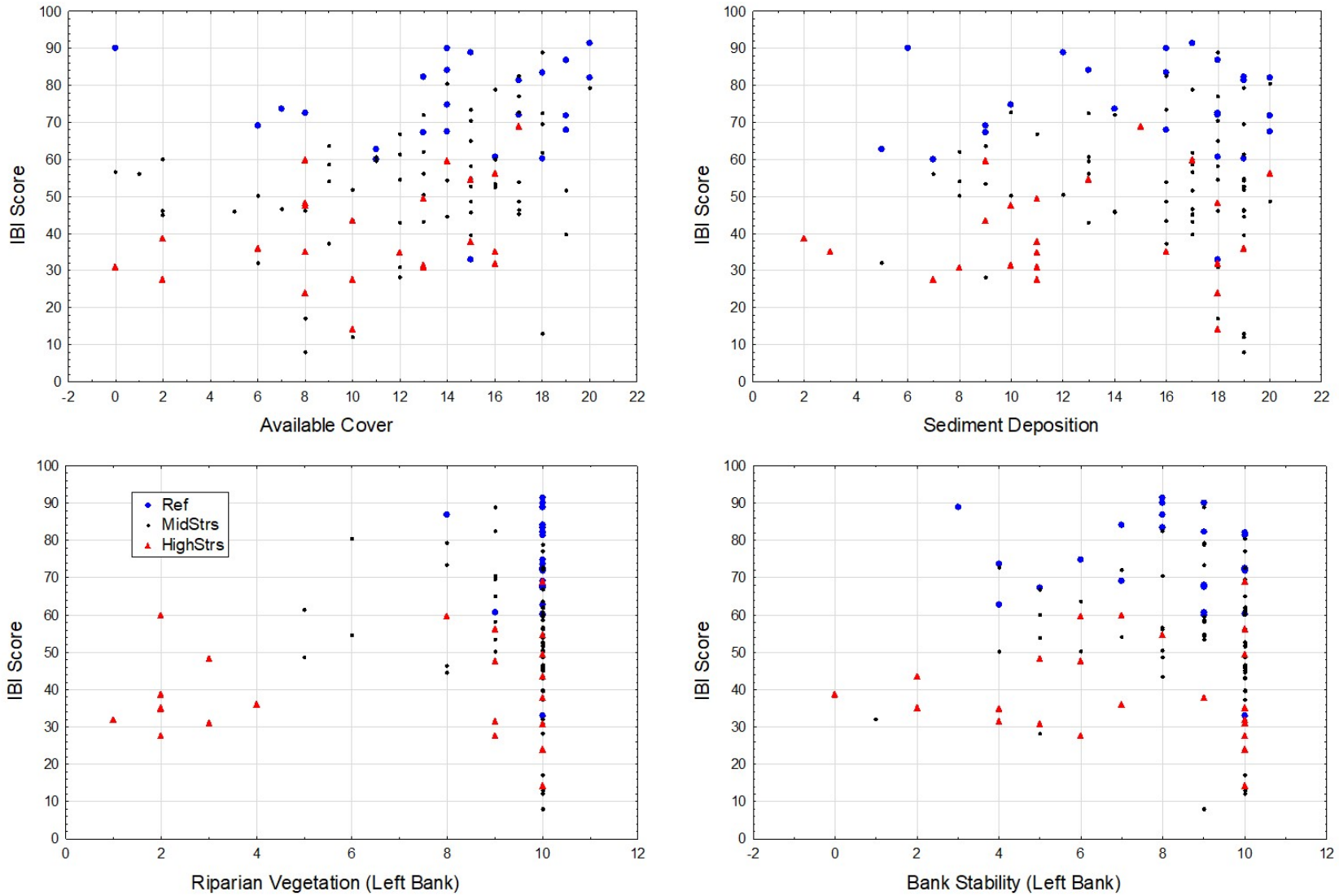

Figure 14. IBI scores in relation to effective habitat variables, including available cover, pool variability, riparian vegetation, and sediment deposition.

DO appears to affect IBI scores when concentrations are below 6 mg/L and above 14 mg/L (Figure 15). However, there were only eight sites that had DO at these extremes. The DO signal is also tenuous because the data are from grab samples taken at the time of the macroinvertebrate sampling and readings could fluctuate during the day depending on light intensity and temperature. However, the observed low DO might be associated with eutrophic conditions in which oxygen is stripped from the water due to excessive respiration by consumers and decomposers of the excessive algae. Very high DO might also be associated with algal productivity. Resulting high respiration can cause an extreme DO flux between night and day conditions. This flux was not confirmed for these examples.

The IBI shows a strong correlation with specific conductivity, especially as conductivity increases above 0.10 mS/cm (100 µS/cm) (Figure 16). Conductivity can be an indicator of general inputs of salts and other contaminants that could affect the macroinvertebrates. Greater inputs suggest more human activity in general and the relationship between the IBI and conductivity could be due to the multiple stressors associated with human activity (Burns et al. 2005, Hatt et al. 2004, Lussier et al. 2008).

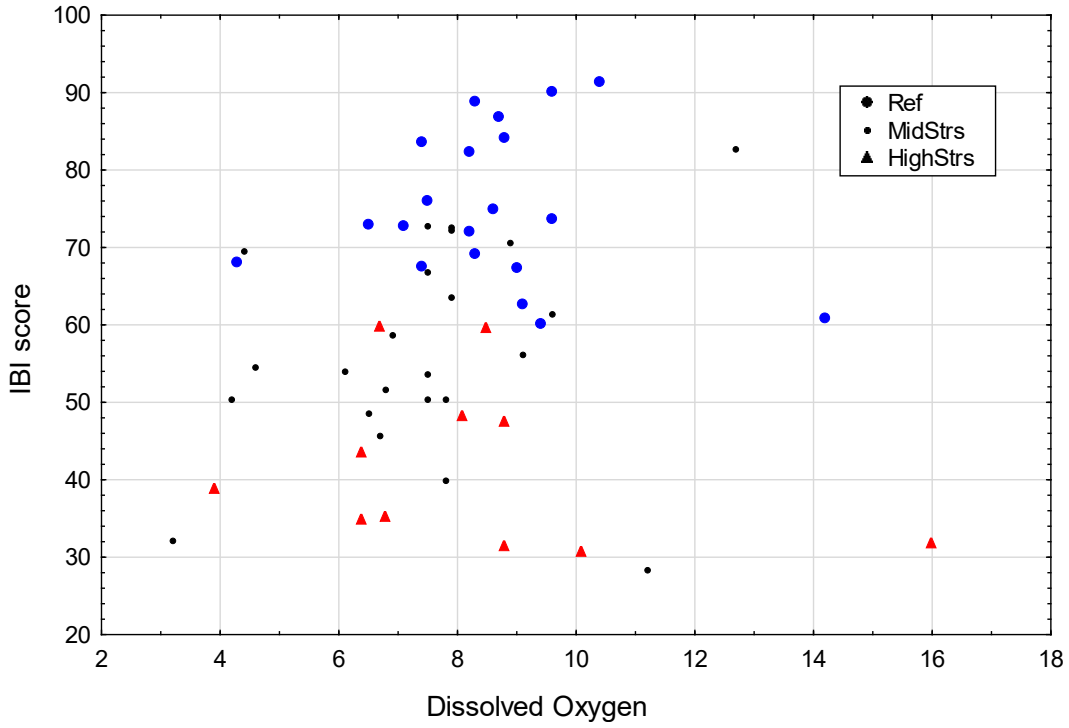

Figure 15. IBI scores in relation to dissolved oxygen (DO) in sites with DO data, marked by disturbance category.