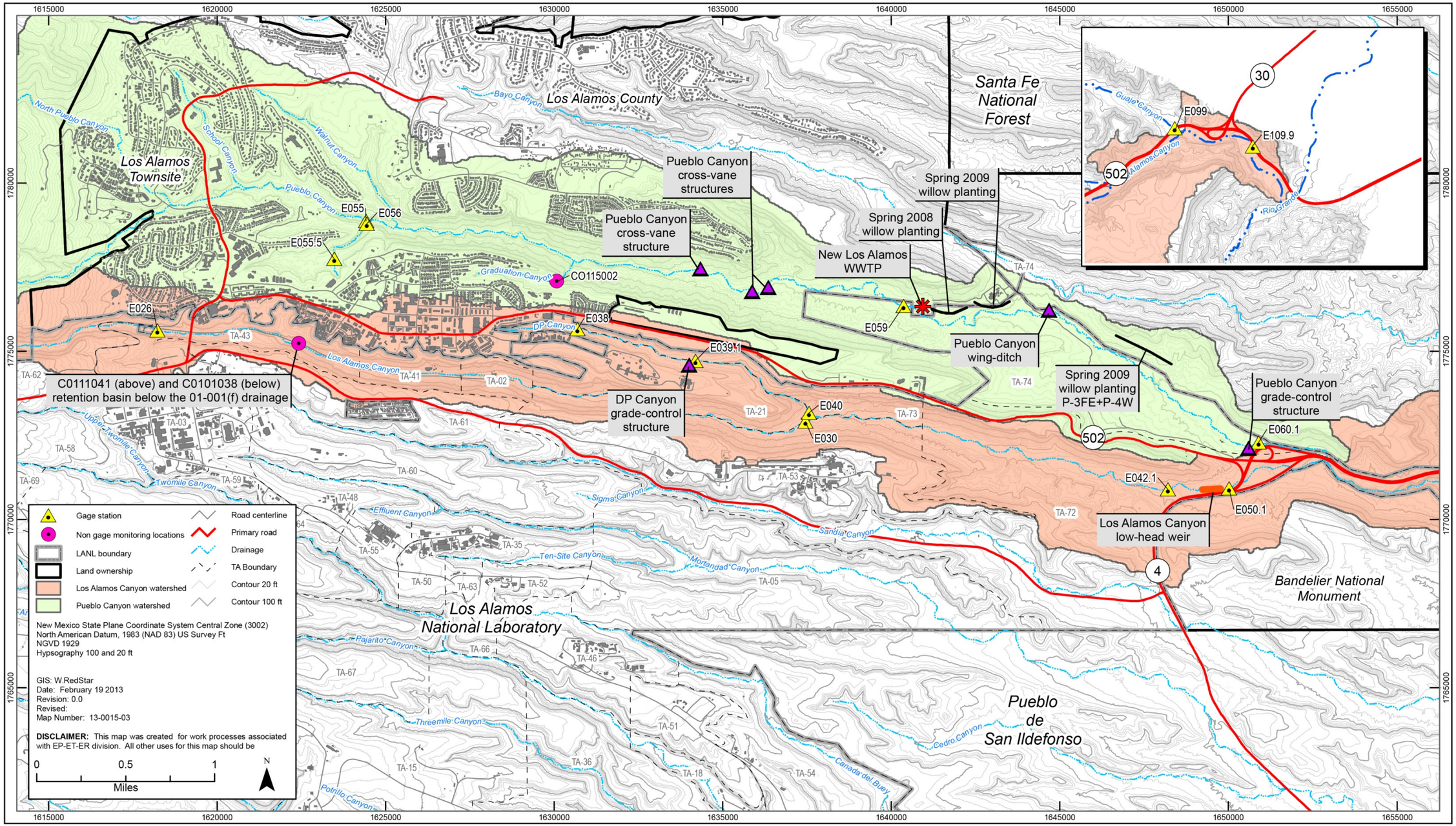


Figure 1.1-1 Los Alamos and Pueblo Canyons showing monitoring locations and sediment transport mitigation sites

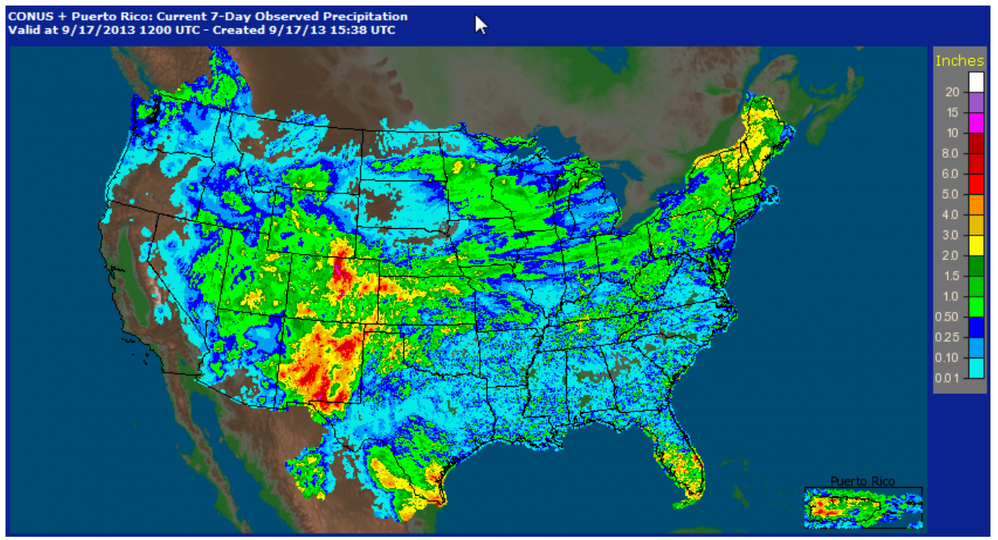


Figure 1.1-2 Radar-observed precipitation for the continental U.S. for 9/10/13 to 9/17/13, courtesy of NOAA

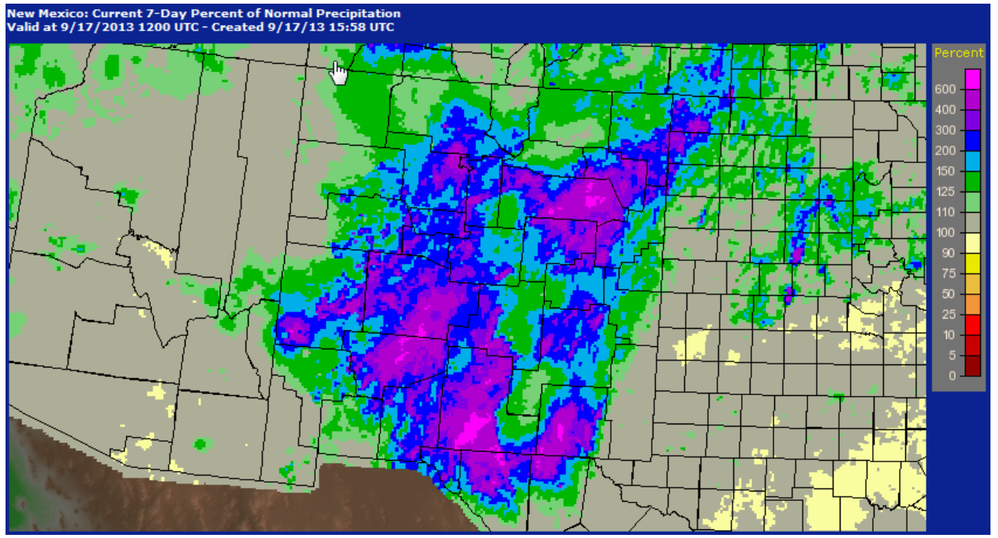


Figure 1.1-3 Percent of normal precipitation for New Mexico for 9/10/13 to 9/17/13, courtesy of NOAA

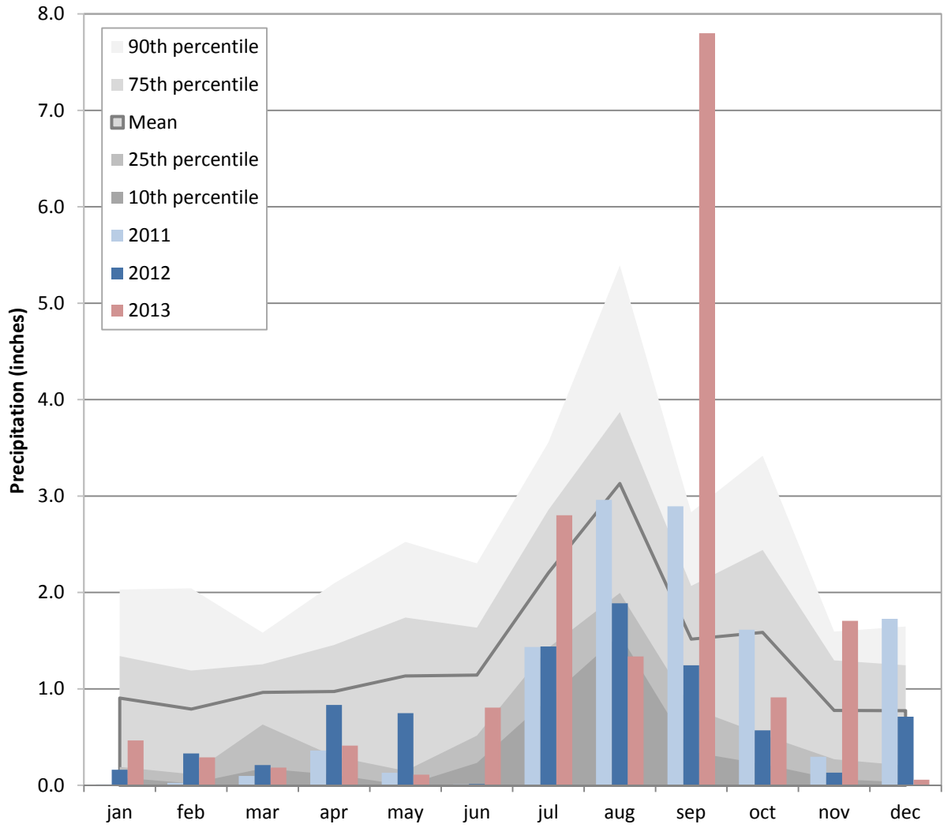


Figure 1.1-4 Total precipitation for each month of 2011, 2012, and 2013 based on meteorological tower data averaged over the Laboratory (mean and percentiles are based on data from 1992 to 2010)

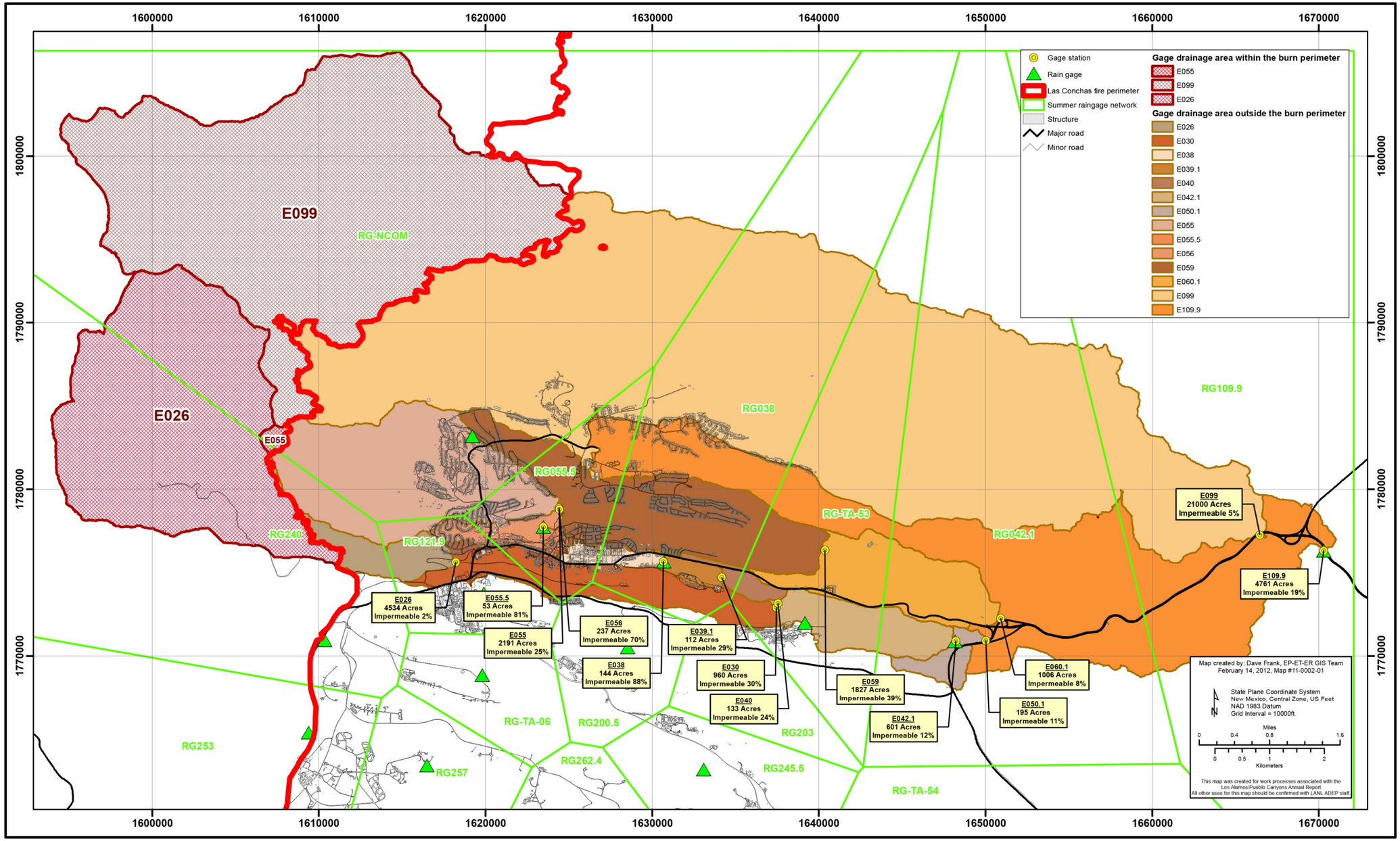


Figure 2.1-1 Los Alamos Canyon watershed showing drainage areas for each stream gage and associated rain gages, Thiessen polygons, and extent of the Las Conchas burn area

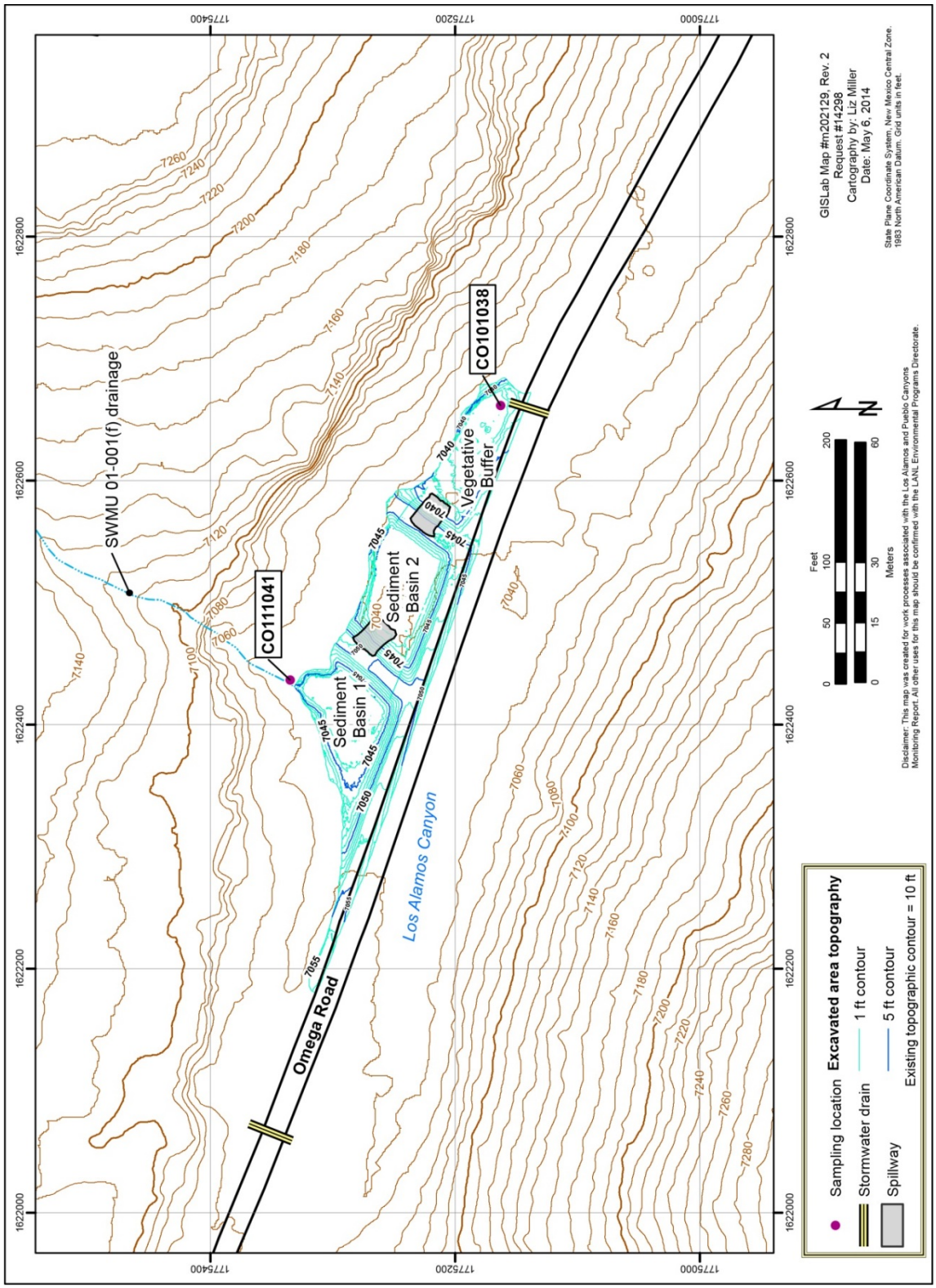


Figure 2.2-1 Sediment detention basins and sampling locations below the SWMU 01-001(f) drainage

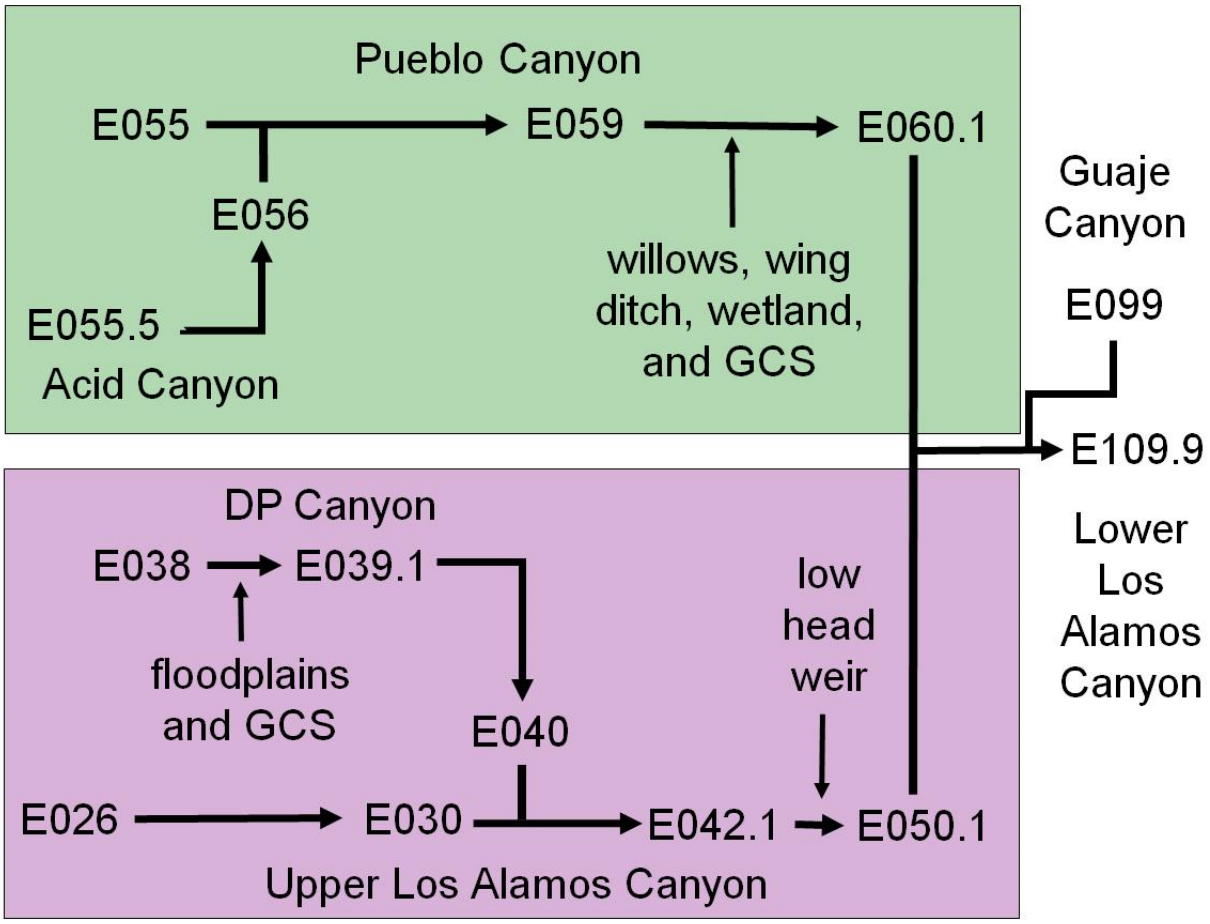


Figure 3.2-1 **Flow diagram of gage stations and sediment transport mitigation sites in the LA/P watershed**

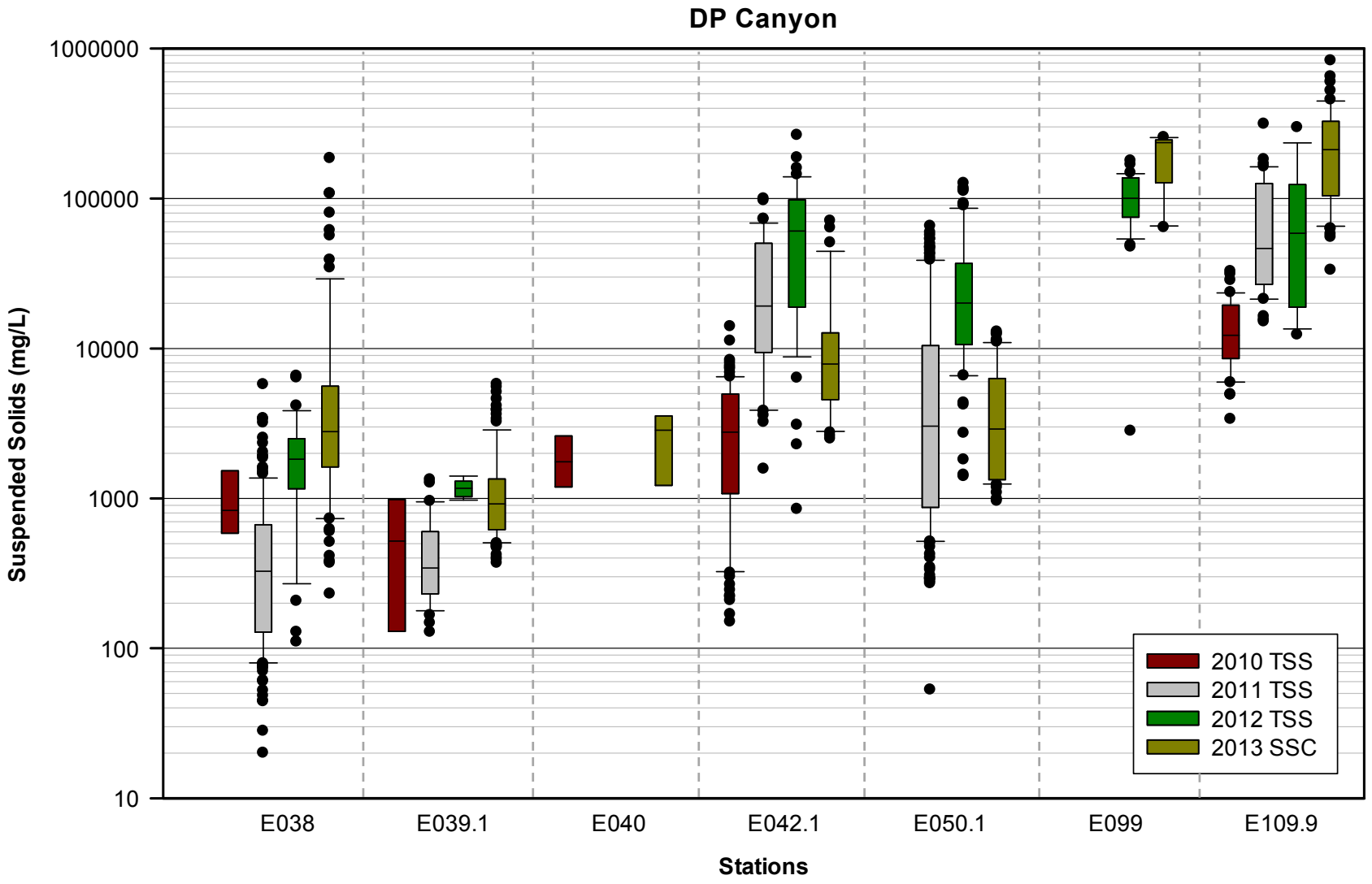


Figure 3.2-2 **Box and whisker plots of TSS and SSC for all stations in the Los Alamos and Pueblo watershed over the past 4 yr of monitoring**

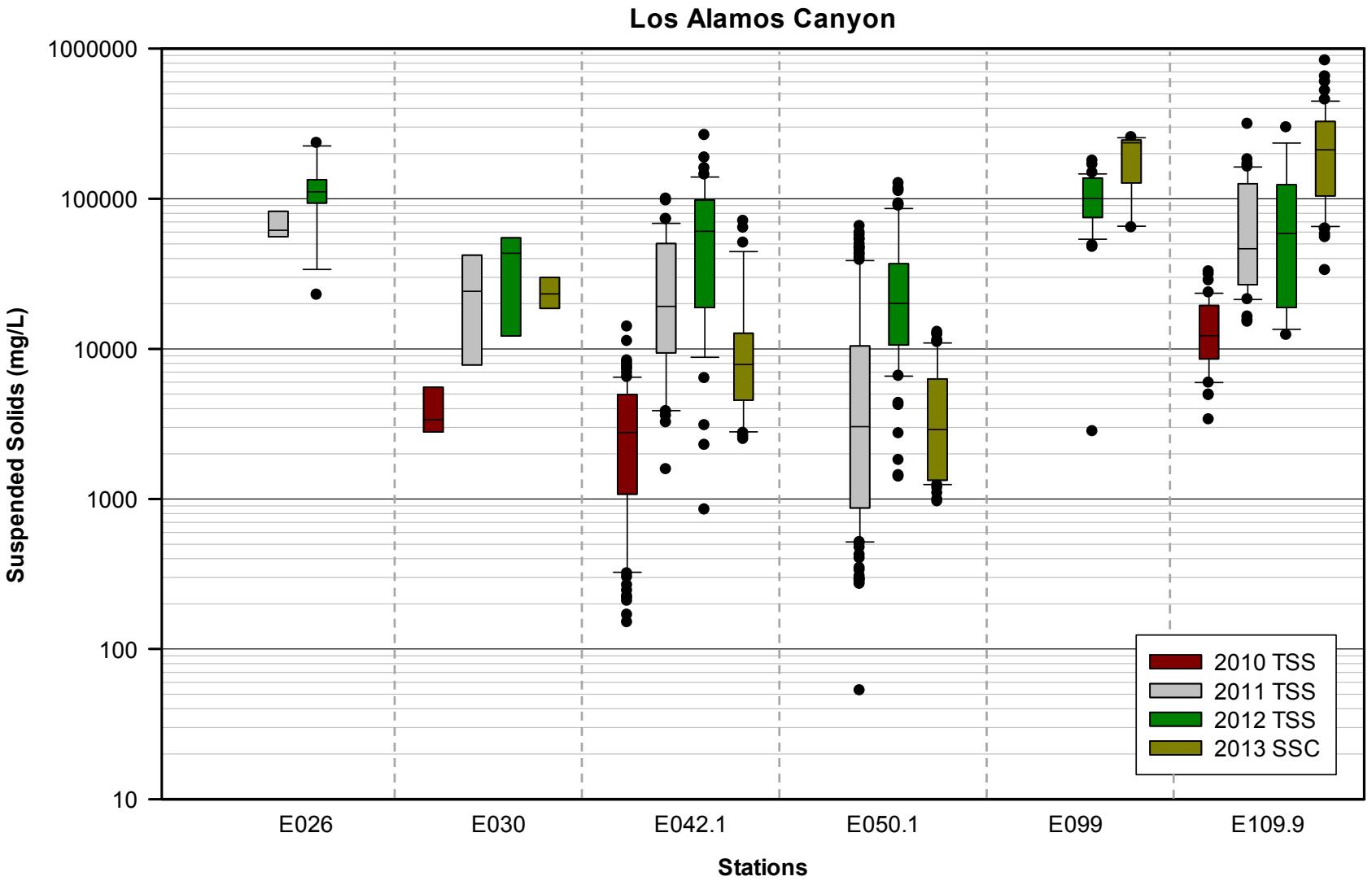


Figure 3.2-2 (continued) **Box and whisker plots of TSS and SSC for all stations in the Los Alamos and Pueblo watershed over the past 4 yr of monitoring**

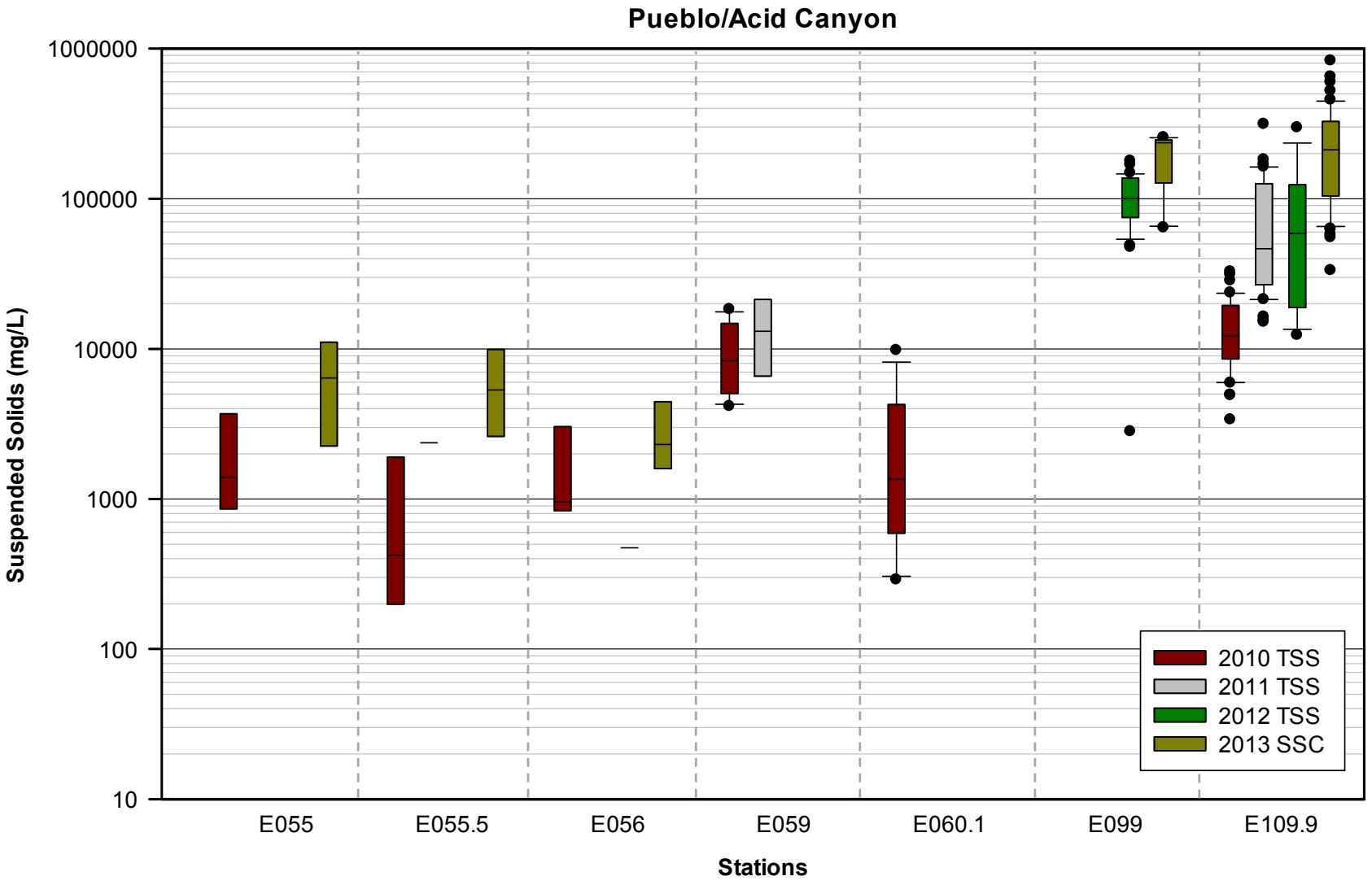


Figure 3.2-2 (continued) **Box and whisker plots of TSS and SSC for all stations in the Los Alamos and Pueblo watershed over the past 4 yr of monitoring**

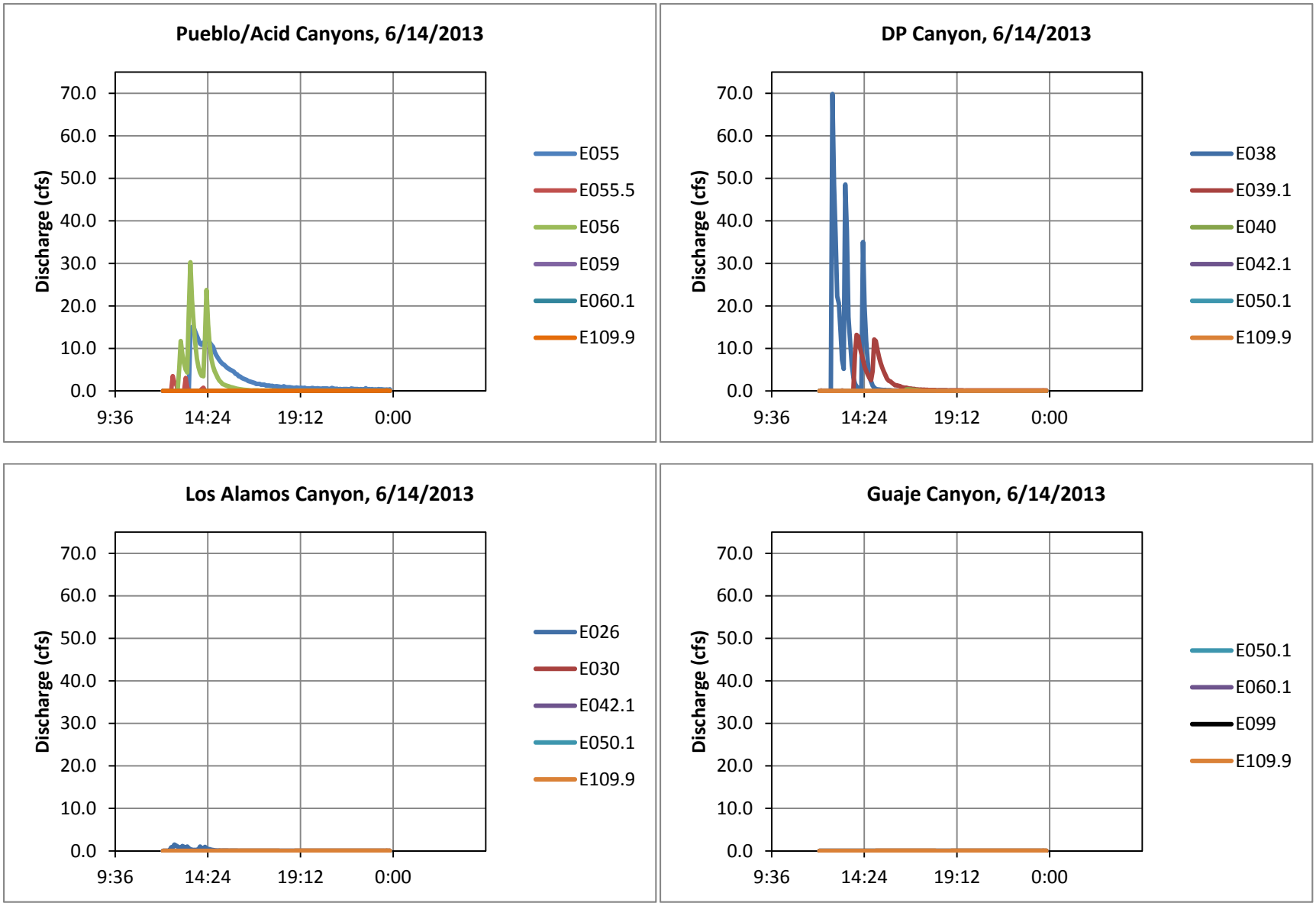


Figure 3.2-3 Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches

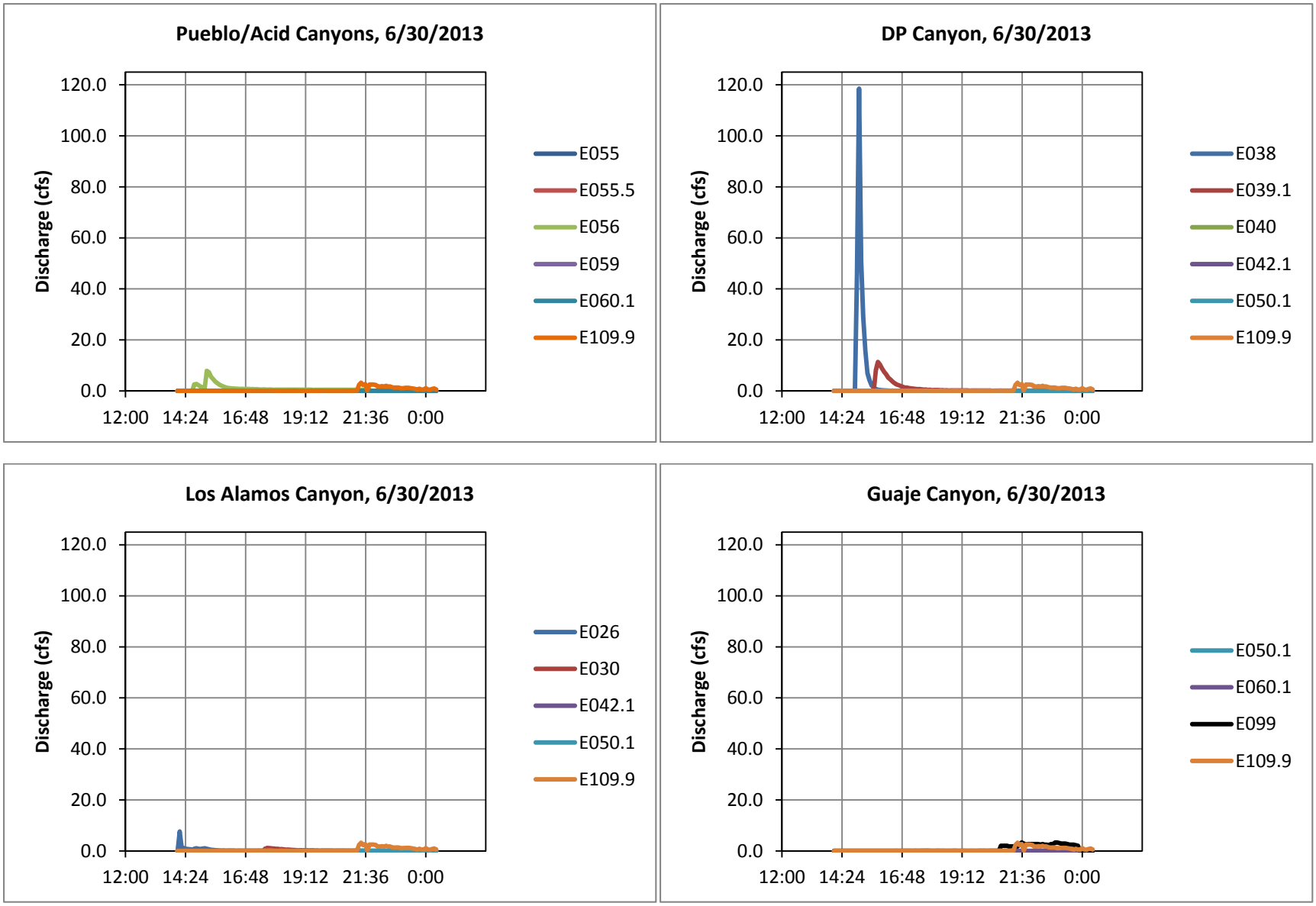


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

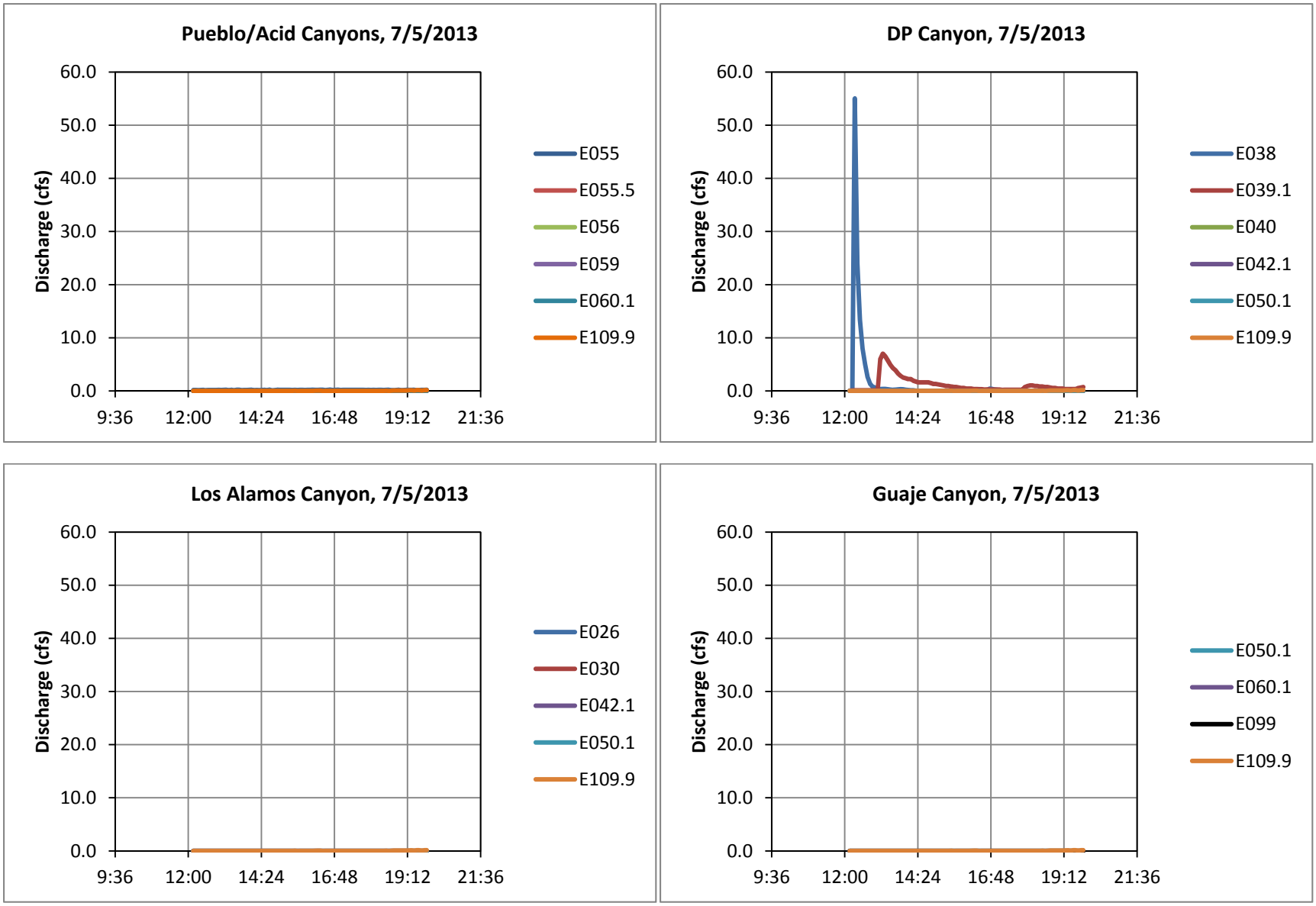


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

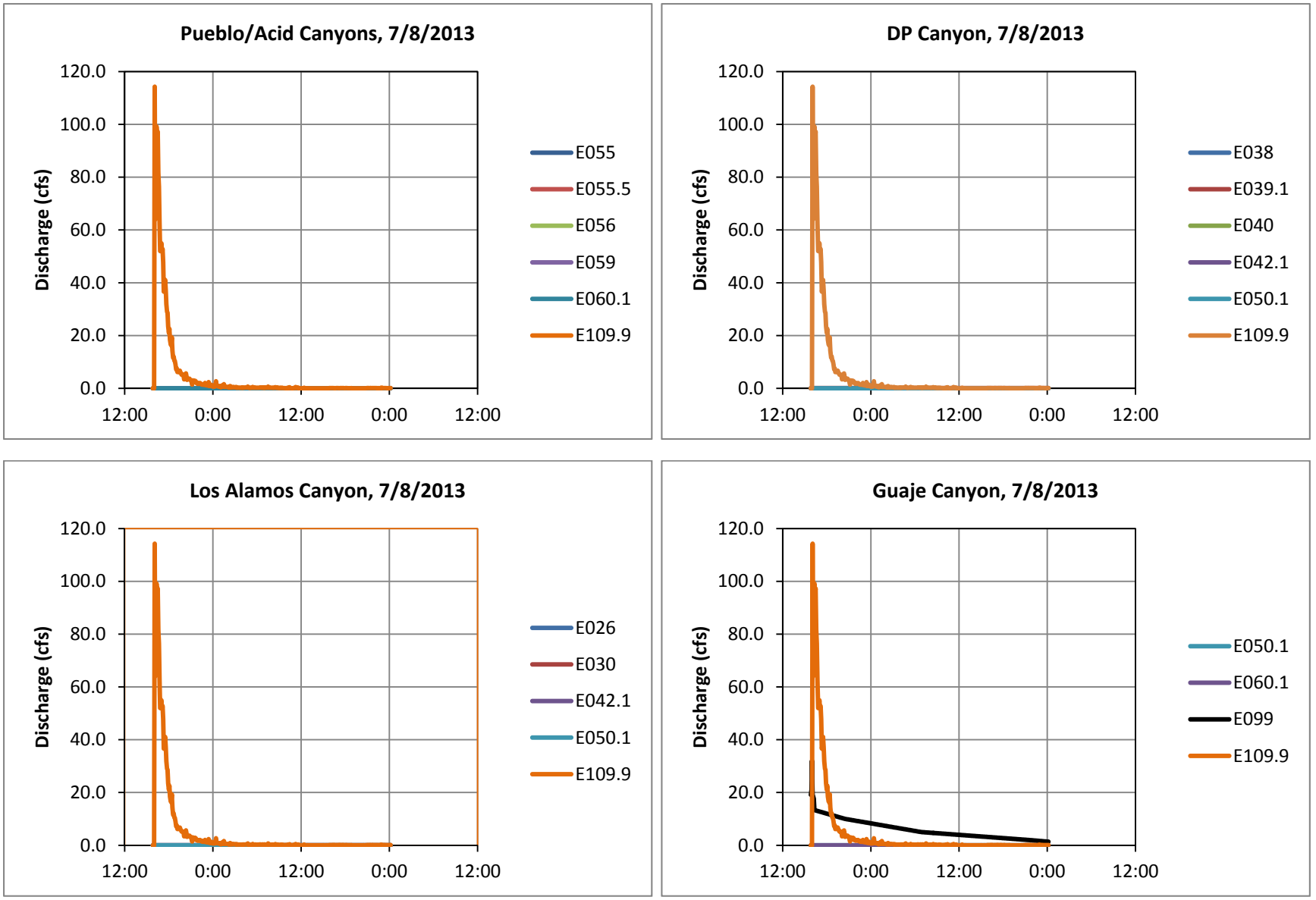


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

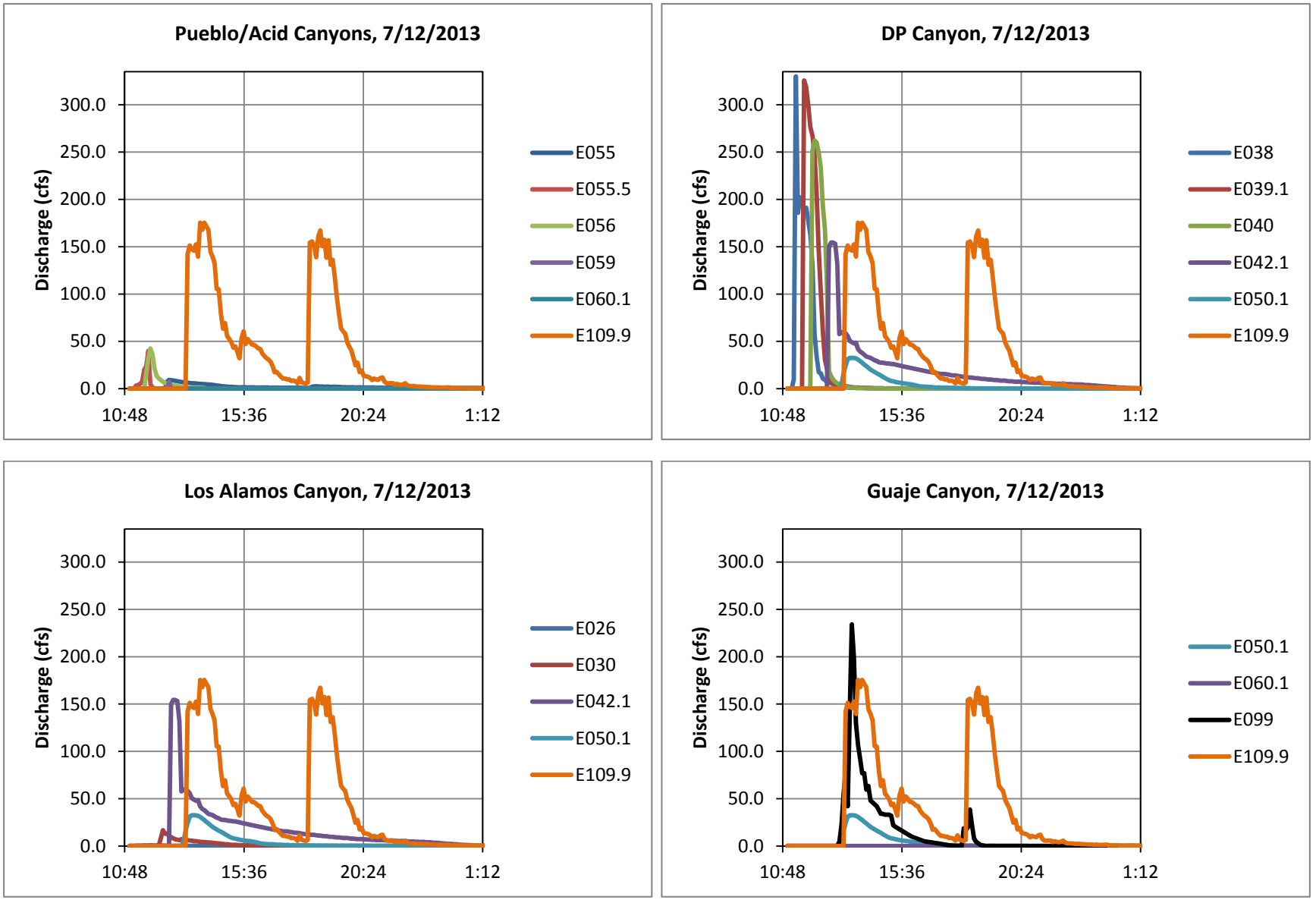


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

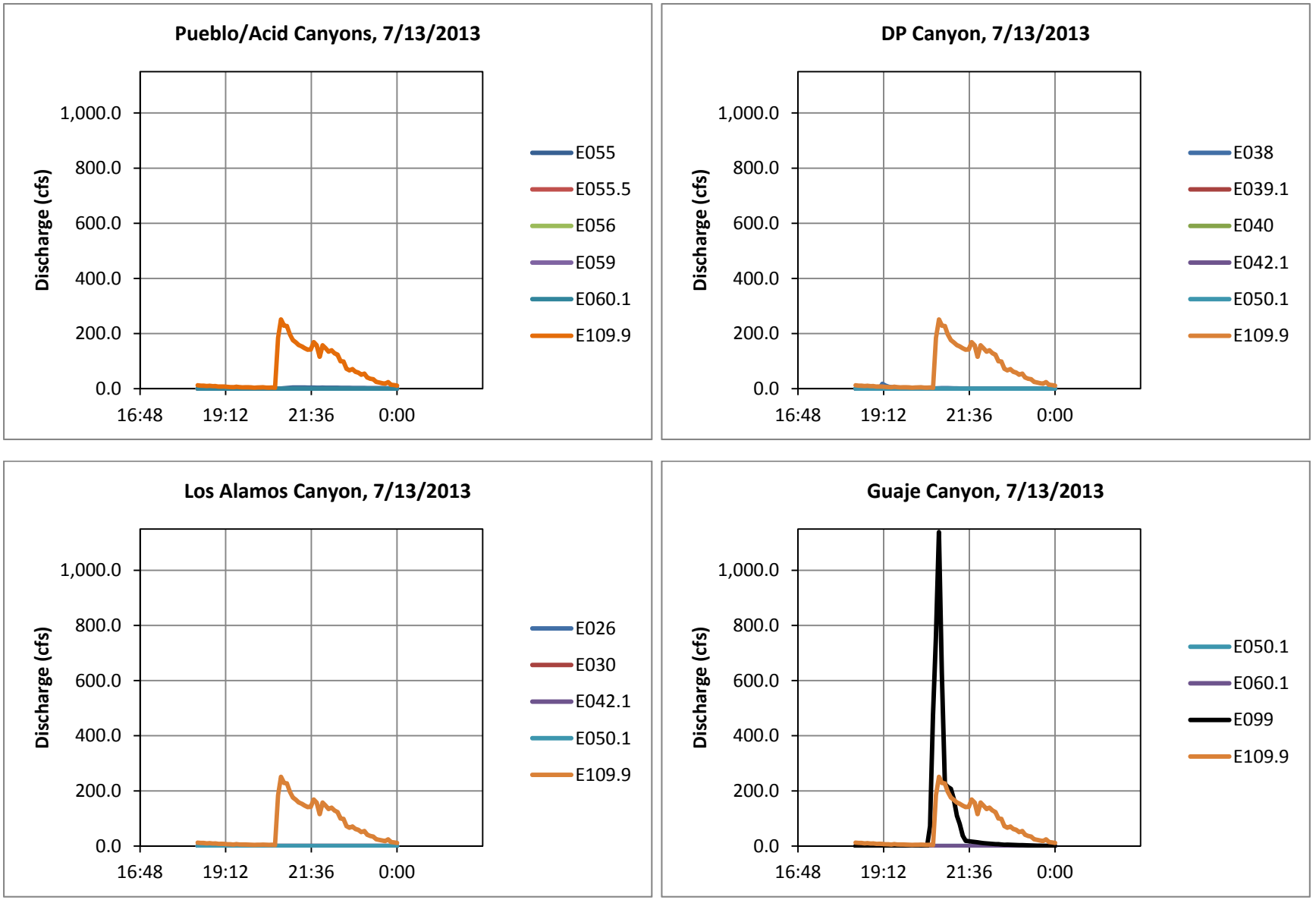


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

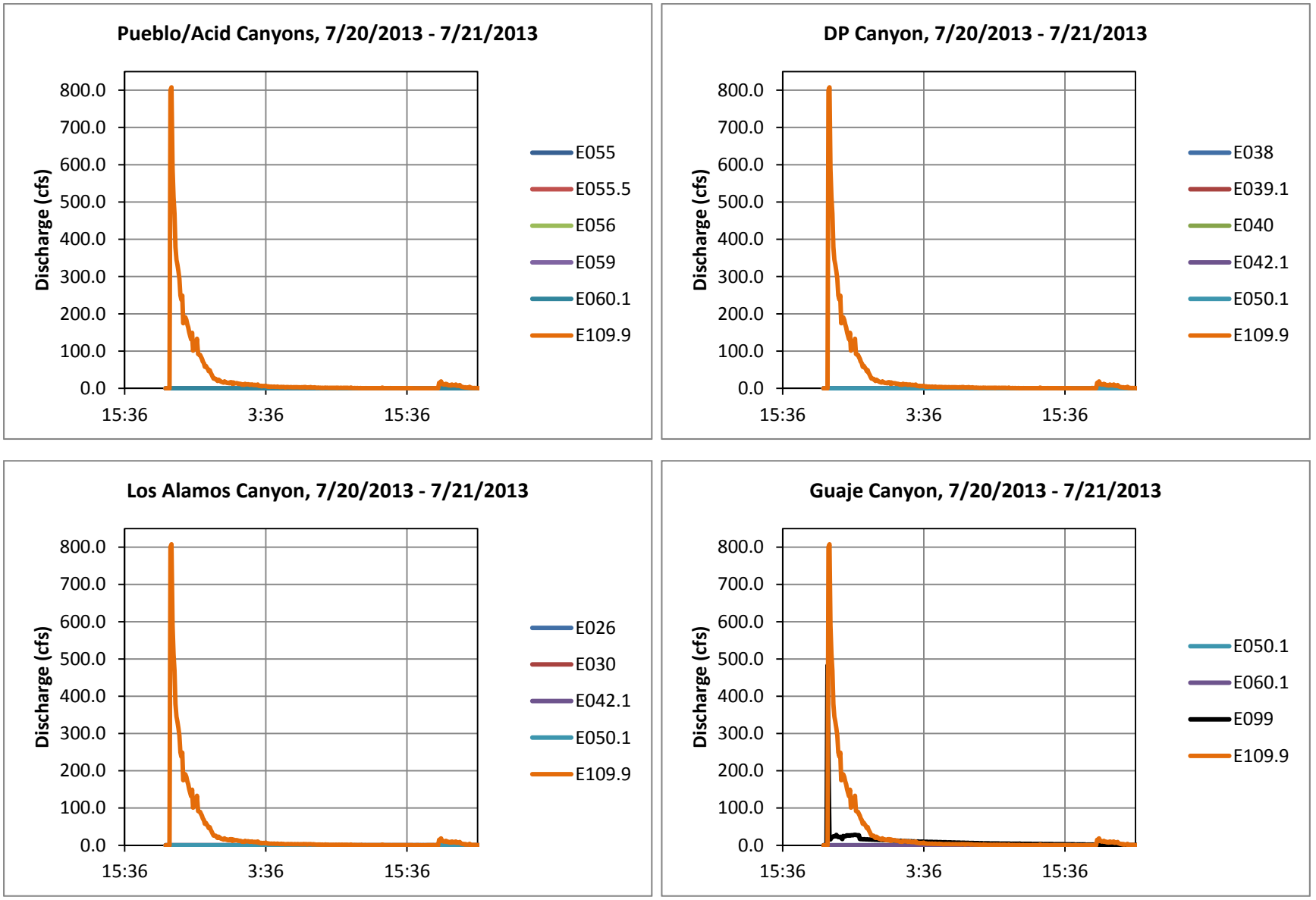


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

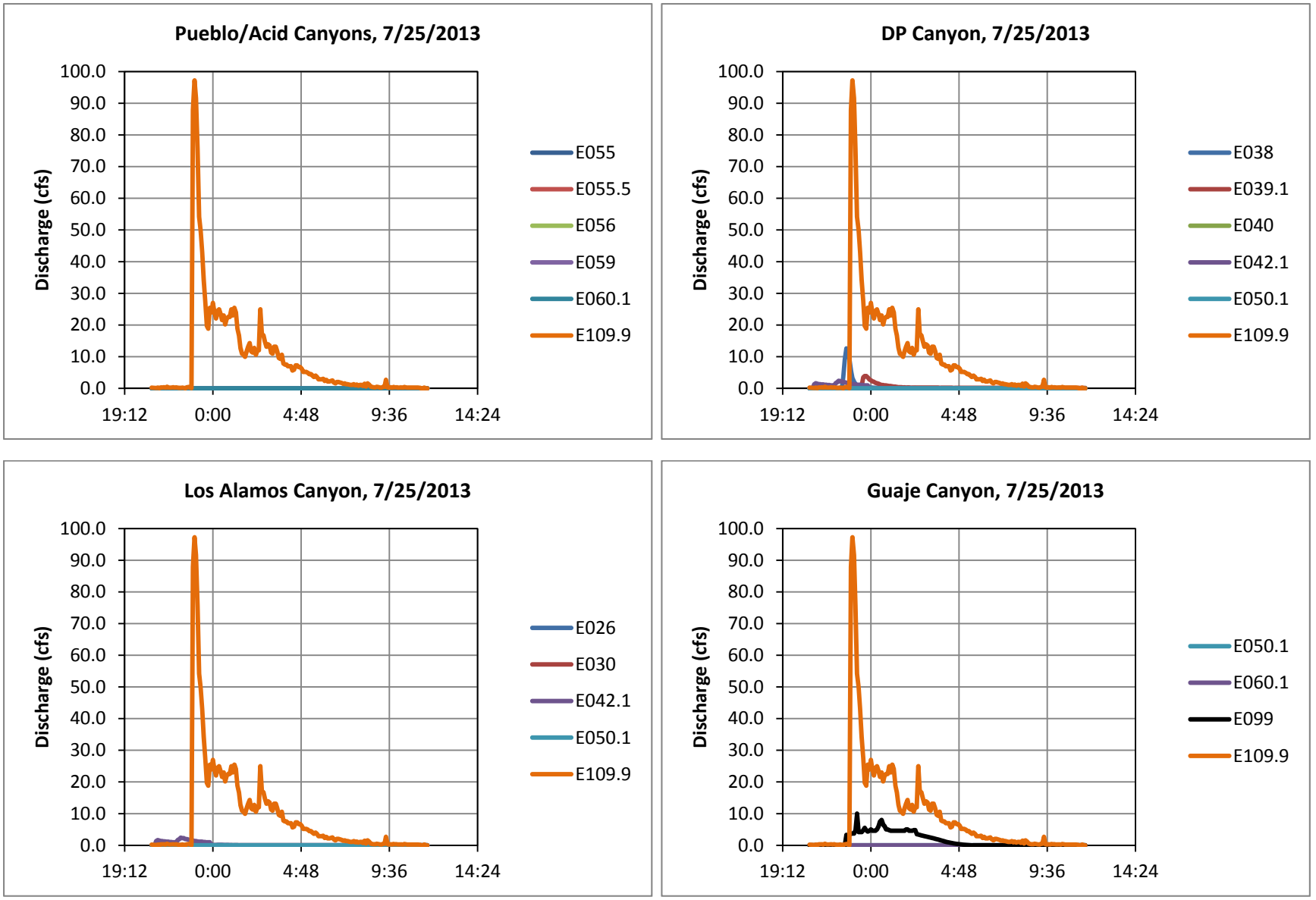


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

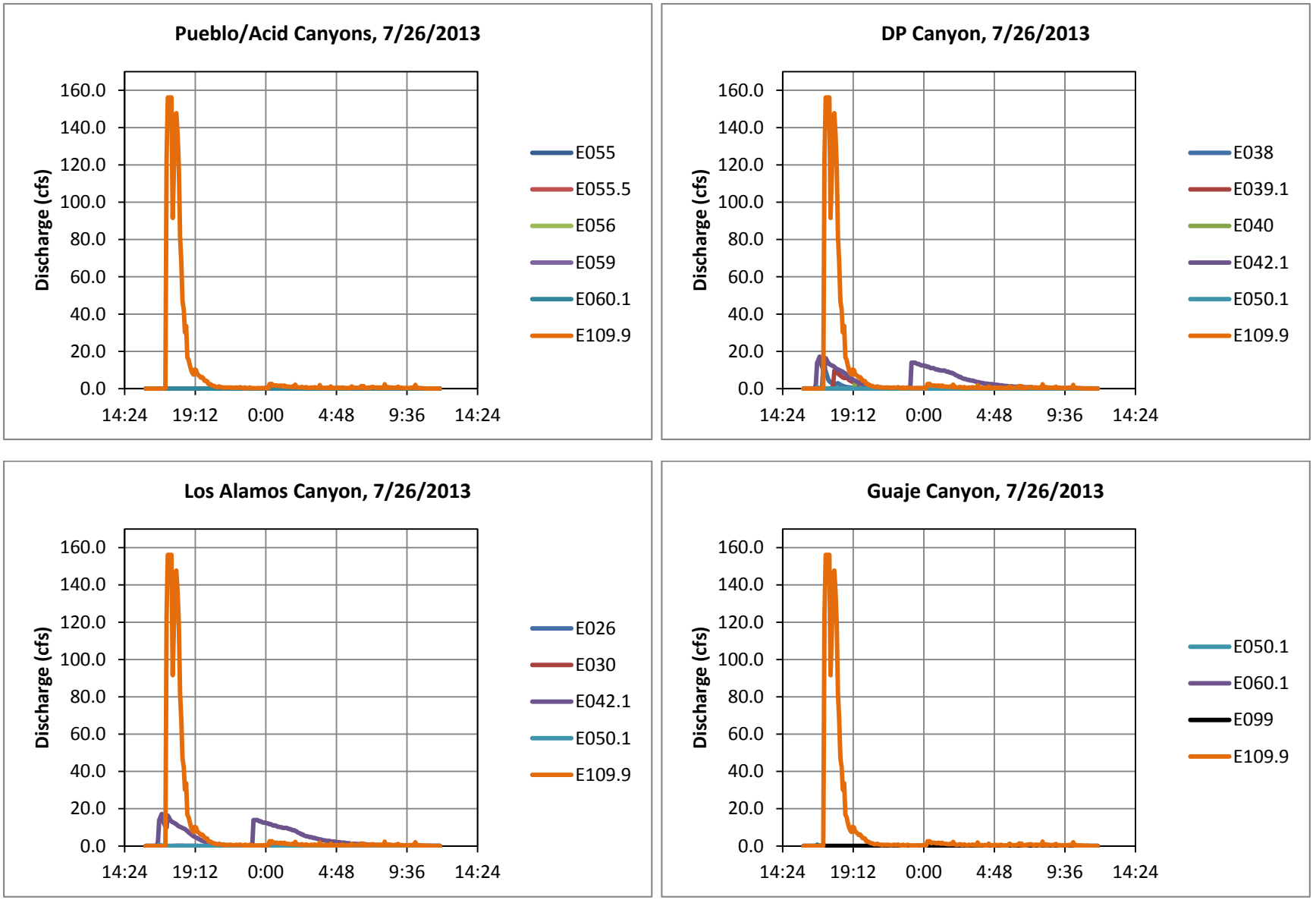


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

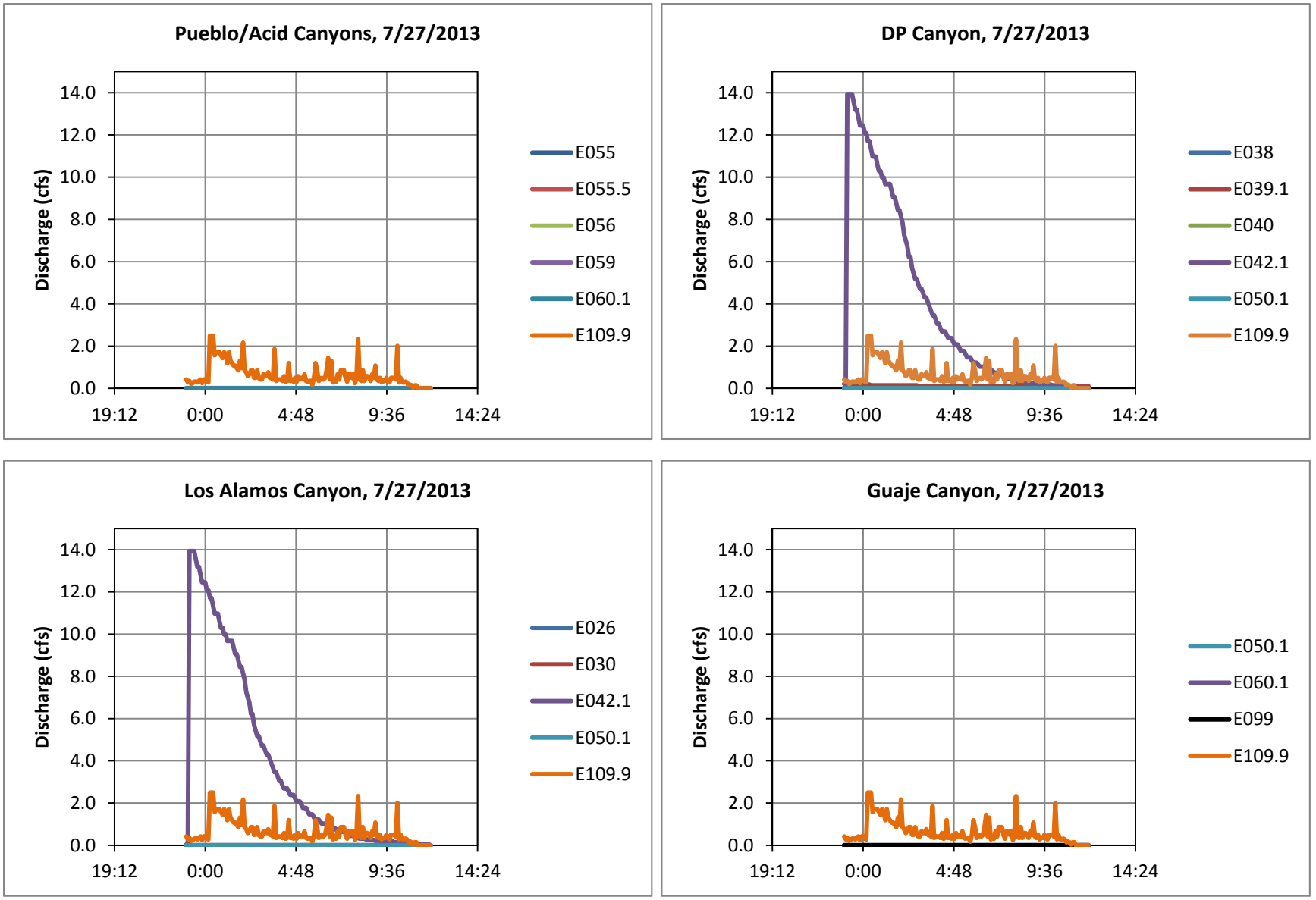


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

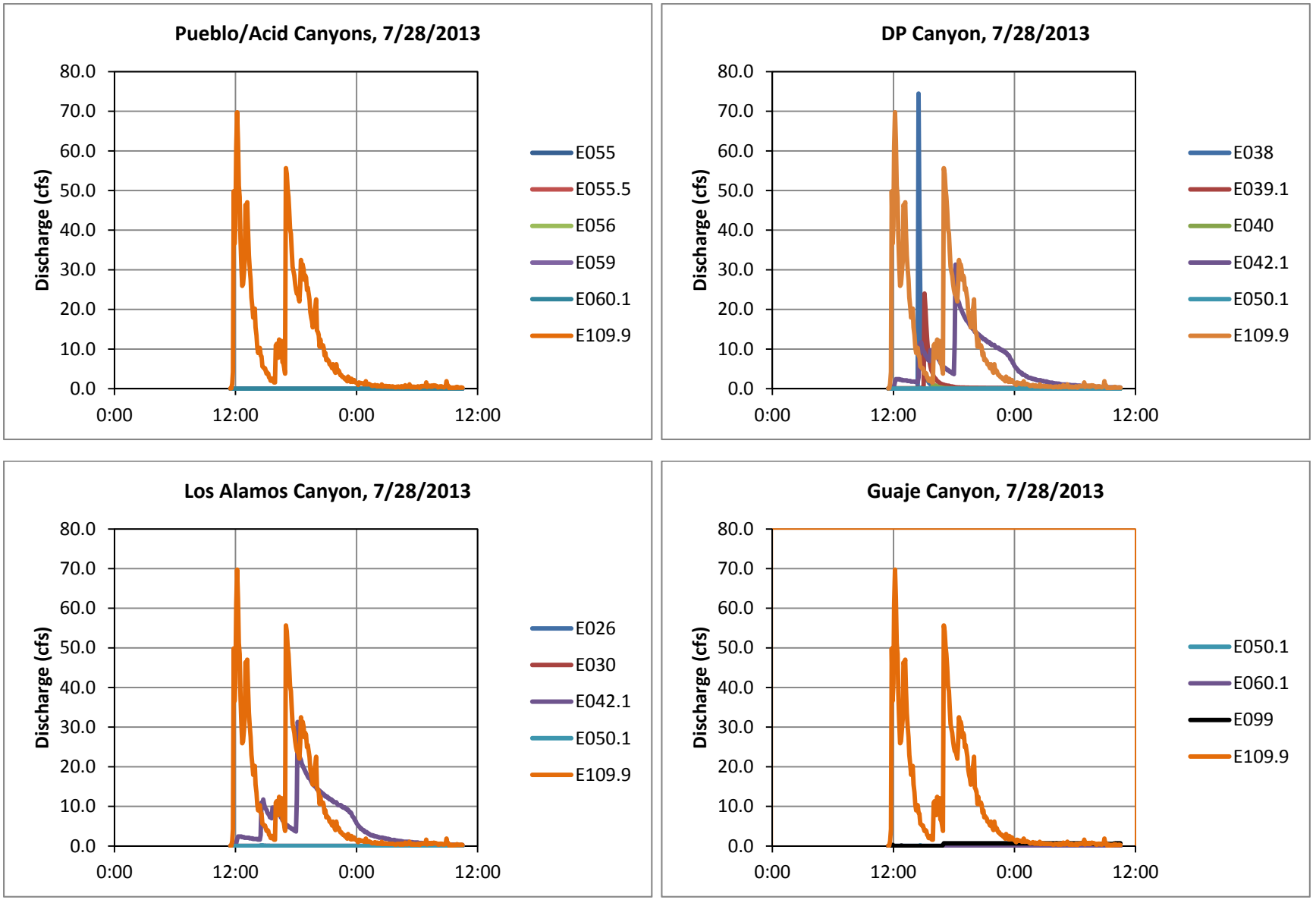


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

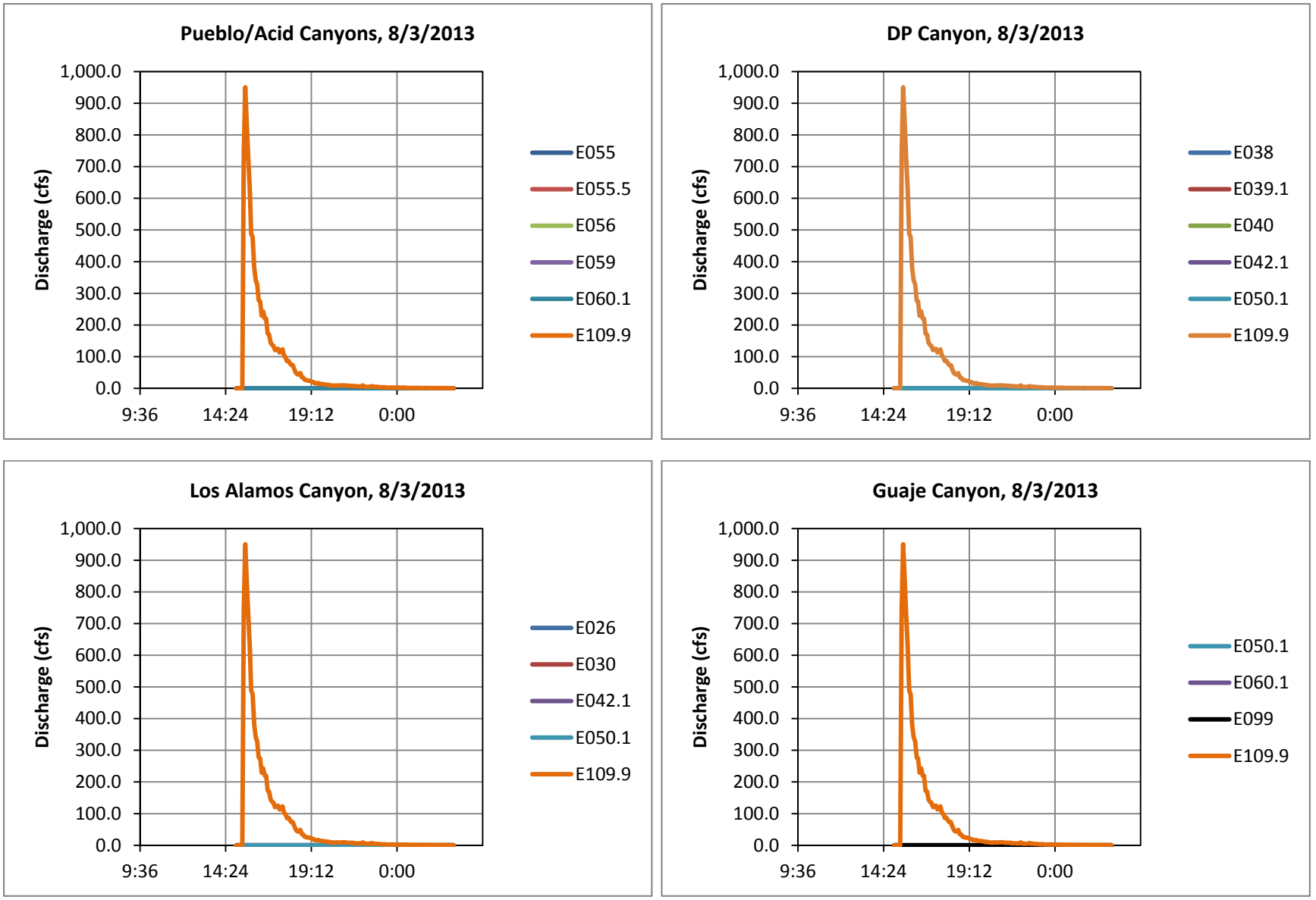


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

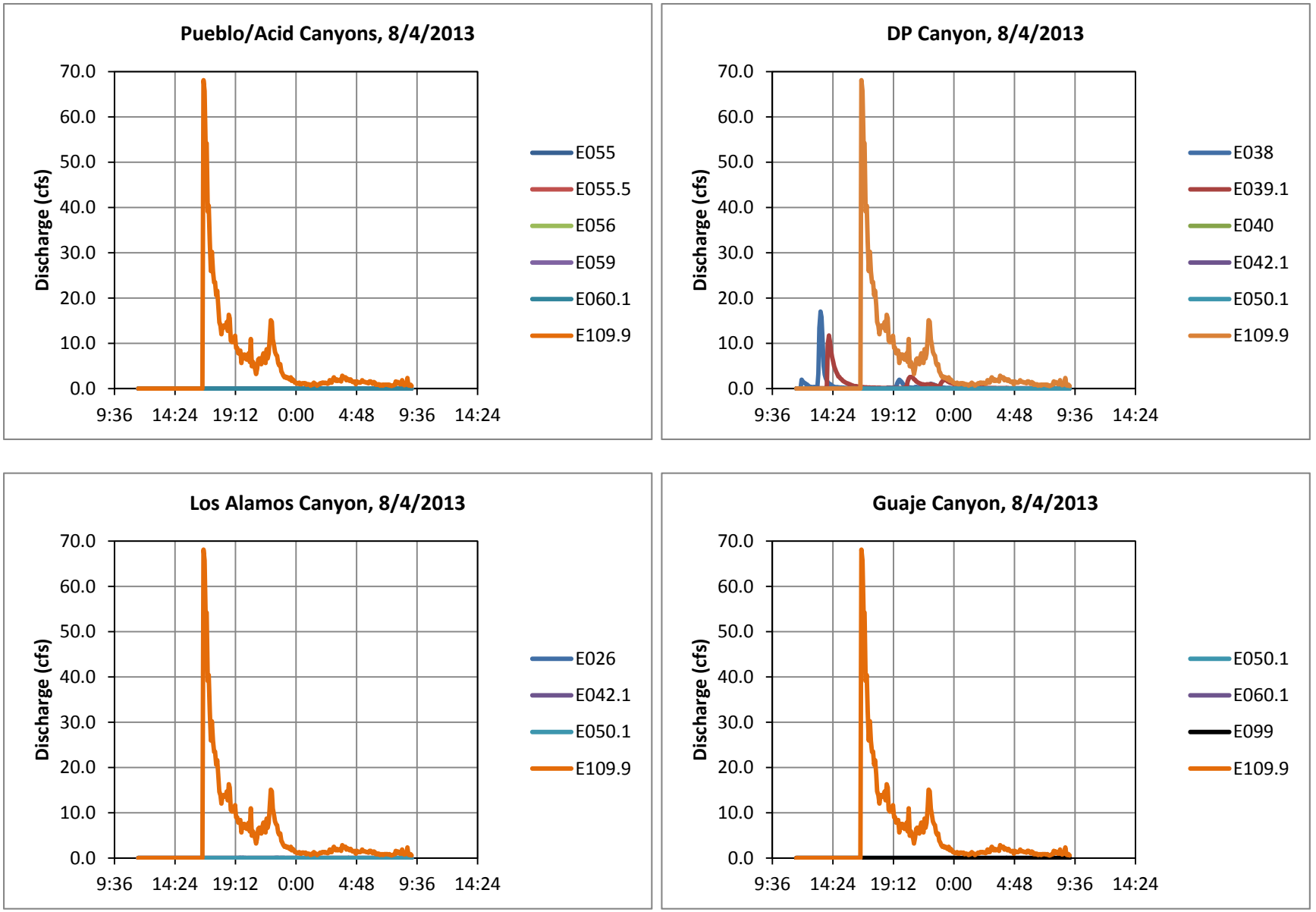


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

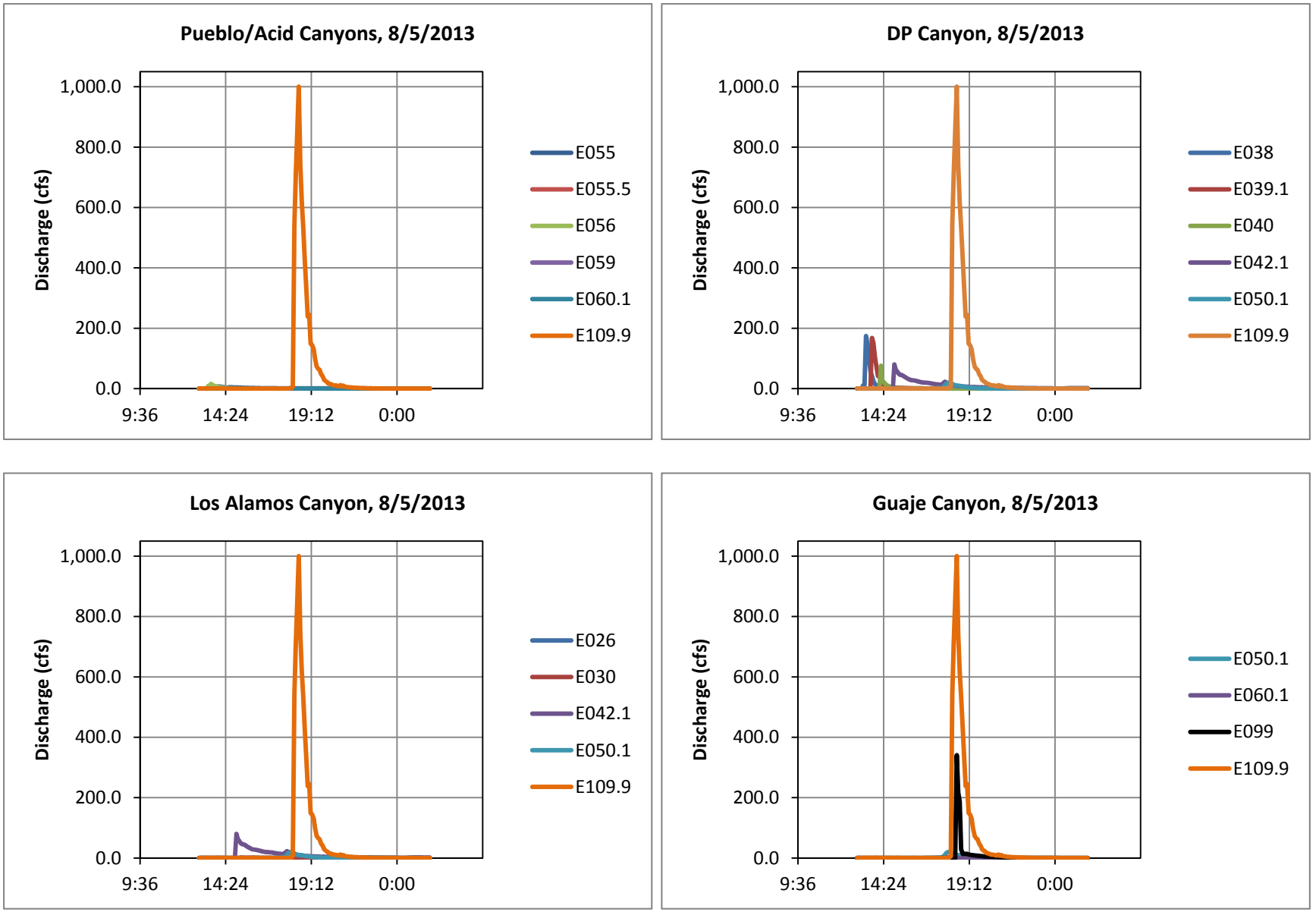


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

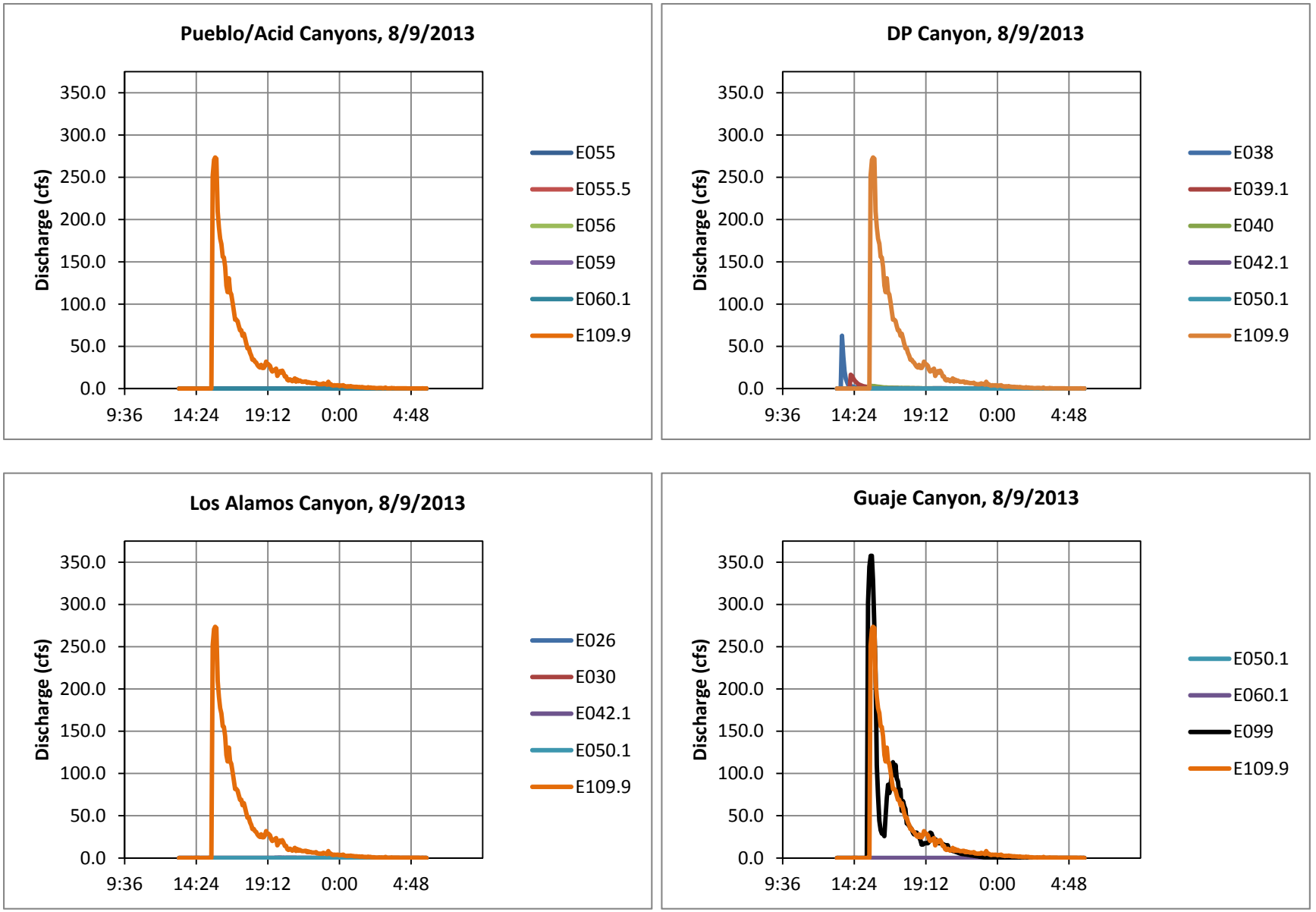


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

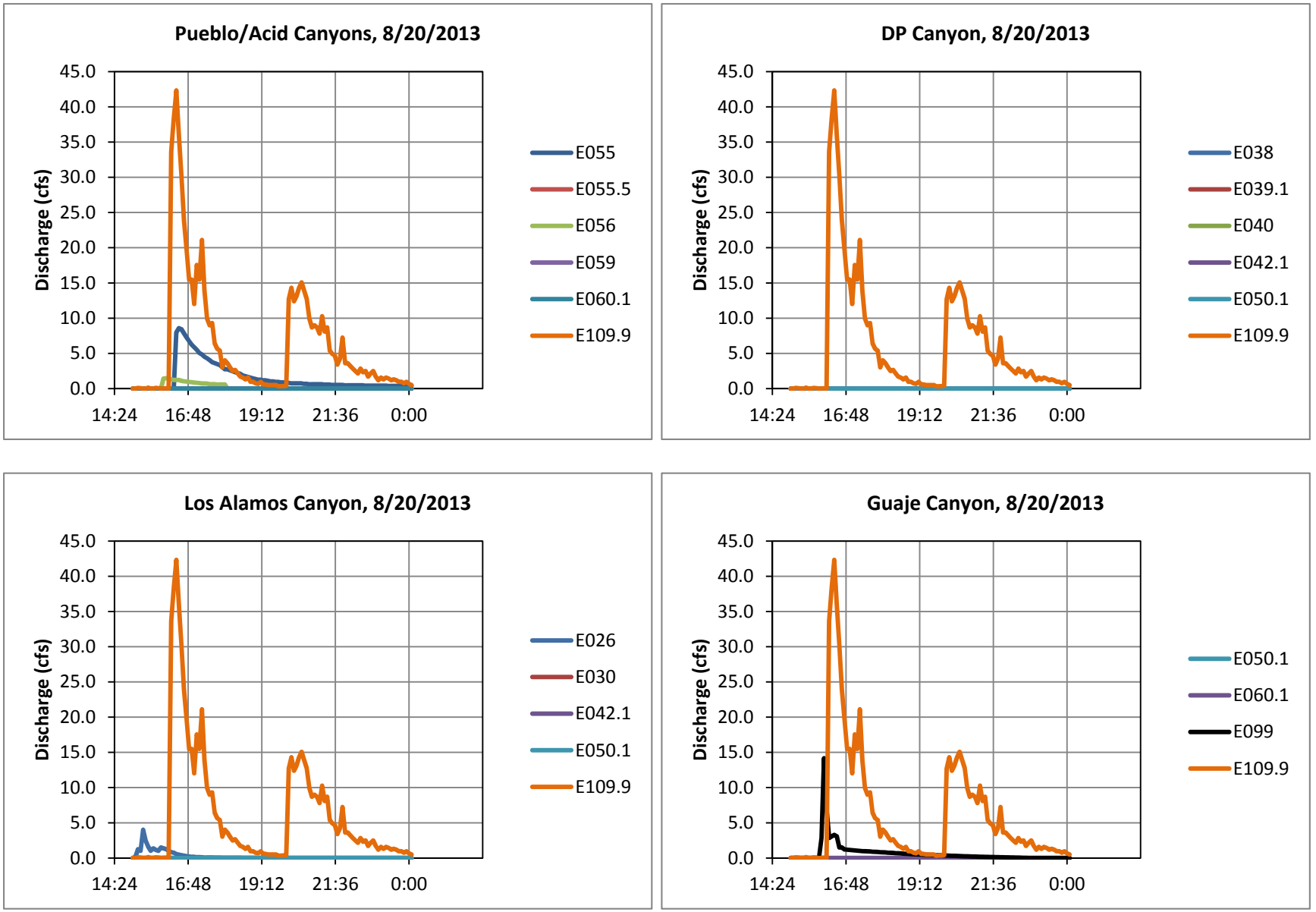


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

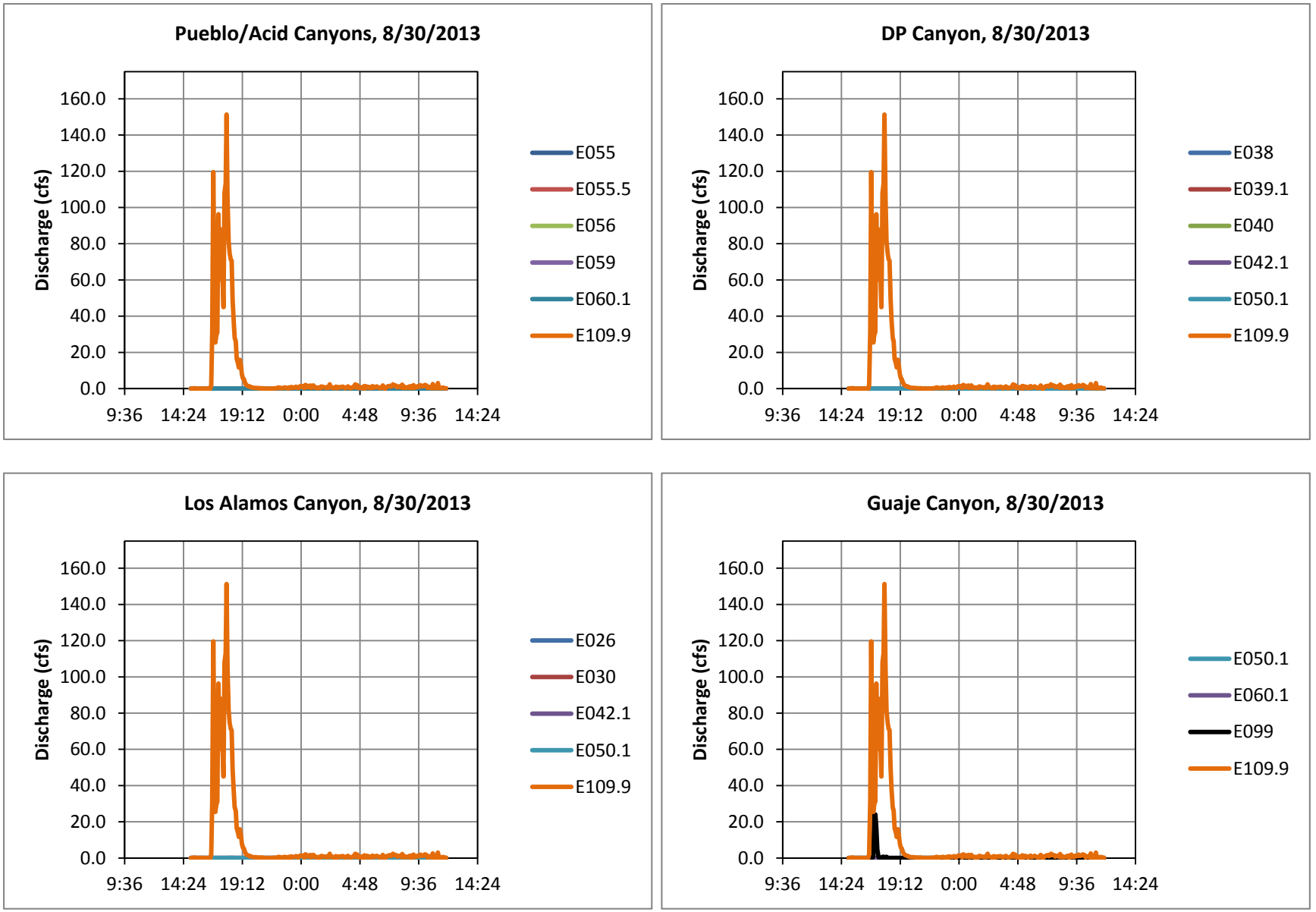


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

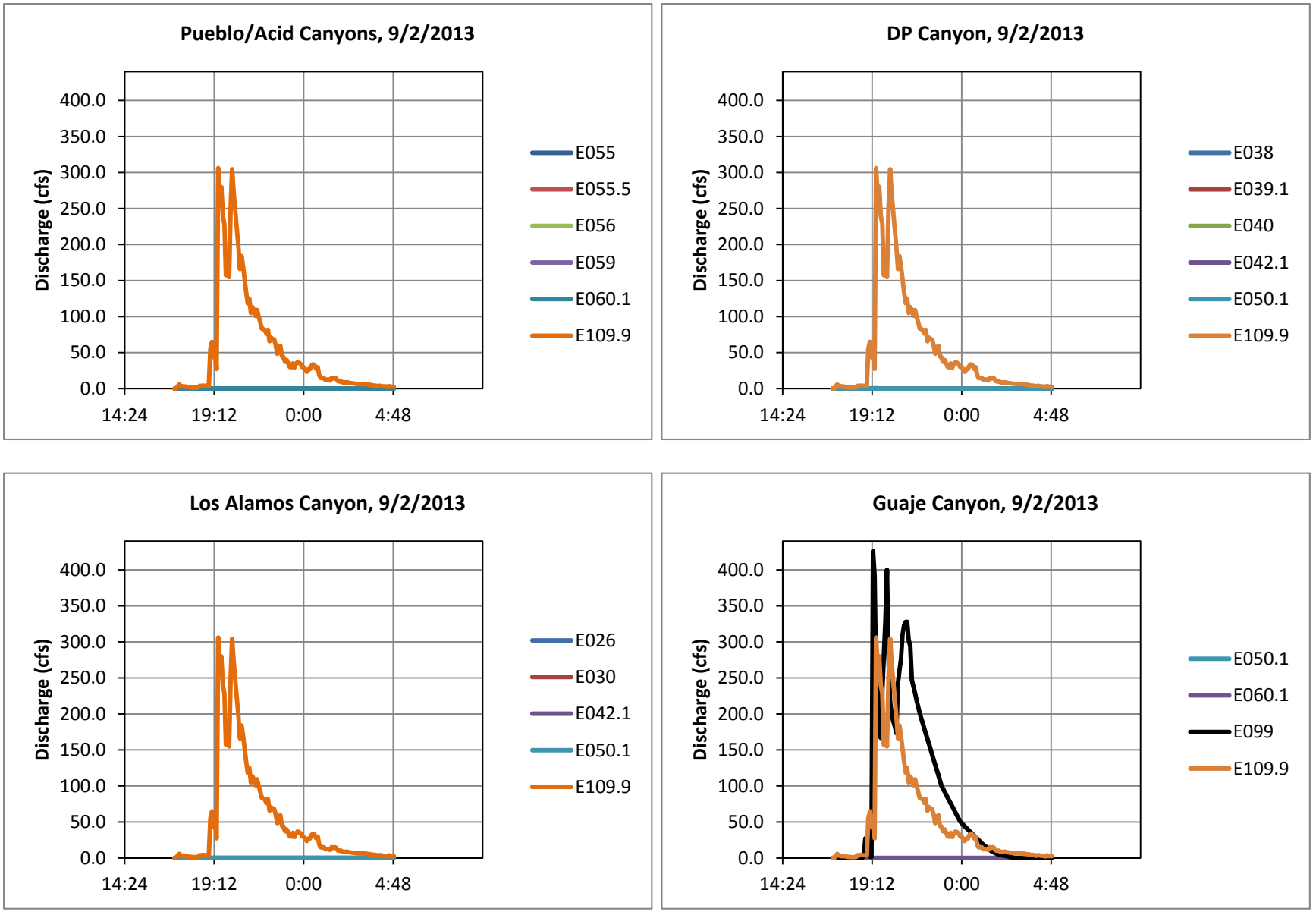


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

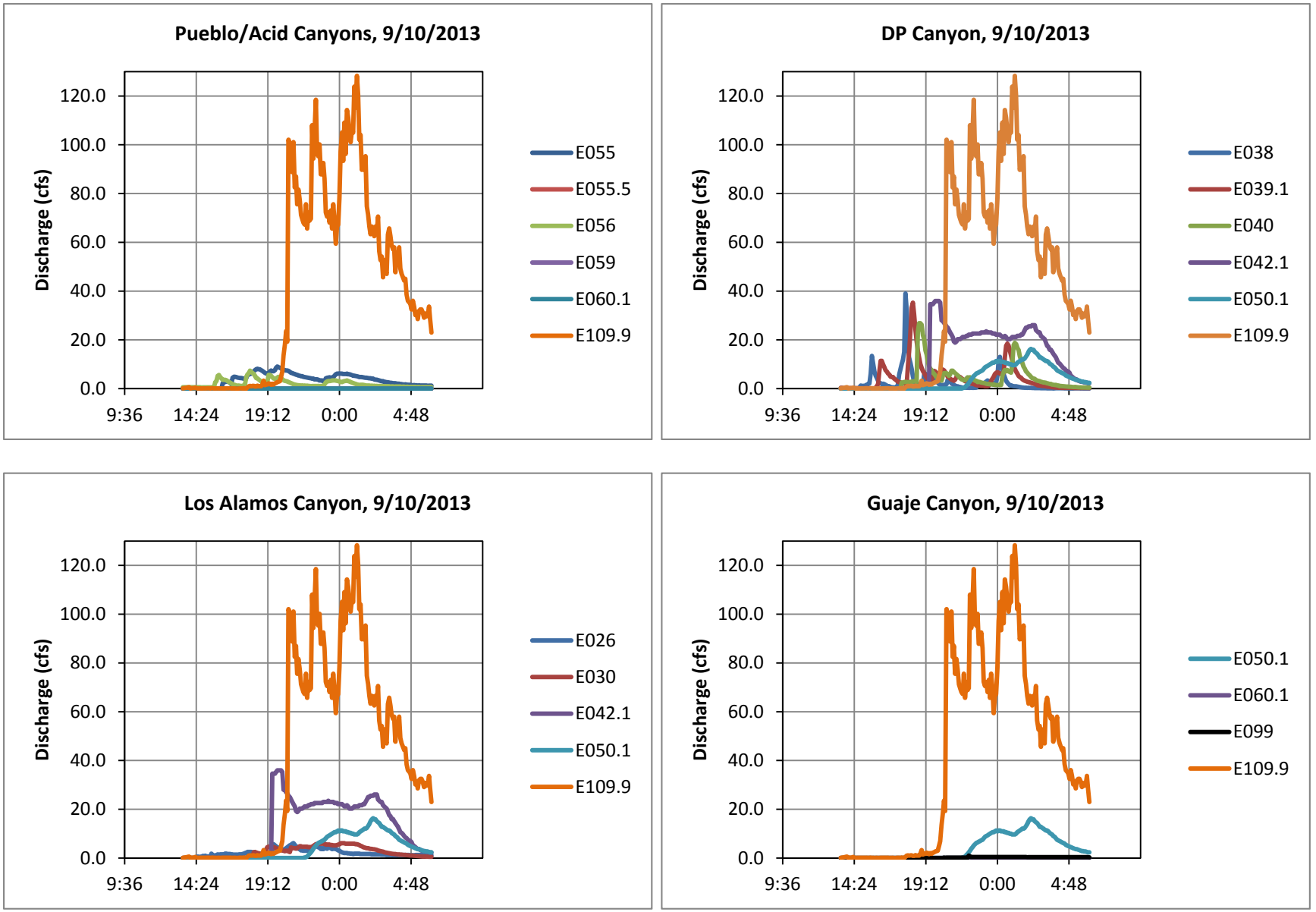


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

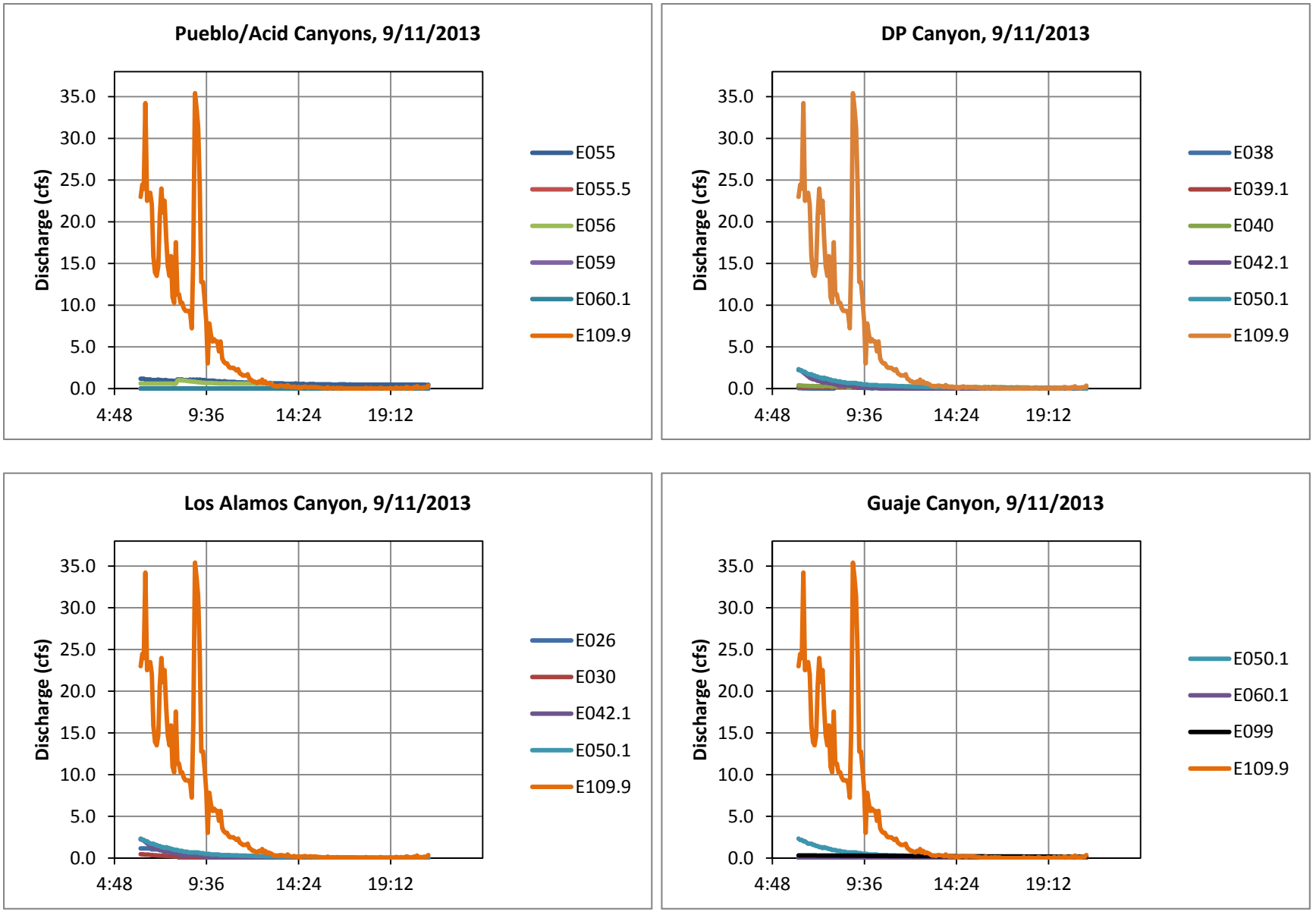


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

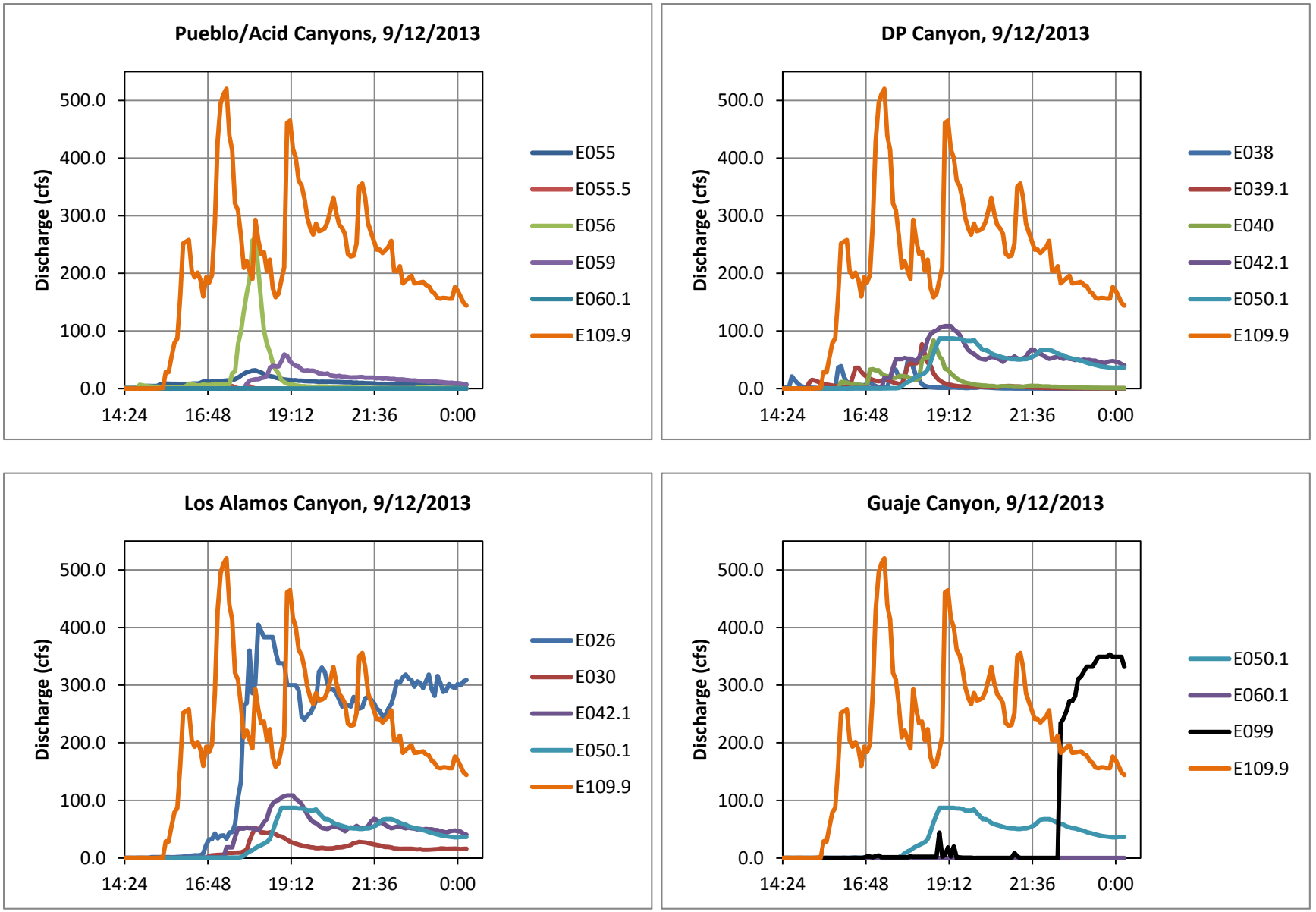


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

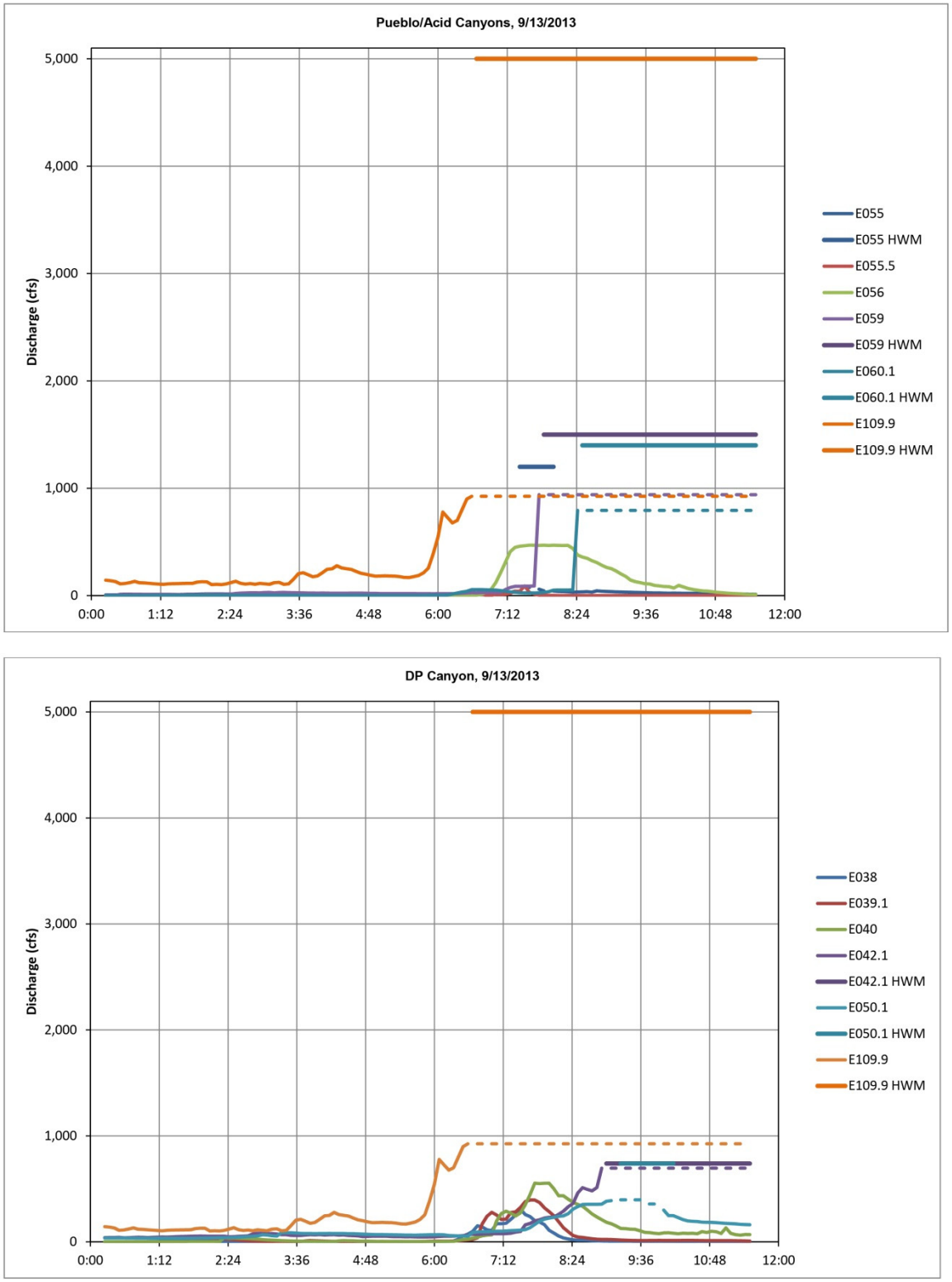
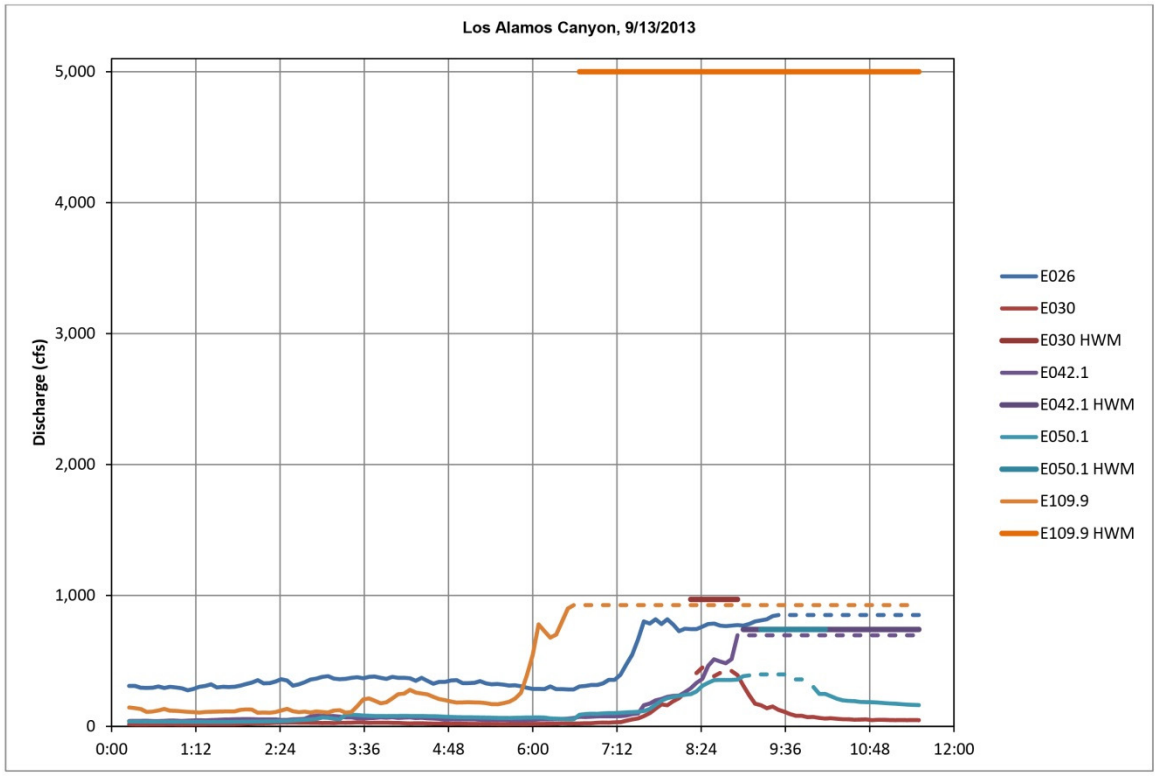


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**



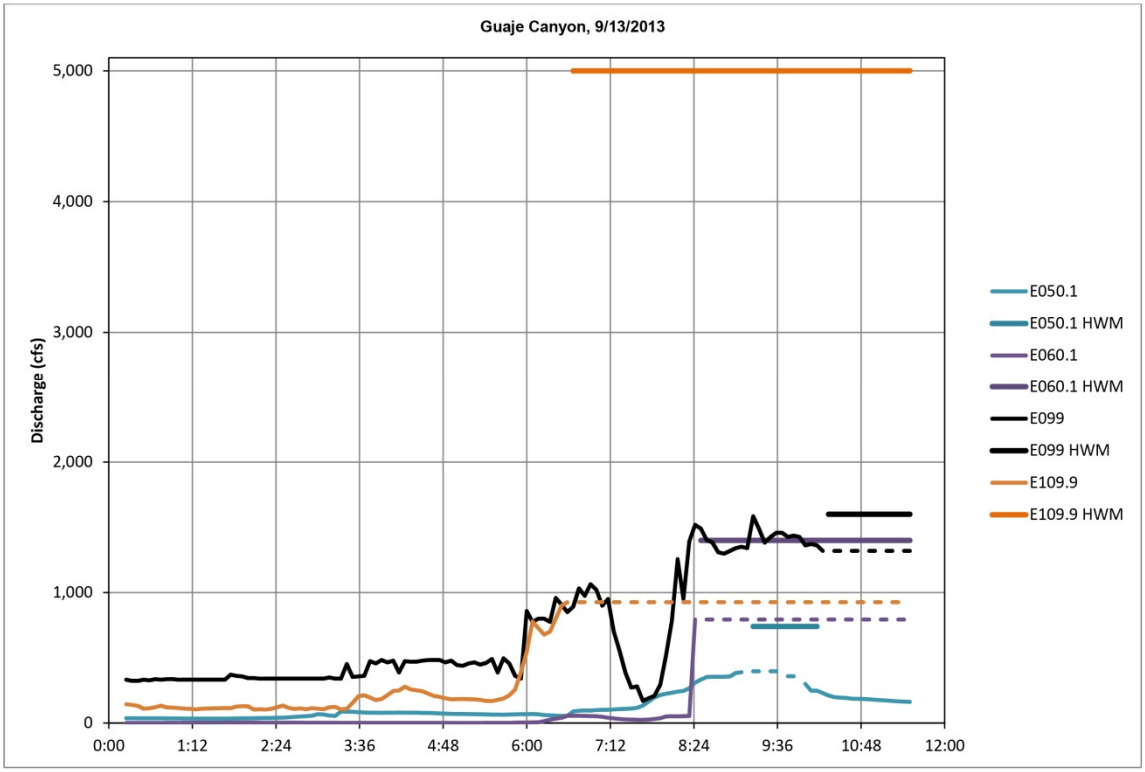


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

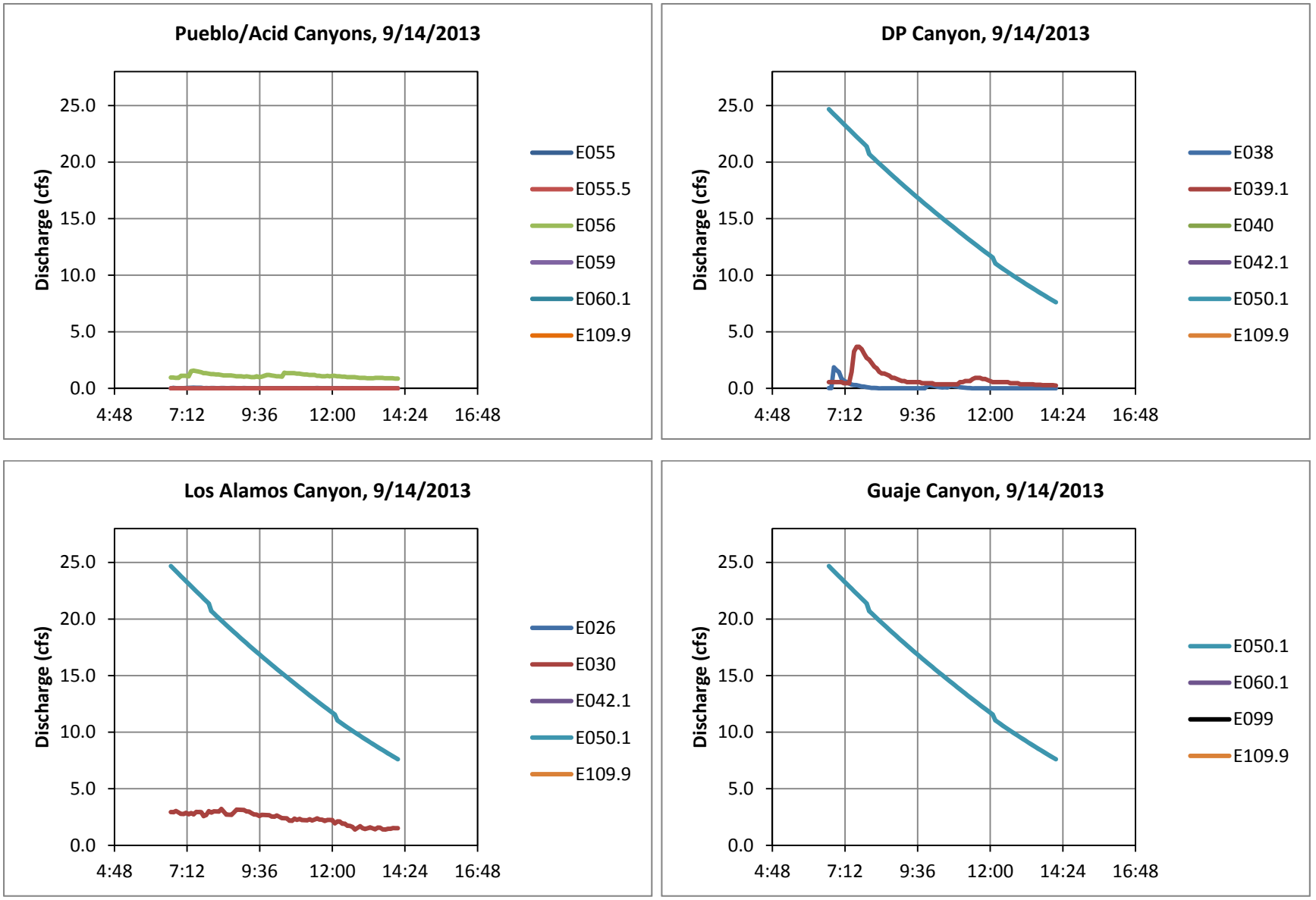


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

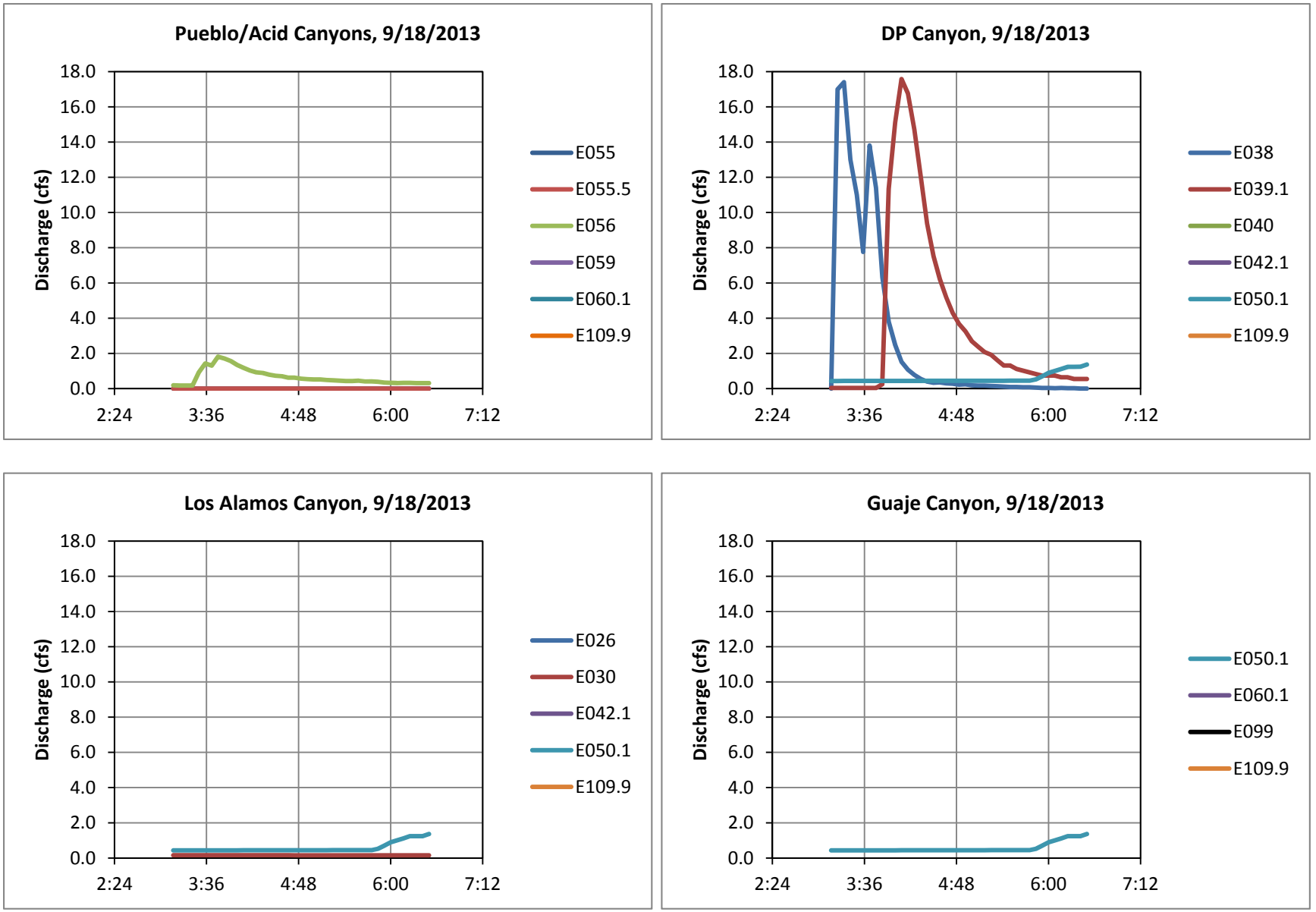


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

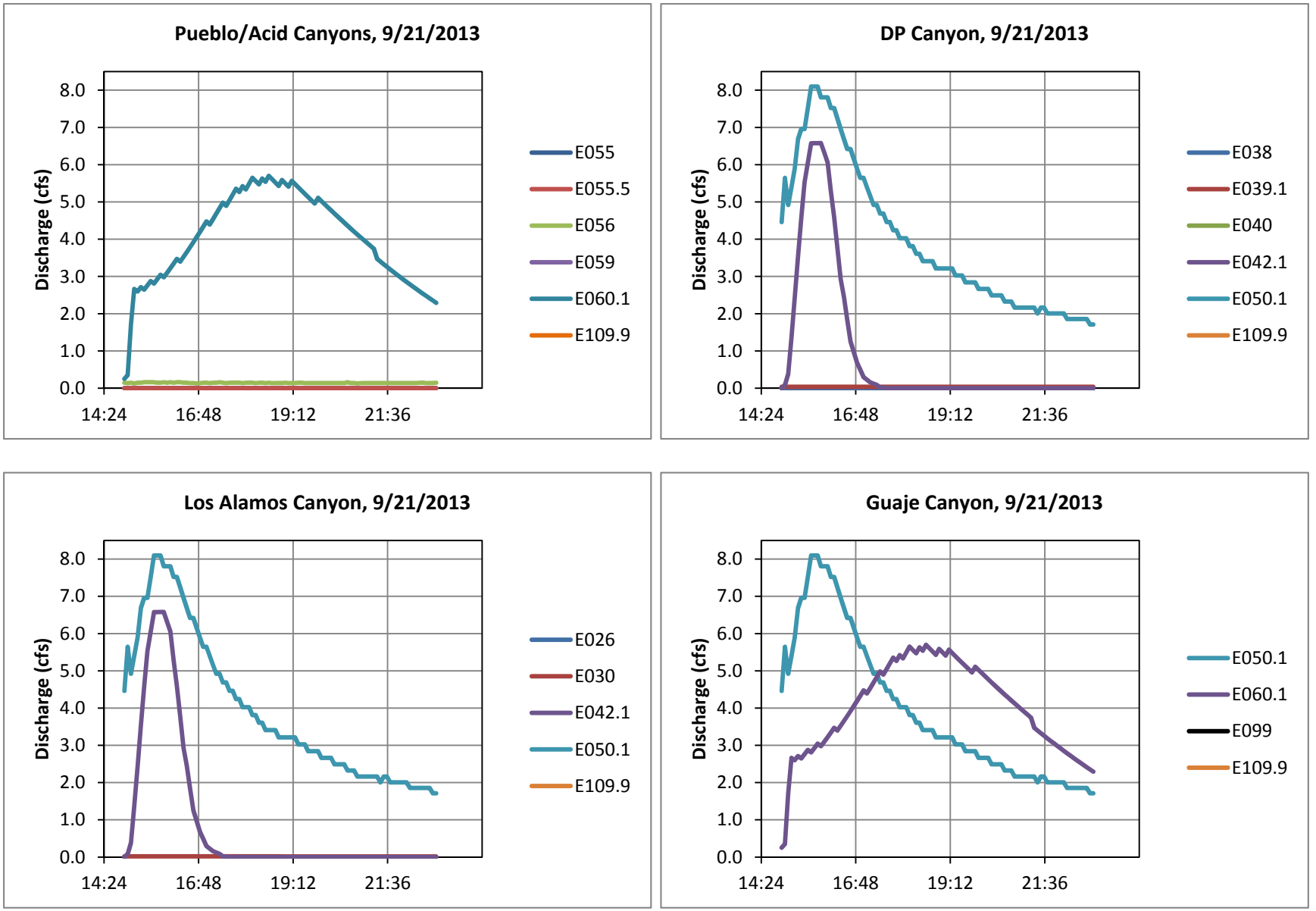


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

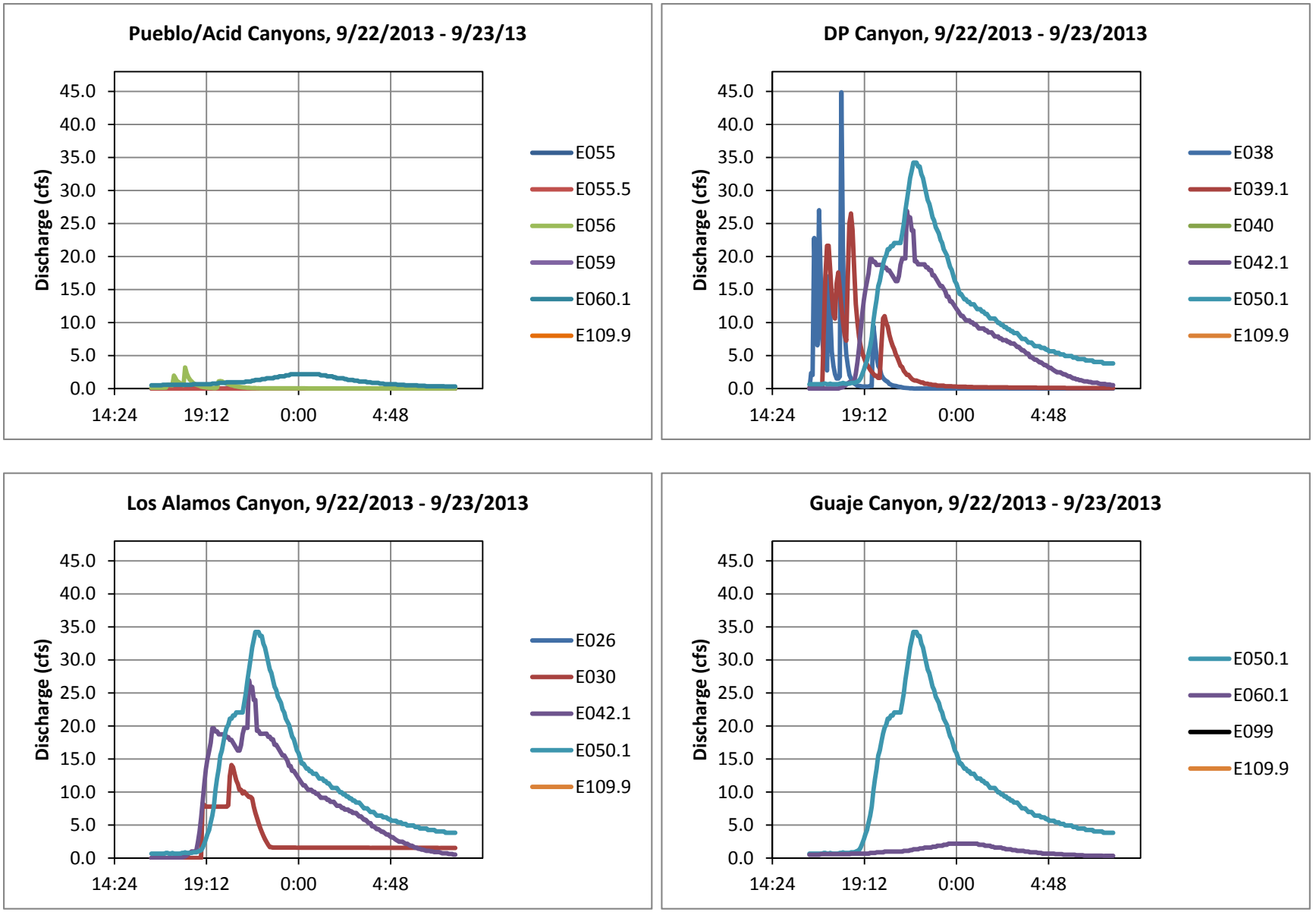


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

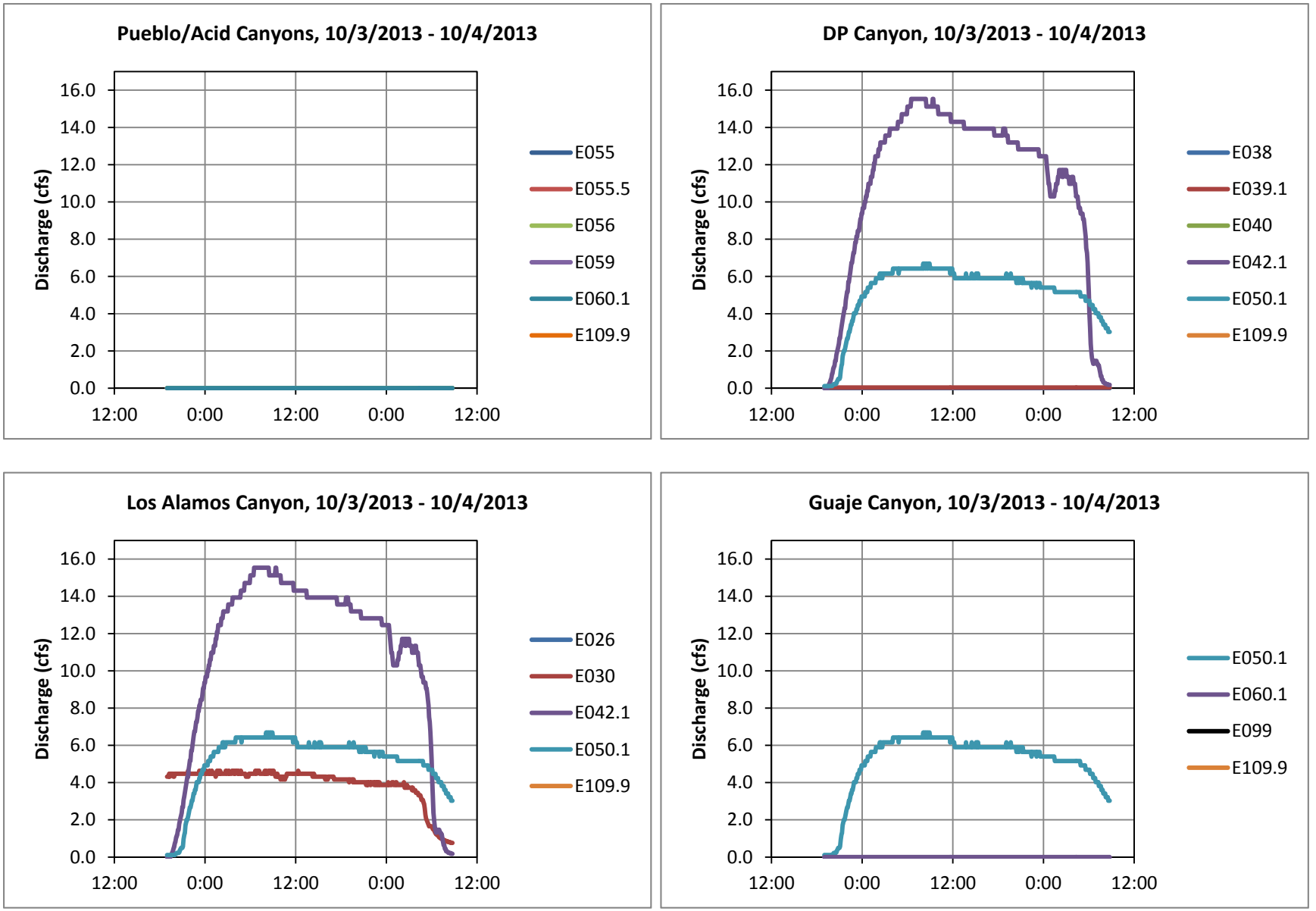


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**

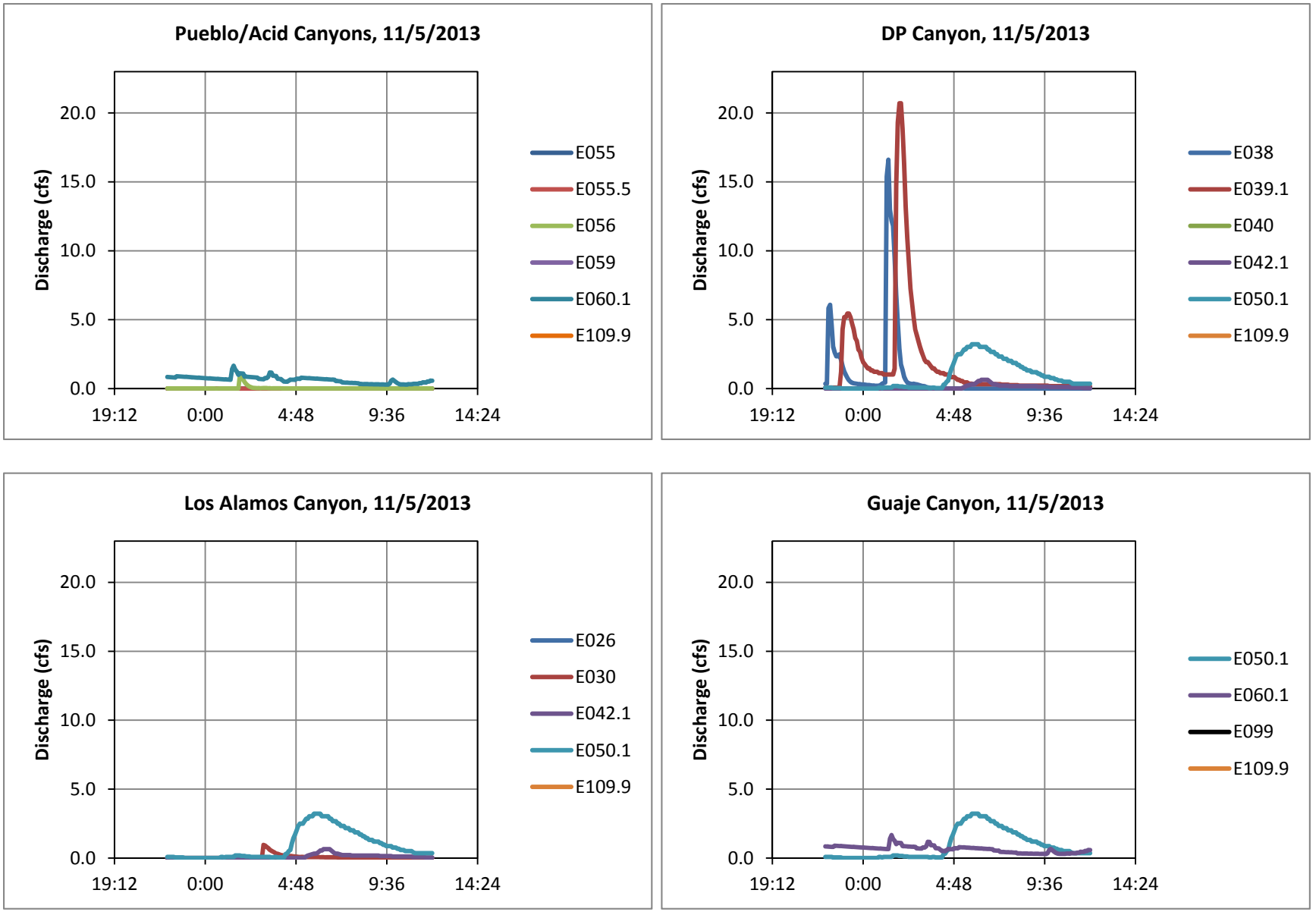
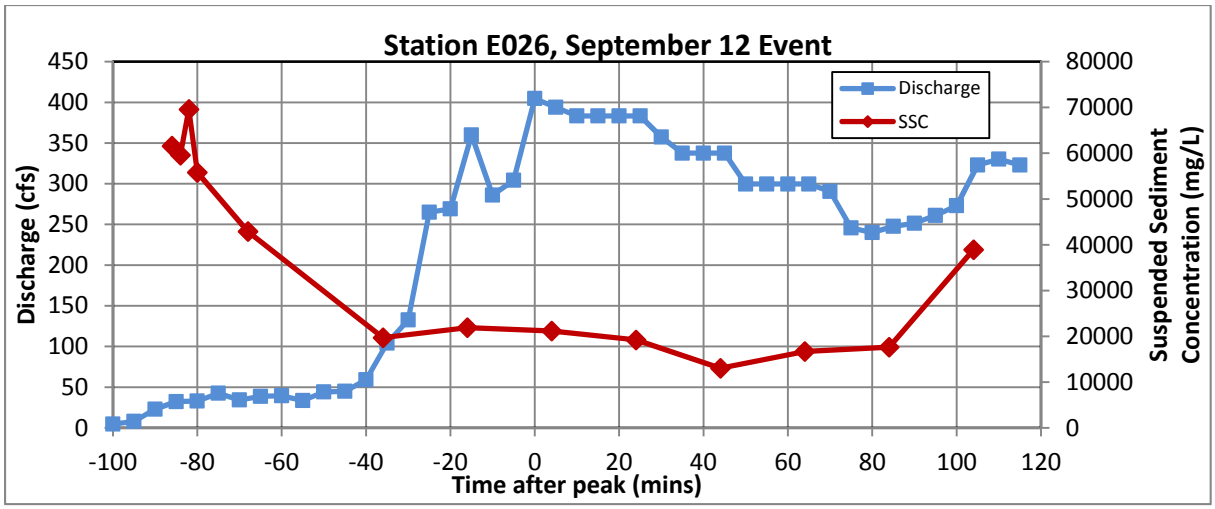
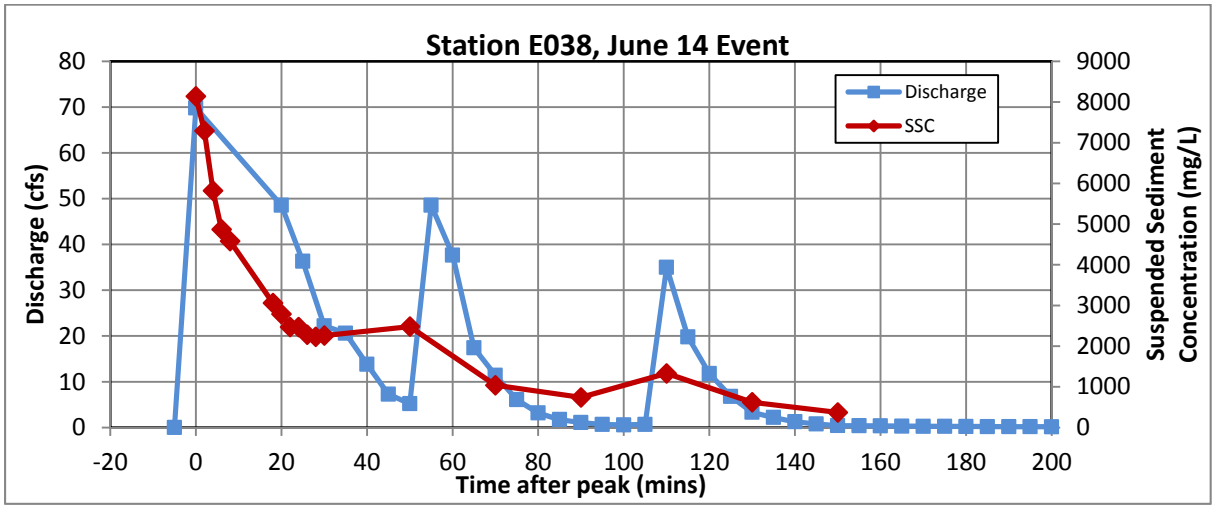


Figure 3.2-3 (continued) **Hydrographs during each sample-triggering runoff event for each canyon from up- to downstream reaches**





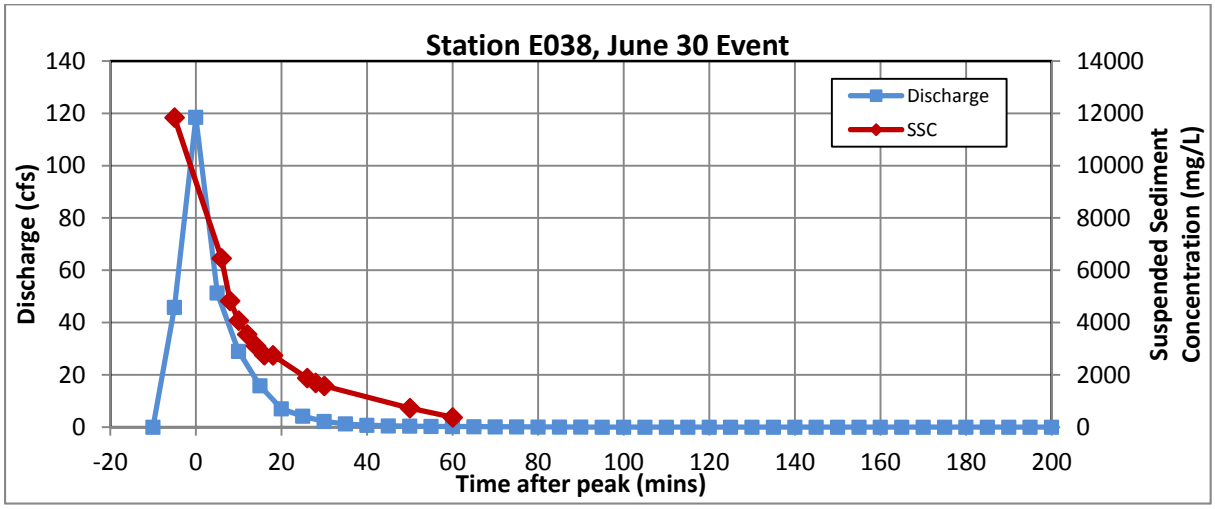
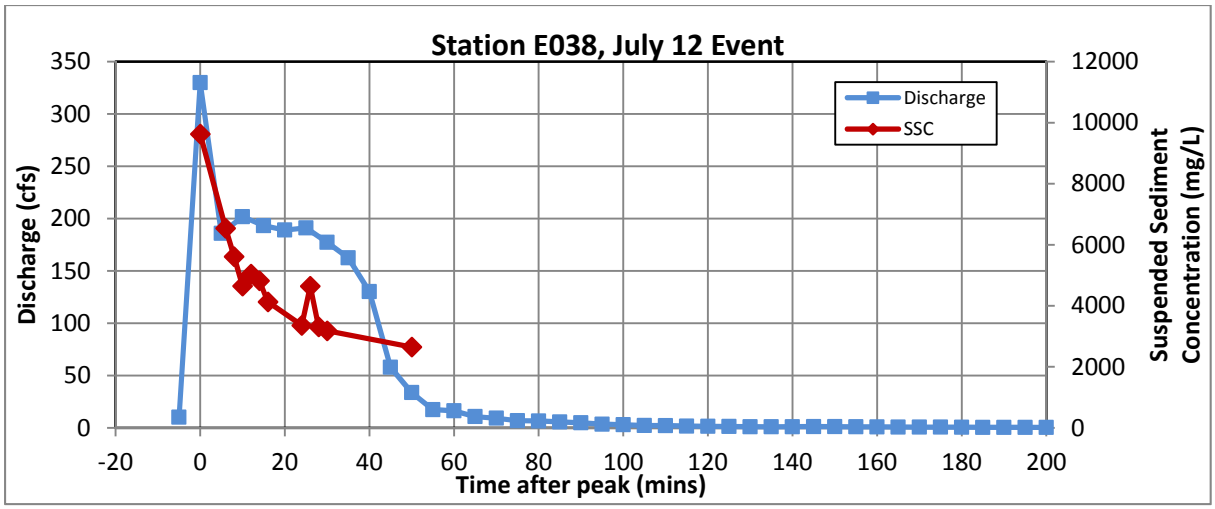
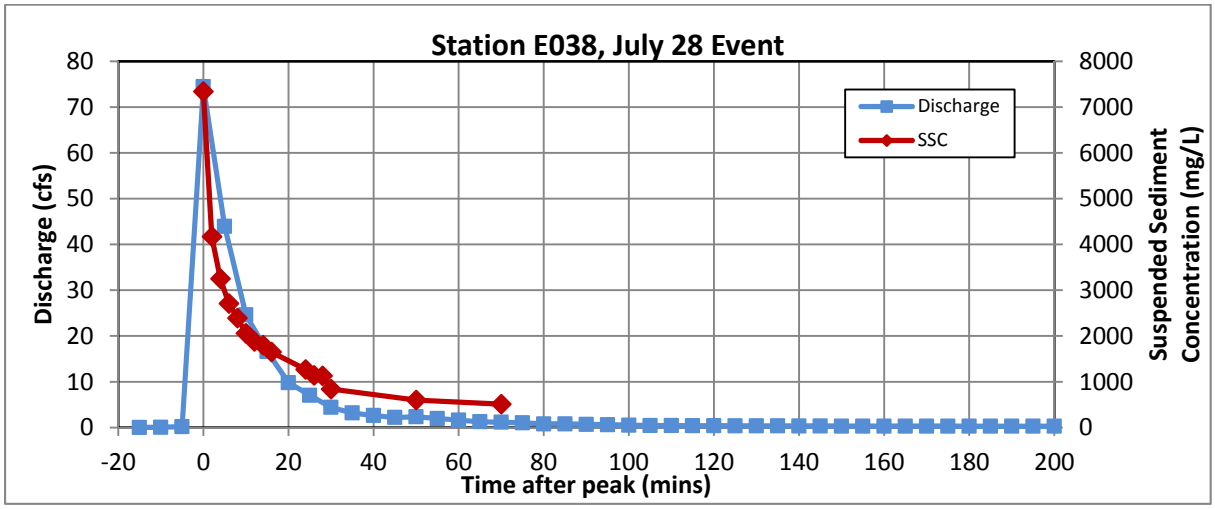


Figure 3.2-4 **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





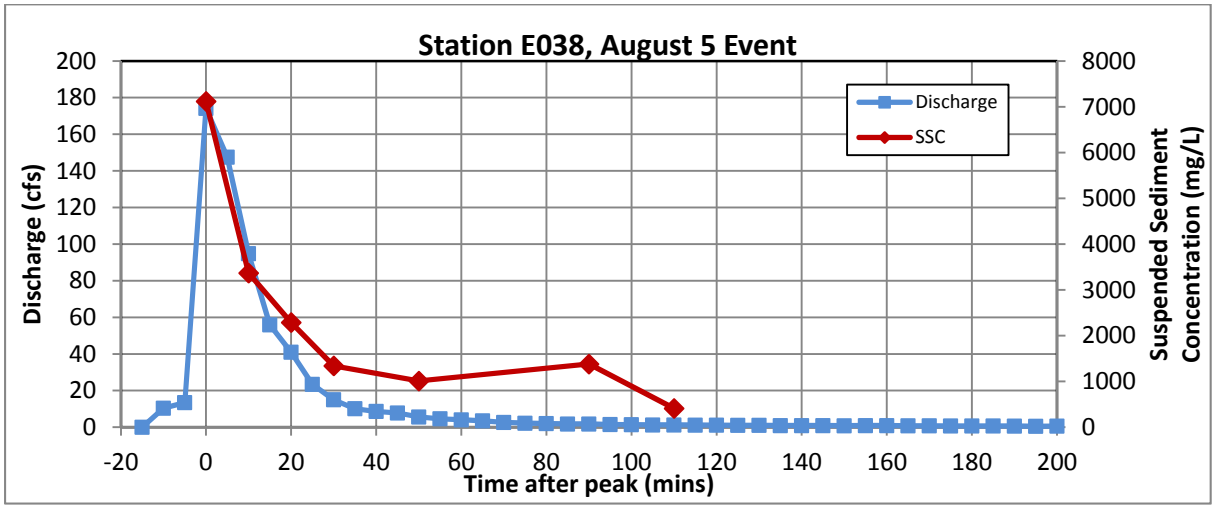
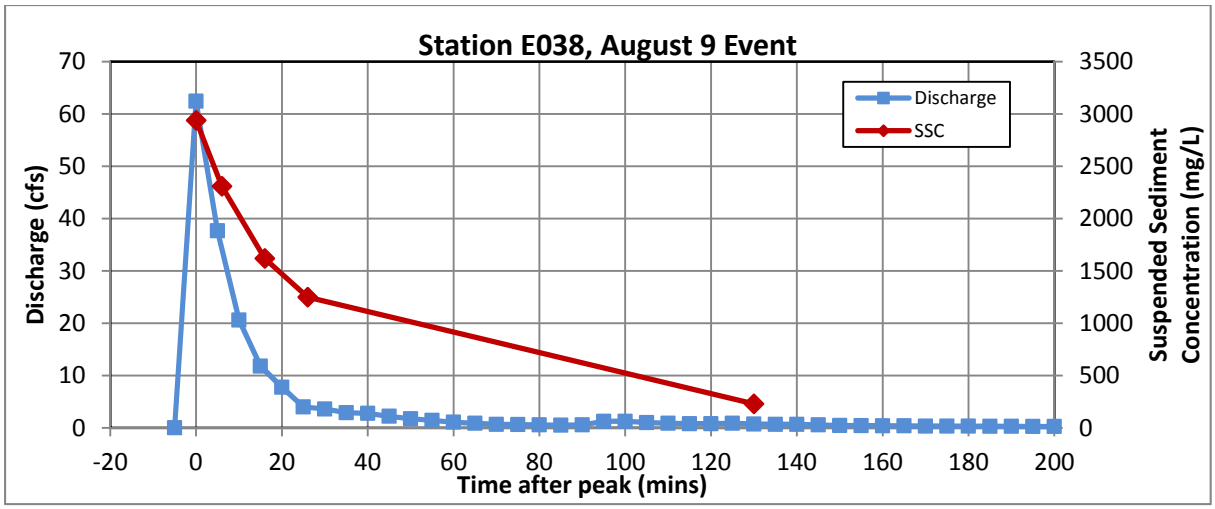
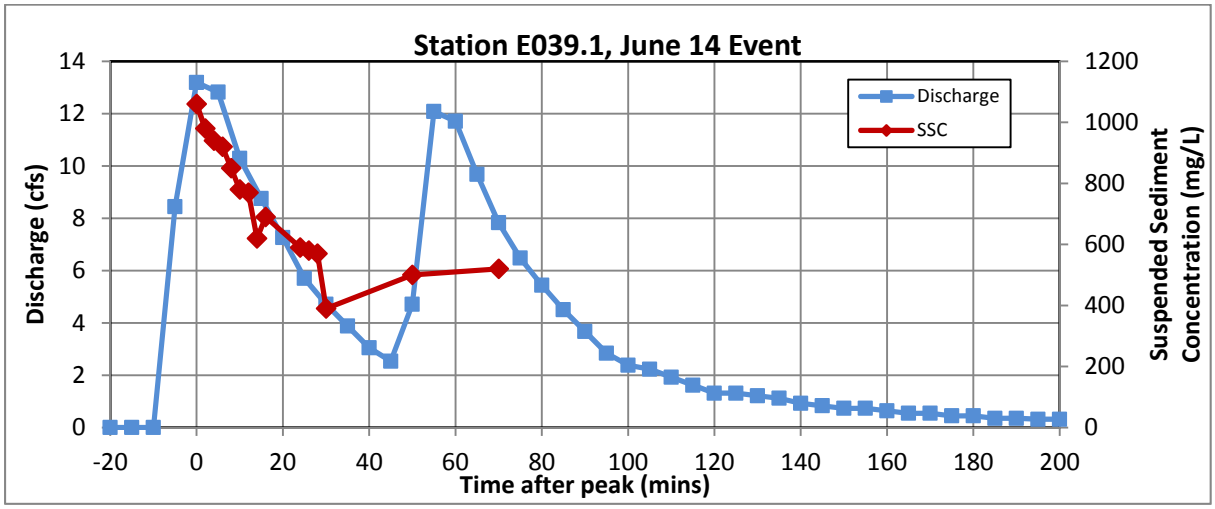


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





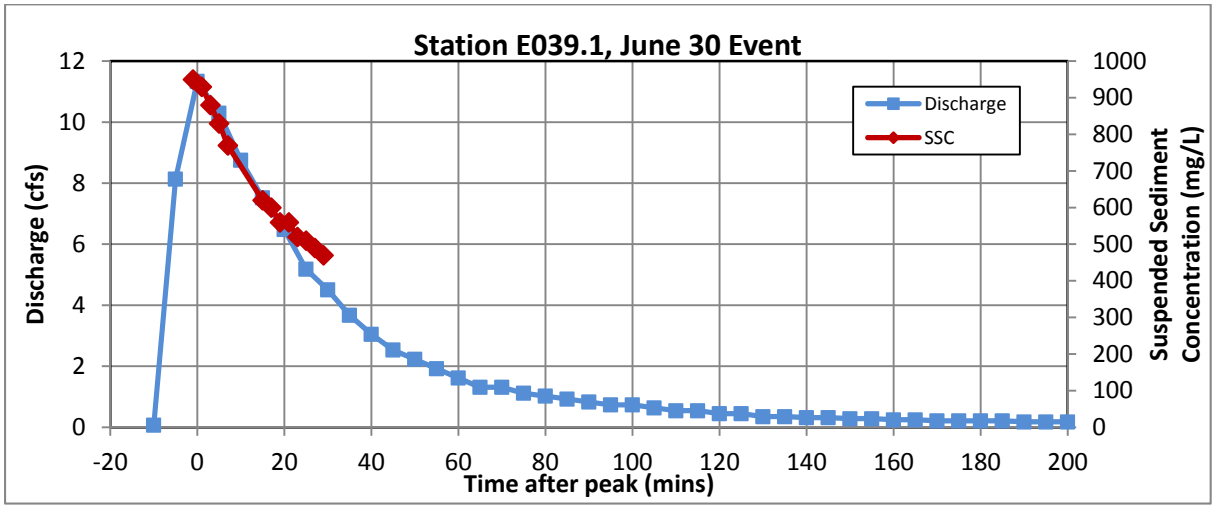
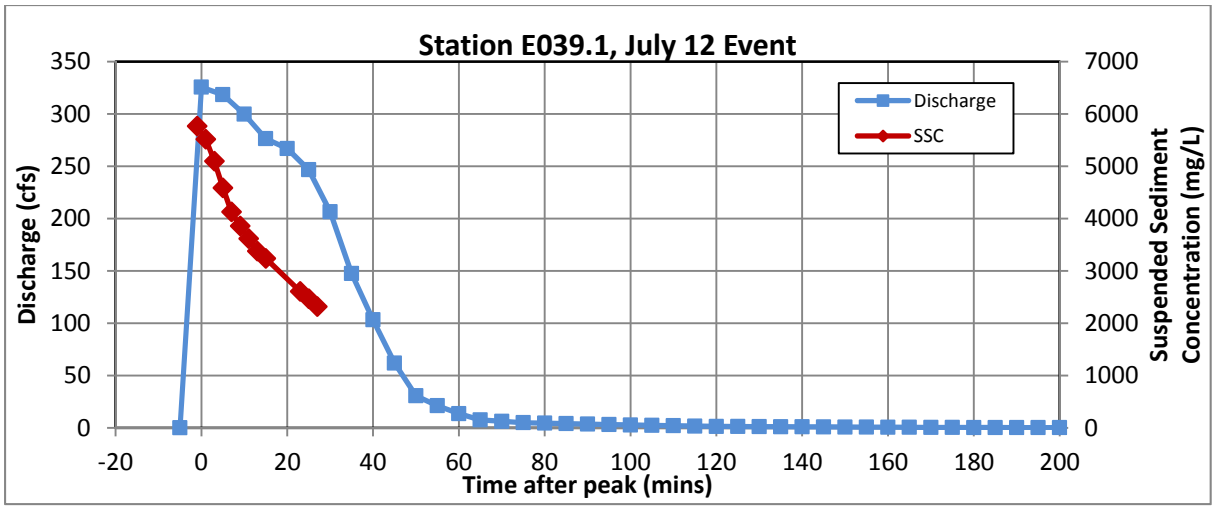
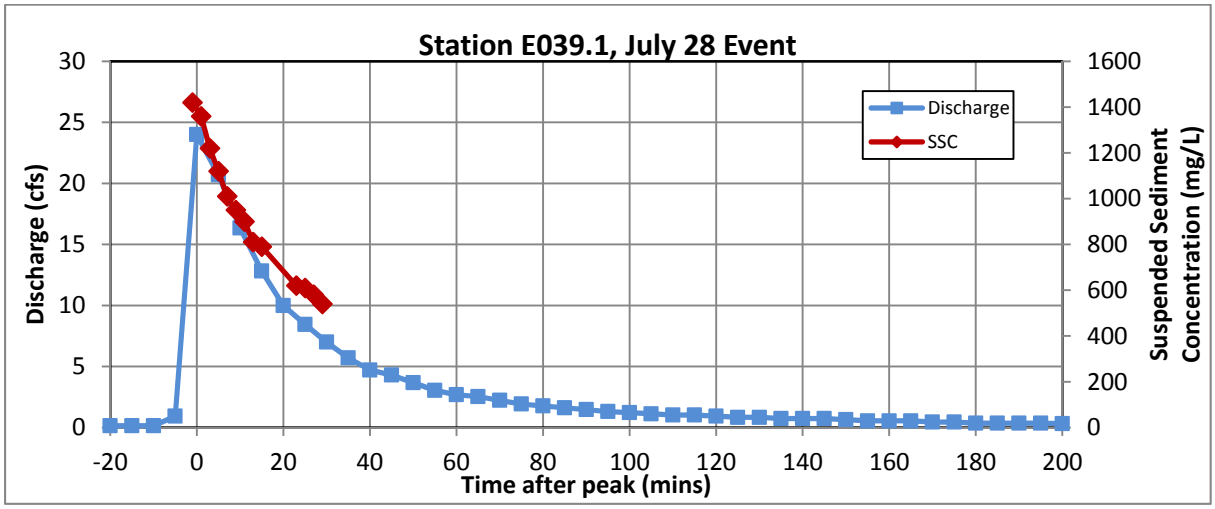


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





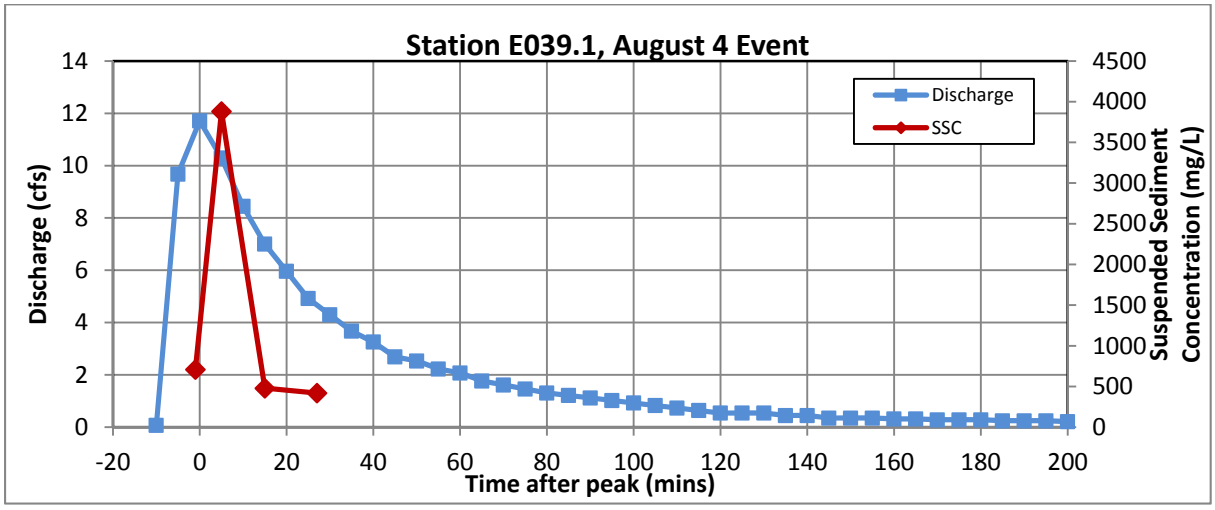
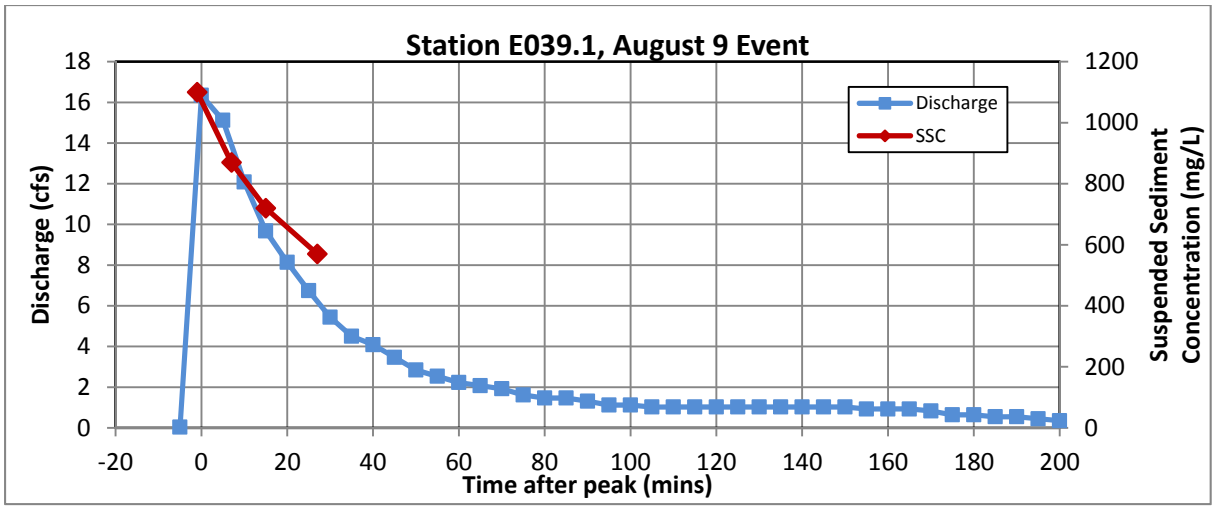
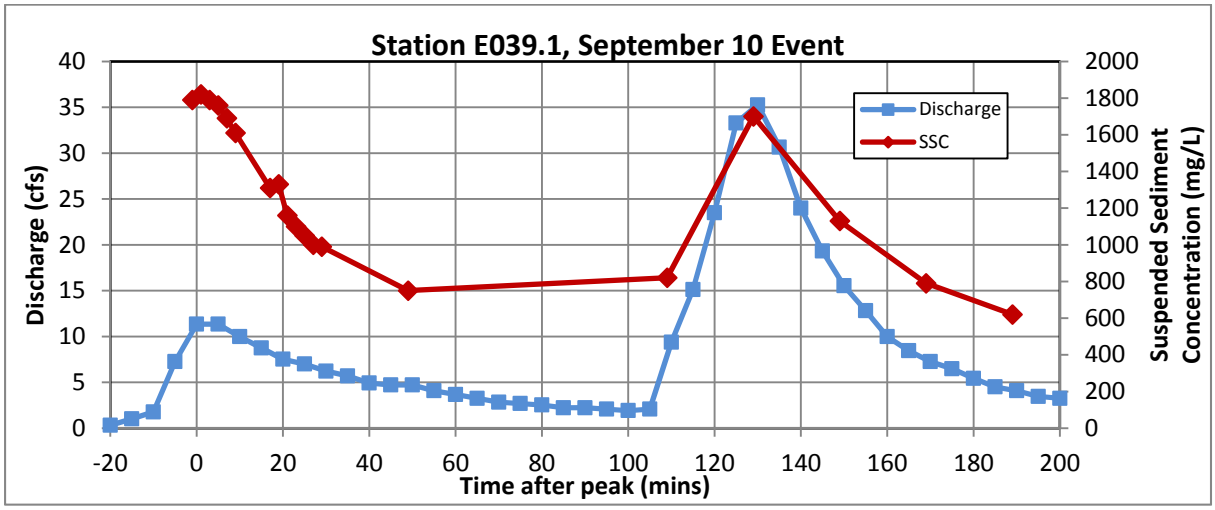


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





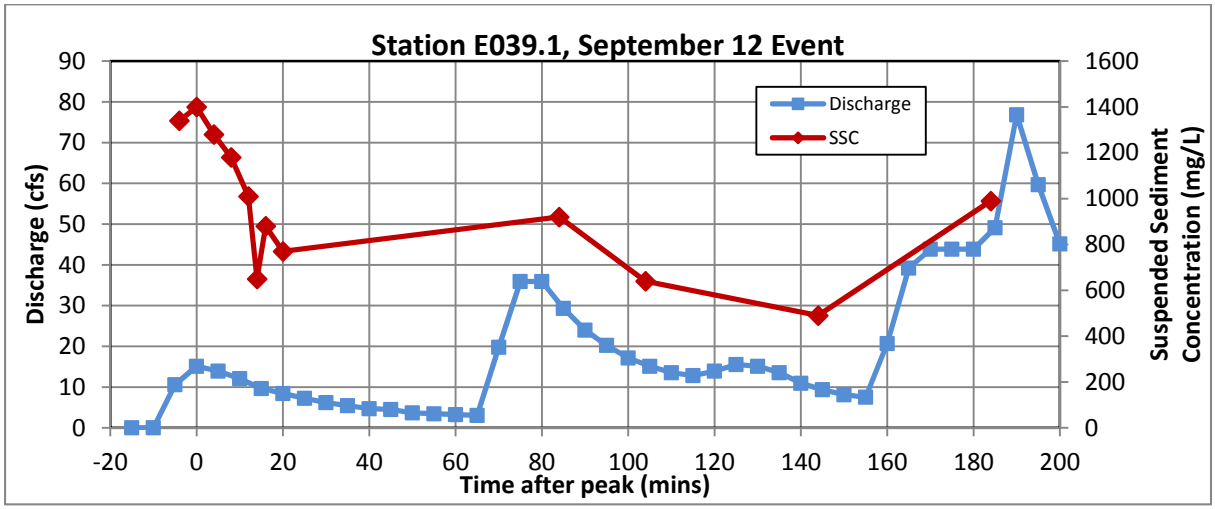
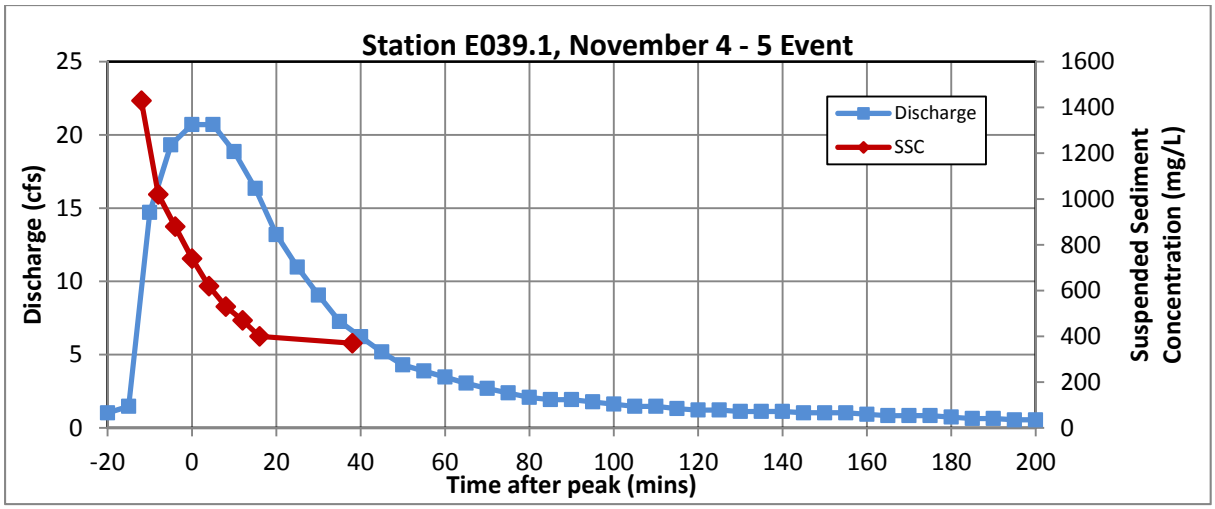
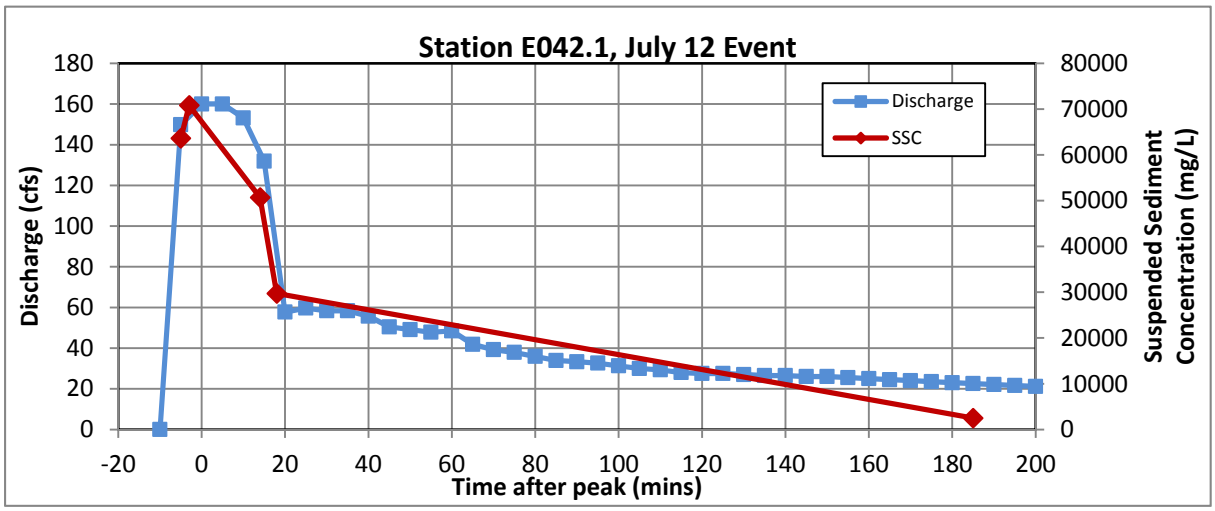


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





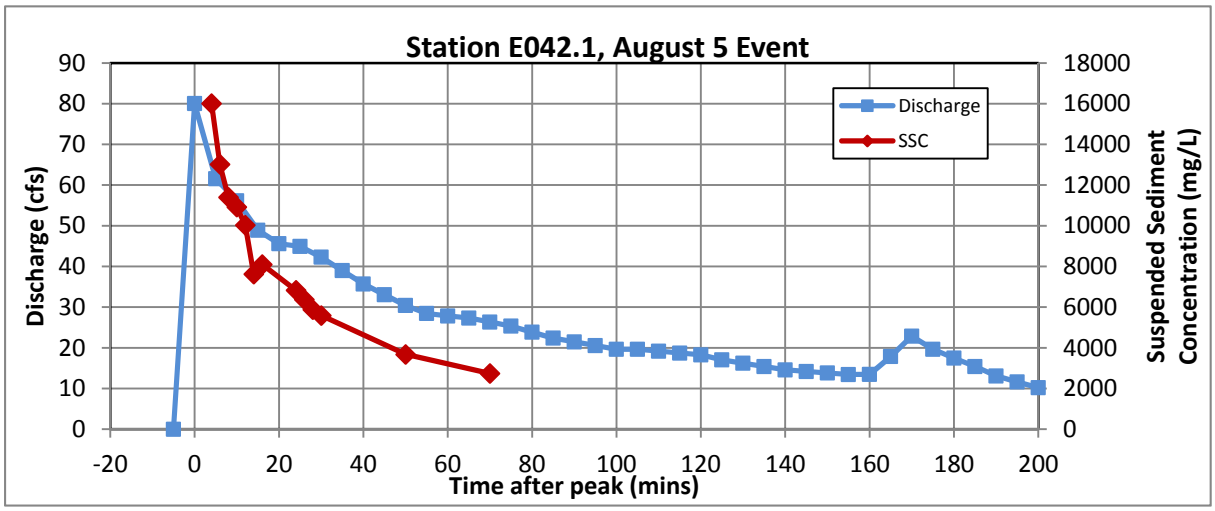
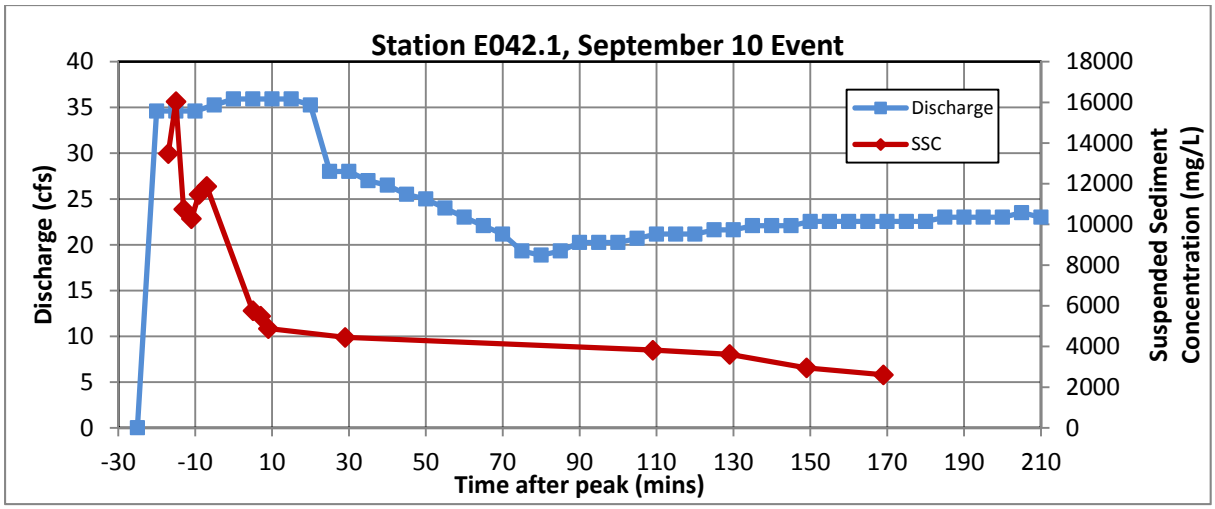
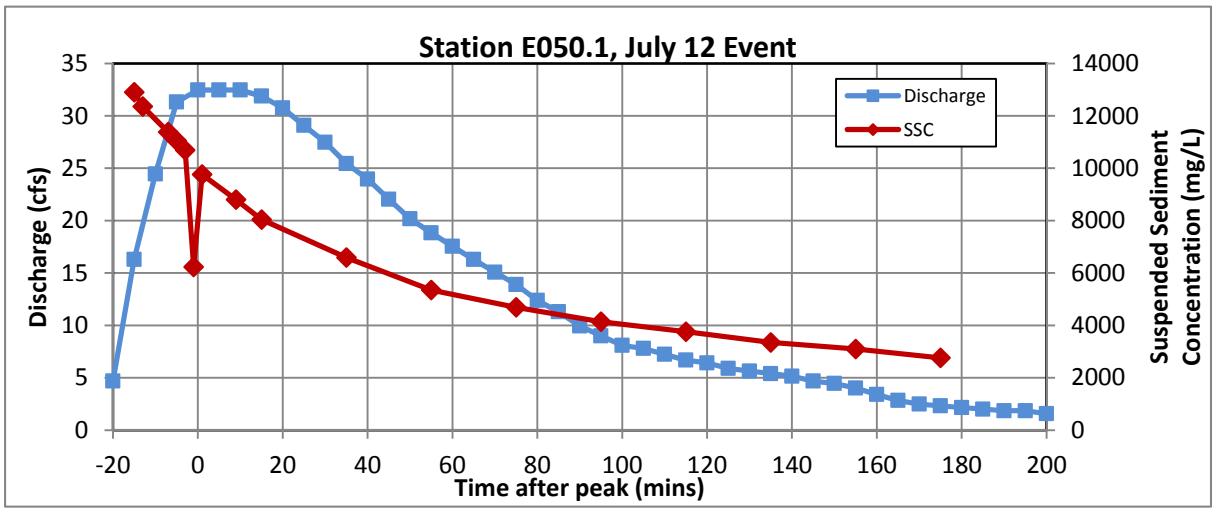


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





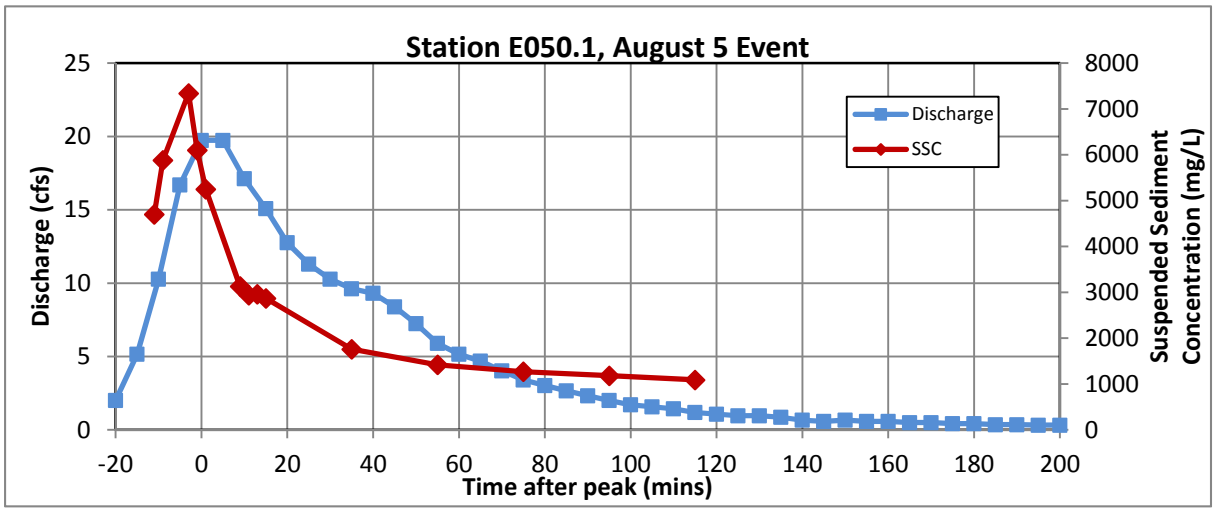
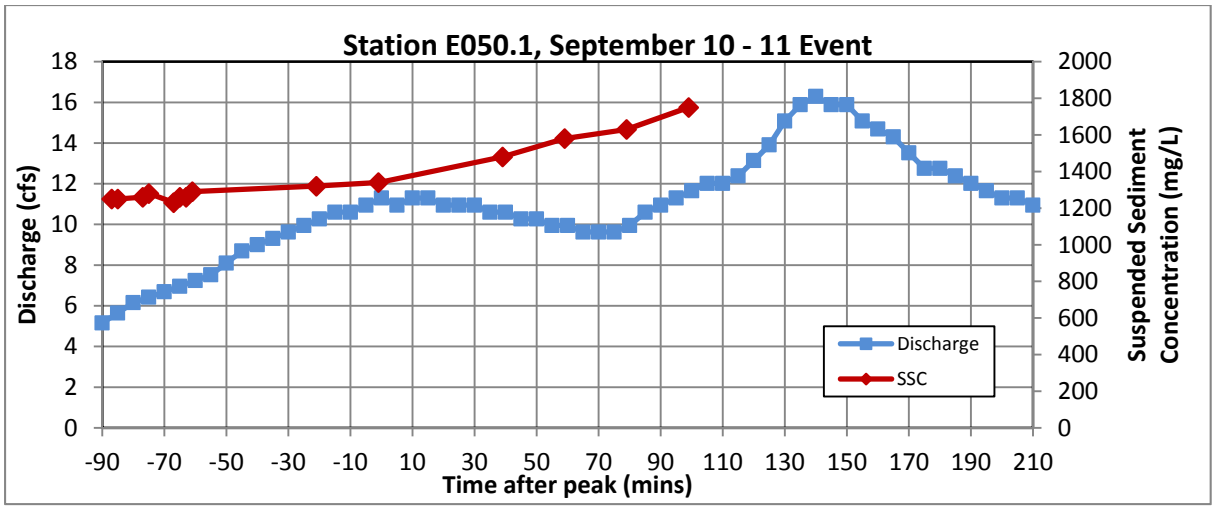
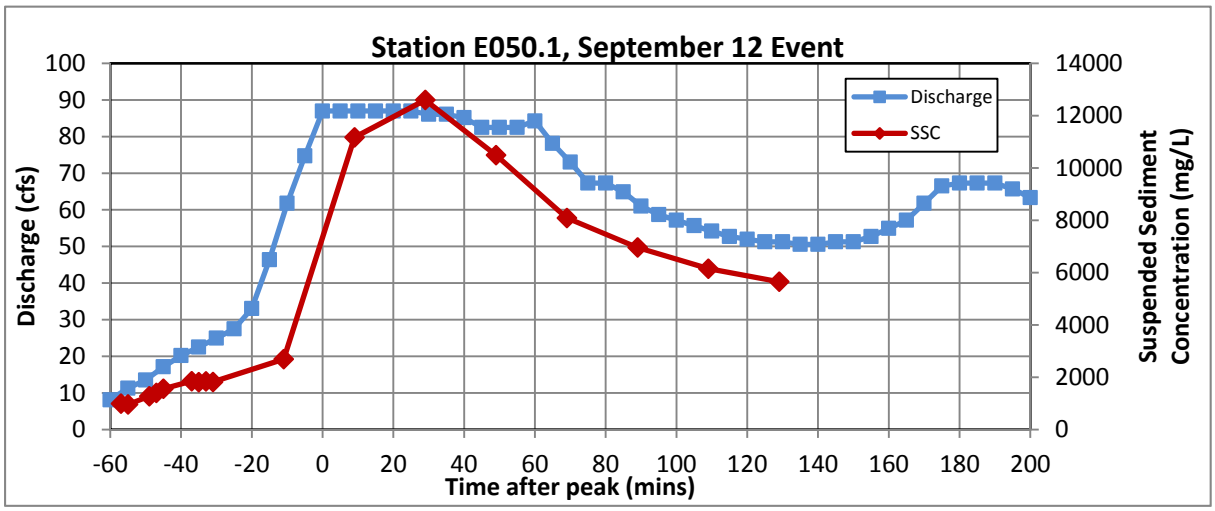


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





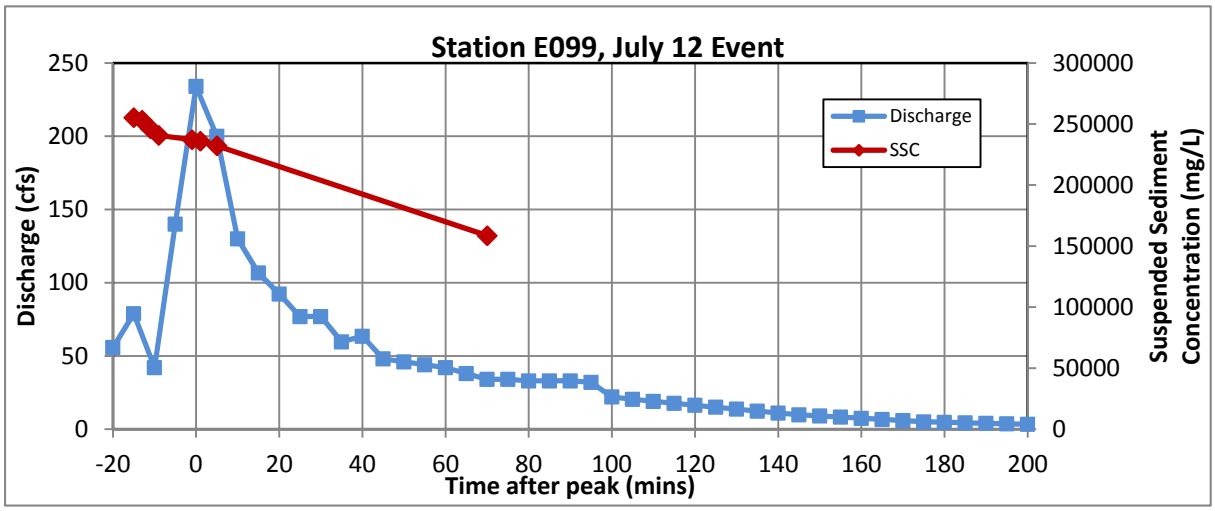
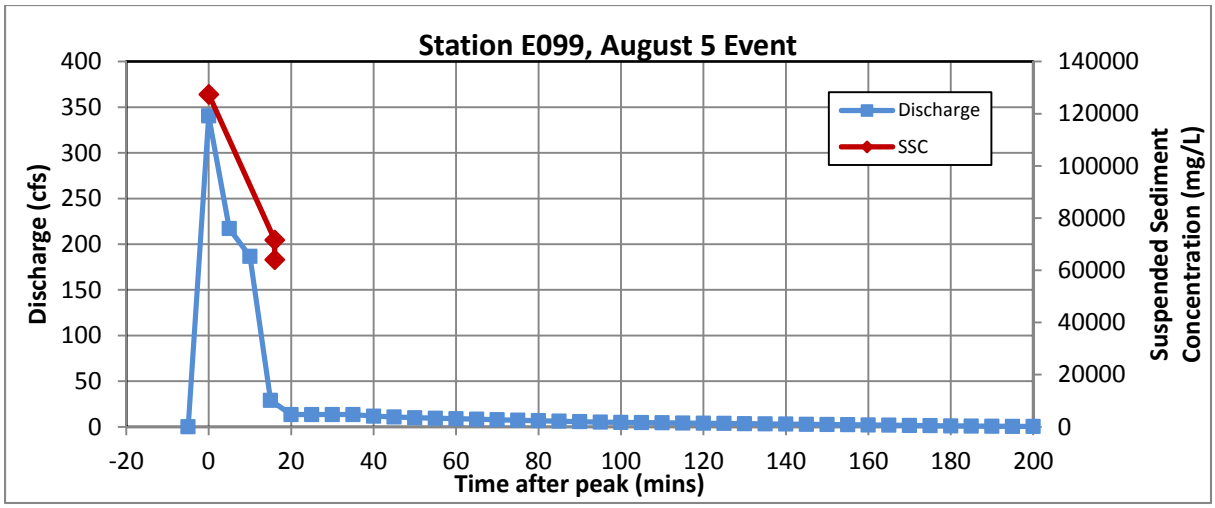
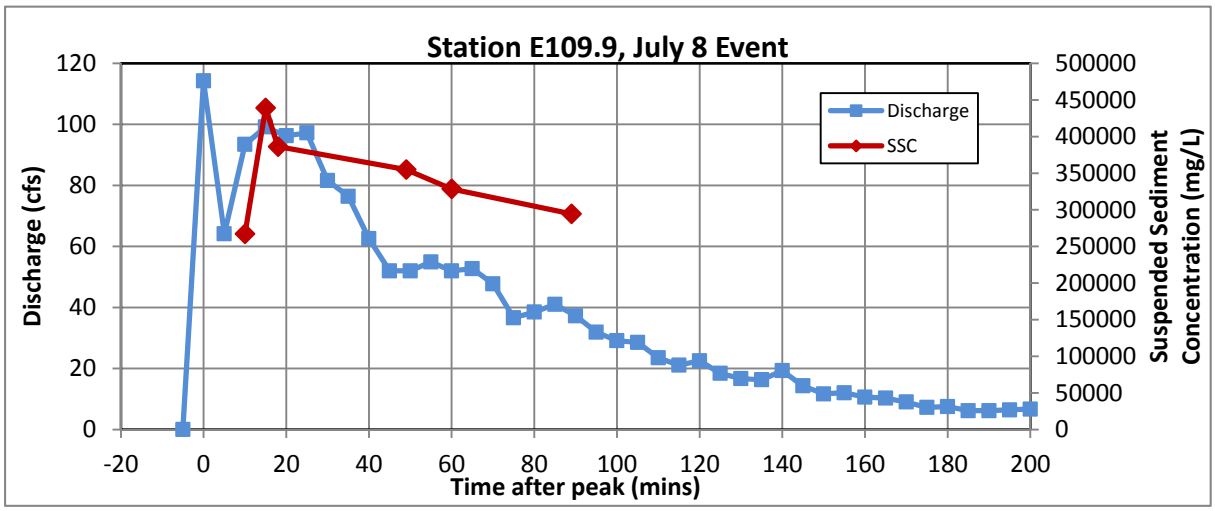


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





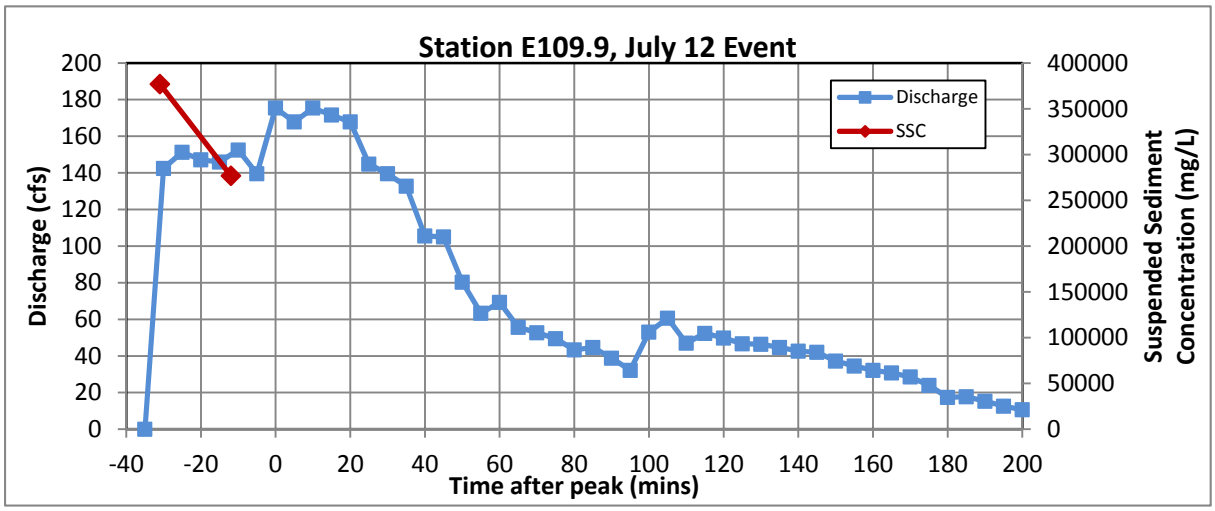
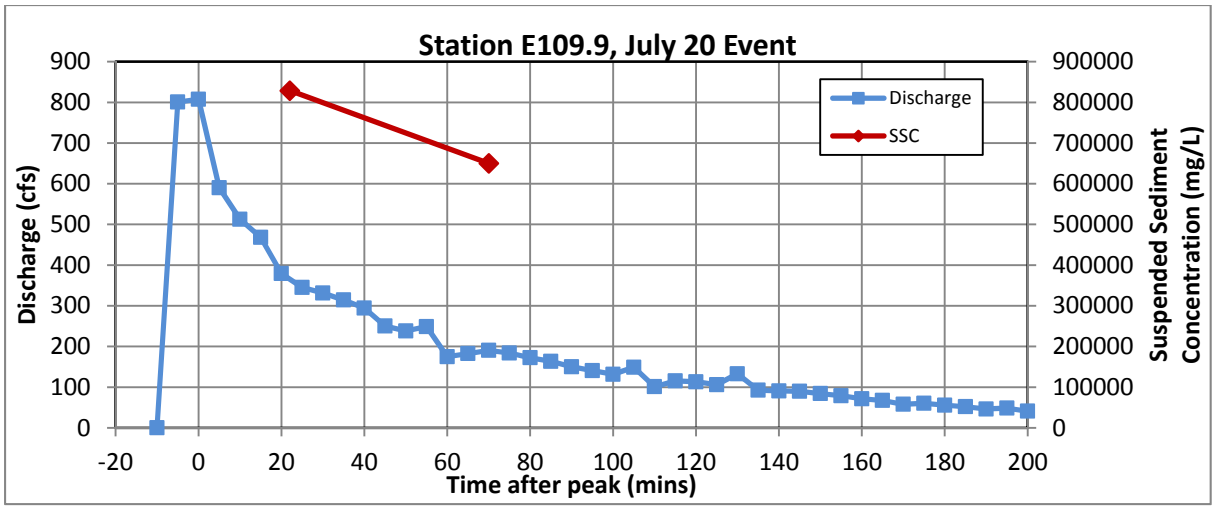
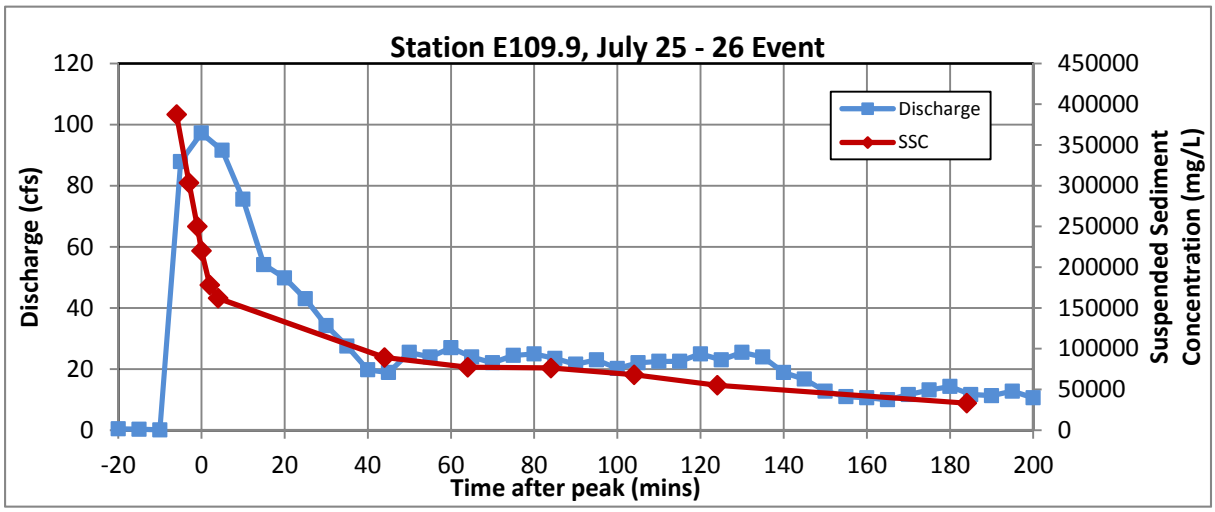


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





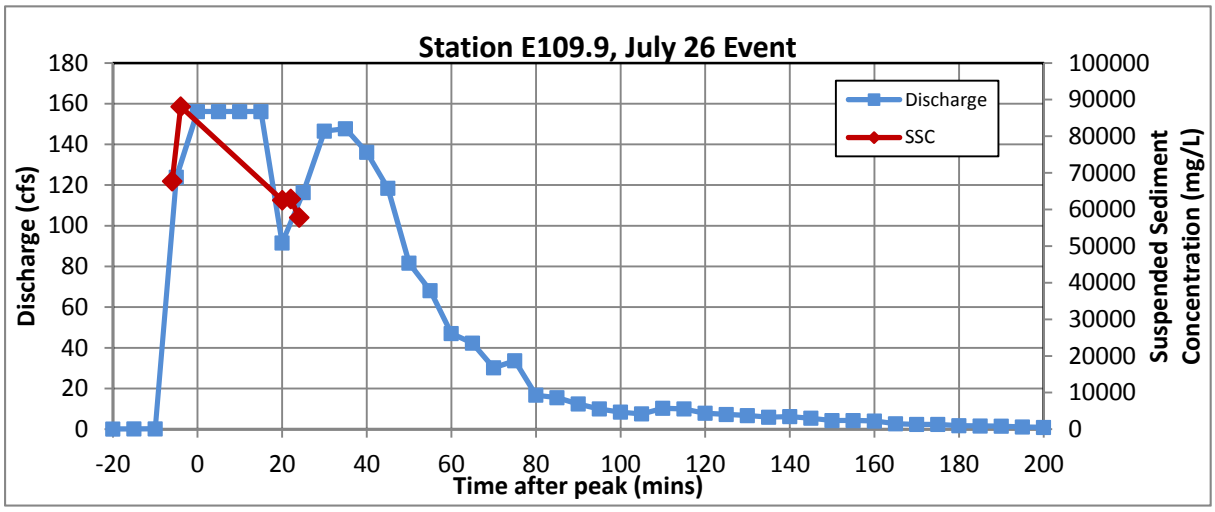
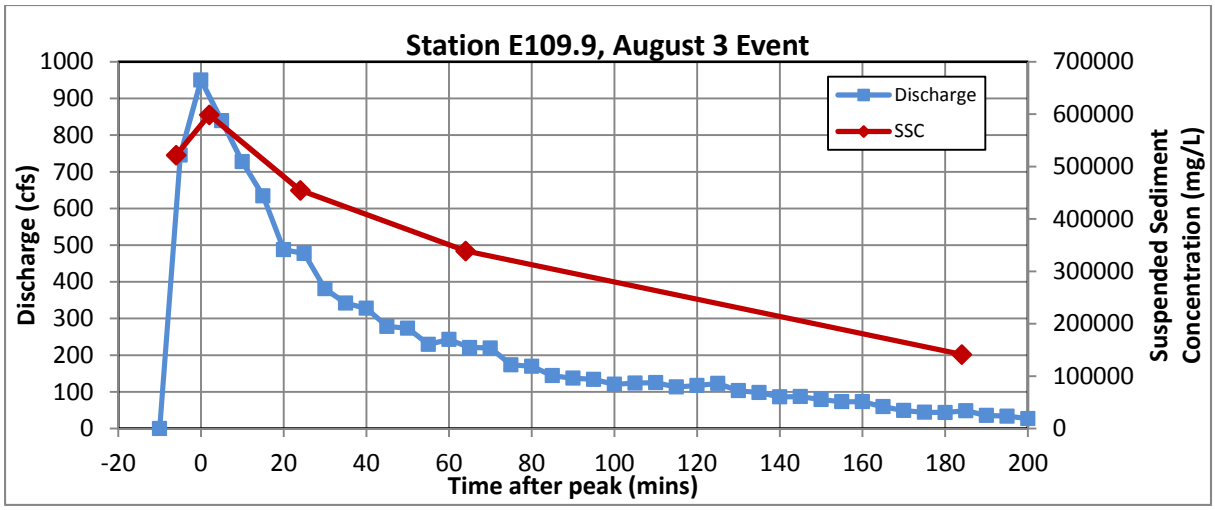
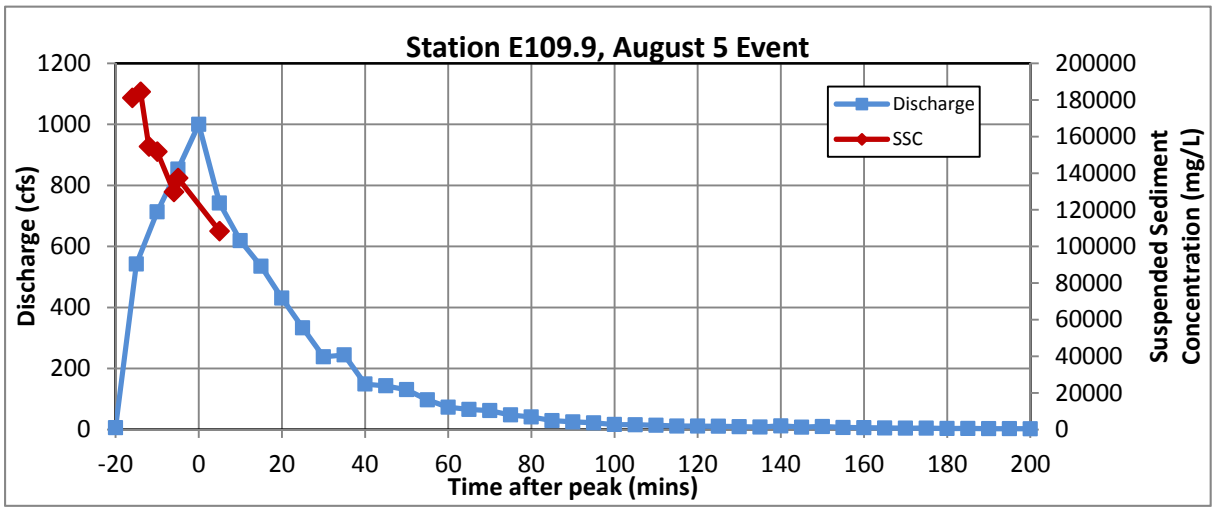


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**





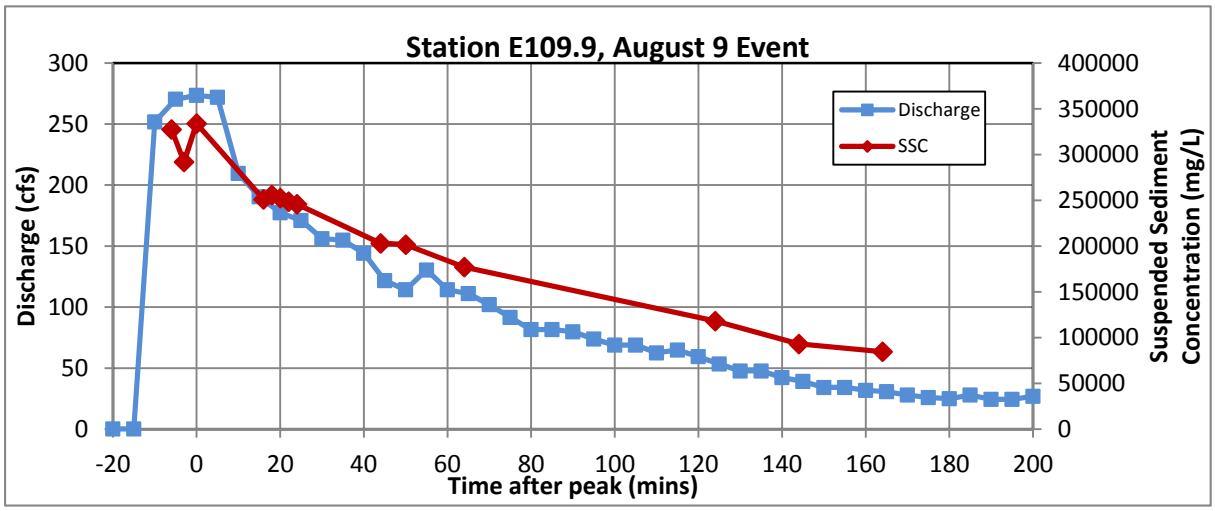


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**

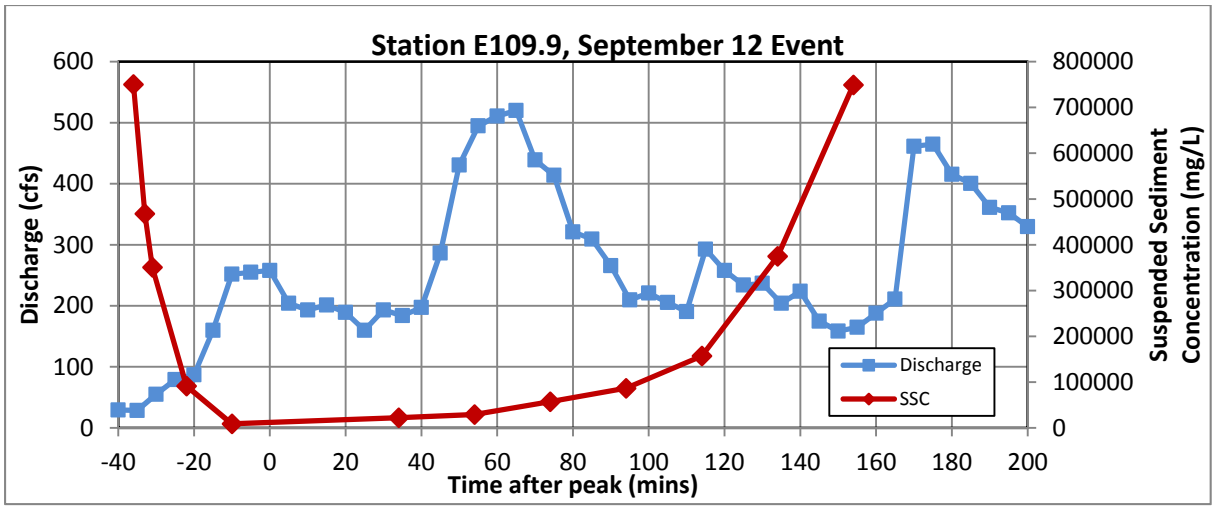


Figure 3.2-4 (continued) **Discharge and SSC for sampled events at E026, E038, E039.1, E042.1, E050.1, E099, and E109.9**

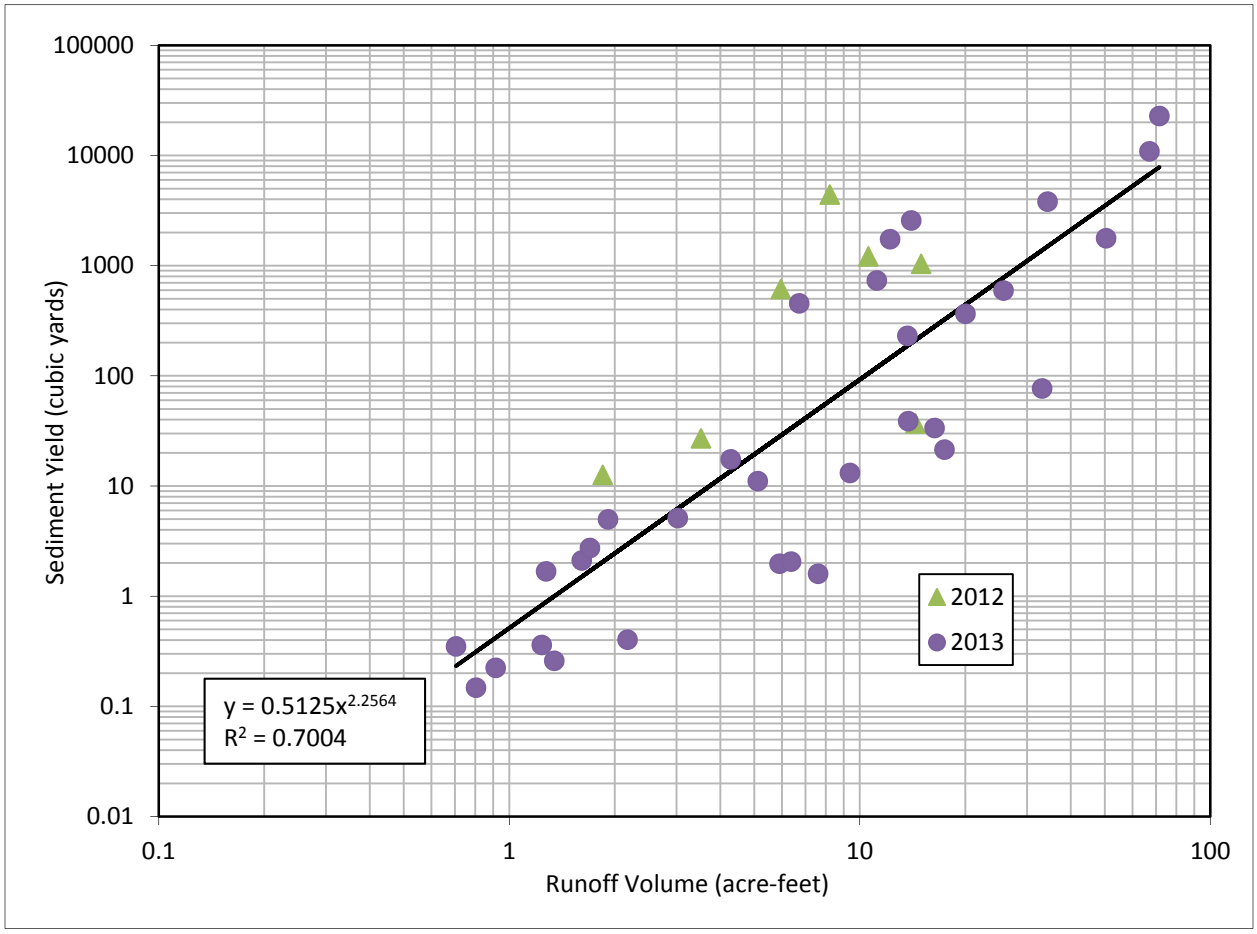


Figure 3.2-5 **Relationship between SSC-based sediment yield and runoff volume over the past 2 yr of monitoring**

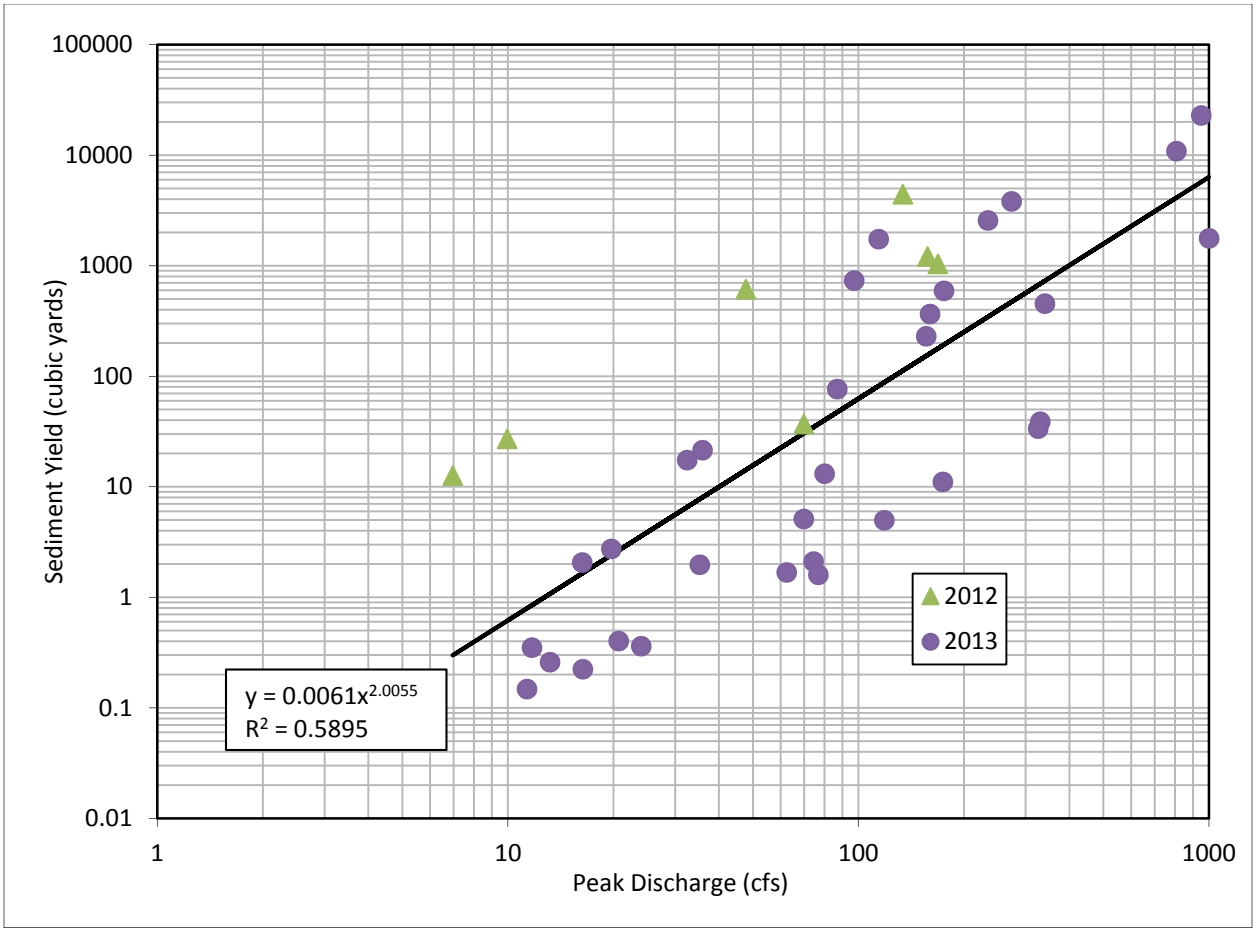


Figure 3.2-6 Relationship between SSC-based sediment yield and peak discharge over the past 2 yr of monitoring

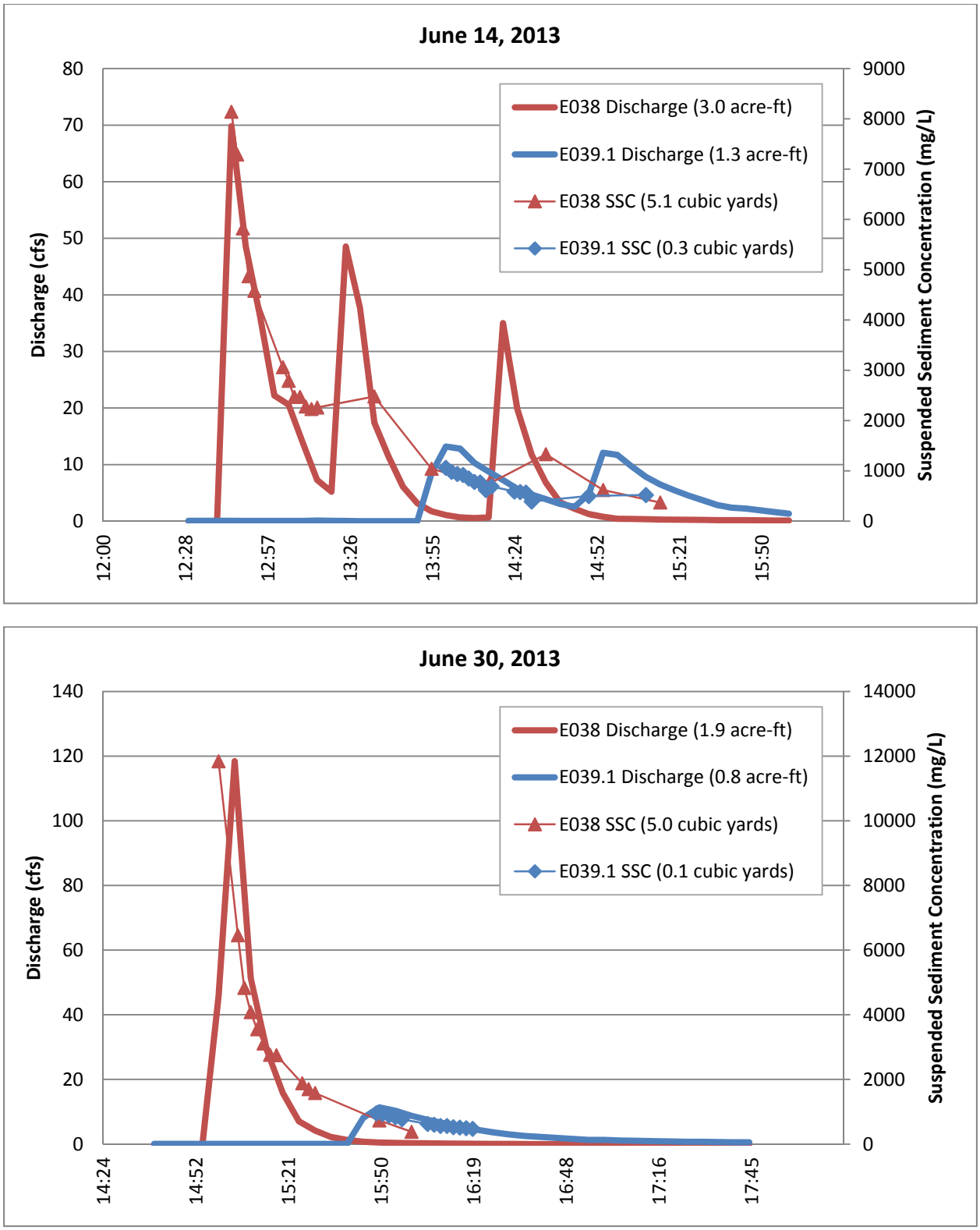


Figure 3.4-1 Discharge and SSC at E038 and E039.1 in DP Canyon on days when sampling of the same runoff event occurred

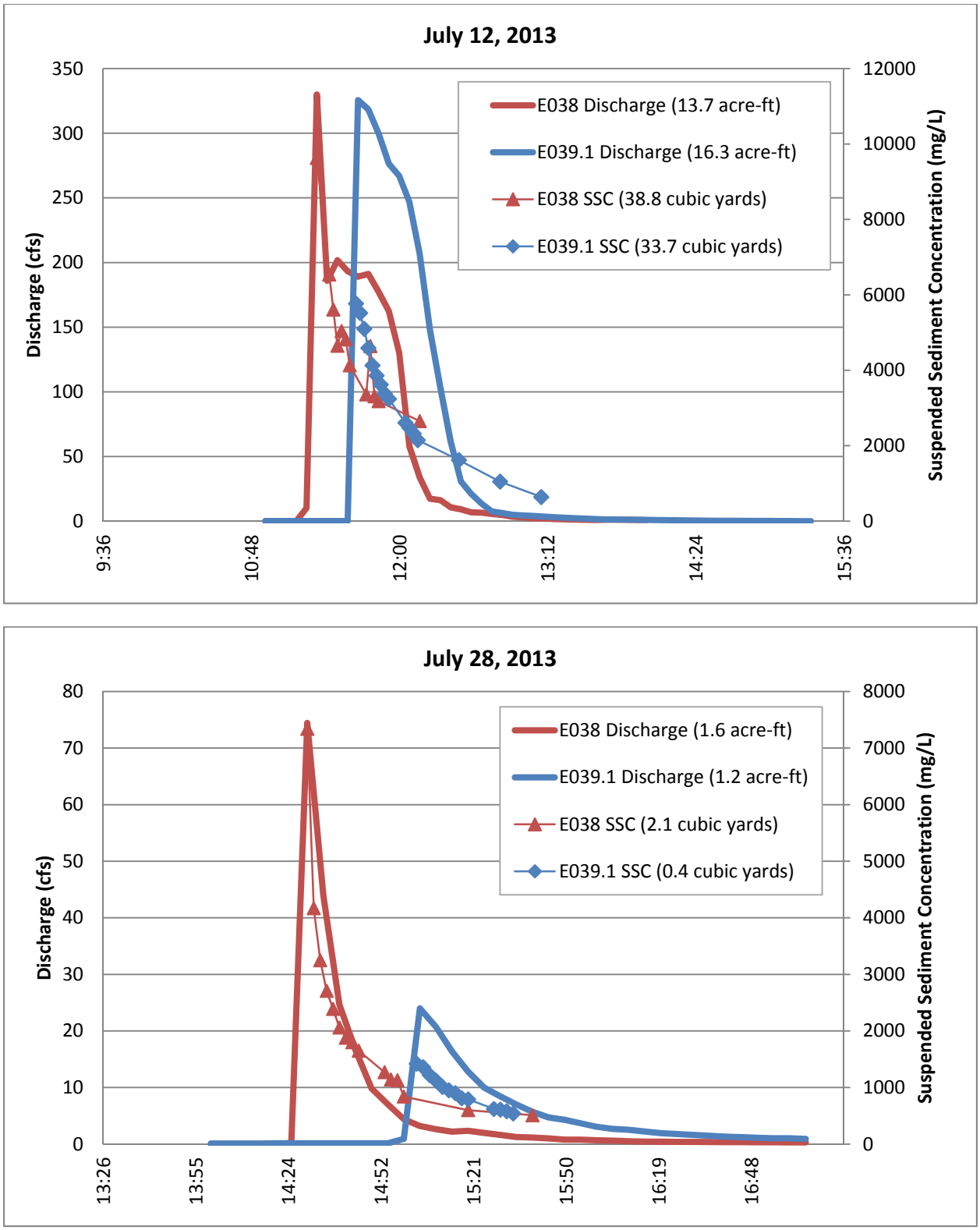


Figure 3.4-1 (continued) **Discharge and SSC at E038 and E039.1 in DP Canyon on days when sampling of the same runoff event occurred**

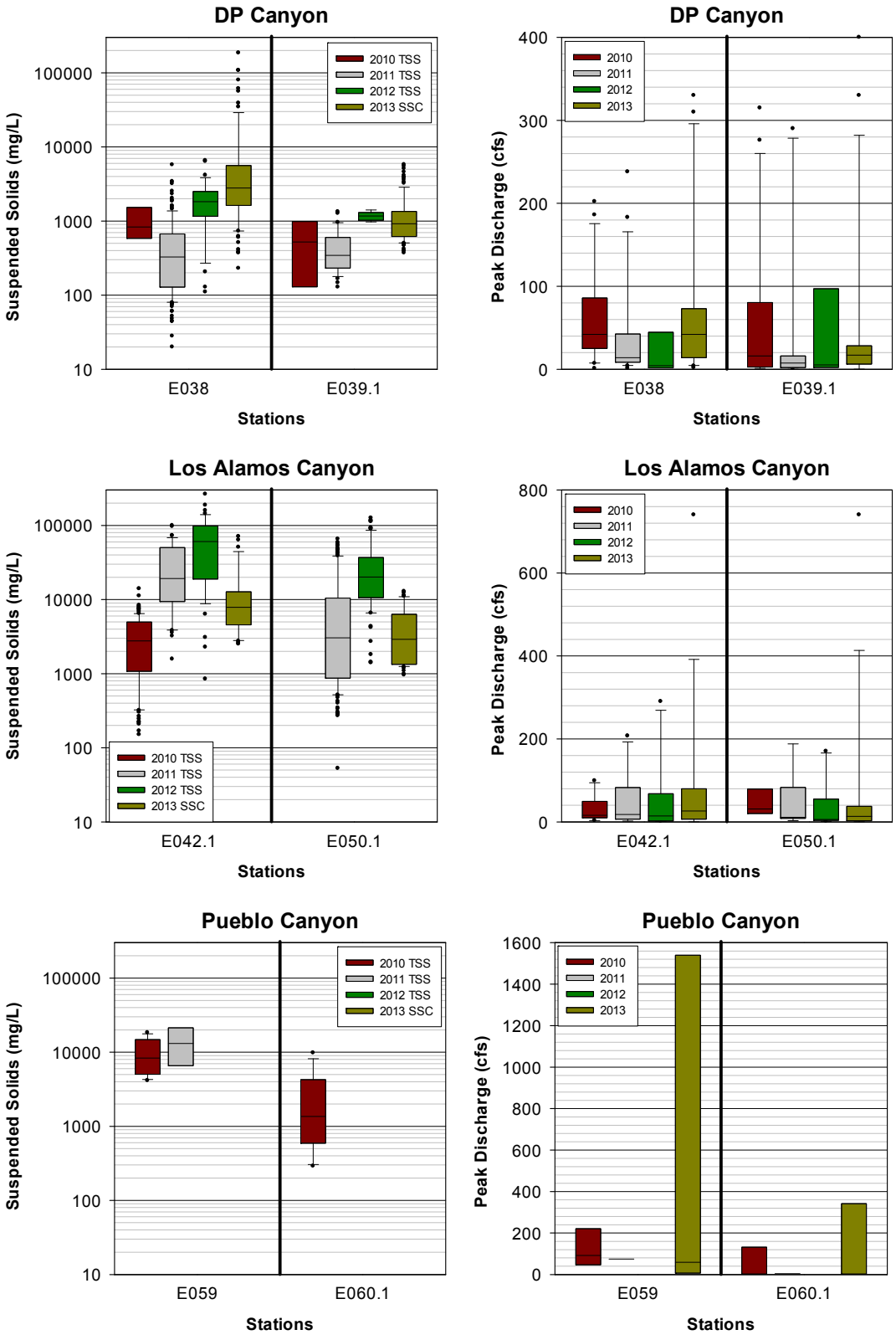


Figure 3.4-2 **Box and whisker plots of TSS and SSC (left) and peak discharge (right) upstream and downstream of the watershed mitigations in DP (top), Los Alamos (middle), and Pueblo (bottom) Canyons over the past 4 yr of monitoring**

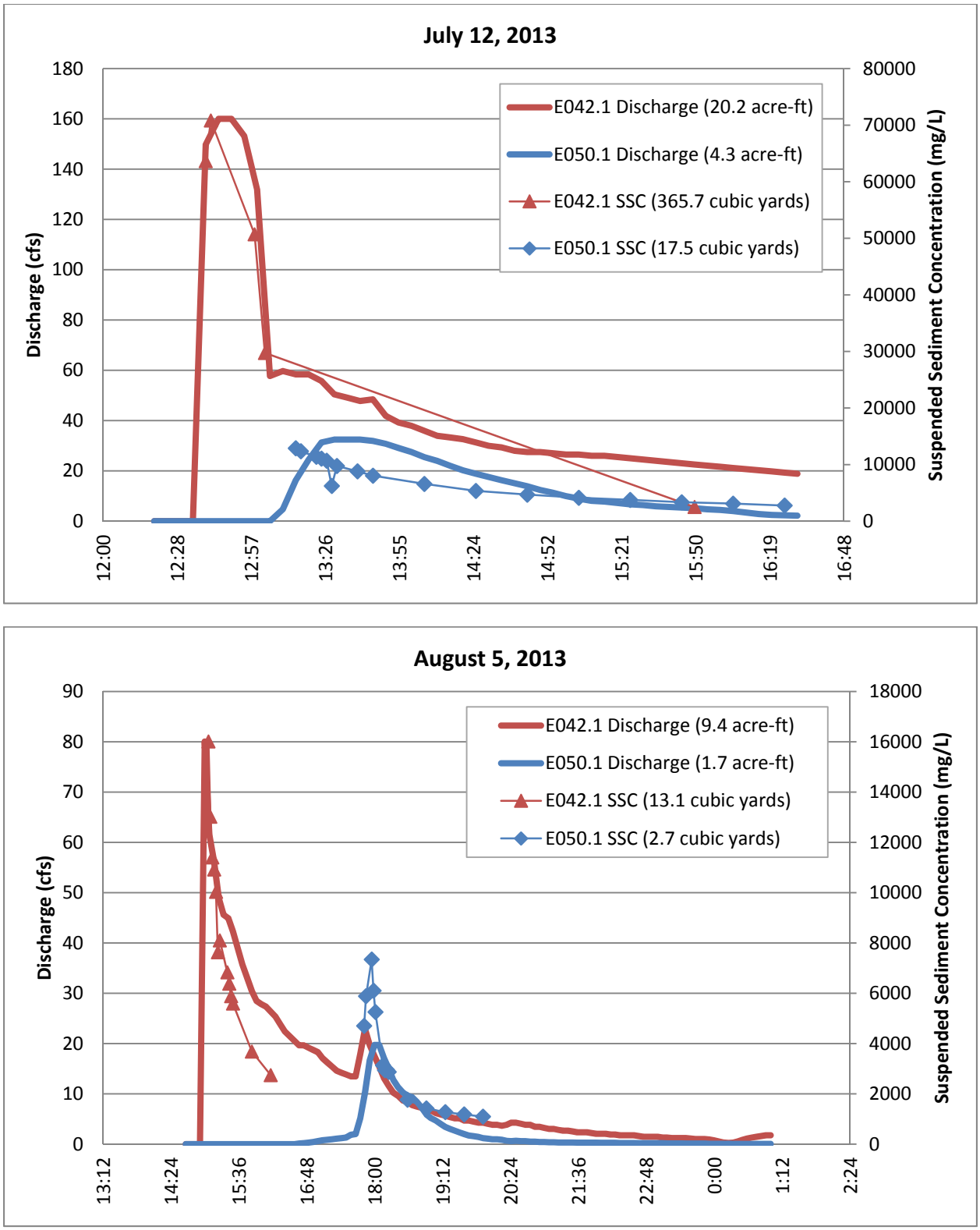


Figure 3.4-3 Discharge and TSS at E042.1 and E050.1 in upper Los Alamos Canyon on days when sampling of the same runoff event occurred

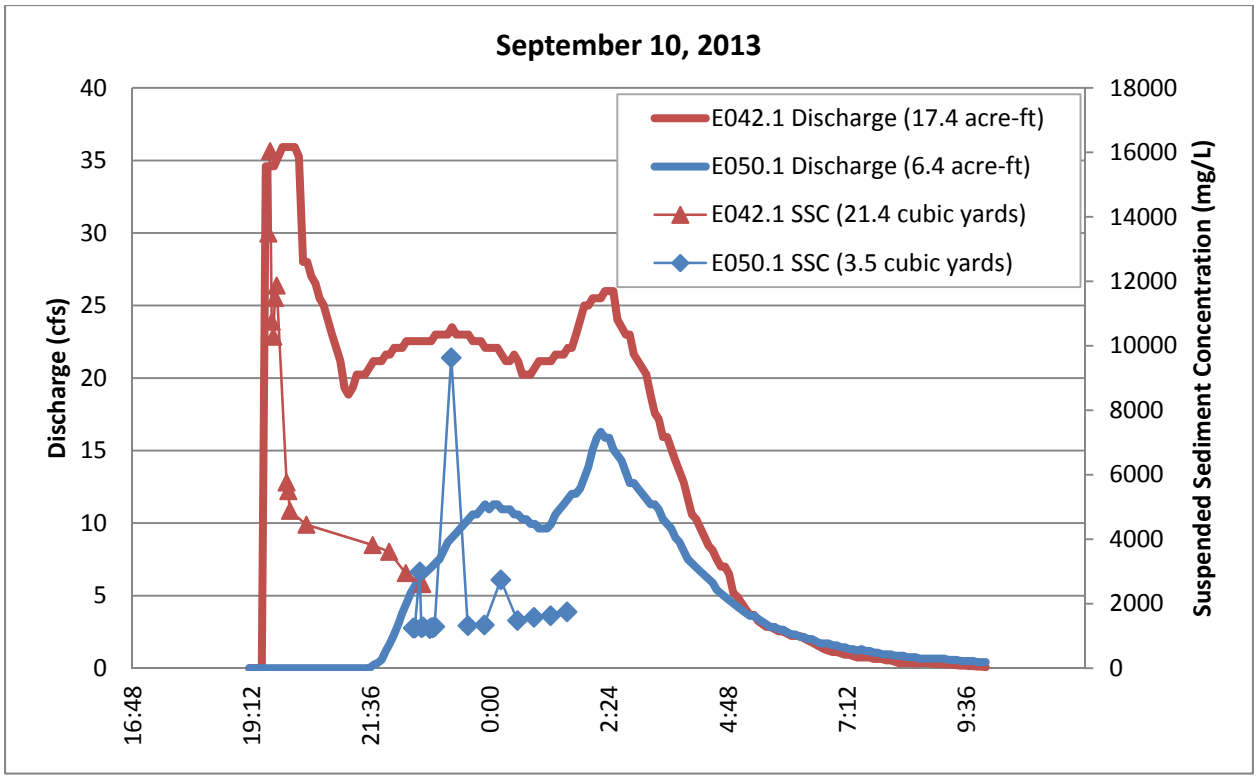


Figure 3.4-3 (continued) **Discharge and TSS at E042.1 and E050.1 in upper Los Alamos Canyon on days when sampling of the same event occurred**

Figure 4.1-1 **Photograph of samples collected at E109.9 (bottle 1 on far left to bottle 24 on far right)**

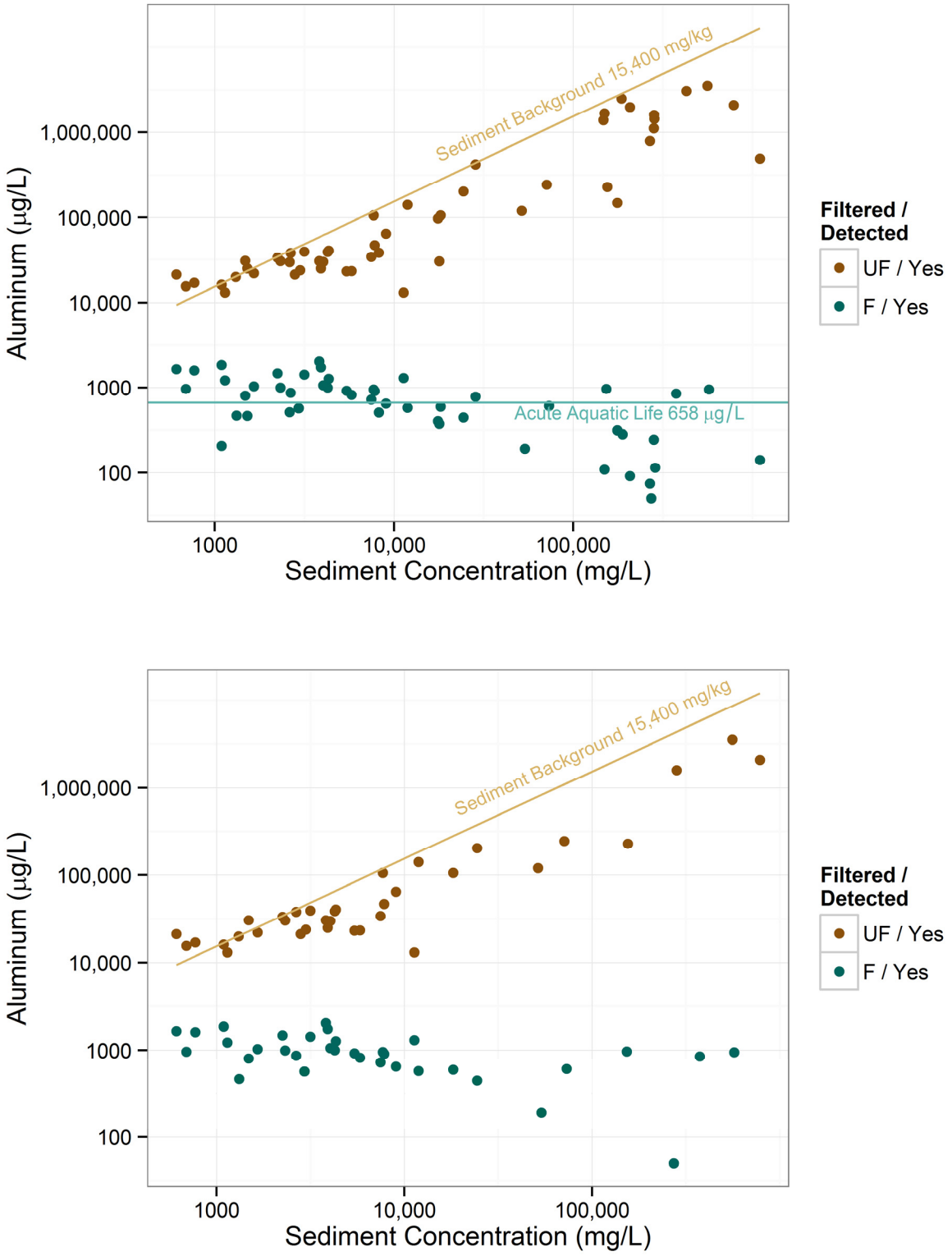


Figure 4.3-1 SSC vs. aluminum for each gage station

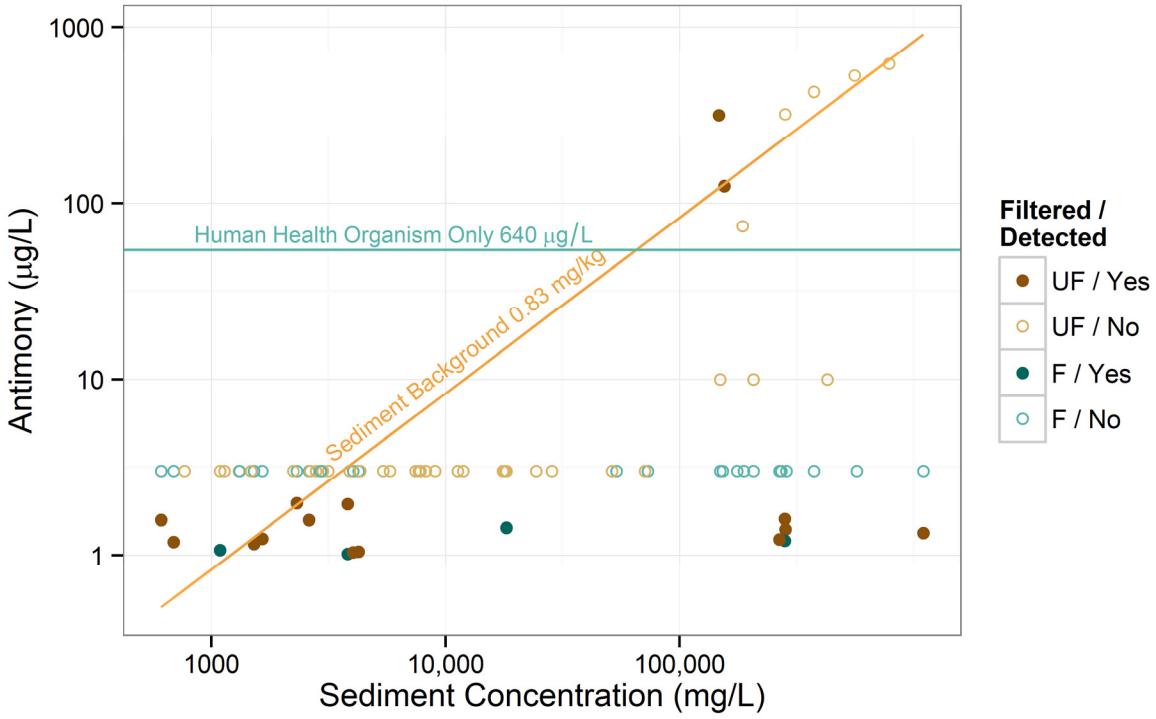


Figure 4.3-2 SSC vs. antimony for each gage station

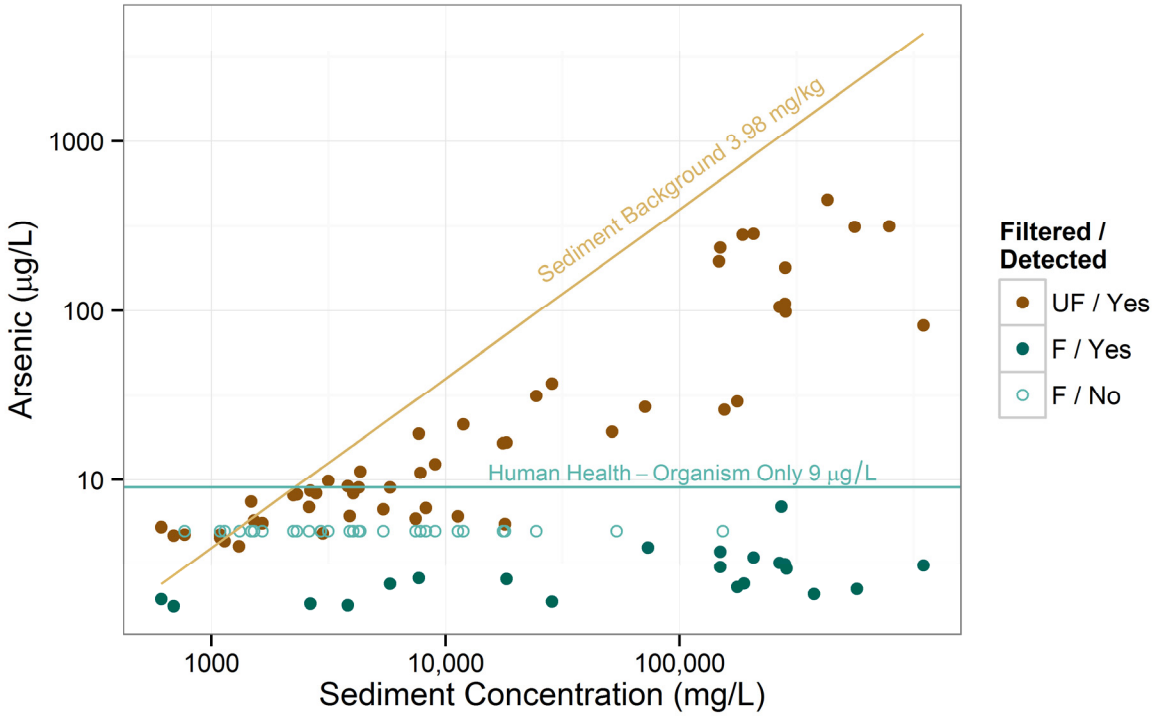


Figure 4.3-3 SSC vs. arsenic for each gage station

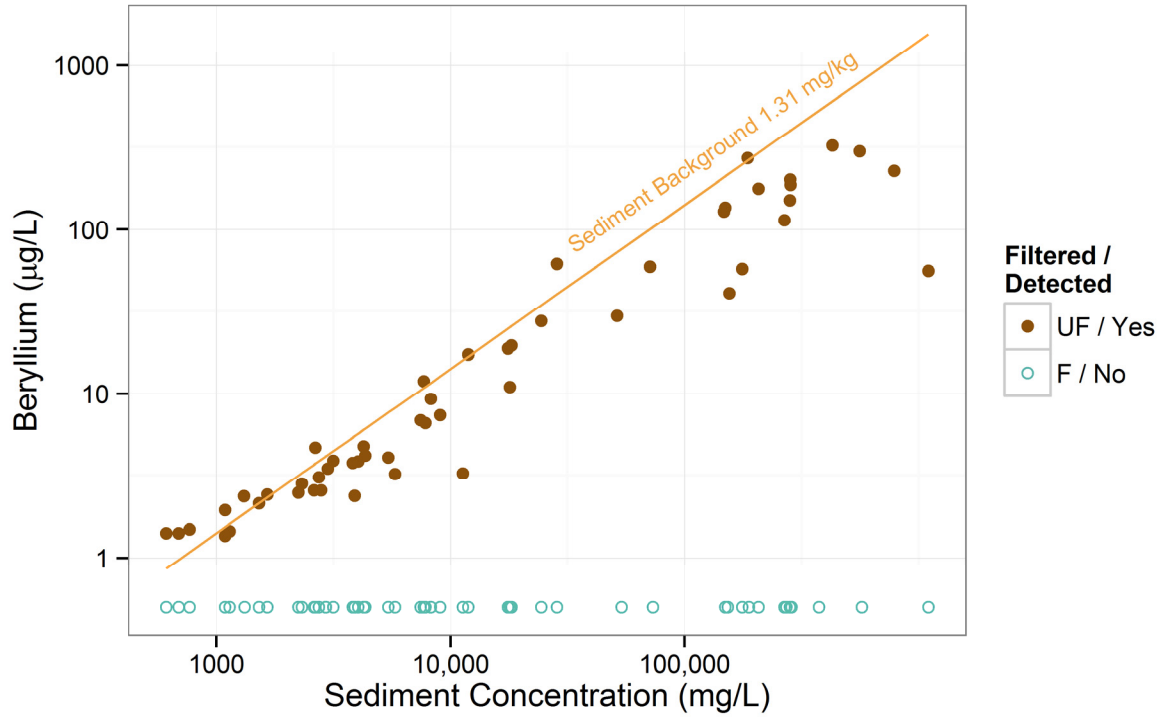


Figure 4.3-4 SSC vs. beryllium for each gage station

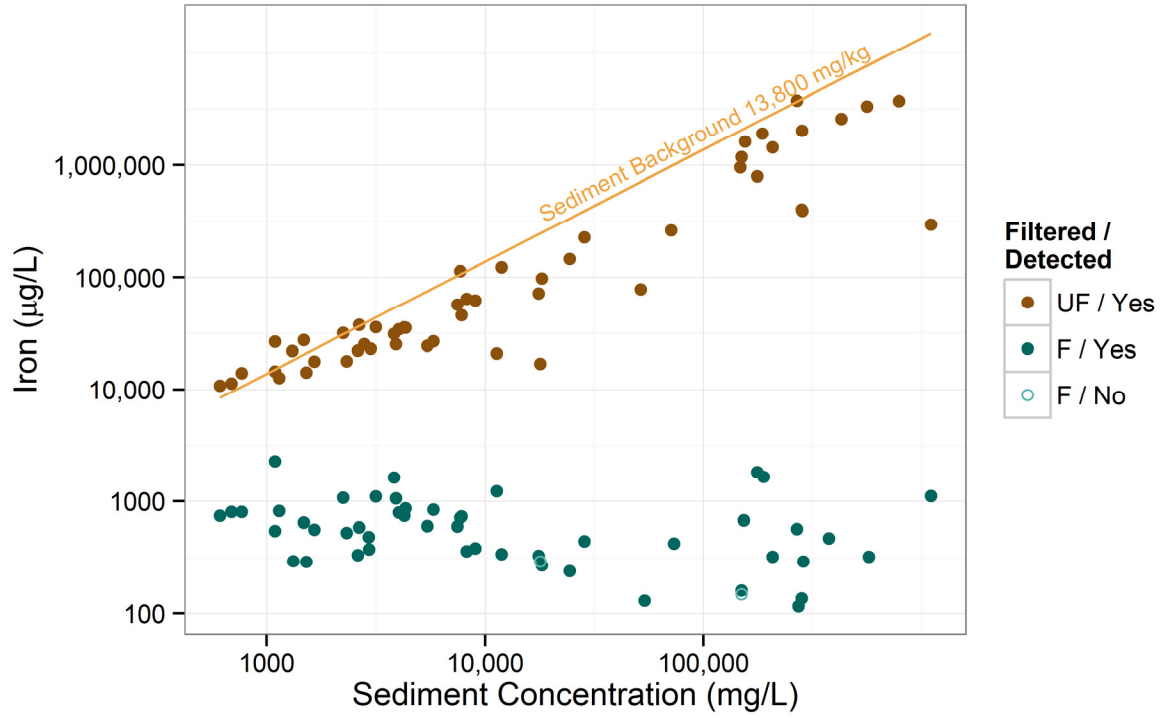


Figure 4.3-5 SSC vs. iron for each gage station

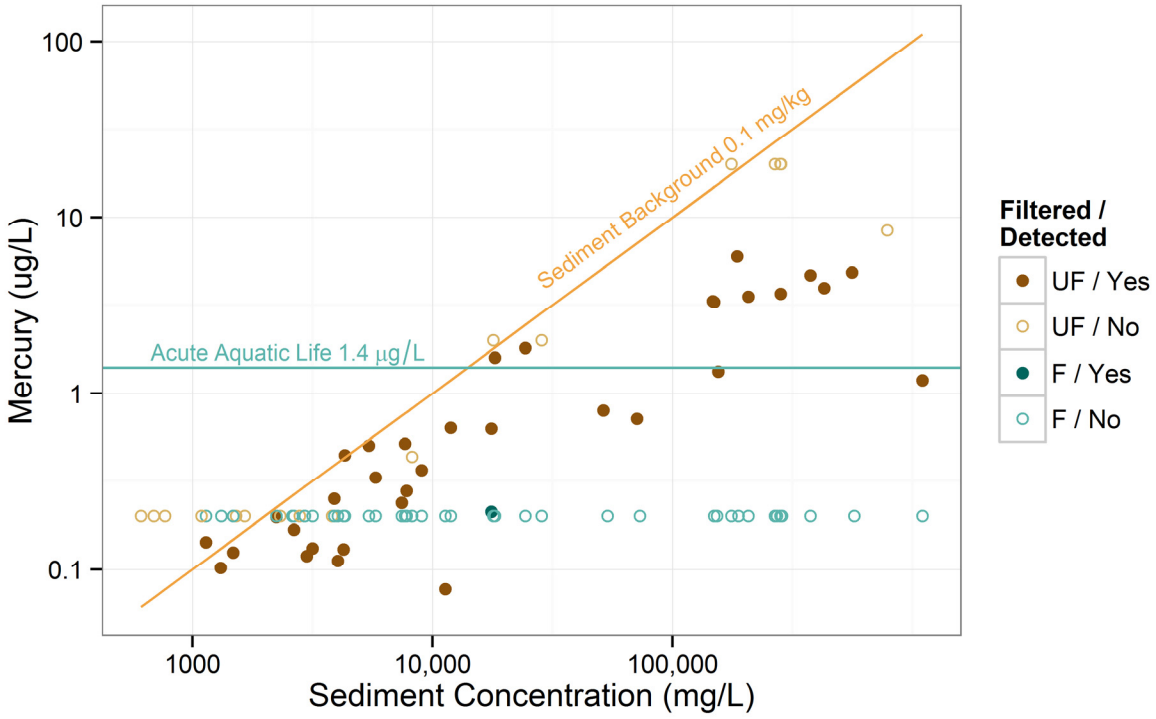


Figure 4.3-6 SSC vs. mercury for each gage station

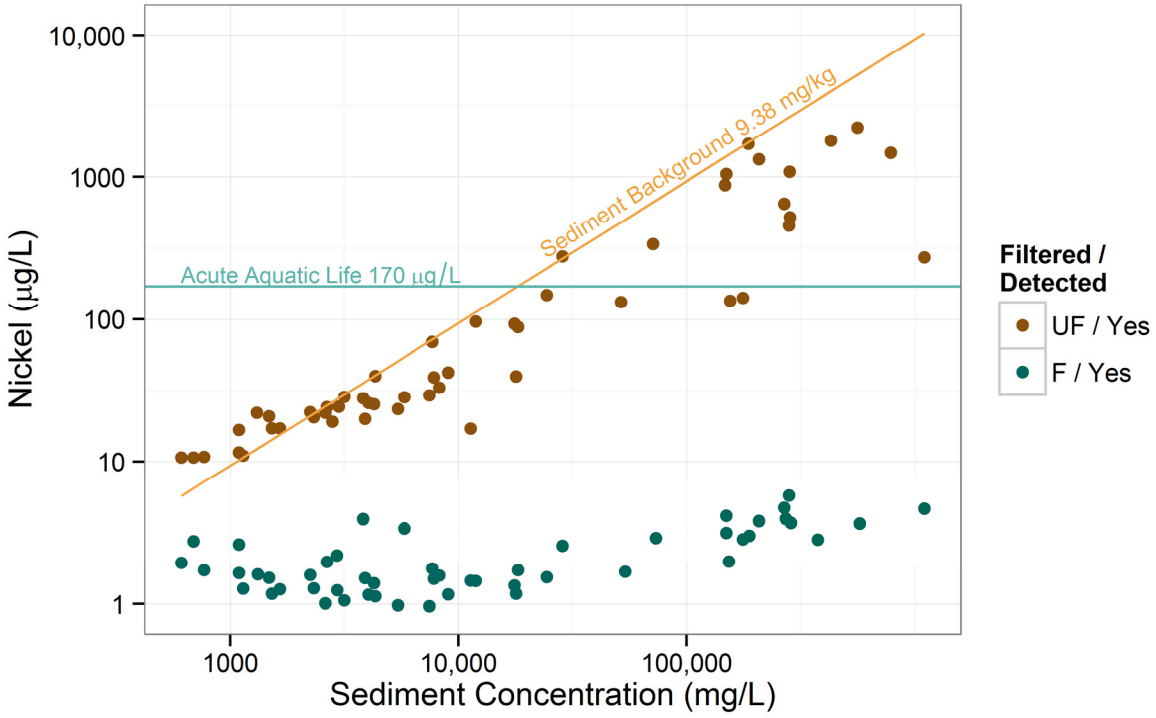


Figure 4.3-7 SSC vs. nickel for each gage station

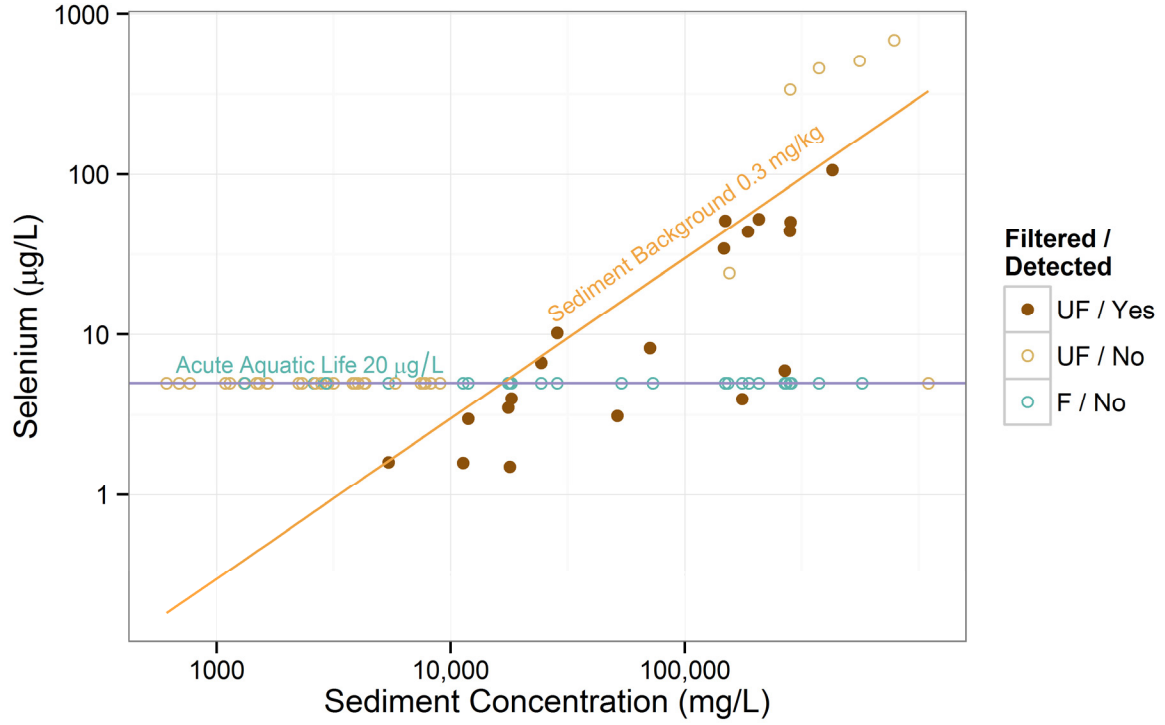


Figure 4.3-8 SSC vs. selenium for each gage station

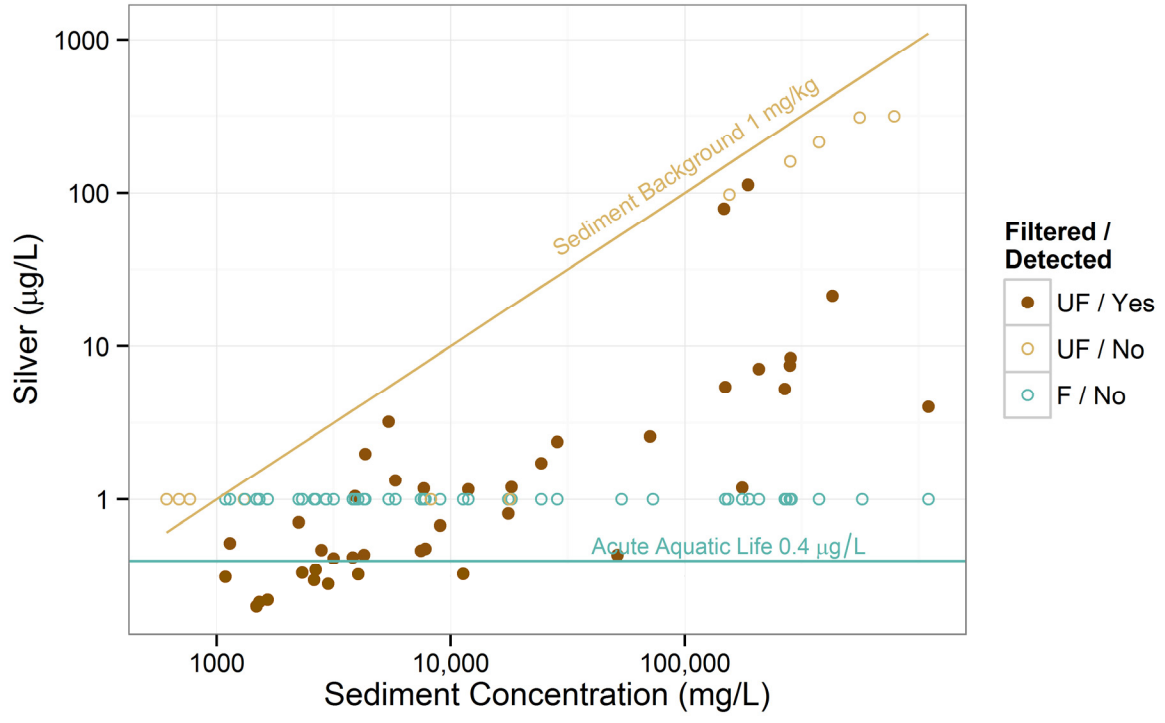


Figure 4.3-9 SSC vs. silver for each gage station

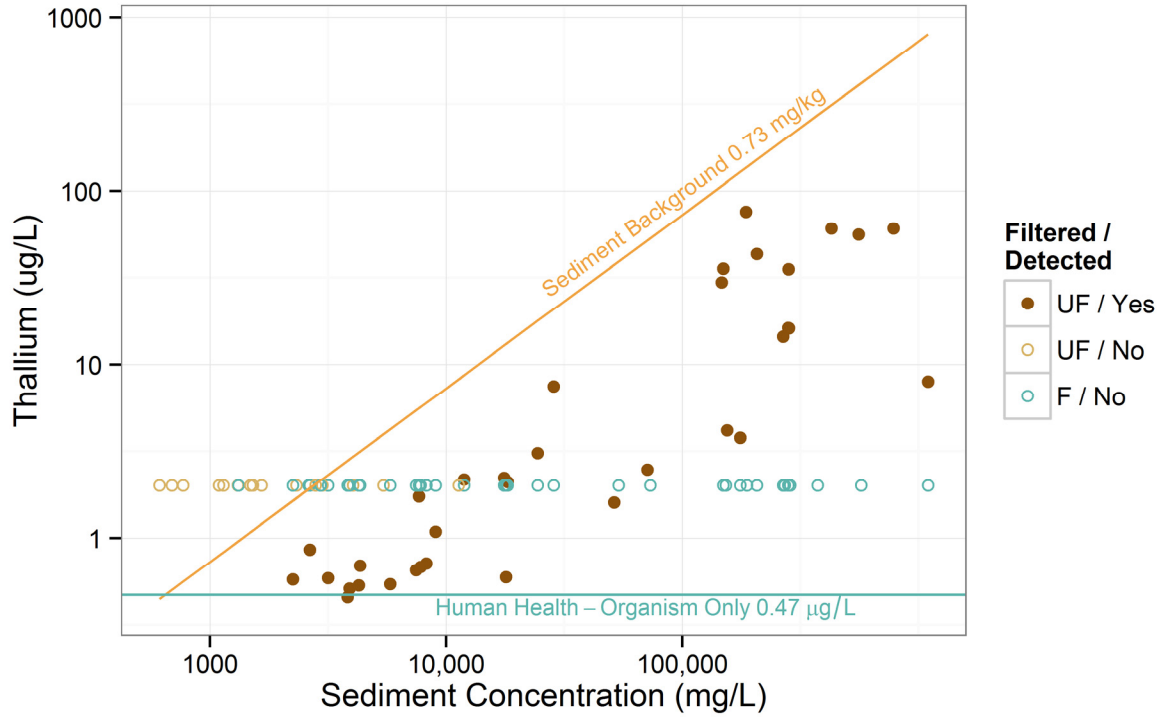


Figure 4.3-10 SSC vs. thallium for each gage station

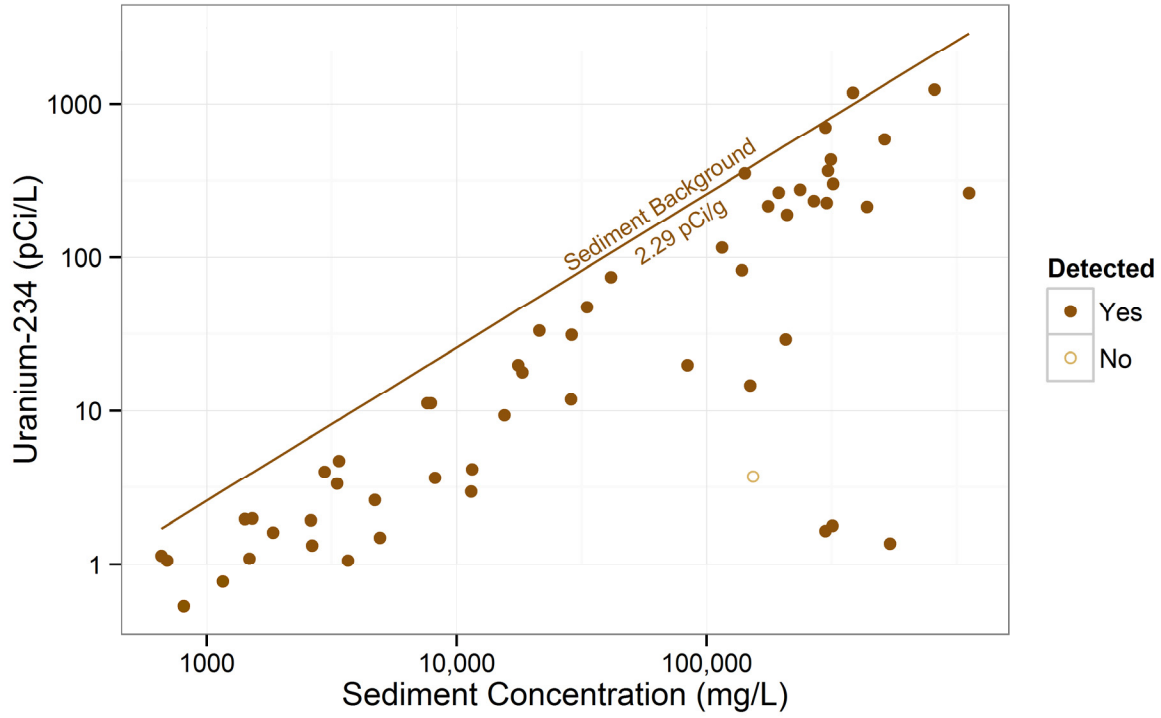


Figure 4.3-11 SSC vs. uranium-234 for each gage station

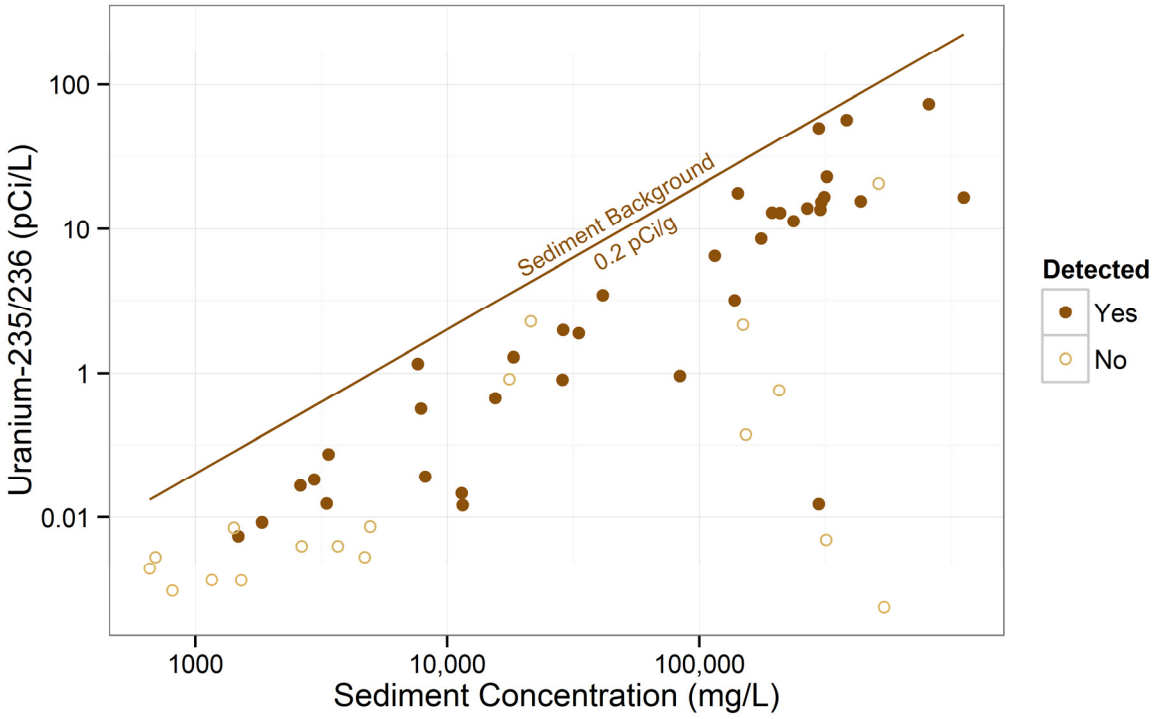


Figure 4.3-12 SSC vs. uranium-235 for each gage station

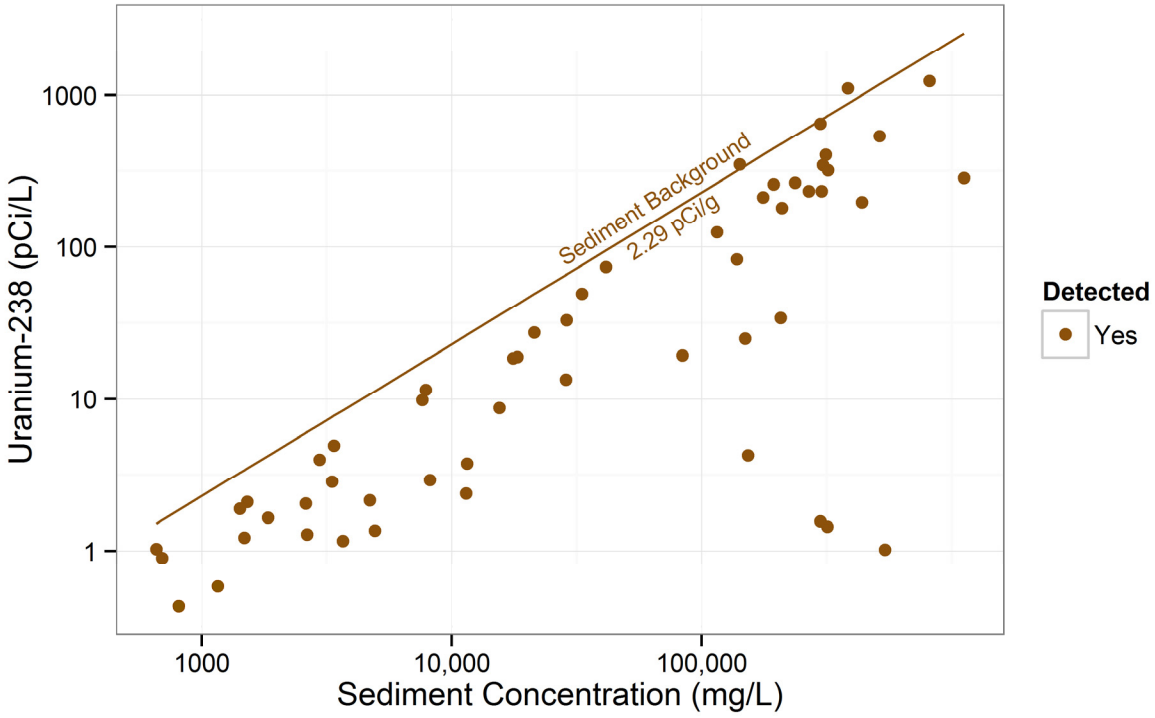


Figure 4.3-13 SSC vs. uranium-238 for each gage station

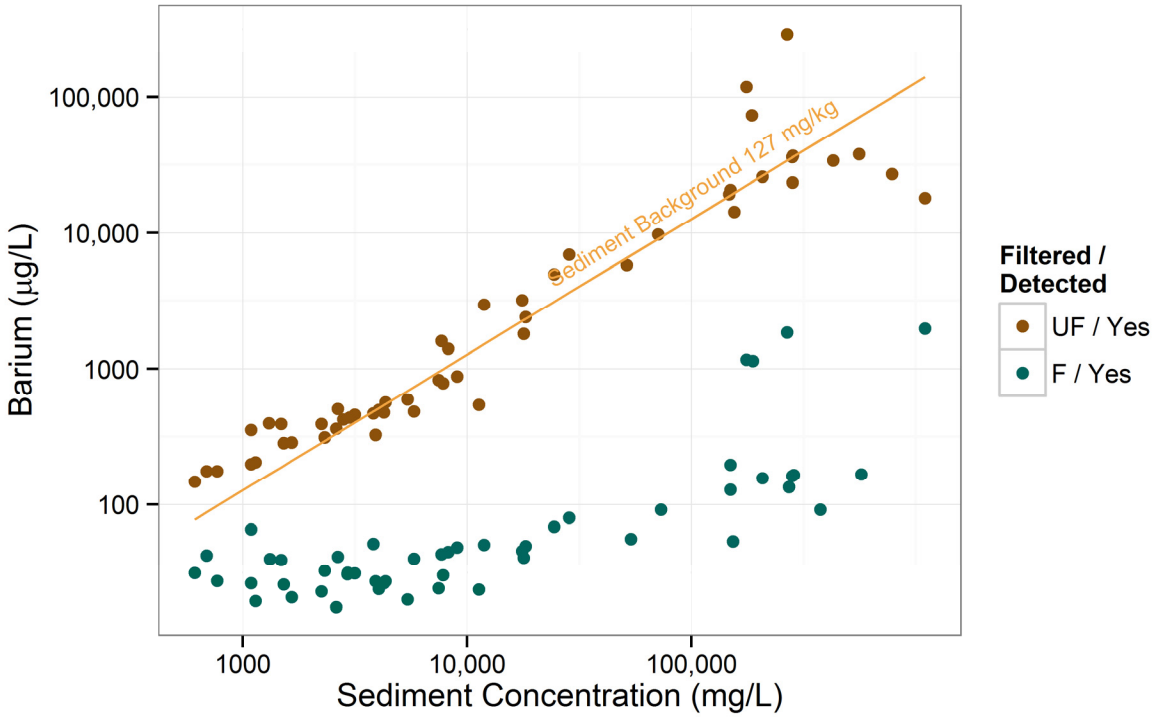


Figure 4.3-14 SSC vs. barium for each gage station

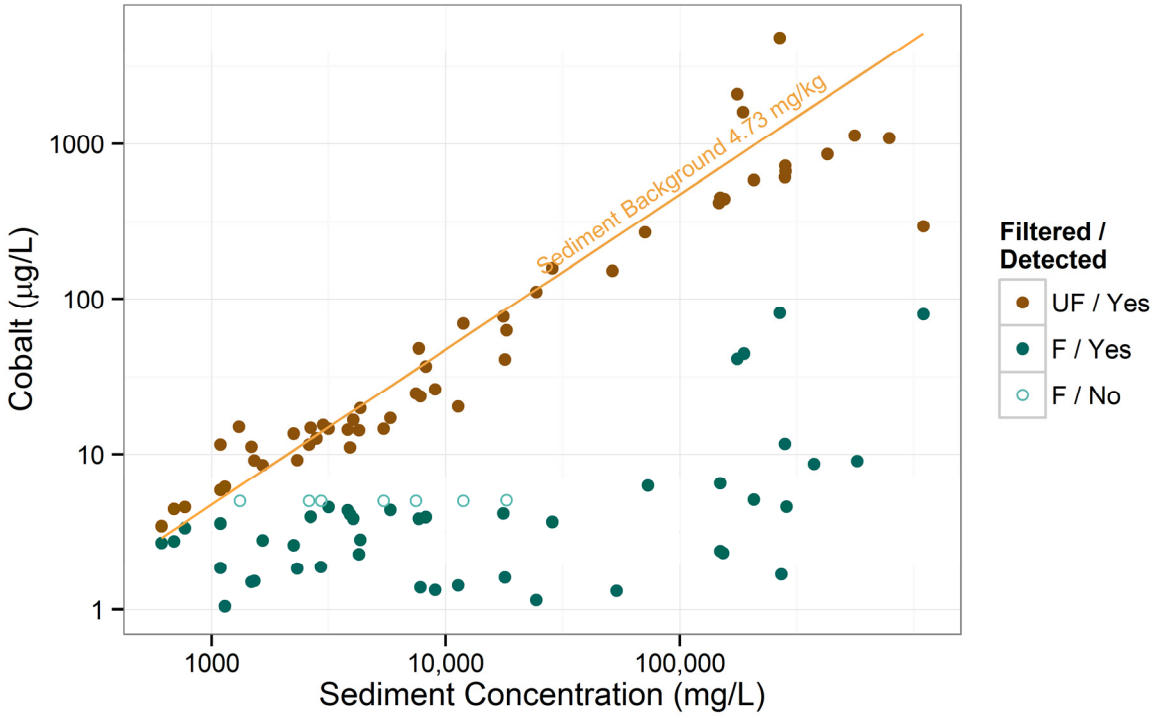


Figure 4.3-15 SSC vs. cobalt for each gage station

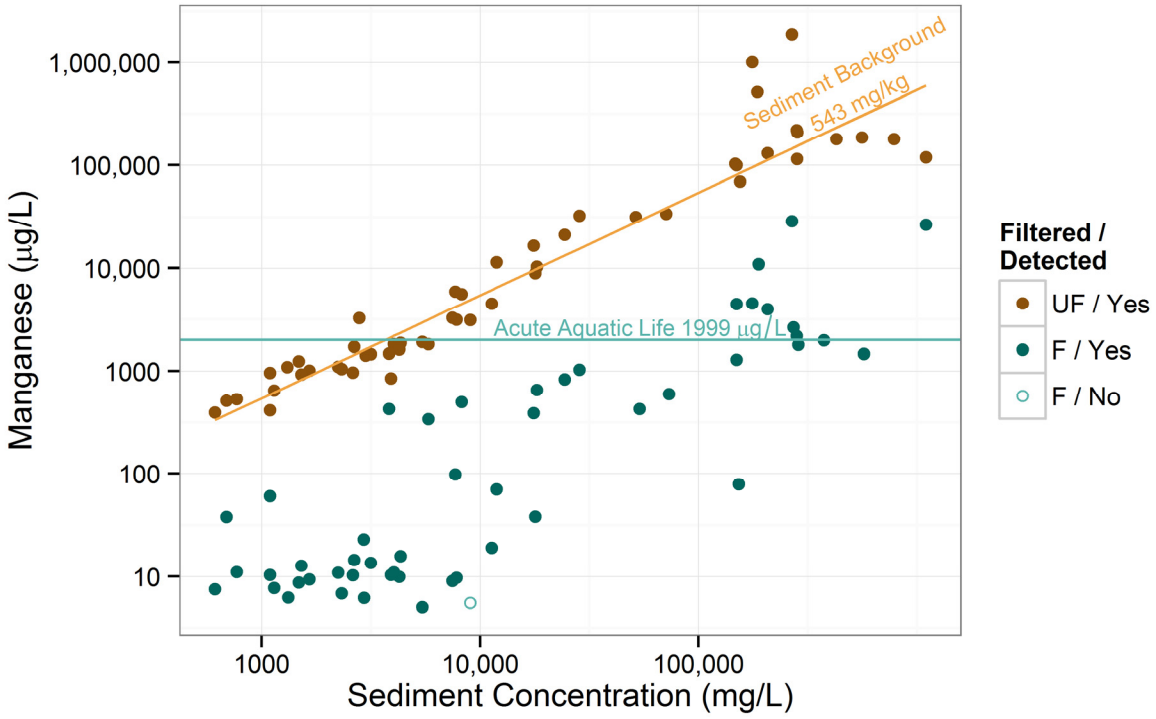


Figure 4.3-16 SSC vs. manganese for each gage station

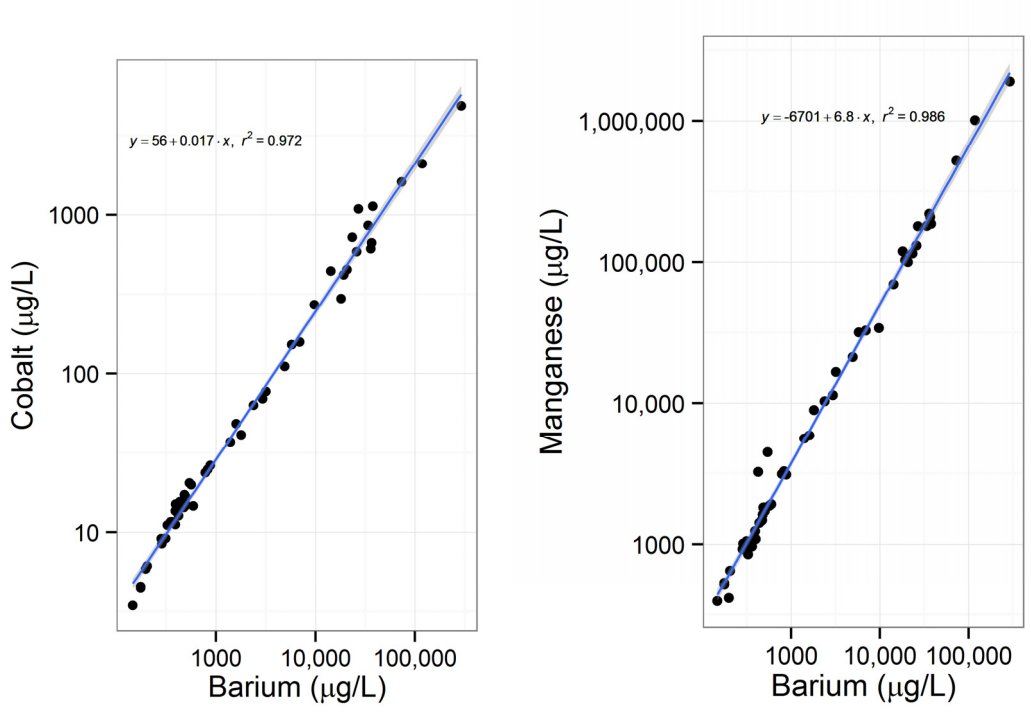


Figure 4.3-17 Correlation of concentrations of barium, cobalt, and manganese for each gage station

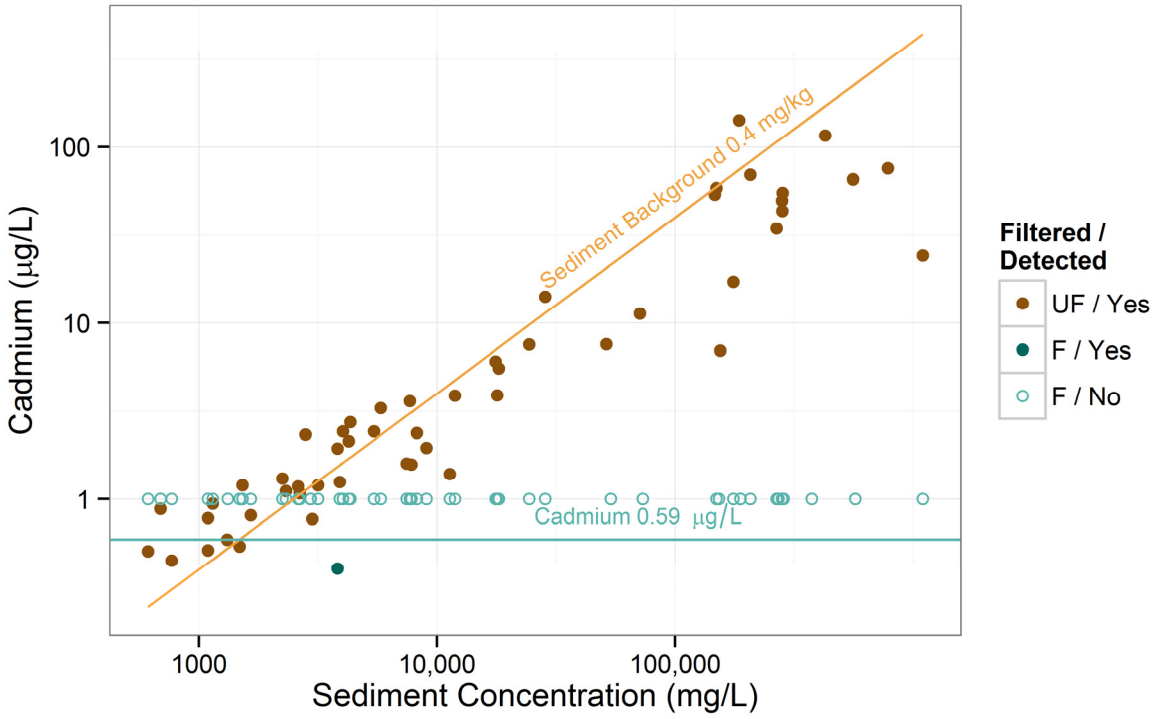


Figure 4.3-18 SSC vs. cadmium for each gage station

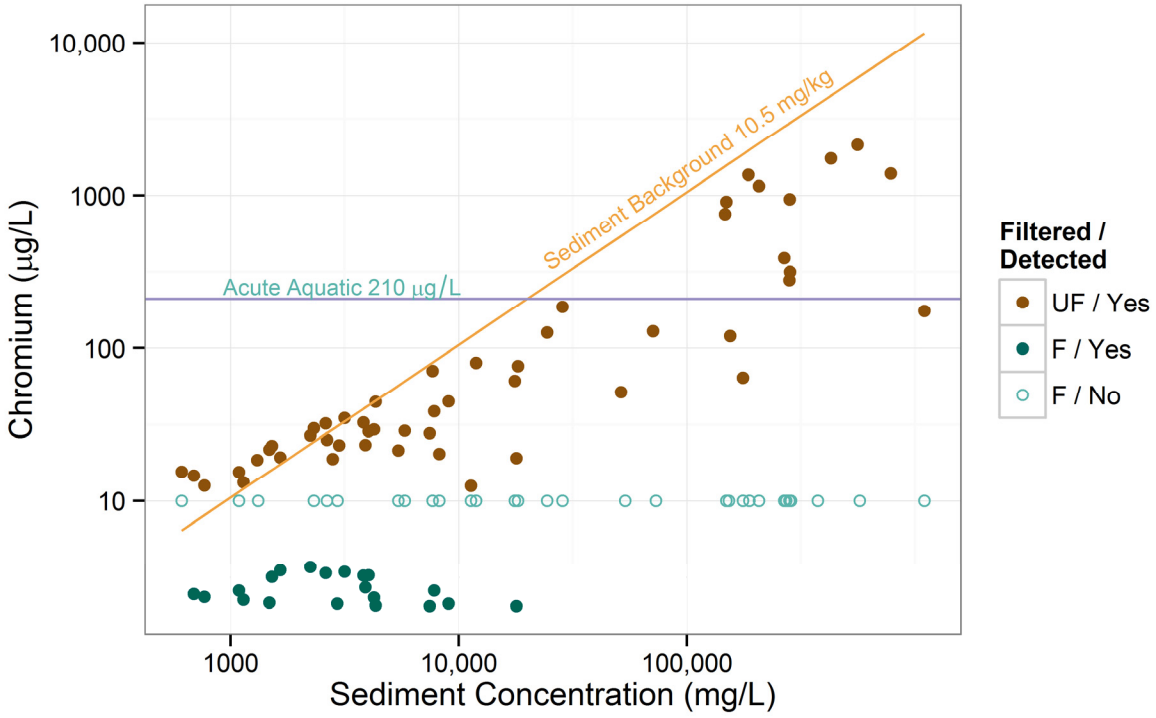


Figure 4.3-19 SSC vs. chromium for each gage station

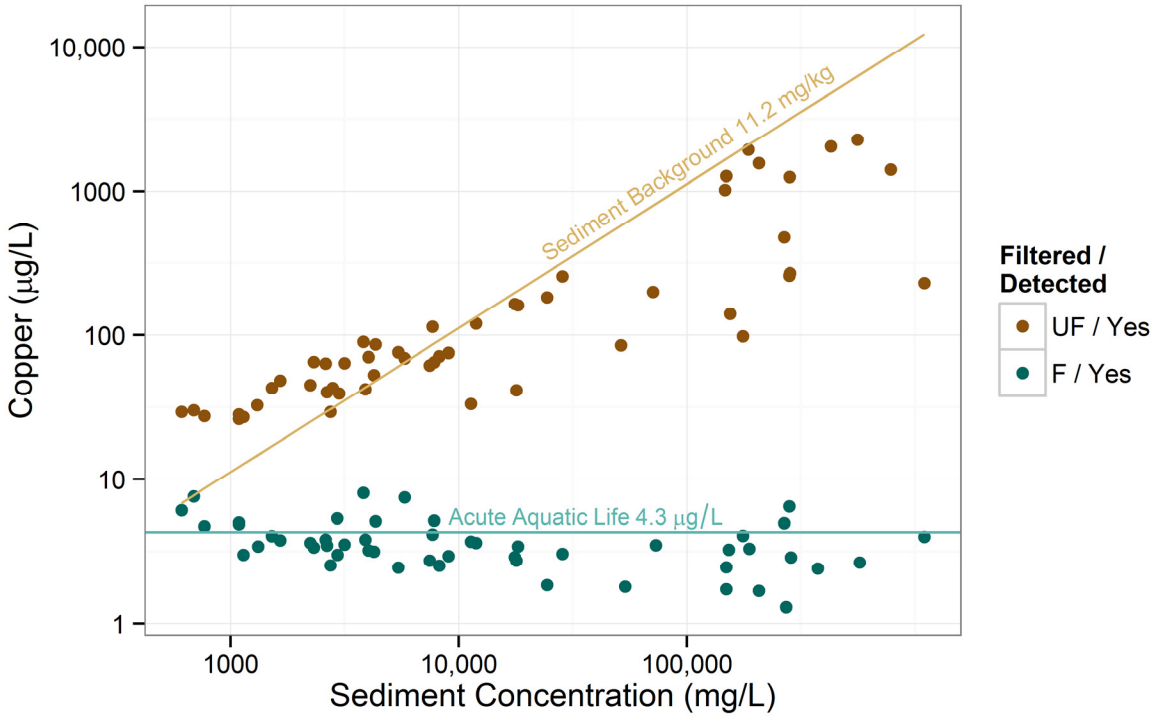


Figure 4.3-20 SSC vs. copper for each gage station

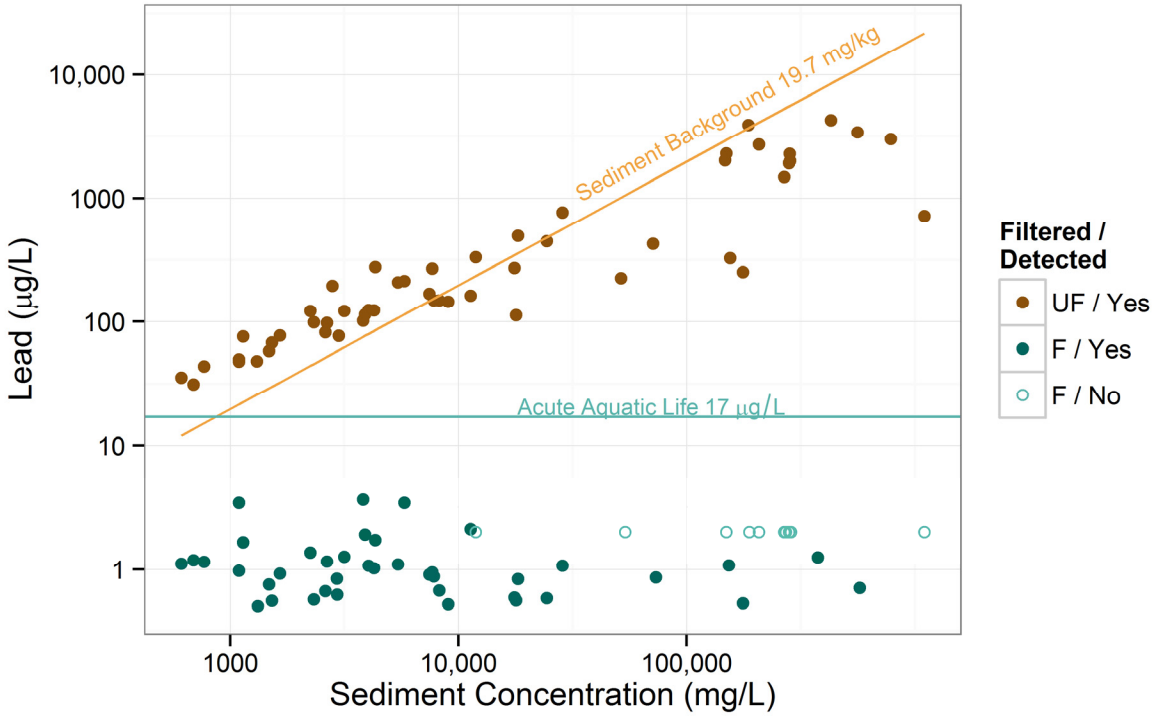


Figure 4.3-21 SSC vs. lead for each gage station

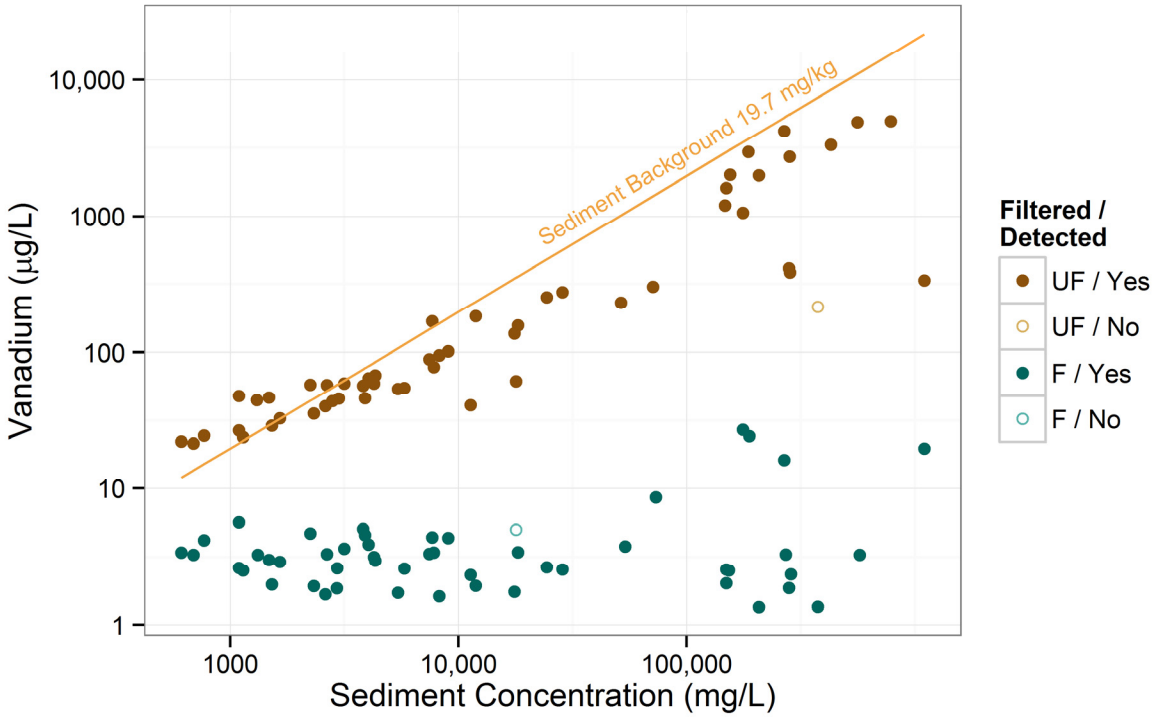


Figure 4.3-22 SSC vs. vanadium for each gage station

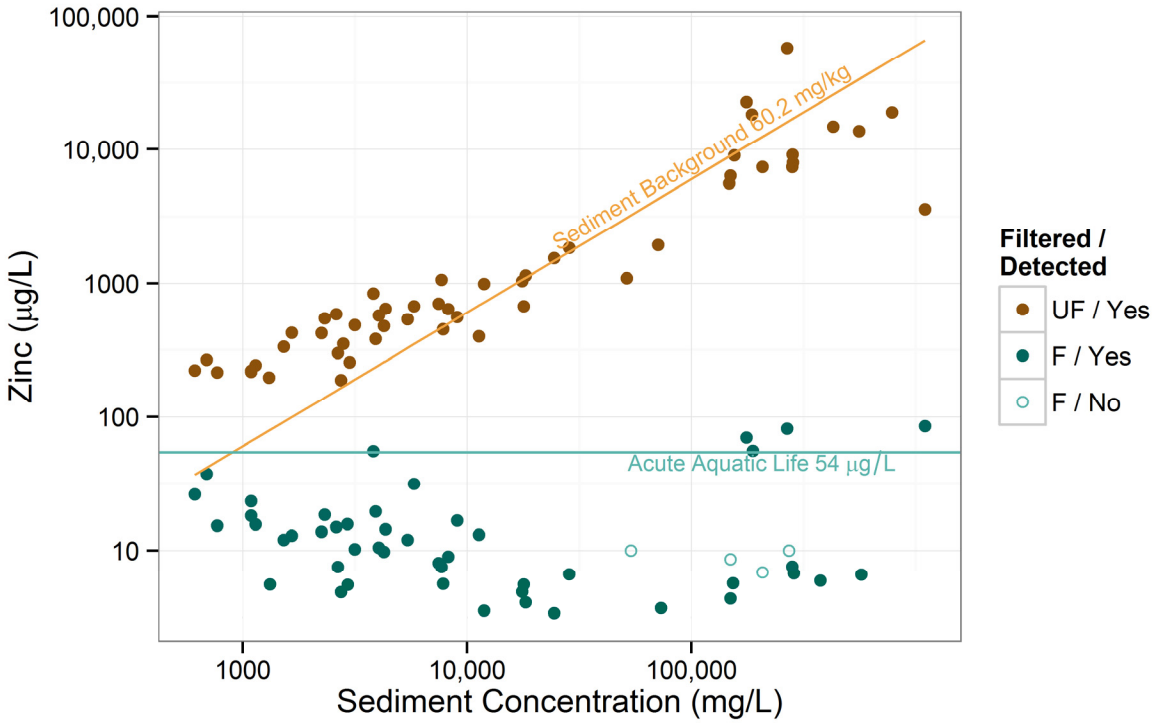


Figure 4.3-23 SSC vs. zinc for each gage station

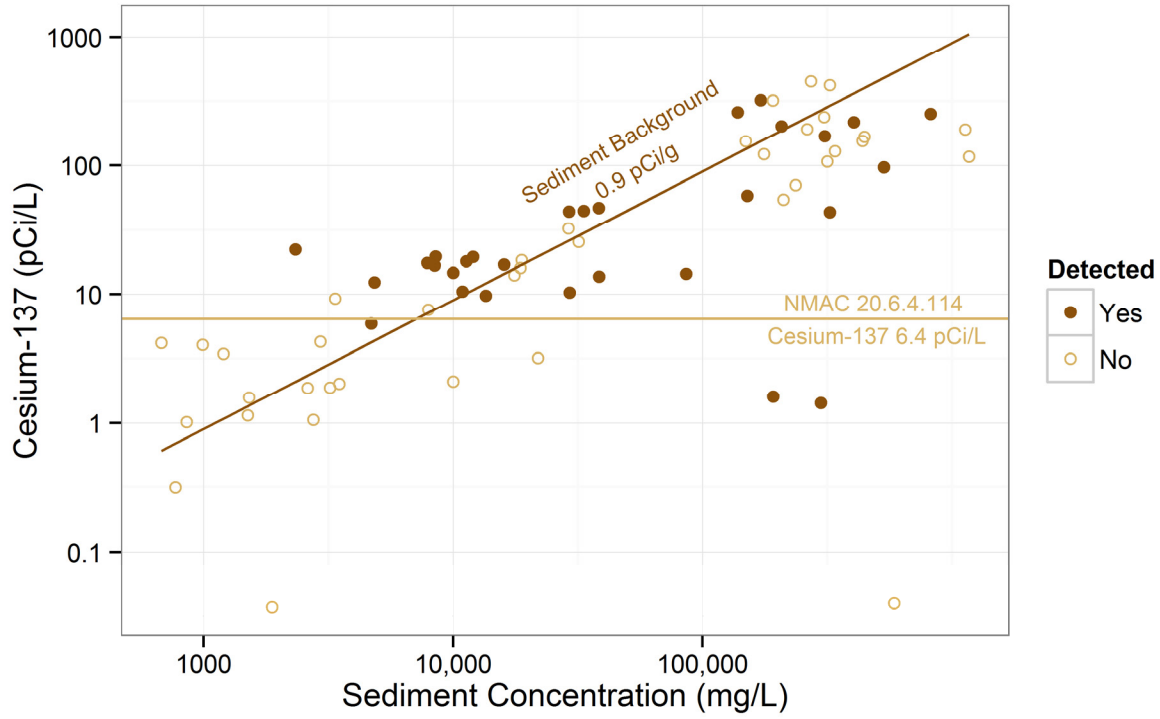


Figure 4.3-24 SSC vs. cesium-137 for each gage station

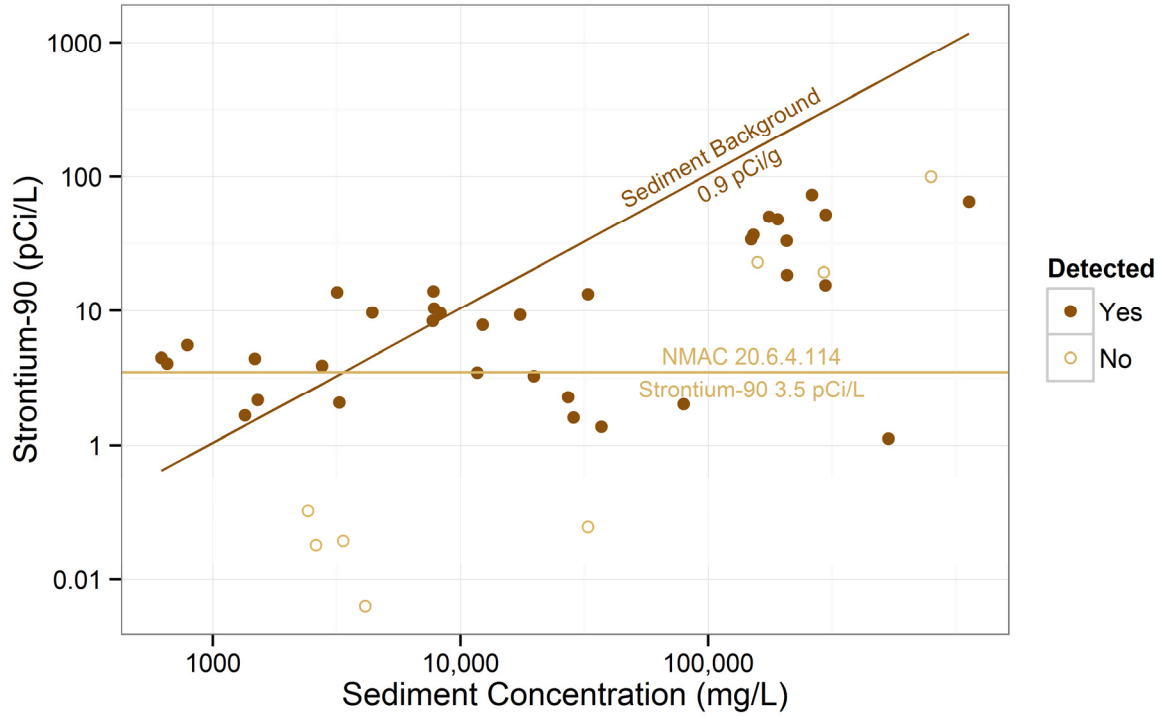


Figure 4.3-25 SSC vs. strontium-90 for each gage station

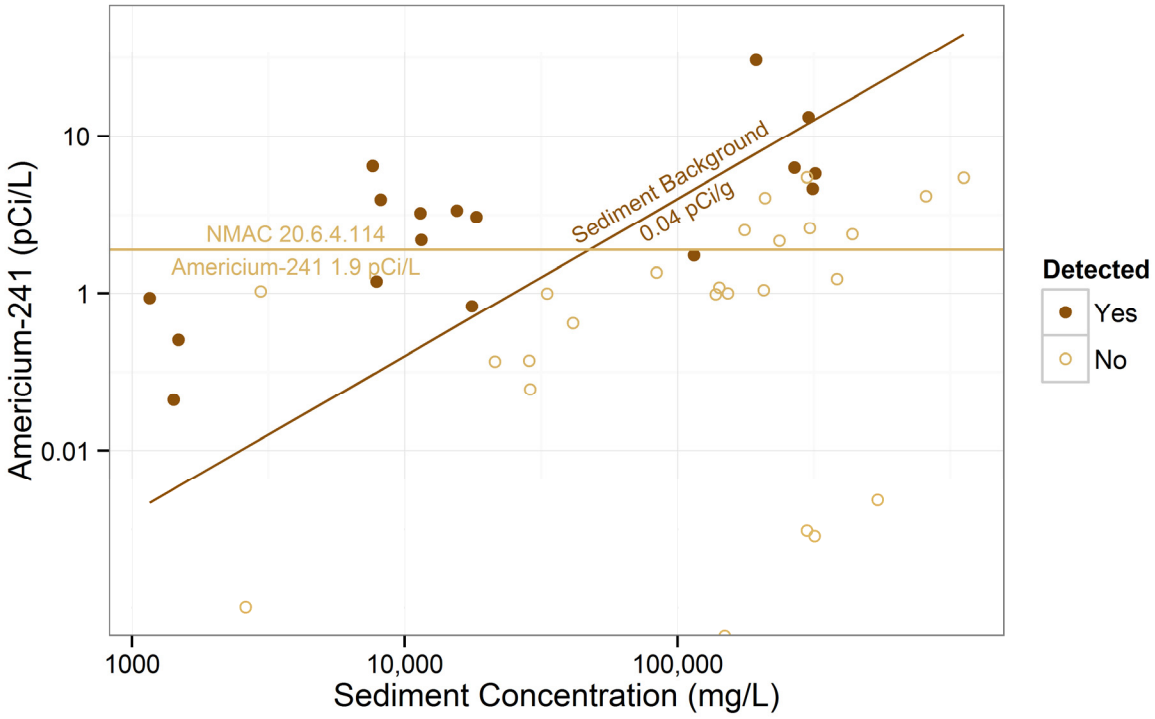


Figure 4.3-26 SSC vs. americium-241 for each gage station

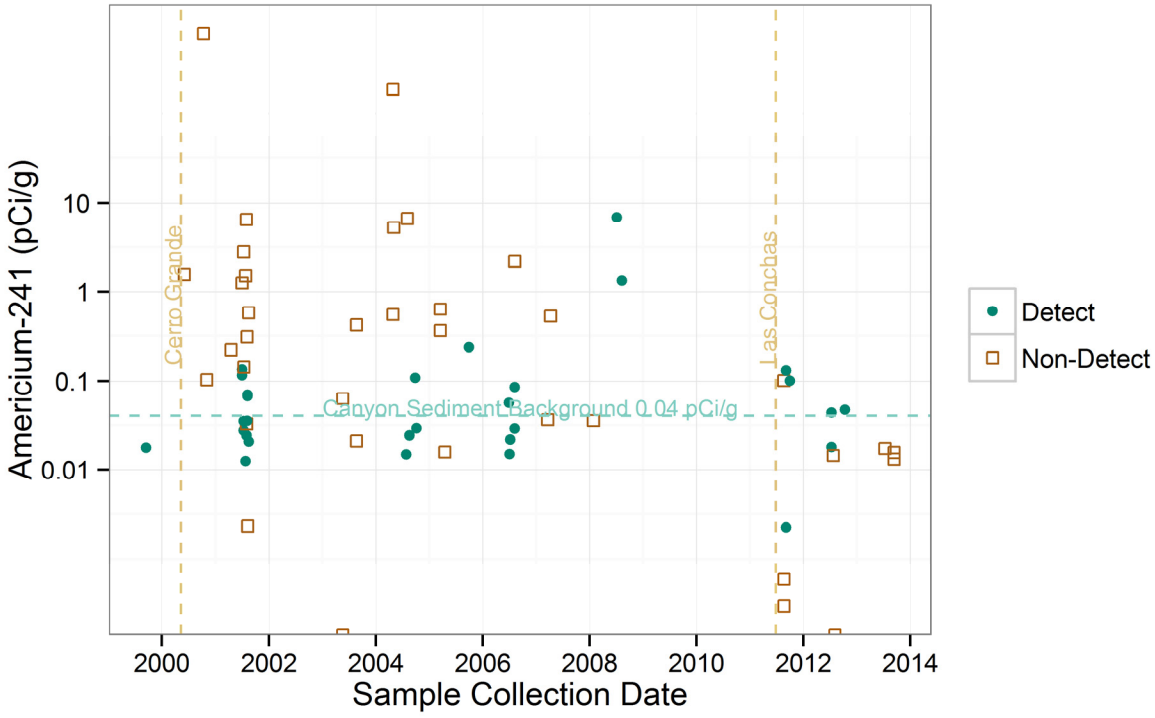


Figure 4.3-27 Americium-241 in storm water normalized to suspended sediment since 2000

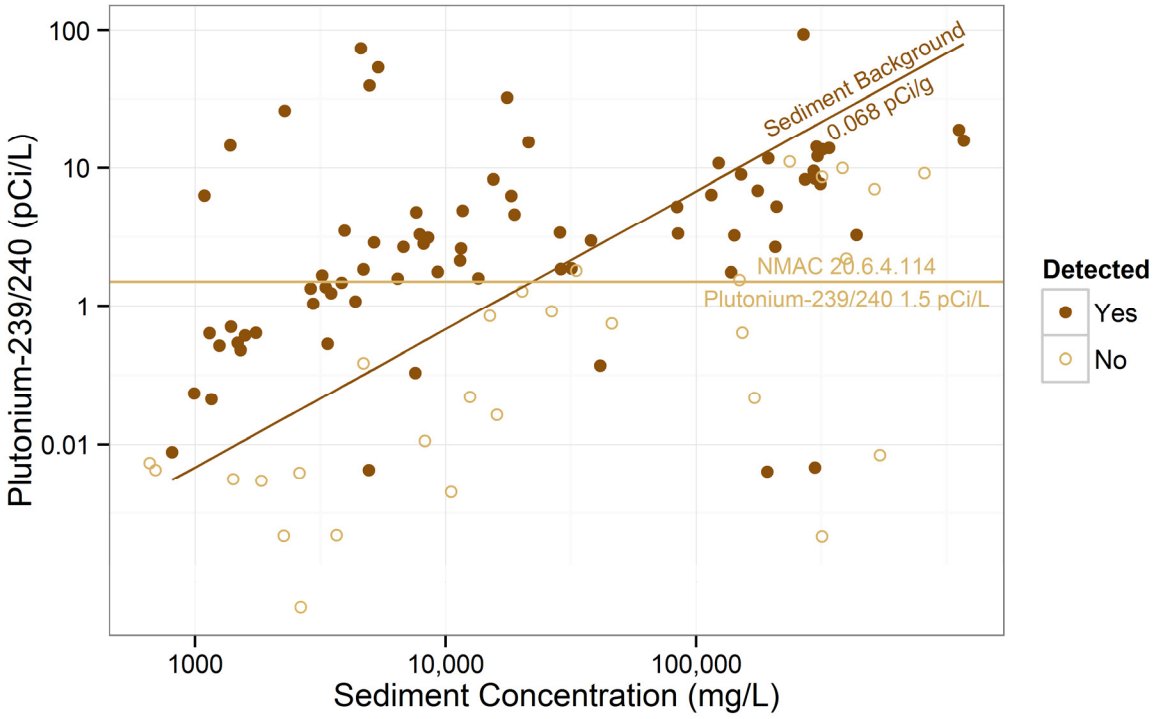


Figure 4.3-28 SSC vs. plutonium-239/240 for each gage station

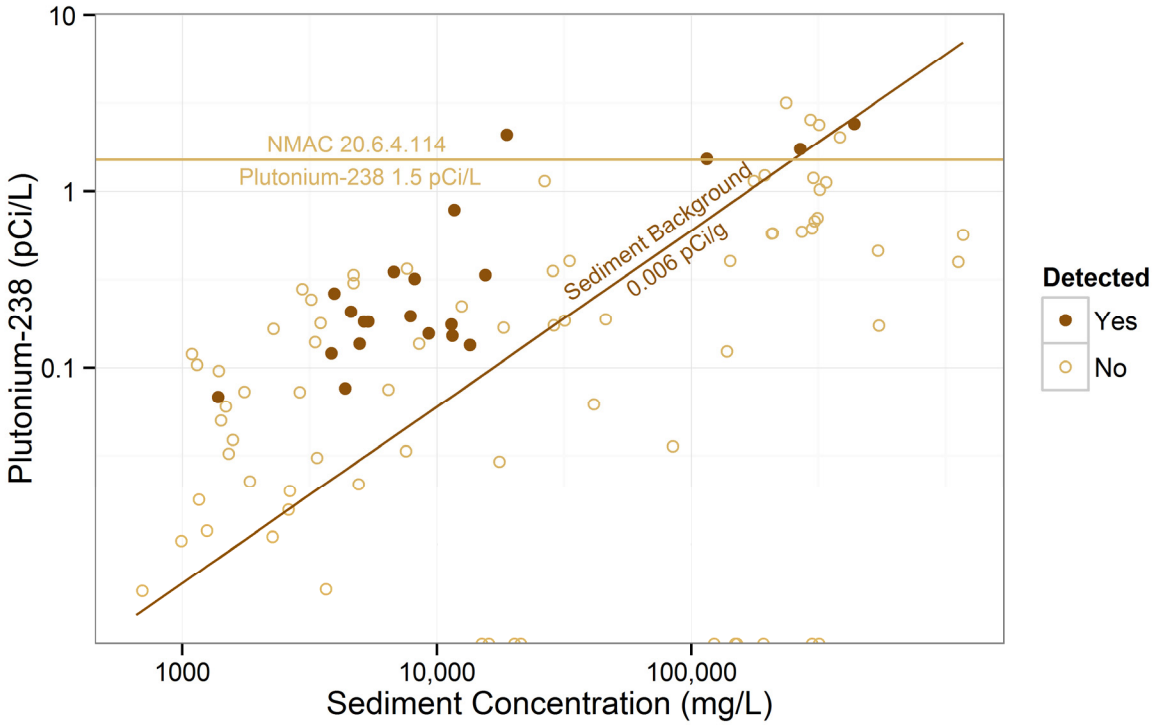


Figure 4.3-29 SSC vs. plutonium-238 for each gage station

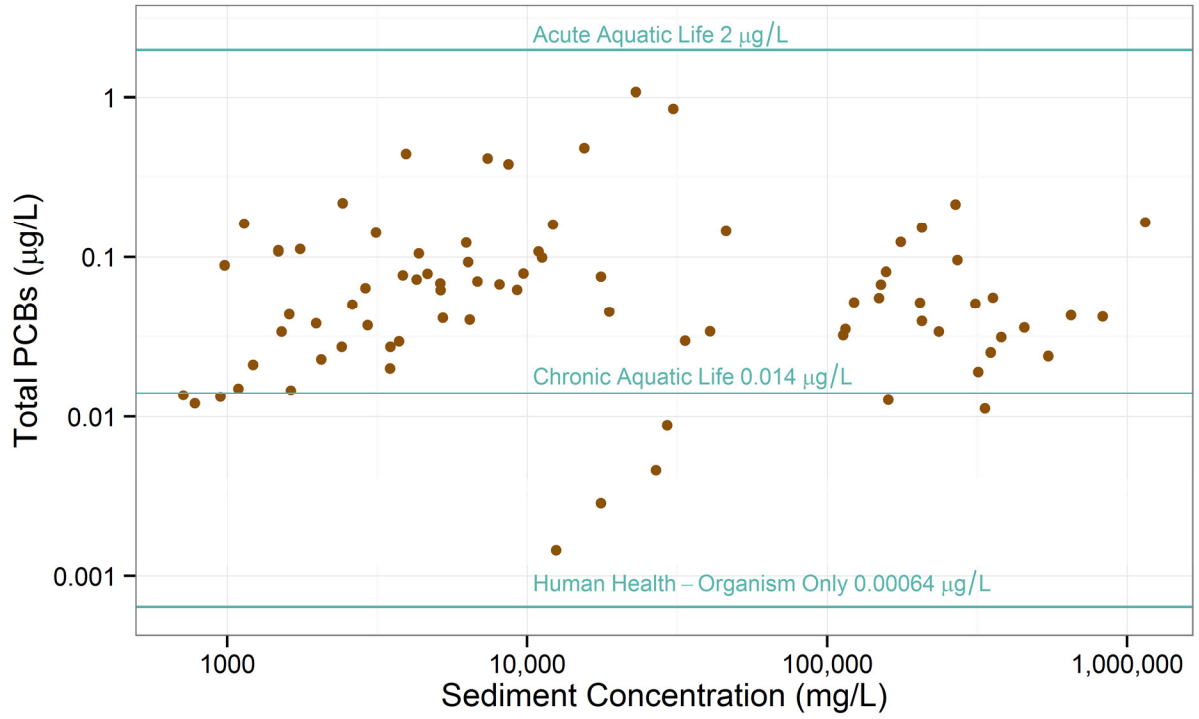


Figure 4.3-30 SSC vs. total PCBs for each gage station

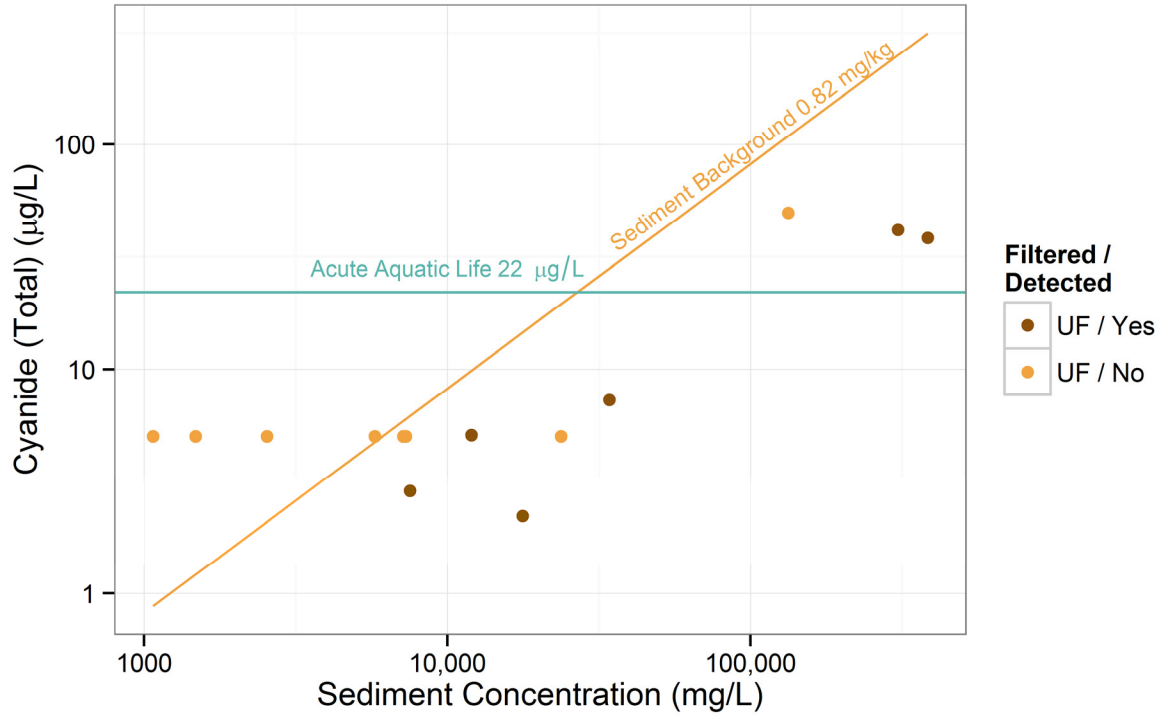


Figure 4.3-31 SSC vs. total cyanide for each gage station

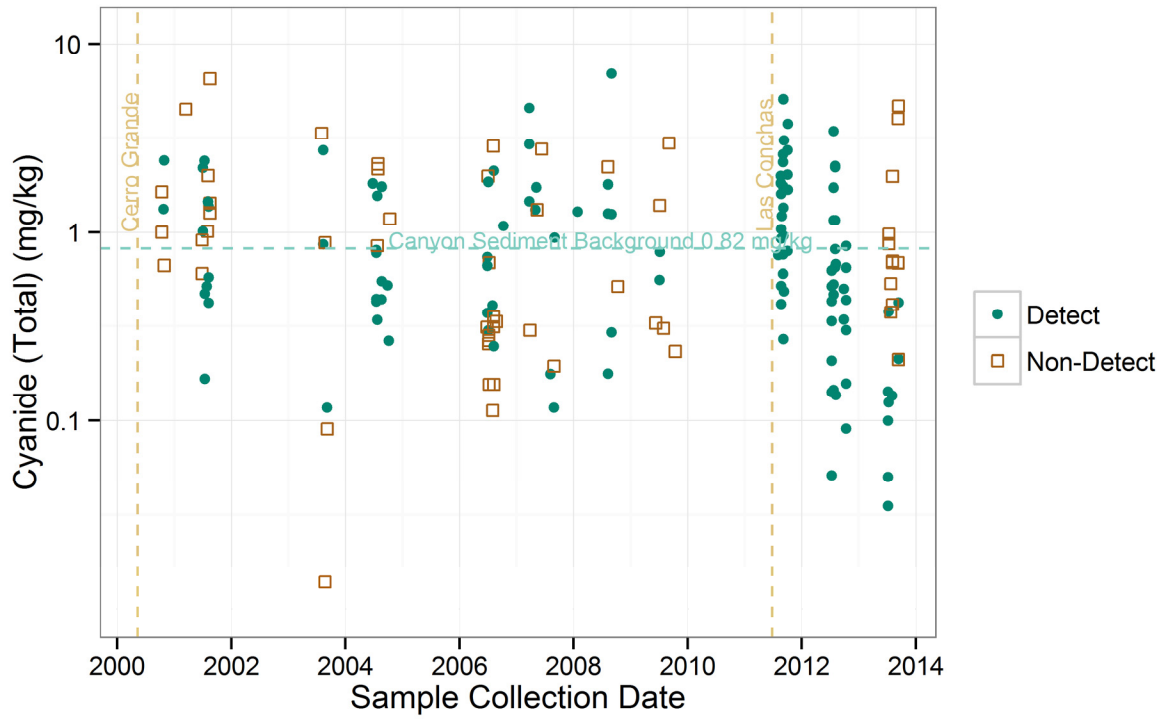


Figure 4.3-32 Cyanide in storm water normalized to suspended sediment since 2000