Appendix F: Hydrology and Meteorology Input Data for SSTEMP

4Q3 Information (used in the SSTEMP model run for Rio Vallecitos):

$$4Q3 = 7.1023 \times 10^{-5} * DA^{0.68} * P_w^{3.59} * s^{1.23}$$

DA = drainage area, in square miles (183)
P_w = average basin mean winter precipitation 1961-1990, in inches (6.68)
S = Slope (.002)

4Q3 = .001 cfs

Air Temperature Corrections:

Ta = To + Ct * (Z-Zo)
where:

Ta = air temperature at elevation E (°C)
To = air temperature at elevation Eo (°C)
Ct = moist-air adiabatic rate (-0.00656 °C/m)
Z = mean elevation of the segment (m)
Zo =elevation of station (m)

Information from Albuquerque Dam Site, *www.wrcc.dri.edu*.

Waterbody	Zo	Z	Ct	To	Ta
Polvadera	1939	2192	-0.00656	10.4	8.7
Vallecitos	1939	2352	-0.00656	10.4	7.7

Relative Humidity Corrections:

Rh = Ro * [1.0640 ^ (To-Ta)] * [(Ta+273.16)/(To+273.16)]
where:

Rh = relative humidity for temperature Ta (decimal)
Ro = relative humidity at station (decimal)
Ta = air temperature at segment (°C)
To = air temperature at station (°C)
^ = exponentiation

Information from Albuquerque Dam Site, *www.wrcc.dri.edu*.

Waterbody	To	Ta	Ro	Rh
Polvadera	10.4	8.7	.6	.66
Vallecitos	10.4	7.7	.6	.71