**SOLUBLE SALTS**  
(Irrigation Water Quality example)

**Dominant Cations**  
(Ions with a positive charge)

- Calcium: Ca\(^{++}\), 80 ppm
- Sodium: Na\(^{+}\), 115 ppm
- Magnesium: Mg\(^{++}\), 14 ppm
- Potassium: K\(^{+}\), 8 ppm

**Dominant Anions**  
(Ions with a negative charge)

- Sulfate: SO\(_4^{--}\), 192 ppm
- Chloride: Cl\(^{-}\), 92 ppm
- Bicarbonate: HCO\(_3^{-}\), 183 ppm
- Carbonate: CO\(_3^{2-}\), 6 ppm

**Total ppm:**

- 217 ppm (cations) + 473 ppm (anions) = 690 ppm = 690 mg/l (Soluble Salts)

**TDS (ppm) = EC (dS/m) x 640**, for EC between 0.1 and 5.0 dS/m  
**TDS (ppm) = EC (dS/m) x 800**, for EC > 5.0 dS/m  
- TDS = Total Dissolved Solids  
- ppm = parts per million; mg/l = milligrams/liter (ppm = mg/l)  
- EC = Electrical Conductivity

690 ÷ 640 = 1.08 dS/m (EC)  
(dS/m = mmhos/cm = mS/cm)  
dS/m = deciSiemens/meter  
mmhos/cm = milliMhos/centimeter  
mS/cm = milliSiemens/centimeter  
2.72 x ppm = lbs. of salts/ac-ft  
(2.72 x 690 ppm = 1,877 lbs/ac-ft)