Appendix C: Water Quality Profile I Charts – Mine Drainage Monitoring Stations

RED DOG MINE

Water Monitoring Bons Creek Drainage
Water Quality Profile I , 5-Year Trend Charts

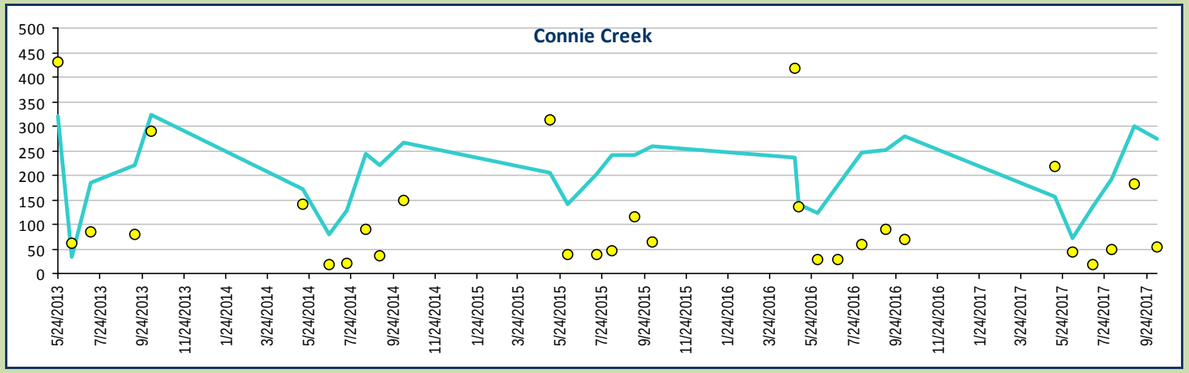
Zinc, Total Recoverable, units ug/L

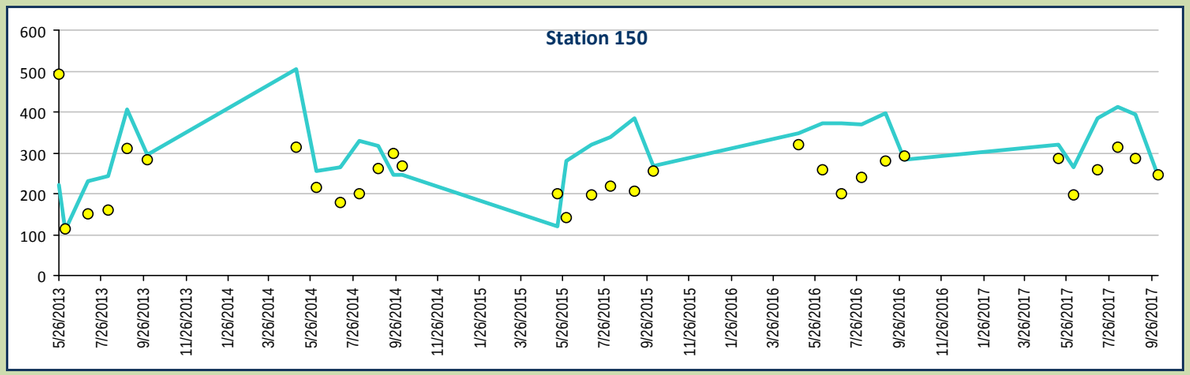
Aquatic Life - Fresh Water Acute WQS ug/L

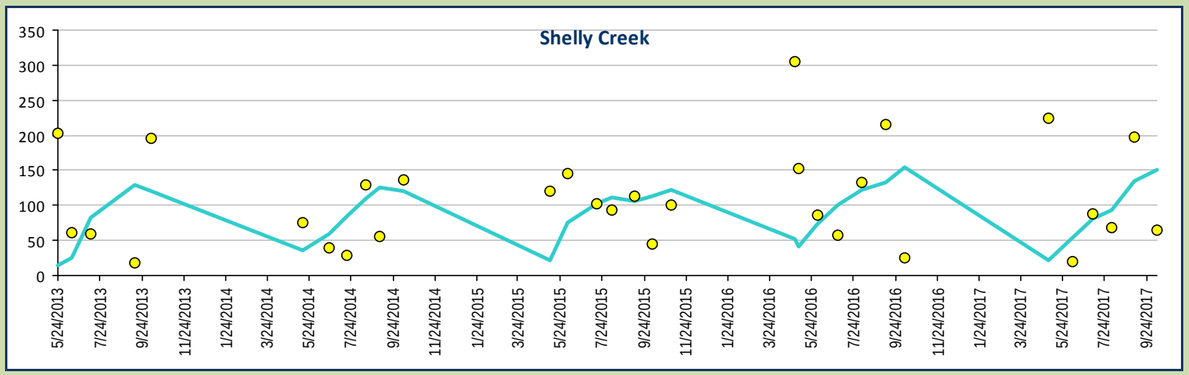
Hardness Dependent Calculation

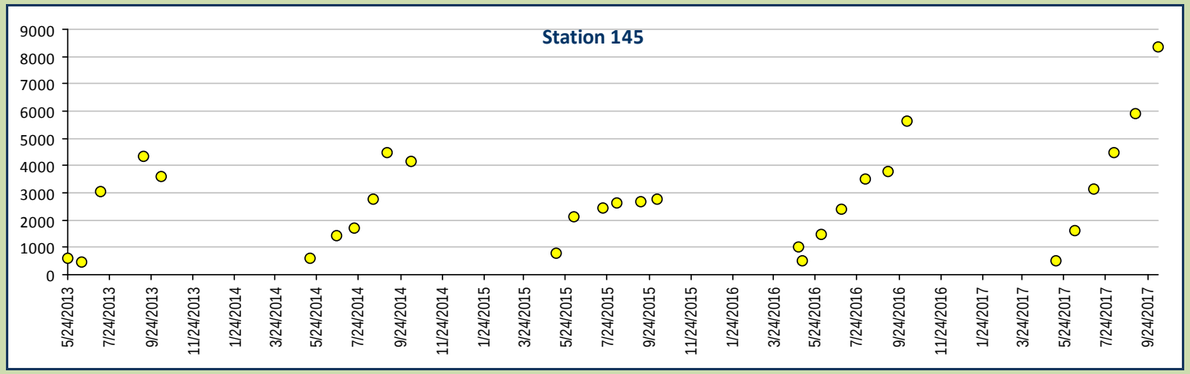
=EXP(0.8473*(LN(*hardness))+0.884)

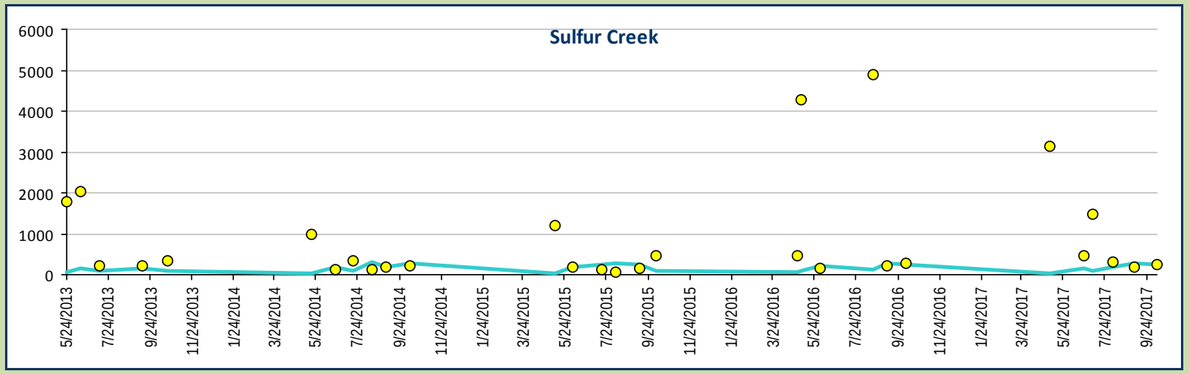
* Calculated using Standard Methods 2340B

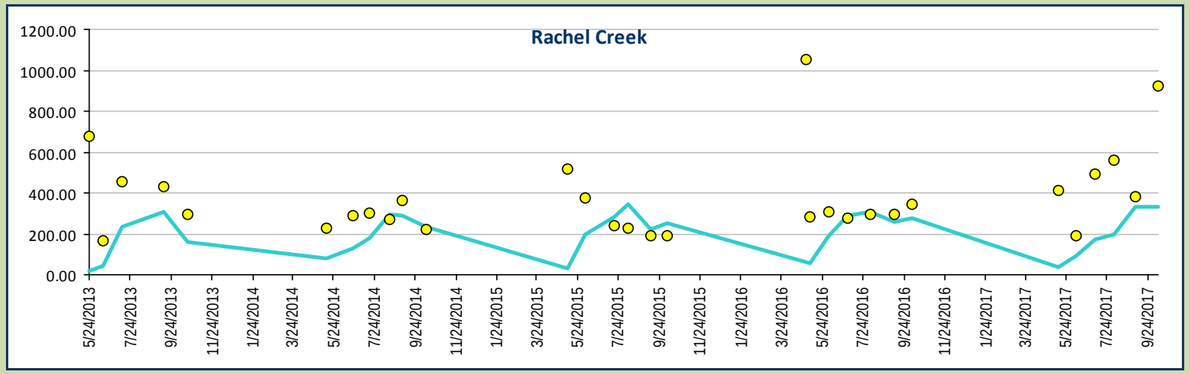


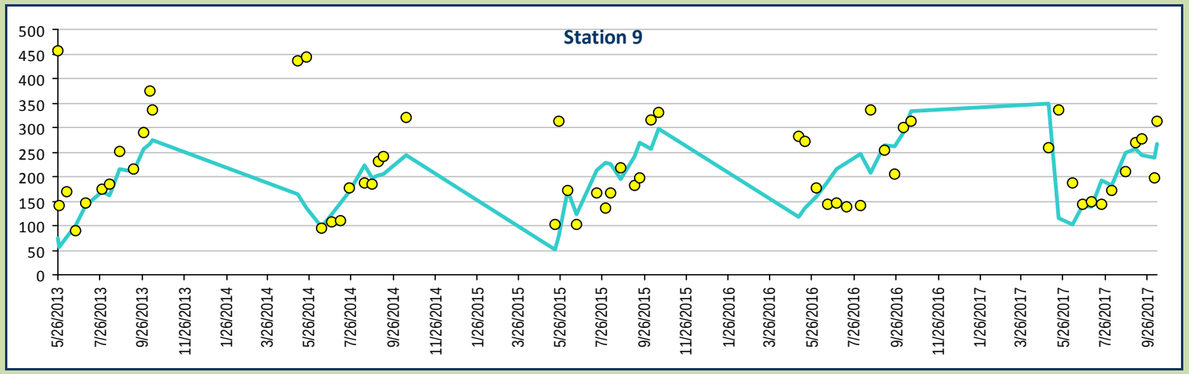








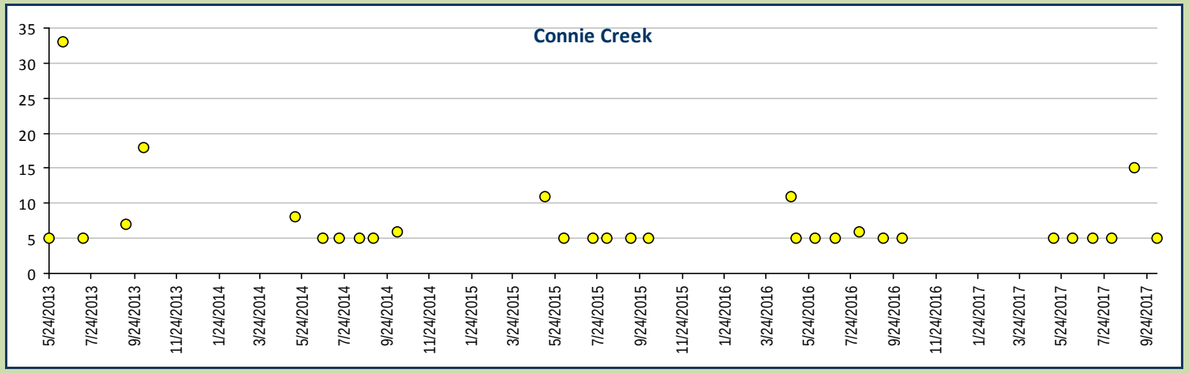


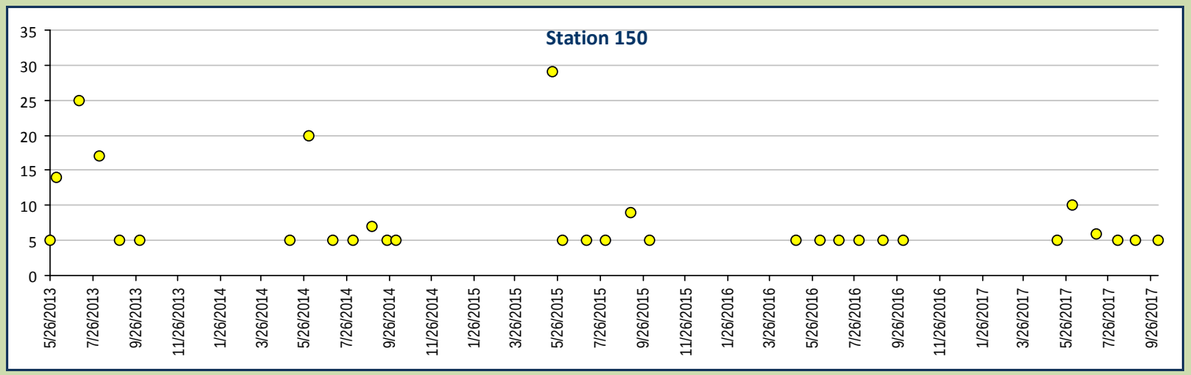


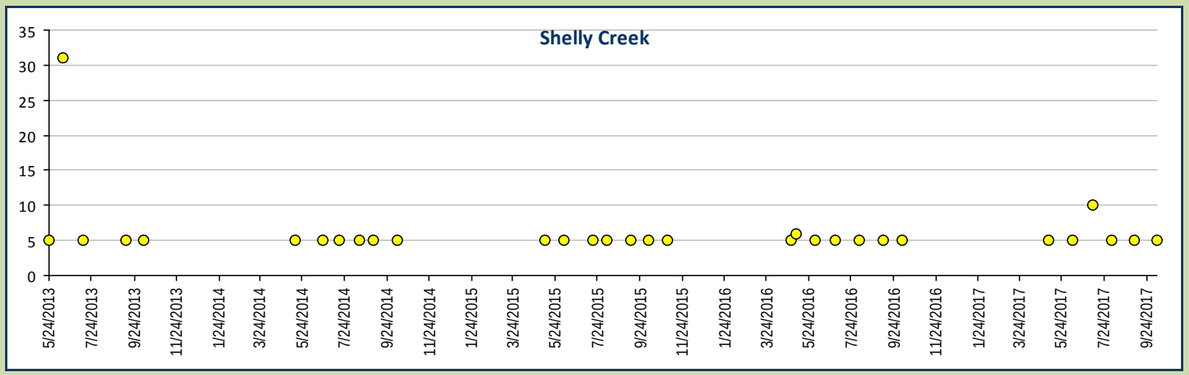
RED DOG MINE

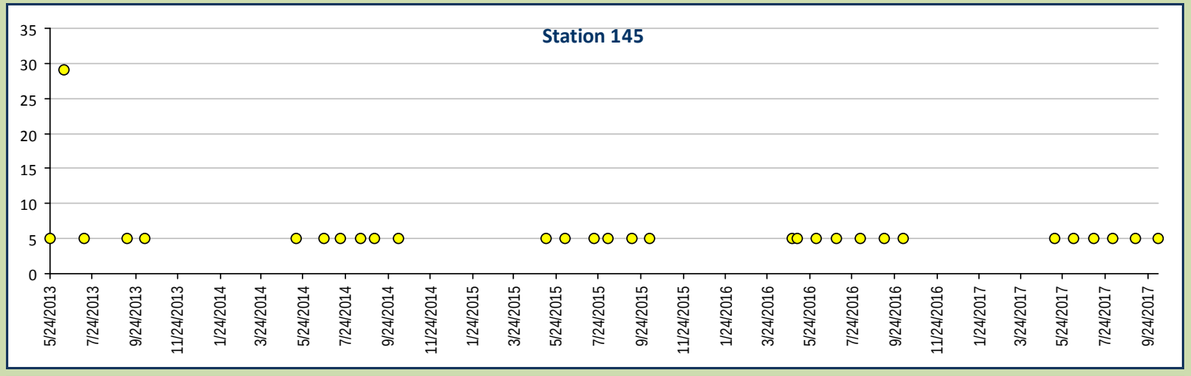
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

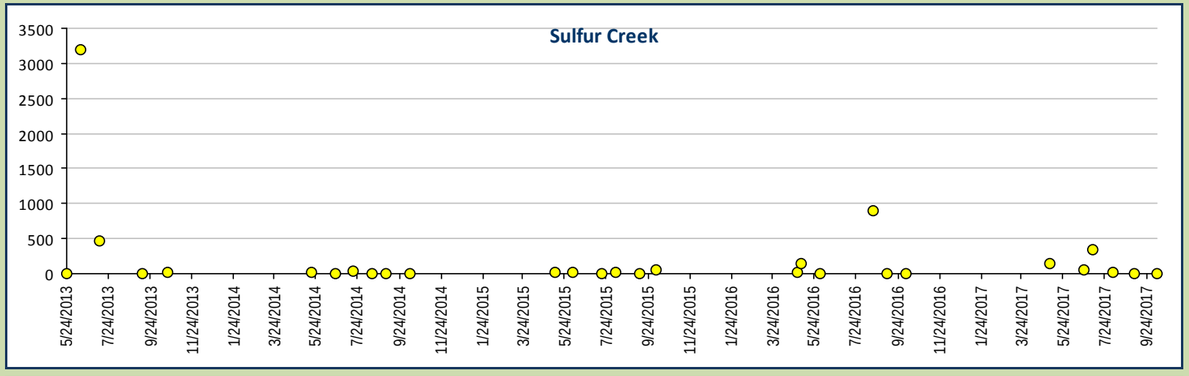
Total Suspended Solids, units mg/L

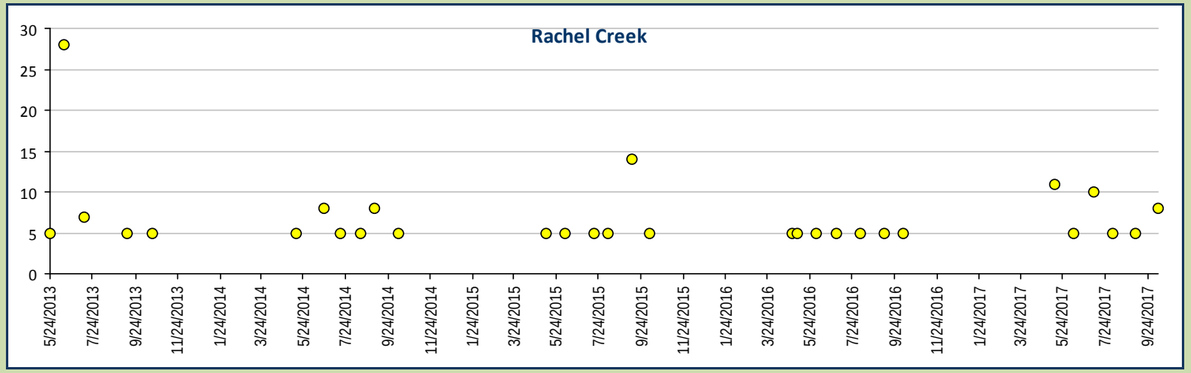


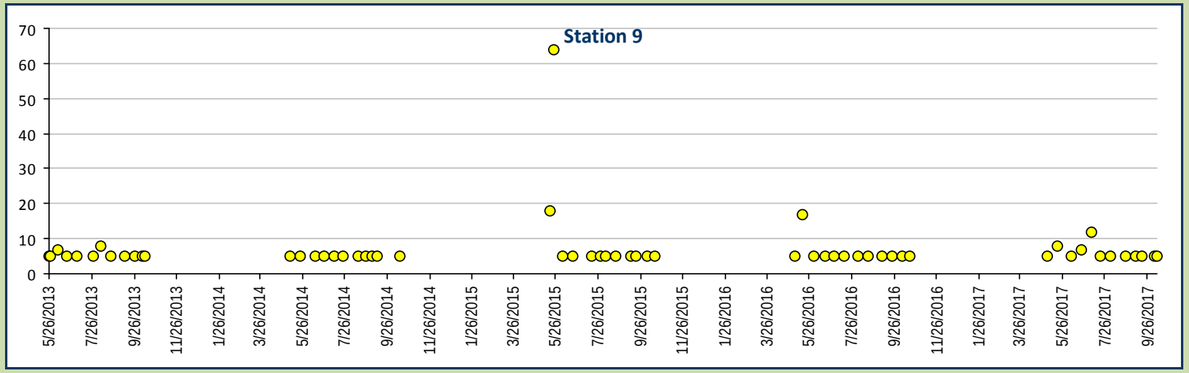












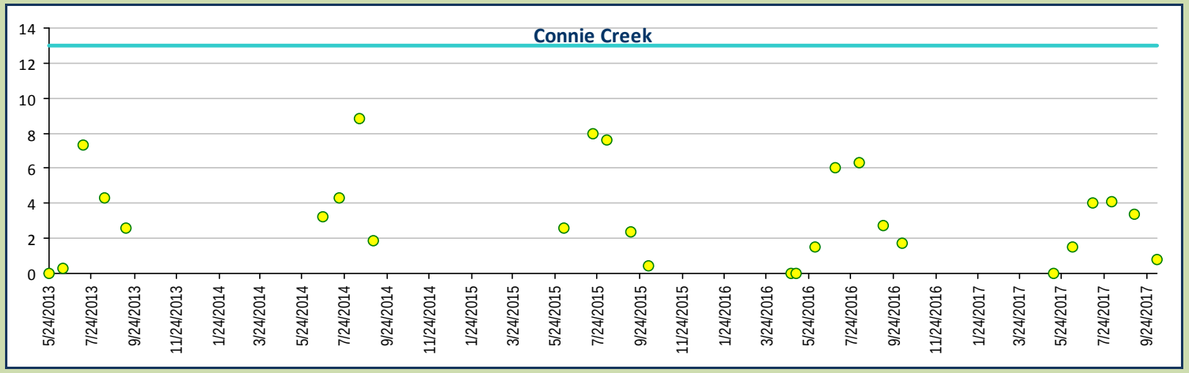
RED DOG MINE

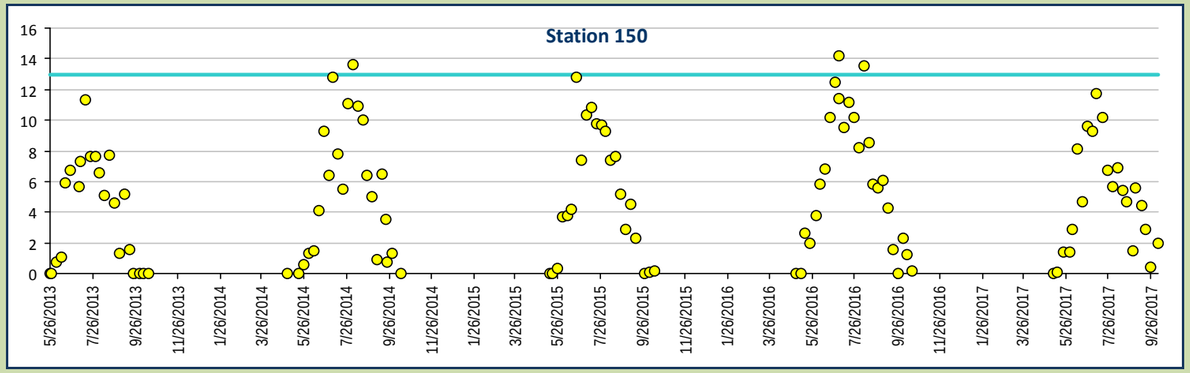
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

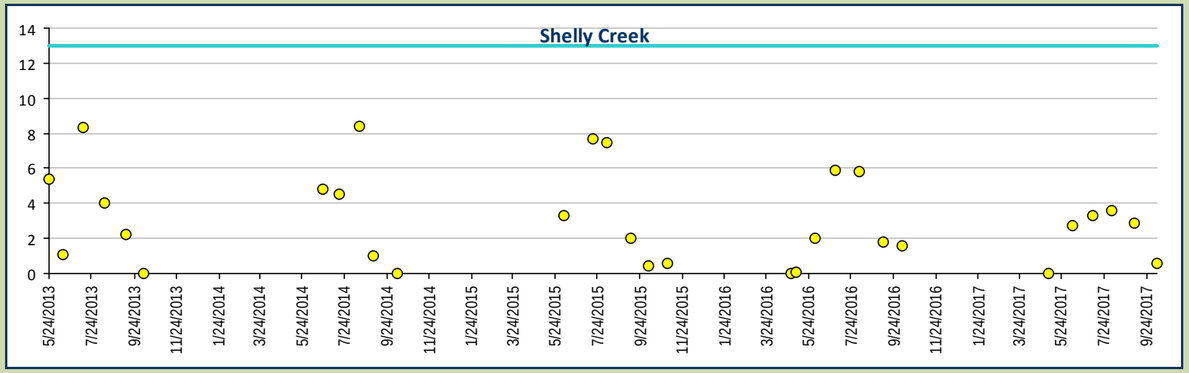
Temperature Field, Celsius

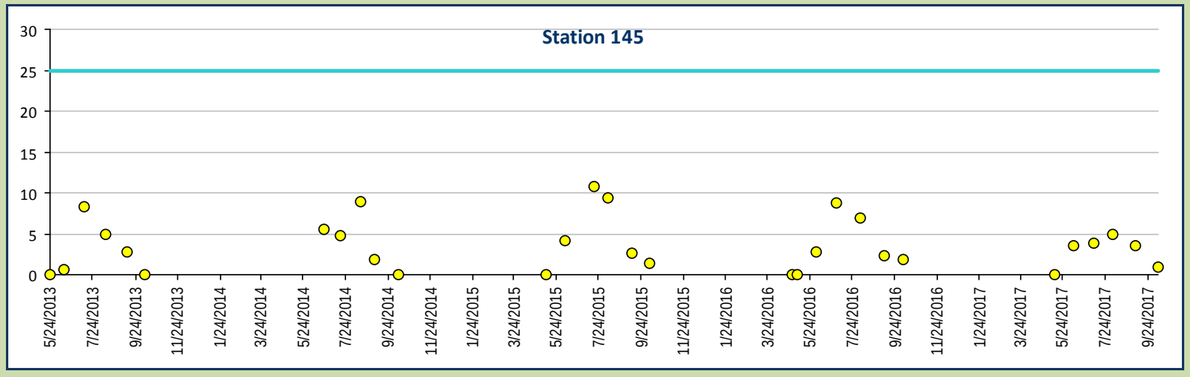
Site Specific WQS mg/L

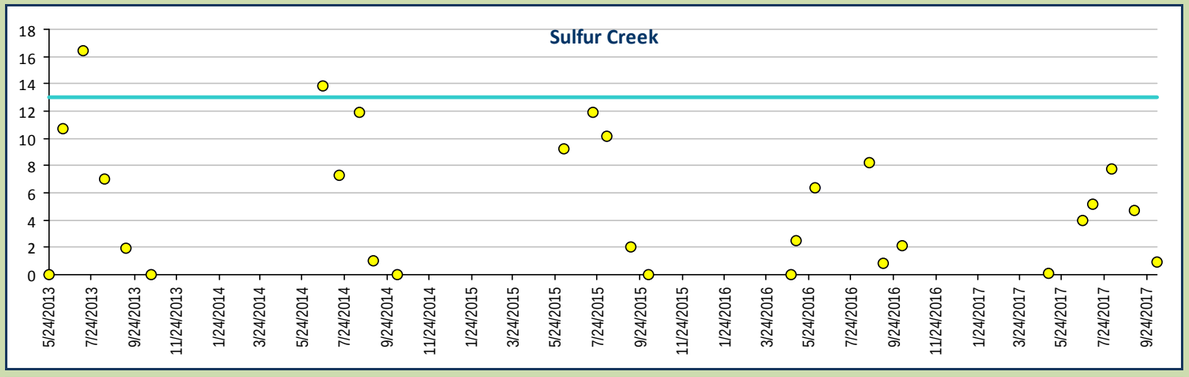
13 Celsius

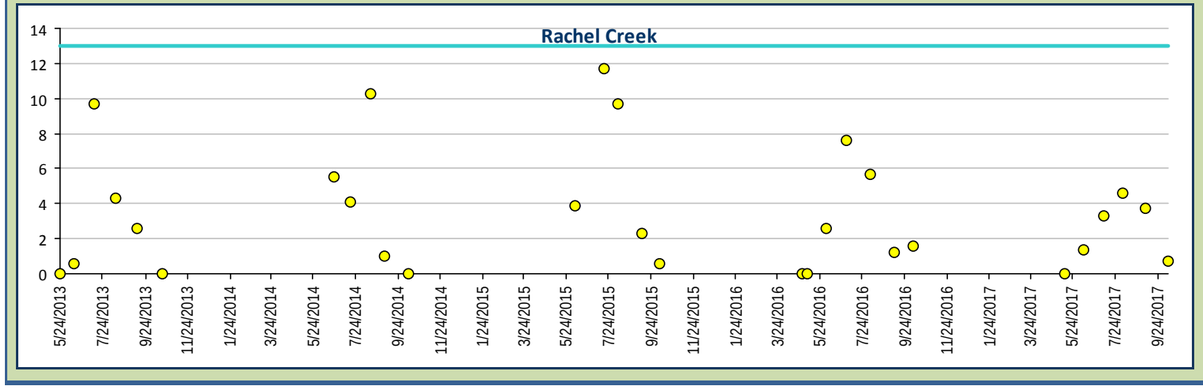


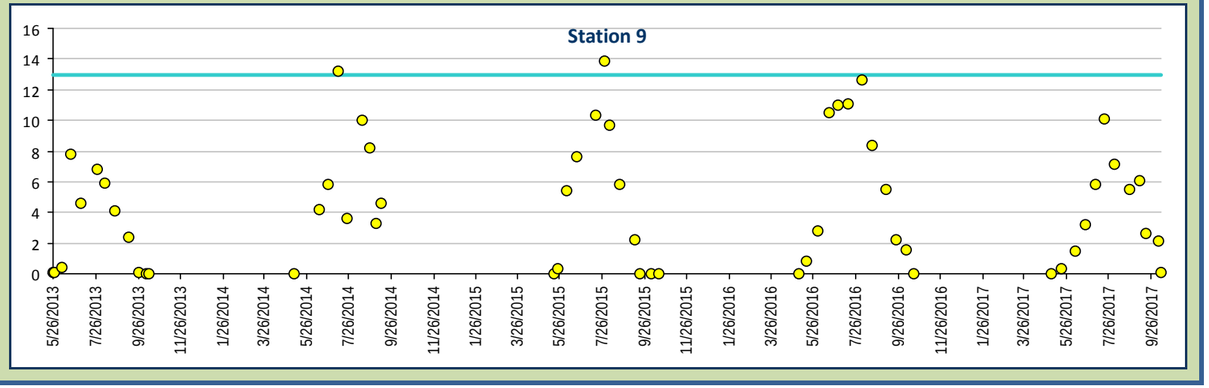












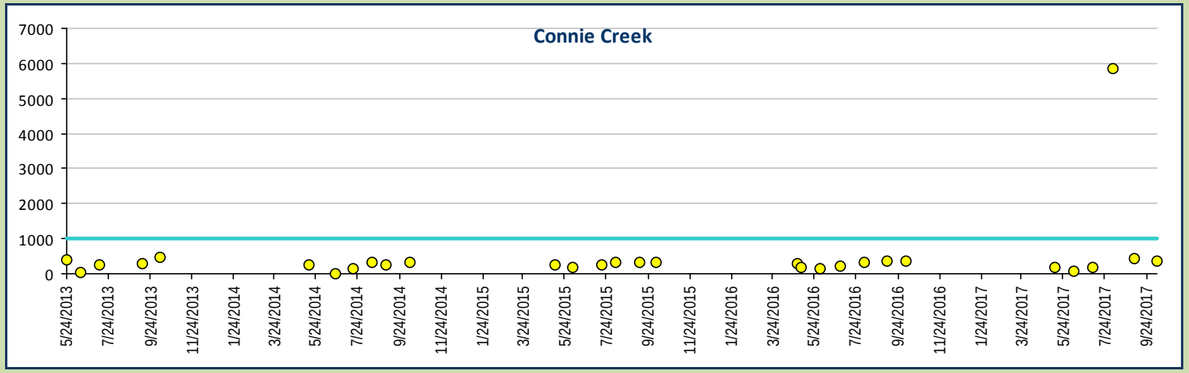
RED DOG MINE

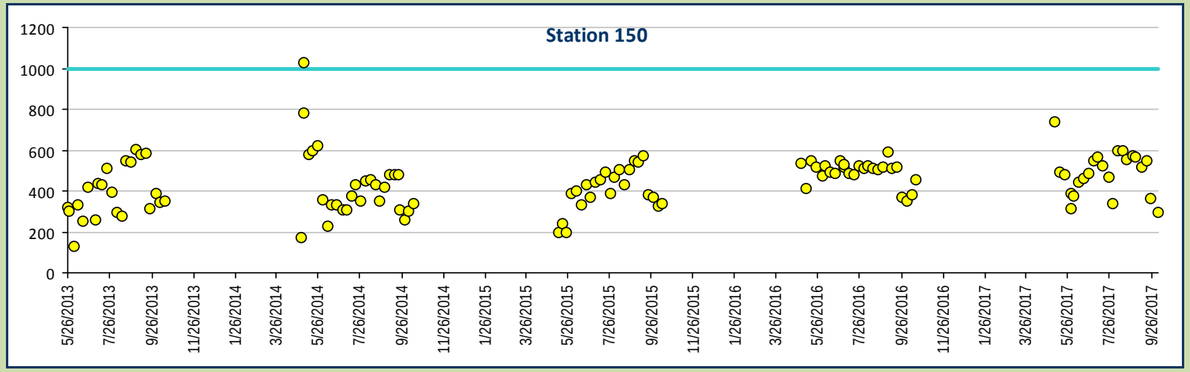
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

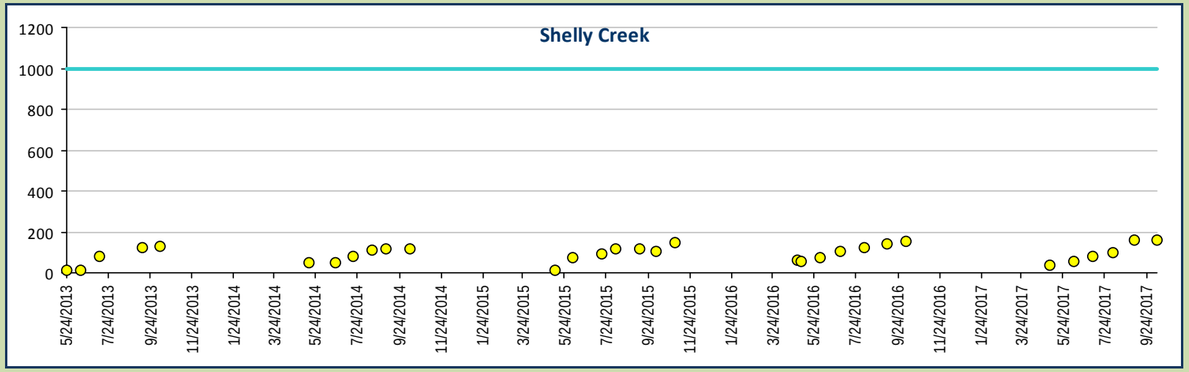
Total Dissolved Solids, units mg/L

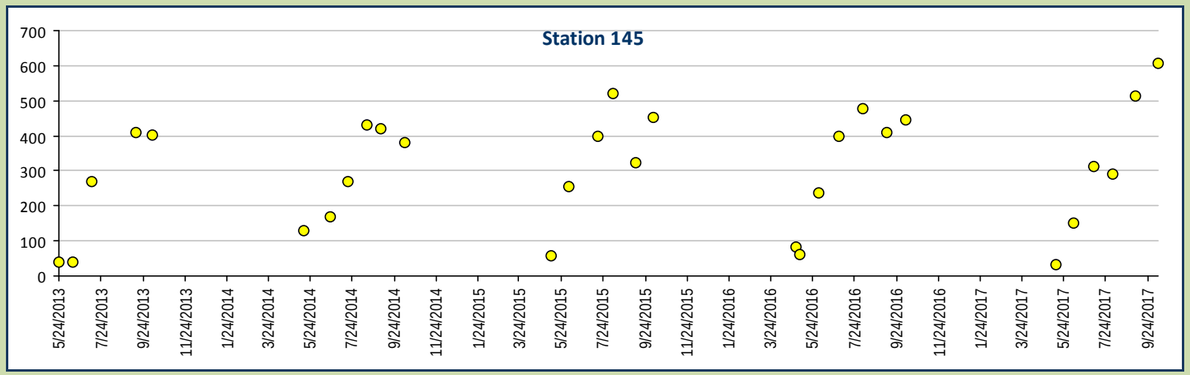
Site Specific WQS mg/L

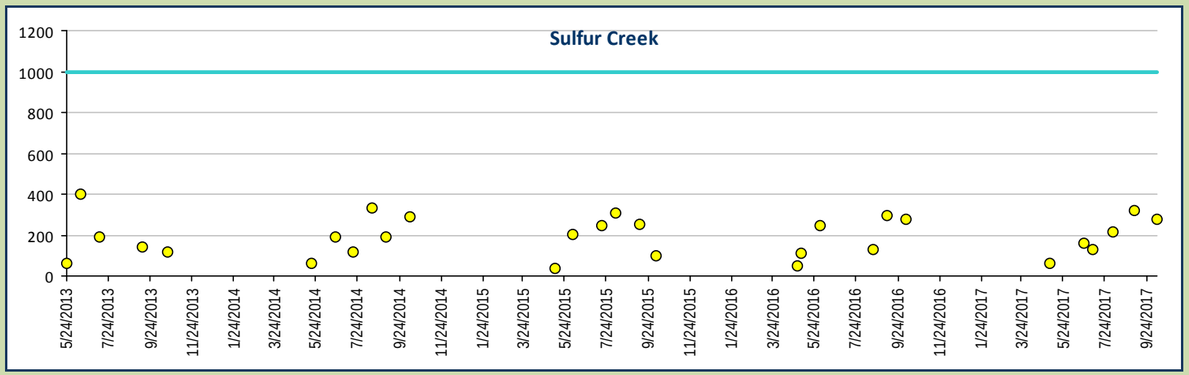
1000 mg/L

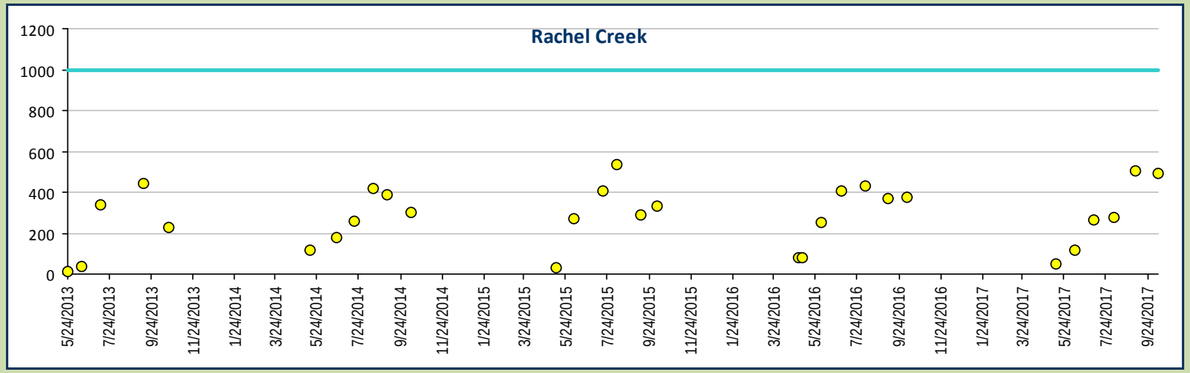


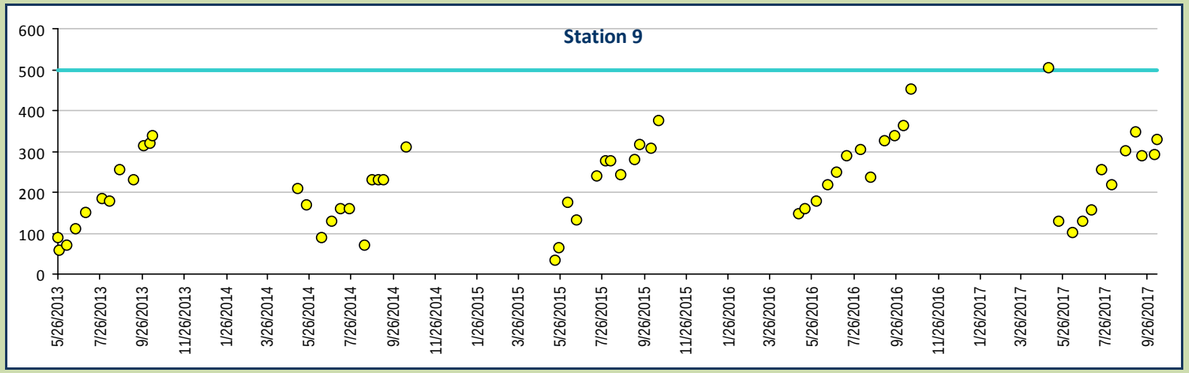








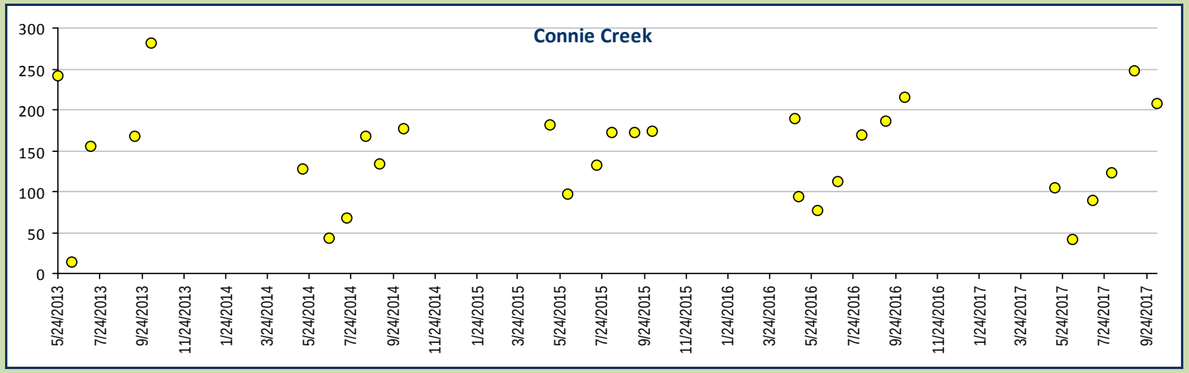


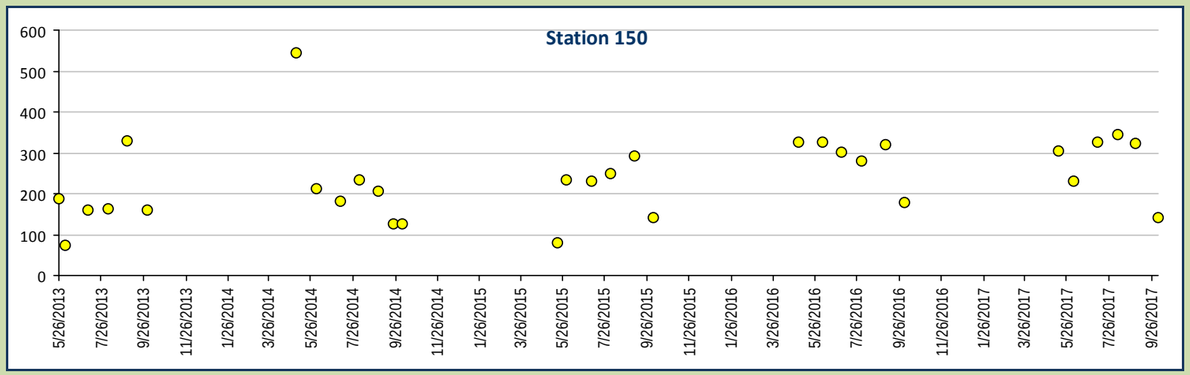


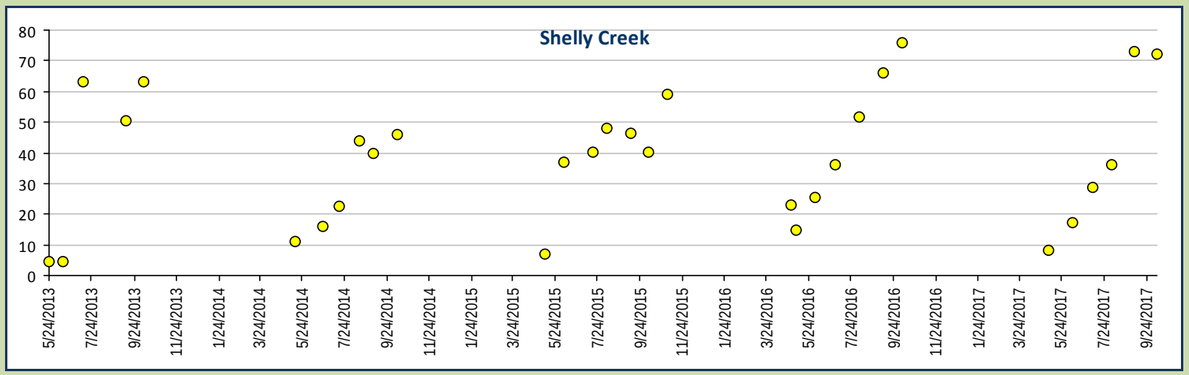
RED DOG MINE

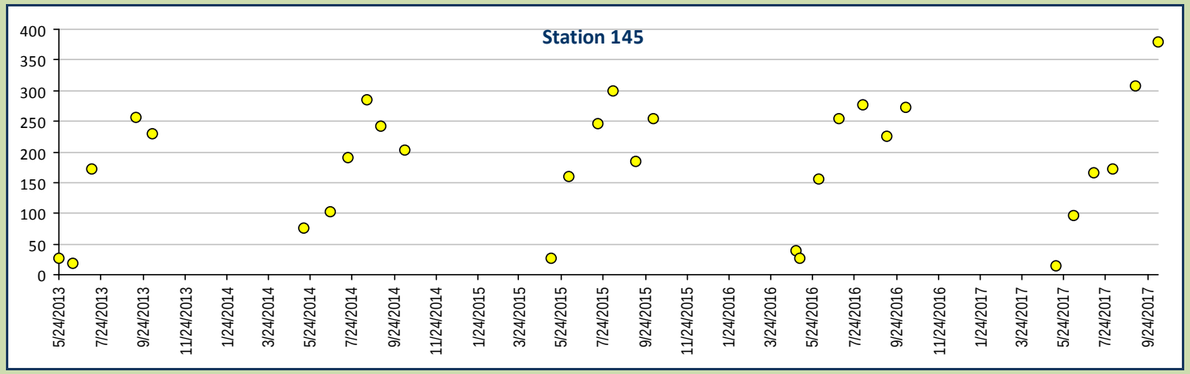
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

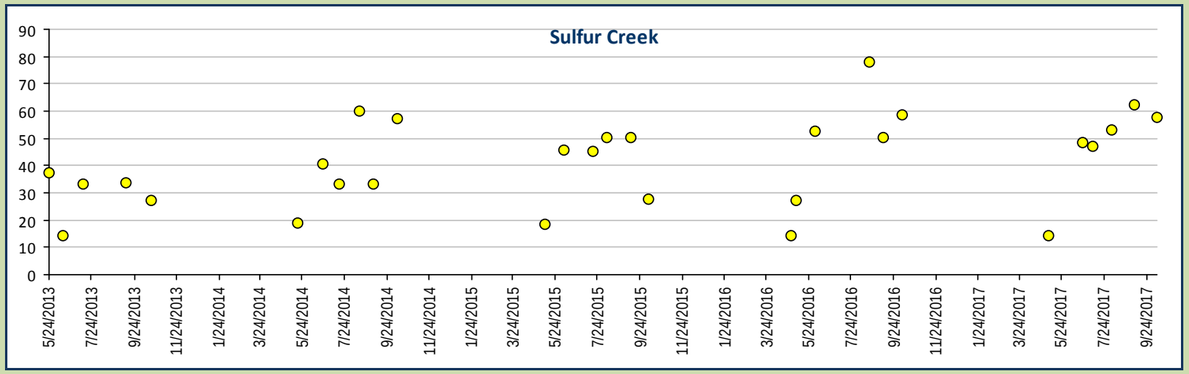
Sulfate, units mg/L

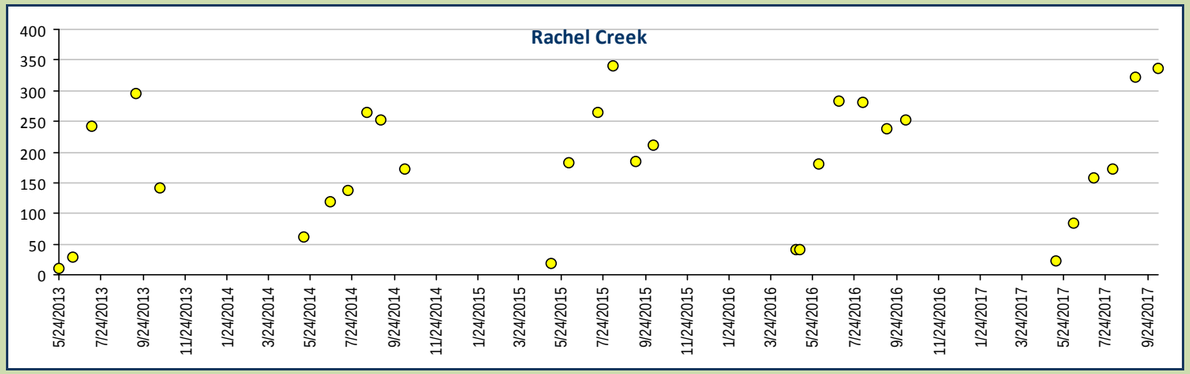


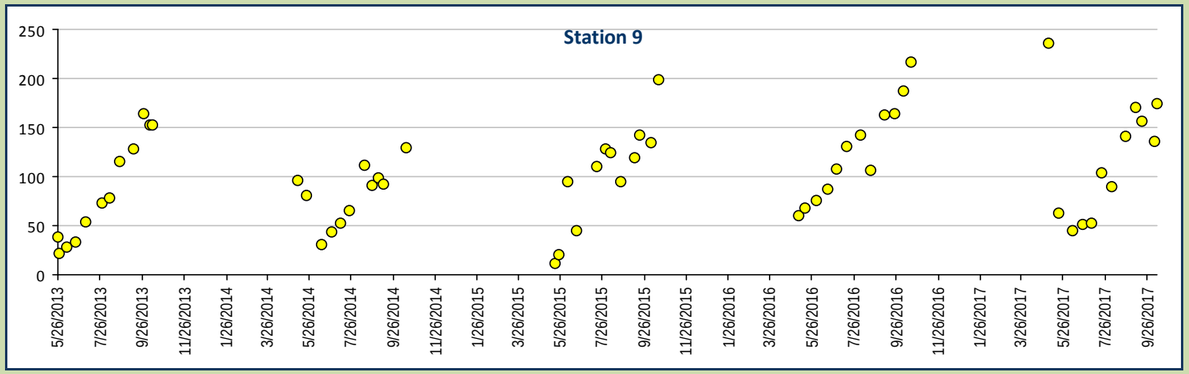












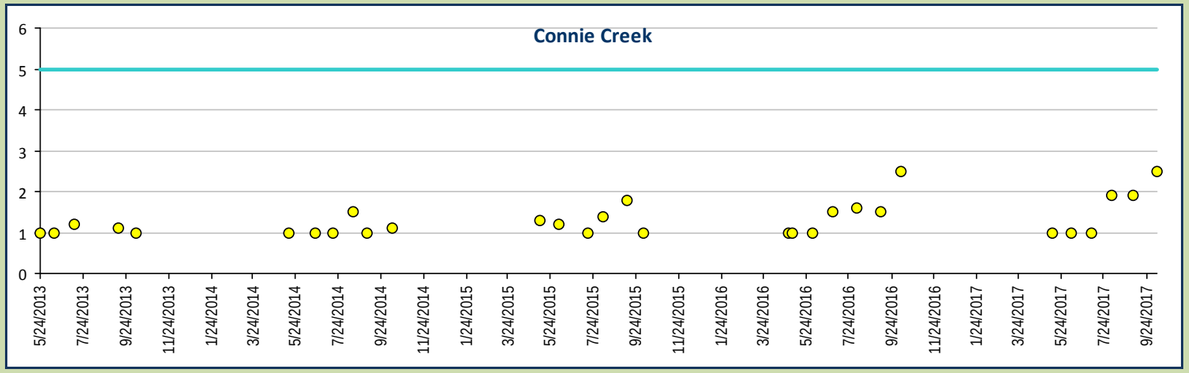
RED DOG MINE

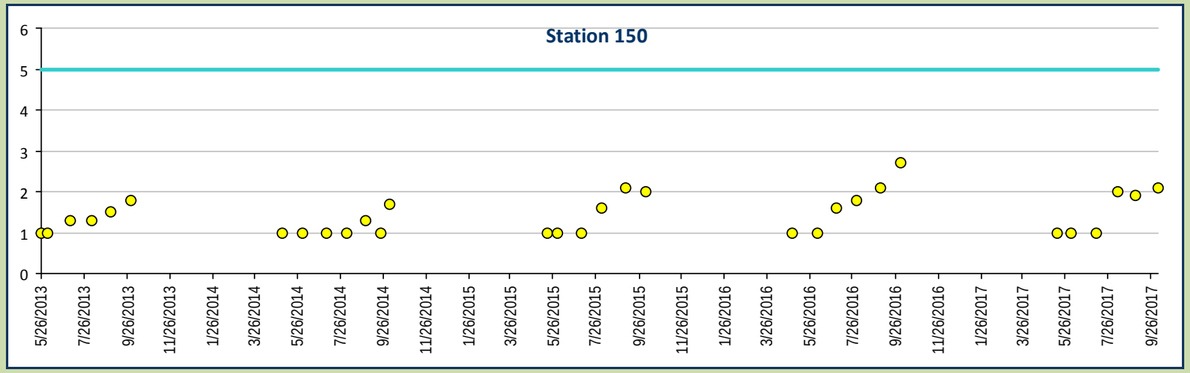
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

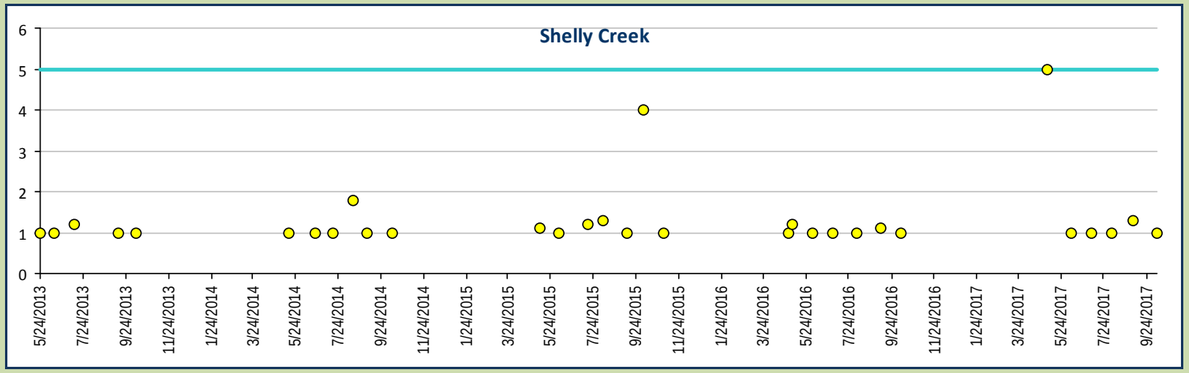
Selenium, Total Recoverable, units ug/L

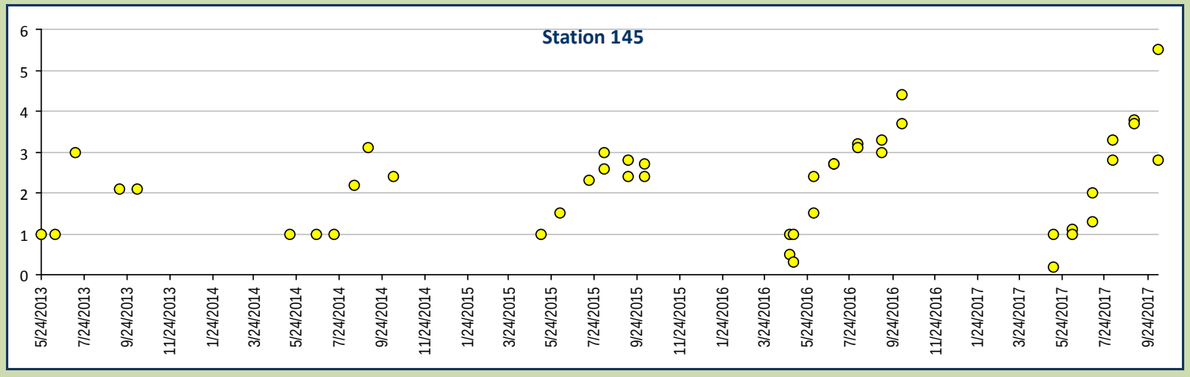
Aquatic Life - Fresh Water Chronic WQS ug/L

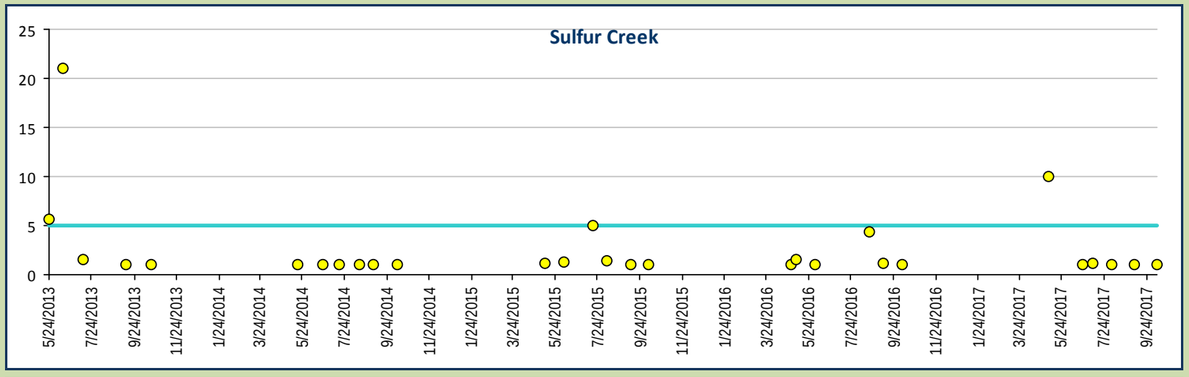
5 ug/L

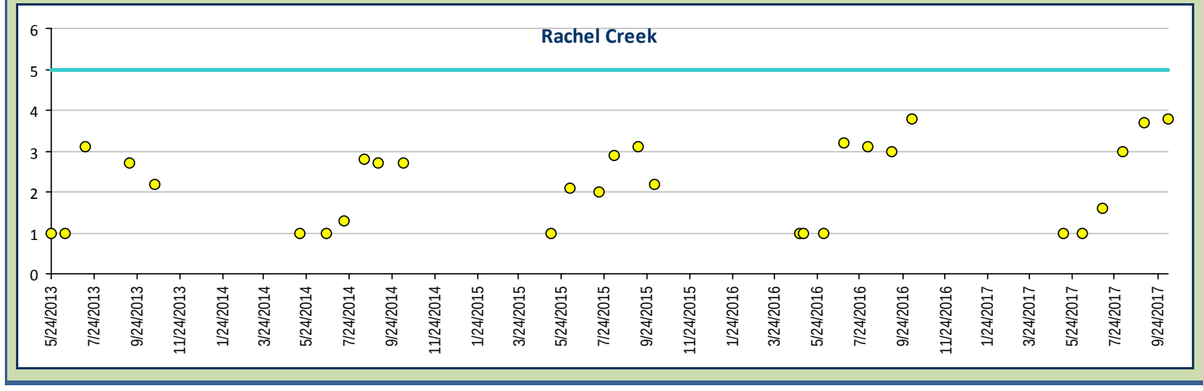


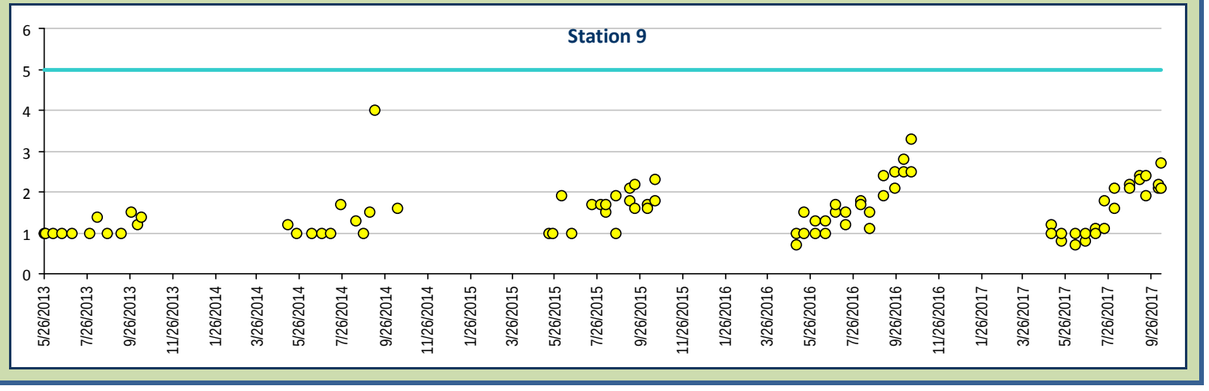










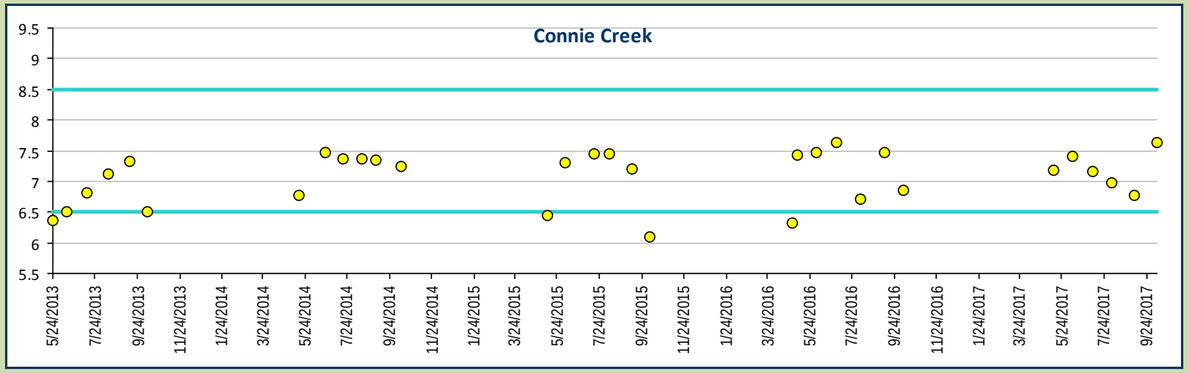


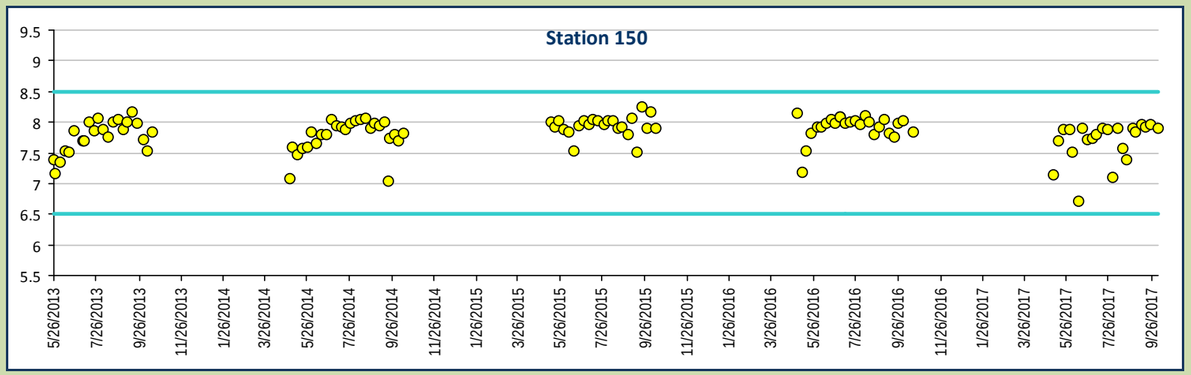
RED DOG MINE

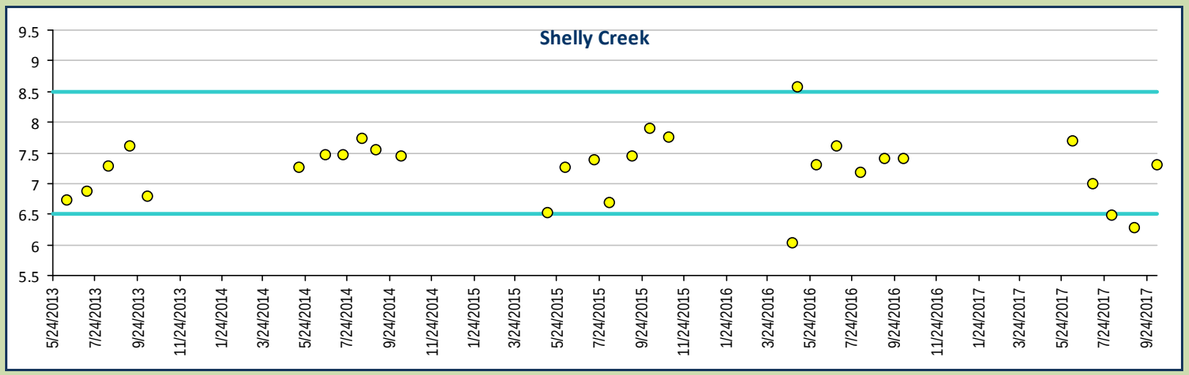
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

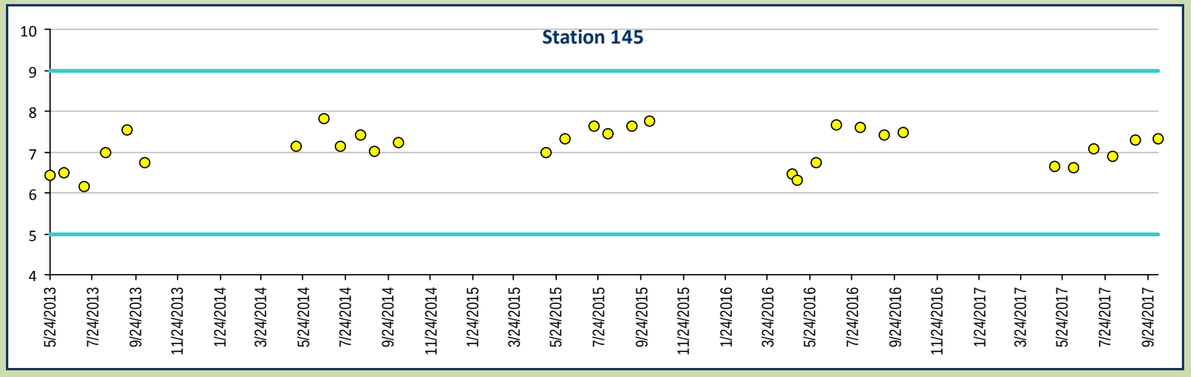
pH

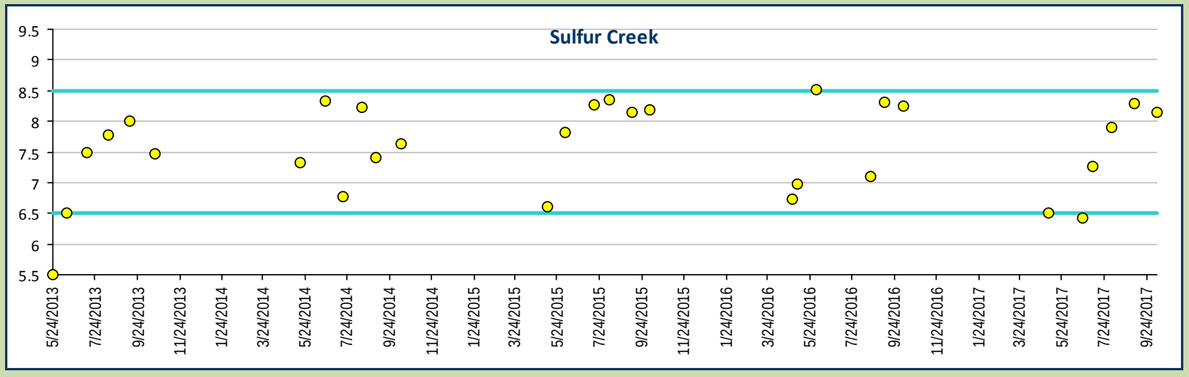
Site Specific WQS pH units

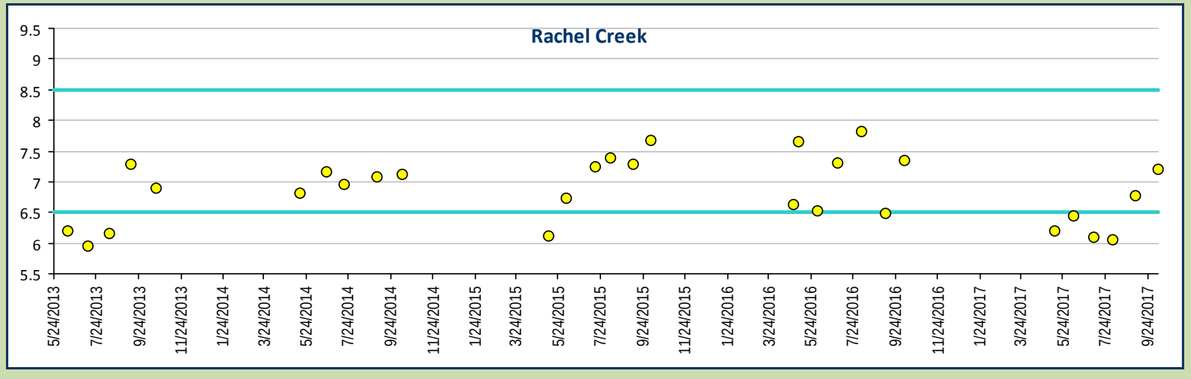


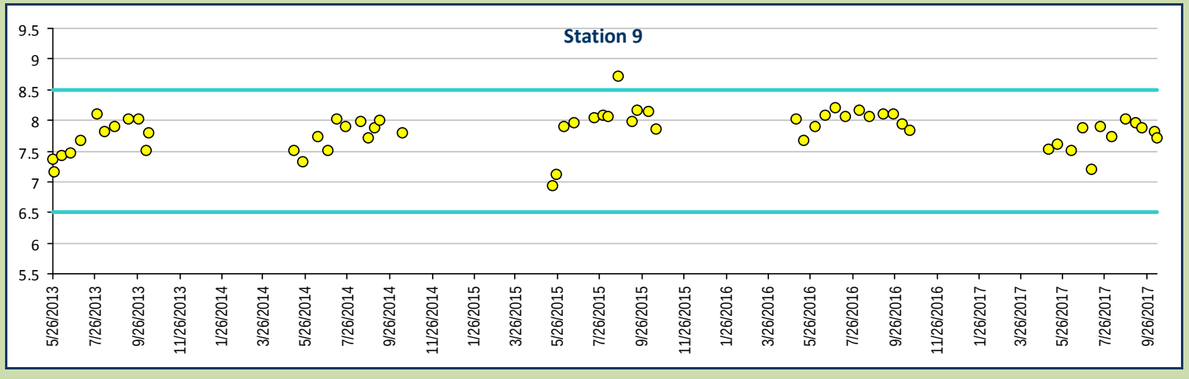












RED DOG MINE

Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

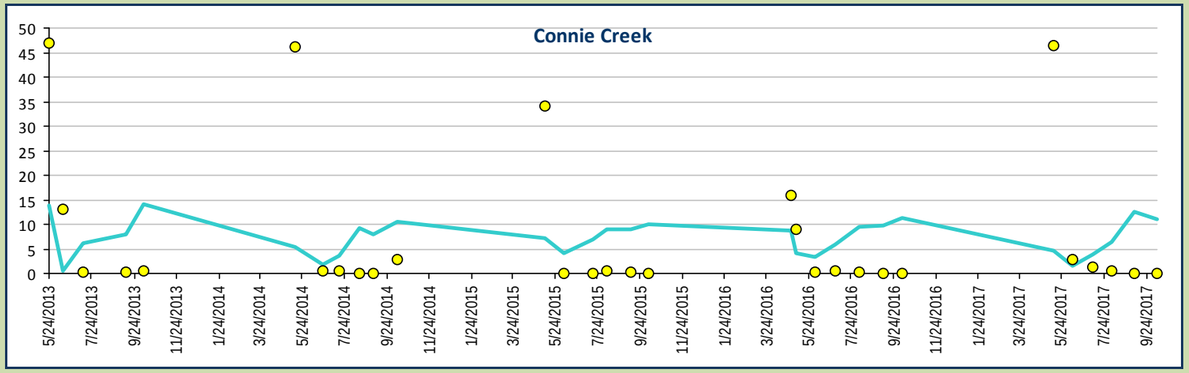
Lead, Total Recoverable, units ug/L

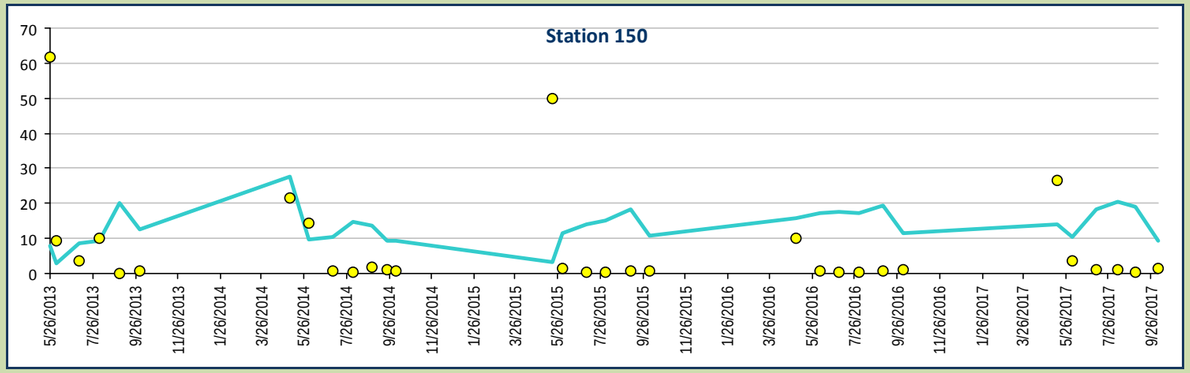
Aquatic Life - Fresh Water Chronic WQS ug/L

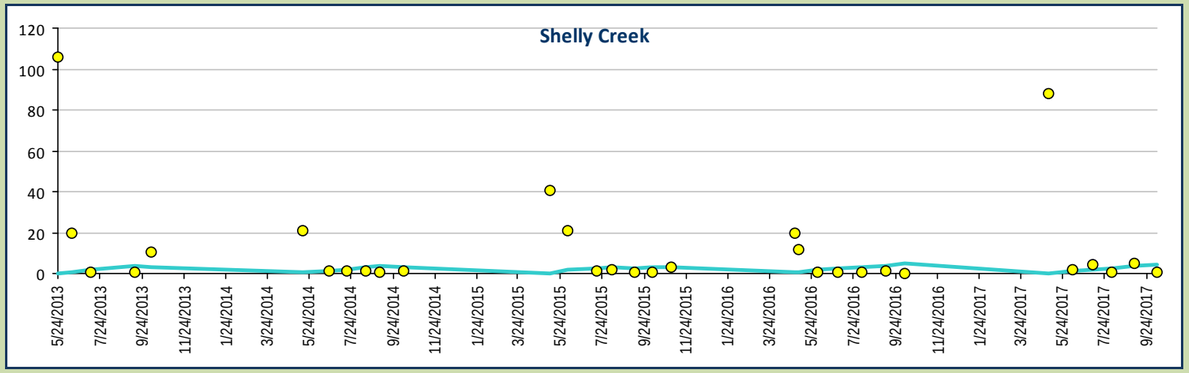
Hardness Dependent Calculation

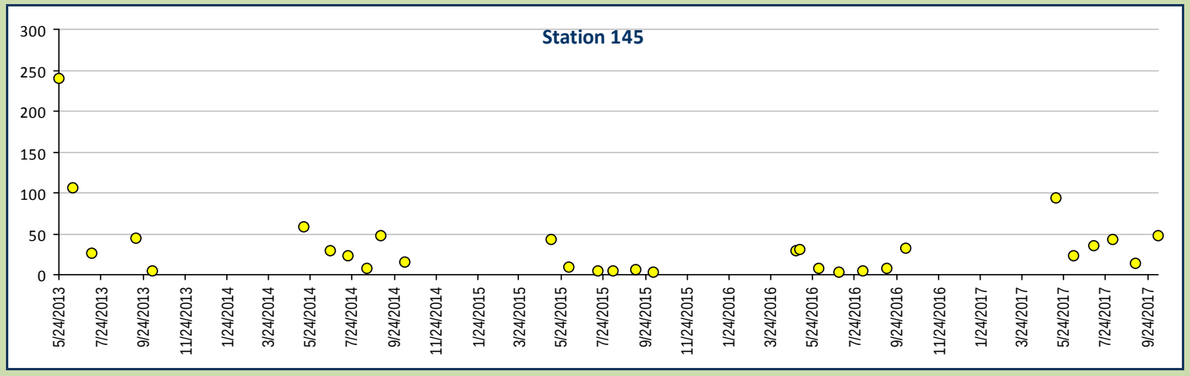
=EXP(1.273*(LN(calc *hardness))-4.705)

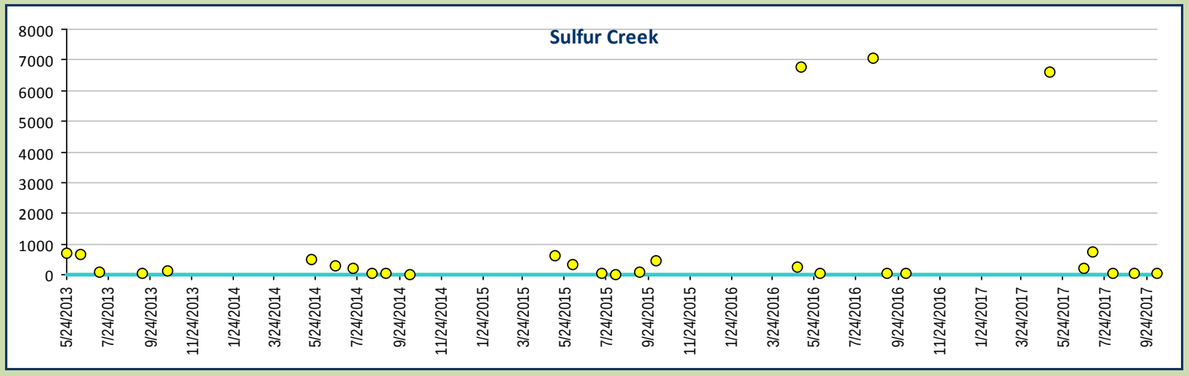
* Calculated using Standard Methods 2340B

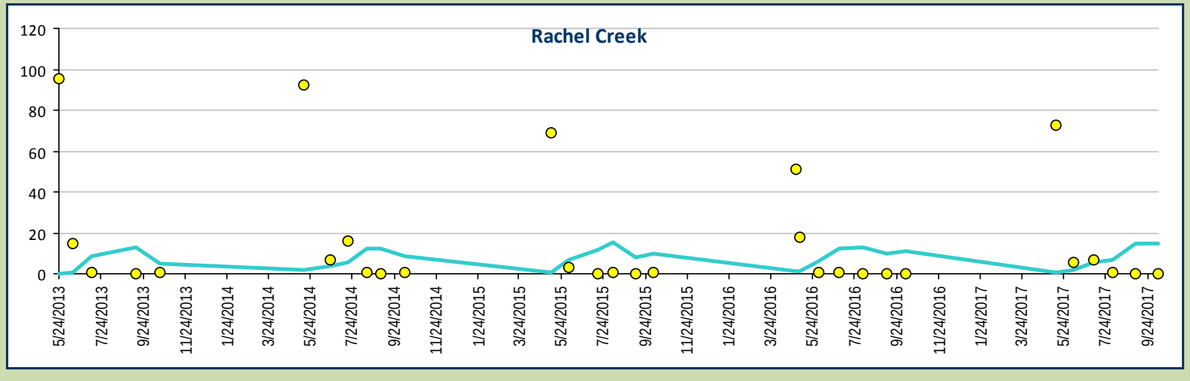


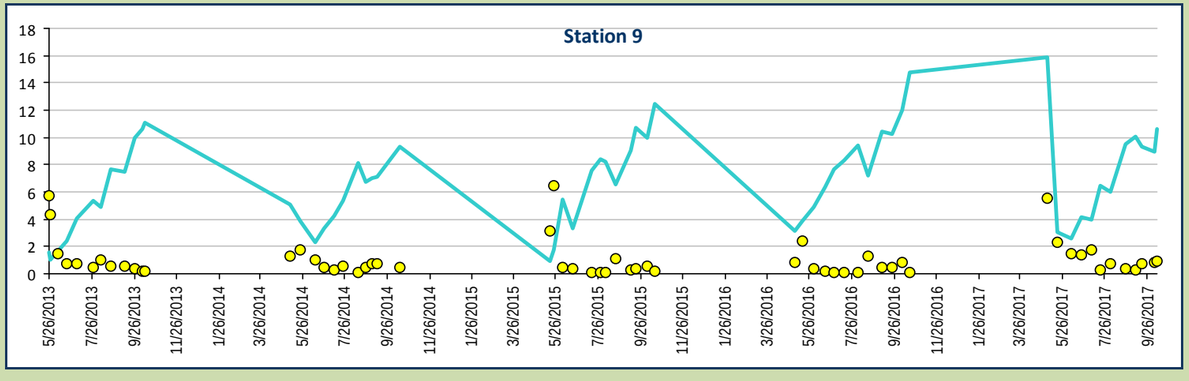








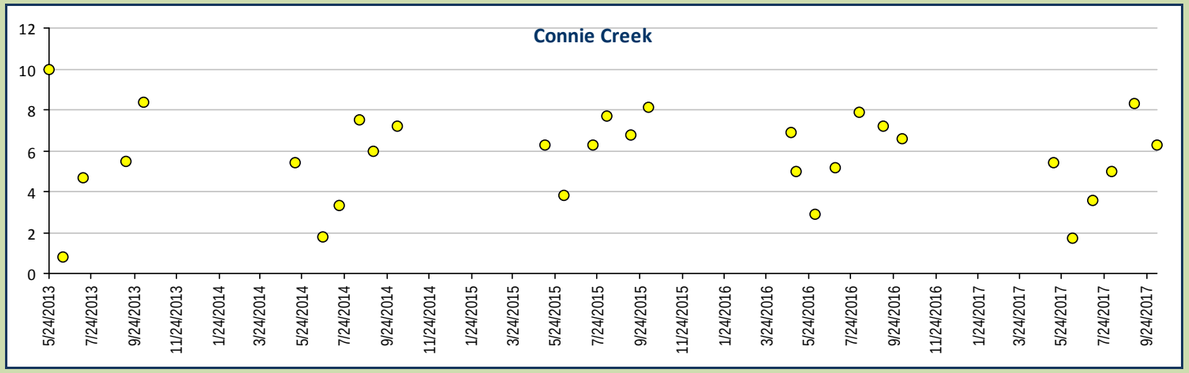


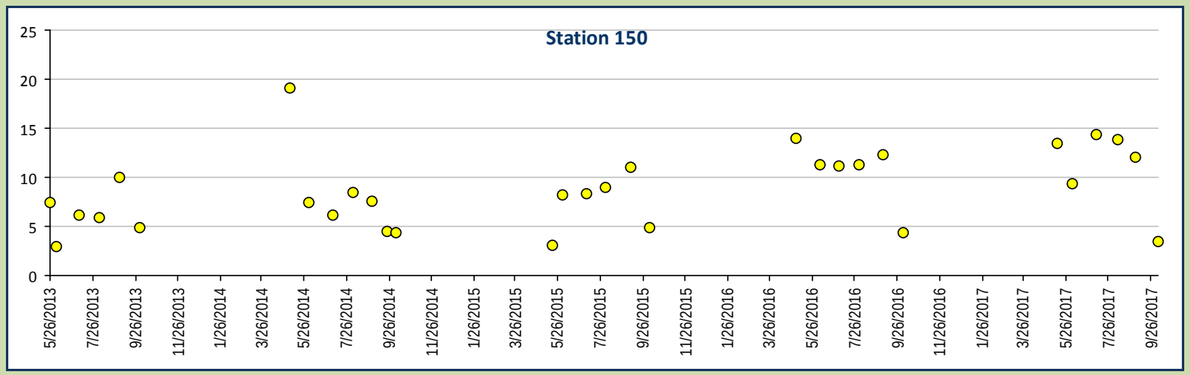


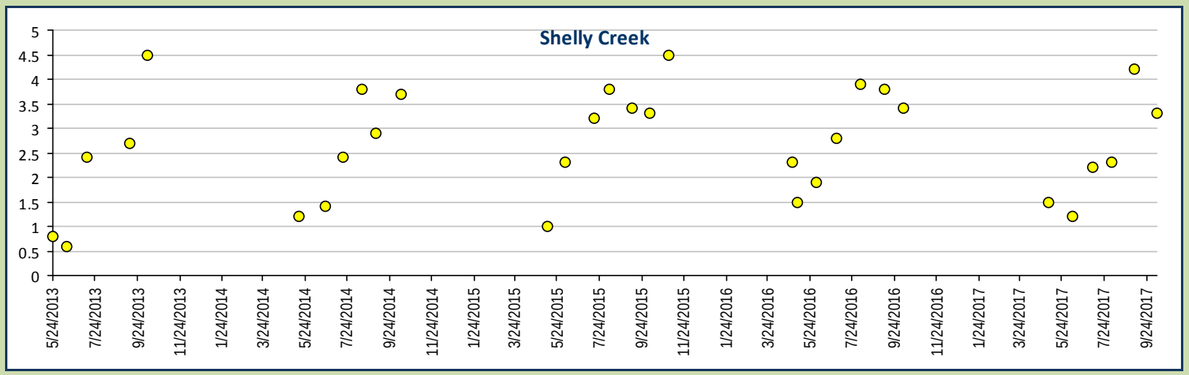
RED DOG MINE

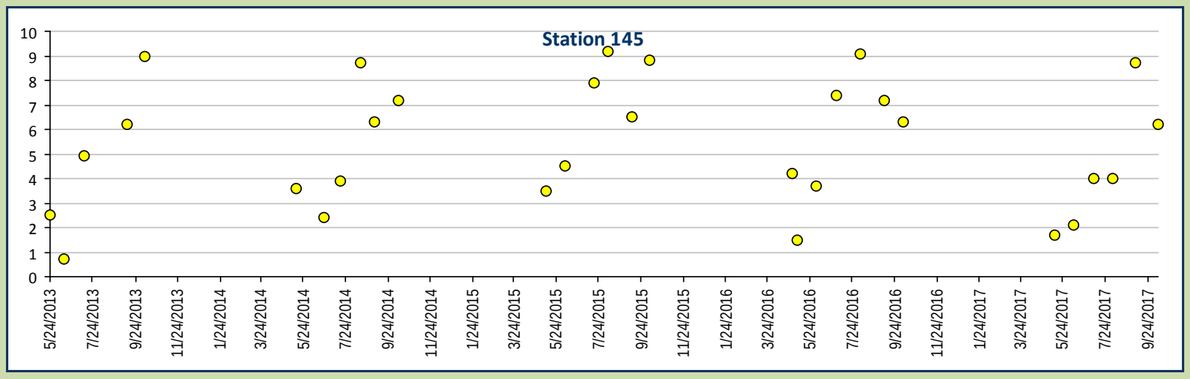
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

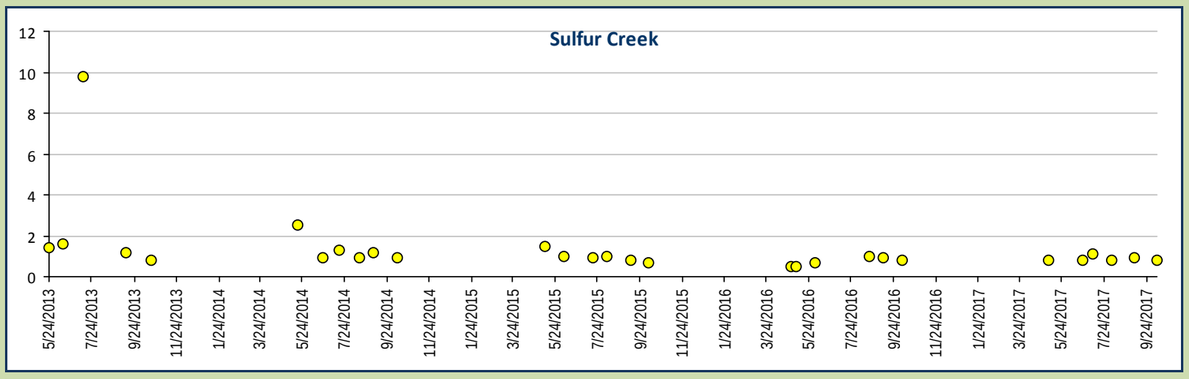
Sodium, Total Recoverable, units mg/L

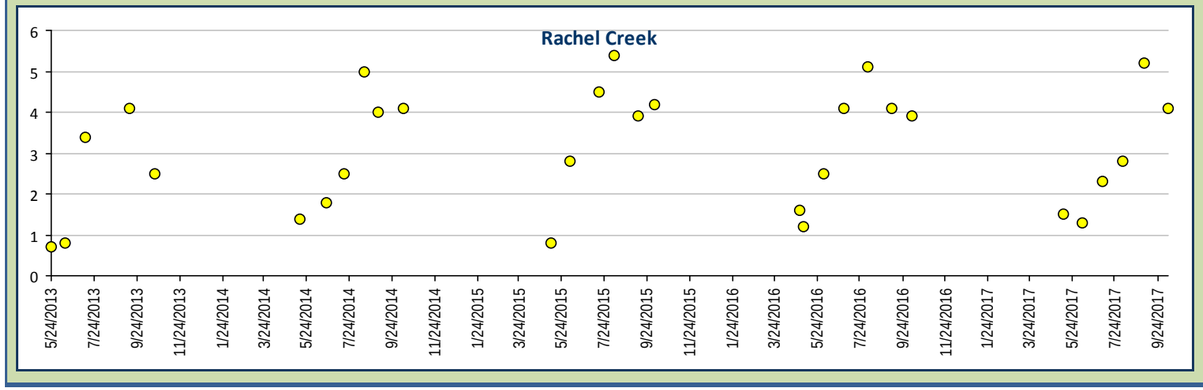


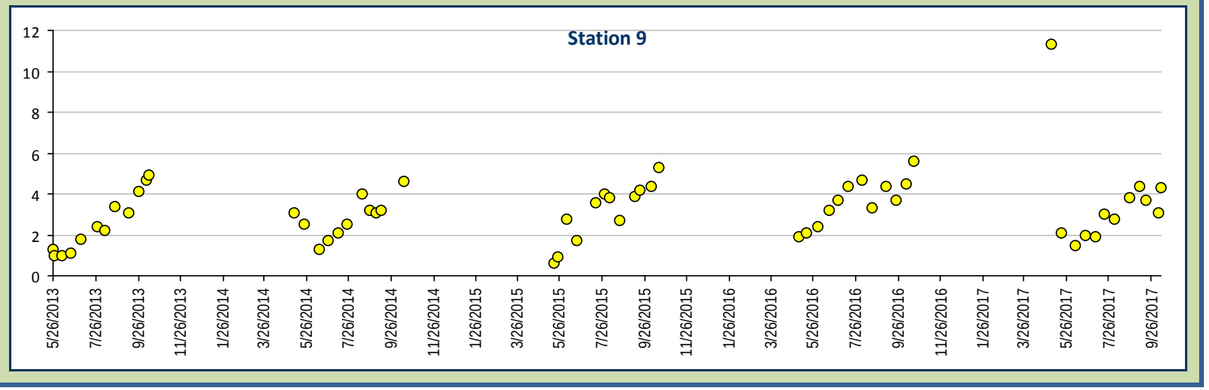








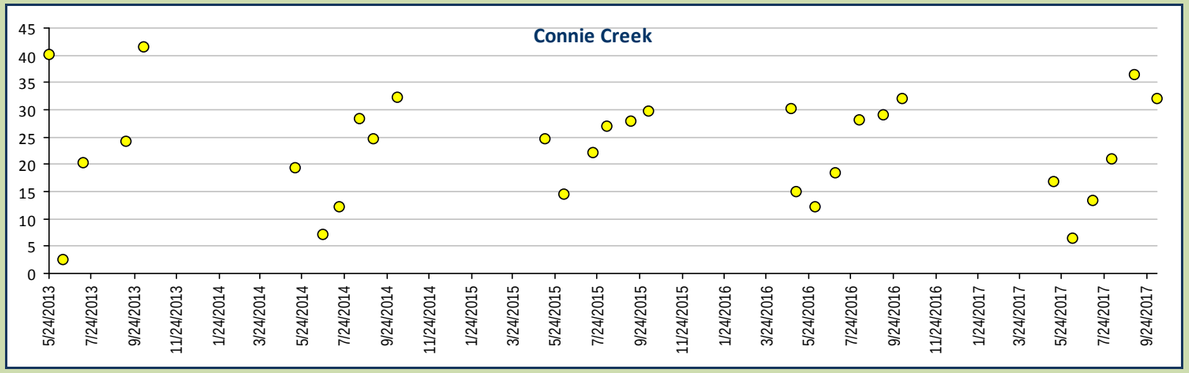


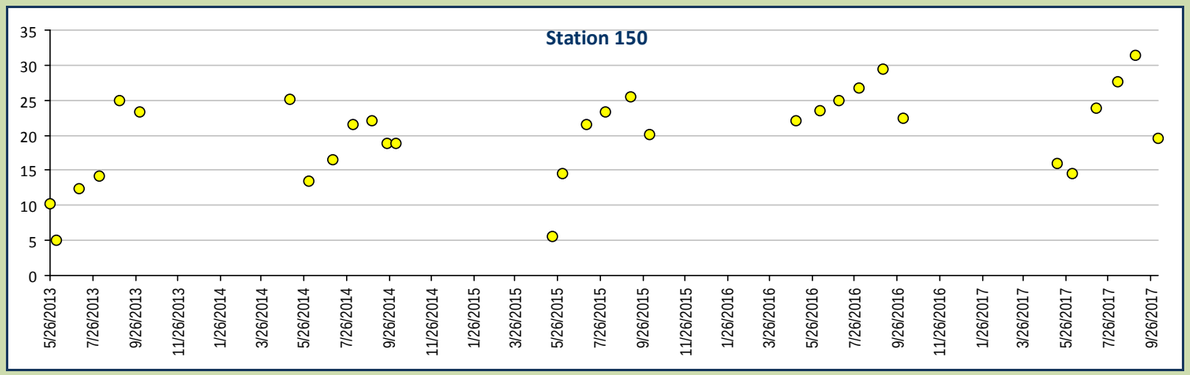


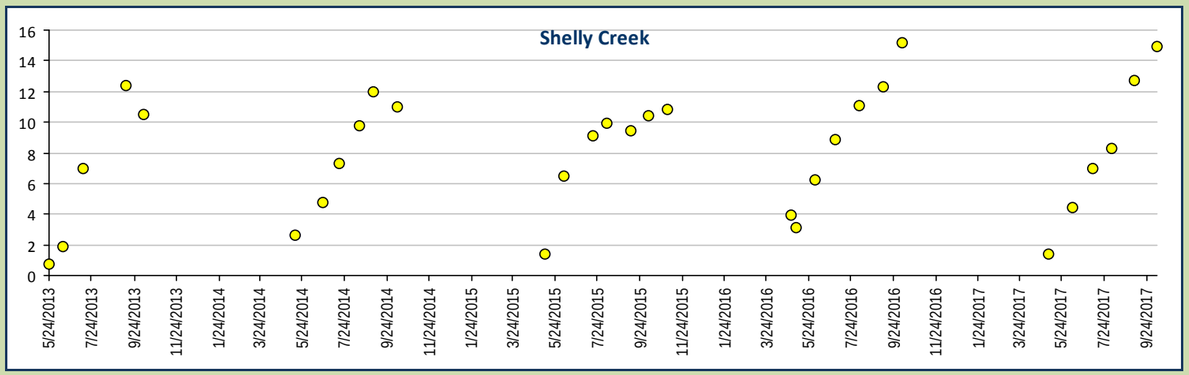
RED DOG MINE

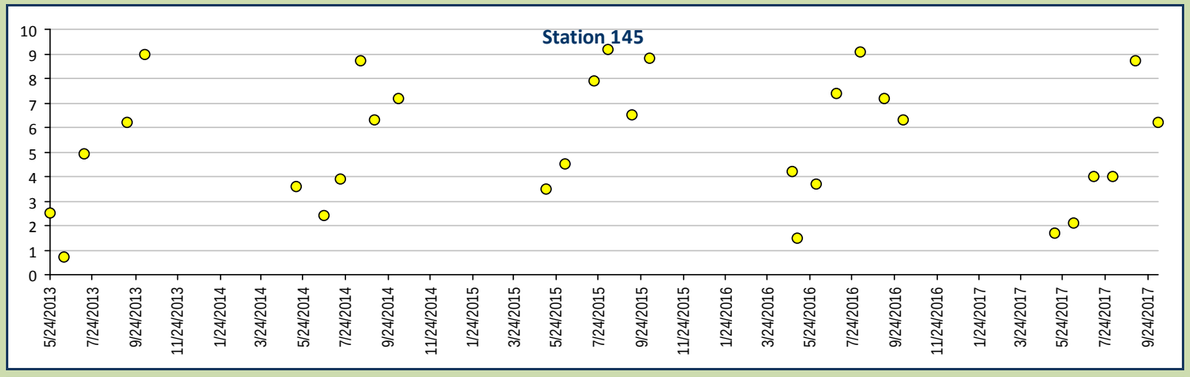
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

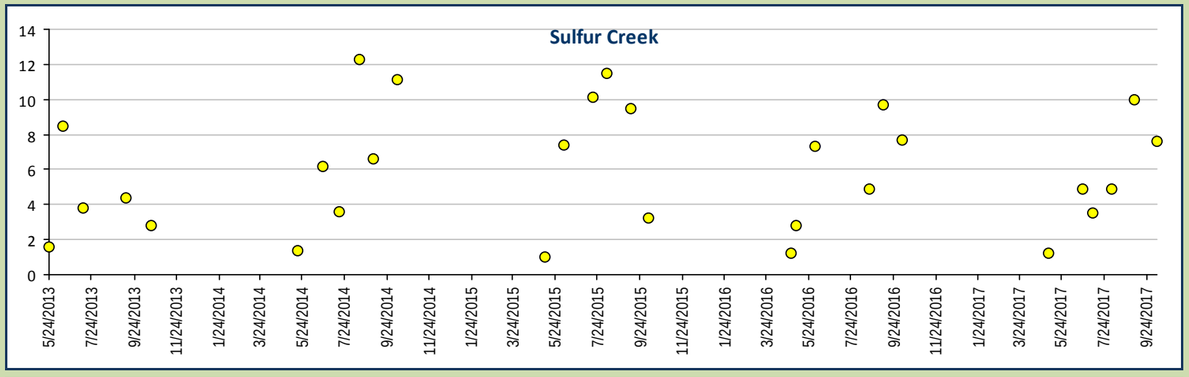
Magnesium, Total Recoverable, units mg/L

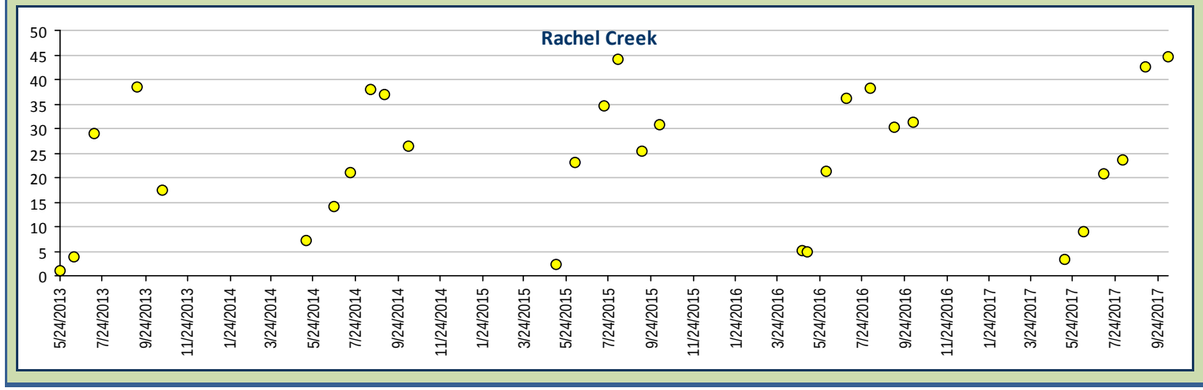


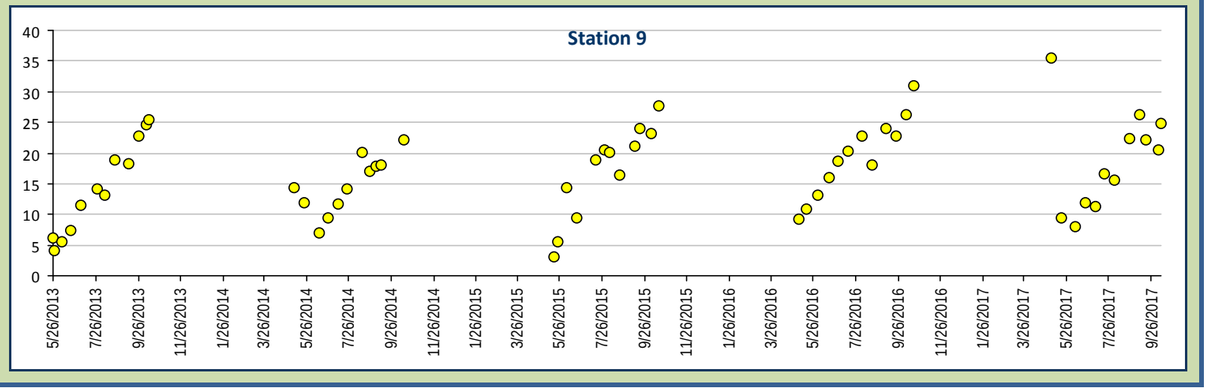








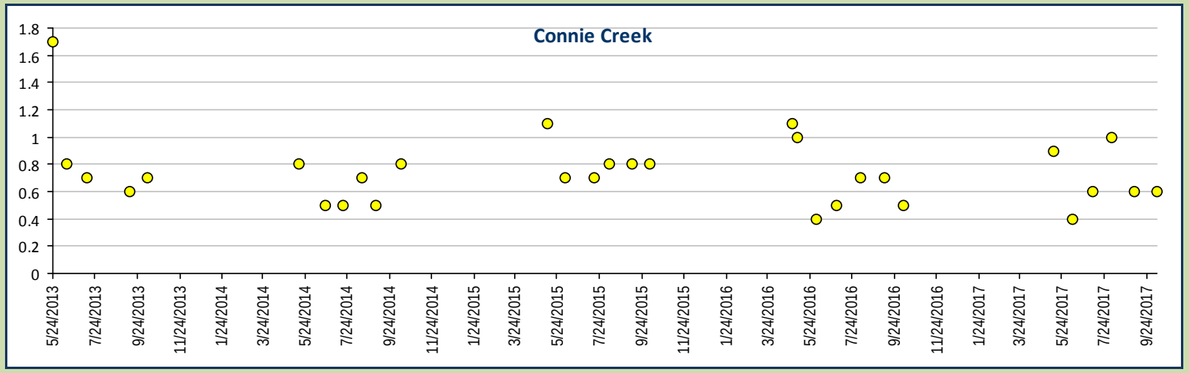


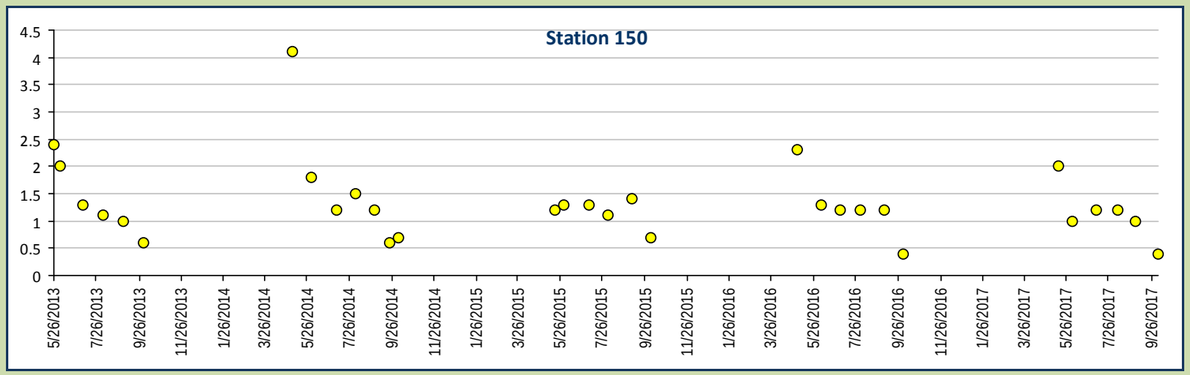


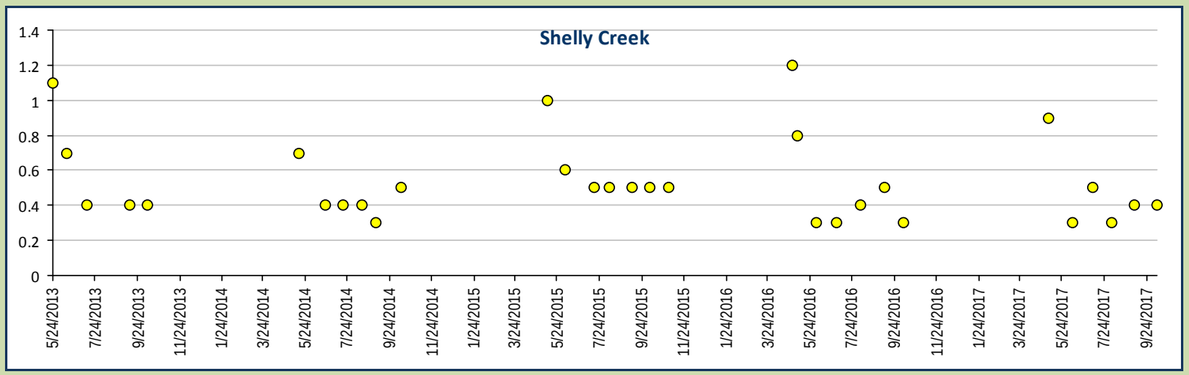
RED DOG MINE

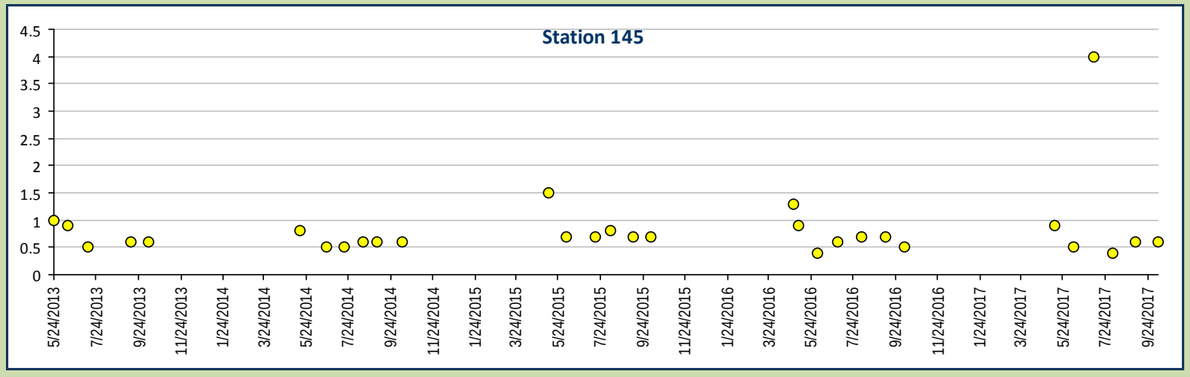
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

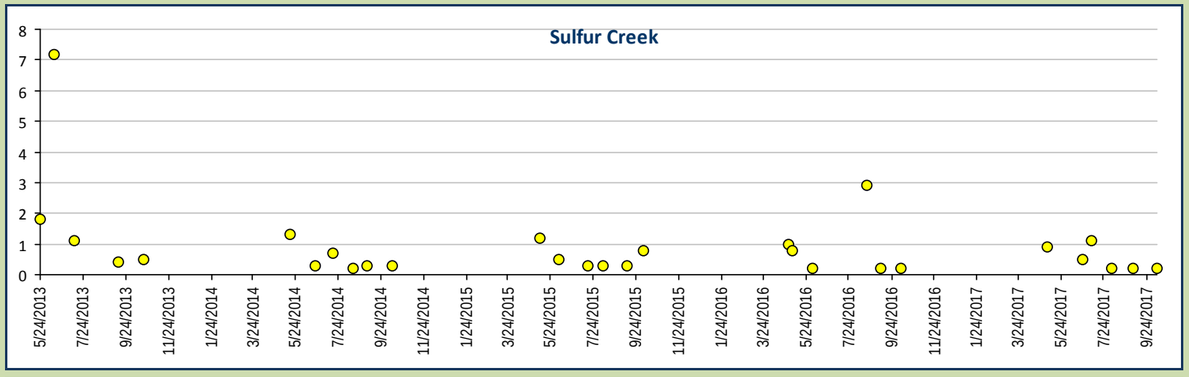
Potassium, Total Recoverable, units mg/L

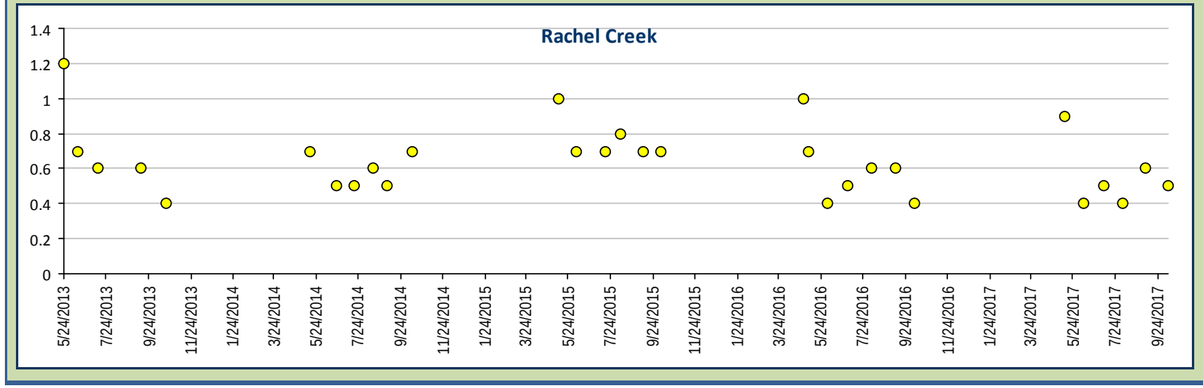


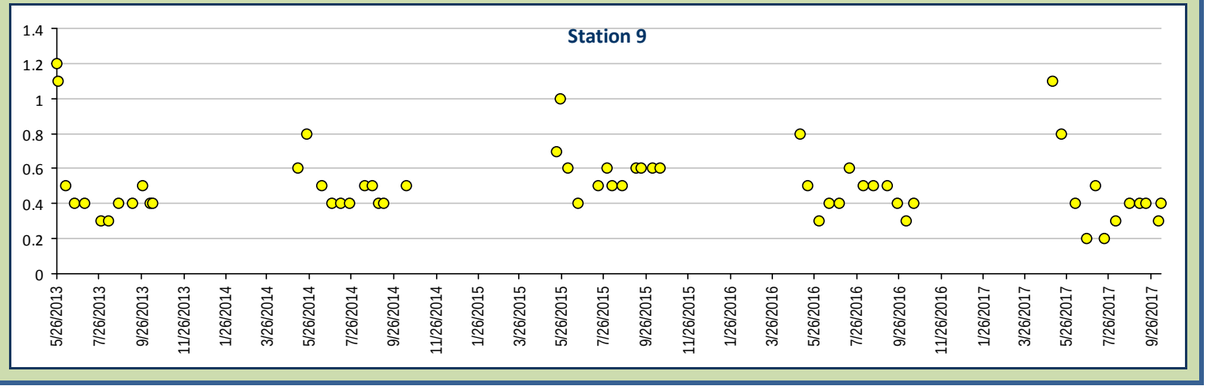












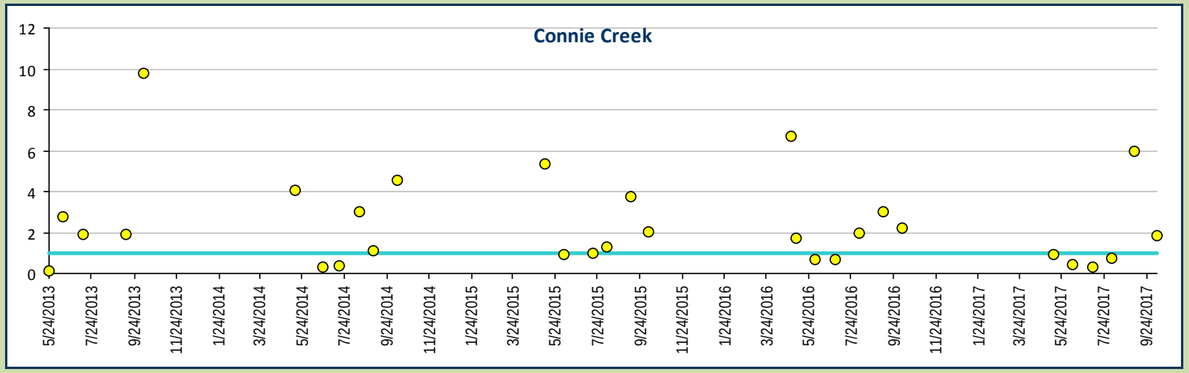
RED DOG MINE

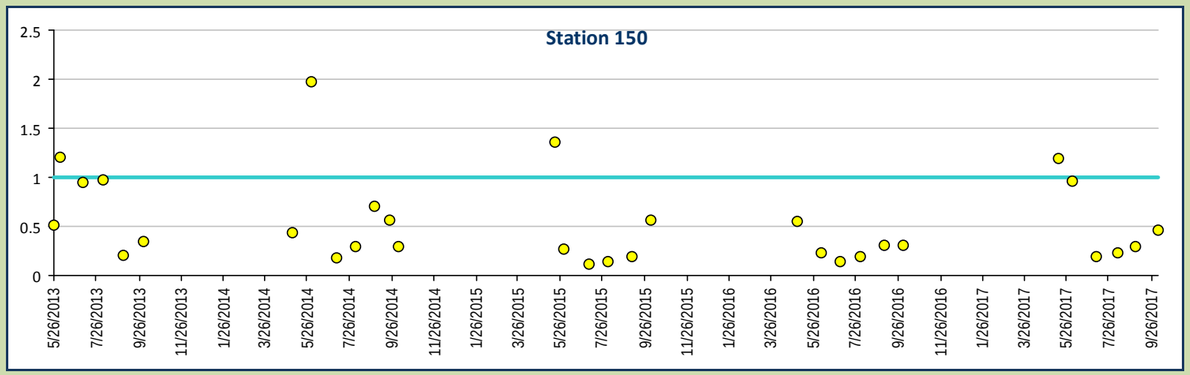
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

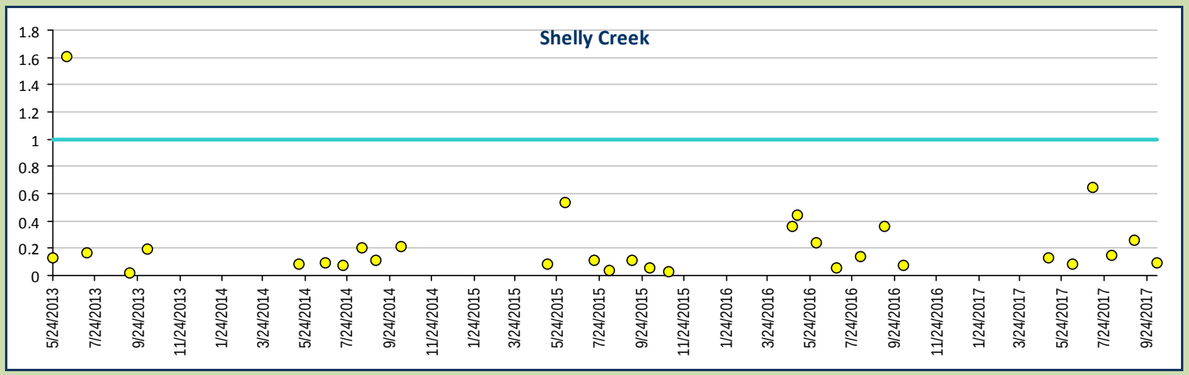
Iron, Total Recoverable, units mg/L

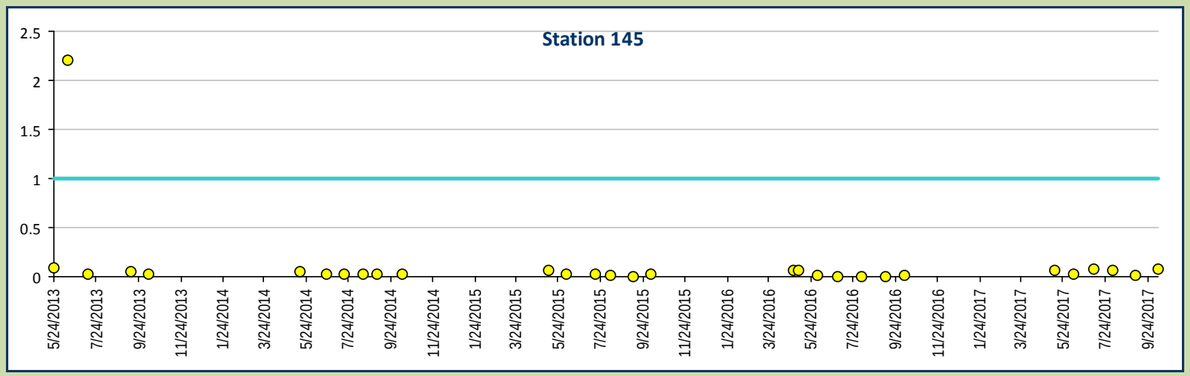
Aquatic Life - Fresh Water Chronic WQS mg/L

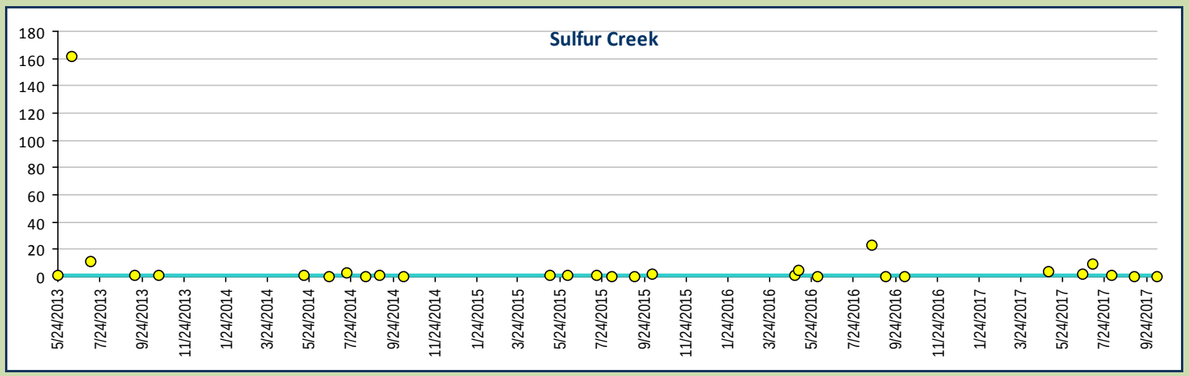
1.0 mg/L

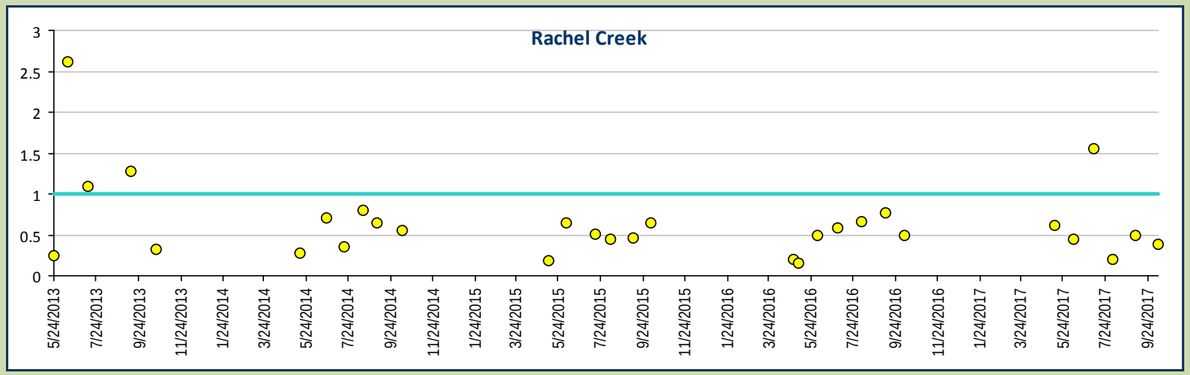


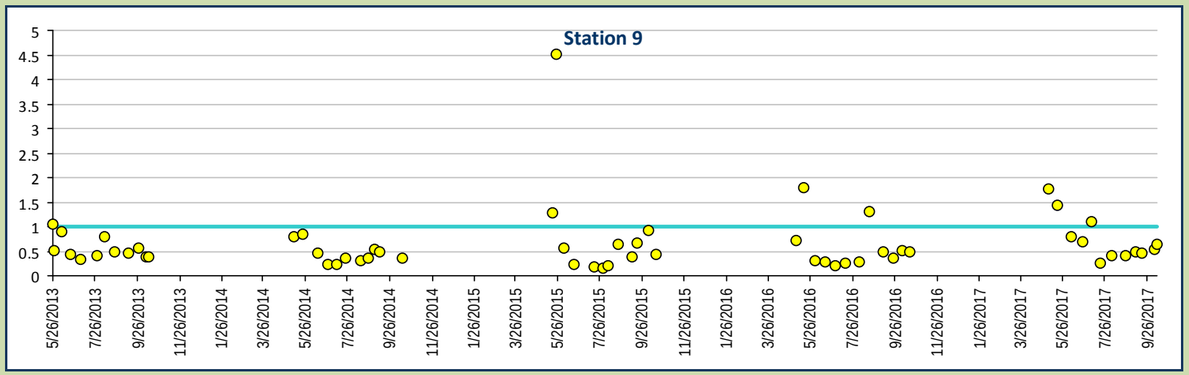








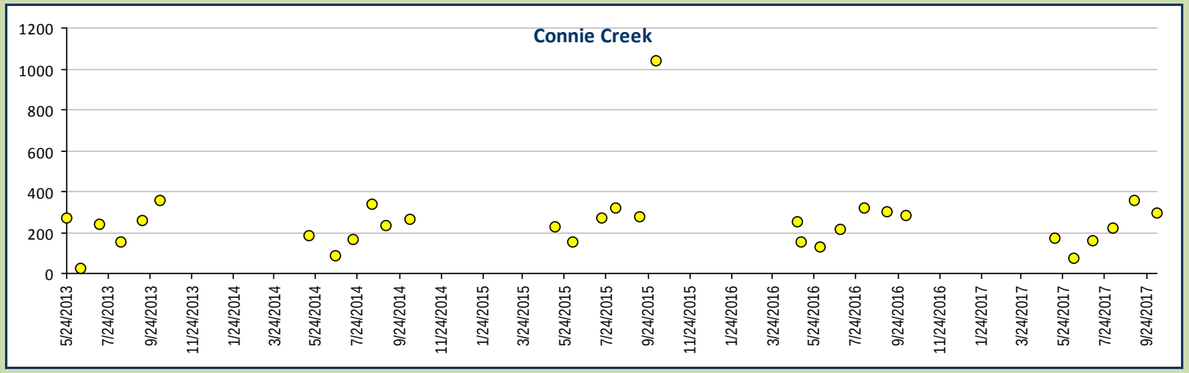


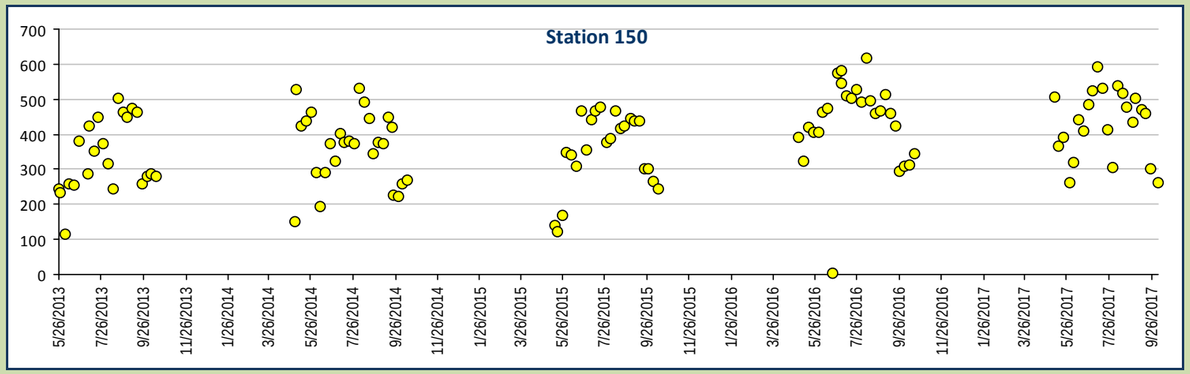


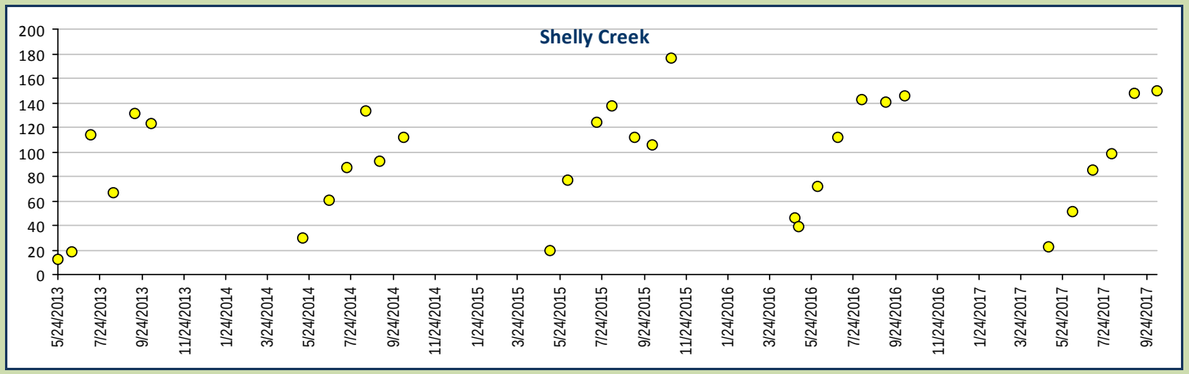
RED DOG MINE

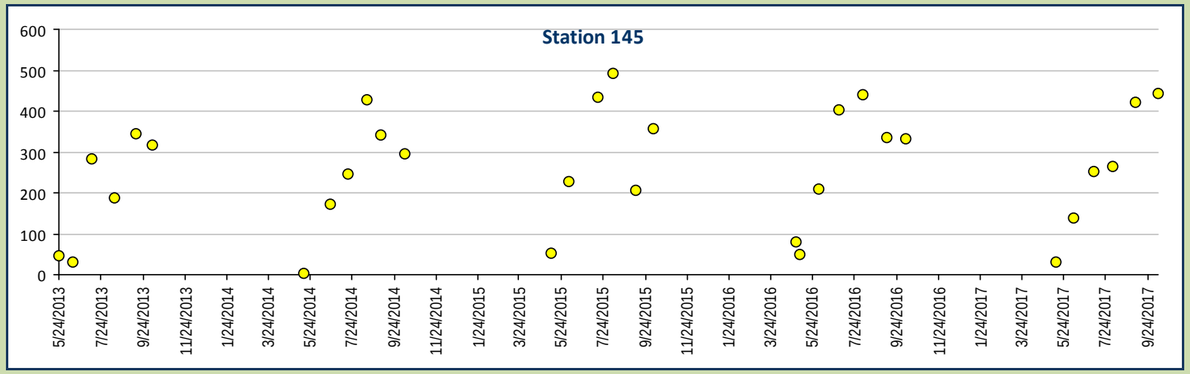
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

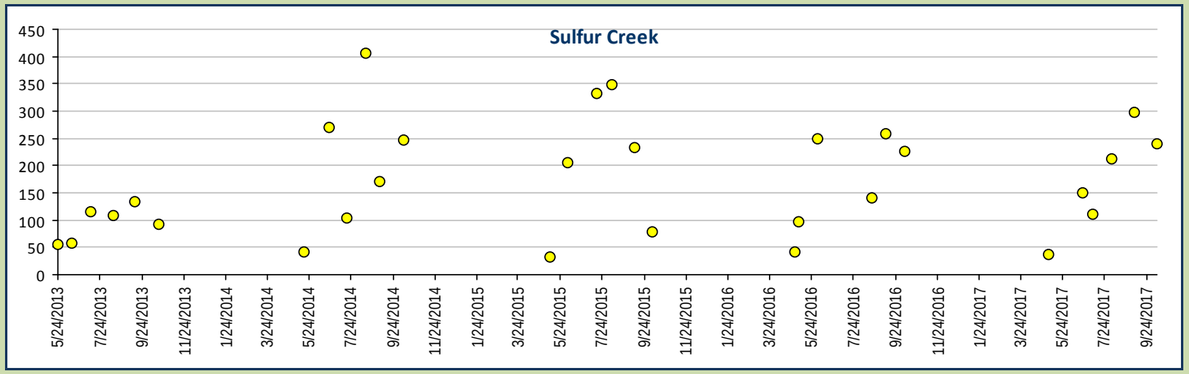
Conductivity, units uS/cm

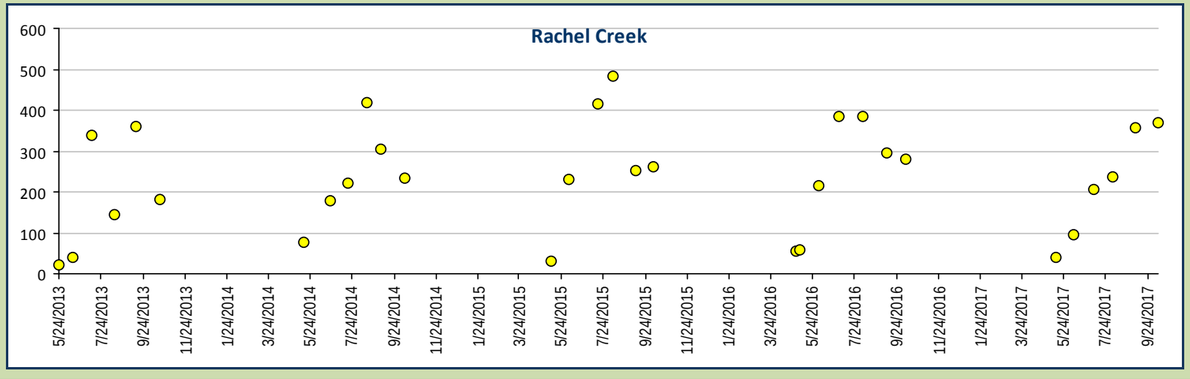


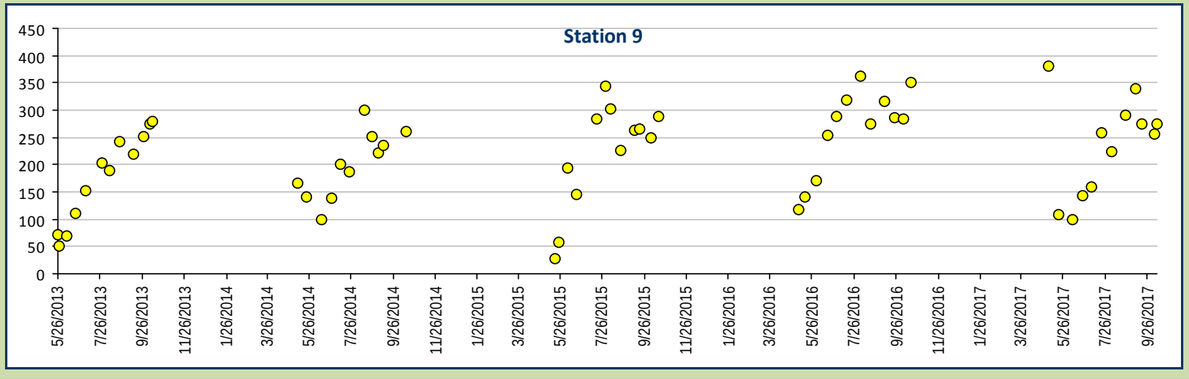












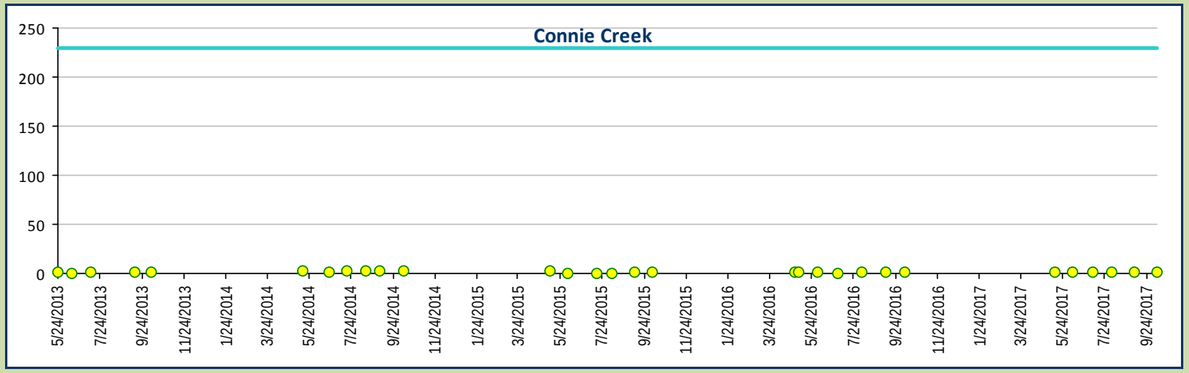
RED DOG MINE

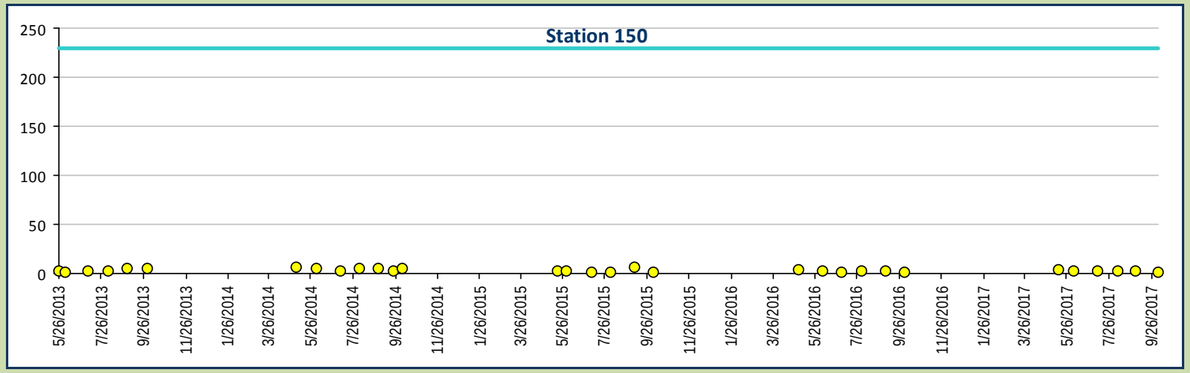
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

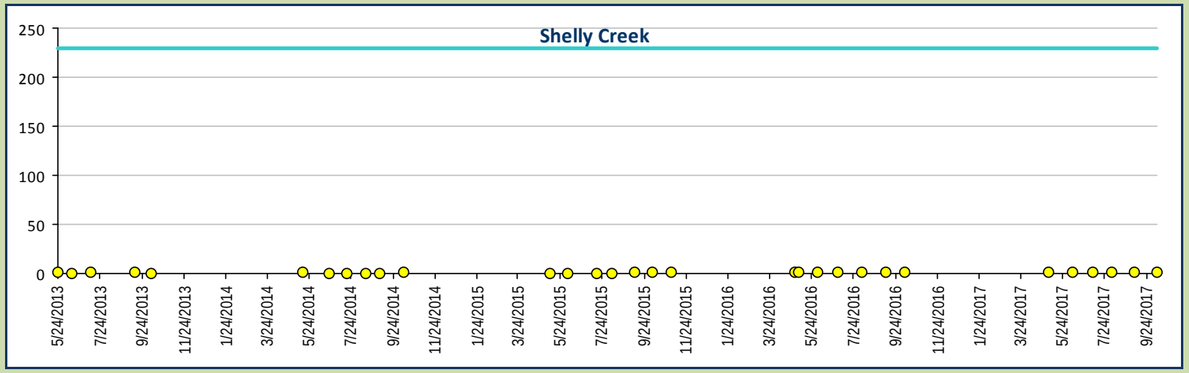
Chloride, Total Recoverable, units mg/L

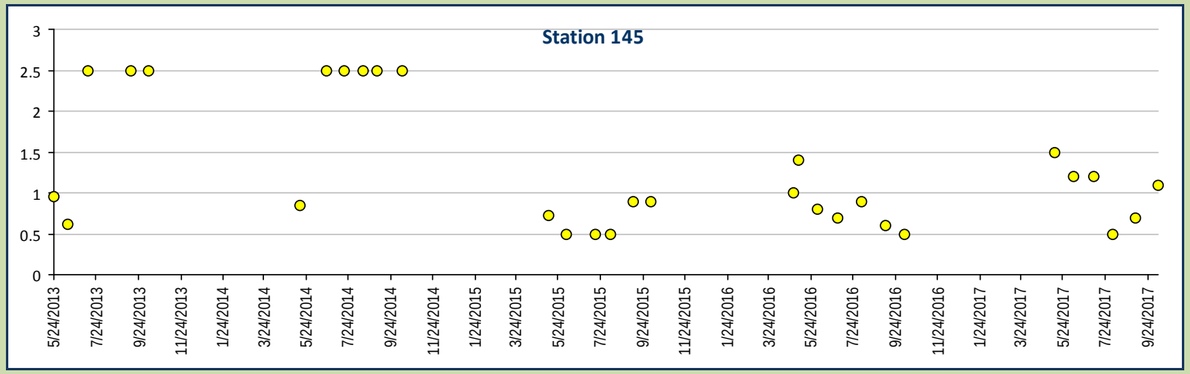
Aquatic Life - Fresh Water Chronic WQS mg/L

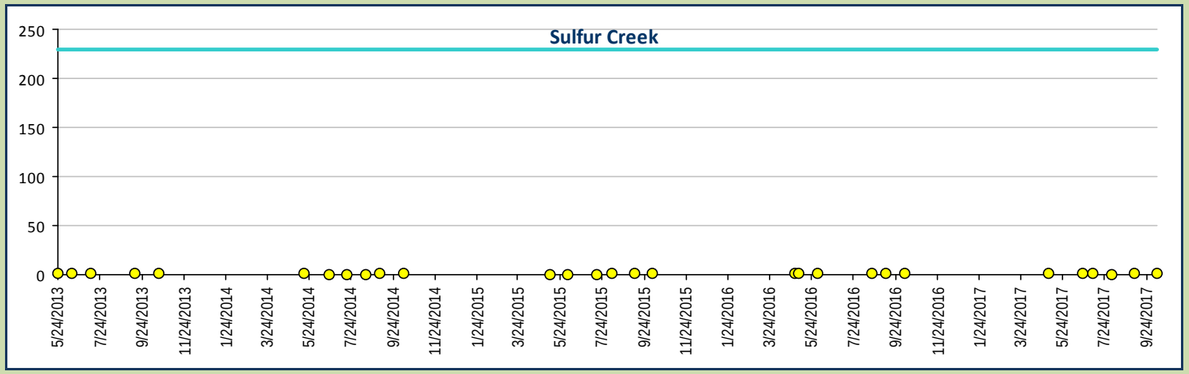
230 mg/L

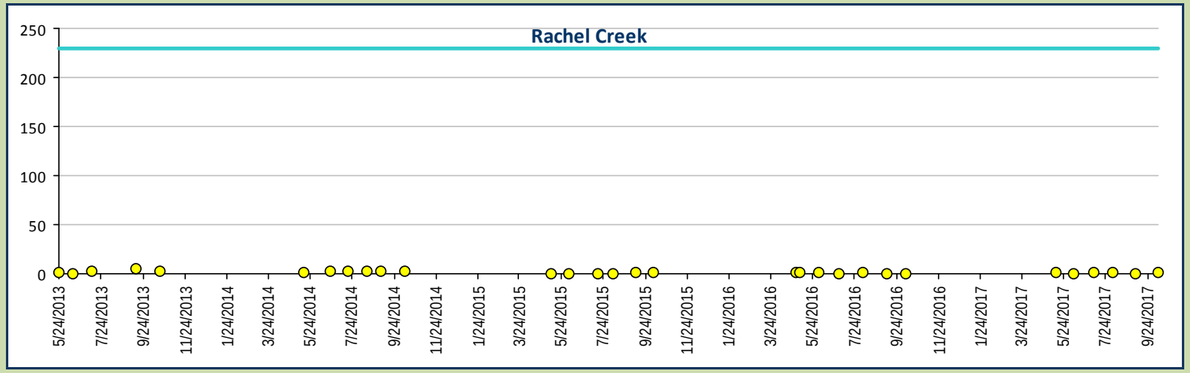


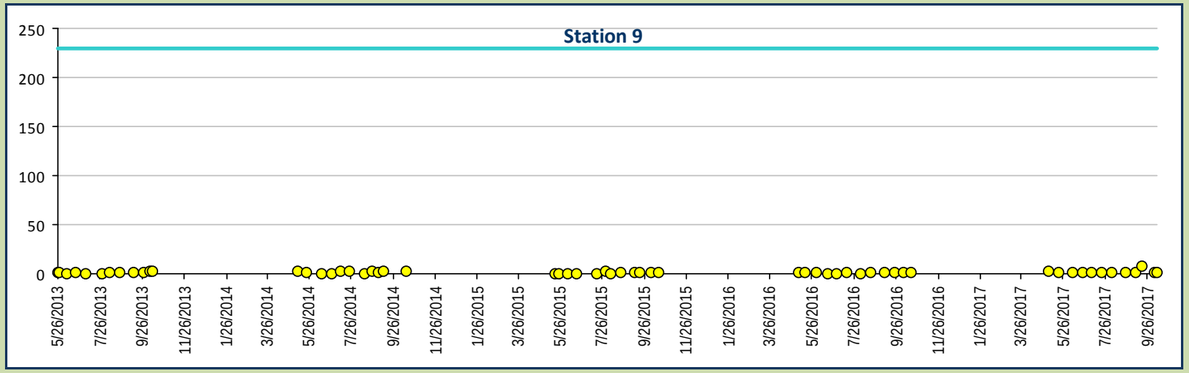












RED DOG MINE

Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

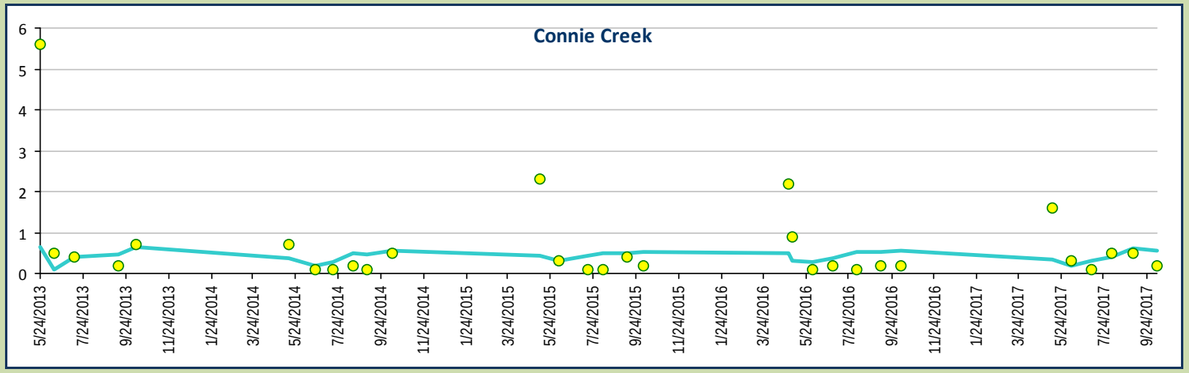
Cadmium, Total Recoverable, units ug/L

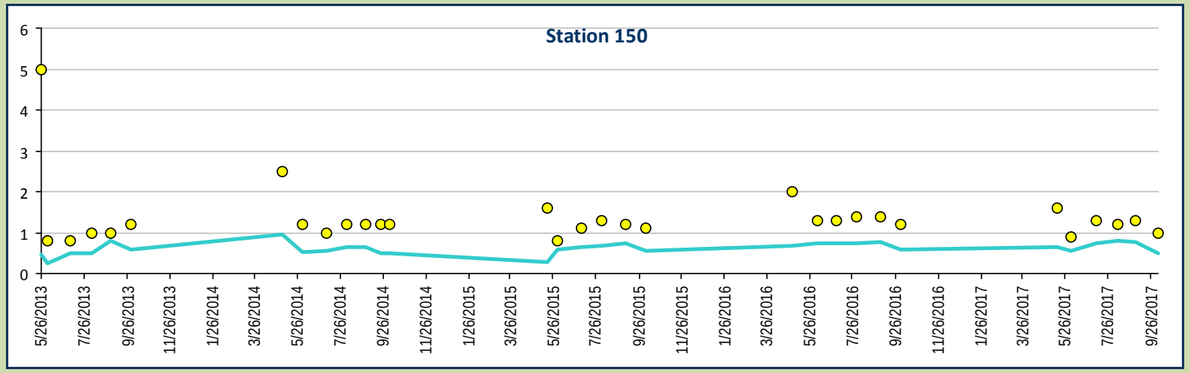
Aquatic Life - Fresh Water Chronic WQS ug/L

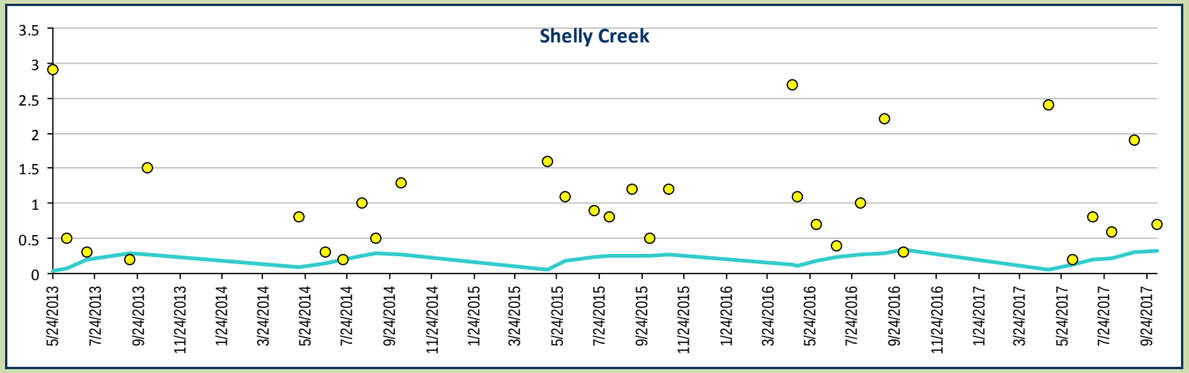
Hardness Dependent Calculation

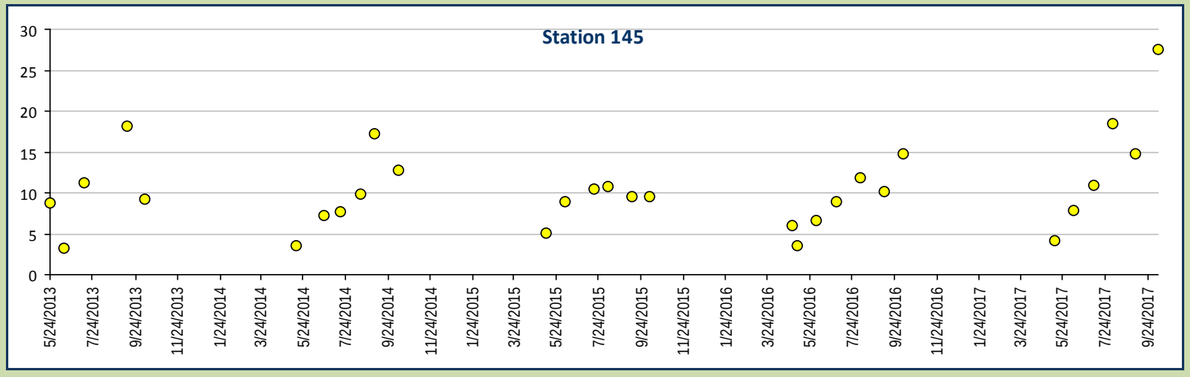
=EXP(0.7409*(LN(calc *hardness))-4.719)

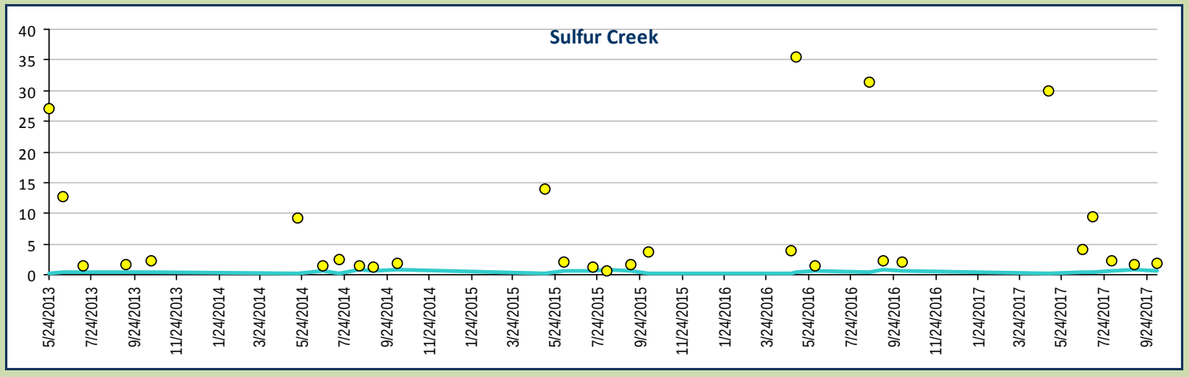
* Calculated using Standard Methods 2340B

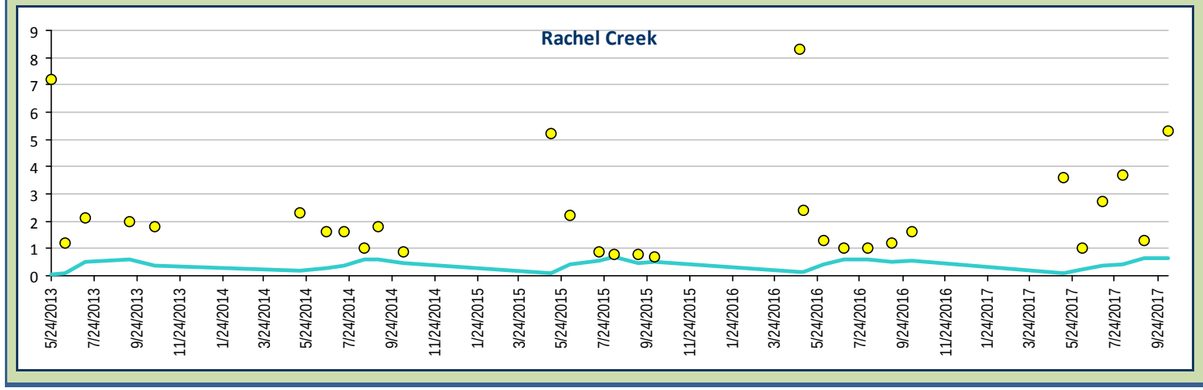


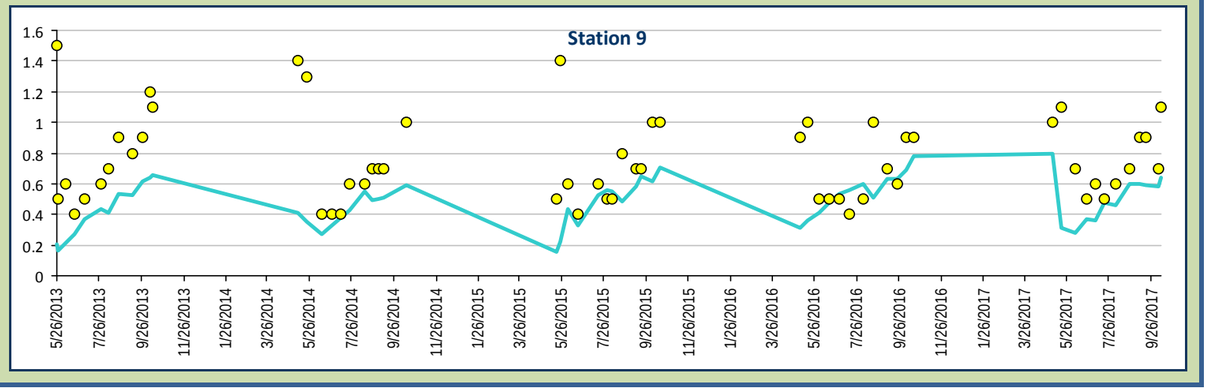








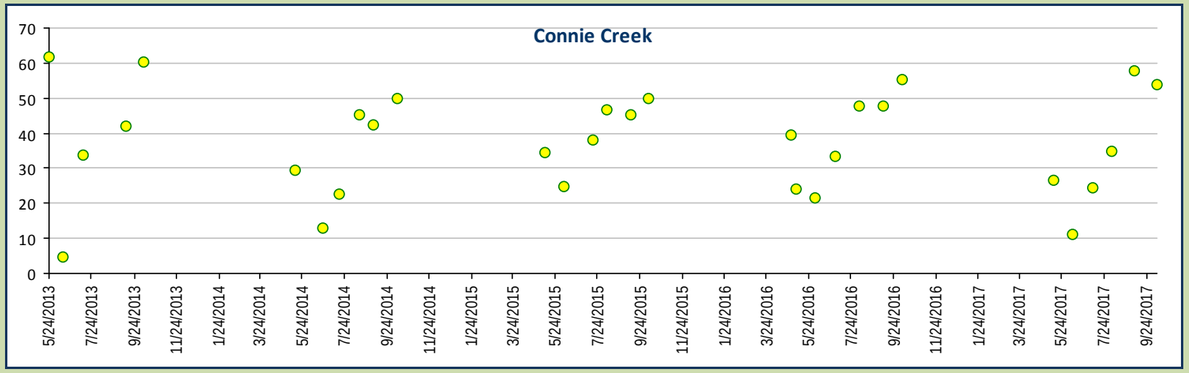


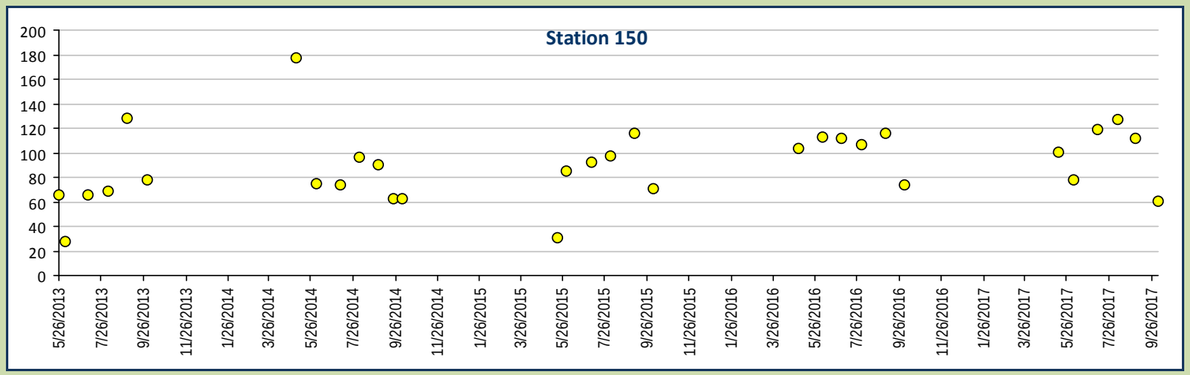


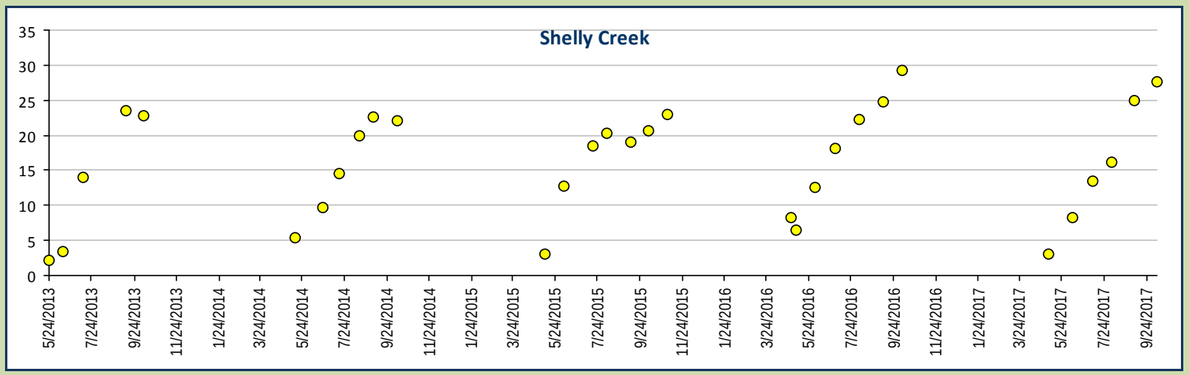
RED DOG MINE

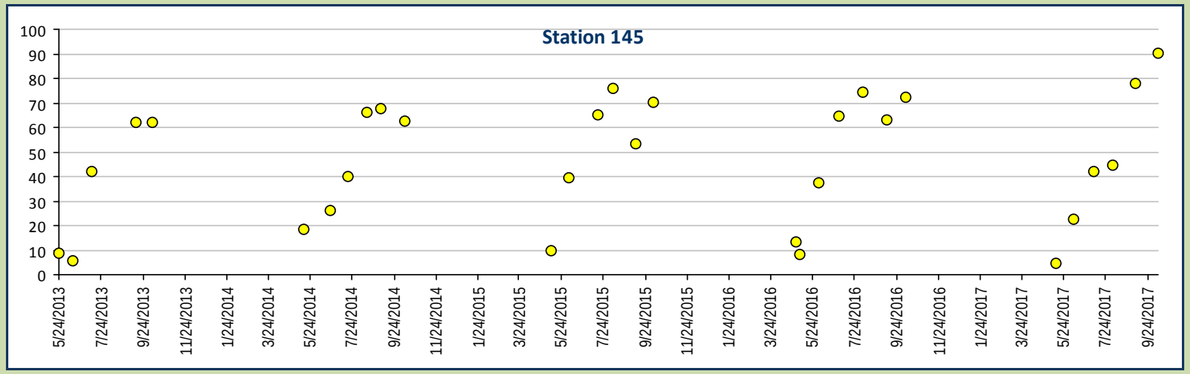
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

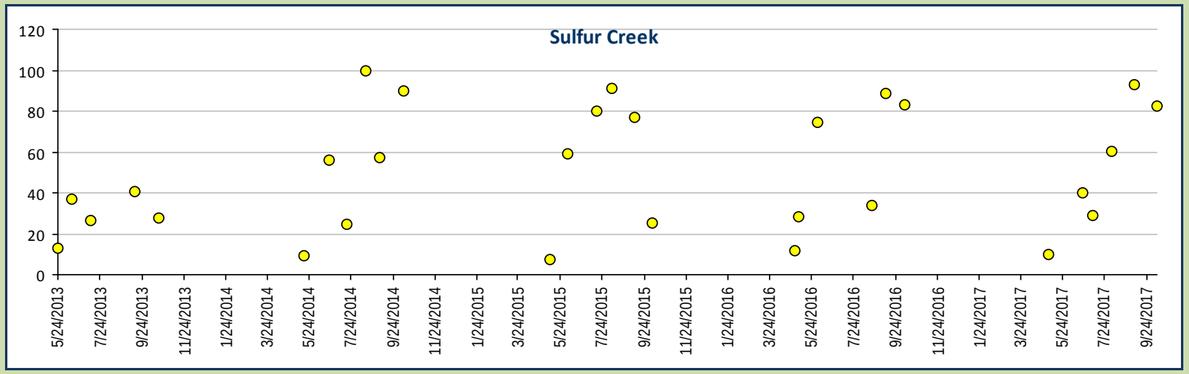
Calcium, Total recoverable, units mg/L

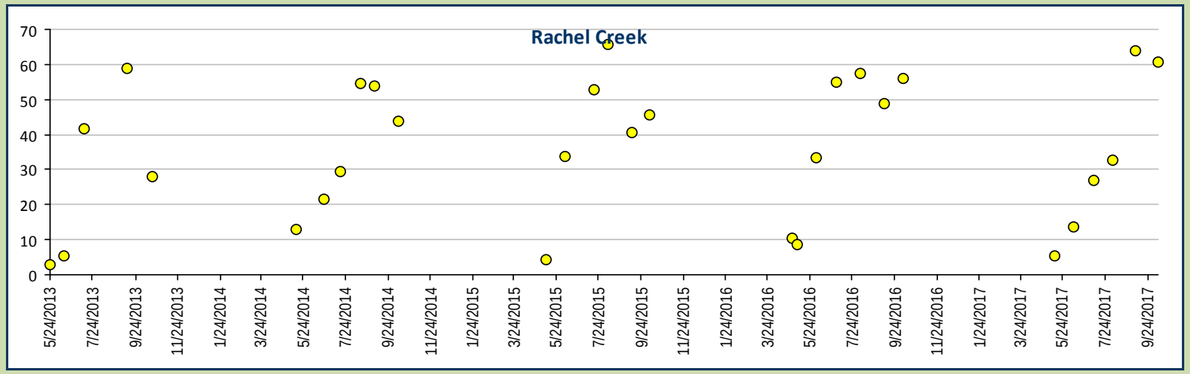


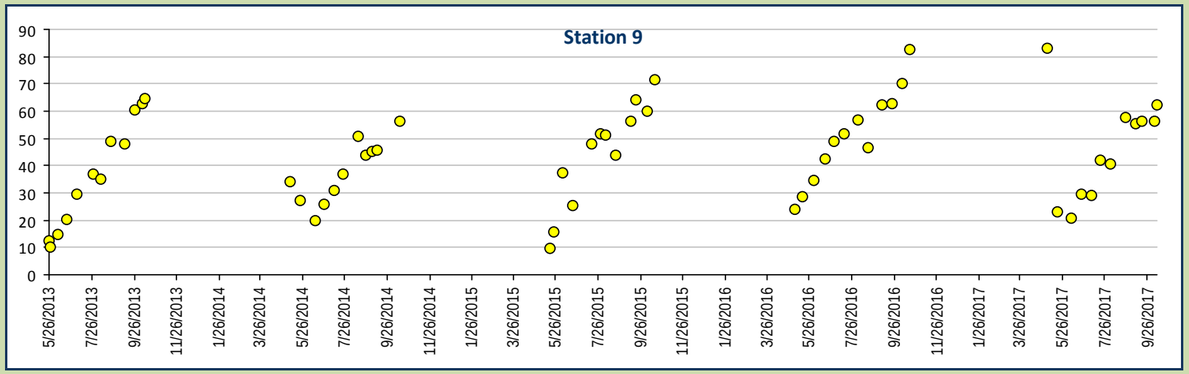












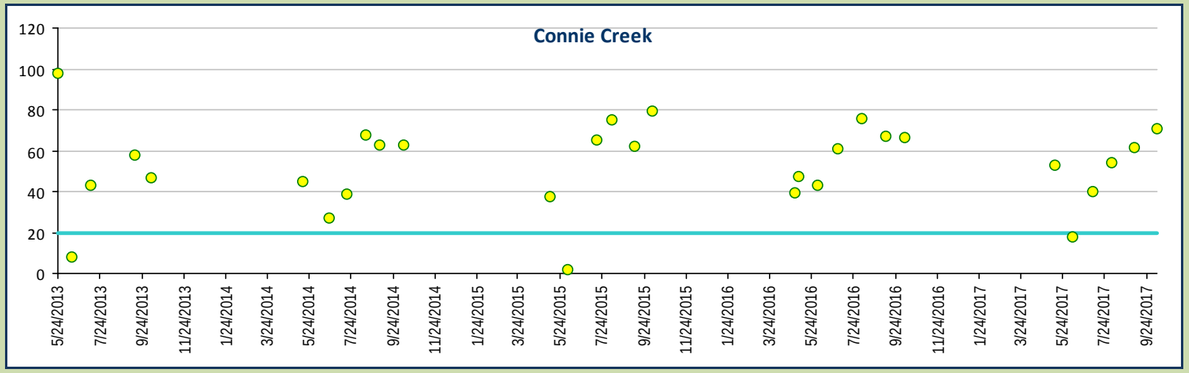
RED DOG MINE

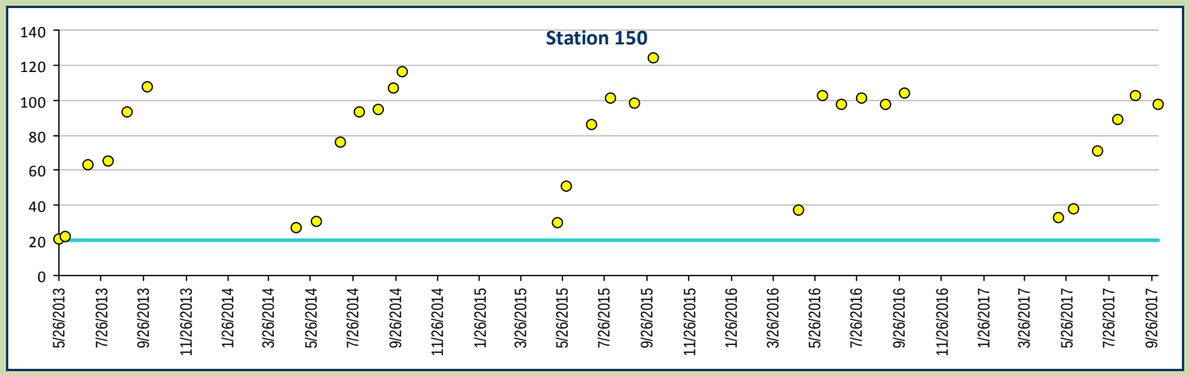
Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

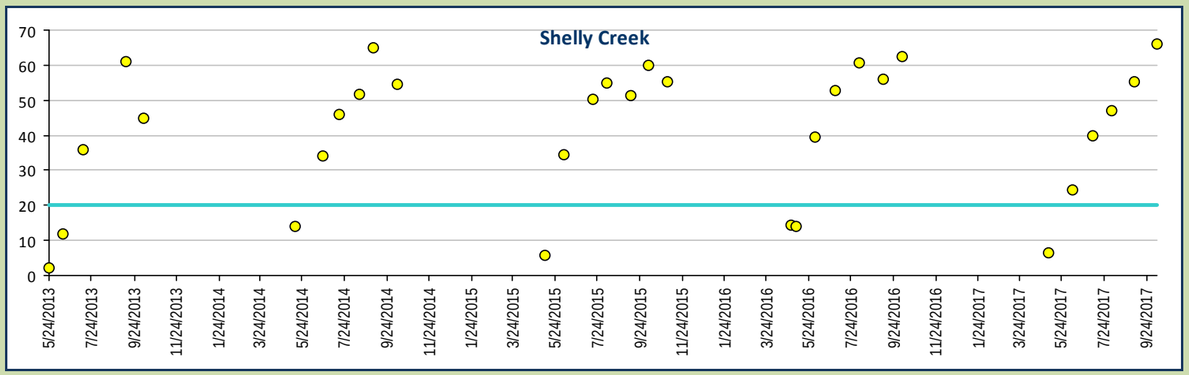
Alkalinity as CaCO3, units mg/L

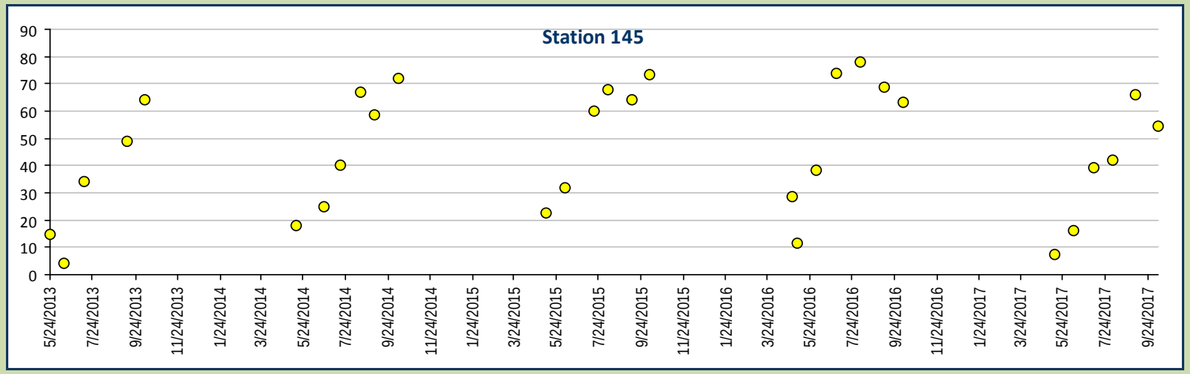
Aquatic Life - Fresh Water Chronic WQS mg/L

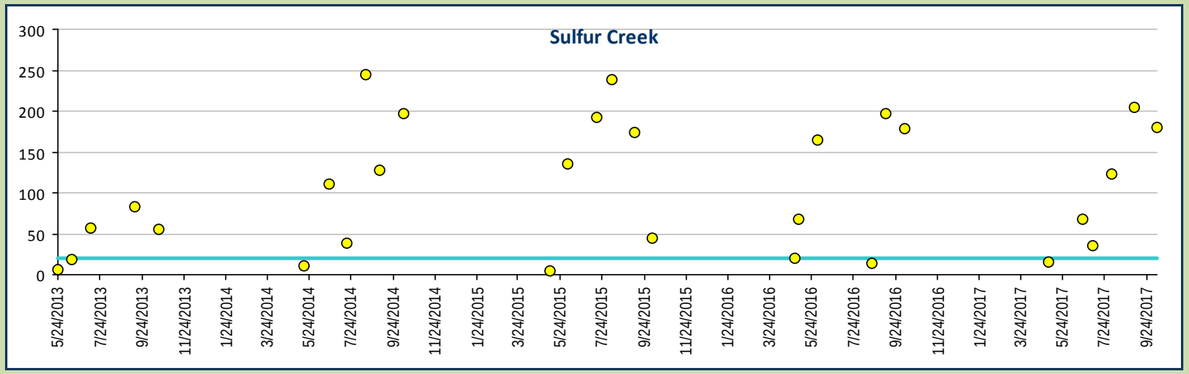
20 mg/L minimum

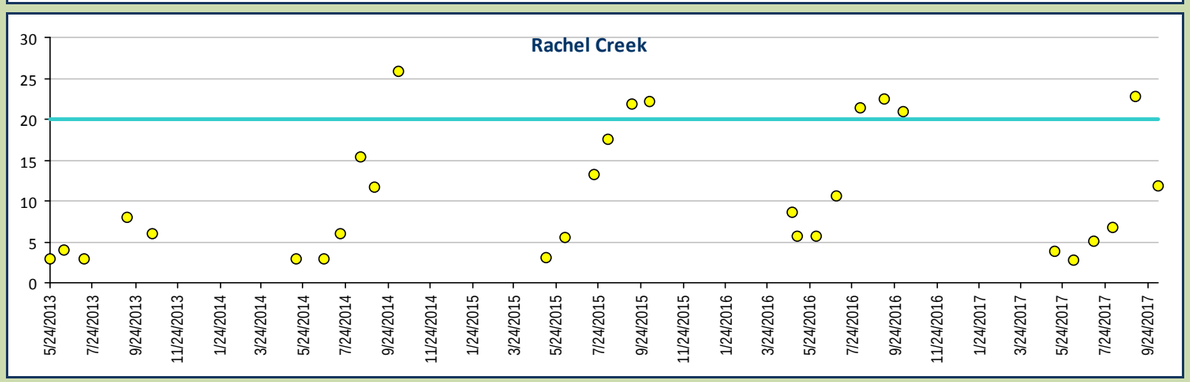


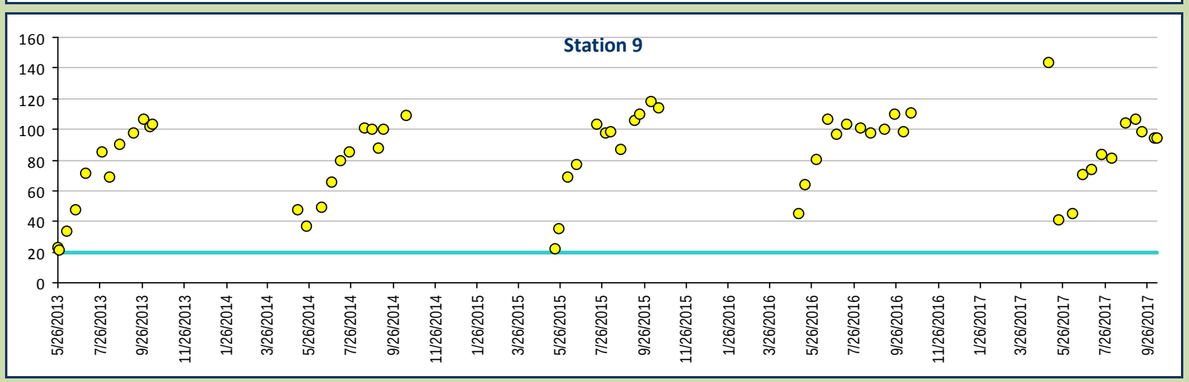








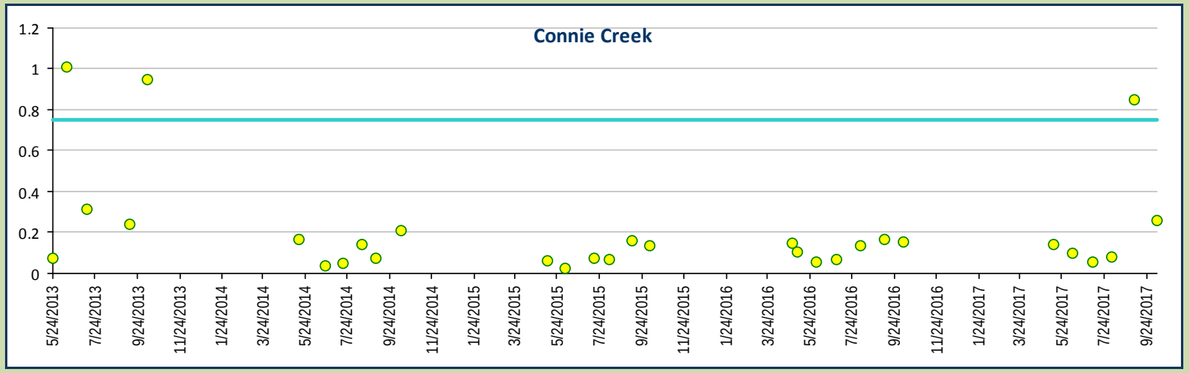
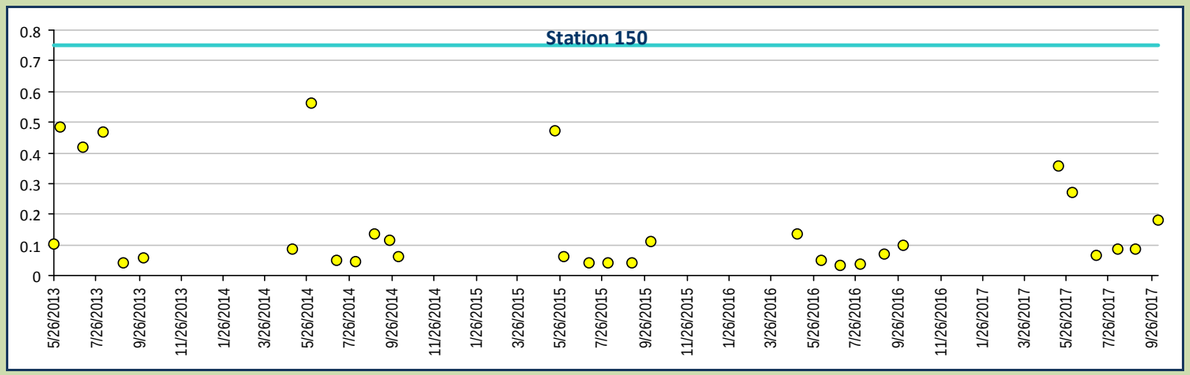
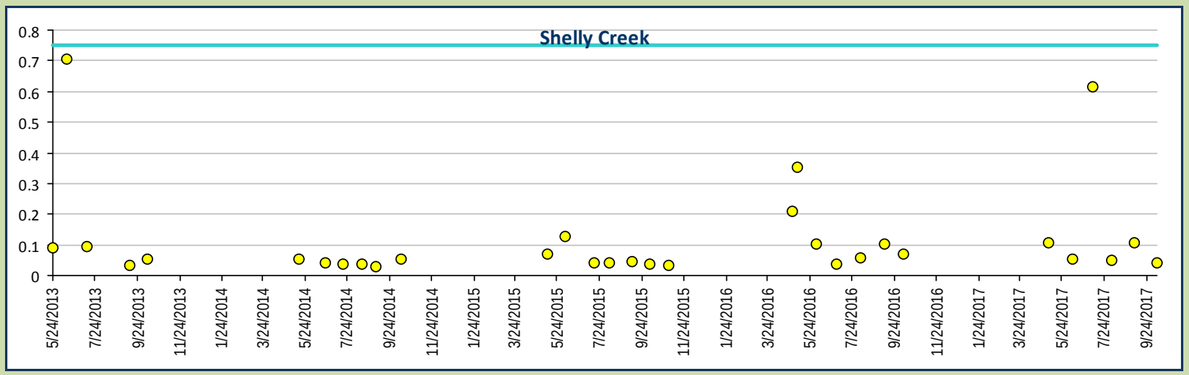
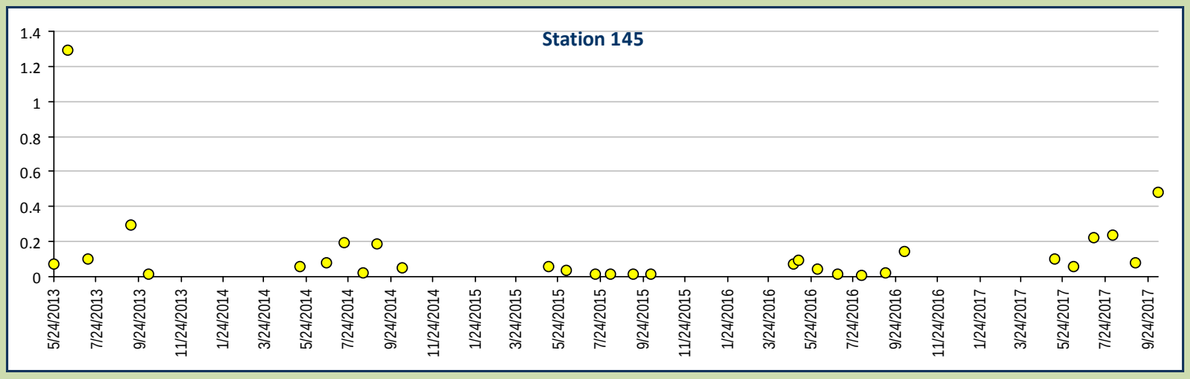
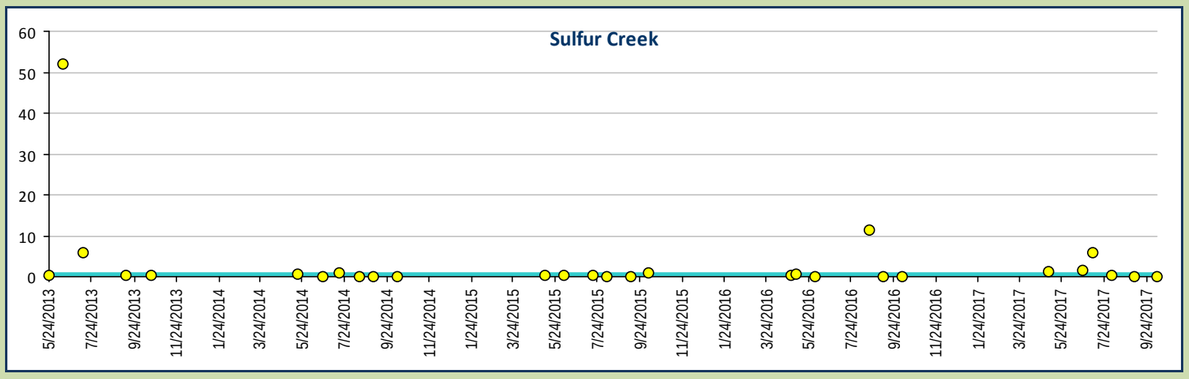
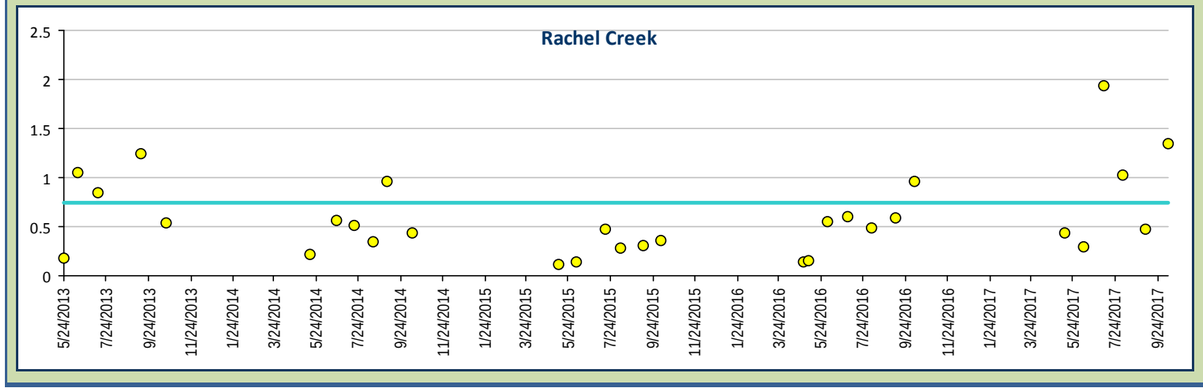
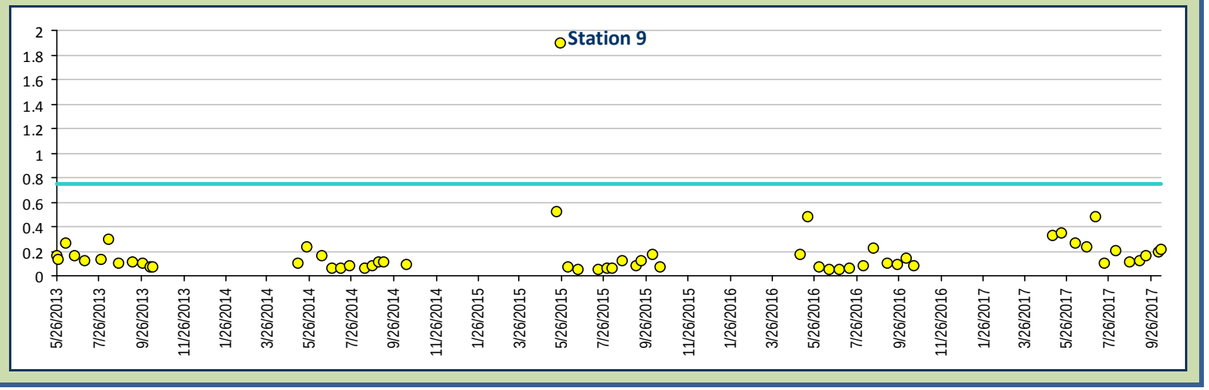




RED DOG MINE

Water Monitoring Mine Drainage
Water Quality Profile I , 5-Year Trend Charts

Aluminum, Total recoverable, units mg/L

Aquatic Life - Fresh Water Chronic WQS mg/L

If pH > 7 and hardness > 50. then WQS = 0.75mg/l