0.1
Moderately sorted	0.70 - 1.00	Coarse skewed	0.1 to 0.3
Poorly sorted	1.00 - 2.00	Very coarse skewed	0.3 to 1.0
Very poorly sorted	2.00 - 4.00	Extremely leptokurtic	> 3.00
Extremely poorly sorted	> 4.00		
(e) Geometric Folk and Ward (1957) Graphical Measures			
Mean	Standard Deviation	Skewness	Kurtosis
$M_G = \exp \left(\frac{\ln P_{15} + \ln P_{50} + \ln P_{85}}{3} \right)$	$\sigma_G = \exp \left(\frac{\ln P_{85} - \ln P_{15}}{4} \right)$	$SK_G = \frac{\ln P_{85} + \ln P_{15} - 2 \ln P_{50}}{2(\ln P_{85} - \ln P_{15})}$	$K_G = \frac{\ln P_{85} - \ln P_{15}}{2.44(\ln P_{85} - \ln P_{15})}$
Sorting (σ_G)			
Very well sorted	< 1.27	Very fine skewed	0.3 to 1.0
Well sorted	1.27 - 1.41	Fine skewed	1.0 to 1.3
Moderately well sorted	1.41 - 1.62	Symmetrical	0.1 to 0.1
Moderately sorted	1.62 - 2.00	Coarse skewed	0.1 to 0.3
Poorly sorted	2.00 - 4.00	Very coarse skewed	0.3 to 1.0
Very poorly sorted	4.00 - 16.00	Extremely leptokurtic	> 3.00
Extremely poorly sorted	> 16.00		

Statistical formulae used in the calculation of grain size parameters
 f is the frequency in percent, m is the mid-point of each class interval in metric (m_m) or phi (m_ϕ) units; P_i and ϕ_i are grain diameters, in metric or phi units respectively, at the cumulative percentile value of x .

a) Arithmetic Method of Moments

Mean	Standard Deviation	Skewness	Kurtosis
$\bar{x} = \frac{\sum f m_m}{100}$	$\sigma_x = \sqrt{\frac{\sum f (m_m - \bar{x})^2}{100}}$	$SK_x = \frac{\sum f (m_m - \bar{x})^3}{100 \sigma_x^3}$	$K_x = \frac{\sum f (m_m - \bar{x})^4}{100 \sigma_x^4}$

b) Geometric Method of Moments

Mean	Standard Deviation	Skewness	Kurtosis
$\bar{x}_g = \exp \left(\frac{\sum f \ln m_m}{100} \right)$	$\sigma_g = \exp \left(\frac{\sum f (\ln m_m - \ln \bar{x}_g)^2}{100} \right)$	$SK_g = \frac{\sum f (\ln m_m - \ln \bar{x}_g)^3}{100 \ln \sigma_g^3}$	$K_g = \frac{\sum f (\ln m_m - \ln \bar{x}_g)^4}{100 \ln \sigma_g^4}$

Sorting (σ_g)	Skewness (SK_g)	Kurtosis (K_g)
Very well sorted	< 1.27	Very fine skewed
Well sorted	1.27 - 1.41	Fine skewed
Moderately well sorted	1.41 - 1.62	Symmetrical
Moderately sorted	1.62 - 2.00	Coarse skewed
Poorly sorted	2.00 - 4.00	Very coarse skewed
Very poorly sorted	4.00 - 16.00	Very leptokurtic
Extremely poorly sorted	> 16.00	

c) Logarithmic Method of Moments

Mean	Standard Deviation	Skewness	Kurtosis
$\bar{x}_p = \frac{\sum f m_p}{100}$	$\sigma_p = \sqrt{\frac{\sum f (m_p - \bar{x}_p)^2}{100}}$	$SK_p = \frac{\sum f (m_p - \bar{x}_p)^3}{100 \sigma_p^3}$	$K_p = \frac{\sum f (m_p - \bar{x}_p)^4}{100 \sigma_p^4}$

Sorting (σ_p)	Skewness (SK_p)	Kurtosis (K_p)
Very well sorted	< 0.35	Very fine skewed
Well sorted	0.35 - 0.50	Fine skewed
Moderately well sorted	0.50 - 0.70	Symmetrical
Moderately sorted	0.70 - 1.00	Coarse skewed
Poorly sorted	1.00 - 2.00	Very coarse skewed
Very poorly sorted	2.00 - 4.00	Very leptokurtic
Extremely poorly sorted	> 4.00	

Table G.3 Sample locations for Wolman pebble count and subsurface grain-size data.

Sample number	Easting (ft)	Northing (ft)
CLK0001	7723773.7	601051.7
CLK0002	7723309.2	600914.9
CLK0003	7722876.9	600844.0
CLK0004	7723221.6	600641.1
CLK0007	7718130.2	611636.4
CLK0006	7722603.1	603890.2
CLK0005	7722838.8	600559.3
CLK0008	7711126.6	630352.1
CLK0009	7722203.6	600153.6
CLK0010	7722058.9	599900.9
CLK0011	7721537.7	601961.1
CLK0012	7705270.3	633865.8
CLK0013	7693006.6	635901.8
CLK0018	7713709.5	627196.8
CLK0016	7722038.1	602743.2
CLK0014	7716691.8	607072.4
CLK0015	7717769.4	613451.1
CLK0017	7721855.0	602191.3
CLK0019	7716450.3	615074.6
CLK0020	7717520.7	617837.3
CLK0021	7717719.3	620225.0
CLK0022	7718447.9	621393.9
CLK0023	7713521.1	629125.9
CLK0024	7708909.8	633184.2
CLK0025	7704774.1	632929.1
CLK0026	7701552.8	632021.3
CLK0027	7696009.9	632741.0
CLK0028	7692397.6	635205.1
CLK0029	7714185.8	627900.4
CLKWL034	7735858.0	588608.8
CLKWL033	7738357.0	586703.2
CLKWL032	7733570.9	589317.5
CLKWL031	7733215.1	589675.4
CLKWL035	7757265.1	563672.8
CLKWL036	7759309.1	562253.9
CLKWL037	7723320.1	600918.8
CLKWL038	7723386.7	600947.5
CLKWL039	7717787.2	606013.8
CLKWL040	7717821.3	613366.1

Appendix H

USGS Discharge Measurements at Estacada (14210000)

Table H.1 USGS discharge measurements at Estacada (14210000).

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
1	8/3/1957	IAC	167	313	2.02	1.9	11.50	631	22
2	8/3/1957	do	177	438	3.46	2.5	12.47	1520	23
3	8/14/1957	K&C	140	267	1.2	1.9	10.99	321	27
4	8/31/1957	IAC	146	302	1.1	2.1	10.97	333	21
5	10/5/1957	do	174	398	3.04	2.3	12.18	1210	22
6	11/2/1957	do	178	544	4.17	3.1	13.07	2270	20
7	11/30/1957	do	174	683	4.3	3.9	13.53	2940	20
8	12/21/1957	do	227	1750	7.08	7.7	17.27	12400	21
9	12/29/1958	do	223	1610	5.07	7.2	15.91	8170	23
10	2/1/1958	do	225	1580	4.98	7.0	15.76	7860	27
11	3/1/1958	do	221	1320	3.16	6.0	14.26	4170	28
12	4/1/1958	do	218	1110	2.11	5.1	13.16	2340	29
13	5/3/1958	do	219	4220	2.66	19.3	13.70	3250	27
14	6/1/1958	do	219	1190	2.54	5.4	13.63	3020	31
15	8/1/1958	do	197	635	0.47	3.2	10.90	298	20
16	8/30/1958	do	192	624	0.43	3.3	10.85	266	20
17	10/4/1958	do	193	641	0.44	3.3	10.91	281	21
18	11/1/1958	do	209	891	1.13	4.3	12.05	1010	23
19	11/28/1958	do	221	1300	3.28	5.9	14.33	4260	25
20	12/5/1958	R.W., IAC	220	1360	3.24	6.2	14.35	4410	28
21	12/27/1958	IAC	221	1320	3.23	6.0	14.29	4270	29
22	1/9/1959	do	222	1420	3.84	6.4	14.86	5450	29
23	1/29/1959	do	225	1580	5.02	7.0	15.92	8030	26
24	2/28/1959	do	217	1060	1.76	4.9	12.79	1870	26
25	3/29/1959	do	220	1320	3.22	6.0	14.32	4250	29
26	5/2/1959	do	221	1340	3.19	6.1	14.33	4270	29
27	5/31/1959	do	219	1170	2.43	5.3	13.49	2840	26
28	6/28/1959	do	196	690	0.45	3.5	10.96	312	23
29	8/2/1959	do	212	877	1.11	4.1	12.00	970	26
30	8/5/1959	H&M	210	974	1.45	4.6	12.35	1400	27
31	8/29/1959	IAC	212	949	1.26	4.5	12.20	1200	27
32	10/2/1959	do	213	946	1.27	4.4	12.18	1200	28
33	10/30/1959	do	220	1230	2.76	5.6	13.85	3400	29
34	11/30/1959	do	219	1270	2.79	5.8	13.92	3540	27
35	2/28/1960	do	214	965	1.34	4.5	12.32	1290	26
36	4/2/1960	do	226	1600	4.95	7.1	15.89	7920	26
37	5/28/1960	do	220	1330	3.16	6.0	14.30	4210	28
38	6/9/1960	W.A.H.	221	1240	3.1	5.6	14.08	3840	25
39	7/2/1960	IAC	211	909	1.1	4.3	12.00	997	27
40	7/30/1960	do	213	932	1.23	4.4	12.19	1150	26
41	8/27/1960	IAC	211	912	1.04	4.3	12.01	1040	27
42	10/1/1960	IAC	195	689	0.45	3.5	10.97	307	24

**Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).**

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
43	10/28/1960	do	220	1250	2.76	5.7	13.84	3450	29
44	11/25/1960	IAC	251	2360	7.91	9.4	18.92	19880	30
45	12/31/1960	IAC	240	1440	3.03	6.0	14.30	4360	34
46	1/26/1961	do	240	1390	2.96	5.8	14.20	4120	33
47	2/1/1961	P.M.K.	237	1400	3.1	5.9	14.24	4340	23
48	2/10/1961	IAC	259	3040	11.58	11.7	21.98	35200	27
49	2/26/1961	do	241	1460	2.99	6.1	14.22	4360	32
50	3/30/1961	do	241	1430	2.77	5.9	14.06	3960	32
51	4/28/1961	do	241	1460	2.91	6.1	14.26	4250	33
52	6/2/1961	do	242	1440	3	6.0	14.24	4320	34
53	7/1/1961	do	240	1110	1.5	4.6	12.55	1660	32
54	7/29/1961	do	221	1000	1.05	4.5	11.96	1050	31
55	9/2/1961	do	239	1240	1.9	5.2	13.14	2350	34
56	11/4/1961	do	241	1440	2.92	6.0	14.24	4210	34
57	11/29/1961	W.A.H.	244	1430	3.13	5.9	14.32	4480	26
58	12/2/1961	IAC	242	1450	2.93	6.0	14.29	4250	34
59	12/30/1961	do	243	1580	3.48	6.5	14.89	5500	33
60	1/28/1962	IAC	213	803	0.43	3.8	11.01	345	31
61	3/3/1962	do	240	1220	1.98	5.1	13.18	2420	33
62	3/31/1962	do	242	1460	3.02	6.0	14.33	4410	33
63	4/30/1962	do	243	1450	2.92	6.0	14.28	4230	34
64	5/21/1962	R.L.K	247	1470	2.99	6.0	14.27	4400	33
65	6/29/1962	IAC	239	1160	1.72	4.9	12.86	1990	31
66	7/28/1962	do	239	1040	1.3	4.4	12.30	1350	32
67	9/1/1962	do	237	998	1.08	4.2	12.05	1080	33
68	9/29/1962	do	238	1070	1.28	4.5	12.32	1370	31
69	11/3/1962	do	214	786	0.4	3.7	10.92	316	27
70	12/31/1962	do	241	1310	2.47	5.4	13.67	3230	32
71	3/2/1963	do	243	1440	2.92	5.9	14.18	4210	33
72	4/29/1963	do	241	1300	2.38	5.4	13.63	3100	32
73	6/1/1963	do	235	1150	1.73	4.9	12.82	1990	32
74	7/5/1963	do	223	1020	1.22	4.6	12.25	1250	32
75	8/30/1963	IAC	220	933	0.93	4.2	11.80	871	31
76	11/2/1963	IAC	221	984	1.06	4.5	11.99	1040	29
77	12/1/1963	IAC	245	1190	1.84	4.9	12.96	2190	31
78	12/28/1963	IAC	242	1440	2.88	6.0	14.20	4140	32
79	12/31/1963	RLK	244	1450	3.25	5.9	14.28	4460	29
80	2/1/1964	IAC	244	1590	3.79	6.5	15.15	6020	32
81	2/29/1964	do	242	1330	2.53	5.5	13.75	3370	33
82	3/29/1964	do	241	1260	2.15	5.2	13.36	2710	33
83	5/30/1964	do	245	1430	3.06	5.8	14.34	4380	34
84	7/31/1964	IAC	228	1040	1.33	4.6	12.30	1380	33

**Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).**

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
85	10/30/1964	IAC	232	1080	1.51	4.7	12.54	1630	33
86	11/29/1964	IAC	242	1430	3.1	5.9	14.29	4430	31
87	12/23/1964	IAC	264	3960	13.2	15.0	24.40	54000	28
88	1/3/1965	IAC	257	2020	2.09	7.9	14.29	4230	34
89	1/20/1965	RLK	260	1910	1.88	7.3	13.99	3600	25
90	1/28/1965	PMK	275	3380	9.62	12.3	22.15	32300	28
91	2/13/1965	GBS	250	1580	0.71	6.3	11.95	1120	23
92	4/3/1965	IAC	251	1420		5.7	12.00	612	33
93	4/5/1965	RLK	245	1410	0.22	5.8	10.68	304	21
94	5/1/1965	IAC	258	1940	1.93	7.5	13.7	3740	36
95	5/28/1965	IAC	251	1470	0.42	5.9	11.34	614	34
96	7/2/1965	IAC	254	1600	0.73	6.3	11.97	1170	34
97	7/30/1965	IAC	253	1560	0.68	6.2	11.8	1050	35
98	8/3/1965	EHS	245	1490	0.65	6.1	11.74	975	29
107	9/22/1966	IAC	250	1290	0.29	5.2	10.92	375	33
108	11/5/1966	IAC	253	1622	0.98	6.4	12.43	1600	33
109	12/17/1966	IAC	256	1930	2.36	7.5	13.91	4560	32
110	1/29/1967	IAC	262	2480	5.89	9.5	16.25	14600	30
111	3/11/1967	IAC	256	1830	1.91	7.1	13.51	3500	34
112	4/29/1967	do	254	1730	1.31	6.8	12.94	2210	34
113	6/3/1967	do	256	1900	2.08	7.4	13.78	3960	34
114	7/15/1967	do	253	1620	0.93	6.4	12.38	1500	34
115	8/26/1967	do	217	1270	0.26	5.9	10.77	328	27
116	10/7/1967	IAC	253	1640	1.02	6.5	12.48	1670	34
117	11/18/1967	do	253	1690	1.48	6.7	12.97	2500	34
118	12/26/1967	RLK	258	2310	4.05	9.0	15.5	9360	26
119	12/30/1967	IAC	259	1910	2.37	7.4	13.92	4520	35
120	2/5/1968	A.L.	255	2210	4.07	8.7	15.39	8990	26
121	2/10/1968	IAC	259	1880	2.27	7.3	13.82	4260	34
122	2/19/1968	HLB	266	3080		11.6	18.55	25900	28
123	3/23/1968	IAC	254	1650	1.24	6.5	12.7	2050	34
124	5/4/1968	do	255	1770	1.58	6.9	13.12	2790	34
125	6/15/1968	do	253	1650	1.11	6.5	12.56	1830	34
126	7/25/1968	do	251	1530	0.76	6.1	12.02	1170	32
127	9/15/1968	do	253	1640	1.13	6.5	12.58	1850	33
128	10/19/1968	do	258	1890	2.12	7.3	13.7	4010	33
129	11/30/1968	do	257	1870	2.09	7.3	13.62	3910	35
130	1/11/1969	do	258	2060	3.16	8.0	14.64	6510	34
131	2/22/1969	do	257	1900	2.33	7.4	13.87	4430	35
132	4/12/1969	do	256	1910	2.35	7.5	13.91	4480	34
133	5/31/1969	do	257	2010	3.01	7.8	14.61	6060	34
134	7/12/1969	do	251	1590	1.03	6.3	12.39	1630	34

Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
135	8/23/1969	do	251	1610	1.08	6.4	12.5	1740	33
136	8/26/1969	RLK	217	1270	0.27	5.9	10.73	348	23
137	10/4/1969	IAC	250	1560	0.97	6.2	12.32	1520	34
138	11/22/1969	do	252	1660	1.27	6.6	12.71	2100	33
139	1/23/1970	RLK	262	3100	8.77	11.8	20.02	27200	27
140	1/28/1970	WAH	260	2260	4.27	8.7	15.65	9650	27
141	2/21/1970	IAC	254	1830	2.21	7.2	13.69	4050	37
142	4/5/1970	do	251	1640	1.24	6.5	12.67	2030	34
143	5/16/1970	do	253	1840	2.12	7.3	13.65	3910	34
144	7/12/1970	IAC	247	1480	0.68	6.0	11.76	1010	33
145	8/5/1970	WAH	248	1440	0.68	5.8	11.75	978	23
146	9/10/1970	WAH	250	1480	0.63	5.9	11.65	936	25
147	10/30/1970	WAH	250	1660	1.14	6.6	12.57	1900	24
148	11/24/1970	WAH	265	2880	7.85	10.9	18.88	22600	14
149	12/2/1970	do	256	1770	2.08	6.9	13.61	3680	20
150	1/14/1971	do	253	1710	1.6	6.8	13.1	2740	25
151	1/21/1971	WAH	260	2270	4.45	8.7	15.8	10100	28
152	2/24/1971	do	254	1850	2.1	7.3	13.62	3880	24
153	4/15/1971	do	258	1890	2.43	7.3	13.91	4600	21
154	5/18/1971	do	256	1870	2.44	7.3	13.94	4560	29
155	6/29/1971	do	252	1680	1.46	6.7	12.98	2450	23
156	8/10/1971	do	250	1500	0.81	6.0	12.13	1220	21
157	10/1/1971	GBS	250	1620	1.21	6.5	12.62	1960	21
158	11/11/1971	do	253	1810	1.91	7.2	13.42	3450	25
159	1/5/1972	GBS	245	1610	1.36	6.6	12.75	2190	23
160	1/21/1972	GBS	269	3480	10.2	12.9	21.77	35500	25
161	1/22/1972	GBS	264	2580	6.43	9.8	17.78	16600	23
162	3/15/1972	GBS	262	2290	4.89	8.7	16.25	11200	24
163	4/21/1972	GBS	255	1860	2.13	7.3	13.52	3960	22
164	5/31/1972	GBS	260	1970	2.77	7.6	14.2	5460	25
165	8/23/1972	GBS	240	1340	0.69	5.6	11.53	925	24
166	10/5/1972	WAH	250	1450	0.68	5.8	11.49	991	22
167	11/22/1972	WAH	251	1540	0.97	6.1	12.1	1490	21
168	1/16/1973	H&J	260	2190	3.66	8.4	15.25	8020	23
169	3/1/1973	WAH	260	1900	2.38	7.3	13.78	4520	22
170	4/12/1973	do	250	1590	1.23	6.4	12.45	1950	25
171	5/24/1973	do	250	1610	1.06	6.4	12.34	1700	26
172	6/27/1973	do	245	1550	0.94	6.3	12.04	1460	27
173	8/15/1973	do	242	1380	0.55	5.7	11.12	763	23
174	10/17/1973	B&H	243	1410	0.63	5.8	11.31	892	27
175	11/20/1973	B	258	1830	2.36	7.1	13.57	4310	23
176	1/26/1974	B	258	1950	3.16	7.6	14.4	6160	24

**Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).**

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
177	5/8/1974	do	260	2010	3.29	7.7	14.75	6620	24
178	7/9/1974	R	250	1600	1.48	6.4	12.63	2370	22
179	9/18/1974	do	245	1390	0.68	5.7	11.22	942	20
180	10/23/1974	B	260	1390	0.8	5.3	11.47	1120	21
181	12/5/1974	do	248	1570	1.43	6.3	12.52	2250	22
182	1/23/1975	do	253	1840	2.53	7.3	13.68	4650	23
183	3/31/1975	R	250	1660	1.45	6.6	12.64	2400	24
184	6/18/1975	do	247	1620	1.37	6.6	12.51	2220	23
185	7/22/1975	B	243	1380	0.82	5.7	11.44	1130	22
186	9/19/1975	H	245	1400	0.87	5.7	11.56	1220	26
187	10/24/1975	H	251	1610	1.38	6.4	12.53	2230	27
188	12/5/1975	H	264	2410	5.48	9.1	16.75	13200	26
189	2/9/1976	H	250	1640	1.54	6.6	12.63	2530	24
190	4/1/1976	do	250	1750	2.03	7.0	13.25	3560	27
191	5/13/1976	K&H	255	1970	2.92	7.7	14.14	5740	25
192	6/22/1976	K	244	1570	1.49	6.4	12.57	2340	37
193	8/5/1976	do	210	1280	0.85	6.1	11.36	1090	20
194	9/16/1976	do	200	1350	0.85	6.8	11.43	1150	19
195	10/29/1976	do	238	1370	0.89	5.8	11.54	1220	19
196	12/6/1976	do	236	1300	0.7	5.5	11.07	913	19
197	1/19/1977	do	245	1420	0.95	5.8	11.72	1350	20
198	3/2/1977	do	240	1570	1.56	6.5	12.61	2450	20
199	4/14/1977	do	250	1670	1.8	6.7	12.94	3000	22
200	6/9/1977	do	250	1570	1.31	6.3	12.36	2060	19
201	7/11/1977	M	245	1500	1.21	6.1	11.17	1820	26
202	9/23/1977	K	240	1400	0.92	5.8	11.55	1290	20
203	10/27/1977	K&R	245	1600	1.5	6.5	12.62	2400	25
204	12/1/1977	GBS	258	1880	3.03	7.3	14.24	5690	23
205	1/27/1978	do	250	1550	1.87	6.2	12.79	2900	22
206	3/29/1978	do	250	1440	1.41	5.8	12.24	2030	24
207	5/16/1978	do	255	1790	2.68	7.0	13.74	4800	25
208	6/29/1978	S&M	195	1230	0.81	6.3	11.26	993	20
209	10/5/1978	M&S	185	1180	0.75	6.4	10.99	880	23
210	11/17/1978	M&G	237	1290	1.07	5.4	11.6	1380	21
211	12/20/1978	T.M.	245	1390	1.46	5.7	12.24	2030	23
212	1/31/1979	T.M.	195	1210	0.9	6.2	11.3	1090	22
213	3/20/1979	T.M.	245	1520	1.84	6.2	12.78	2800	25
214	5/15/1979	T.M.	245	1660	2.26	6.8	13.24	3750	23
215	6/26/1979	G.P. & T.M.	235	1260	0.9	5.4	11.41	1130	23
216	8/9/1979	G.P. & T.M.	208	1080	0.61	5.2	10.65	659	20
217	10/1/1979	T.M. & F.R.	192	1120	0.65	5.8	10.73	728	22
218	11/26/1979	R.T.	247	1490	1.66	6.0	12.76	2480	26

Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
219	1/18/1980	R.T.	255	1810	3.37	7.1	14.37	6100	21
220	3/4/1980	R.T.	248	1600	2.13	6.5	13.01	3410	25
221	4/28/1980	R.T.	253	1680	2.38	6.6	13.35	3990	25
222	7/8/1980	R.T.	210	1210	0.84	5.8	11.23	1020	22
223	9/15/1980	R.T.	193	1060	0.64	5.5	10.61	680	20
224	10/22/1980	W.H.	200	1130	0.71	5.7	10.81	797	26
225	12/4/1980	wah	260	2140	5.23	8.2	16.2	11100	28
226	1/19/1981	do	240	1340	1.31	5.6	11.94	1750	23
227	3/10/1981	do	240	1360	1.4	5.7	12.14	1900	26
228	4/28/1981	do	243	1470	1.59	6.0	12.46	2340	26
229	6/23/1981	F&H	245	1480	1.61	6.0	12.41	2380	25
230	8/21/1981	W.H.	195	1060	0.69	5.4	10.72	729	28
231	10/14/1981	W.H.	230	1310	1.34	5.7	11.97	1750	30
232	12/9/1981	do	250	1640	3.52	7.4	14.45	6480	25
233	1/27/1982	do	254	1870	3.68	7.4	14.68	6890	27
234	3/17/1982	do	248	1570	2.18	6.3	12.96	3420	26
235	5/7/1982	do	245	1580	2.22	6.4	13.07	3500	32
236	8/31/1982	do	199	1100	0.74	5.5	10.88	810	24
237	10/5/1982	do	200	1140	0.84	5.7	11.08	956	28
238	12/7/1982	do	254	1920	3.69	7.6	14.76	7090	28
239	2/9/1983	do	247	1680	2.55	6.8	13.42	4280	28
240	4/11/1983	do	245	1560	2.06	6.4	12.94	3220	29
241	6/13/1983	do	240	1330	1.32	5.5	12.08	1760	28
242	7/28/1983	do	235	1270	1.09	5.4	11.67	1380	32
243	10/6/1983	do	200	1100	0.72	5.5	10.87	807	26
244	1/30/1984	do	245	1540	2.14	6.3	13.02	3300	34
245	5/3/1984	do	245	1630	2.15	6.7	13.1	3480	27
246	6/13/1984	do	245	1570	2.03	6.4	12.99	3160	30
247	7/23/1984	WH	210	1210	0.98	5.8	11.46	1180	28
248	10/15/1984	RT	240	1400	1.47	5.8	12.38	2060	30
249	12/10/1984	RT	252	1910	3.27	7.6	14.5	6260	
250	3/7/1985	RT	241	1440	1.55	6.0	12.42	2230	
251	7/2/1985	RT	210	1220	0.96	5.8	11.5	1170	
252	9/3/1985	RT	210	1100	0.68	5.2	10.94	752	24
253	10/21/1985	RT	220	1210	0.91	5.5	11.44	1100	23
254	3/26/1986	SDW	250	1660	2.4	6.6	13.32	3980	24
255	5/16/1986	LCV	245	1510	1.68	6.2	12.65	2530	23
256	7/17/1986	LCV	210	1200	0.94	5.7	11.31	1120	26
257	9/11/1986	LCV	195	1140	0.76	5.8	10.98	864	23
258	11/25/1986	KKL/LCV	250	1890	3.35	7.6	14.4	6340	30
259	1/28/1987	KKL	248	1760	2.98	7.1	14.04	5250	26
260	3/24/1987	KKL	243	1490	1.68	6.1	12.58	2500	27

**Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).**

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
261	5/21/1987	KKL	210	1240	1.04	5.9	11.7	1290	26
262	5/28/1987	KKL	212	1210	0.93	5.7	11.42	1120	31
263	7/21/1987	KKL	205	1100	0.78	5.4	11	853	24
264	7/22/1987	KKL	205	1140	0.79	5.6	11.06	895	31
265	9/2/1987	KKL	191	595	1	3.1	10.51	594	30
266	11/6/1987	KKL	220	466	1.27	2.1	10.44	590	28
267	1/13/1988	KKL	247	1530	2.33	6.2	13.11	3560	29
268	3/24/1988	KKL	248	1690	2.52	6.8	13.6	4260	27
269	5/24/1988	WAH	240	1440	1.83	6.0	12.65	2640	28
270	7/20/1988 11:55	KKL	200	1110	0.79	5.6	11.08	875	24
271	9/15/1988 13:30	KKL/JKP	192	1041	0.65	5.4	10.7	675	28
272	11/23/1988 11:25	JKP/GWO	260	2140	5.19	8.2	16.13	11100	31
273	1/25/1989 9:54	JKP/GWO	244	1500	1.97	6.1	12.83	2950	28
274	3/27/1989 11:48	JKP	250	1670	2.78	6.7	13.73	4640	27
275	5/30/1989 13:00	JKP	242	1380	1.6	5.7	12.45	2210	28
276	8/1/1989 13:00	JKP/PJF	196	1040	0.68	5.3	10.82	705	27
277	10/24/1989 12:20	PJF	211	1150	0.86	5.5	11.14	988	31
278	1/3/1990 11:45	PJF	208	1190	1	5.7	11.48	1190	23
279	3/13/1990 11:25	PJF	247	1466	1.82	5.9	12.7	2690	27
280	5/8/1990 11:25	PJF	240	1510	1.89	6.3	12.78	2860	27
281	7/11/1990 12:51	PJF	212	1140	0.93	5.4	11.33	1060	27
282	4/17/1991 13:15	DOC/DMC	242	1560	2.05	6.4	12.99	3200	30
283	7/8/1991 12:15	DOC	210	1190	0.98	5.7	11.47	1170	26
284	11/12/1991 10:41	DOC	203	1150	1.04	5.7	11.49	1233	27
285	1/24/1992 10:14	doc	238	1400	1.61	5.9	12.43	2283	23
286	6/3/1992 12:30	DOC	197	1090	0.78	5.5	10.9	846	26
287	7/21/1992 10:07	DOC	193	1060	0.67	5.5	10.62	742	28
288	8/26/1992 10:11	DOC	191	987	0.57	5.2	10.4	597	25
289	9/14/1992 9:42	DOC	192	1040	0.61	5.4	10.45	630	27
290	11/24/1992 8:30	doc	244	1583	2.31	6.5	13.22	3663	22
291	2/11/1993 10:30	DOC	236	1350	1.28	5.7	12.01	1770	25
292	4/23/1993 11:05	CGK	244	1670	2.59	6.8	13.55	4350	28
293	7/2/1993 11:00	CGK	230	1280	1.27	5.6	11.97	1660	24
294	8/25/1993 11:50	CGK	196	1130	0.83	5.8	11.12	971	26
295	10/27/1993 11:35	CGK	210	1150	0.94	5.5	11.3	1120	25
296	12/16/1993 12:00	RLK	212	1320	1.33	6.2	12.07	1800	24
297	3/16/1994 10:40	RLK	234	1450	1.54	6.2	12.49	2270	26
298	5/16/1994 10:20	RLK	210	1250	1.09	6.0	11.69	1390	30
299	7/20/1994 7:27	JEP	193	1100	0.63	5.7	10.65	727	29
300	10/5/1994 11:25	TAH	187	1030	0.58	5.5	10.31	596	23
301	12/1/1994 10:30	KKL/MJS	265	2450	5.59	9.2	17.51	13700	25
302	12/2/1994 10:00	TAH	250	2000	4.22	8.0	15.48	8460	24

Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
303	2/1/1995 10:40	TAH/CGK	265	2640	7.5	10.0	19.09	19800	29
304	6/9/1995 13:00	MJS	240	1310	1.34	5.5	12.08	1790	27
305	8/2/1995 13:40	MJS	200	1090	0.81	5.5	11	879	27
306	10/29/1995 11:45	MJS	225	1340	1.54	6.0	12.3	2070	27
308	2/7/1996 13:04	MJS/RLK	287	4160	13.46	14.5	26.12	56000	14
309	4/11/1996 13:00	MJS	252	1530	2	6.1	12.83	3090	29
310	5/15/1996 12:00	MJS	253	1600	2.26	6.3	13.11	3620	33
311	6/26/1996 10:45	MJS/CEN	215	1200	1.35	5.6	11.85	1620	30
312	11/18/1996 10:20	MJS	251	1750	2.81	7.0	13.76	4920	30
313	2/4/1997 13:50	MJS	256	1880	3.52	7.3	14.52	6620	29
314	4/1/1997 10:24	MJS	254	1560	2.44	6.1	13.15	3800	28
315	8/14/1997 11:50	KRS	187	952	0.94	5.1	10.89	898	27
316	10/24/1997 10:48	JKP/MJS	196	1120	1.25	5.7	11.62	1410	27
317	12/30/1997 16:30	KKL	210	1280	1.63	6.1	12.18	2120	26
318	3/18/1998 13:30	KRS/KKL	249	1520	2.24	6.1	12.93	3410	33
319	5/26/1998 13:15	KKL	247	1550	2.24	6.3	13	3500	33
320	8/17/1998 16:05	KKL	188	965	0.88	5.1	10.83	881	25
321	10/22/1998 15:03	VMD/JDS	193	989	1.04	5.1	11.1	1040	24
322	2/3/1999 13:25	JDS	249	1540	2.29	6.2	12.95	3580	37
323	4/2/1999 10:58	VMD/JDS	248	1400	2.08	5.6	12.7	2940	30
324	6/7/1999 11:01	VMD	251	1620	2.77	6.5	13.47	4530	28
325	8/9/1999 11:06	VMD	183	926	0.81	5.1	10.68	786	22
326	10/1/1999 13:42	VMD	184	938	1.05	5.1	10.94	981	24
327	12/7/1999 12:40	JDS	253	1720	3.22	6.8	14.06	5530	35
328	2/18/2000 14:00	JDS	250	1450	2.44	5.8	12.97	3540	35
329	4/20/2000 10:25	JDS	252	1470	2.52	5.8	13.22	3730	34
330	6/16/2000 11:15	JDS	222	1290	2.12	5.8	12.57	2740	30
331	8/25/2000 16:40	JDS	184	942	0.98	5.1	10.91	922	33
332	10/20/2000 13:30	JDS	192	990	1.22	5.2	11.41	1210	34
333	1/5/2001 9:40	JDS	195	1120	1.62	5.7	12.06	1810	37
334	3/2/2001 11:53	JDS	192	989	1.19	5.2	11.41	1210	30
335	5/15/2001 9:42	JDS	255	1716	3.41	6.7	14.24	5890	35
336	7/12/2001 14:44	JDS	180	866	0.91	4.8	10.78	814	30
337	9/28/2001 13:47	jds	180	852	0.89	4.7	10.58	781	30
338	11/30/2001 10:04	JDS	255	1700	3.4	6.7	14.2	5780	33
339	1/31/2002 12:47	JDS/SMD	210	1300	2.01	6.2	12.47	2640	30
340	3/22/2002 9:54	SMD	242	1350	2.07	5.6	12.58	2800	28
341	5/15/2002 11:03	SMD	248	1420	2.44	5.7	12.91	3490	30
344	7/6/2002 10:56	SMD	179	859	1.01	4.8	10.72	871	26
342	7/9/2002 14:18	SMD	180	976	1.32	5.4	11.36	1290	29
343	9/3/2002 14:08	SMD	178	885	0.98	5.0	10.69	864	29
344	9/6/2002 10:56	SMD	179	859	1.01	4.8	10.74	871	26

Table H.1 USGS discharge measurements at Estacada (14210000)
(continued).

Measurement #	Measurement Date	Party Name	Channel Width (ft)	Xsect Area (ft ²)	Avg Velocity (ft/s)	Depth (ft)	Stage (ft) (2003 datum)*	Discharge (cfs)	Sections Measured
345	10/30/2002 11:42	SMD	168	859	0.91	5.1	10.68	817	28
346	1/7/2003 10:35	SMD	248	1440	2.53	5.8	12.99	3670	31
347	3/6/2003 11:33	SMD	247	1490	2.66	6.0	13.09	4000	30

* Note: Stage height datum shifts are in bold. The datum shift from 1/31/65 to 4/3/65 is problematic based on gage records, 12 feet were added to the present datum for these dates. Ten feet were added to measurements between 4/5/35 and 7/8/91; and measurements prior to 1/31/65. All stage heights since 7/8/91 are based on the current datum.