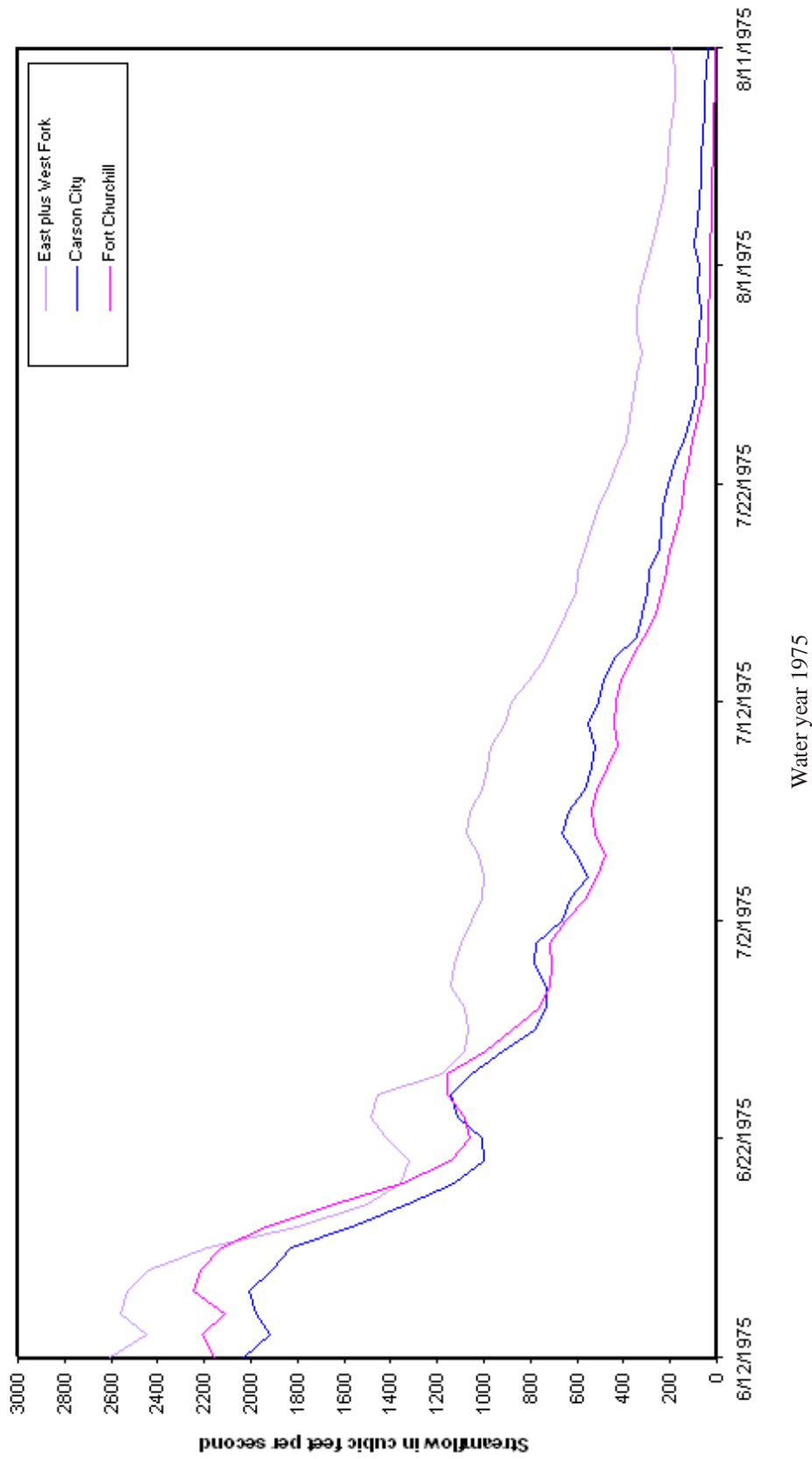
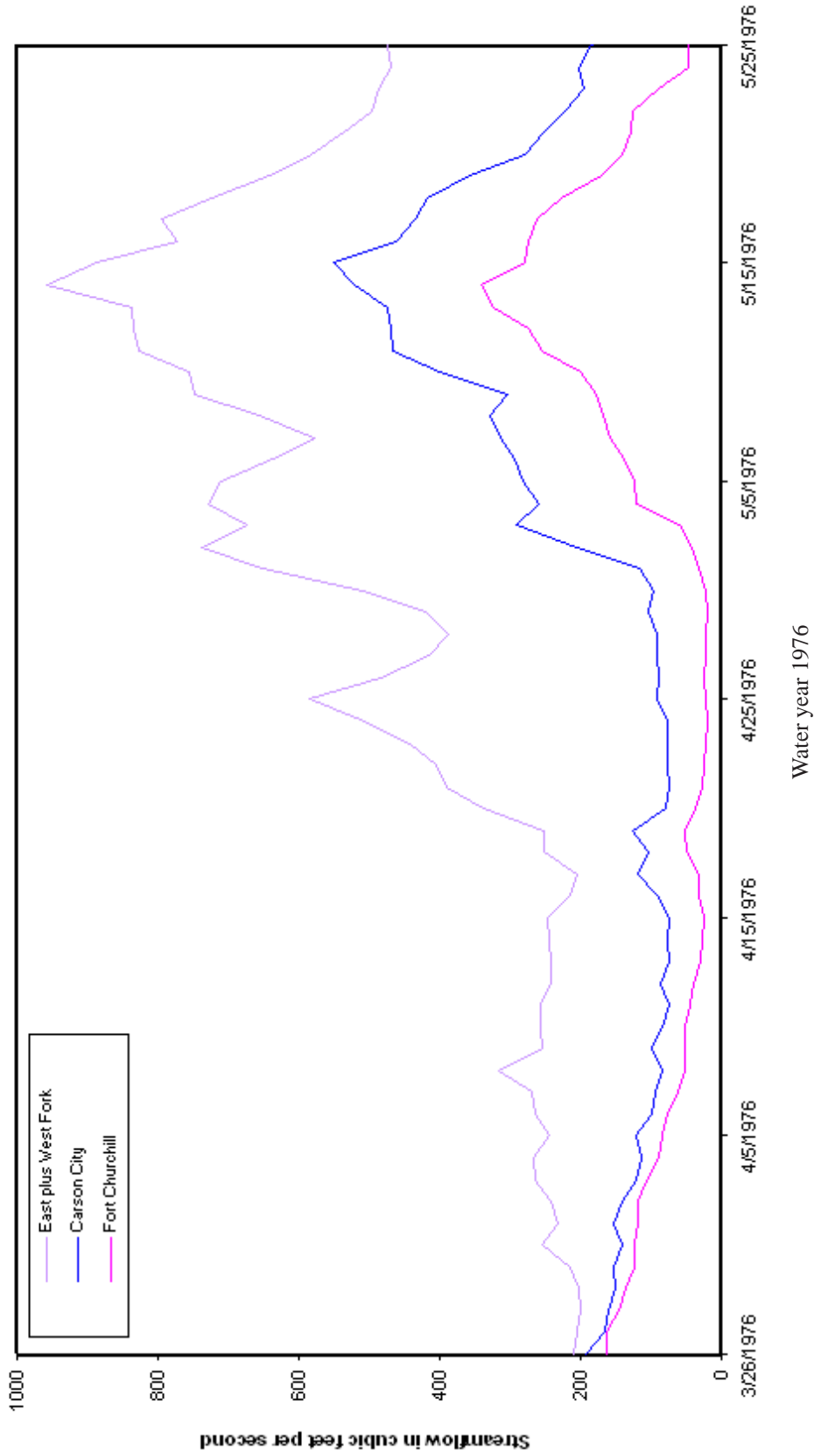


Appendix A. Daily Mean Streamflow at Selected Sites and Periods Showing (1) Streamflow Losses, (2) Streamflow Gains, (3) Streamflow at Fort Churchill Compared with Streamflow in Buckland Ditch, and (4) Baseflow in the Upper Carson River Basin, Nevada

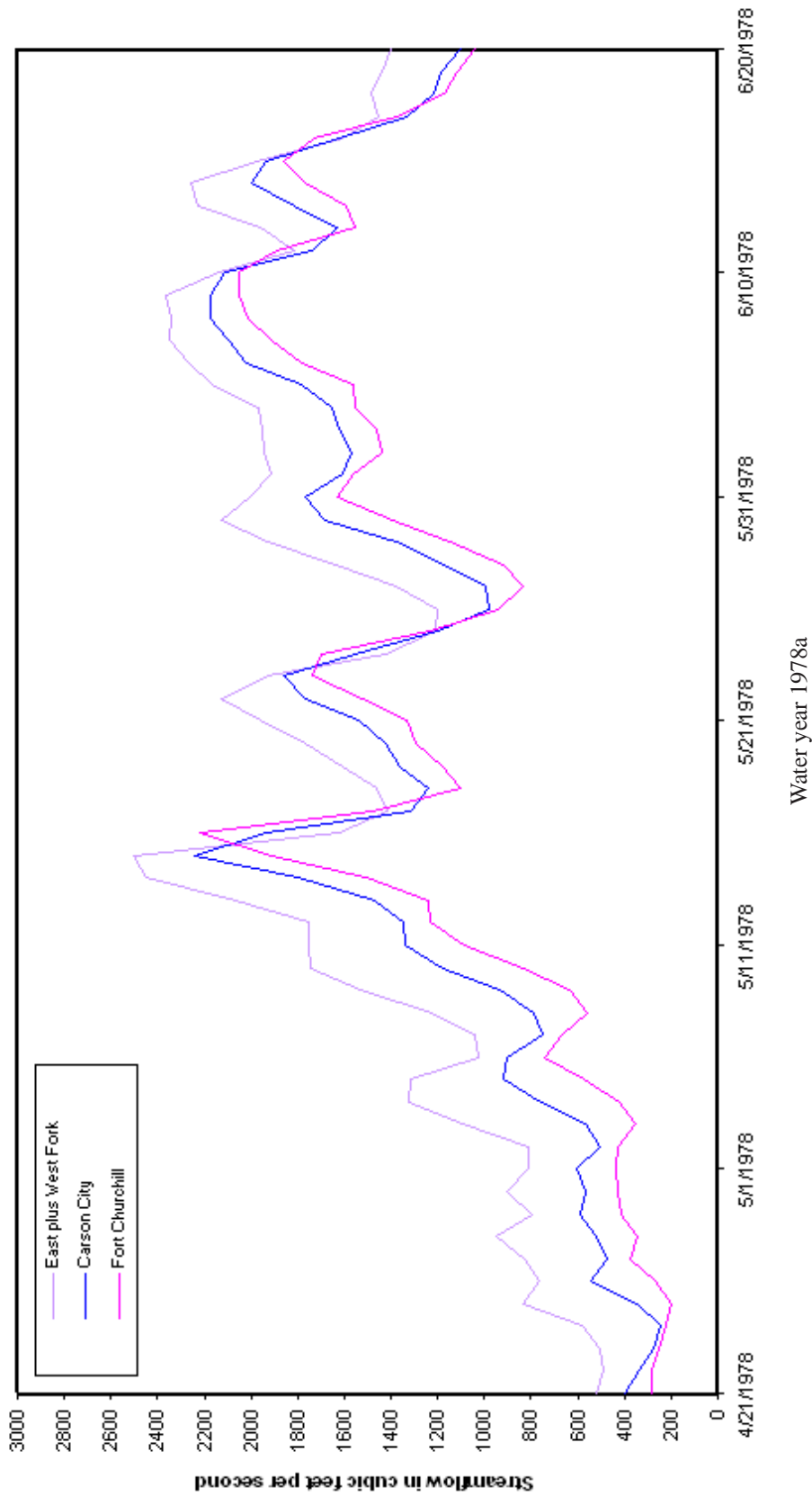
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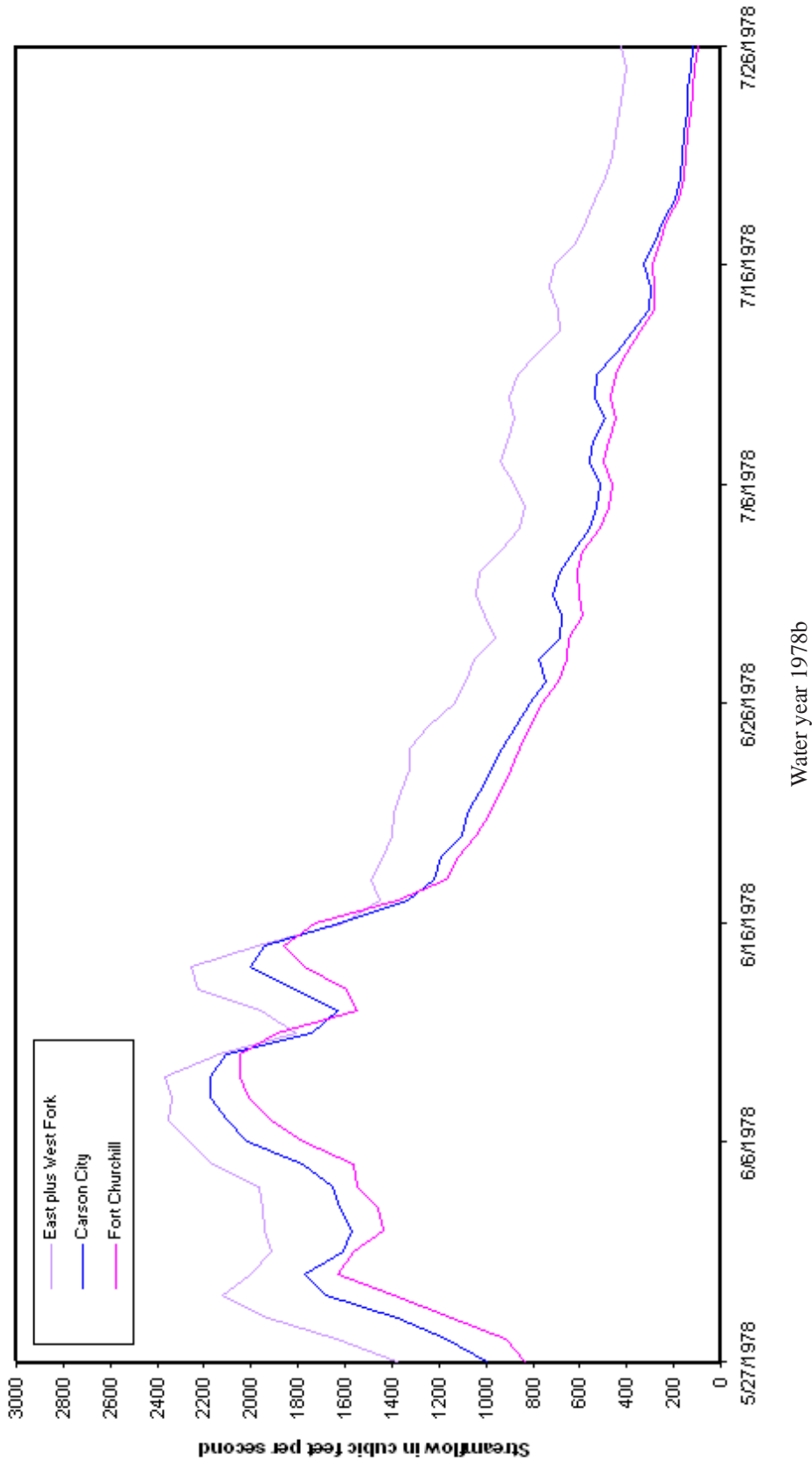
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.



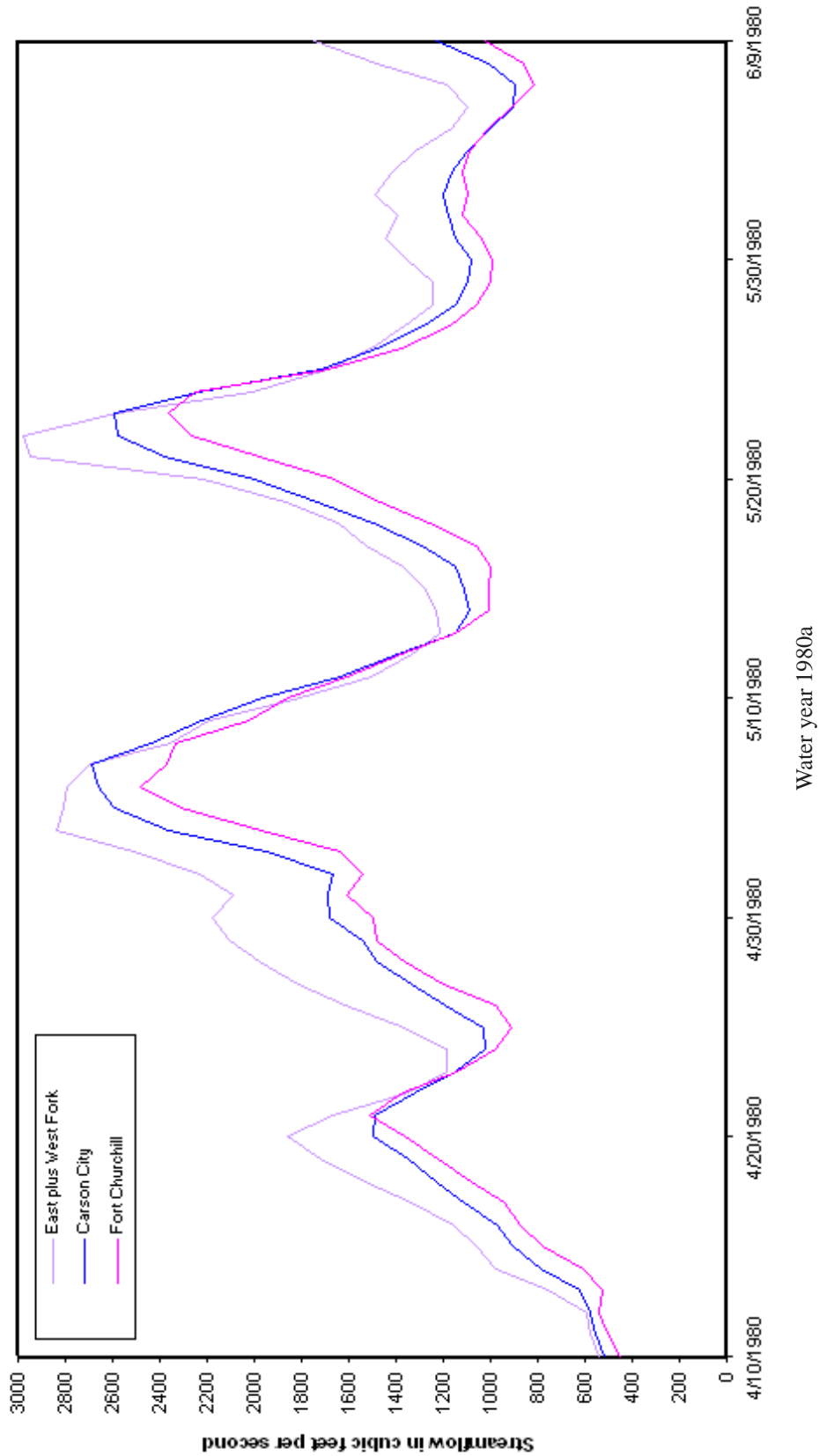
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



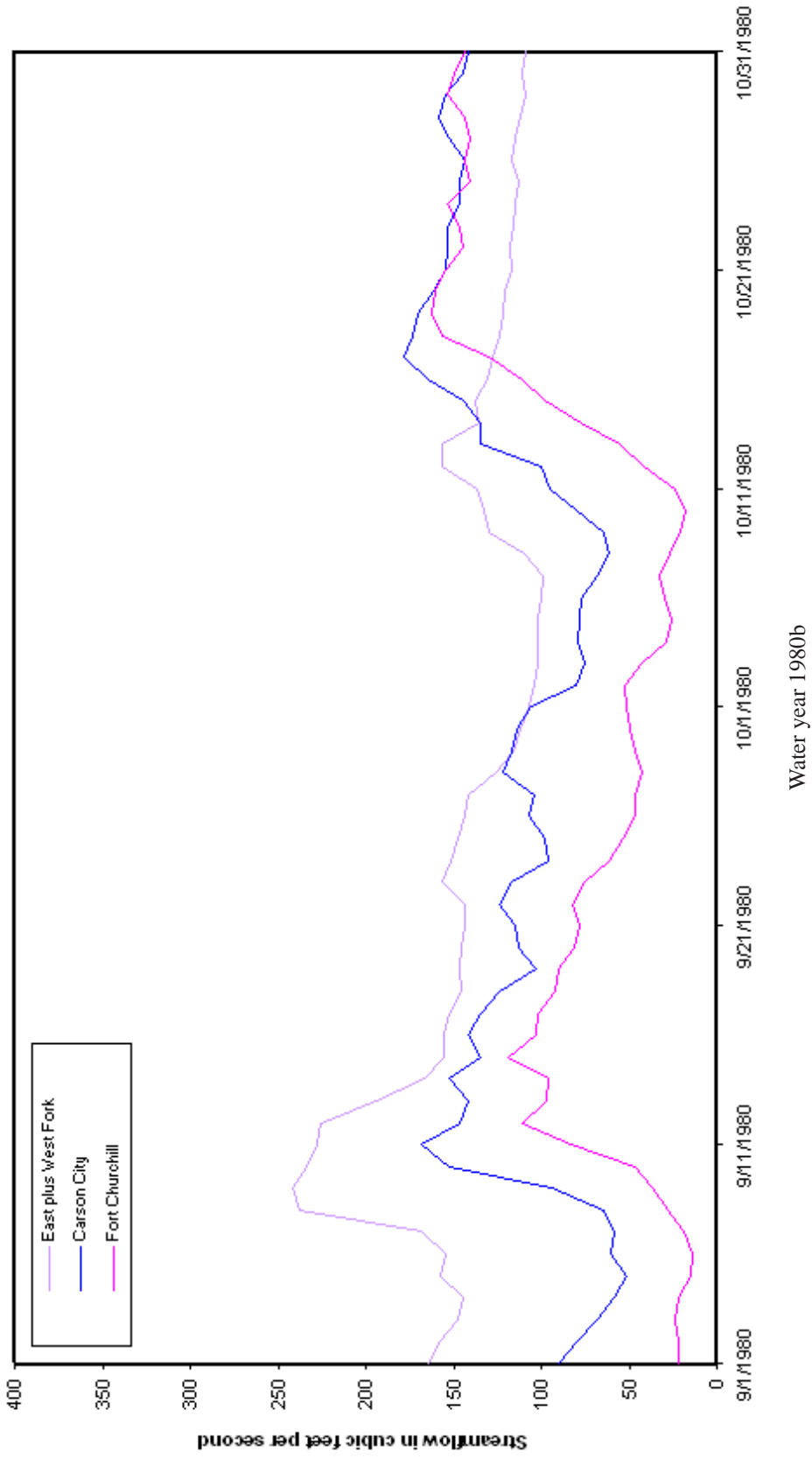
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



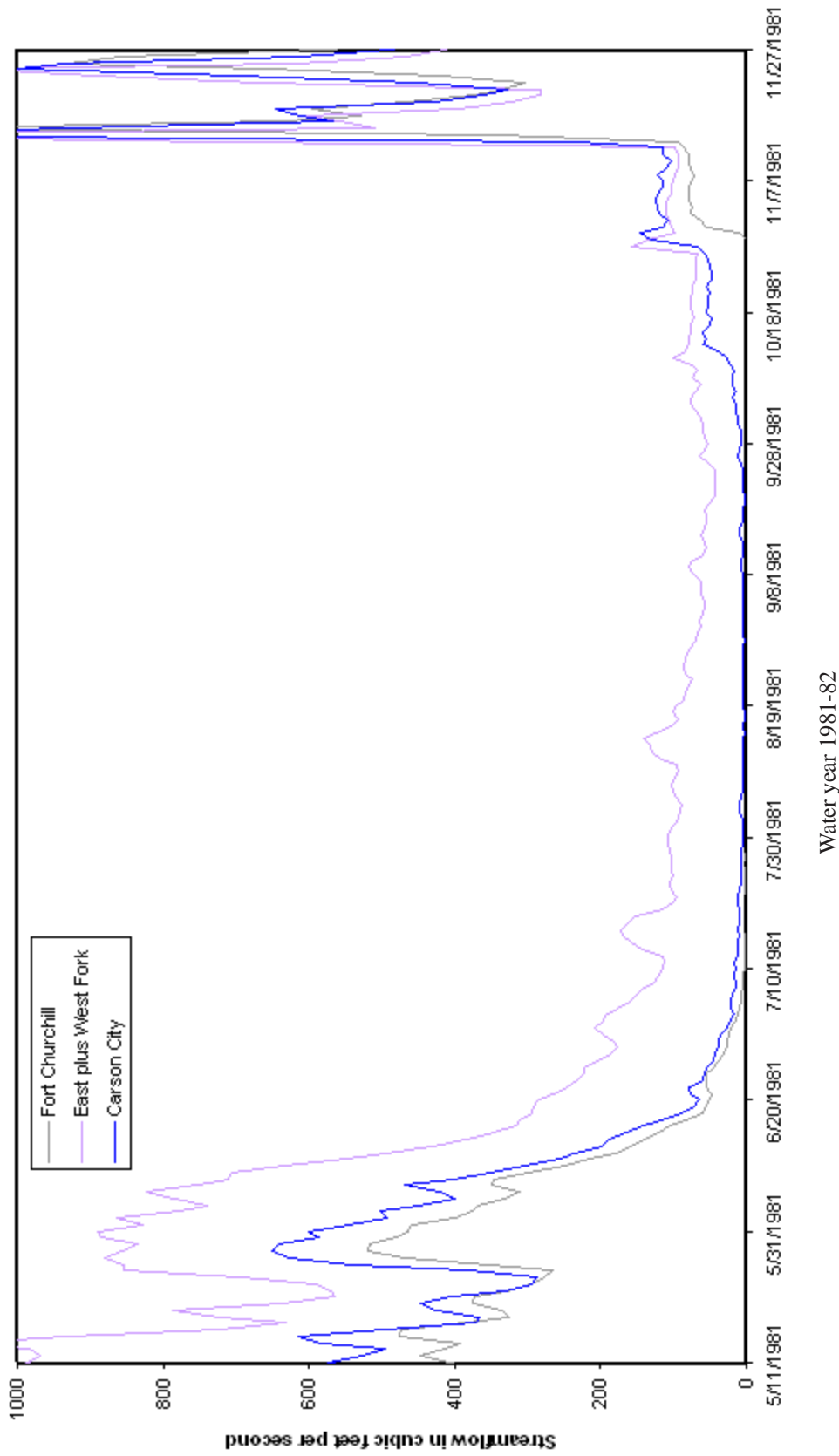
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



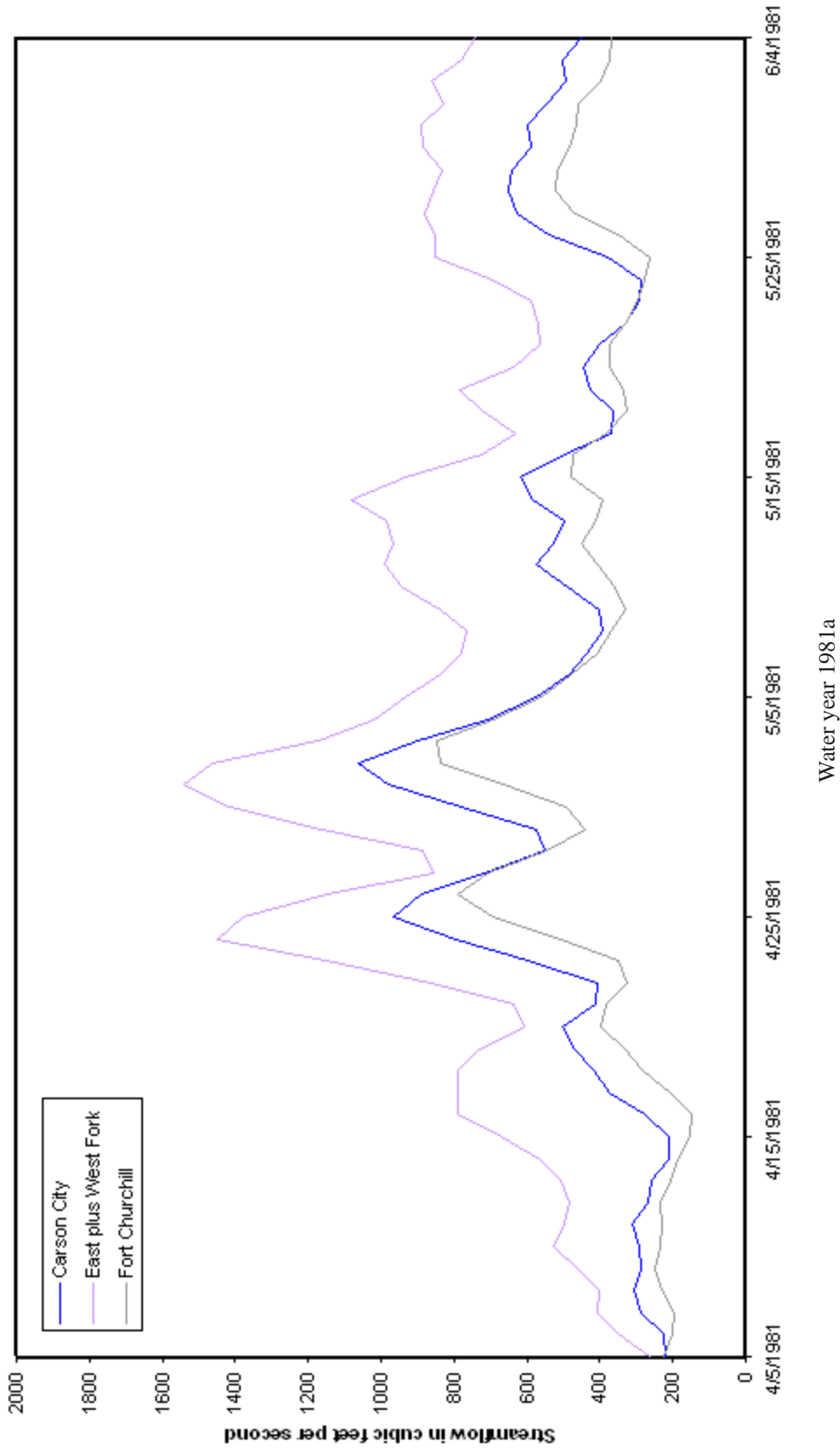
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



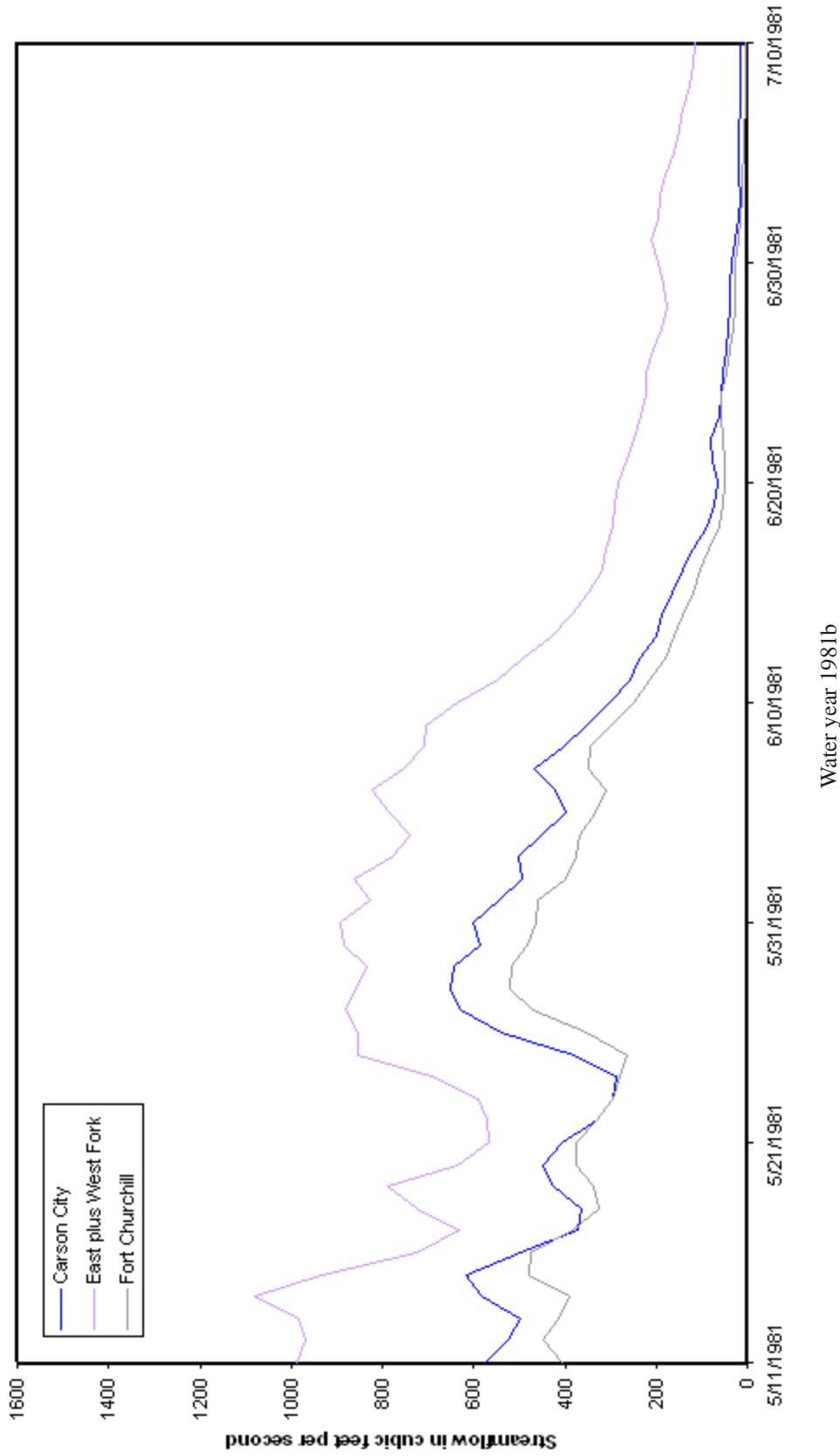
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



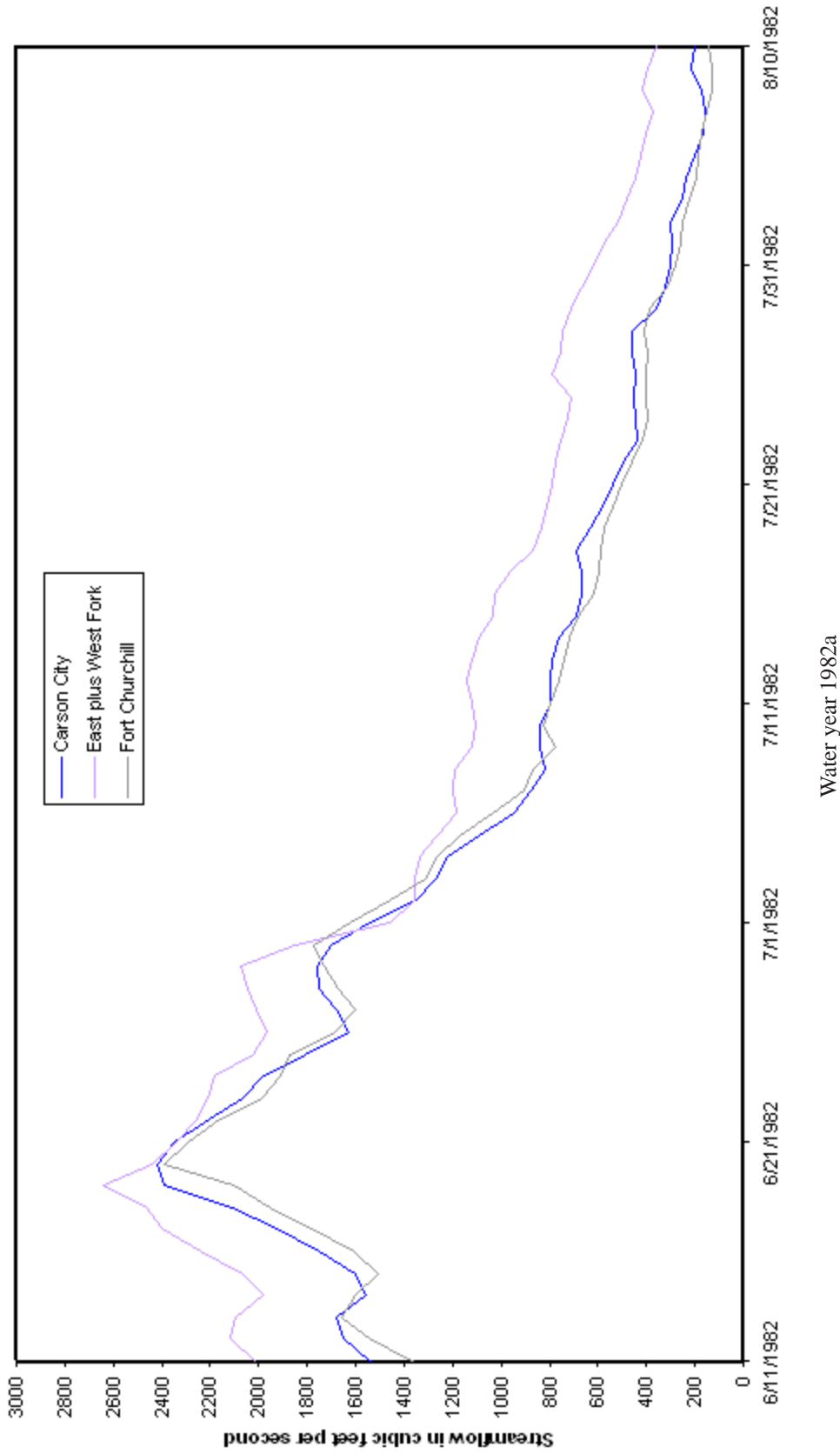
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



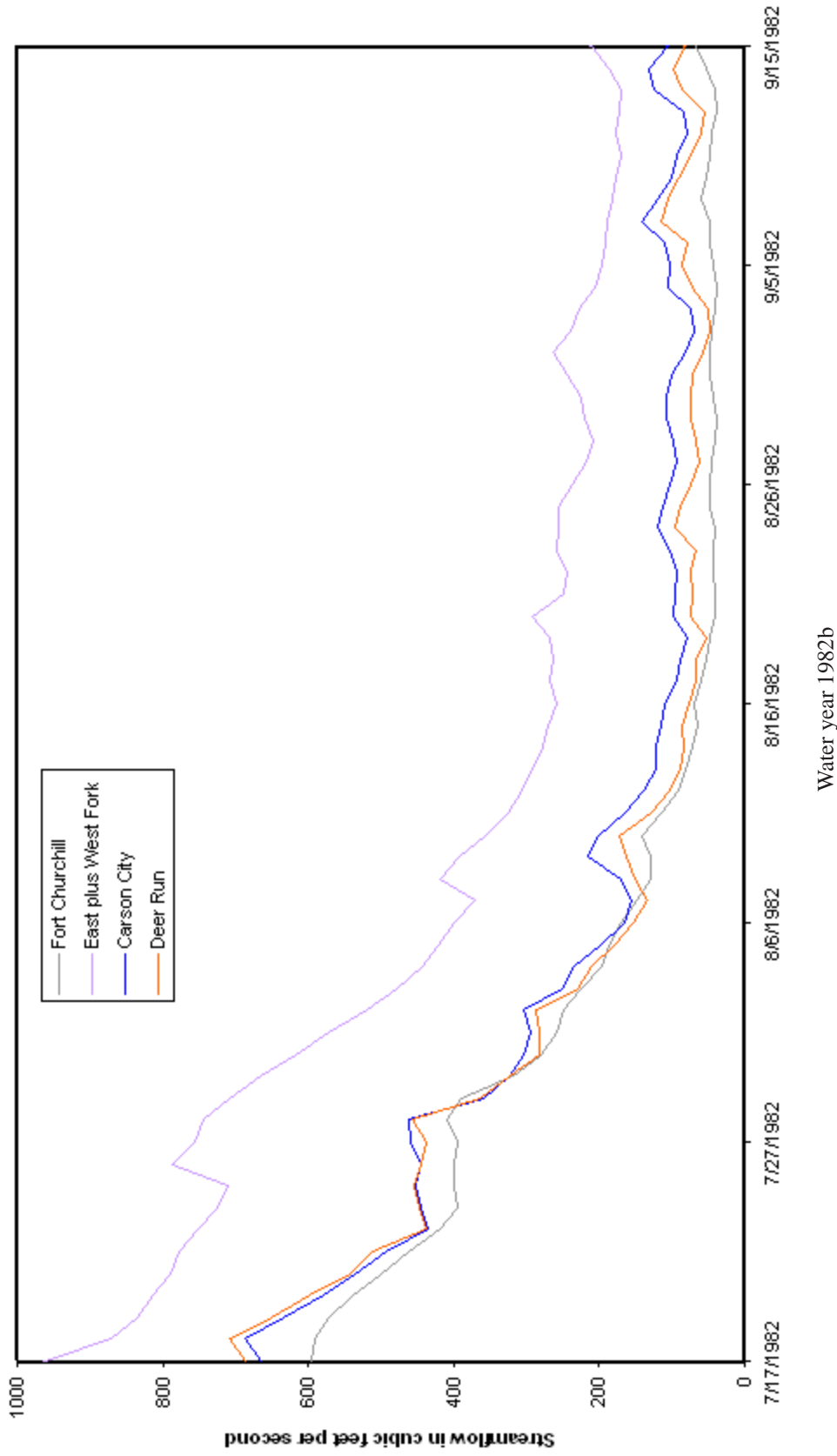
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



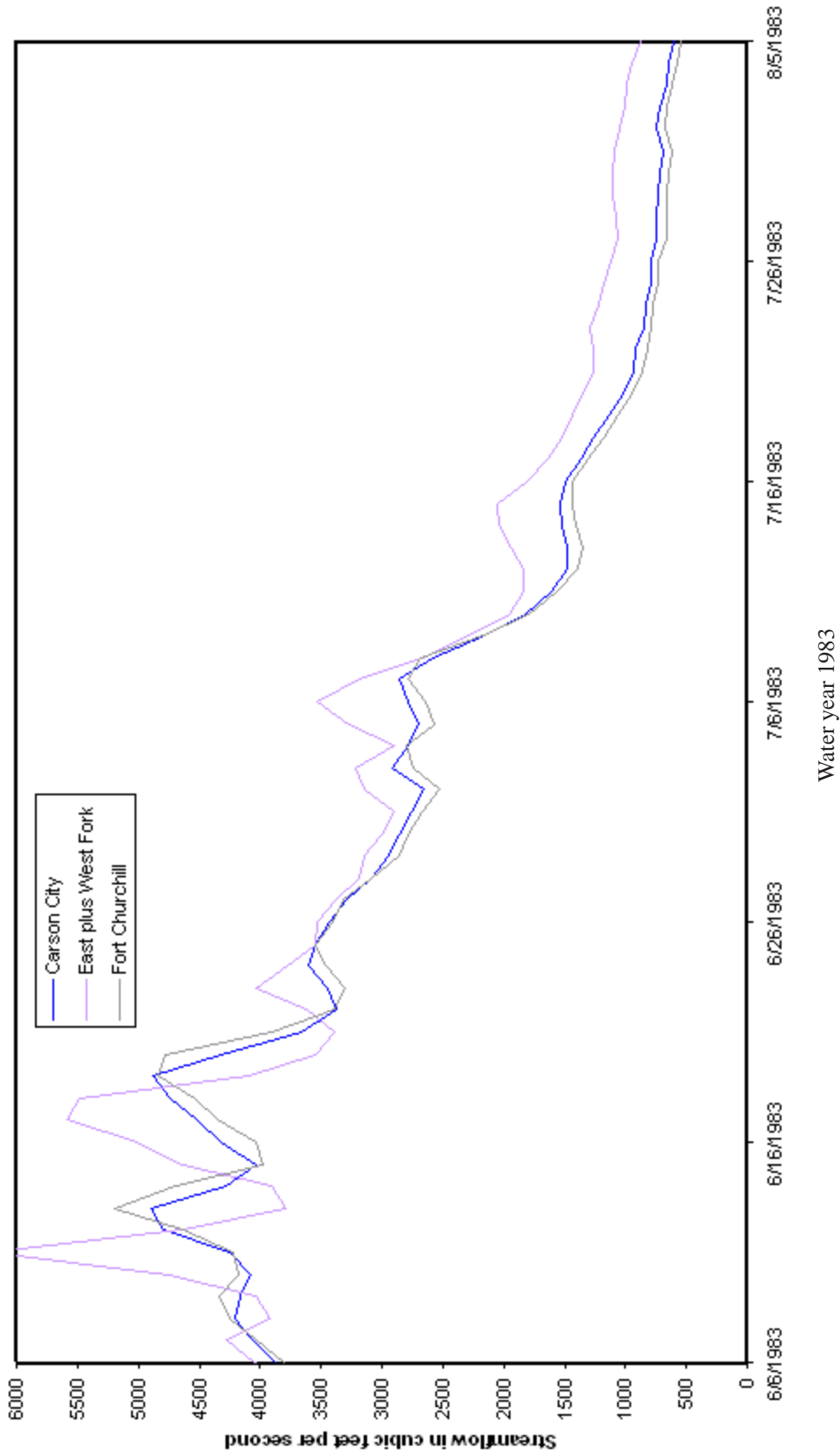
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



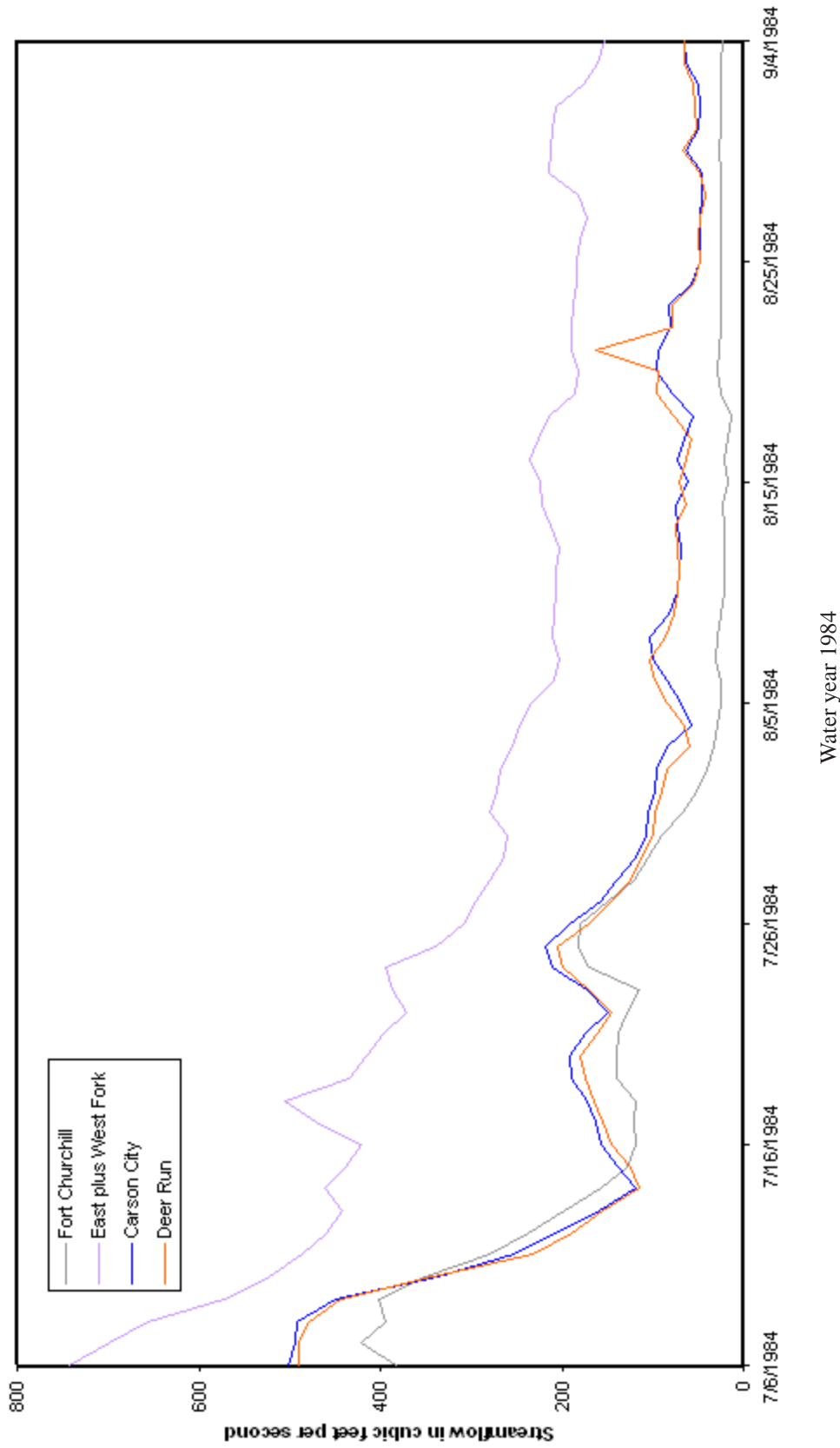
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



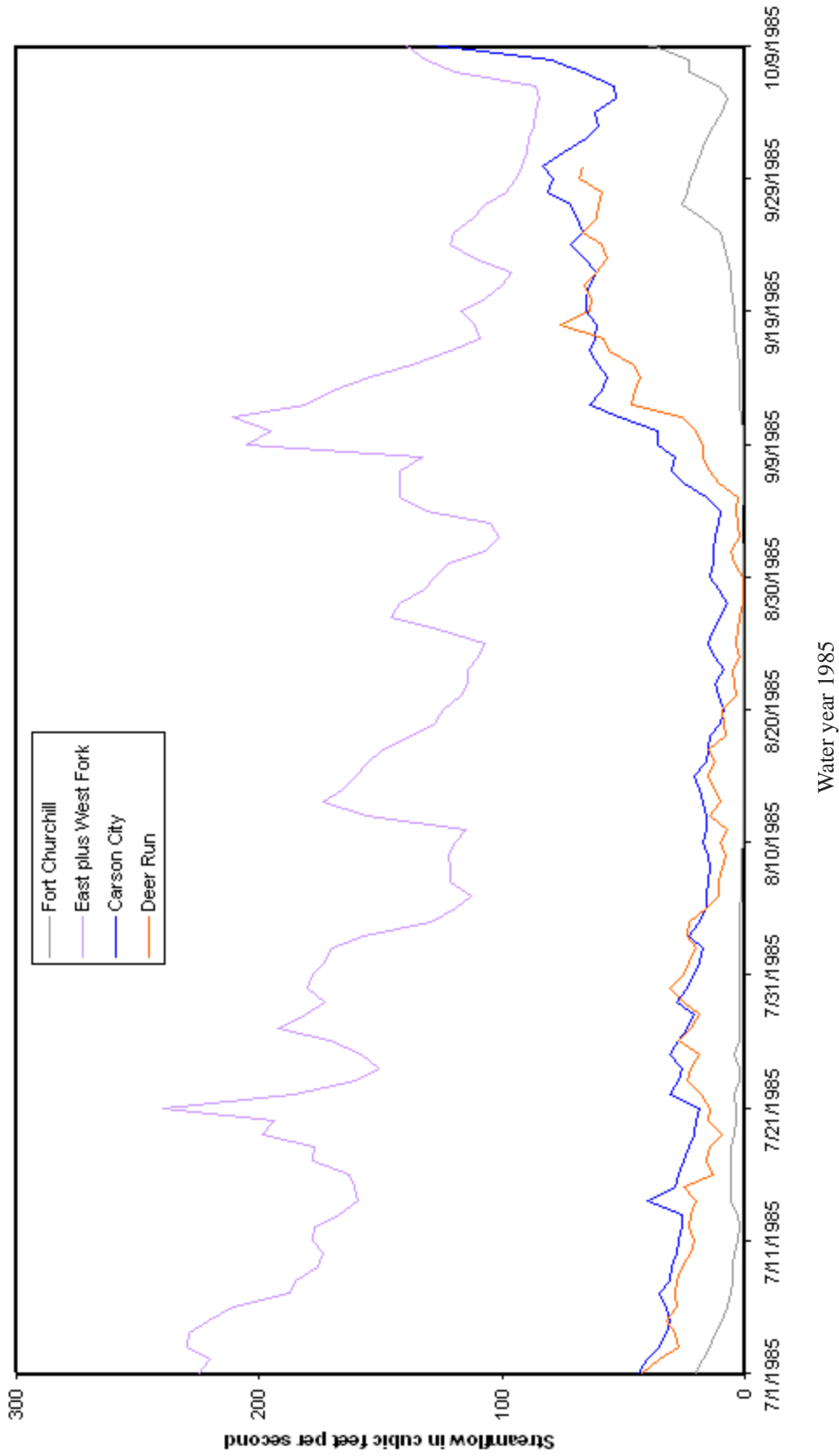
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



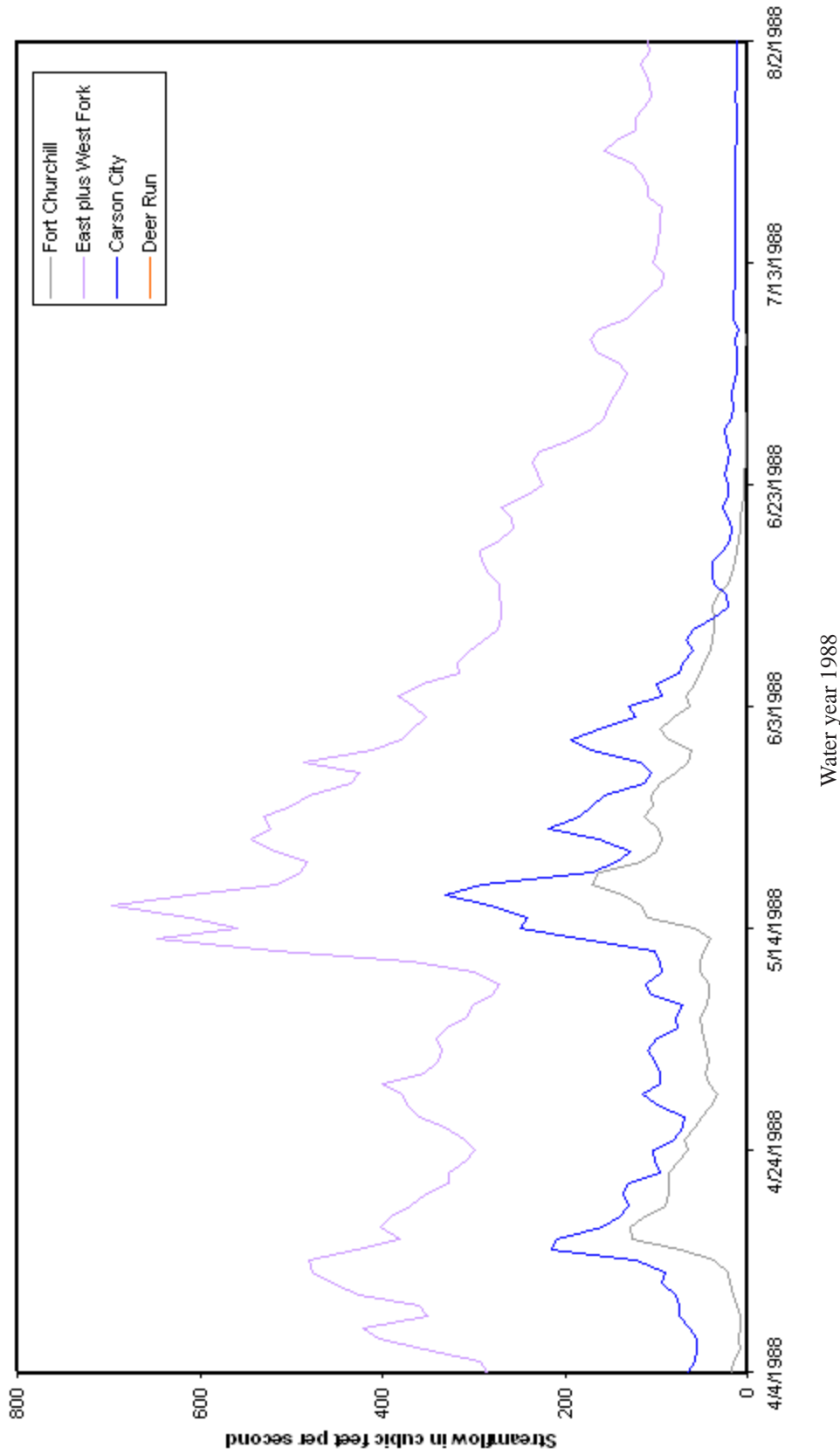
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



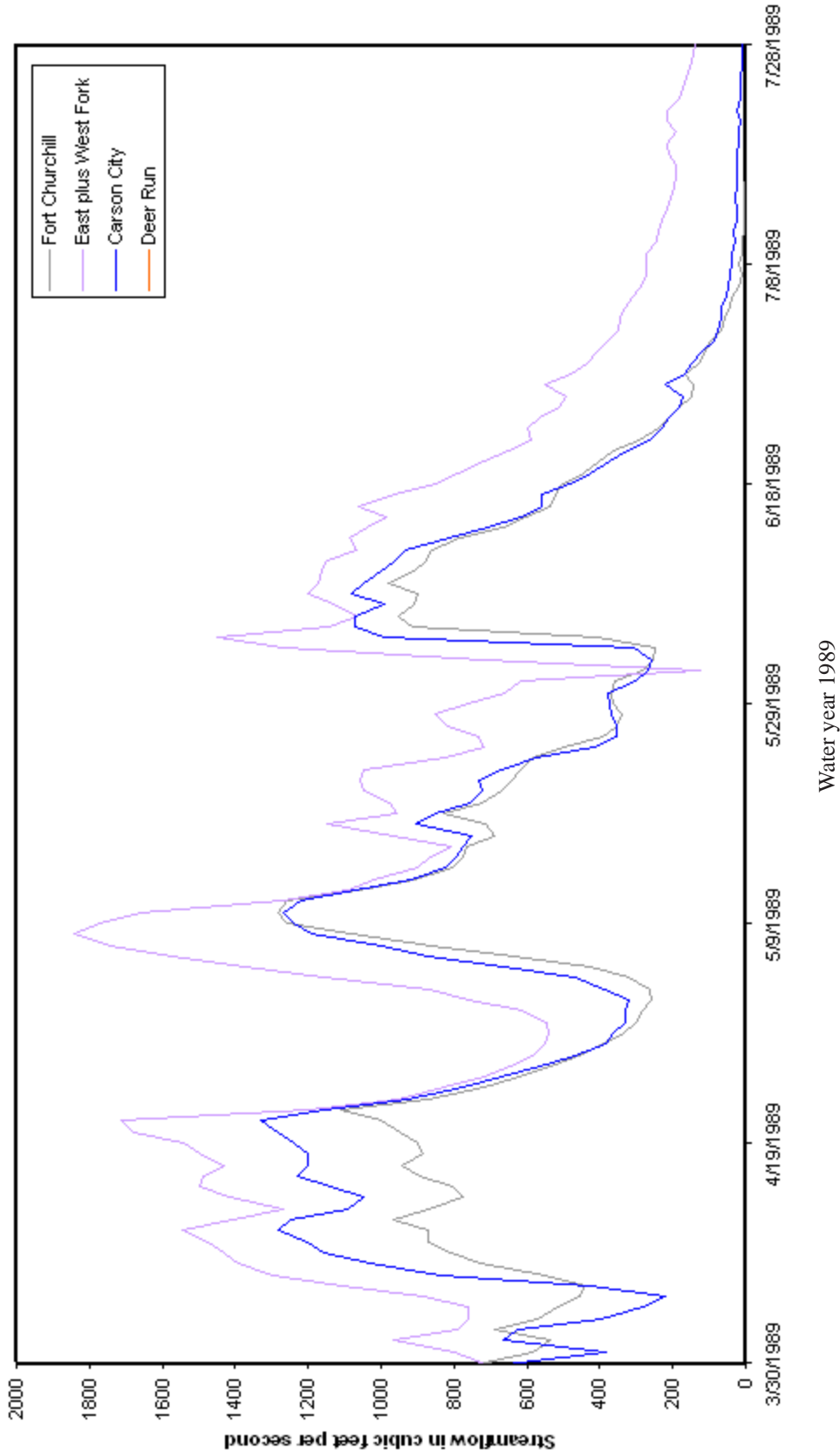
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



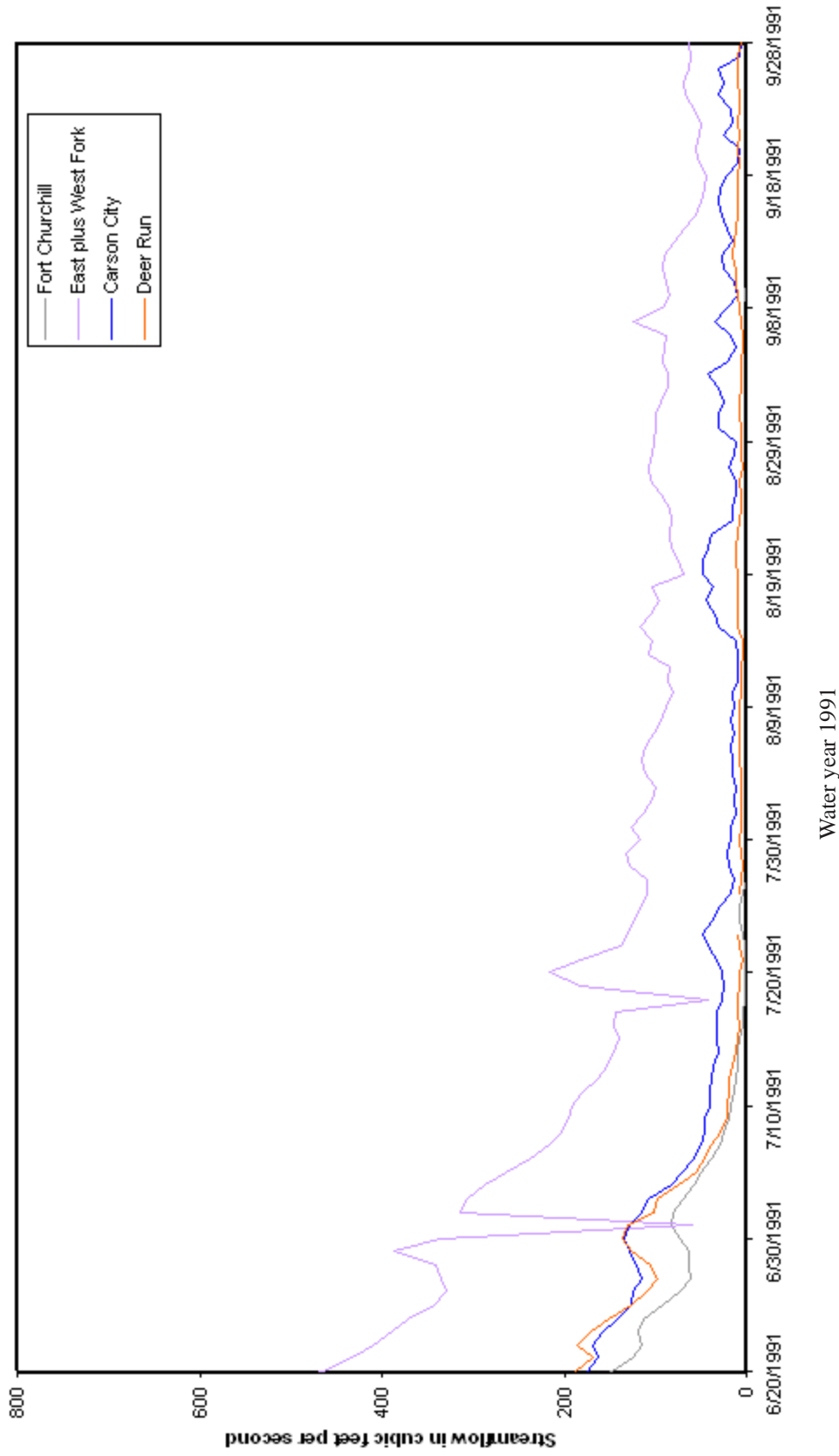
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



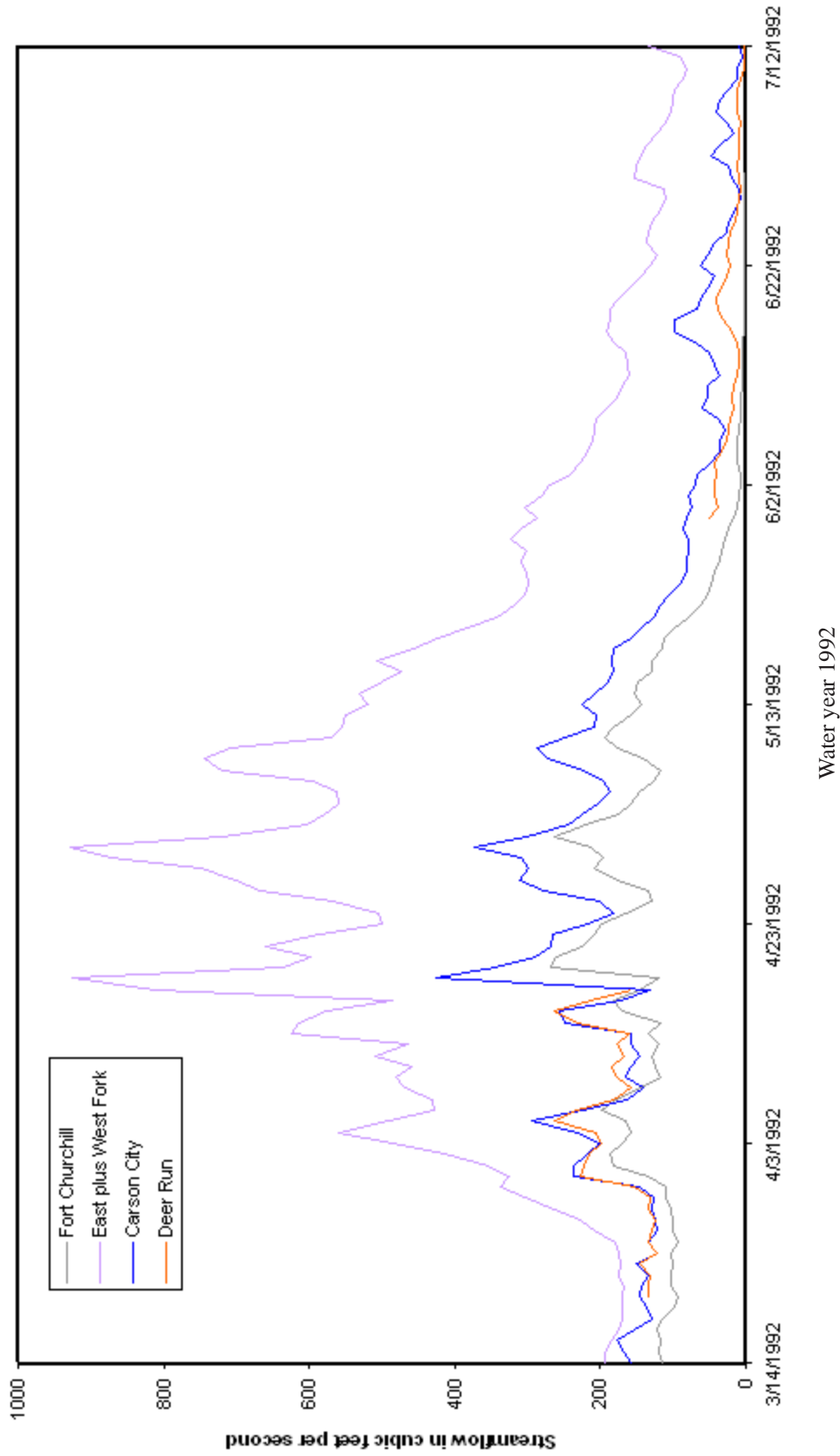
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



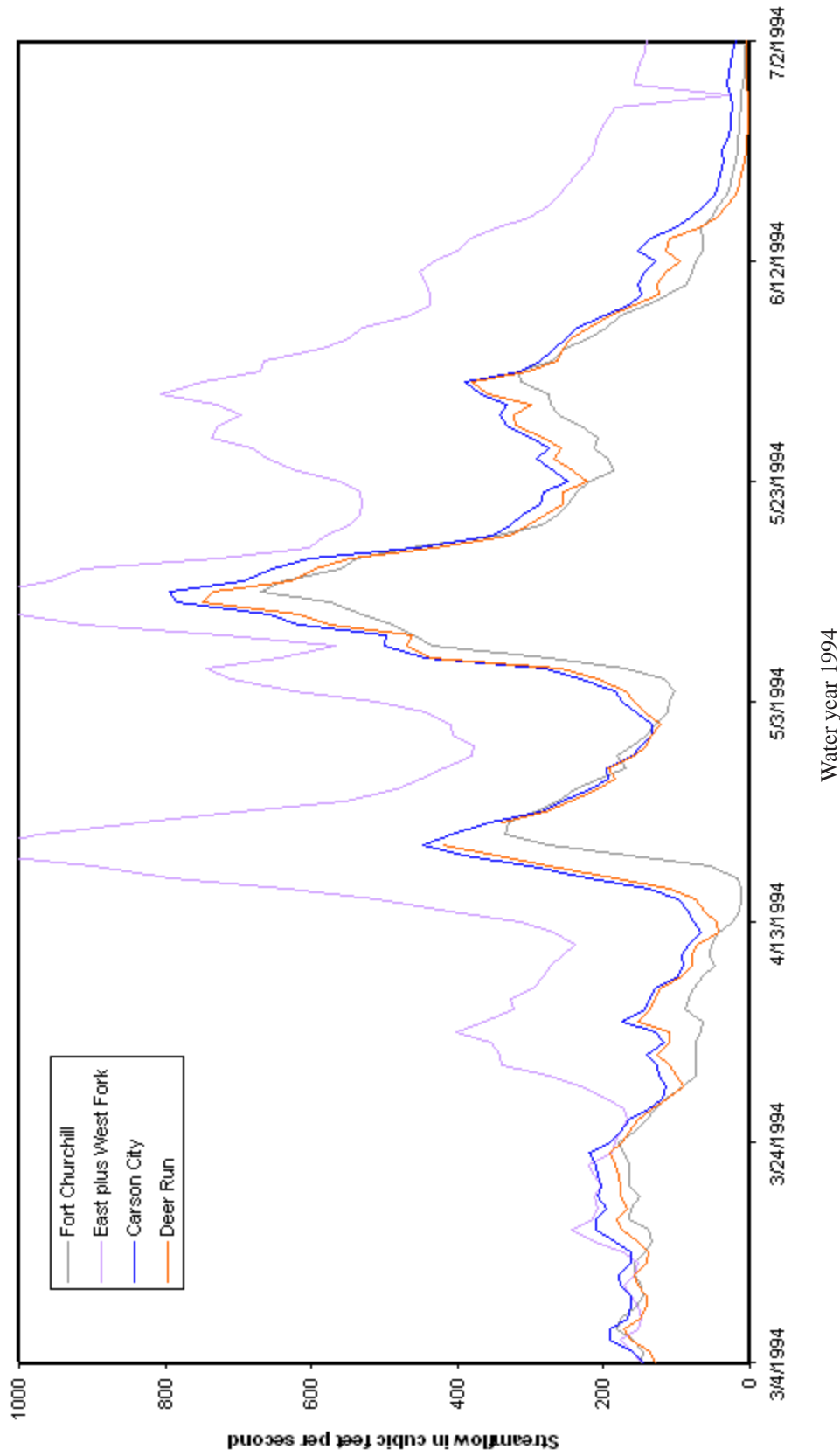
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



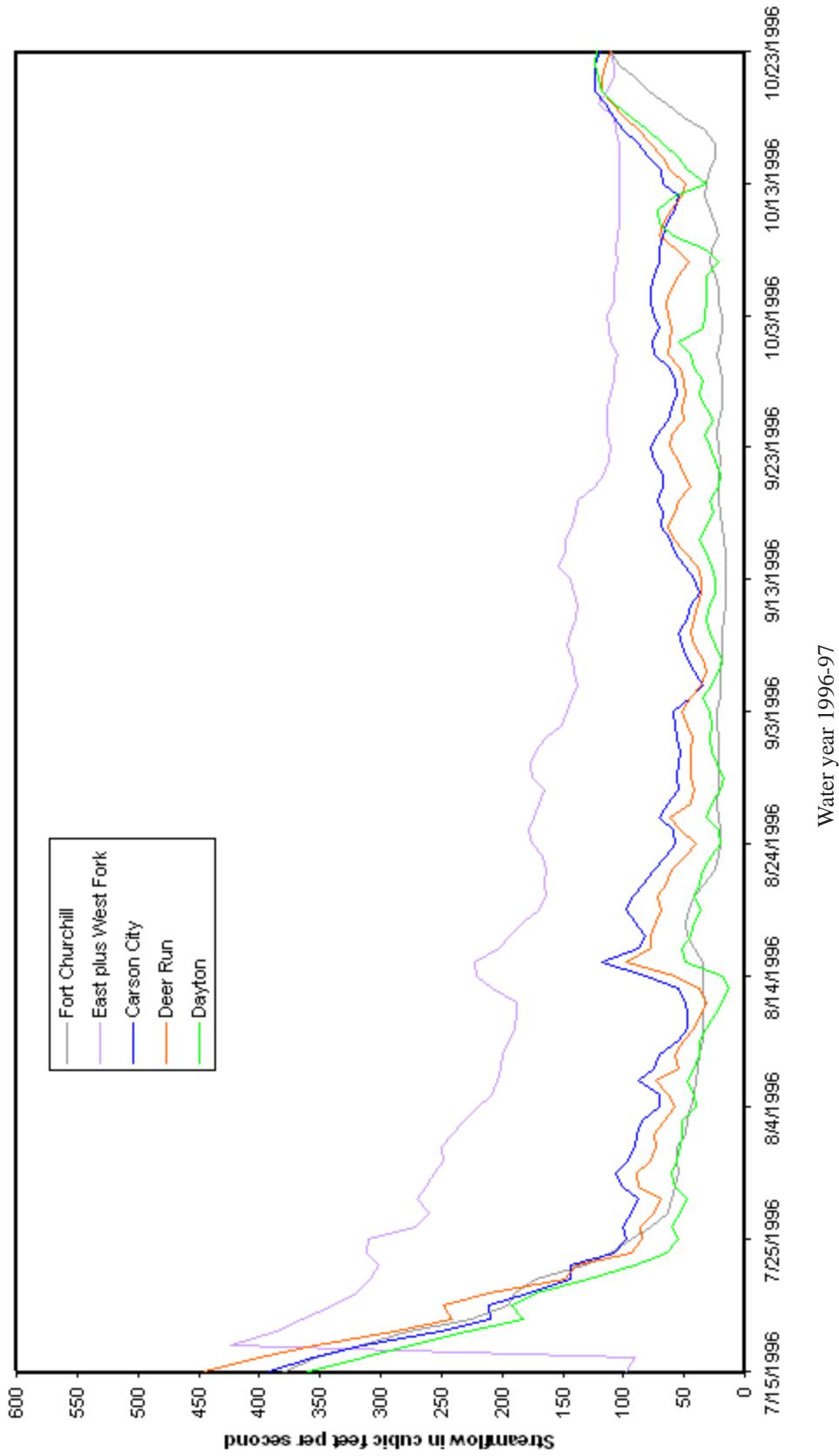
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



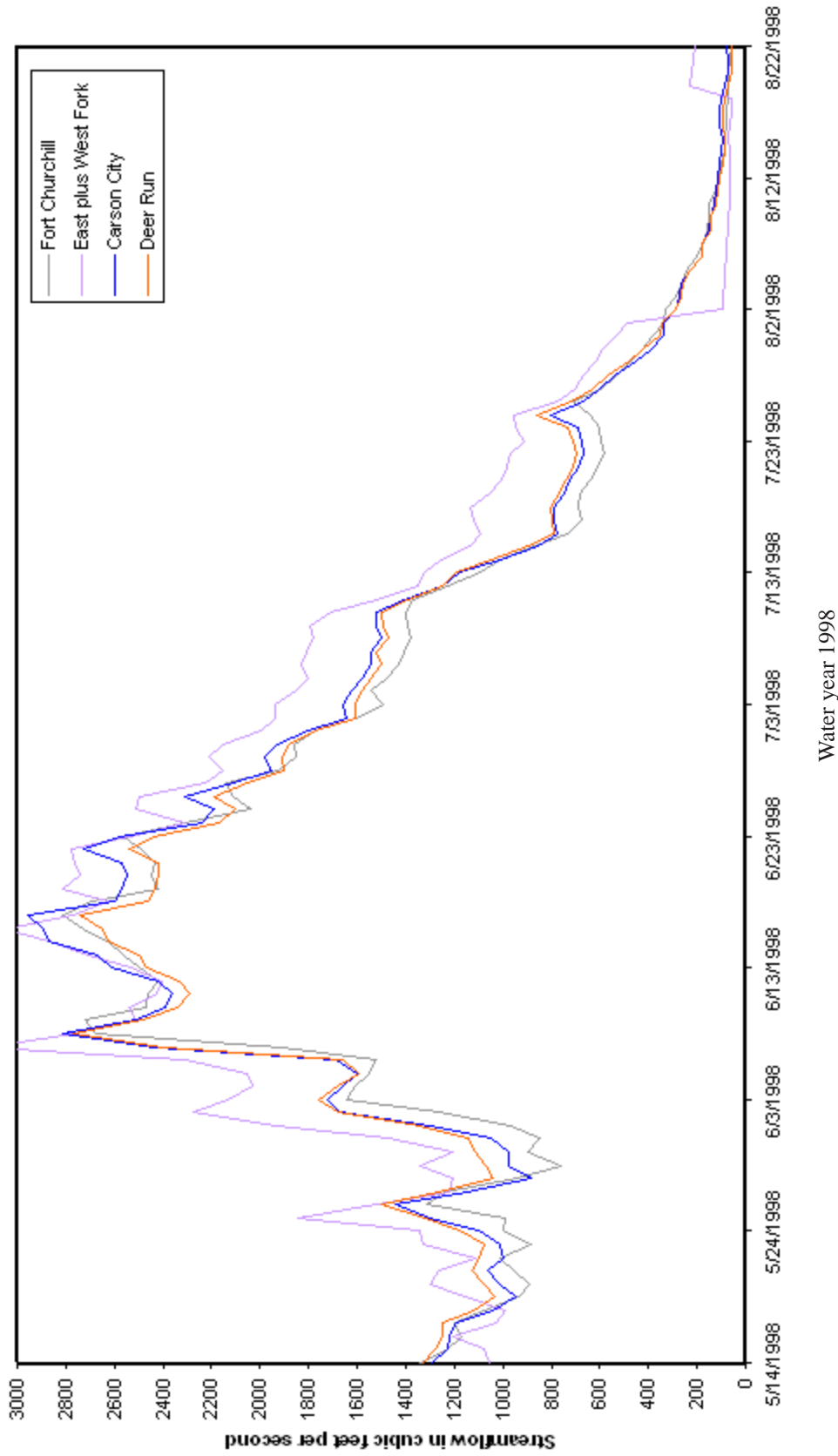
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



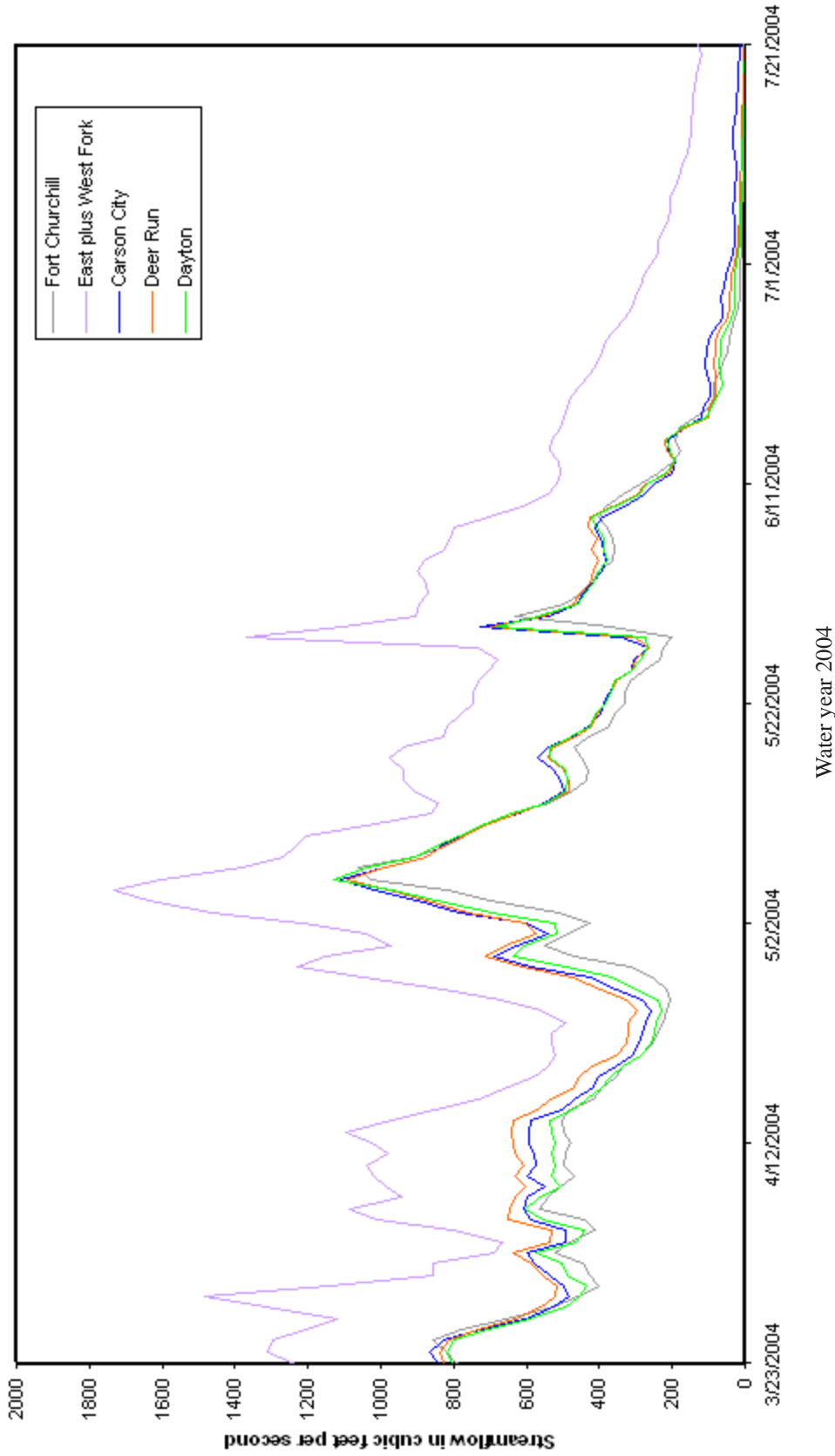
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



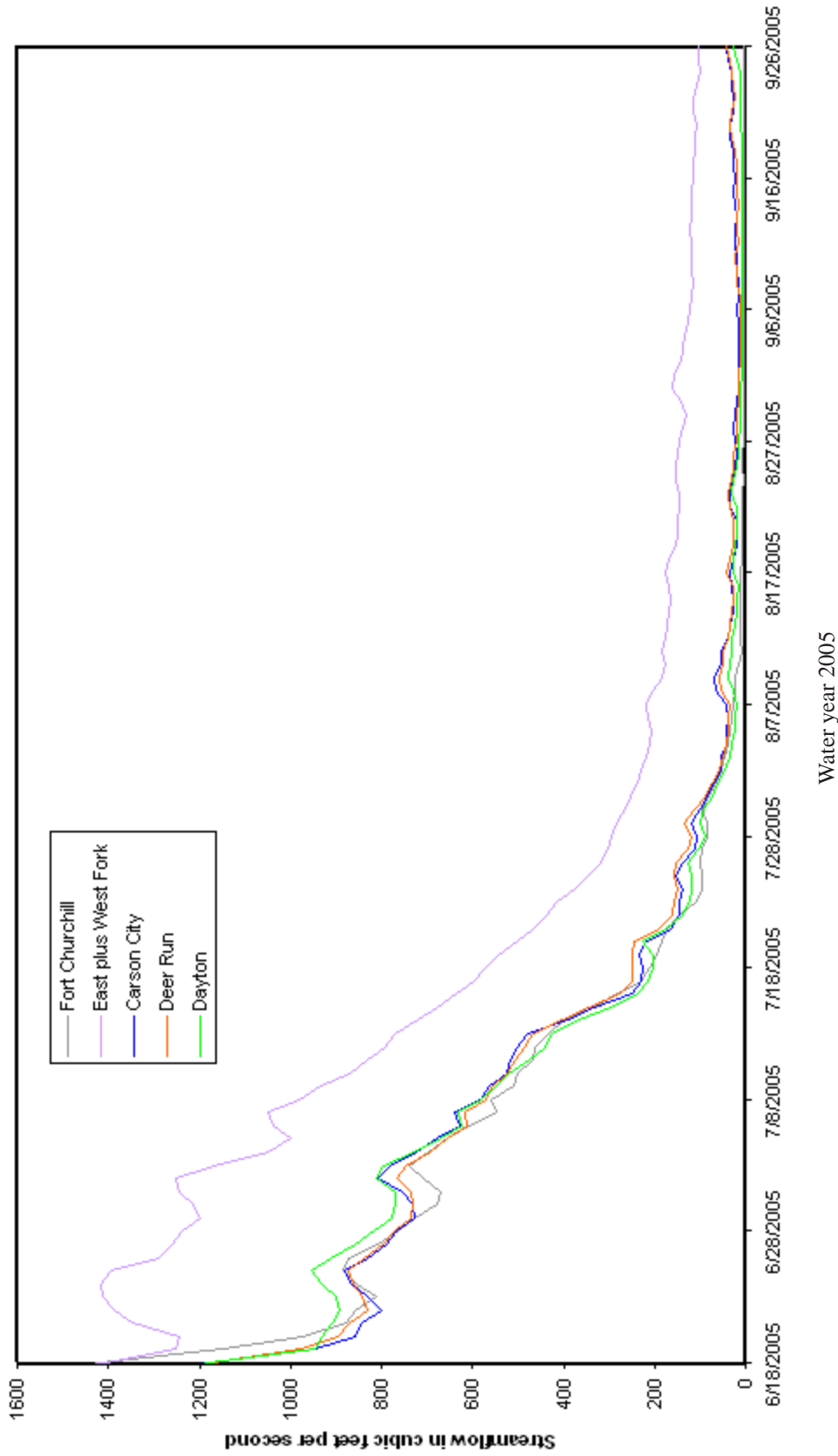
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



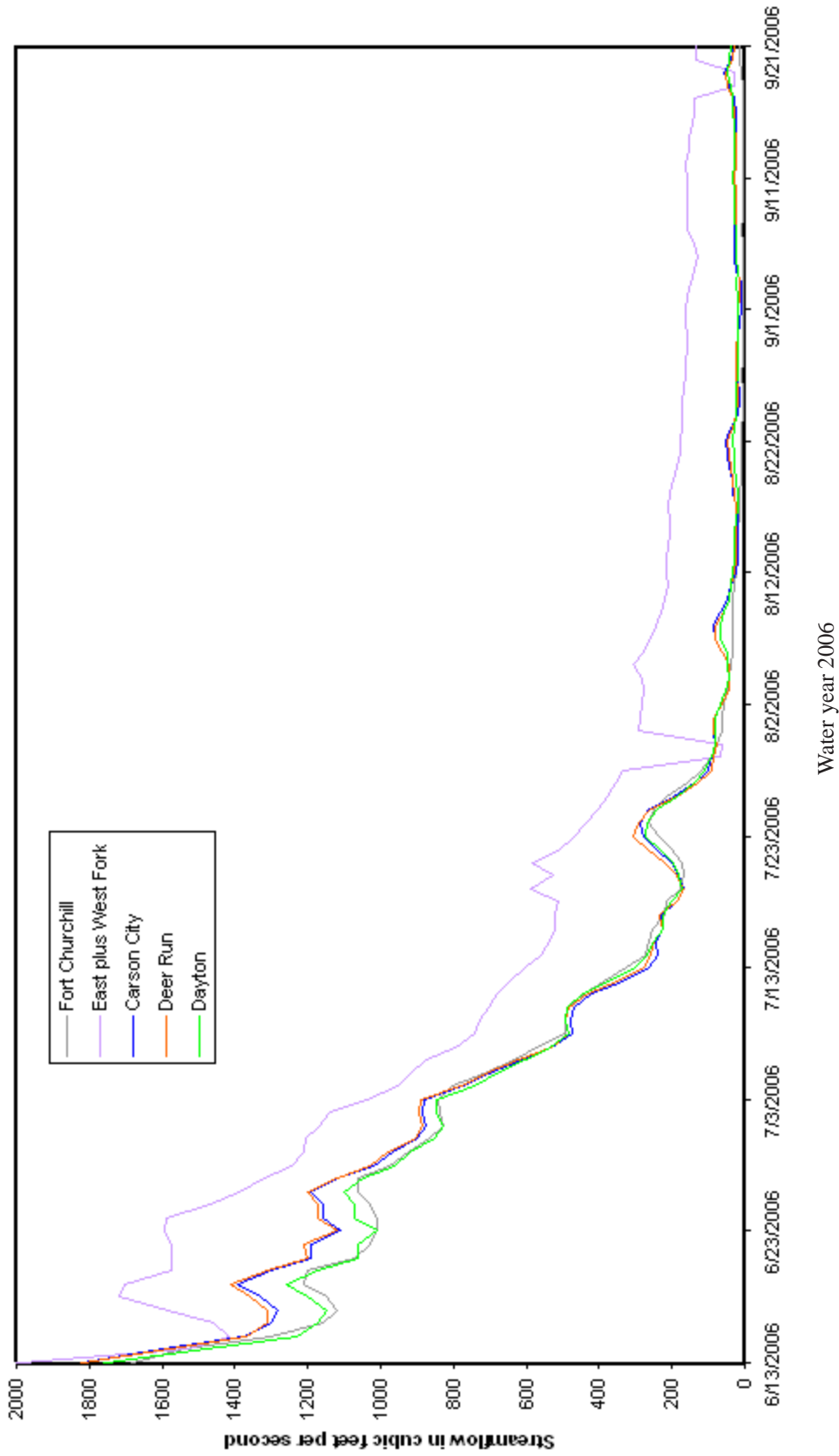
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



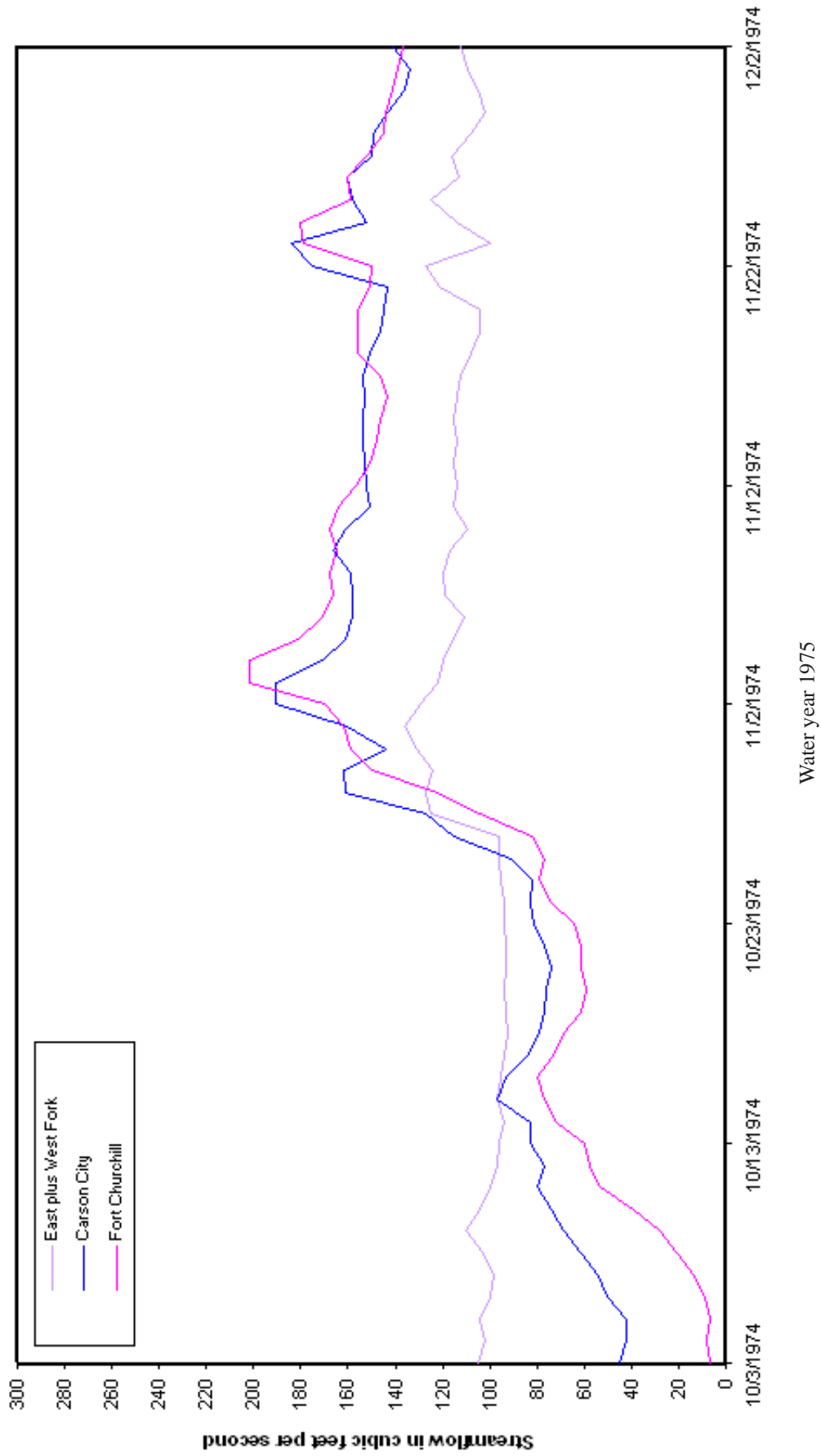
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



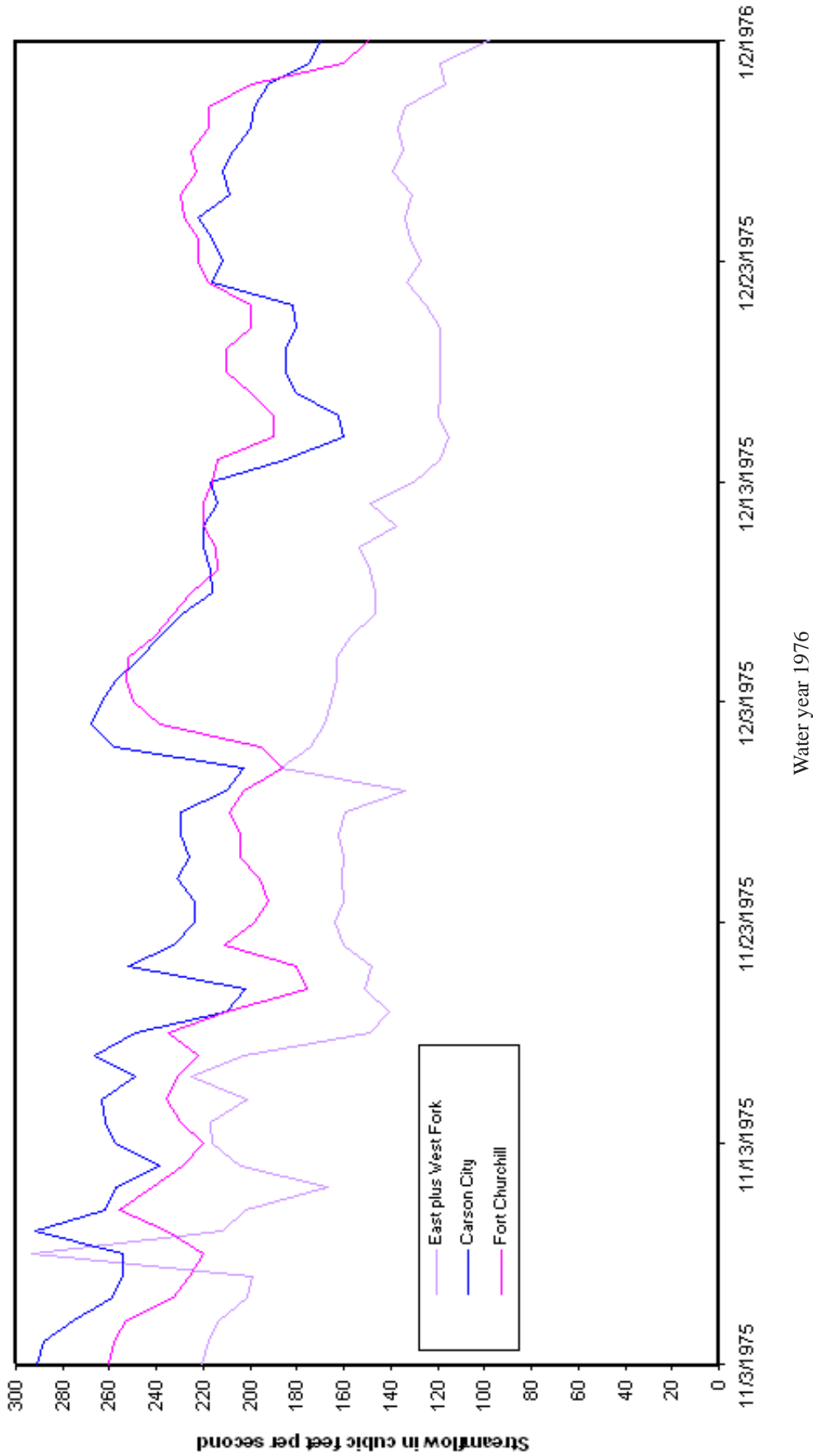
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



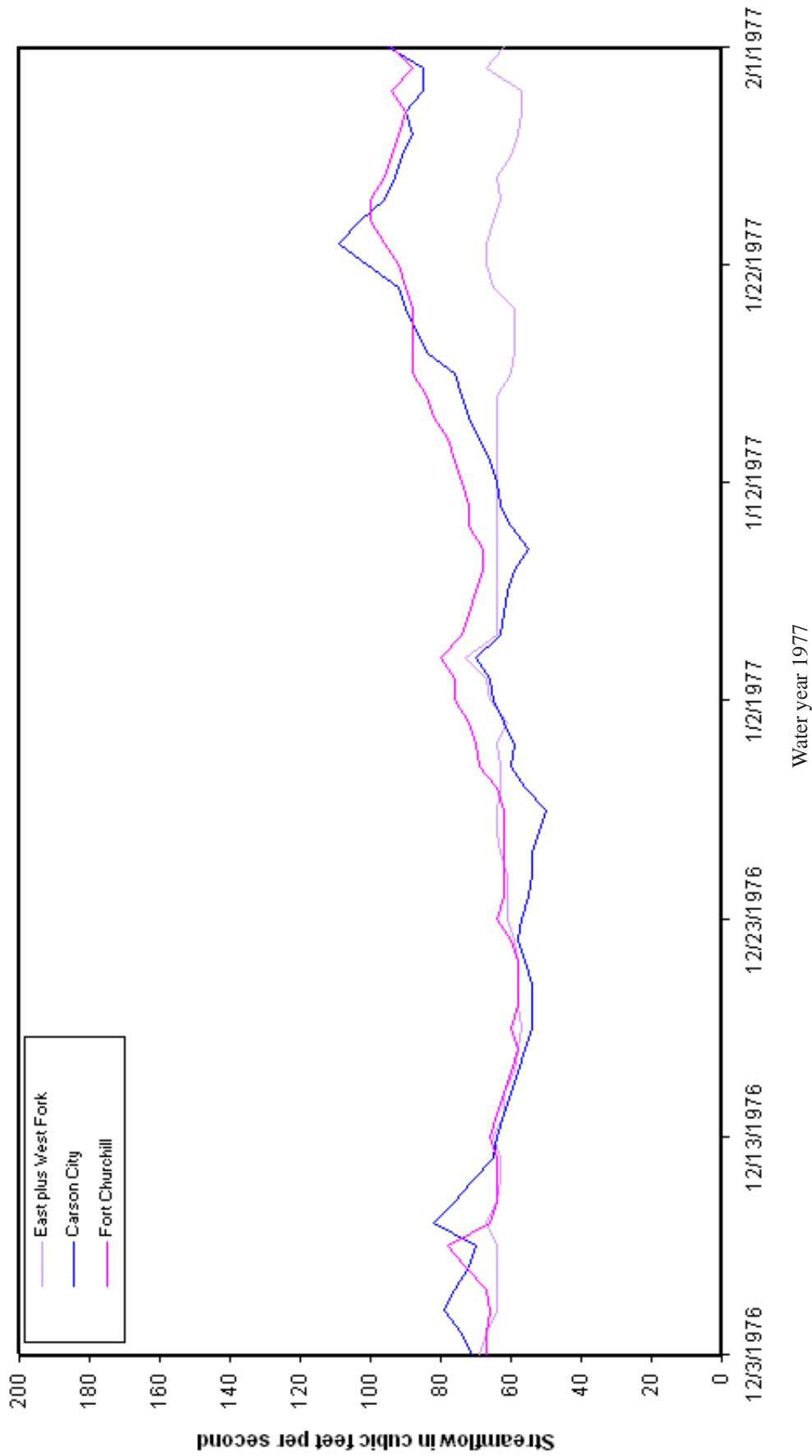
Appendix A1. Daily mean streamflow at selected sites and periods showing streamflow losses in the upper Carson River basin, Nevada.—Continued



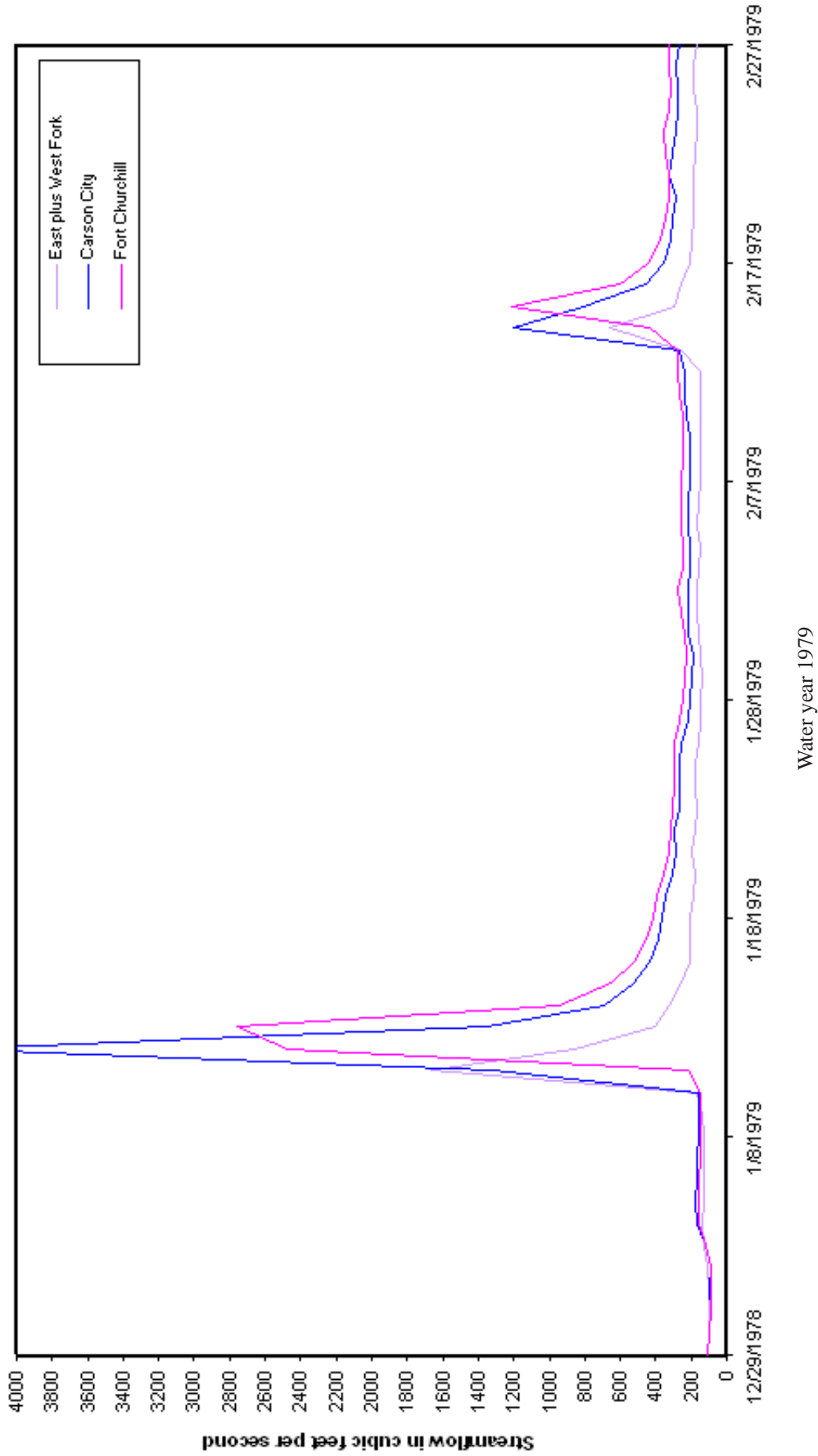
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.



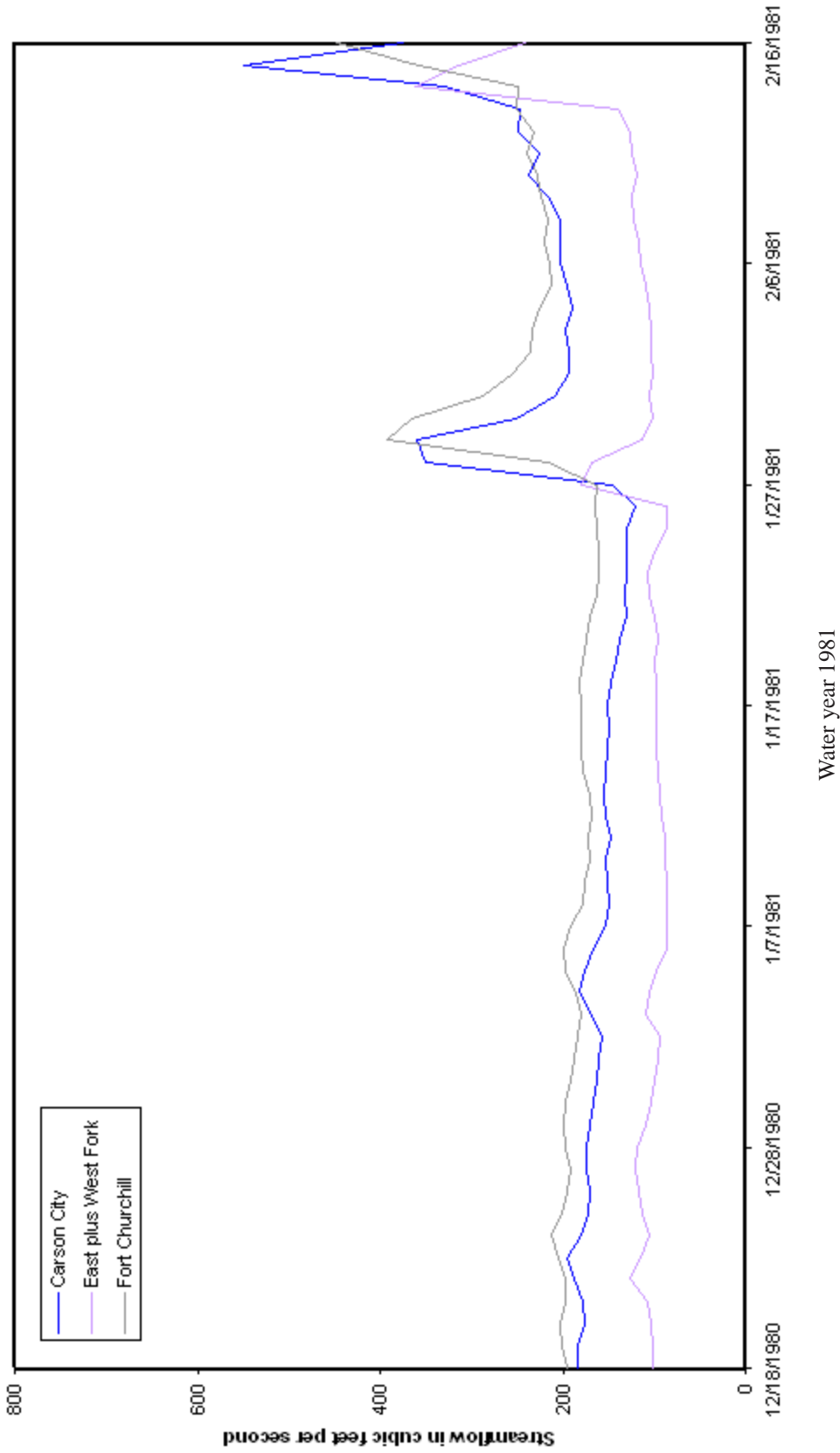
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



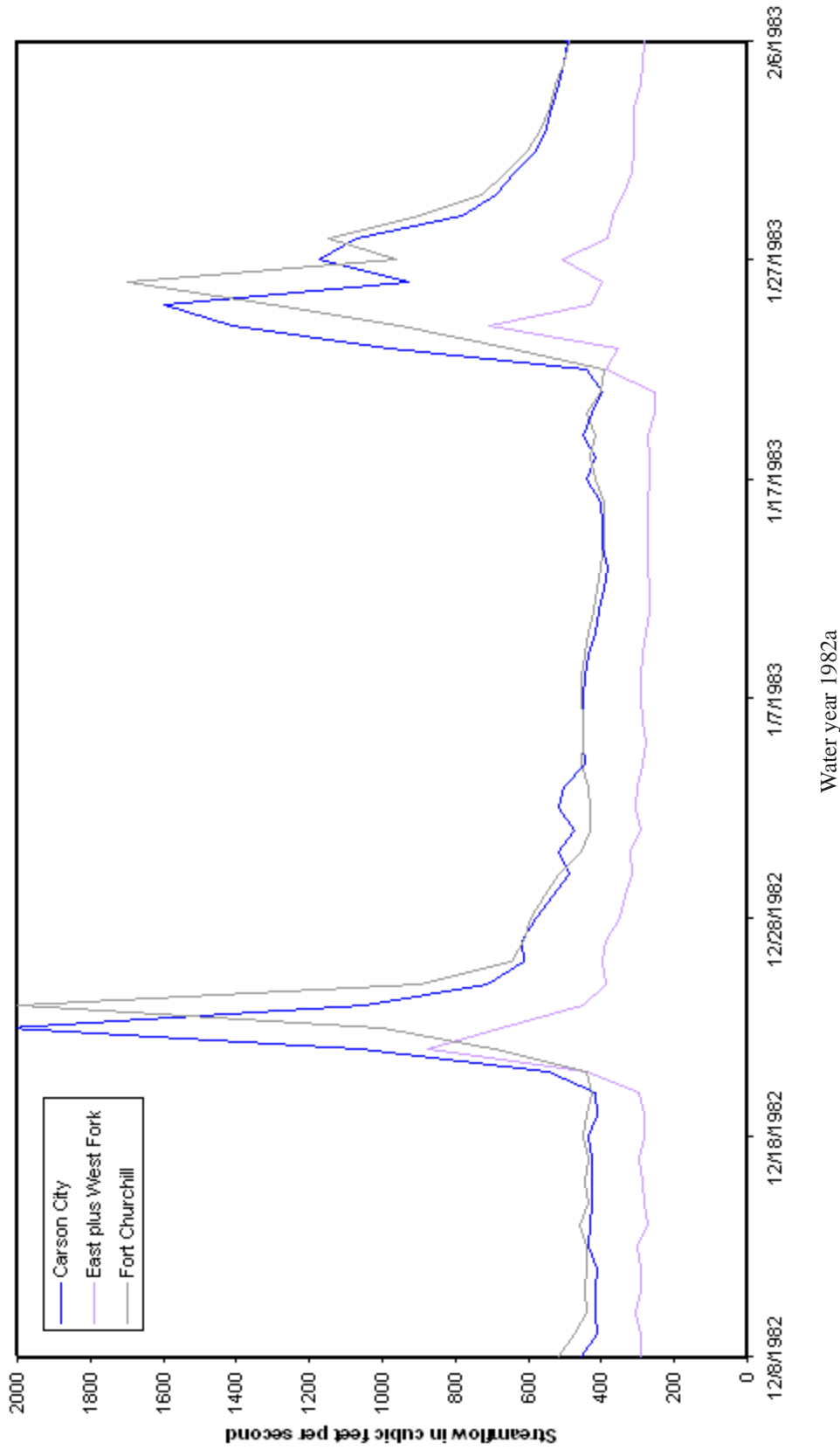
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



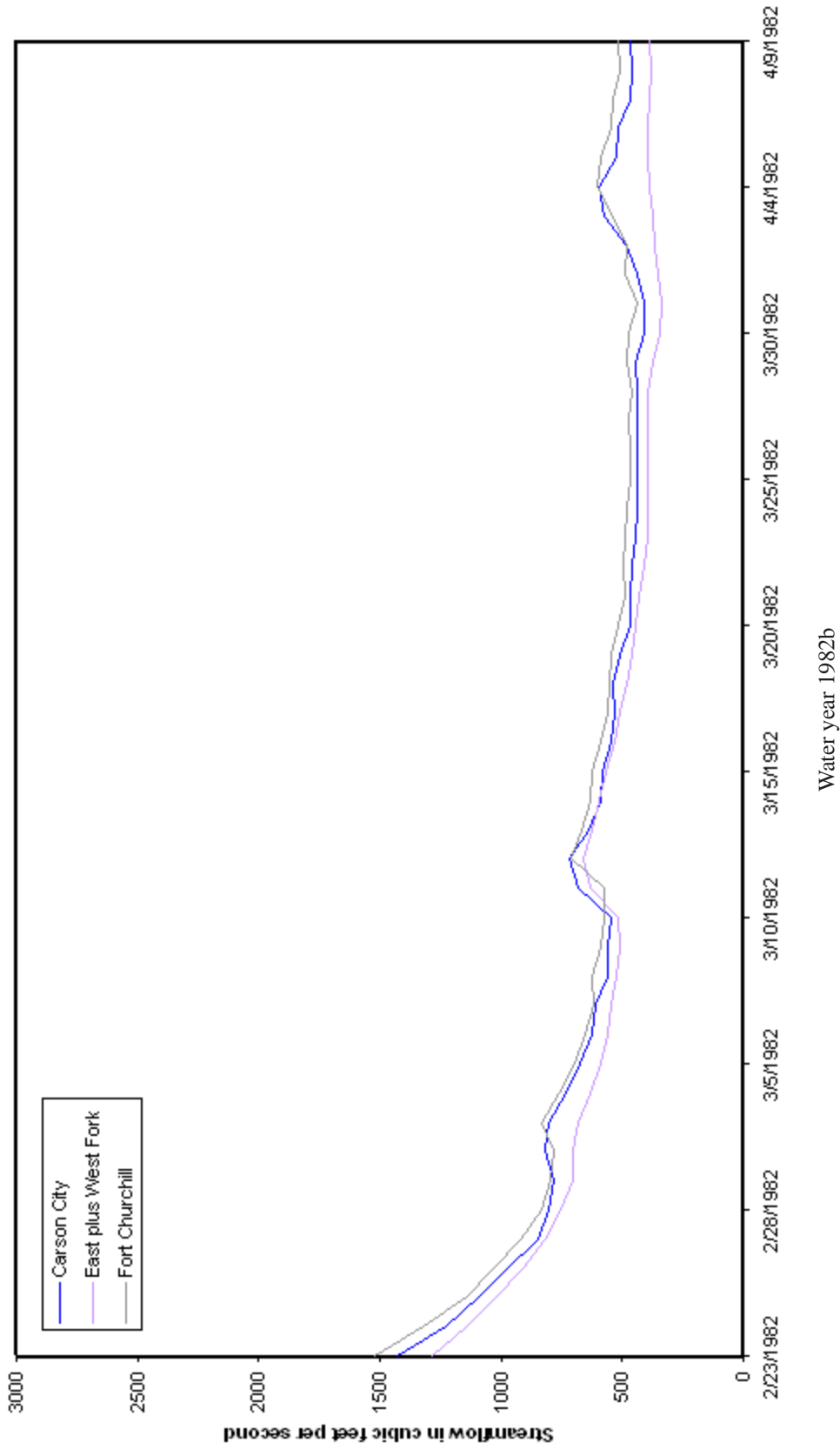
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



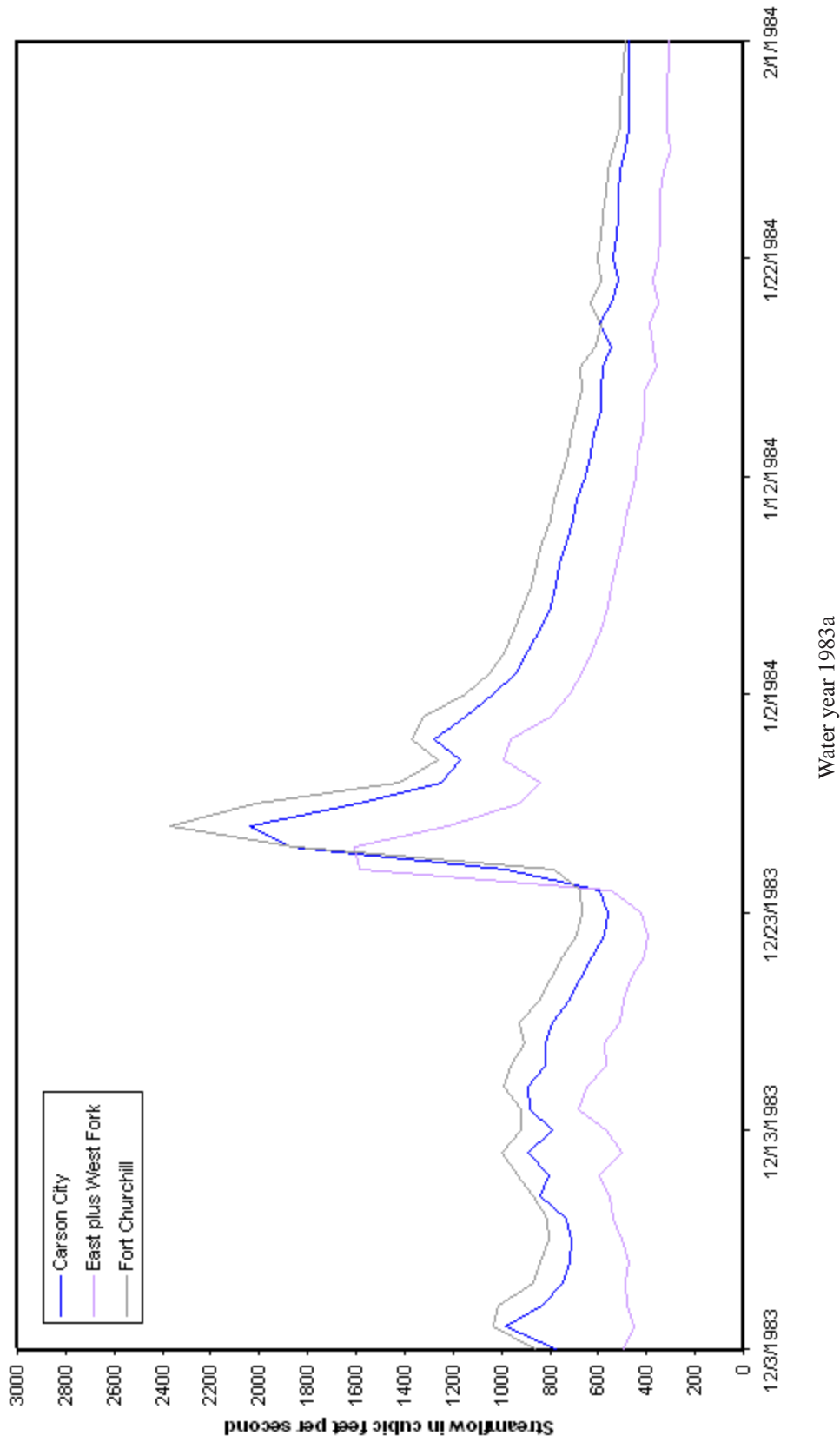
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



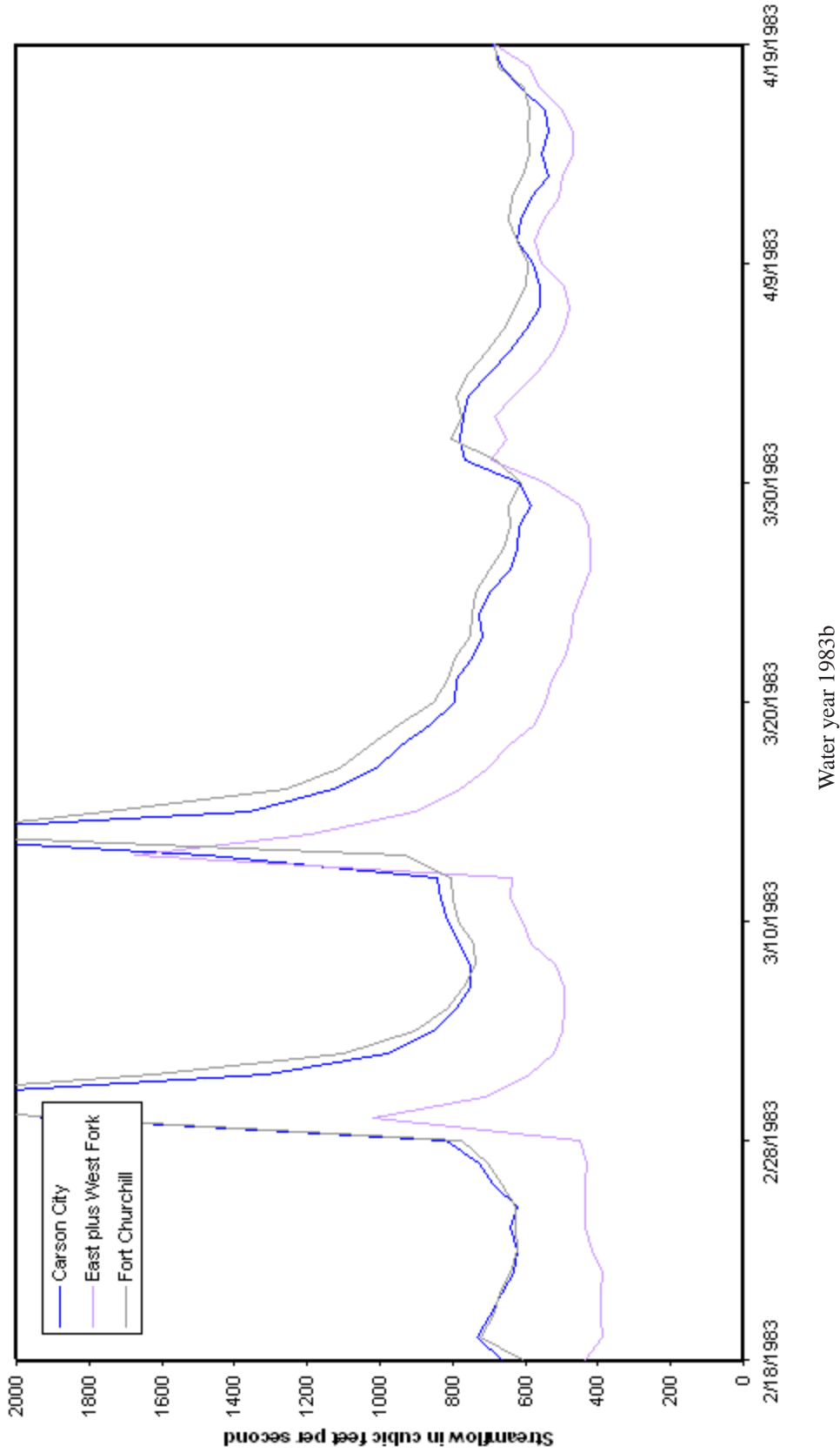
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



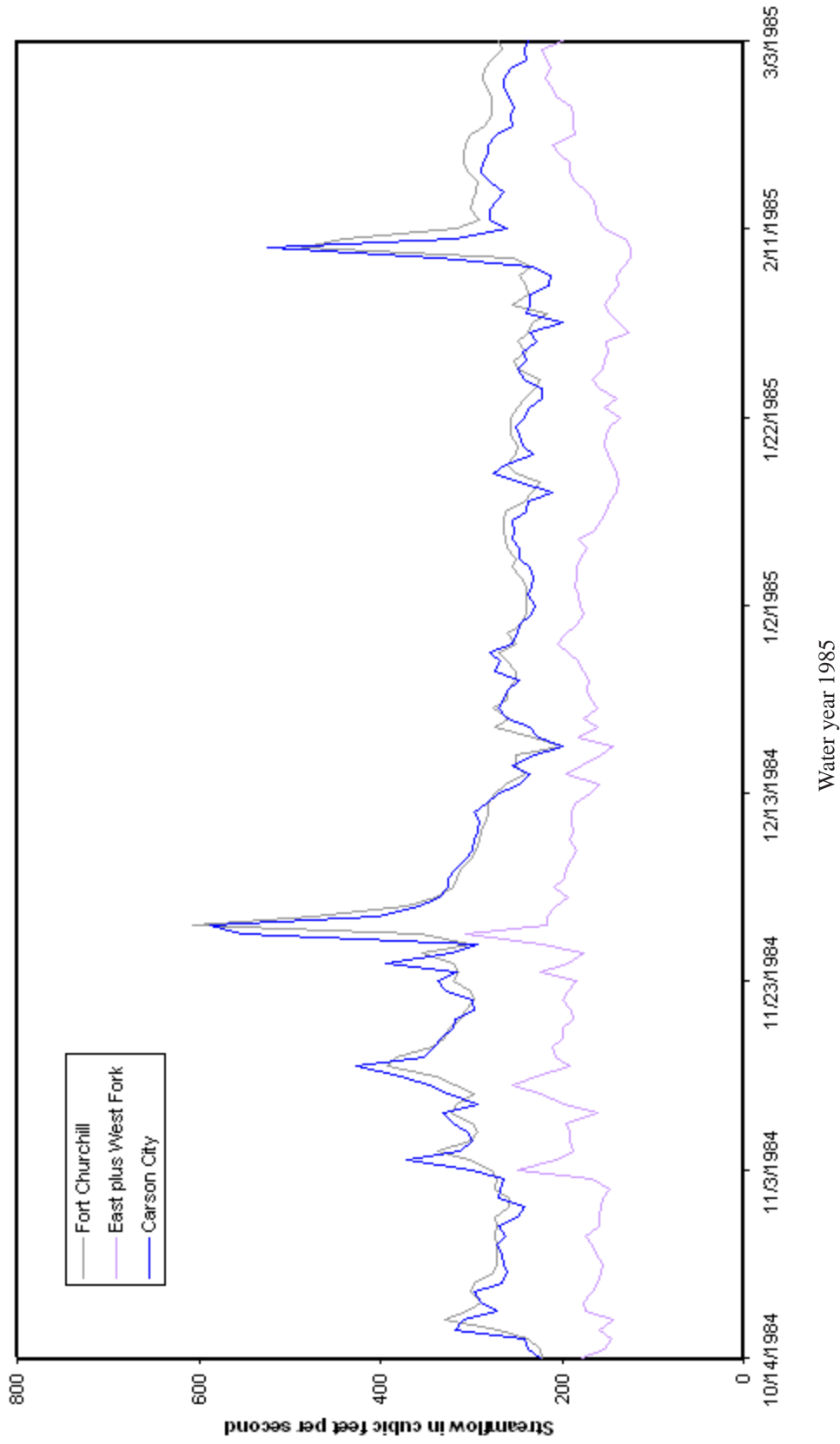
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



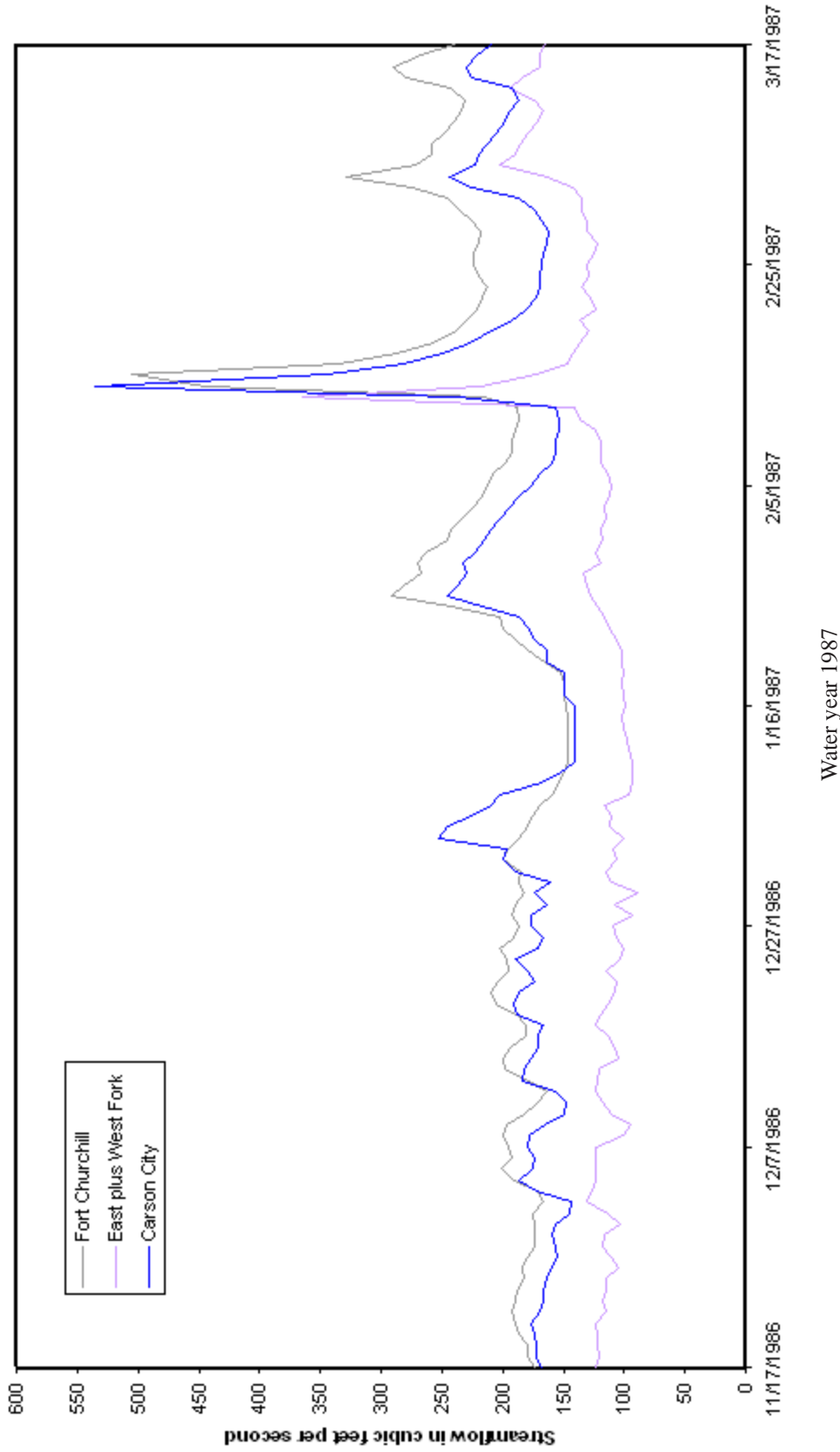
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



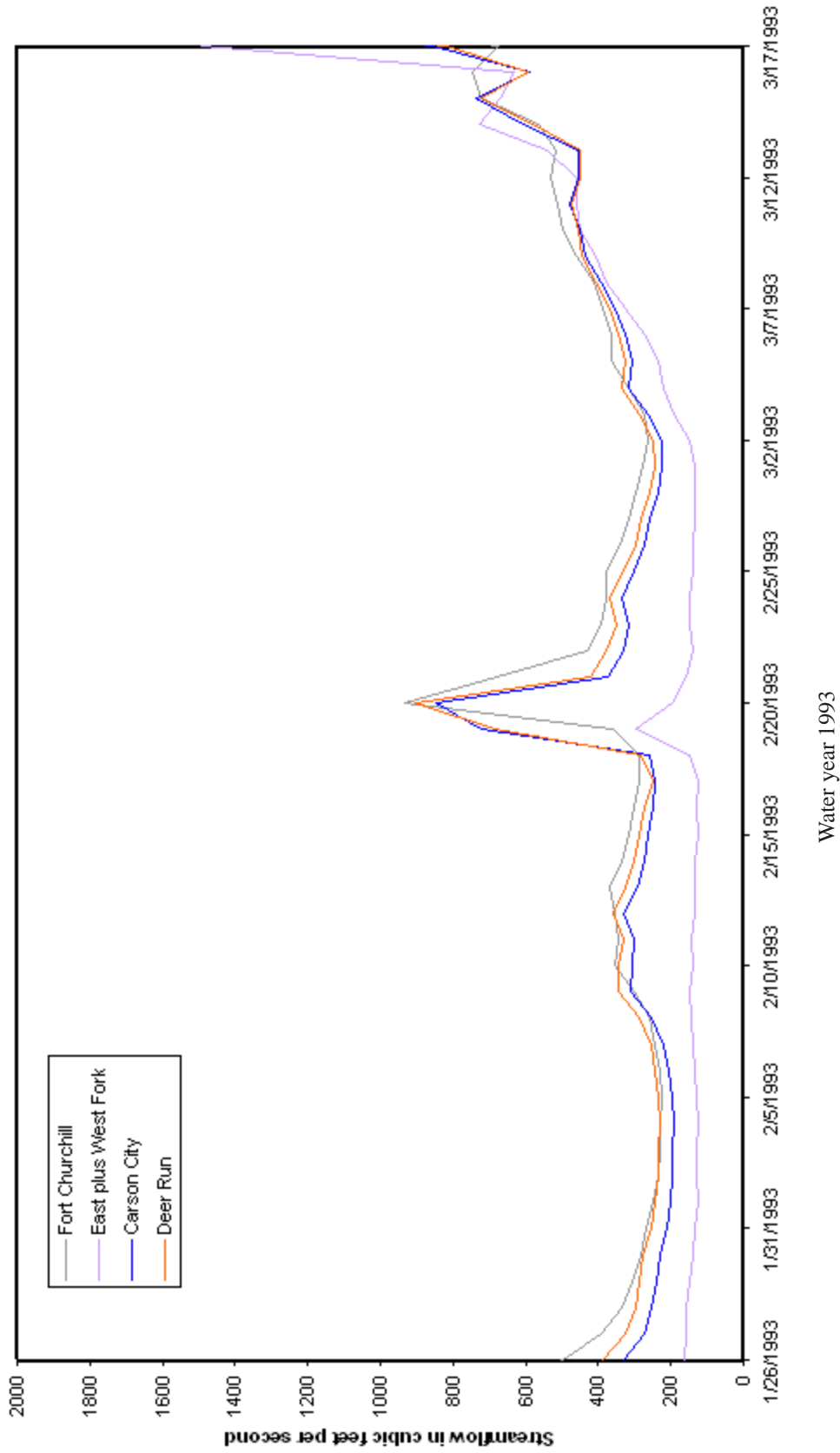
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



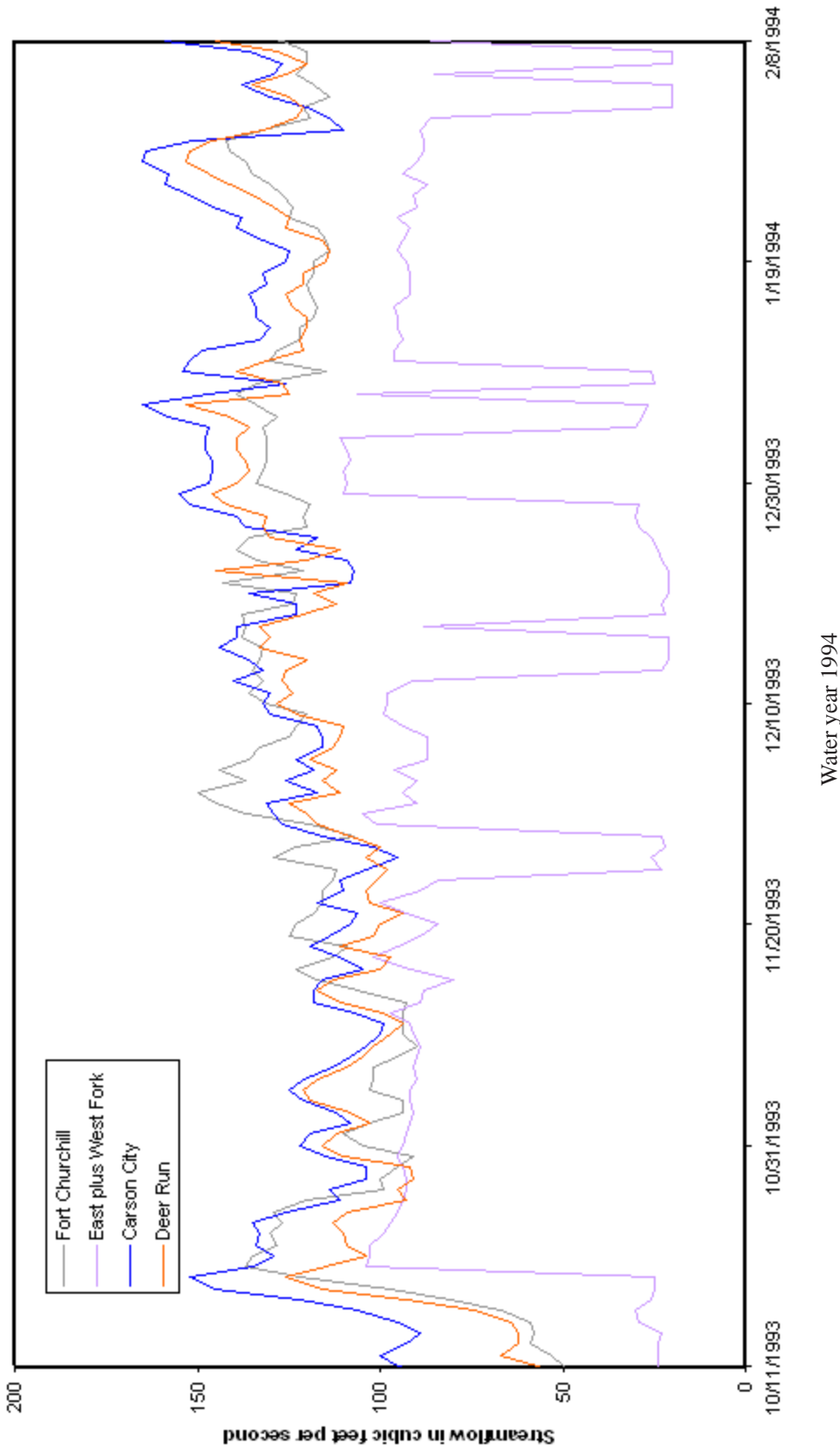
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



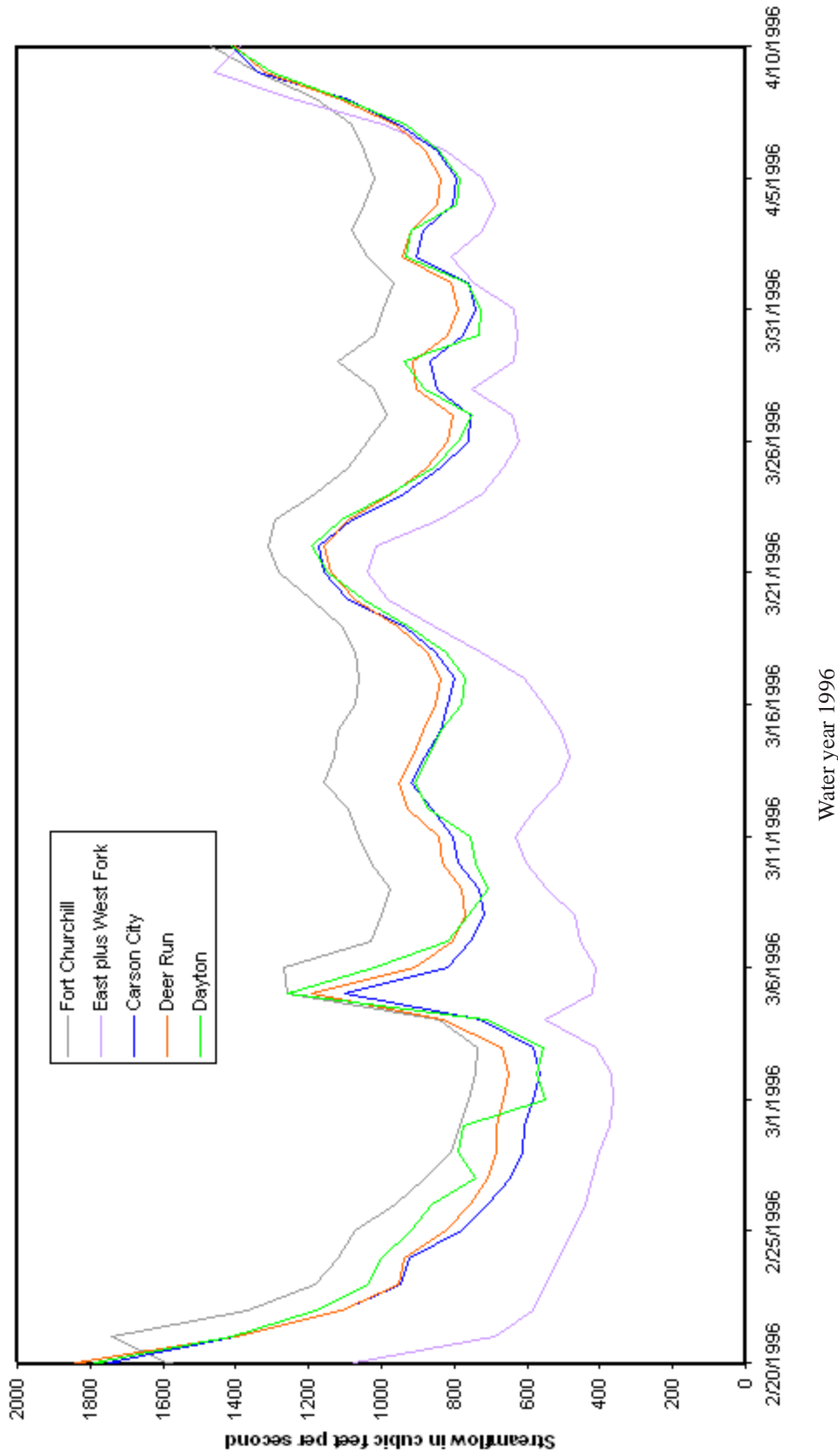
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



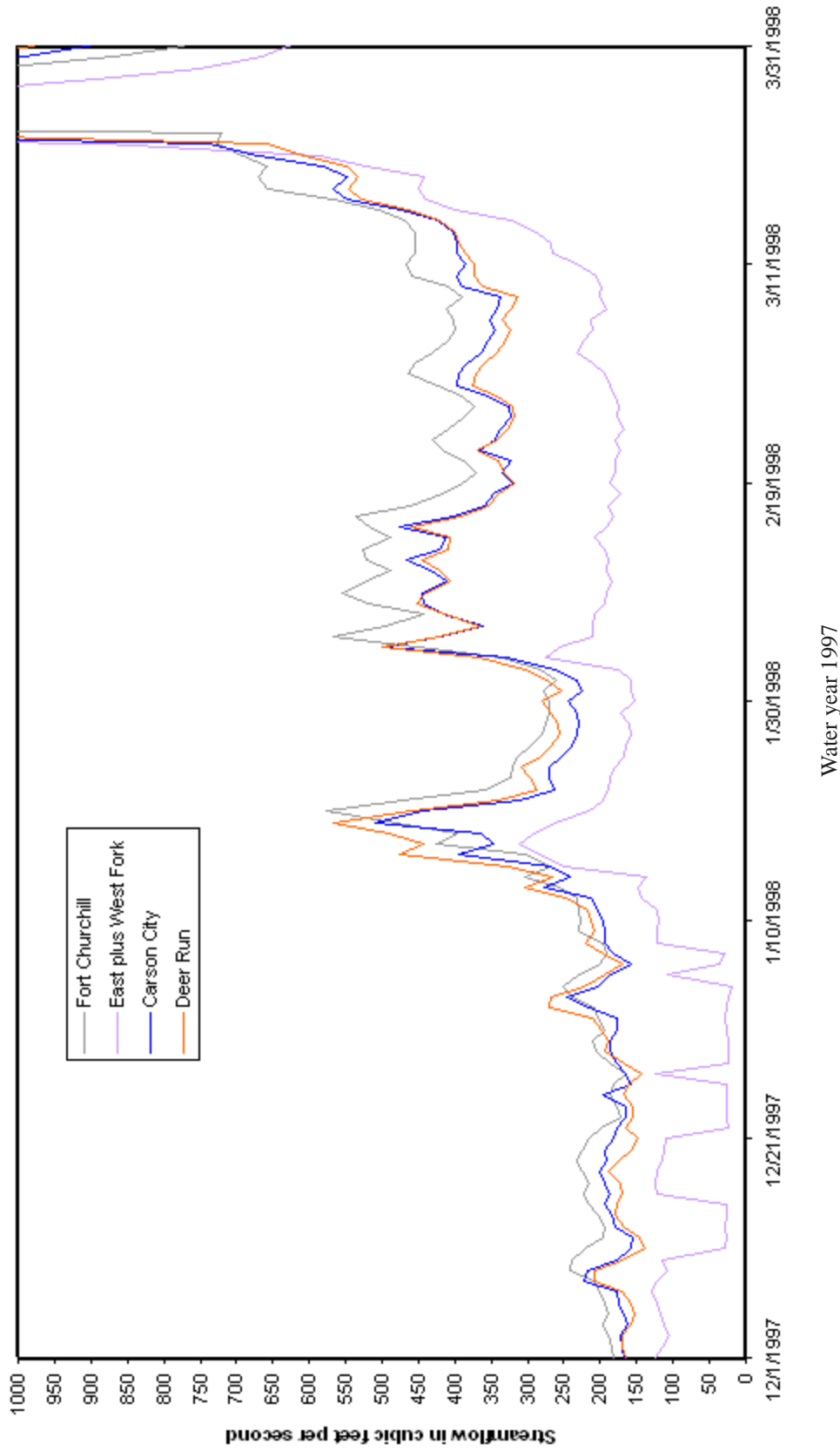
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



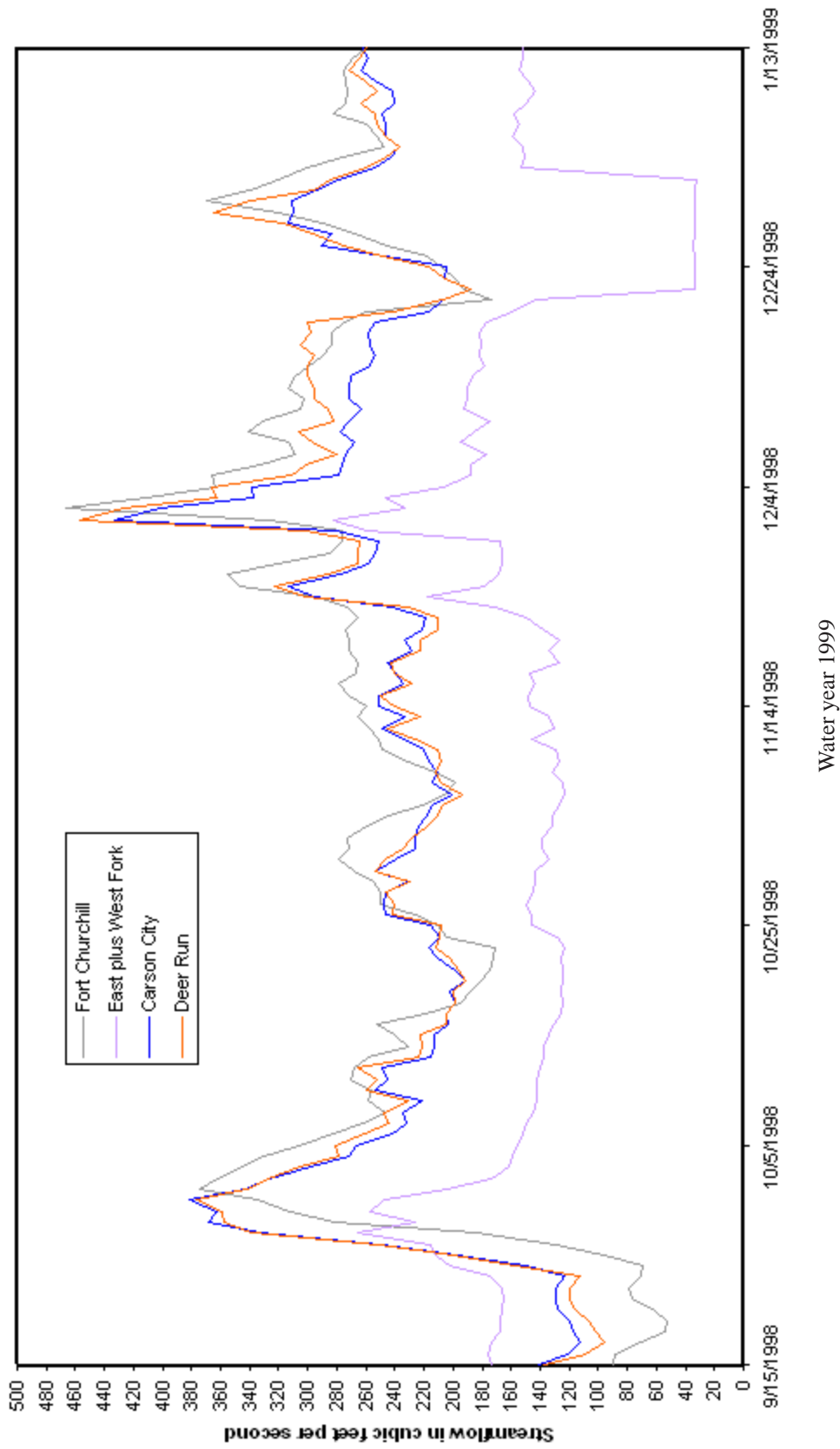
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



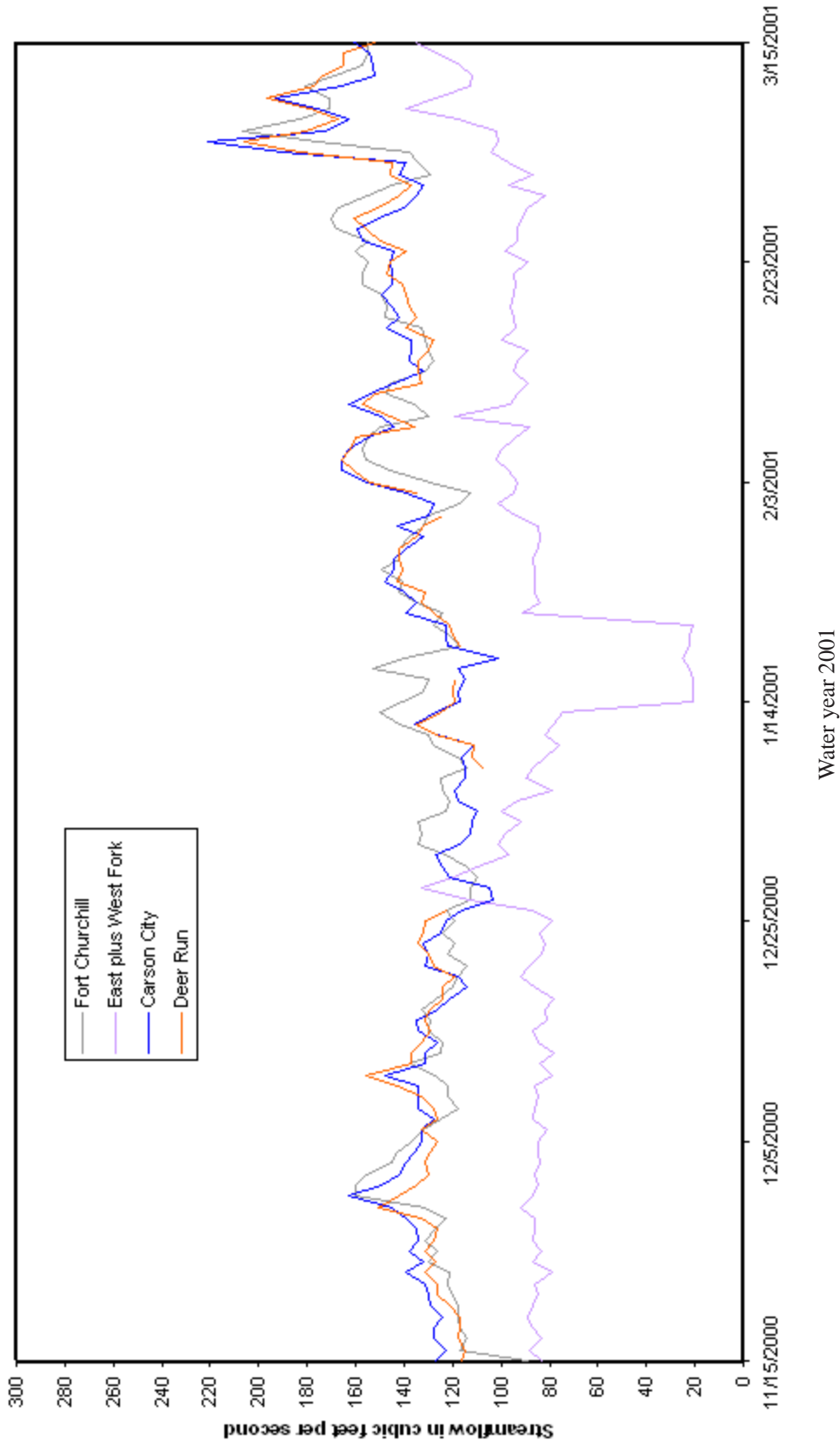
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



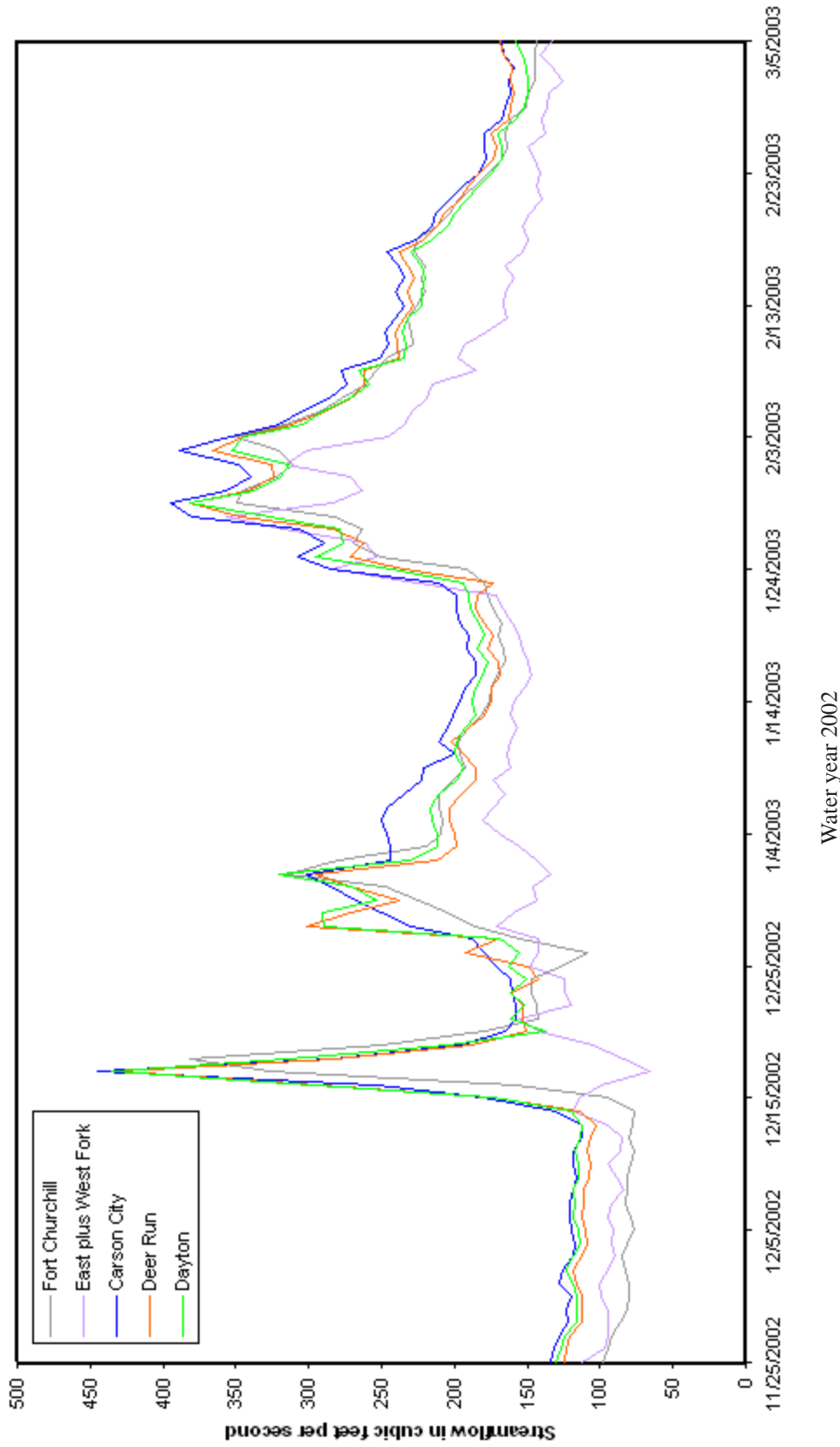
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



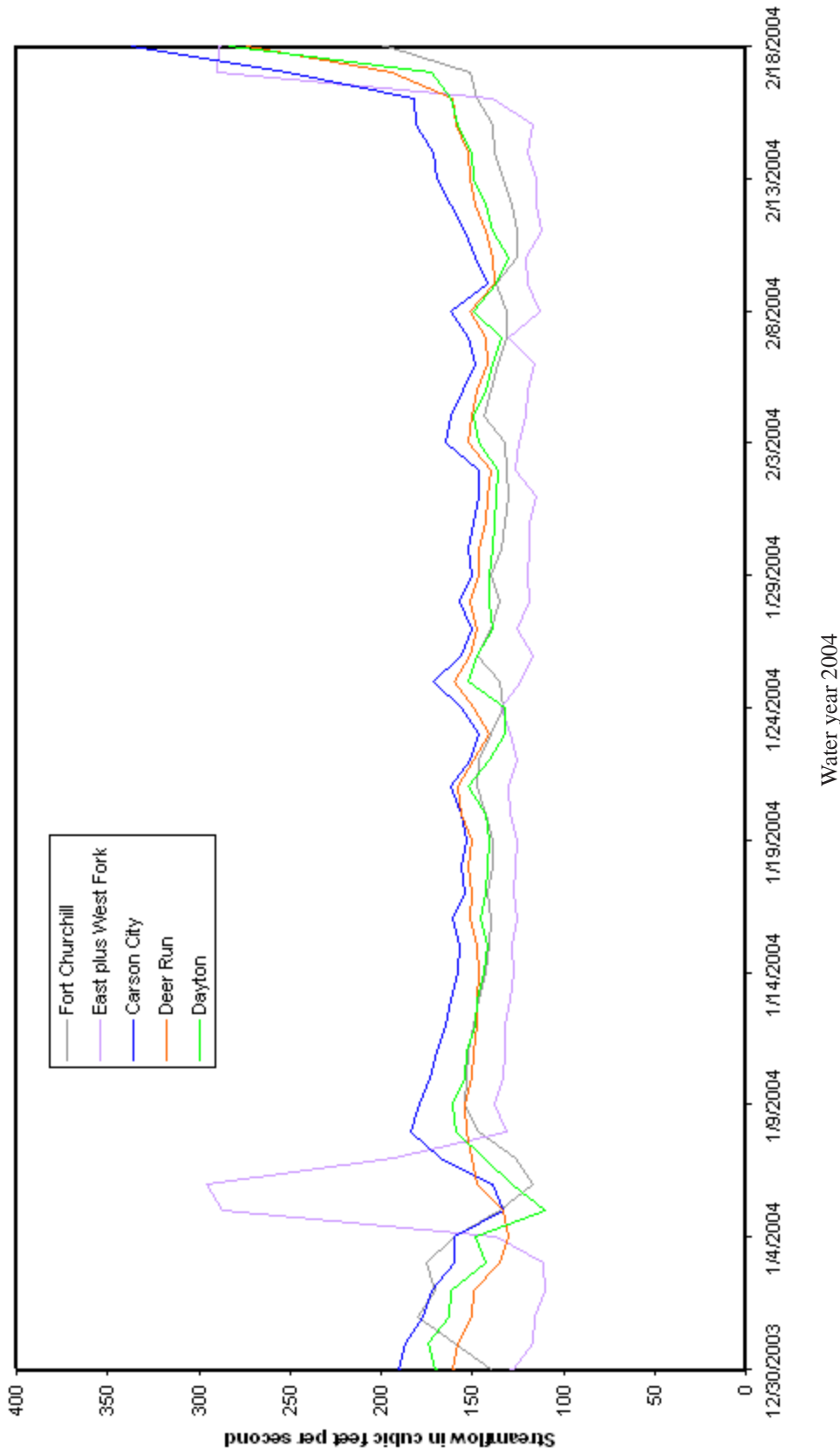
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



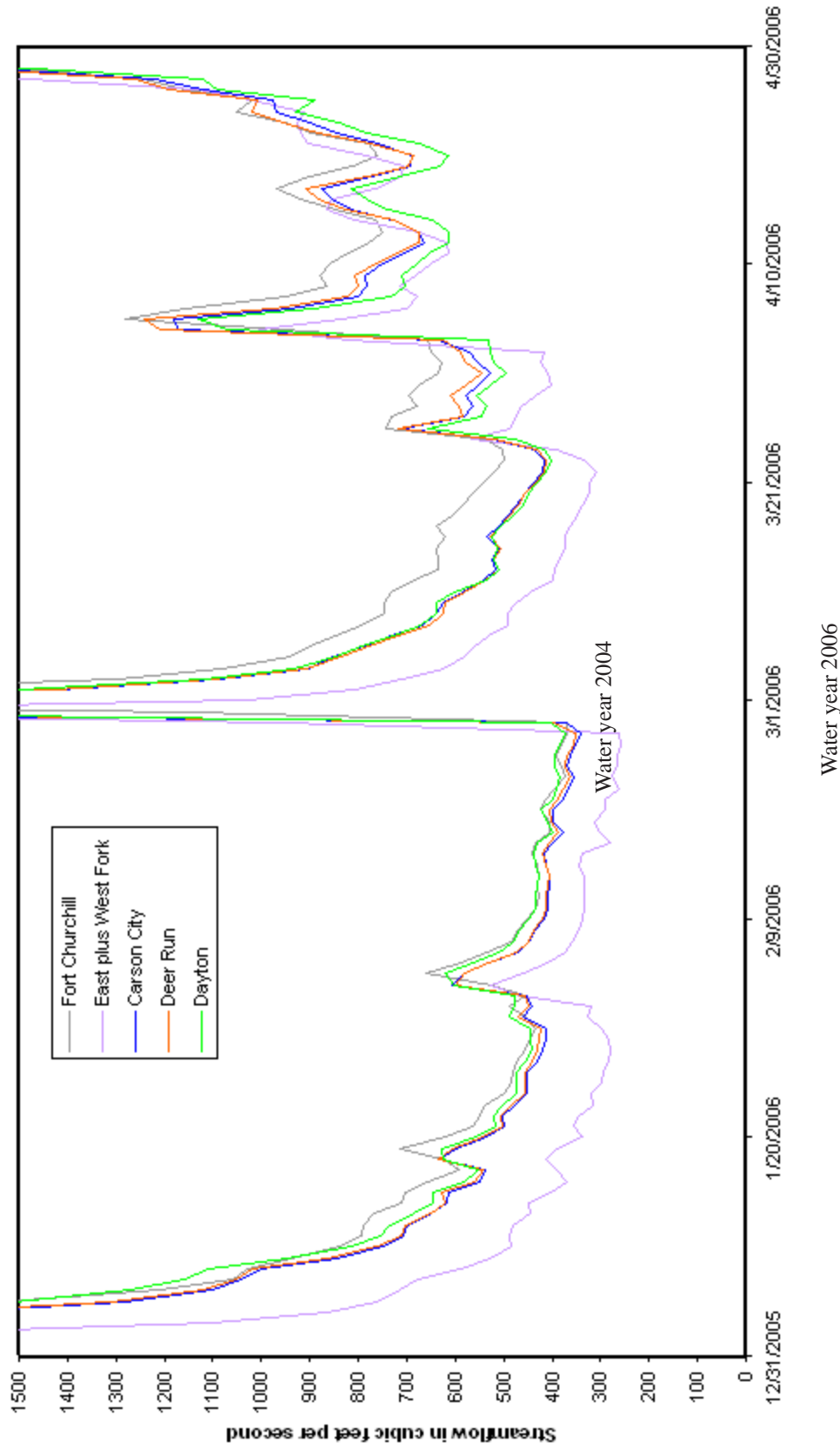
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



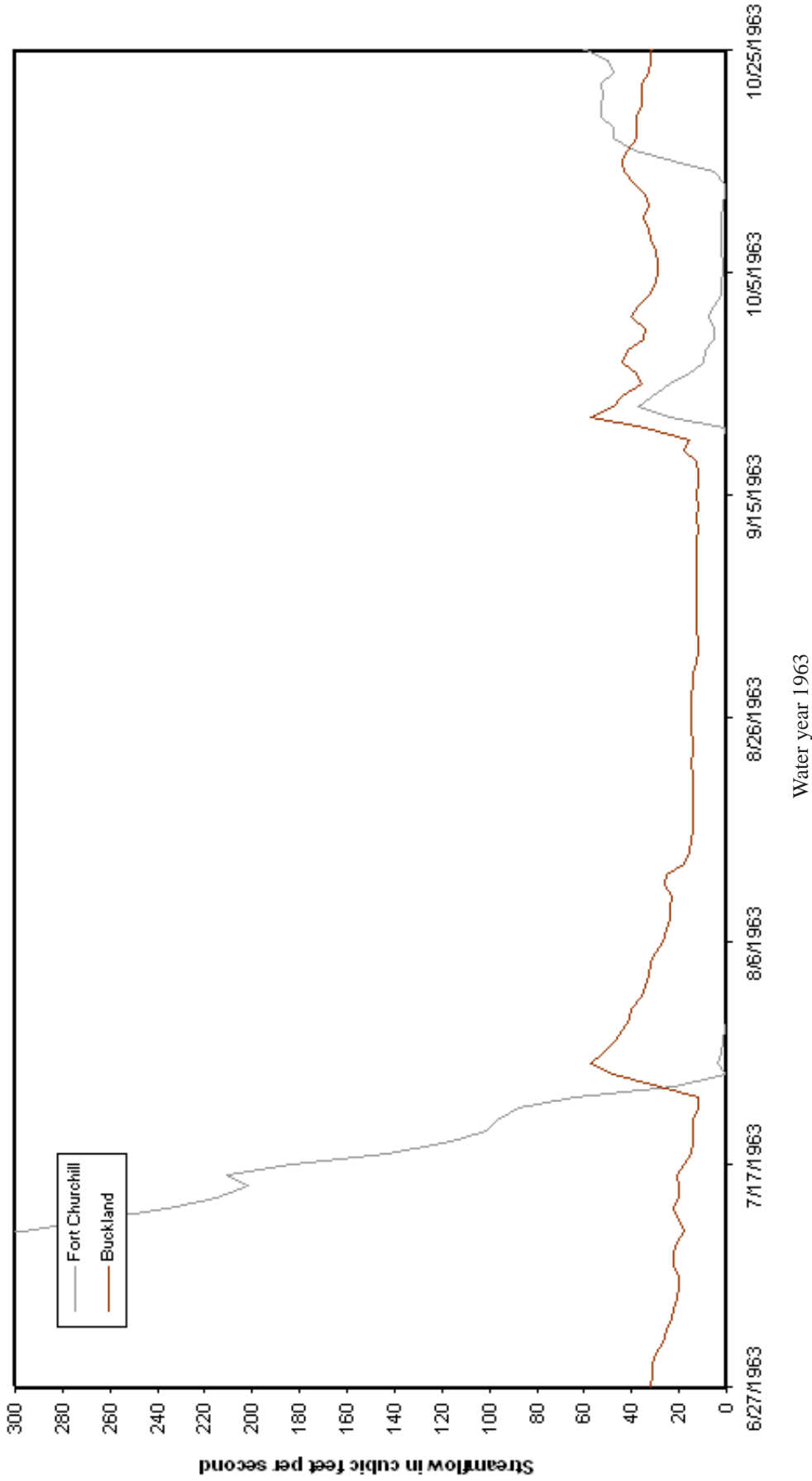
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



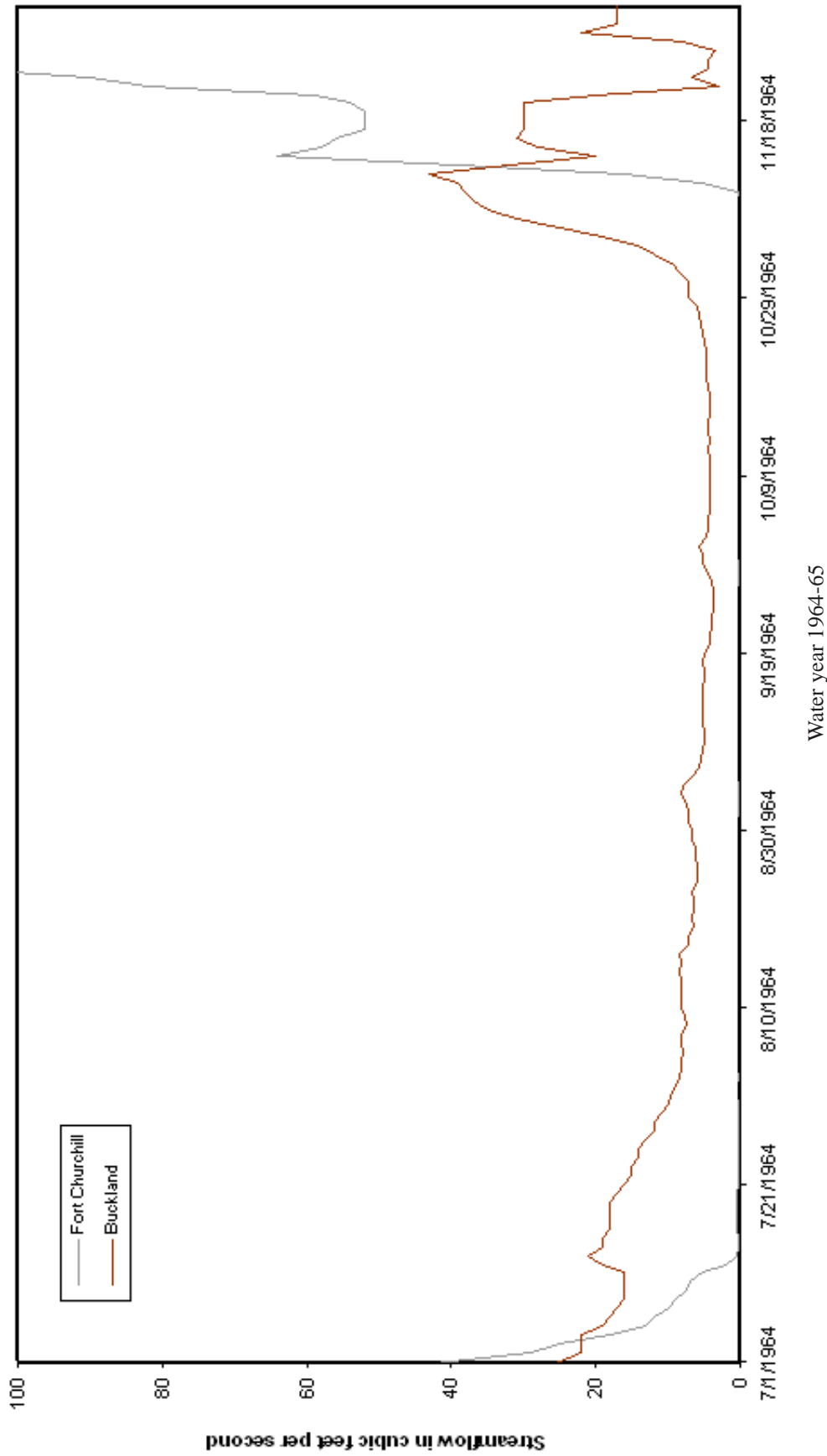
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



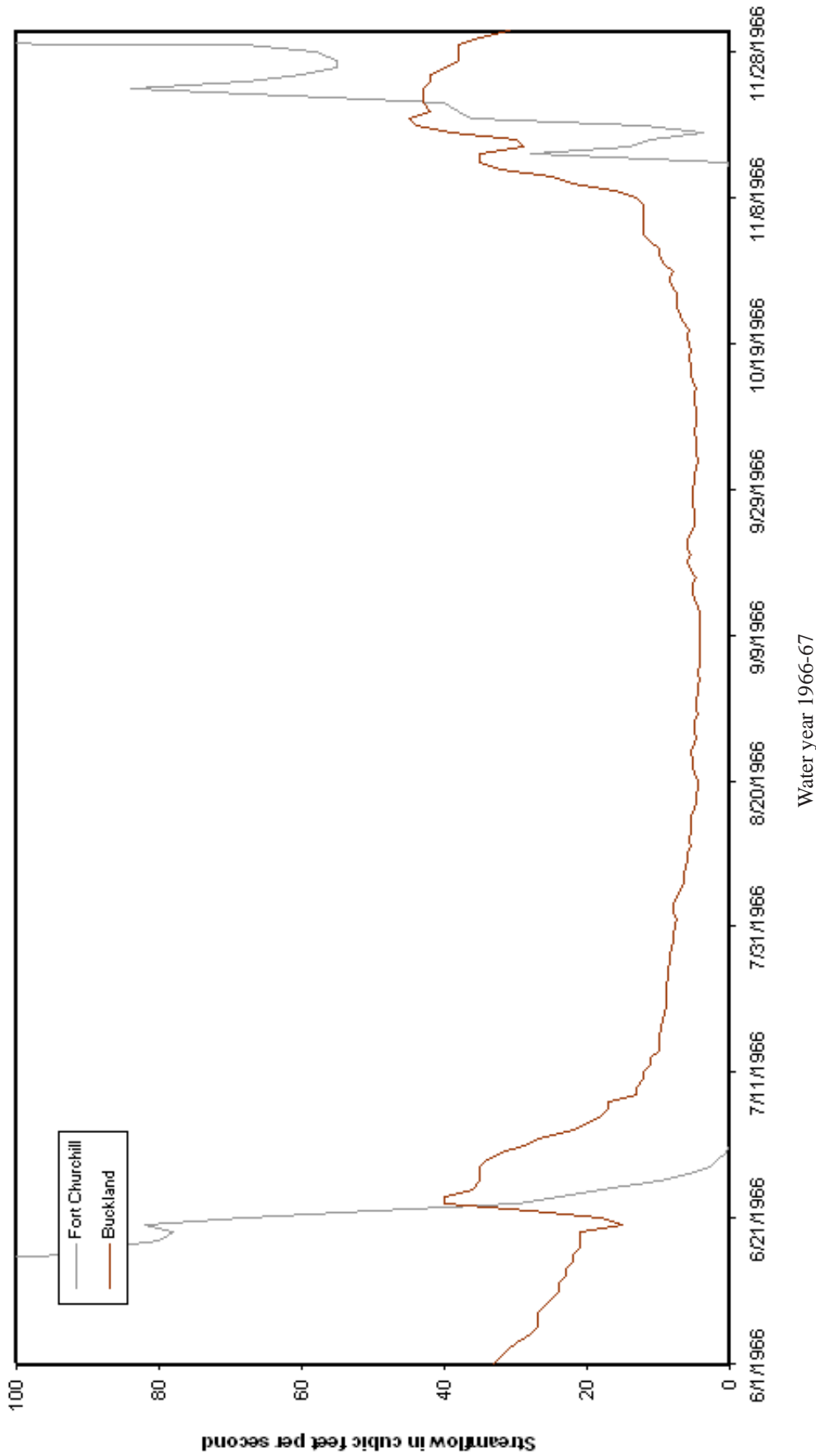
Appendix A2. Daily mean streamflow at selected sites and periods showing streamflow gains, upper Carson River basin, Nevada.—Continued



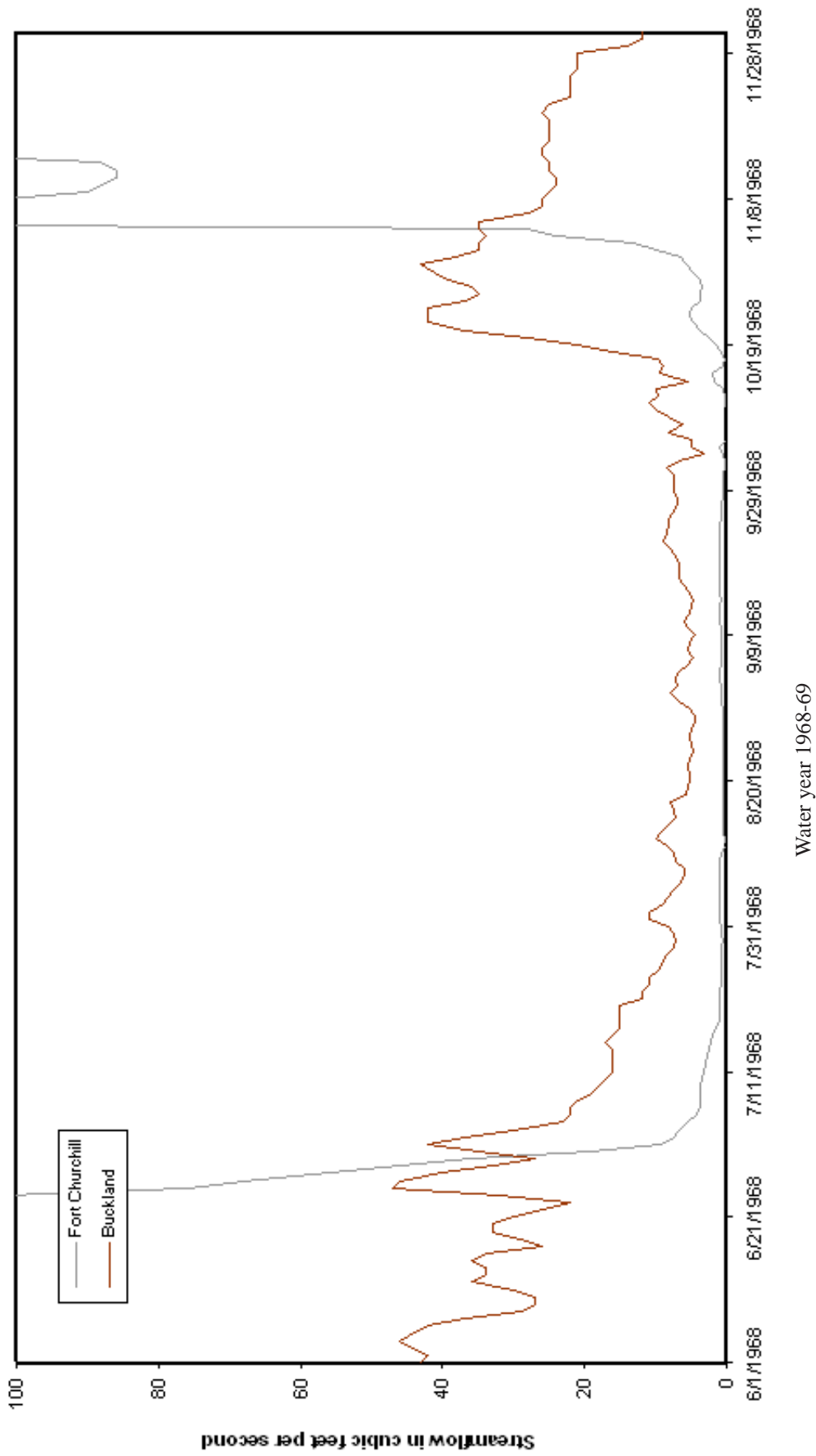
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada.



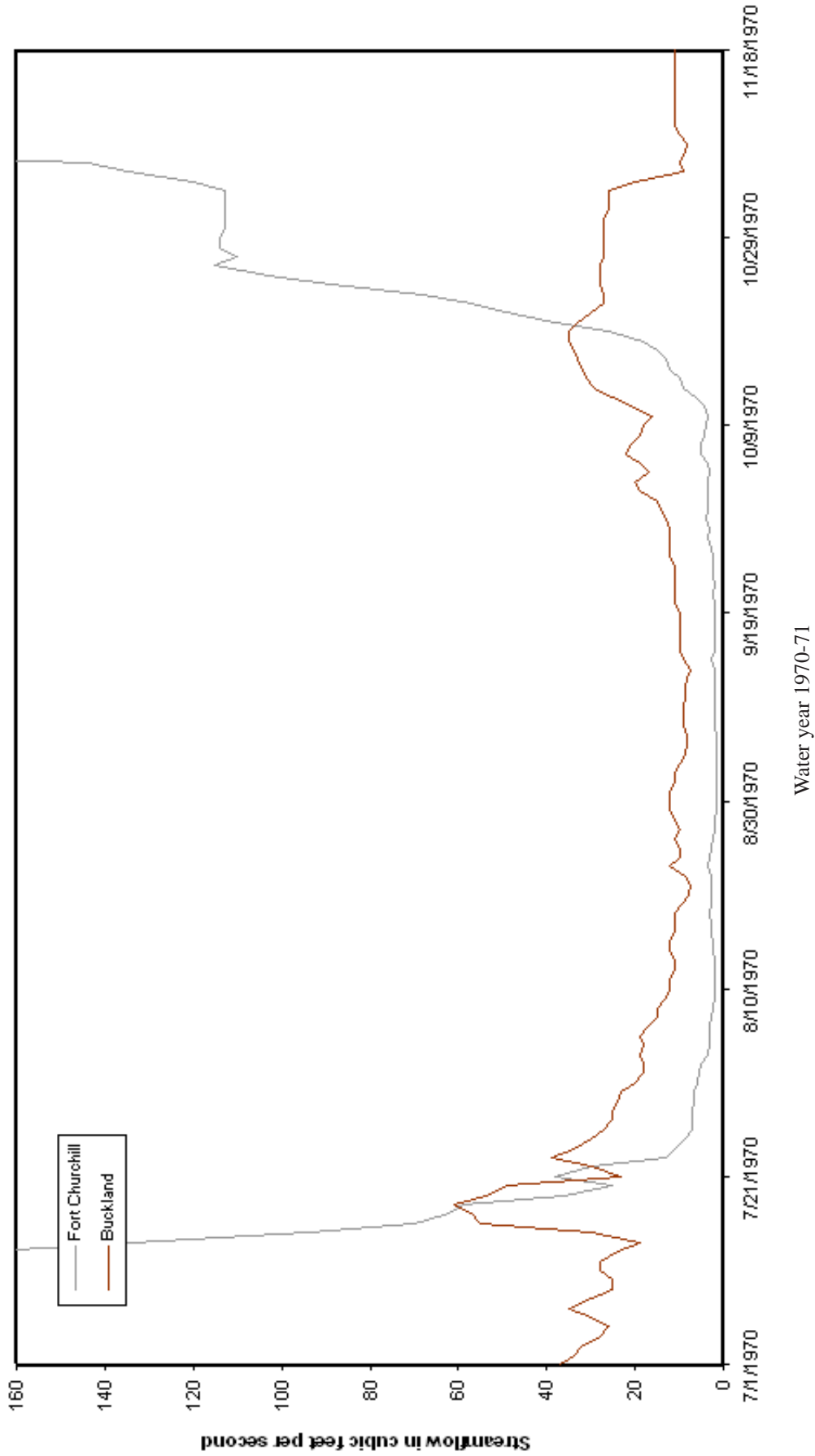
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada—Continued



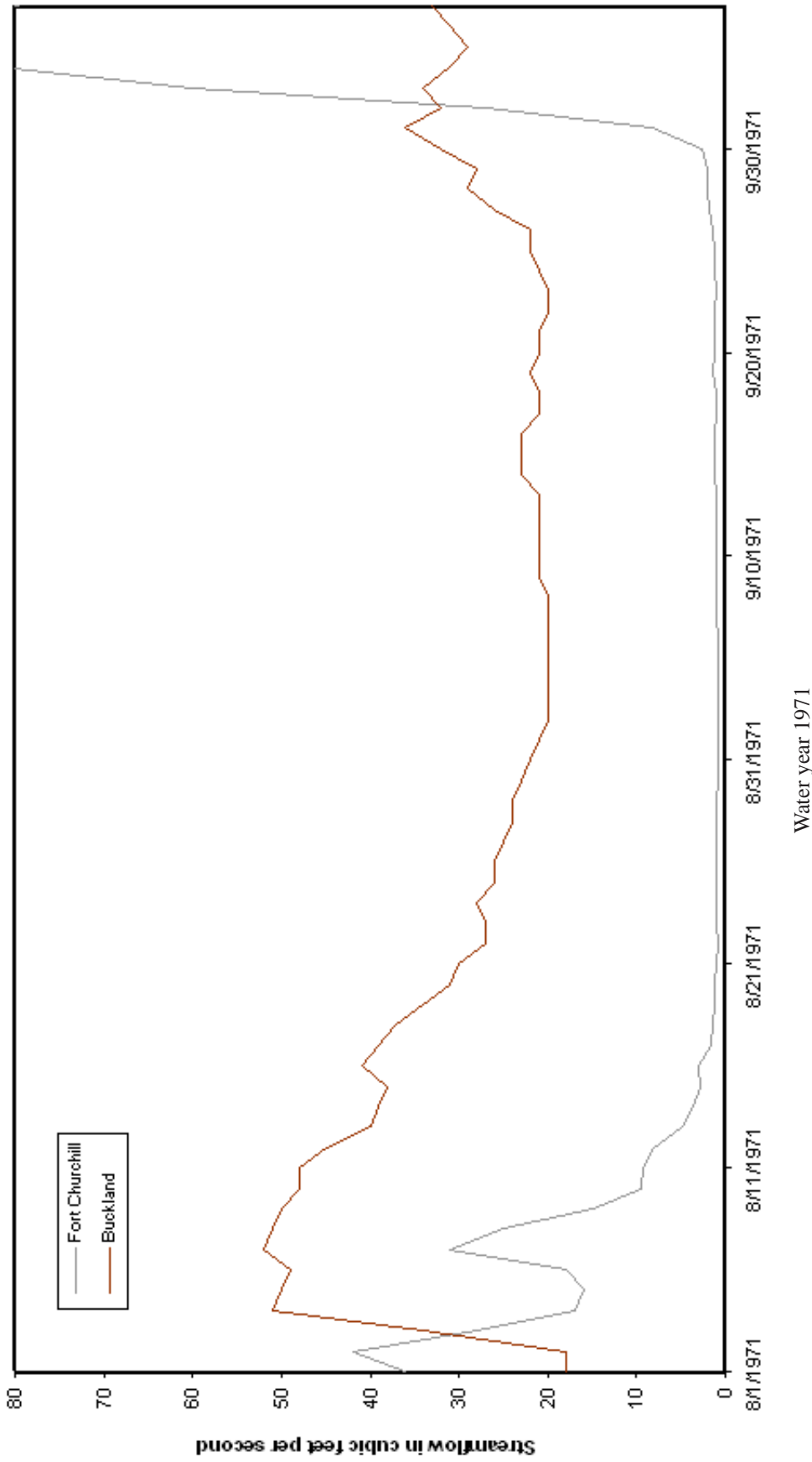
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada—Continued



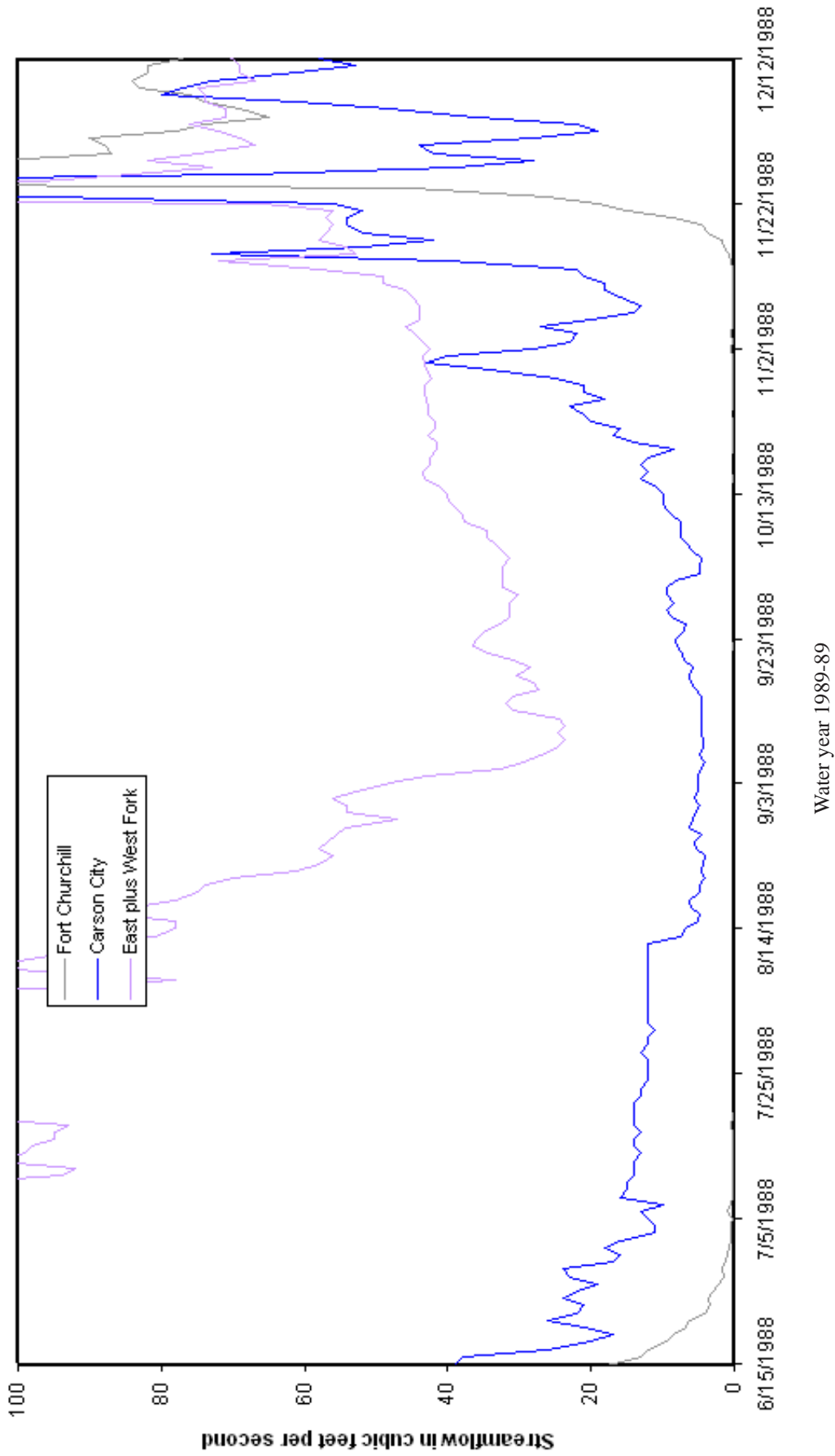
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada—Continued



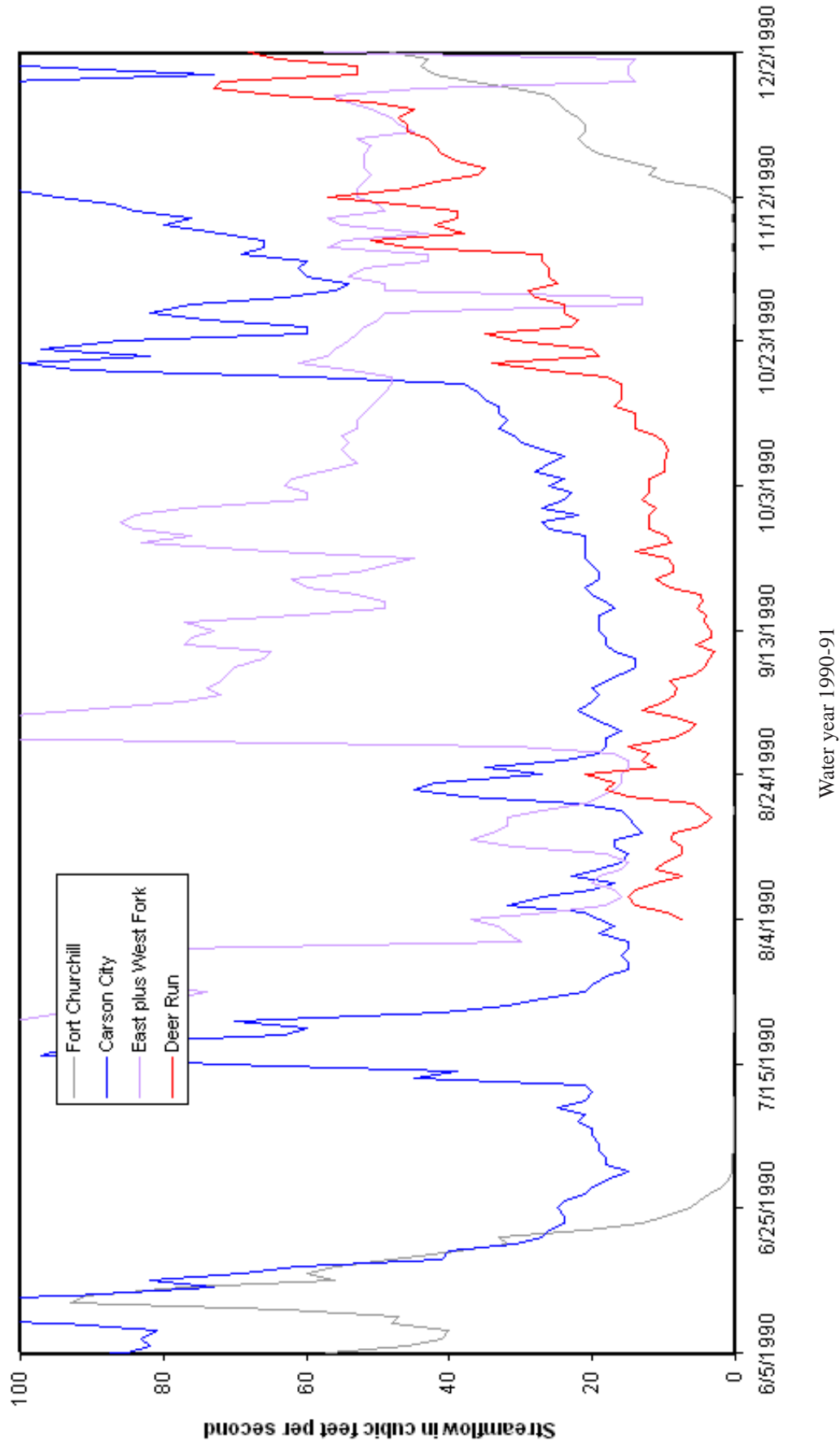
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada—Continued



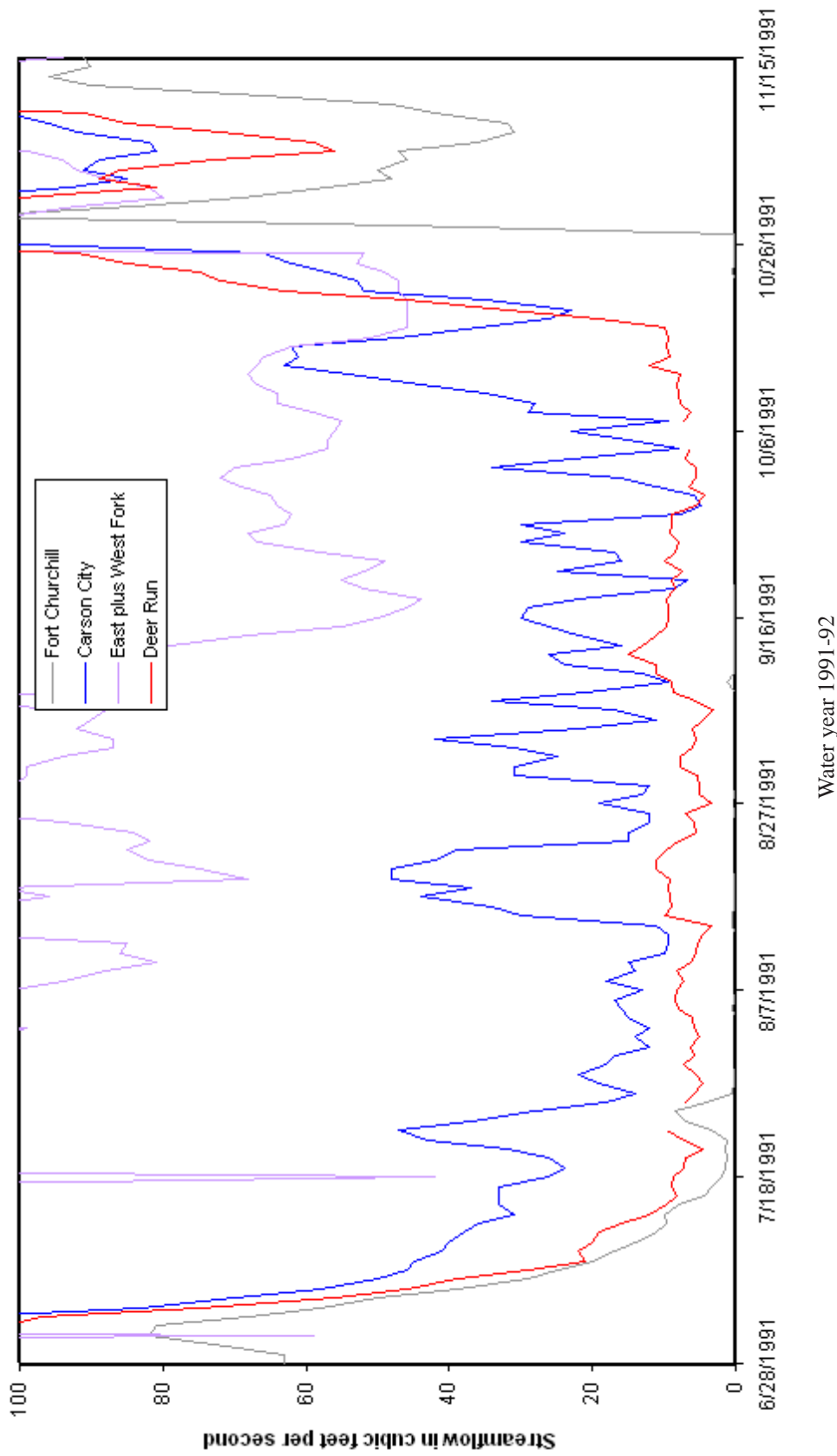
Appendix A3. Daily mean streamflow at selected sites and periods showing streamflow at Fort Churchill compared with streamflow in Buckland Ditch, upper Carson River basin, Nevada—Continued.



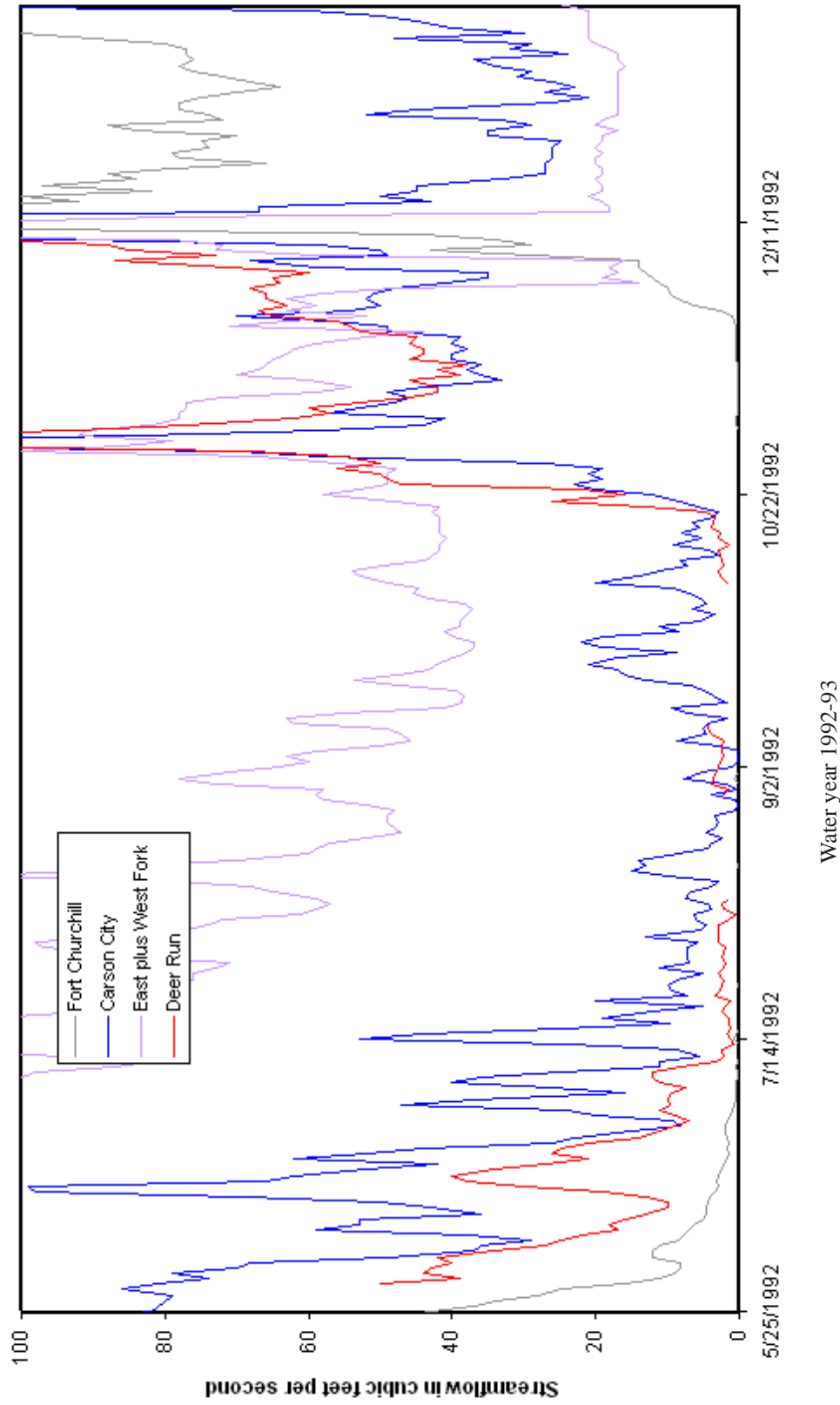
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.



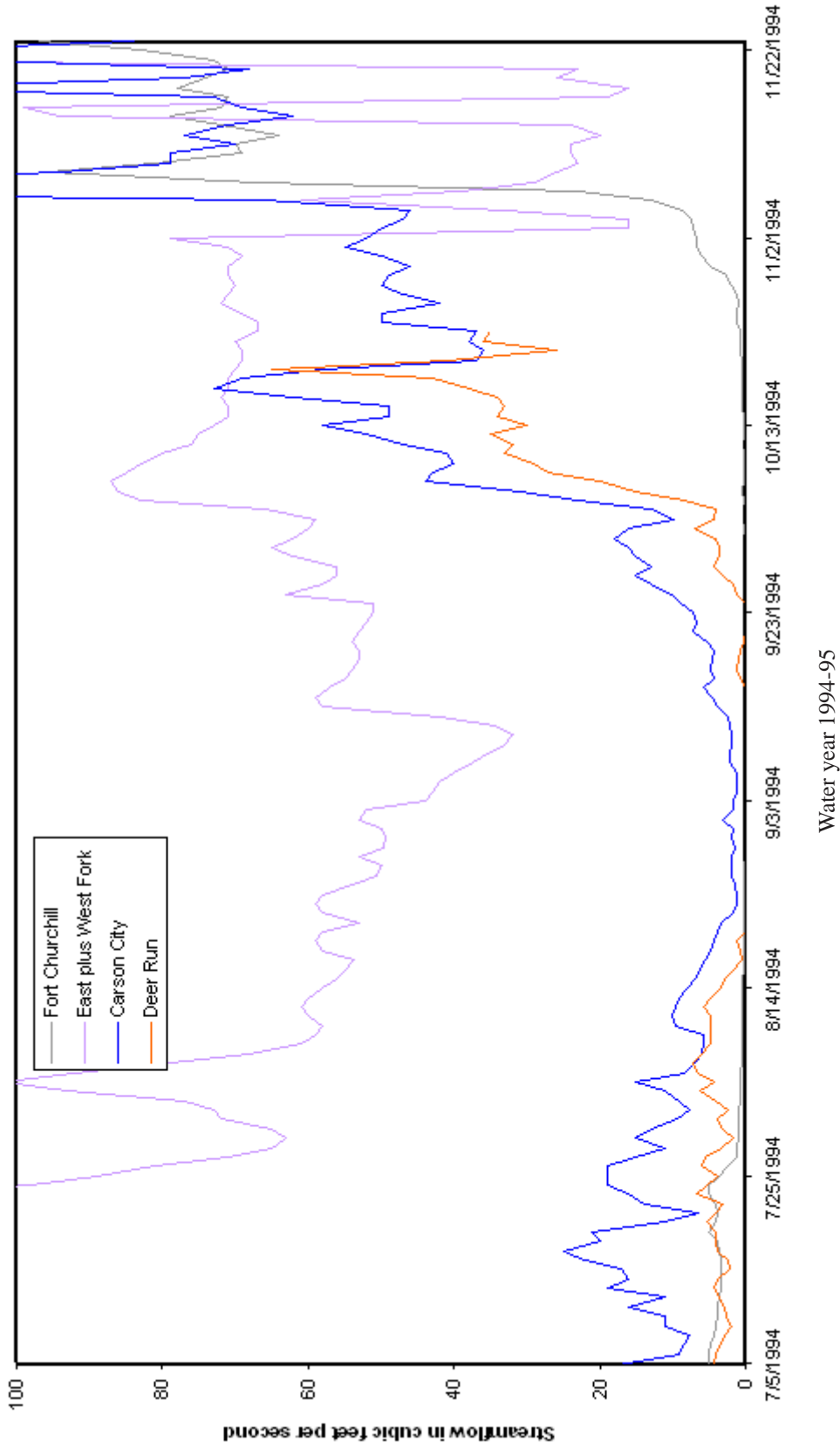
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



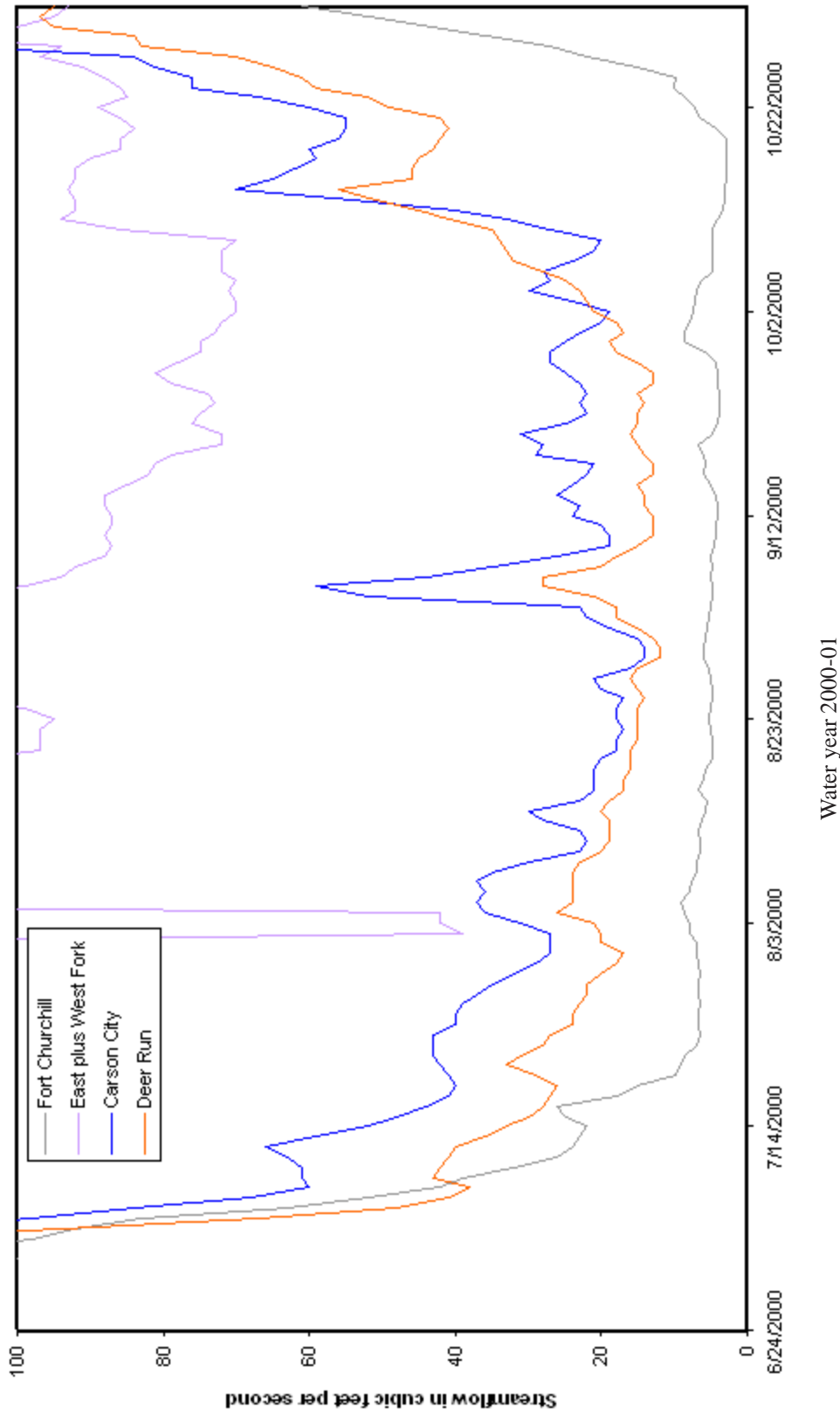
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



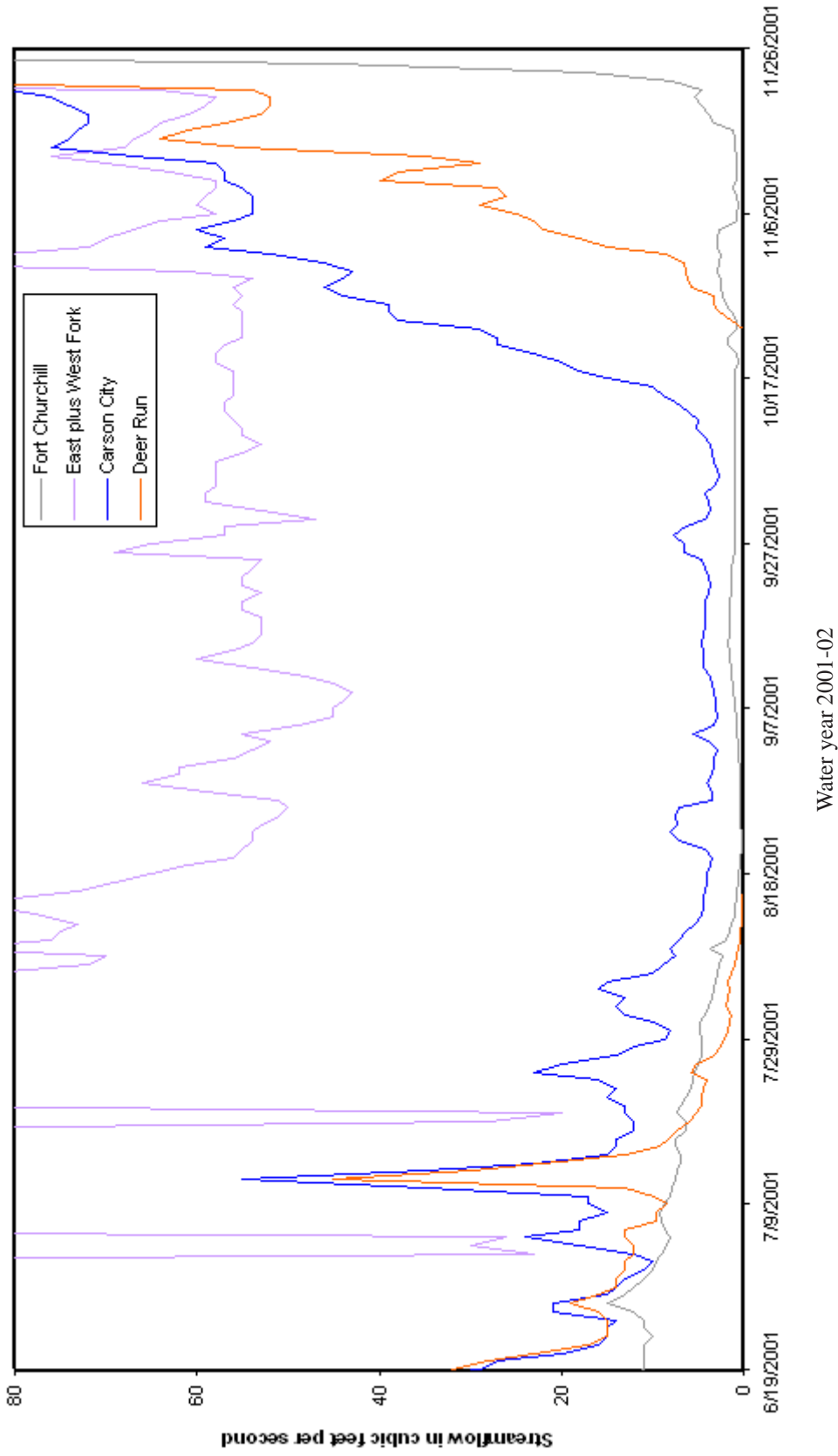
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



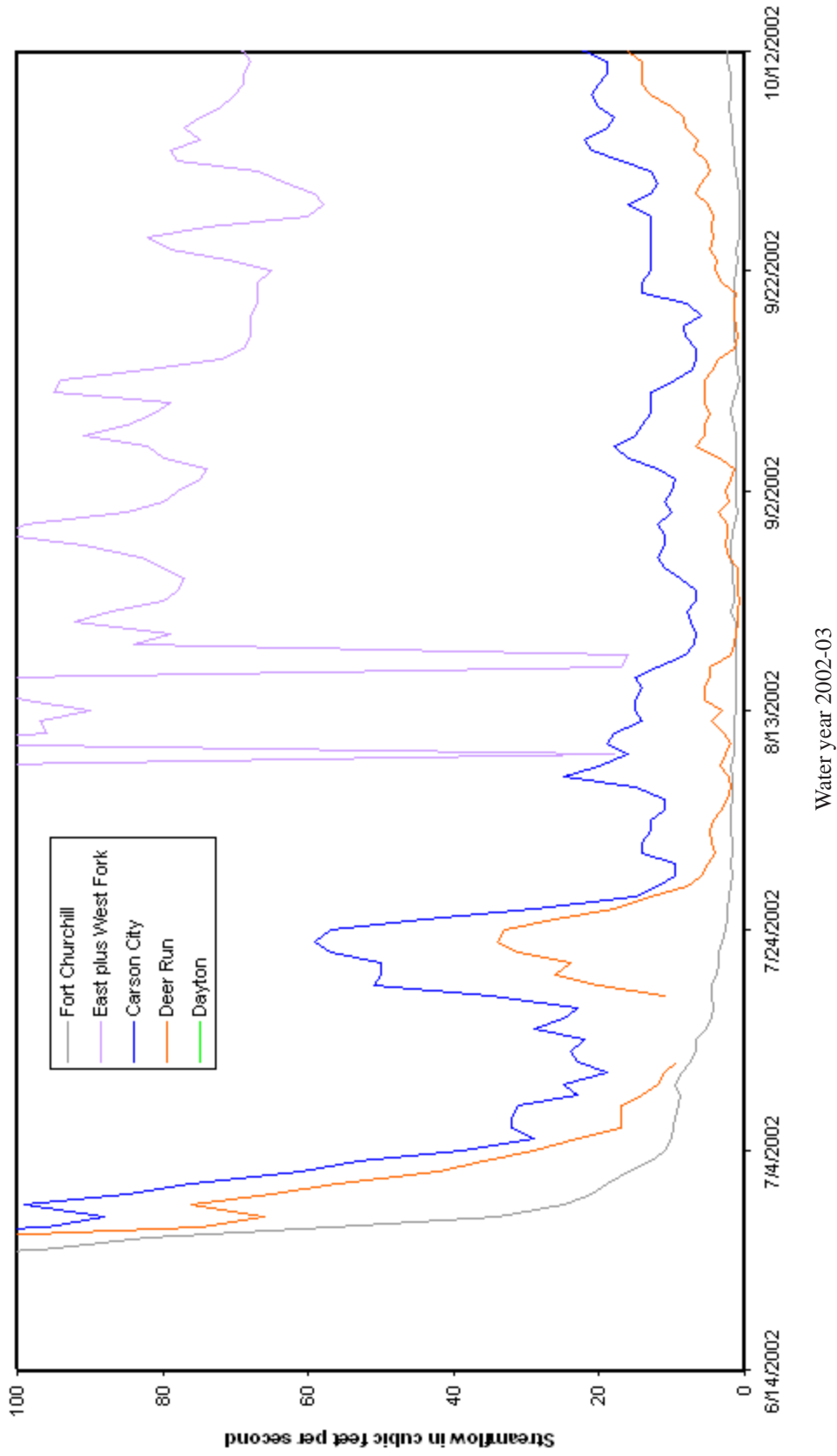
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



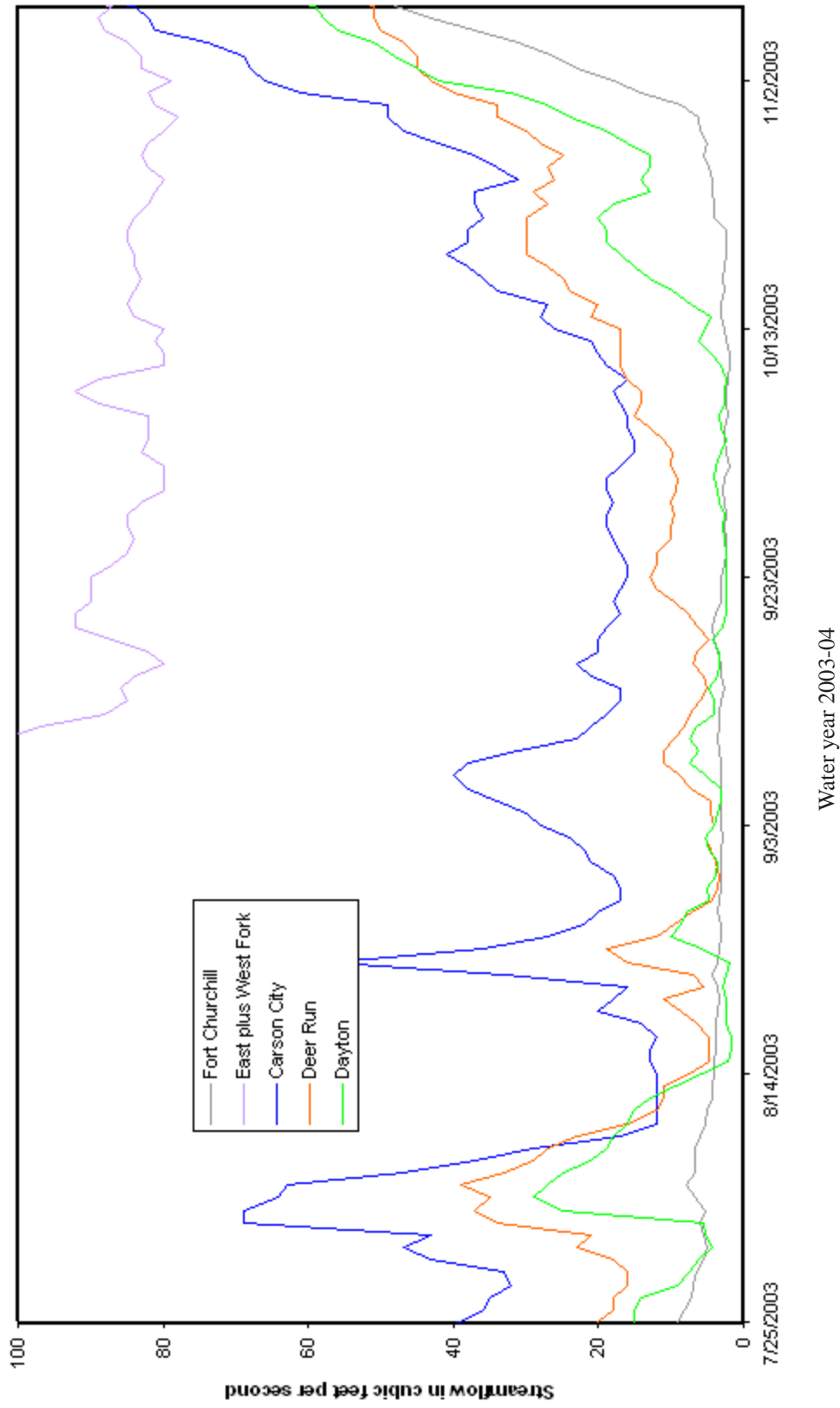
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



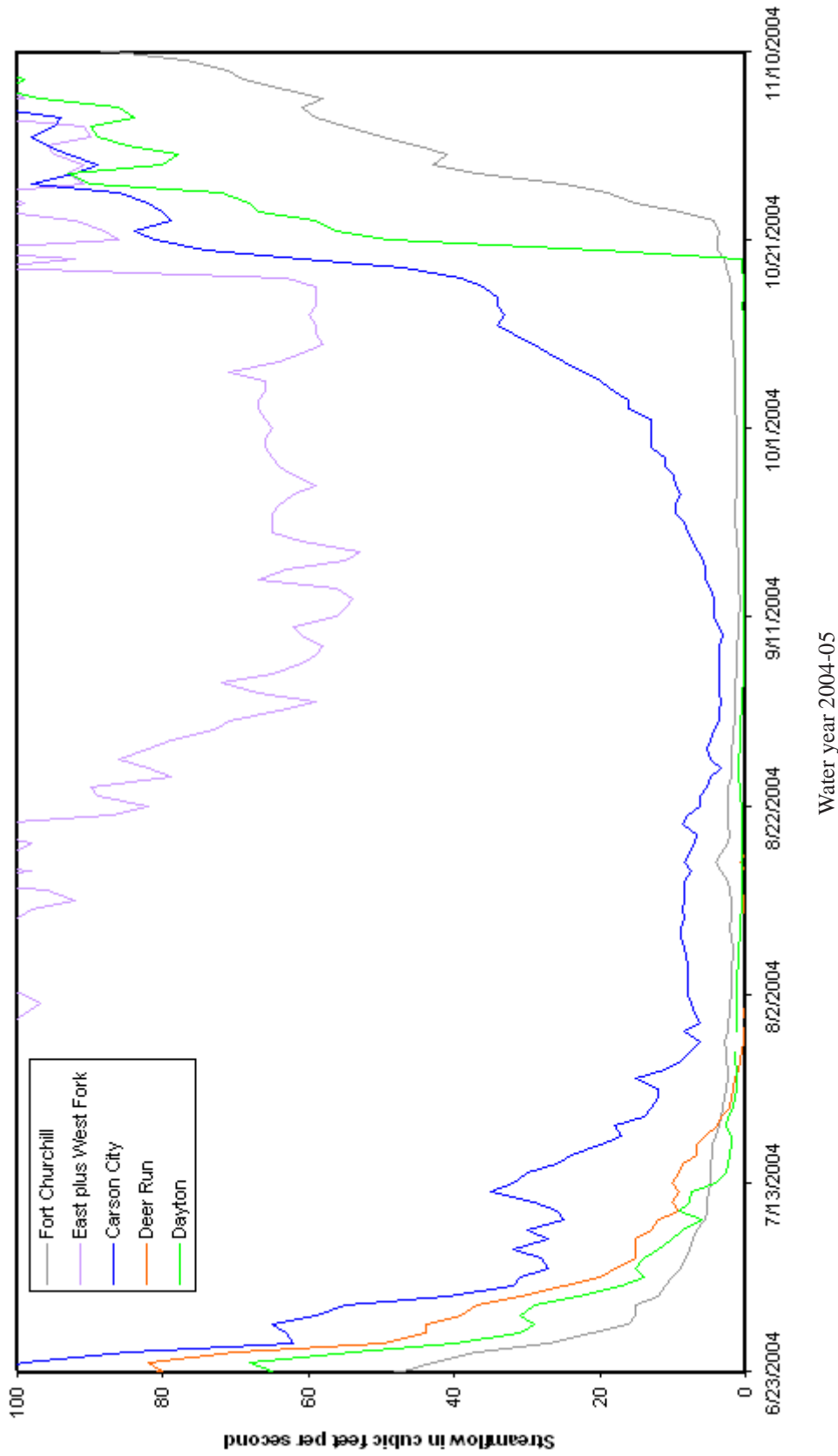
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



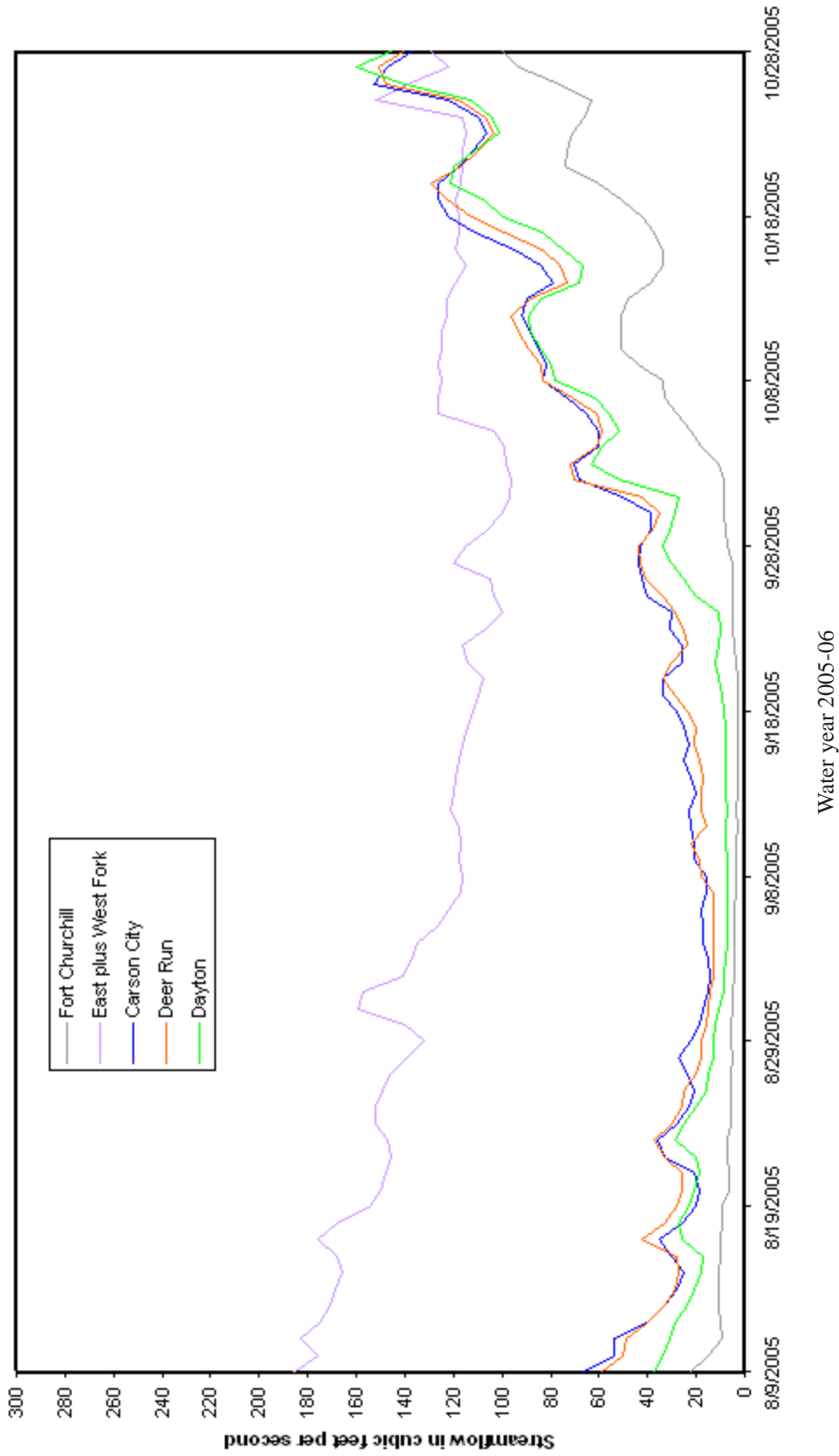
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



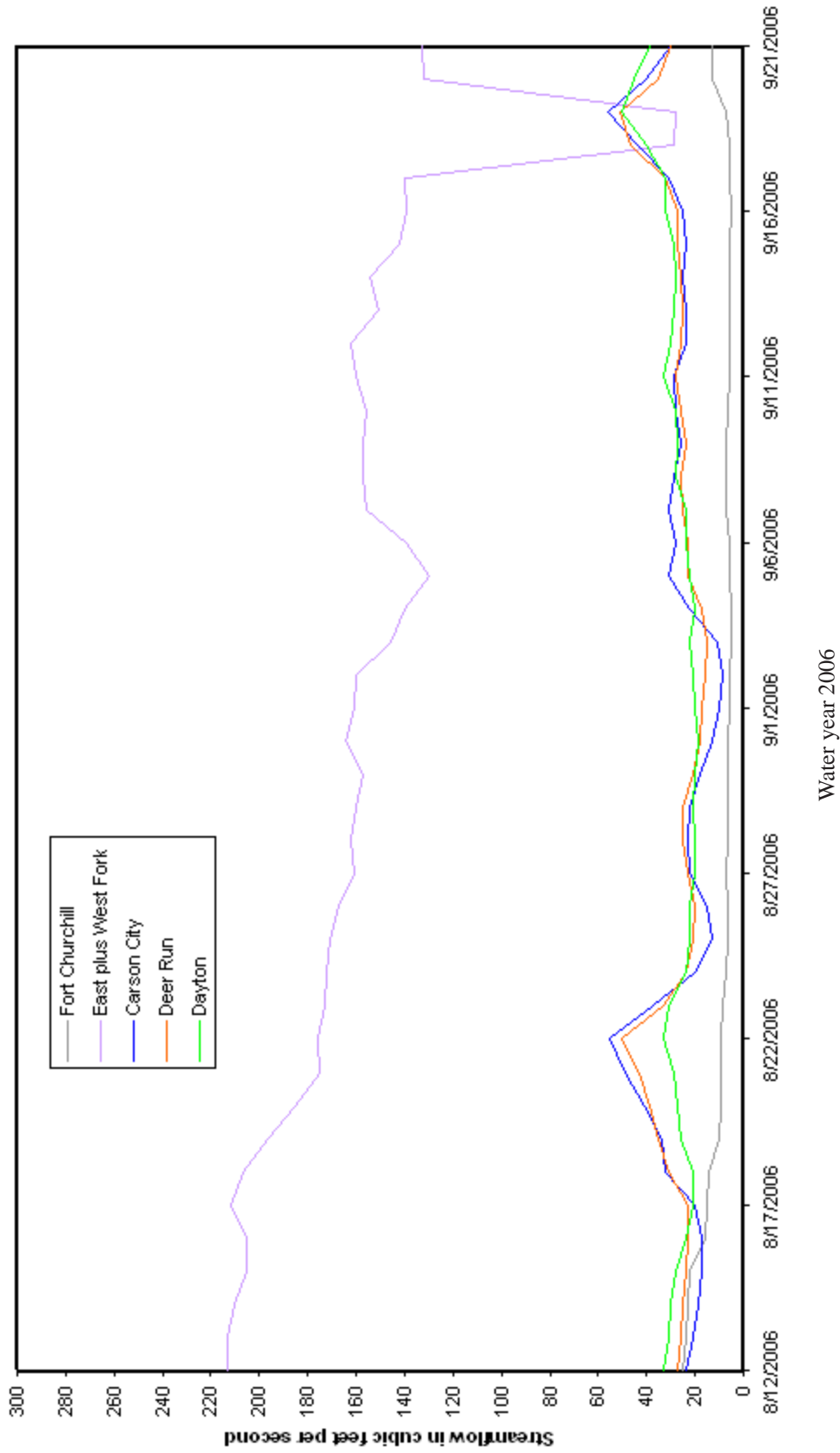
Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued



Appendix A4. Daily mean streamflow at selected sites and periods showing baseflow, upper Carson River basin, Nevada.—Continued

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Appendix B. Trace-Element, Major Constituent, Nutrient, Volatile-Organic Compound, and Pesticide Data for Ground-Water Samples Collected from (1) Water-Supply Wells and (2) Non-Water Supply Wells in the Upper Carson River Basin, Nevada and California, 1996–2006

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Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006.

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; –, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentrations range in each reach (number of sites) | | | | | | |
|------------------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|--|----------|------------------|---------------|--------|------------|----------|
| | | | | | | | | | EF (3) | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) |
| Nutrients | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | |
| Nitrate (mg/L as N) | 10 | 1 | Filtered | 1 | 1.24 | 0 | 1 | 0 | 1.24 (1) | No wells | – | – | – | No wells | |
| Nitrate (mg/L as N), Total | 10 | 1 | Unfiltered | 8 | ND–0.51 | 0 | 1 | 0 | – | No wells | – | ND–0.51 (1) | – | No wells | |
| Nitrite (mg/L as N) | 1 | 10 | Filtered | 11 | ND–0.007 | 8 | 2 | 0 | ND–0.001 (3) | No wells | ND (4) | ND–0.007 (3) | – | No wells | |
| Nitrite (mg/L as N), Total | 1 | 1 | Unfiltered | 7 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | No wells | |
| Nitrite+Nitrate (mg/L as N) | 10 | 10 | Filtered | 11 | ND–2.82 | 1 | 9 | 0 | 0.39–1.72 (3) | No wells | ND–2.82 (4) | ND–1.74 (3) | – | No wells | |
| Nitrite+Nitrate (mg/L as N), Total | 10 | 6 | Unfiltered | 9 | ND–2.9 | 2 | 4 | 0 | – | No wells | – | – | ND (1) | ND–2.9 (5) | No wells |
| No criteria: | | | | | | | | | | | | | | | |
| Phosphate (mg/L as P) | | 10 | Filtered | 11 | ND–0.07 | 1 | 9 | 0 | 0.016–0.024 (3) | No wells | ND–0.07 (4) | ND–0.02 (3) | – | No wells | |
| Phosphate (mg/L as P), Total | | 7 | Unfiltered | 7 | 0.0039–0.023 | 0 | 7 | 0 | 0.0052–0.0079 (3) | No wells | 0.0039–0.023 (3) | 0.0065 (1) | – | No wells | |
| Major constituents | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | |
| Fluoride (mg/L) | 4 | 10 | Filtered | 11 | ND–1.34 | 4 | 6 | 0 | ND (3) | No wells | ND–0.51 (4) | 0.42–1.34 (3) | – | No wells | |
| Fluoride (mg/L), Total | 4 | 11 | Unfiltered | 144 | ND–3.4 | 1 | 10 | 0 | – | No wells | ND–0.42 (2) | ND–3.4 (8) | – | No wells | |
| Secondary criteria: | | | | | | | | | | | | | | | |
| Chloride (mg/L) | 400 | 10 | Filtered | 11 | ND–16.2 | 0 | 10 | 0 | 4.78–7.8 (3) | No wells | ND–16.2 (4) | 12.9–16.2 (3) | – | No wells | |
| Chloride (mg/L), Total | 400 | 1 | Unfiltered | 6 | 17–25 | 0 | 1 | 0 | – | No wells | – | 17–25 (1) | – | No wells | |
| Magnesium (mg/L) | 150 | 7 | Filtered | 7 | 4.38–14.4 | 0 | 7 | 0 | 4.56–14.4 (3) | No wells | 5.7 (1) | 4.38–6.67 (3) | – | No wells | |
| Magnesium (mg/L), Total | 150 | 11 | Unfiltered | 75 | 1.79–21 | 0 | 11 | 0 | – | No wells | 4–7.08 (2) | 1.79–7.92 (8) | – | No wells | |
| Sulfate (mg/L) | 500 | 10 | Filtered | 11 | ND–248 | 0 | 10 | 0 | 16.3–31.1 (3) | No wells | ND–17.1 (4) | 63.2–248 (3) | – | No wells | |
| Sulfate (mg/L), Total | 500 | 2 | Unfiltered | 13 | 78–240 | 0 | 2 | 0 | – | No wells | – | 78–95 (1) | – | No wells | |
| TDS (mg/L) | 1,000 | 17 | Filtered | 86 | ND–692 | 0 | 17 | 0 | 152–293 (3) | No wells | ND–268 (5) | 134–692 (8) | – | No wells | |
| No criteria: | | | | | | | | | | | | | | | |
| Calcium (mg/L) | | 7 | Filtered | 7 | 21.4–57 | 0 | 7 | 0 | 23.5–50.2 (3) | No wells | 21.4 (1) | 44.1–57 (3) | – | No wells | |
| Calcium (mg/L), Total | | 10 | Unfiltered | 25 | 18.5–110 | 0 | 10 | 0 | – | No wells | 18.5–36 (2) | 18.8–110 (8) | – | No wells | |
| Potassium (mg/L) | | 7 | Filtered | 7 | 1.39–5.38 | 0 | 7 | 0 | 1.88–3.23 (3) | No wells | 1.39 (1) | 2.54–5.38 (3) | – | No wells | |
| Potassium (mg/L), Total | | 4 | Unfiltered | 5 | 1.39–5.38 | 0 | 4 | 0 | – | No wells | 1.39 (1) | 2–5.38 (3) | – | No wells | |
| Sodium (mg/L) | | 7 | Filtered | 7 | 13.6–81.8 | 0 | 7 | 0 | 13.6–22.4 (3) | No wells | 19.7 (1) | 26.5–81.8 (3) | – | No wells | |
| Sodium (mg/L), Total | | 1 | Unfiltered | 6 | 19–50 | 0 | 1 | 0 | – | No wells | – | 19.6–50 (1) | – | No wells | |

Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006. —Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; –, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentrations range in each reach (number of sites) | | | | | | |
|--------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|--|-------------|--------------|-------|----------|--------|----------|
| | | | | | | | | | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) | |
| Trace elements | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | |
| Antimony (µg/L) | 6 | 4 | Filtered | 4 | ND–0.88 | 3 | 1 | 0 | No wells | ND (1) | ND–0.88 (3) | – | – | – | No wells |
| Antimony (µg/L), Total | 6 | 11 | Unfiltered | 81 | ND–2 | 7 | 4 | 0 | No wells | ND (2) | ND–2 (8) | – | ND (1) | – | No wells |
| Arsenic (µg/L) | 10 | 7 | Filtered | 7 | ND–16.7 | 1 | 6 | 1 | No wells | 1.2 (1) | 1.6–16.7 (3) | – | – | – | No wells |
| Arsenic (µg/L), Total | 10 | 11 | Unfiltered | 78 | ND–24 | 0 | 11 | 3 | No wells | ND–1.9 (2) | ND–24 (8) | – | – | – | No wells |
| Barium (µg/L) | 2,000 | 7 | Filtered | 7 | 8–142 | 0 | 7 | 0 | No wells | 27 (1) | 8–54 (3) | – | – | – | No wells |
| Barium (µg/L), Total | 2,000 | 11 | Unfiltered | 80 | ND–84 | 0 | 11 | 0 | No wells | 27–84 (2) | 4.9–74 (8) | – | – | – | No wells |
| Beryllium (µg/L) | 4 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | No wells | ND (1) | ND (3) | – | – | – | No wells |
| Beryllium (µg/L), Total | 4 | 11 | Unfiltered | 78 | ND–1 | 10 | 1 | 0 | No wells | ND (2) | ND–1 (8) | – | – | – | No wells |
| Cadmium (µg/L) | 5 | 7 | Filtered | 7 | ND–0.06 | 5 | 2 | 0 | No wells | ND (1) | ND–0.06 (3) | – | – | – | No wells |
| Cadmium (µg/L), Total | 5 | 11 | Unfiltered | 76 | ND–2 | 9 | 2 | 0 | No wells | ND (2) | ND–2 (8) | – | – | – | No wells |
| Chromium (µg/L) | 100 | 7 | Filtered | 7 | ND–2.1 | 4 | 3 | 0 | No wells | ND (1) | ND–1 (3) | – | – | – | No wells |
| Chromium (µg/L), Total | 100 | 11 | Unfiltered | 79 | ND–16 | 2 | 9 | 0 | No wells | ND–7 (2) | ND–16 (8) | – | – | – | No wells |
| Copper (µg/L) | 1,300 | 7 | Filtered | 7 | ND–31 | 2 | 5 | 0 | No wells | 1.6 (1) | 0.8–1.3 (3) | – | – | – | No wells |
| Copper (µg/L), Total | 1,300 | 11 | Unfiltered | 131 | ND–28 | 1 | 10 | 0 | No wells | ND–3.1 (2) | ND–28 (8) | – | – | – | No wells |
| Lead (µg/L) | 15 | 7 | Filtered | 7 | ND–20 | 2 | 5 | 1 | No wells | 0.26 (1) | 0.1–0.59 (3) | – | – | – | No wells |
| Lead (µg/L), Total | 15 | 10 | Unfiltered | 60 | ND–6.6 | 3 | 7 | 0 | No wells | ND–1.5 (2) | ND–6.6 (8) | – | – | – | No wells |
| Mercury (µg/L) | 2 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | No wells | – | – | – | – | – | No wells |
| Mercury (µg/L), Total | 2 | 11 | Unfiltered | 76 | ND–0.15 | 10 | 1 | 0 | No wells | ND (2) | ND (8) | – | – | – | No wells |
| Nickel (µg/L) | 100 | 4 | Filtered | 4 | 0.2–2.15 | 0 | 4 | 0 | No wells | 0.92 (1) | 0.2–2.15 (3) | – | – | – | No wells |
| Nickel (µg/L), Total | 100 | 11 | Unfiltered | 79 | ND–12 | 2 | 9 | 0 | No wells | ND–3 (2) | ND–12 (8) | – | – | – | No wells |
| Selenium (µg/L) | 50 | 7 | Filtered | 7 | ND–0.7 | 4 | 3 | 0 | No wells | 0.4 (1) | ND–0.7 (3) | – | – | – | No wells |
| Selenium (µg/L), Total | 50 | 11 | Unfiltered | 79 | ND–14 | 1 | 10 | 0 | No wells | ND–5 (2) | ND–14 (8) | – | – | – | No wells |
| Thallium (µg/L) | 2 | 4 | Filtered | 4 | ND–0.02 | 3 | 1 | 0 | No wells | ND (1) | ND–0.02 (3) | – | – | – | No wells |
| Thallium (µg/L), Total | 2 | 11 | Unfiltered | 76 | ND–2 | 8 | 3 | 0 | No wells | ND (2) | ND–2 (8) | – | – | – | No wells |
| Secondary criteria: | | | | | | | | | | | | | | | |
| Aluminum (µg/L) | 200 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | No wells | ND (1) | ND (3) | – | – | – | No wells |
| Aluminum (µg/L), Total | 200 | 11 | Unfiltered | 53 | ND–210 | 10 | 1 | 1 | No wells | ND (2) | ND–210 (8) | – | – | – | No wells |
| Iron (µg/L) | 600 | 7 | Filtered | 7 | ND–28 | 3 | 4 | 0 | No wells | ND (1) | 5–28 (3) | – | – | – | No wells |
| Iron (µg/L), Total | 300 | 1 | Unfiltered | 6 | ND–140 | 0 | 1 | 0 | No wells | ND–0.85 (2) | ND–10.9 (8) | – | – | – | No wells |
| Manganese (µg/L) | 100 | 7 | Filtered | 7 | ND–42.2 | 1 | 6 | 0 | No wells | 6.5 (1) | 1.3–42.2 (3) | – | – | – | No wells |
| Manganese (µg/L), Total | 100 | 11 | Unfiltered | 90 | ND–710 | 0 | 11 | 3 | No wells | ND–80 (2) | ND–710 (8) | – | – | – | No wells |
| Silver (µg/L) | 100 | 7 | Filtered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | – | – | – | No wells |
| Silver (µg/L), Total | 100 | 11 | Unfiltered | 71 | ND–0.52 | 10 | 1 | 0 | No wells | ND–0.52 (2) | ND (8) | – | – | – | No wells |
| Zinc (µg/L) | 5,000 | 7 | Filtered | 7 | ND–47 | 1 | 6 | 0 | No wells | 1.9 (1) | 0.8–47 (3) | – | – | – | No wells |

Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006. —Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPP, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picogram per liter; ng/L, nanogram per liter; –, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentrations range in each reach (number of sites) | | | | | | | | | | | | | | |
|----------------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|--|----------|----------------|-----------------|------------|--------------|----------|--|--|--|--|--|--|--|--|
| | | | | | | | | | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) | | | | | | | | | |
| Secondary criteria:—Continued | | | | | | | | | | | | | | | | | | | | | | | |
| Zinc (µg/L), Total | 5,000 | 11 | Unfiltered | 73 | ND–25 | 0 | 11 | 0 | – | No wells | ND–0.015 (2) | ND–0.14 (8) | – | ND–25 (1) | No wells | | | | | | | | |
| No criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| Boron (µg/L) | | 4 | Filtered | 4 | 62–353 | 0 | 4 | 0 | – | No wells | 67 (1) | 62–353 (3) | – | – | No wells | | | | | | | | |
| Cobalt (µg/L) | | 4 | Filtered | 4 | 0.048–0.142 | 0 | 4 | 0 | – | No wells | 0.048 (1) | 0.096–0.142 (3) | – | – | No wells | | | | | | | | |
| Vanadium (µg/L) | | 4 | Filtered | 4 | 1.4–18.9 | 0 | 4 | 0 | – | No wells | 5.2 (1) | 1.4–18.9 (3) | – | – | No wells | | | | | | | | |
| Radiochemistry | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| Radium 226, (pCi/L), Total | 5 | 22 | Unfiltered | 79 | ND–0.96 | 12 | 10 | 0 | – | No wells | 0.073–0.59 (2) | ND–0.96 (8) | ND (1) | ND (11) | No wells | | | | | | | | |
| Radium 228, (pCi/L), Total | 5 | 22 | Unfiltered | 76 | ND–0.77 | 14 | 8 | 0 | – | No wells | ND–0.41 (2) | ND–0.77 (8) | ND (1) | ND–0.73 (11) | No wells | | | | | | | | |
| Uranium (µg/L) | 30 | 4 | Filtered | 4 | 0.55–20.6 | 0 | 4 | 0 | – | No wells | 5.5 (1) | 0.55–20.6 (3) | – | – | No wells | | | | | | | | |
| Uranium (µg/L), Total | 30 | 21 | Unfiltered | 53 | ND–20 | 2 | 19 | 0 | – | No wells | 2.1–7.8 (2) | ND–20 (7) | 3 (1) | ND–9 (11) | No wells | | | | | | | | |
| Gross Alpha (pCi/L) | 15 | 22 | Unfiltered | 84 | ND–14 | 4 | 18 | 0 | – | No wells | ND–3.7 (2) | ND–14 (8) | 0.8–12 (1) | ND–13 (11) | No wells | | | | | | | | |
| No criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| Gross-beta (pCi/L) | | 13 | Unfiltered | 38 | ND–15.9 | 0 | 13 | 0 | – | No wells | – | ND–4.94 (1) | ND–3 (1) | ND–15.9 (11) | No wells | | | | | | | | |
| Radon-222 (pCi/L) | | 3 | Unfiltered | 3 | 300–380 | 0 | 3 | 0 | – | No wells | – | 300–380 (3) | – | – | No wells | | | | | | | | |
| Uranium Gross-beta (pCi/L) | | 9 | Unfiltered | 17 | ND–13.4 | 2 | 7 | 0 | – | No wells | 1.41–5.23 (2) | ND–13.4 (7) | – | – | No wells | | | | | | | | |
| Volatile-Organic Compounds (VOC) | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane (µg/L) | 200 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |
| 1,1,2-Trichloroethane (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |
| 1,1-Dichloroethene (µg/L) | 7 | 7 | Unfiltered | 7 | ND–0.01 | 6 | 1 | 0 | ND (3) | No wells | ND (1) | ND–0.01 (3) | – | – | No wells | | | | | | | | |
| 1,2,4-Trichlorobenzene (µg/L) | 70 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |
| 1,2-Dichloropropane (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |
| 1,2-dichlorobenzene (µg/L) | 600 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |
| 1,4-dichlorobenzene (µg/L) | 75 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells | | | | | | | | |
| 1,4-dichlorobenzene (µg/L) | 75 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells | | | | | | | | |

Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006. —Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; —, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentrations range in each reach (number of sites) | | | | | | | |
|---|------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|--|--------|-------------|-------|--|--------|----------|--|
| | | | | | | | | | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) | | |
| Primary criteria:—Continued | | | | | | | | | | | | | Volatile-Organic Compounds (VOC)—Continued | | | |
| Benzoflapyrene (µg/L) | 0.2 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | No wells | ND (1) | ND (2) | — | — | — | No wells | |
| Benzoflapyrene (µg/L) | 0.2 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells | |
| Carbon Tetrachloride (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| Chlorobenzene (µg/L) | 100 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| DBCP (µg/L) | 0.2 | 8 | Unfiltered | 15 | ND | 8 | 0 | 0 | No wells | ND (1) | ND (4) | — | — | — | No wells | |
| Dichloromethane (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| HCCPD (µg/L) | 50 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells | |
| Hexachlorobenzene (µg/L) | 1 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells | |
| PCE (µg/L) | 5 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | No wells | ND (1) | ND (2) | — | — | — | No wells | |
| PCE (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| Styrene (µg/L) | 100 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| TCE (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| Vinyl chloride (µg/L) | 2 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| <i>cis</i> -1,2-Dichloroethene (µg/L) | 70 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| <i>trans</i> -1,2-Dichloroethene (µg/L) | 100 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| TCDD (ng/L) | 0.03 | 1 | Unfiltered | 10 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells | |
| Advisory: | | | | | | | | | | | | | VOC—Trihalomethanes | | | |
| MTBE (µg/L) | 40 | 7 | Unfiltered | 7 | ND–NQ | 6 | 1 | 0 | No wells | ND (3) | ND–NQ (3) | — | — | — | No wells | |
| No criteria: | | | | | | | | | | | | | VOC—Trihalomethanes | | | |
| Ethyl Methyl Ketone | | 1 | Unfiltered | 7 | ND–12 | 0 | 1 | 0 | No wells | — | ND–12 (1) | — | — | — | No wells | |
| Ethylene Dibromide (µg/L) | | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells | |
| Primary criteria: | | | | | | | | | | | | | VOC—Trihalomethanes | | | |
| Bromoform (µg/L) | | 3 | Filtered | 3 | ND | 3 | 0 | 0 | No wells | ND (1) | ND (2) | — | — | — | No wells | |
| Bromoform (µg/L) | | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| Chlorodibromomethane (µg/L) | | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |
| Chloroform (µg/L) | | 7 | Unfiltered | 7 | ND–0.02 | 6 | 1 | 0 | No wells | ND (1) | ND–0.02 (3) | — | — | — | No wells | |
| Dichlorobromomethane (µg/L) | | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells | |

Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006. —Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; –, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with exceeds | Concentrations range in each reach (number of sites) | | | | | | | |
|--------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|--|--------|----------|--------|----------|--------|---|----------|
| | | | | | | | | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) | | |
| VOC-BTEX | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | |
| Benzene (µg/L) | 5 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells |
| Ethylbenzene (µg/L) | 700 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells |
| Toluene (µg/L) | 1,000 | 7 | Unfiltered | 7 | ND | 7 | 0 | 0 | ND (3) | No wells | ND (1) | ND (3) | – | – | No wells |
| Xylene (µg/L) | 10 | 3 | Unfiltered | 3 | ND | 3 | 0 | 0 | ND (3) | No wells | – | – | – | – | No wells |
| m,p-Xylenes (µg/L) | 10 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | – | No wells | ND (1) | ND (3) | – | – | No wells |
| o-xylene (µg/L) | 10 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | – | No wells | ND (1) | ND (3) | – | – | No wells |
| Pesticides | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | |
| 2,4-D (µg/L) | 70 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells |
| 2,4-D (µg/L) | 70 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |
| Alachlor (µg/L) | 2 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | – | No wells | ND (1) | ND (3) | – | – | No wells |
| Alachlor (µg/L) | 2 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Atrazine (µg/L) | 3 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | – | No wells | ND (1) | ND (3) | – | – | No wells |
| Atrazine (µg/L) | 3 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Carbofuran (µg/L) | 40 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | – | No wells | ND (1) | ND (3) | – | – | No wells |
| Carbofuran (µg/L) | 40 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Dalapon (µg/L) | 200 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Dinoseb (µg/L) | 7 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells |
| Dinoseb (µg/L) | 7 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Diquat (µg/L) | 20 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Endrin (µg/L) | 2 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |
| Glyphosate (µg/L) | 700 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Heptachlor (µg/L) | 0.4 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |
| Lindane (µg/L) | 0.2 | 1 | Filtered | 1 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Lindane (µg/L) | 0.2 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |
| Methoxychlor (µg/L) | 40 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |
| Oxamyl (µg/L) | 200 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells |
| Oxamyl (µg/L) | 200 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Pentachlorophenol (µg/L) | 1 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells |
| Pentachlorophenol (µg/L) | 1 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Picloram (µg/L) | 500 | 3 | Filtered | 3 | ND | 3 | 0 | 0 | – | No wells | ND (1) | ND (2) | – | – | No wells |
| Picloram (µg/L) | 500 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | – | No wells | – | ND (1) | – | – | No wells |
| Silvex (µg/L) | 50 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | ND (3) | No wells | – | ND (1) | – | – | No wells |

Table B1. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from water-supply wells in the upper Carson River basin, Nevada and California, 1996–2006. —Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** Values indicate primary or secondary criteria established by the USEPA or identified within the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; –, no data]

| Water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentrations range in each reach (number of sites) | | | | | | |
|-----------------------------|-----|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|--|--------|--------|-------|-------|----------|----------|
| | | | | | | | | | EF (3) | WF (0) | MS (5) | R (8) | M (1) | CPS (11) | CV (0) |
| Primary criteria:—Continued | | | | | | | | | | | | | | | |
| Simazine (µg/L) | 4 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells |
| Simazine (µg/L) | 4 | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells |
| Toxaphene (µg/L) | 3 | 4 | Unfiltered | 11 | ND | 4 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells |
| No criteria: | | | | | | | | | | | | | | | |
| Chlordane (µg/L) | | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells |
| Endothal (µg/L) | | 1 | Unfiltered | 8 | ND | 1 | 0 | 0 | No wells | — | ND (1) | — | — | — | No wells |
| Prometon (µg/L) | | 4 | Filtered | 4 | ND | 4 | 0 | 0 | No wells | ND (1) | ND (3) | — | — | — | No wells |

Pesticides—Continued

Table B2. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from non-water supply wells in the upper Carson River basin, Nevada and California, 1996–2006.

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No water-supply or nonwater-supply wells were sampled in the following reaches: EFH, EFM, and WFH. No wells were sampled in EFH, EFM, and WFH. No wells were sampled in WFH and no water-supply wells were in the M and CPS reaches. **MCL:** maximum contaminant level; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; -, no data]

| Non-water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detections exceeding MCL | Concentration range in each reach (number of sites) | | | | | | |
|------------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|---|---|------------------|--------------------|-----------------|----------|----------|--------------|
| | | | | | | | | EF (18) | WF (35) | MS (11) | R (6) | M (0) | CPS (0) | CV (2) |
| Nutrients | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | |
| Nitrate (mg/L as N) | 10 | 28 | Filtered | 1,736 | ND-19.4 | 0 | 28 | 1.84-19.9 (3) | ND-19.4 (17) | NQ-3.78 (6) | 0.37-6.35 (2) | No wells | No wells | - |
| Nitrite (mg/L as N) | 1 | 72 | Filtered | 1,891 | ND-1.78 | 46 | 26 | ND-1.78 (18) | ND-0.209 (35) | ND-0.048 (11) | ND-0.055 (6) | No wells | No wells | ND-0.006 (2) |
| Nitrite+Nitrate (mg/L as N) | 10 | 56 | Filtered | 187 | ND-17.5 | 4 | 52 | ND-17.5 (18) | ND-10.6 (19) | ND-10.7 (11) | ND-11.3 (6) | No wells | No wells | ND-4.56 (2) |
| No criteria: | | | | | | | | | | | | | | |
| Ammonia (mg/L as N) | | 16 | Filtered | 757 | ND-1.58 | 0 | 16 | - | ND-1.58 (16) | - | - | No wells | No wells | - |
| Kjeldahl-N (mg/L), Total | | 16 | Unfiltered | 1,155 | ND-7.56 | 0 | 16 | - | ND-7.56 (16) | - | - | No wells | No wells | - |
| Nitrogen (mg/L), Total | | 16 | Unfiltered | 731 | 0.0-8.27 | 0 | 16 | - | 0-8.27 (16) | - | - | No wells | No wells | - |
| Phosphorus (mg/L as P) | | 56 | Filtered | 189 | ND-0.72 | 4 | 52 | ND-0.14 (18) | ND-0.72 (19) | ND-0.198 (11) | ND-0.29 (6) | No wells | No wells | ND-0.01 (2) |
| Phosphate (mg/L as P), Total | | 50 | Unfiltered | 169 | 0.00032-0.23 | 0 | 50 | 0.0058-0.046 (17) | 0.0065-0.23 (18) | 0.00032-0.064 (10) | 0.013-0.093 (5) | No wells | No wells | - |
| Phosphorus (mg/L), Total | | 16 | Unfiltered | 1,162 | ND-1.34 | 0 | 16 | - | ND-1.34 (16) | - | - | No wells | No wells | - |
| Major constituents | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | |
| Fluoride (mg/L) | 4 | 49 | Filtered | 185 | ND-7.67 | 4 | 45 | ND-0.21 (16) | ND-0.34 (18) | ND-7.67 (10) | 0.12-2.5 (5) | No wells | No wells | - |
| Secondary criteria: | | | | | | | | | | | | | | |
| Chloride (mg/L) | 400 | 65 | Filtered | 1,892 | ND-261 | 0 | 65 | ND-53.7 (16) | ND-83.2 (34) | ND-261 (10) | 7.14-142 (5) | No wells | No wells | - |
| Magnesium (mg/L) | 150 | 14 | Filtered | 119 | ND-44.5 | 0 | 14 | ND-24.4 (3) | 6.67-7.92 (1) | ND-40.3 (5) | 1.19-44.5 (5) | No wells | No wells | - |
| Sulfate (mg/L) | 500 | 65 | Filtered | 1,287 | ND-2580 | 0 | 65 | ND-77.4 (16) | ND-64.3 (34) | ND-2580 (10) | 16.5-1550 (5) | No wells | No wells | - |
| TDS (mg/L) | 1,000 | 72 | Filtered | 1,898 | ND-4660 | 0 | 72 | ND-492 (18) | 44-532 (35) | ND-4660 (11) | 158-3070 (6) | No wells | No wells | 372-2370 (2) |
| No criteria: | | | | | | | | | | | | | | |
| Calcium (mg/L) | | 14 | Filtered | 114 | 4.8-560 | 0 | 14 | 47-85.6 (3) | 15.1-19.1 (1) | 4.8-560 (5) | 13.9-217 (5) | No wells | No wells | - |
| Potassium (mg/L) | | 14 | Filtered | 114 | 0.38-60 | 0 | 14 | 1.77-6.5 (3) | 2.1-2.59 (1) | 0.38-13.8 (5) | 1.04-60 (5) | No wells | No wells | - |
| Sodium (mg/L) | | 14 | Filtered | 114 | 8.85-1050 | 0 | 14 | 22.8-38.2 (3) | 8.85-10.2 (1) | 9.71-1050 (5) | 14.4-647 (5) | No wells | No wells | - |

Table B2. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from non-water supply wells in the upper Carson River basin, Nevada and California, 1996–2006.—Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No water-supply or nonwater-supply wells were sampled in the following reaches: EFH, EFM, and WFF. No wells were sampled in EFH, EFM, and WFF. No wells were sampled in EFH, EFM, and WFF. No non-water supply wells were in the M and CPS reaches. **MCL:** maximum contaminant level; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFF, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagescoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; -, no data]

| Non-water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentration range in each reach (number of sites) | | | | | | | | | | |
|------------------------------|-------|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|---|----------|----------------|----------|----------|----------|---|--|--|--|--|
| | | | | | | | | | WF (35) | MS (11) | R (6) | M (0) | CPS (0) | CV (2) | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | |
| Antimony (µg/L) | 6 | 3 | Filtered | 3 | ND-1.2 | 1 | 2 | 0 | - | - | ND-1.2 (3) | No wells | No wells | No wells | - | | | | |
| Arsenic (µg/L) | 10 | 4 | Filtered | 4 | 13-93.8 | 0 | 4 | 4 | - | 13 (1) | 21.1-93.8 (3) | No wells | No wells | No wells | - | | | | |
| Barium (µg/L) | 2,000 | 4 | Filtered | 4 | 9-107 | 0 | 4 | 4 | - | 9 (1) | 51-107 (3) | No wells | No wells | No wells | - | | | | |
| Beryllium (µg/L) | 4 | 3 | Filtered | 3 | ND-1.06 | 2 | 1 | 0 | - | - | ND-1.06 (3) | No wells | No wells | No wells | - | | | | |
| Cadmium (µg/L) | 5 | 4 | Filtered | 4 | ND-2.02 | 1 | 3 | 0 | - | ND (1) | 0.03-2.02 (3) | No wells | No wells | No wells | - | | | | |
| Chromium (µg/L) | 100 | 4 | Filtered | 4 | ND-1.3 | 3 | 1 | 0 | - | 1.3 (1) | ND (3) | No wells | No wells | No wells | - | | | | |
| Copper (µg/L) | 1,300 | 4 | Filtered | 4 | ND-8.3 | 1 | 3 | 0 | - | ND (1) | 0.2-8.3 (3) | No wells | No wells | No wells | - | | | | |
| Lead (µg/L) | 15 | 4 | Filtered | 4 | ND-20 | 3 | 1 | 0 | - | 20 (1) | ND (3) | No wells | No wells | No wells | - | | | | |
| Mercury (µg/L) | 2 | 1 | Filtered | 1 | ND | 1 | 0 | 0 | - | ND (1) | - | No wells | No wells | No wells | - | | | | |
| Nickel (µg/L) | 100 | 3 | Filtered | 3 | 1.0-3.85 | 0 | 3 | 0 | - | - | 1-3.85 (3) | No wells | No wells | No wells | - | | | | |
| Selenium (µg/L) | 50 | 4 | Filtered | 4 | ND-4.7 | 2 | 2 | 0 | - | ND (1) | ND-4.7 (3) | No wells | No wells | No wells | - | | | | |
| Thallium (µg/L) | 2 | 3 | Filtered | 3 | ND-0.04 | 2 | 1 | 0 | - | - | ND-0.04 (3) | No wells | No wells | No wells | - | | | | |
| Secondary criteria: | | | | | | | | | | | | | | | | | | | |
| Aluminum (µg/L) | 200 | 3 | Filtered | 3 | 1-5.8 | 0 | 3 | 0 | - | - | 1-5.8 (3) | No wells | No wells | No wells | - | | | | |
| Iron (µg/L) | 600 | 14 | Filtered | 119 | ND-13400 | 5 | 9 | 1 | ND-15 (3) | ND-9 (1) | ND-13400 (5) | No wells | No wells | No wells | - | | | | |
| Manganese (µg/L) | 100 | 6 | Filtered | 7 | ND-1230 | 3 | 3 | 3 | - | - | ND-1230 (5) | No wells | No wells | No wells | - | | | | |
| Silver (µg/L) | 100 | 4 | Filtered | 4 | ND | 4 | 0 | 0 | - | ND (1) | ND (3) | No wells | No wells | No wells | - | | | | |
| Zinc (µg/L) | 5,000 | 4 | Filtered | 4 | 1.3-9.4 | 0 | 4 | 0 | - | 8 (1) | 1.3-9.4 (3) | No wells | No wells | No wells | - | | | | |
| No criteria: | | | | | | | | | | | | | | | | | | | |
| Boron (µg/L) | | 3 | Filtered | 3 | 80-868 | 0 | 3 | 0 | - | - | 80-868 (3) | No wells | No wells | No wells | - | | | | |
| Cobalt (µg/L) | | 3 | Filtered | 3 | 0.072-1.23 | 0 | 3 | 0 | - | - | 0.072-1.23 (3) | No wells | No wells | No wells | - | | | | |
| Vanadium (µg/L) | | 3 | Filtered | 3 | ND-65.3 | 1 | 2 | 0 | - | - | ND-65.3 (3) | No wells | No wells | No wells | - | | | | |

Trace elements

Table B2. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from non-water supply wells in the upper Carson River basin, Nevada and California, 1996–2006.—Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No water-supply or nonwater-supply wells were sampled in the following reaches: EFH, EFM, and WFH. No wells were sampled in EFH, EFM, and WFH. No wells were sampled in EFH, EFM, and WFH. No non-water supply wells were in the M and CPS reaches. **MCL:** maximum contaminant level; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; TDS, total dissolved solids; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; piC/L, picocurie per liter; ng/L, nanogram per liter; -, no data]

| Non-water-supply constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with detects | Number of sites exceeding MCL | Concentration range in each reach (number of sites) | | | | | | | | | | | | | | |
|---|-----|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|---|---------|---------|-------|---------------|------------|----------|----------|---|---|---|---|--|--|--|
| | | | | | | | | | EF (18) | WF (35) | MS (11) | R (6) | IM (0) | CPS (0) | CV (2) | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| Uranium (µg/L) | 30 | 3 | Filtered | 3 | 0.01–85.3 | 0 | 3 | 2 | - | - | - | - | 0.01–85.3 (3) | No wells | No wells | - | - | - | - | - | | | |
| Volatile-Organic Compounds (VOC) | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane (µg/L) | 200 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,1,2-Trichloroethane (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,1-Dichloroethene (µg/L) | 7 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,2,4-Trichlorobenzene (µg/L) | 70 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,2-Dichloropropane (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,2-dichlorobenzene (µg/L) | 600 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| 1,4-dichlorobenzene (µg/L) | 75 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Carbon Tetrachloride (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Chlorobenzene (µg/L) | 100 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| DBCP (µg/L) | 0.2 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Dichloromethane (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| PCE (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Styrene (µg/L) | 100 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| TCE (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Vinyl Chloride (µg/L) | 2 | 4 | Unfiltered | 4 | ND-0.3 | 3 | 1 | 0 | - | - | - | - | ND (1) | ND-0.3 (3) | No wells | No wells | - | - | - | - | | | |
| <i>cis</i> -1,2-Dichloroethene (µg/L) | 70 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| <i>trans</i> -1,2-Dichloroethene (µg/L) | 100 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |
| Advisory: | | | | | | | | | | | | | | | | | | | | | | | |
| MTBE (µg/L) | 40 | 4 | Unfiltered | 4 | ND | 4 | 0 | 0 | - | - | - | - | ND (1) | ND (3) | No wells | No wells | - | - | - | - | | | |

Table B2. Trace-element, major-constituent, nutrient, volatile-organic compound, and pesticide data for ground-water samples collected from non-water supply wells in the upper Carson River basin, Nevada and California, 1996–2006.—Continued

[The drinking-water criterion for gross-alpha is adjusted for uranium activity (Thomas and Lawrence, 1994; U.S. Environmental Protection Agency (USEPA), 2006). No water-supply or nonwater-supply wells were sampled in the following reaches: EFH, EFM, and WFH. No wells were sampled in EFH, EFM, and WFH and no water-supply wells were in WF and CV reaches. No non-water supply wells were in the M and CPS reaches. **MCL:** maximum contaminant level; no value indicates no criteria established. **Abbreviations:** MCL, maximum contaminant level; EFH, East Fork Headwaters Reach; EFM, East Fork Markleeville Reach; WFH, West Fork Headwaters Reach; EF, East Fork Reach; WF, West Fork Reach; MS, Main Stem Reach; R, Riverview Reach; M, Moundhouse Reach; CPS, Carson Plains Stagecoach Reach; CV, Churchill Valley Reach; mg/L, milligram per liter; N, nitrogen; ND, not detected; P, phosphorus; NQ, measured but not quantified; DBCP, dibromochloropropane; HCCPD, hexachlorocyclopentadiene; PCE, tetrachloroethylene; TCE, trichloroethylene; MTBE, methyl-*tert*-butyl ether; TCDD, dioxin; 2,4-D, 2,4-Dichlorophenoxyacetic acid; µg/L, microgram per liter; p/C/L, picocurie per liter; ng/L, nanogram per liter; –, no data]

| Non-water-supply constituent | MCL (µg/L) | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-detects | Number of sites with exceeds MCL | Concentration range in each reach (number of sites) | | | | | | | | | | | | | | | | |
|------------------------------|------------|-----------------|-----------------|-------------------|---------------------|----------------------------------|----------------------------------|---|---------|---------|--------|-------------|----------|----------|----------|---|--|--|--|--|--|--|--|--|
| | | | | | | | | EF (18) | WF (35) | MS (11) | R (6) | M (0) | CPS (0) | CV (2) | | | | | | | | | | |
| VOC–Trihalomethanes | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | | |
| Bromoform (µg/L) | | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Chlorodibromomethane (µg/L) | | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Chloroform (µg/L) | | 4 | Unfiltered | 4 | ND–0.04 | 3 | 1 | – | – | – | ND (1) | ND–0.04 (3) | No wells | No wells | No wells | – | | | | | | | | |
| Dichlorobromomethane (µg/L) | | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| VOC–BTEX | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | | |
| Benzene (µg/L) | 5 | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Ethylbenzene (µg/L) | 700 | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Toluene (µg/L) | 1,000 | 4 | Unfiltered | 4 | ND | 4 | 0 | – | – | – | ND (1) | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Xylene (µg/L) | 10 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| m,p-Xylenes (µg/L) | 10 | 3 | Unfiltered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| o-xylene (µg/L) | 10 | 3 | Unfiltered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Pesticides | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-D (µg/L) | 70 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| Alachlor (µg/L) | 2 | 3 | Filtered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Atrazine (µg/L) | 3 | 3 | Filtered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Carbofuran (µg/L) | 40 | 3 | Filtered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Endrin (µg/L) | 2 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| Heptachlor (µg/L) | 0.4 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| Lindane (µg/L) | 0.2 | 3 | Filtered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Methoxychlor (µg/L) | 40 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| Silvex (µg/L) | 50 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| Simazine (µg/L) | 4 | 3 | Filtered | 3 | ND | 3 | 0 | – | – | – | – | ND (3) | No wells | No wells | No wells | – | | | | | | | | |
| Toxaphene (µg/L) | 3 | 1 | Unfiltered | 1 | ND | 1 | 0 | – | – | – | ND (1) | – | No wells | No wells | No wells | – | | | | | | | | |
| No criteria: | | | | | | | | | | | | | | | | | | | | | | | | |
| Prometon (µg/L) | | 3 | Filtered | 3 | ND–0.01 | 2 | 1 | – | – | – | – | ND–0.01 (3) | No wells | No wells | No wells | – | | | | | | | | |

**Appendix C. Trace-Element, Major Constituent,
Radiochemistry, and Nutrient Data for Water Samples
Collected from Streams in the Upper Carson River Basin,
Nevada and California, 1996–2006**

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Table C1. Trace-element, major constituent, radiochemistry, and nutrient data for water samples collected from streams in the upper Carson River basin, California and Nevada, 1996–2006.

[Many mercury samples were analyzed using low-level analysis methods. In these instances, original mercury data were expressed in nanograms per liter. In this table, these units were converted to µg/L. Source of suspended solids within Carson River are from erosion and landslides in the basin (Pahl, 2008). **MCL:** Values indicate primary or secondary criteria established by USEPA or identified in the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** DIC, dissolved inorganic carbon; DOC, dissolved organic carbon; MCL, maximum contaminant level; EFH, East Fork Headwaters reach; EFM, East Fork Markleville reach; EF, East Fork reach; WFH, West Fork Headwaters reach; WF, West Fork reach; MS, Main Stem reach; R, Riverview reach; M, Moundhouse reach; CPS, Carson Plains Stagecoach reach; CV, Churchill Valley reach; LR, Lahontan Reservoir; mg/L, milligram per liter; N, nitrogen; ND, not detected; NQ, measured but not quantified; TDS, total dissolved solids; µg/L, microgram per liter; –, no data]

| Constituent | MCL | Number of sites | Sample fraction | Number of samples | Concentration range | Number of sites with non-defects | Number of sites with defects | Concentration range in each reach (number of sites) | | | | | | | | | | | | |
|------------------------------------|-----|-----------------|-----------------|-------------------|---------------------|----------------------------------|------------------------------|---|---------------|-------------|--------------|--------------|----------------|----------------|---------------|---------------|----------------|---------|--|--|
| | | | | | | | | EFH (4) | EPM (8) | EF (12) | WFH (10) | WF (22) | MS (11) | R (7) | M (8) | CPS (5) | CV (3) | LR (18) | | |
| Nutrients | | | | | | | | | | | | | | | | | | | | |
| Primary criteria: | | | | | | | | | | | | | | | | | | | | |
| Nitrate (mg/L as N) | 10 | 27 | Filtered | 1,010 | ND-1.36 | 0 | 0 | NQ (1) | NQ (1) | 0-0.58 (3) | ND-0.28 (3) | ND-1.36 (12) | 0-0.21 (4) | 0.004-0.25 (1) | 0-0.43 (1) | 0-0.23 (1) | - | | | |
| Nitrate (mg/L as N), Total | 10 | 24 | Unfiltered | 342 | ND-0.58 | 2 | 22 | ND-0.34 (3) | 0.02-0.4 (2) | ND-0.58 (4) | ND-0.17 (6) | ND-0.22 (3) | ND-0.21 (3) | ND-0.56 (1) | ND-0.43 (1) | ND-0.23 (1) | - | | | |
| Nitrite (mg/L as N) | 1 | 34 | Filtered | 1,065 | ND-0.34 | 8 | 26 | ND-0.001 (1) | ND-0.005 (5) | ND-0.02 (5) | ND-0.014 (4) | ND-0.34 (12) | 0.009-0.02 (4) | 0.01-0.02 (1) | 0.01-0.02 (1) | 0.01-0.02 (1) | - | | | |
| Nitrite (mg/L as N), Total | 1 | 46 | Unfiltered | 1,151 | ND-0.13 | 21 | 25 | ND (4) | ND (3) | ND-0.04 (4) | ND (7) | ND-0.01 (5) | ND-0.13 (4) | ND-0.01 (1) | ND-0.01 (1) | ND-0.01 (1) | ND-0.04 (16) | | | |
| Nitrite+Nitrate (mg/L as N) | 10 | 14 | Filtered | 84 | ND-0.2 | ND-0.2 | 13 | ND-0.03 (1) | 0.007-0.2 (5) | ND-0.08 (3) | ND-0.084 (2) | 0.026 (1) | 0.057 (1) | - | - | 0.17 (1) | - | | | |
| Nitrite+Nitrate (mg/L as N), Total | 10 | 34 | Unfiltered | 621 | ND-1.76 | 2 | 32 | ND-0.07 (1) | ND-0.14 (2) | ND-1.76 (4) | ND-0.04 (1) | ND-0.4 (3) | ND-0.52 (4) | ND-0.4 (1) | ND-0.22 (1) | ND-0.13 (1) | ND-0.4 (16) | | | |
| No criteria: | | | | | | | | | | | | | | | | | | | | |
| Ammonia (mg/L as N) | | 40 | Filtered | 1,048 | ND-2.12 | 13 | 27 | - | ND-0.014 (6) | ND-0.1 (5) | ND-0.22 (3) | ND-2.12 (12) | ND-0.11 (5) | 0.04-0.11 (2) | ND-0.1 (6) | ND-0.1 (1) | - | | | |
| Ammonia (mg/L as N), Total | | 36 | Unfiltered | 1,073 | ND-0.4 | 13 | 23 | ND (1) | ND (3) | ND-0.08 (4) | ND (1) | ND- (0.2(4) | ND-0.3 (4) | ND-0.12 (1) | ND-0.07 (1) | ND-0.06 (1) | ND-0.4 (16) | | | |
| Kjeldahl-N (mg/L), Total | | 61 | Unfiltered | 2,195 | ND-4.56 | 1 | 60 | ND-1.2 (4) | ND-0.46 (5) | ND-2.5 (6) | ND-2.8 (9) | ND-4.56 (14) | ND-1.3 (4) | 0.2-0.9 (1) | 0.16-0.98 (1) | 0.2-2.8 (1) | 0.3-3.1 (16) | | | |
| Nitrogen (mg/L), Total | | 62 | Unfiltered | 1,751 | ND-5.81 | 0 | 62 | ND-1.2 (4) | ND-0.87 (3) | ND-2.6 (4) | ND-2.9 (8) | ND-5.81 (14) | ND-1.43 (5) | 0.26-1.19 (1) | 0.2-4.8 (6) | 0.2-1.02 (1) | 0.3-3.1 (16) | | | |
| Phosphate (mg/L as P) | | 34 | Filtered | 1,069 | ND-0.84 | 4 | 30 | 0.019 (1) | ND-0.01 (5) | ND-0.06 (5) | ND-0.72 (3) | ND-0.84 (12) | 0.03-0.48 (5) | 0.04-0.16 (1) | 0.03-0.13 (1) | 0.04-0.09 (1) | - | | | |
| Phosphate (mg/L as P), Total | | 50 | Unfiltered | 1,179 | ND-0.48 | 2 | 48 | ND-0.04 (4) | ND-0.04 (4) | ND-0.07 (5) | ND-0.03 (7) | ND-0.37 (5) | ND-0.48 (6) | 0.03-0.21 (1) | ND-0.16 (1) | ND-0.09 (1) | ND-0.44 (16) | | | |
| Phosphorus (mg/L) | | 6 | Filtered | 73 | ND-0.21 | 0 | 6 | - | - | - | - | - | ND-0.21 (1) | - | ND-0.16 (5) | - | - | | | |
| Phosphorus (mg/L), Total | | 68 | Unfiltered | 2,296 | ND-3.2 | 1 | 67 | ND-0.37 (4) | ND-0.21 (5) | ND-0.77 (6) | ND-0.88 (9) | ND-1.06 (14) | 0.03-0.55 (6) | 0.06-0.51 (1) | ND-0.85 (6) | 0.04-3.2 (1) | 0.07-0.71 (16) | | | |

Table C1. Trace-element, major constituent, radiochemistry, and nutrient data for water samples collected from streams in the upper Carson River basin, California and Nevada, 1996–2006.—Continued

[Many mercury samples were analyzed using low-level analysis methods. In these instances, original mercury data were expressed in nanograms per liter. In this table, these units were converted to µg/L. Source of suspended solids within Carson River are from erosion and landslides in the basin (Pahl, 2008). **MCL:** Values indicate primary or secondary criteria established by USEPA or identified in the Nevada Administrative Code 445A.455; no value indicates no criteria established. **Abbreviations:** DIC, dissolved inorganic carbon; DOC, dissolved organic carbon; MCL, maximum contaminant level; EFH, East Fork Headwaters reach; EFM, East Fork Markleeville reach; EF, East Fork reach; WFH, West Fork Headwaters reach; WF, West Fork reach; MS, Main Stem reach; R, Riverview reach; M, Moundhouse reach; CPS, Carson Plains Stagecoach reach; CV, Churchill Valley reach; LR, Lahontan Reservoir; mg/L, milligram per liter; N, nitrogen; ND, not detected; NQ, measured but not quantified; TDS, total dissolved solids; µg/L, microgram per liter; –, no data]

| Constituent | MCL | Number of sites | Sample of fraction | Number of samples | Concentration Range | Number of sites with non-defects | Number of sites with defects | Number of sites exceeding MCL | Concentration range in each reach (number of sites) | | | | | | | | | | | | | |
|-------------------------|-----|-----------------|--------------------|-------------------|---------------------|----------------------------------|------------------------------|-------------------------------|---|---------------|-----------------|----------------|--------------|-------------|-------------|-------------|---------|--------|-------------|------------|--|--|
| | | | | | | | | | EFH (4) | EFM (8) | EF (12) | WFH (10) | WF (22) | MS (11) | R (7) | M (8) | CPS (5) | CV (3) | LR (18) | | | |
| No criteria.—Continued | | | | | | | | | | | | | | | | | | | | | | |
| Potassium (mg/L), Total | 22 | Unfiltered | 821 | 821 | ND-11 | 1 | 21 | 0 | 0.6-2.8 (3) | 0.8-1.1 (1) | ND-1.78 (8) | 0.51-11.3 (10) | — | — | — | — | — | — | — | — | | |
| Silica (mg/L) | 3 | Filtered | 6 | 6 | 0.0054-0.025 | 0 | 3 | 0 | — | 0.018 (1) | 0.0054-0.00 (1) | — | — | 0.025 (1) | — | — | — | — | — | — | | |
| Sodium (mg/L) | 36 | Filtered | 242 | 242 | 0.99-73 | 0 | 36 | 0 | — | 4.28-20.5 (6) | 0.99-2.09 (1) | 4.9-26 (2) | 14-73 (4) | 21-67 (2) | 22-51 (1) | — | — | — | 16-50 (1) | 20-40 (14) | | |
| Sodium (mg/L), Total | 51 | Unfiltered | 1,172 | 1,172 | 0.248-60 | 0 | 51 | 0 | 3-13 (3) | 4-17 (3) | 0.9-5.13 (8) | 0.25-33.4 (13) | 5.77-60 (3) | 9.16-58 (1) | 11.2-45 (1) | — | — | — | 11.9-49 (1) | 17-31 (14) | | |
| Suspended Solids (mg/L) | 93 | Unfiltered | 2,504 | 2,504 | ND-4220 | 2 | 91 | 0 | ND-390 (4) | ND-111 (4) | ND-1000 (10) | ND-418 (22) | ND-2500 (10) | ND-3100 (5) | ND-870 (3) | ND-2780 (5) | — | — | — | 3640 (3) | | |

Major constituents—Continued

| Trace elements | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------|----|------------|-----|--------|----|----|----|---------|------------|-------------|-------------|-----------|------------|-----------|------------|---|---|---|----------|------------|
| Primary criteria: | | | | | | | | | | | | | | | | | | | | | |
| Antimony (µg/L) | 6 | 7 | Filtered | 7 | ND | 7 | 0 | 0 | — | ND (4) | ND (3) | — | — | — | — | — | — | — | — | — | — |
| Antimony (µg/L), Total | 6 | 26 | Unfiltered | 63 | ND | 26 | 0 | 0 | — | ND (4) | ND (4) | — | — | — | — | — | — | — | — | — | — |
| Arsenic (µg/L) | 10 | 33 | Filtered | 226 | ND-20 | 1 | 32 | 18 | 5-7 (1) | ND-10 (4) | ND-12 (5) | 0.6-0.9 (1) | ND-18 (2) | 4-18 (3) | 4-18 (1) | 5-10 (1) | — | — | — | 4-7 (1) | ND-20 (14) |
| Arsenic (µg/L), Total | 10 | 18 | Unfiltered | 153 | ND-195 | 0 | 18 | 14 | — | ND-154 (5) | 2.8-195 (4) | — | ND-26 (3) | 4.3-16 (3) | 4-16 (1) | 5-17.2 (1) | — | — | — | 5-15 (1) | — |
| Barium (µg/L) | 2,000 | 7 | Filtered | 7 | 28-39 | 0 | 7 | 0 | — | 28-34 (4) | 29-39 (3) | — | — | — | — | — | — | — | — | — | — |
| Barium (µg/L), Total | 2,000 | 26 | Unfiltered | 63 | ND-80 | 0 | 26 | 0 | — | NQ-78 (4) | NQ-80 (4) | — | ND-70 (2) | 40-80 (3) | 40-70 (1) | — | — | — | — | — | 40-70 (10) |
| Beryllium (µg/L) | 4 | 7 | Filtered | 7 | ND | 7 | 0 | 0 | — | ND (4) | ND (3) | — | — | — | — | — | — | — | — | — | — |
| Beryllium (µg/L), Total | 4 | 26 | Unfiltered | 63 | ND-NQ | 24 | 2 | 0 | — | ND-NQ (4) | ND (4) | — | — | — | — | — | — | — | — | — | — |
| Cadmium (µg/L) | 5 | 31 | Filtered | 221 | ND-1.0 | 26 | 5 | 0 | — | ND (4) | ND (5) | — | ND-1 (2) | ND (3) | ND-1 (1) | — | — | — | — | — | — |
| Cadmium (µg/L), Total | 5 | 30 | Unfiltered | 263 | ND-2.0 | 23 | 7 | 0 | — | ND-NQ (4) | ND (4) | — | ND (2) | ND-1 (3) | ND-1 (1) | — | — | — | — | — | — |

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