

Appendix K

E. coli Measurement in the South Platte River 2001-2012

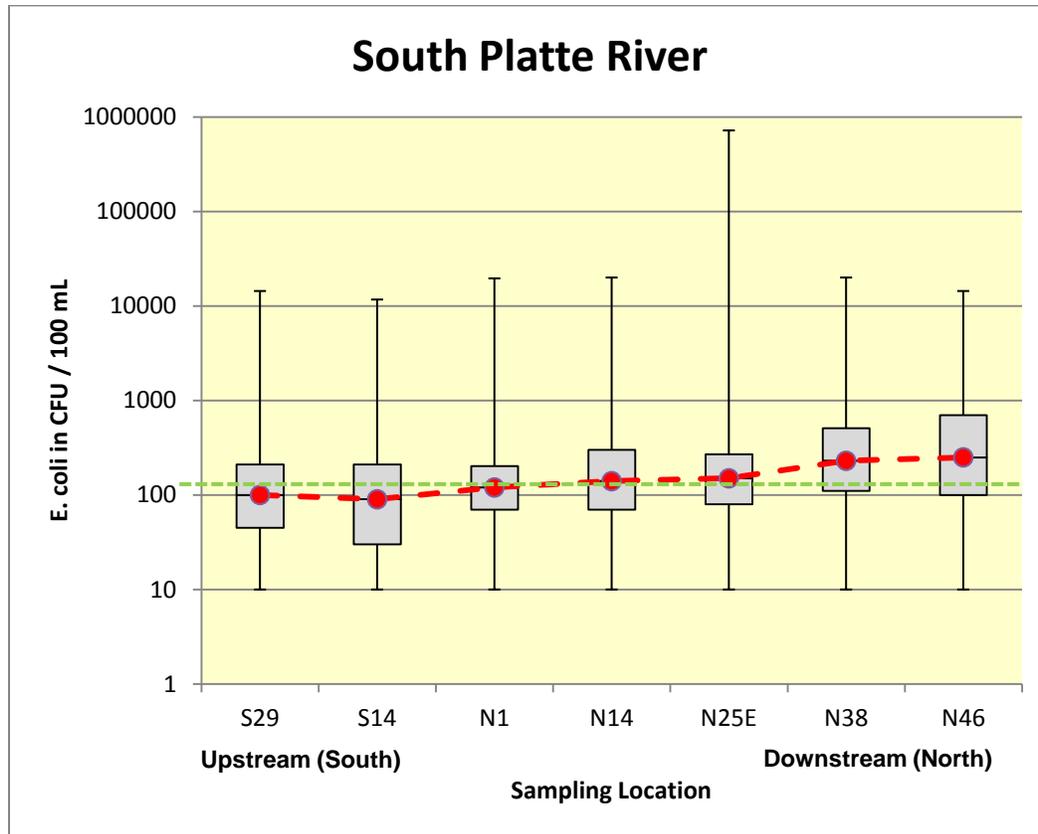


Figure 1. Changes in *E. coli* levels in the South Platte River as it passes through Denver (period of record is 2001 through 2012). Note, the bacteria levels tend to increase at the downstream sites in Globeville and Elyria Swansea, downstream of the city's urban core.

Figure 1 shows *E. coli* levels at sampling locations in the South Platte River in Denver. Upstream sites are on the left side of the chart and the downstream sites are to the right. The last two sampling sites on the right, N38 and N46, are the sites in Globeville and Elyria Swansea. Water quality in the South Platte River in Globeville and Elyria Swansea tends to be worse than in other parts of Denver because the area is downstream of Denver's urban core. The city's urban core contains large areas of hard surfaces, such as parking lots, roads, and rooftops, that don't allow water to penetrate into the ground. During storm events, less water soaks into the ground, and runoff travels to drainage ditches, streams, lakes, and retention ponds. This runoff can carry oil, chemicals, pesticides, fertilizers, pet waste, debris and sediment from hard surfaces directly into storm sewers, streams, or lakes, without treatment. The cumulative impact of these pollutants becomes greater as the River passes through Denver (Figure 1). Increased education and outreach to residents and businesses may help reduce the amount of chemicals and debris that runoff into the river, as it passes through Denver.