



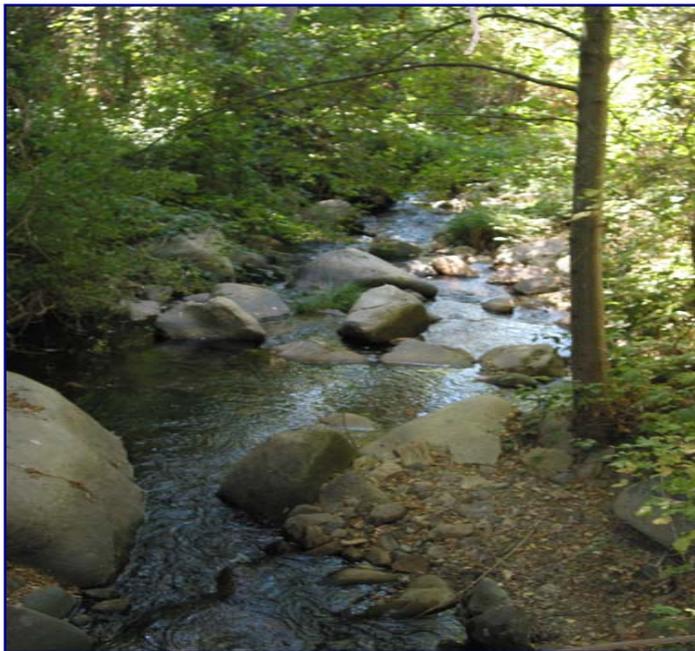
E. coli and enterococci

E. coli and enterococci levels are used as indicators of the presence of fecal material in drinking and recreational waters. Both indicate the possible presence of disease-causing bacteria, viruses, and protozoans. Such pathogens may pose health risks to people fishing and swimming in a water body. Sources of bacteria include improperly functioning wastewater treatment plants, leaking septic systems, storm water runoff, animal carcasses, and runoff from animal manure and manure storage areas.



Cattle at Tule River Indian Reservation

Understanding the Impact of *E. coli* and enterococci: The presence of pathogens in a waterway can cause cloudy water, unpleasant odors, and decreased levels of dissolved oxygen. Enterococci levels should be measured in marine and fresh waters while *E. coli* should only be measured in fresh waters. Acceptable levels of *E. coli* are measured in cfu (colony forming units) and commonly include both a 30 day mean (126 cfu/100mL) and a single sample number (235 cfu/100mL – 575 cfu/100mL). Suitable levels for enterococci in marine waters are 35 cfu/100mL for a 30 day mean and 104 – 501 cfu/100mL for a single sample, while levels in fresh water should be less than 33 cfu/100mL for a 30 day mean and 61 – 151 cfu/100 mL as a single sample reading. Be sure to compare your results with tribal, state, or federal standards when measuring for either enterococci or *E. coli*.



Stream used as the only drinking source for Cattle

Monitoring Equipment:

E. coli and enterococci levels can be measured using simple kits readily available on the market (ex. Colalert testing kit) and an incubator. Samples can also be collected and sent to a laboratory for analysis.

EPA's Microbiology website (<http://www.epa.gov/nerlcwww/>) provides EPA-approved standard methods and examples of test kit use. Major national vendors also have websites that can be reviewed as well.