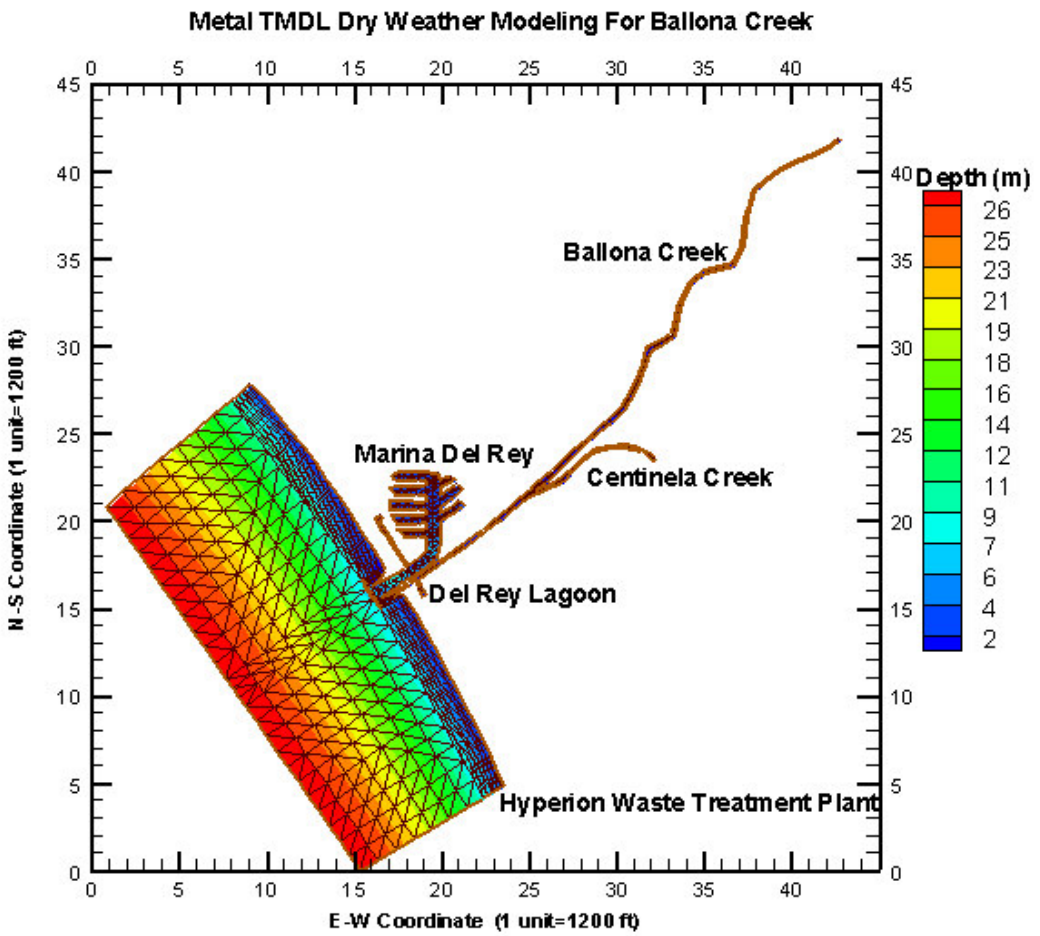


Figure 3.1 Computational Grid System for Ballona Creek Dry Weather Modeling

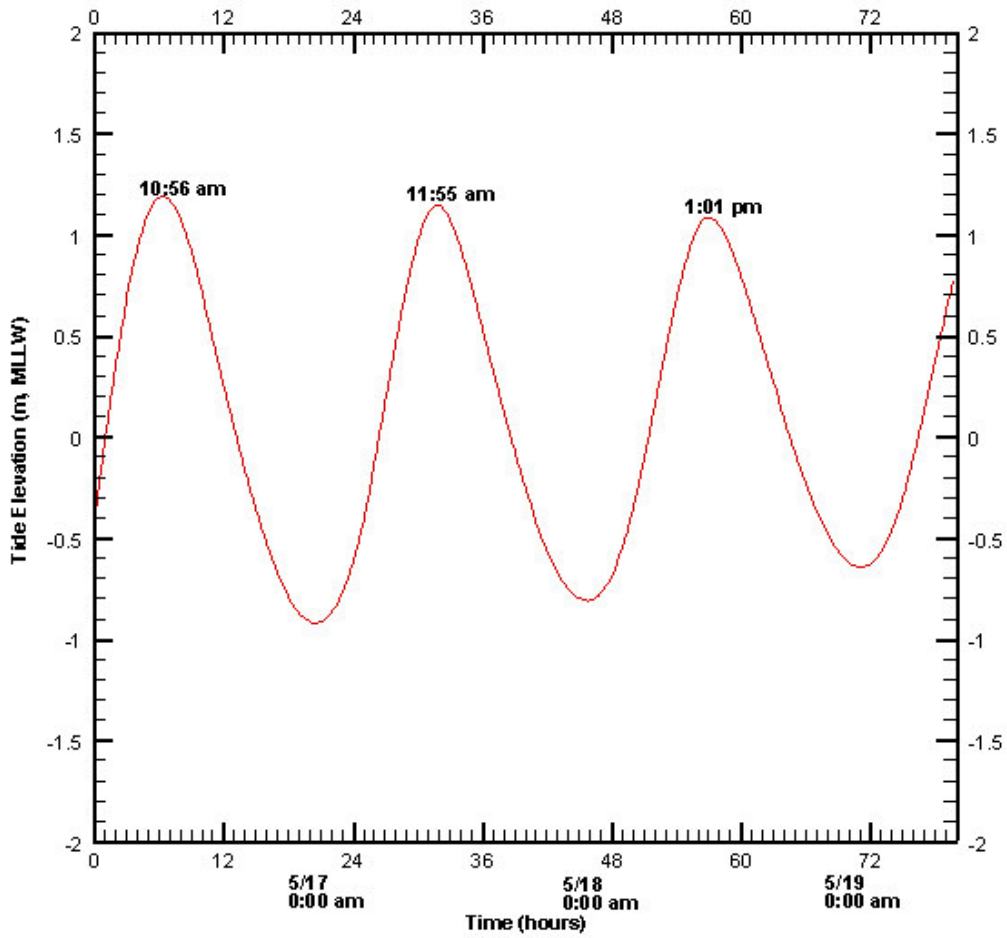


Figure 3.2 Tide Elevation Input (5/17/03) for Ballona Creek Modeling

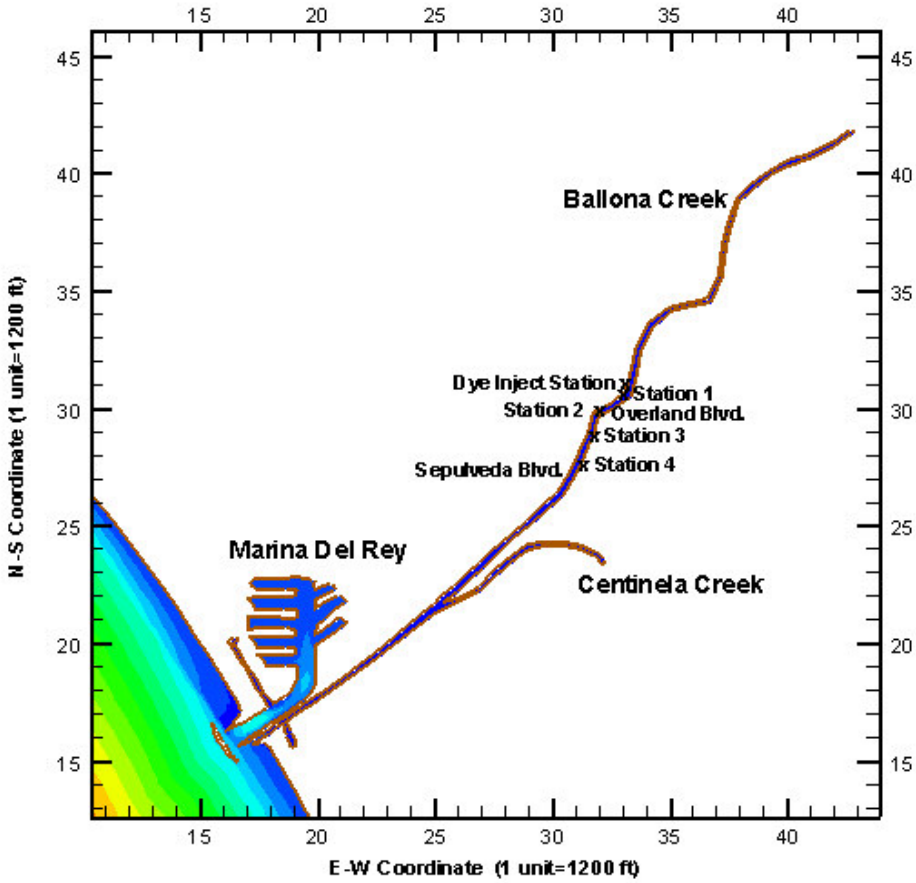


Figure 3.3 Locations of Measured Concentration Stations for Ballona Creek Dye Study

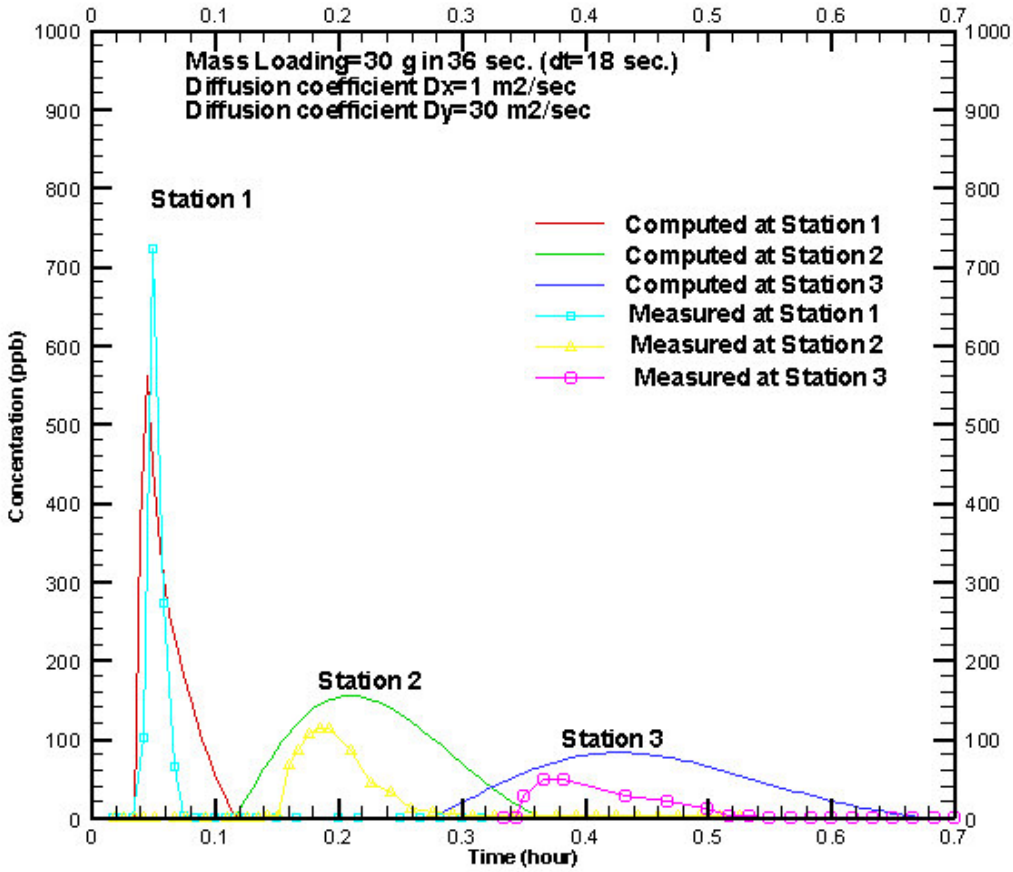


Figure 3.4 Comparions of computed to measured concentrations of dye study for Ballona Creek

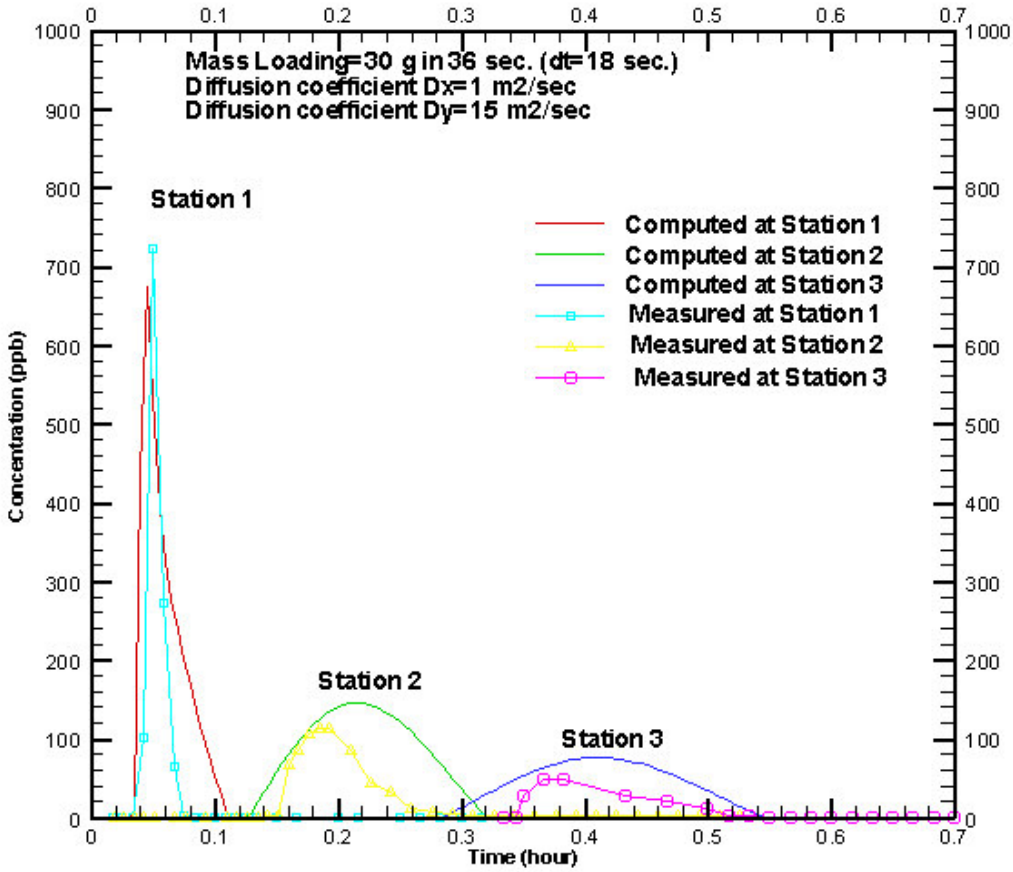


Figure 3.5 Comparions of computed to measured concentrations of dye study for Ballona Creek

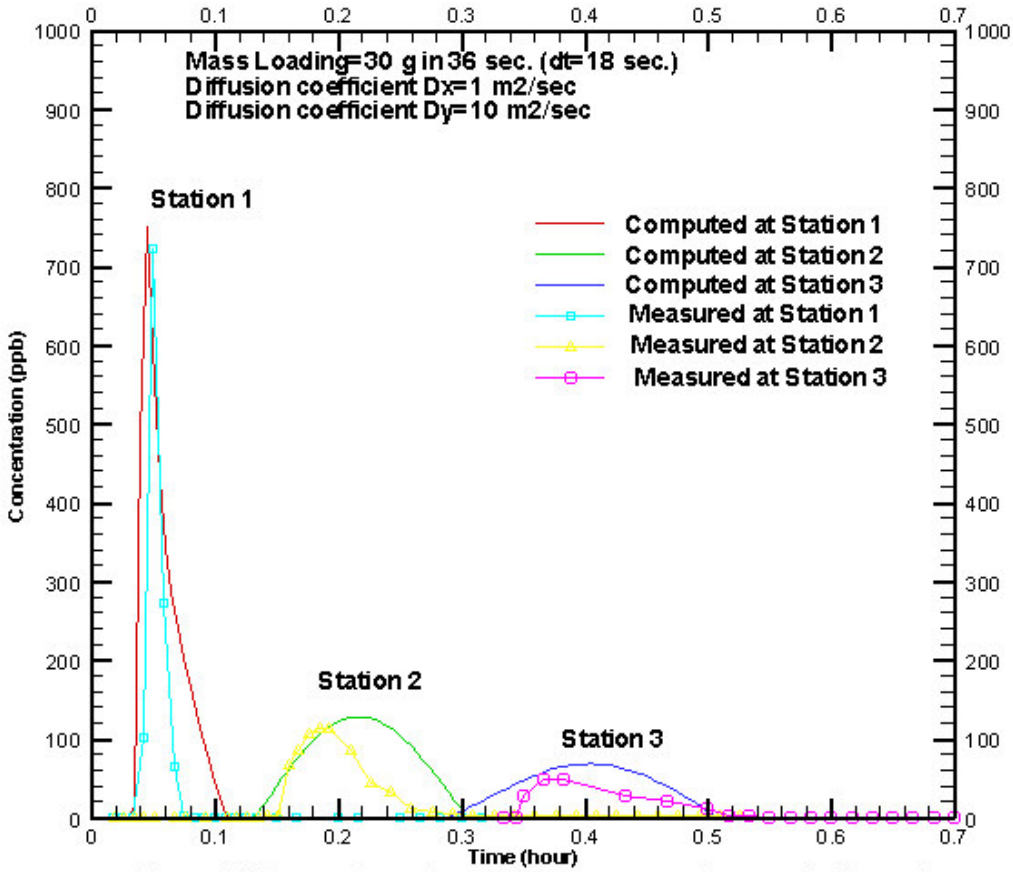
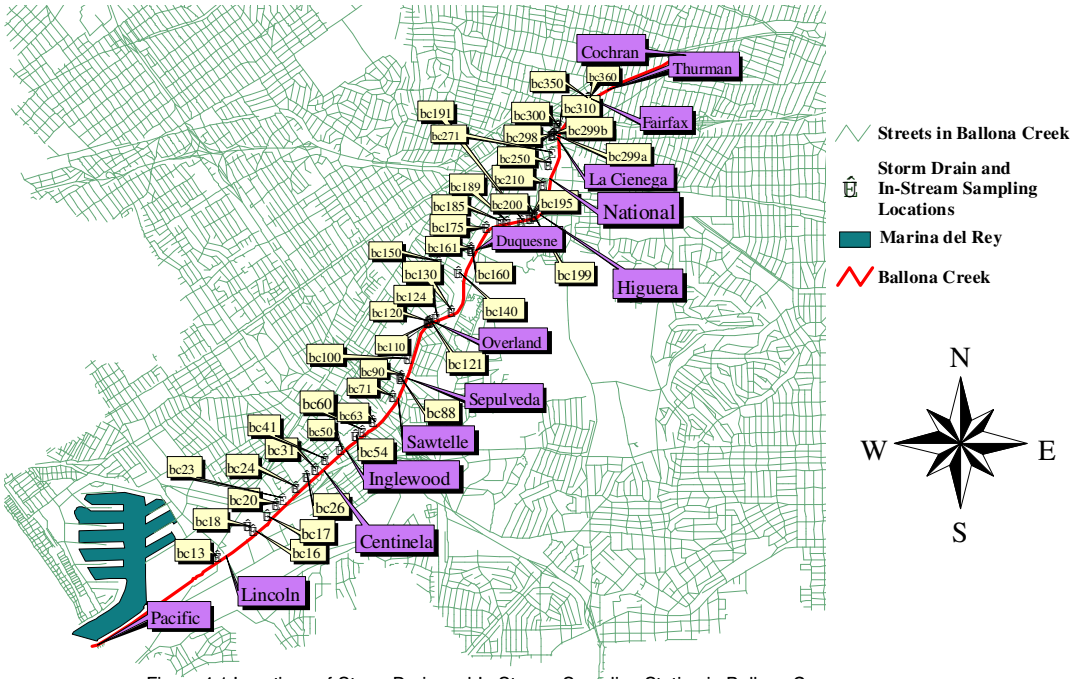


Figure 3.6 Comparions of computed to measured concentrations of dye study for Ballona Creek

Storm Drain and In-Stream Sampling Locations in Ballona Creek



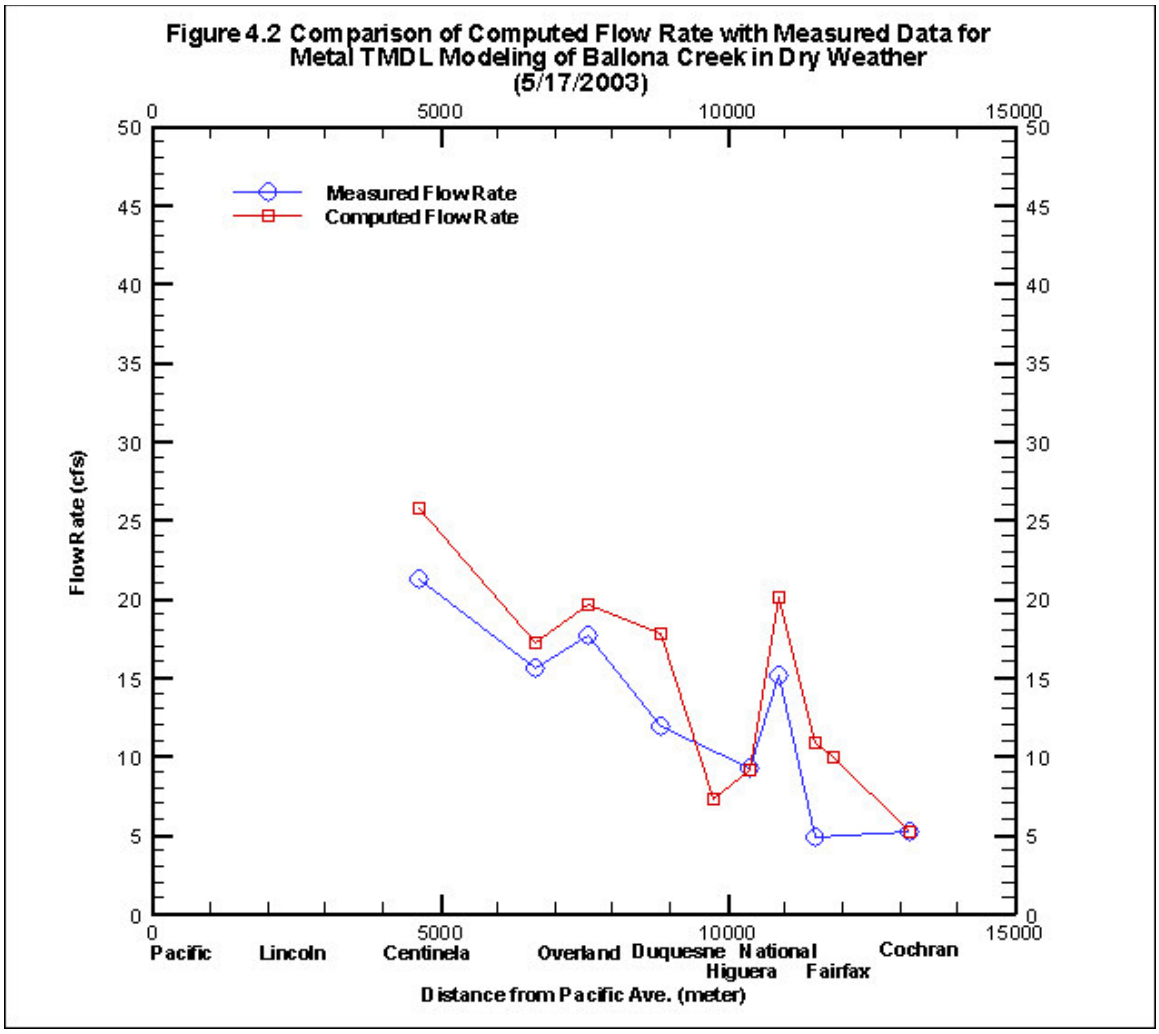


Figure 4.2 Comparison of Computed Flow Rate with Measured Data for Metal TMDL Modeling of Ballona Creek in Dry Weather (5/17/2003)
Measured Flow Rate
Computed Flow Rate
Flow Rate (cfs)
0
5
10
15
20
25
30
35
40
45
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

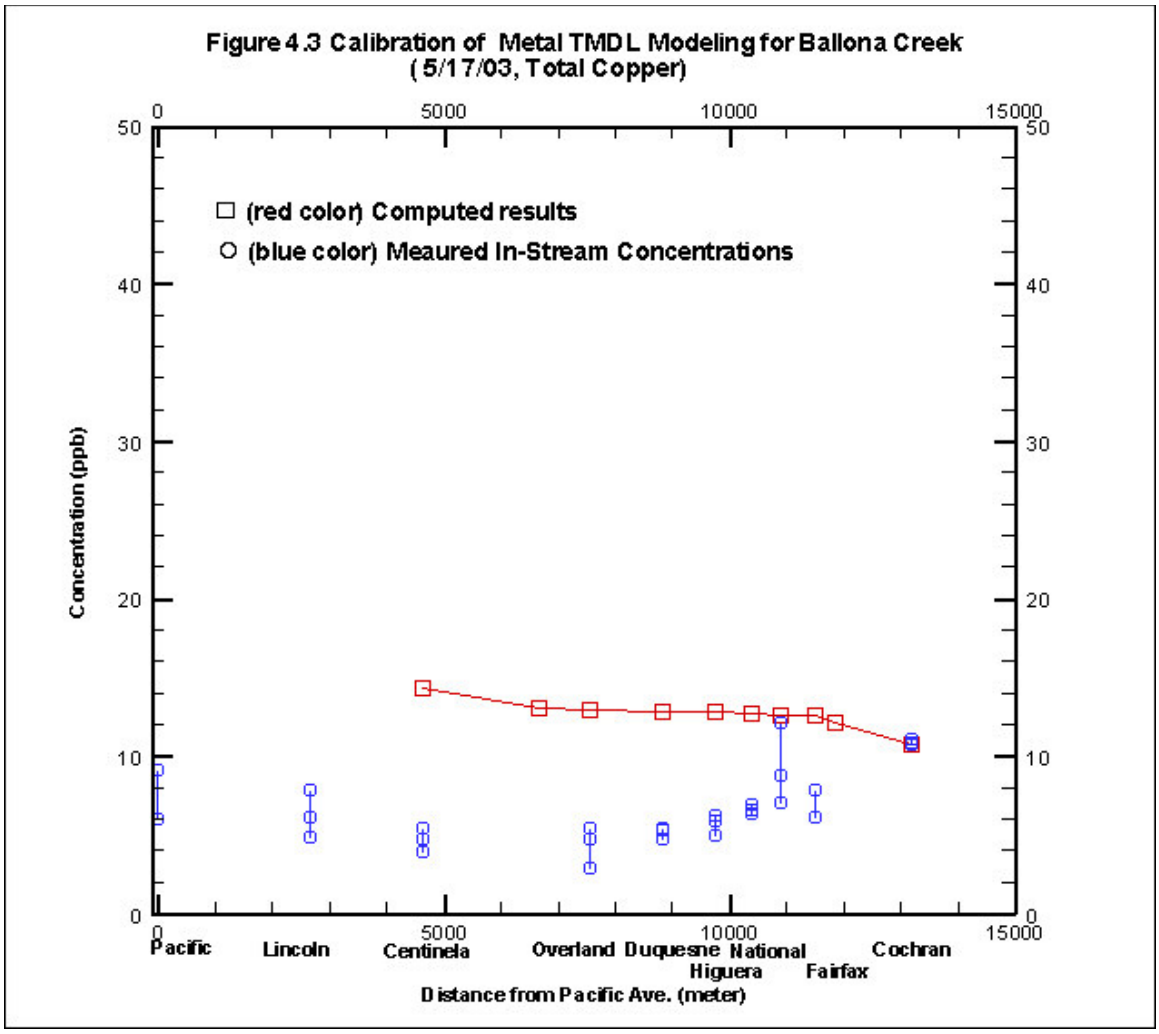


Figure 4.3 Calibration of Metal TMDL Modeling for Ballona Creek
(5/17/03, Total Copper)
(red color) Computed results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
0
10
20
30
40
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

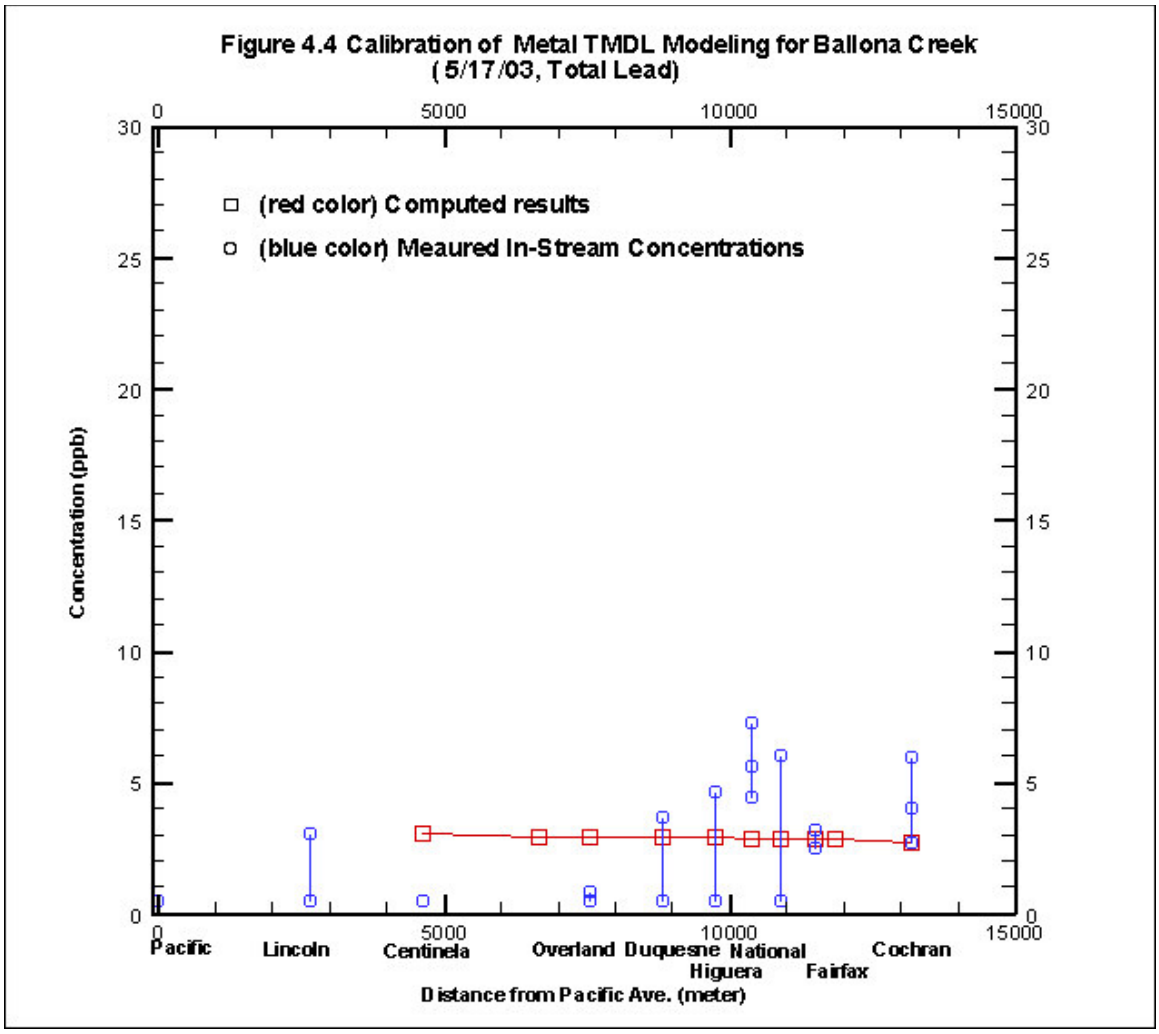


Figure 4.4 Calibration of Metal TMDL Modeling for Ballona Creek
(5/17/03, Total Lead)
(red color) Computed results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
0
5
10
15
20
25
30
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

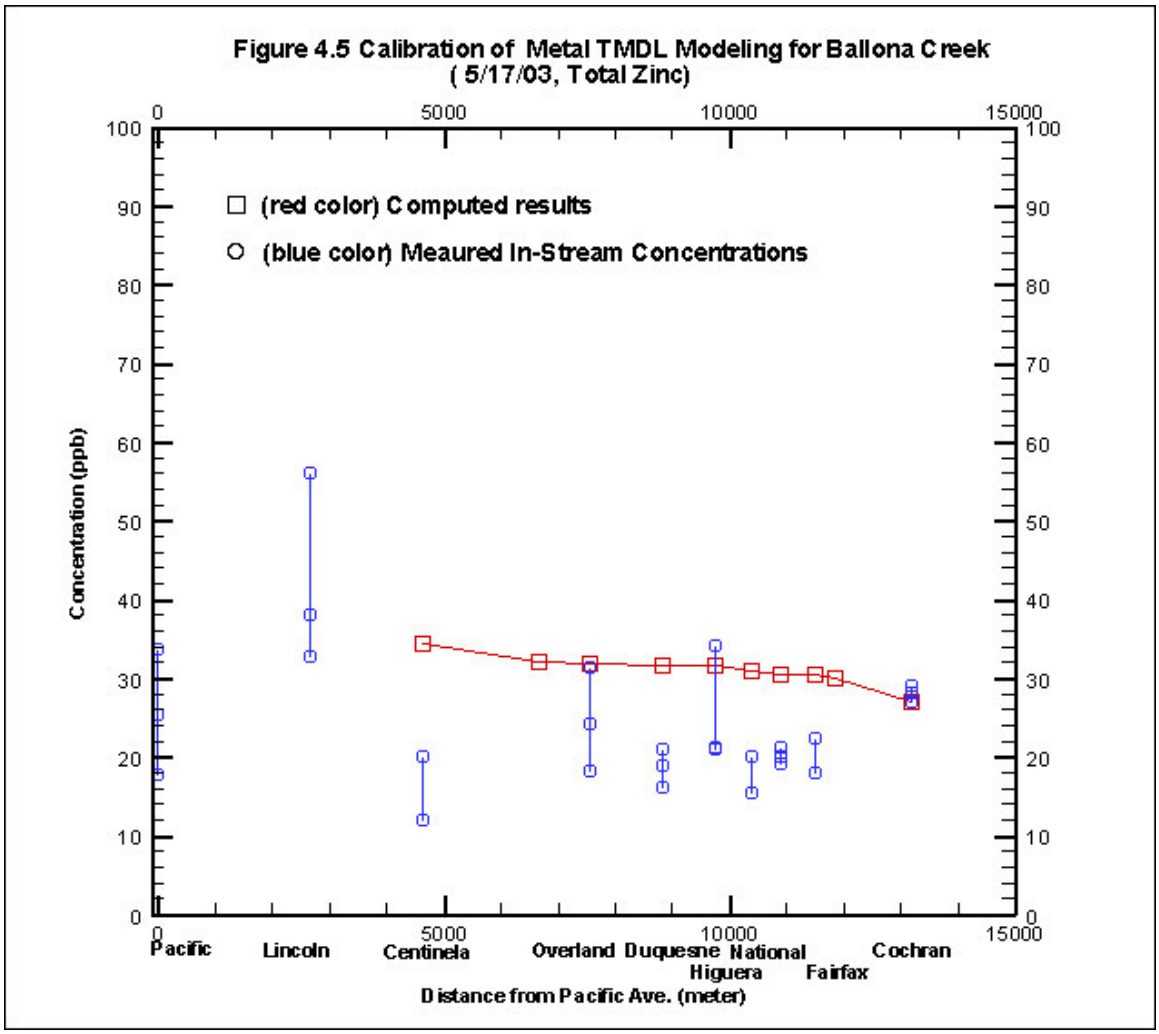


Figure 4.5 Calibration of Metal TMDL Modeling for Ballona Creek
(5/17/03, Total Zinc)
(red color) Computed results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
Distance from Pacific Ave. (meter)
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
0
5000
10000
15000
0
10
20
30
40
50
60
70
80
90
100

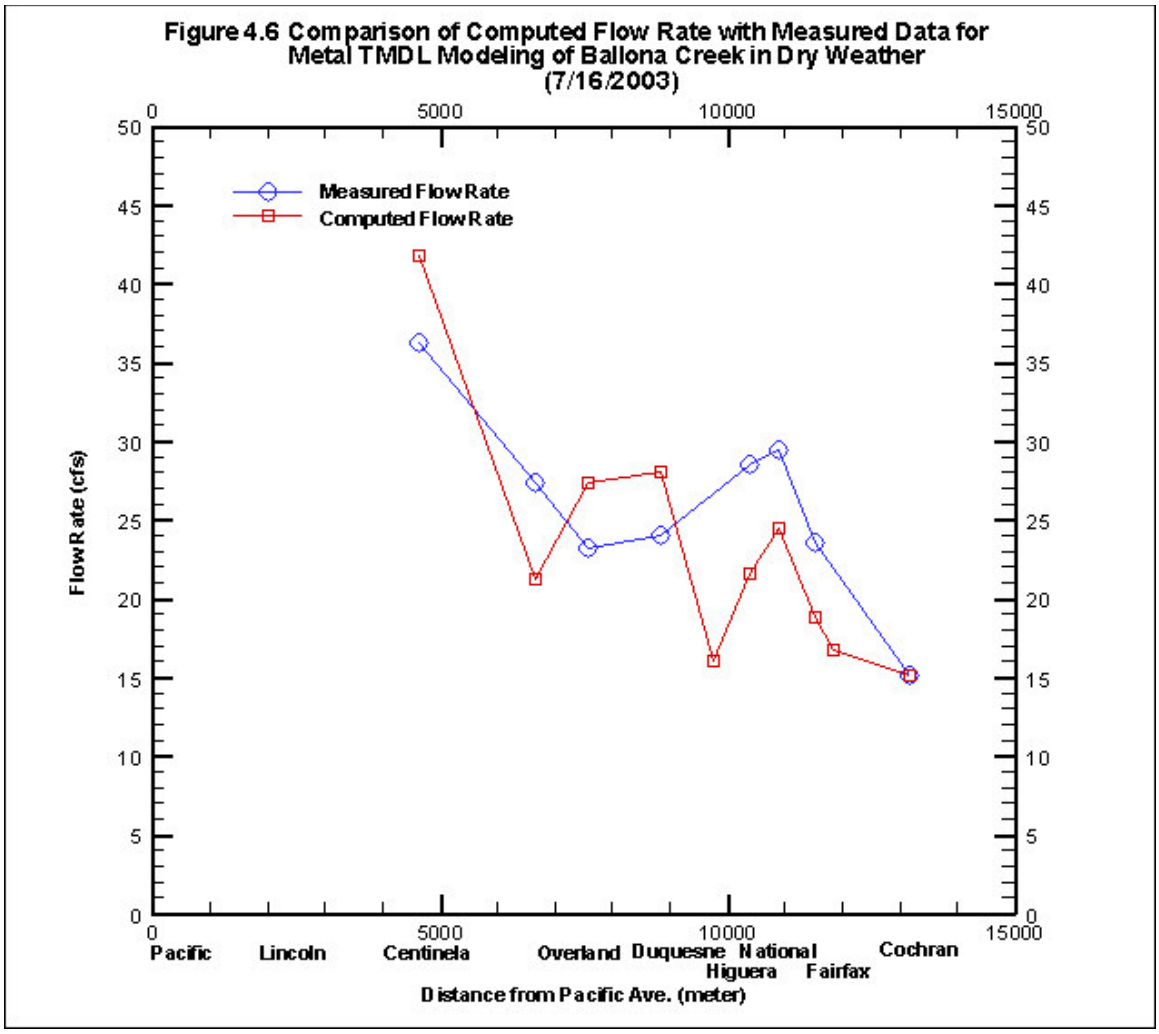


Figure 4.6 Comparison of Computed Flow Rate with Measured Data for Metal TMDL Modeling of Ballona Creek in Dry Weather (7/16/2003)
Measured Flow Rate
Computed Flow Rate
Flow Rate (cfs)
0
5
10
15
20
25
30
35
40
45
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
National
Higuera
Fairfax
Cochran
Distance from Pacific Ave. (meter)

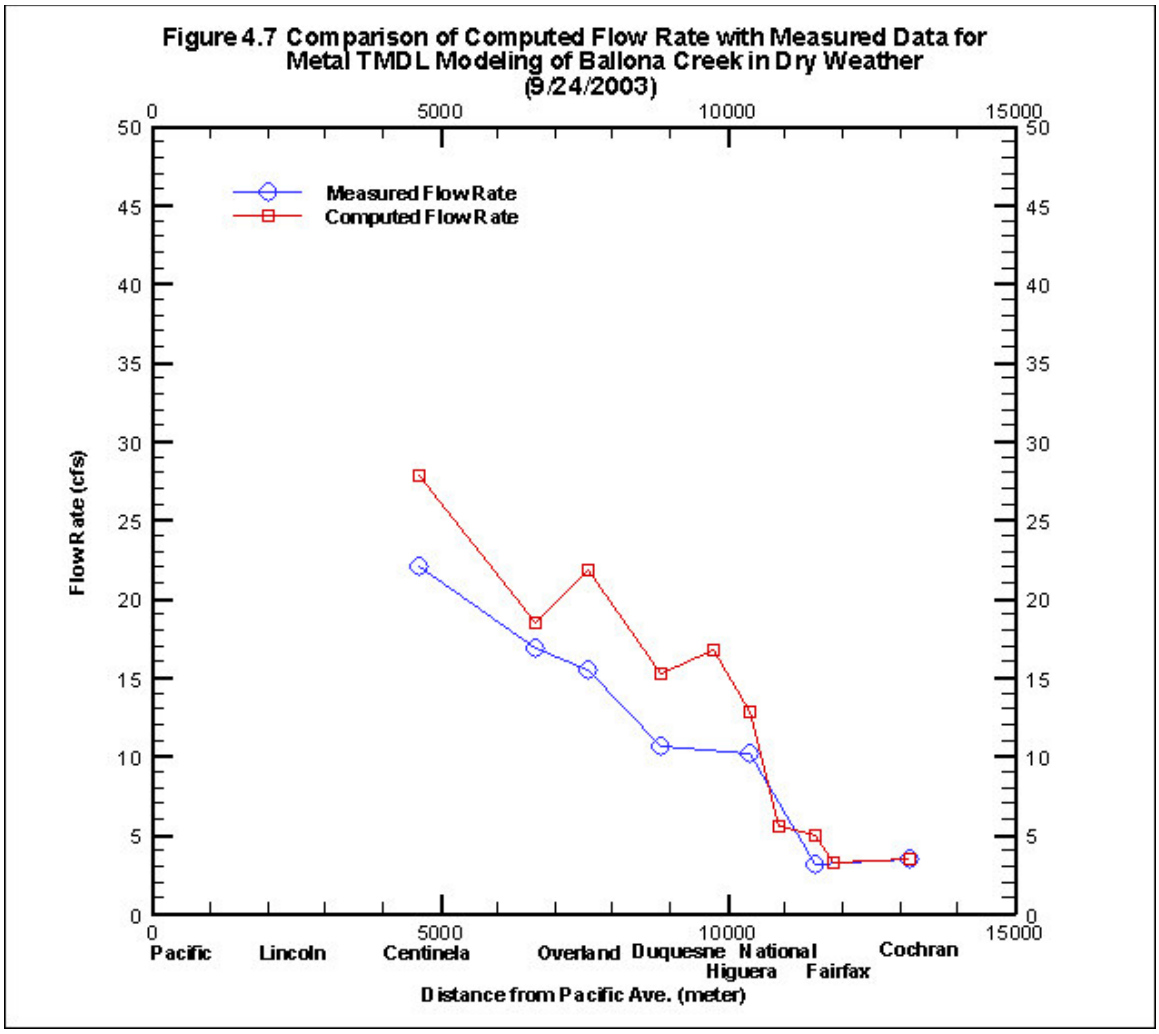


Figure 4.7 Comparison of Computed Flow Rate with Measured Data for Metal TMDL Modeling of Ballona Creek in Dry Weather (9/24/2003)
Measured Flow Rate
Computed Flow Rate
Flow Rate (cfs)
0
5
10
15
20
25
30
35
40
45
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
National
Higuera
Fairfax
Cochran
Distance from Pacific Ave. (meter)

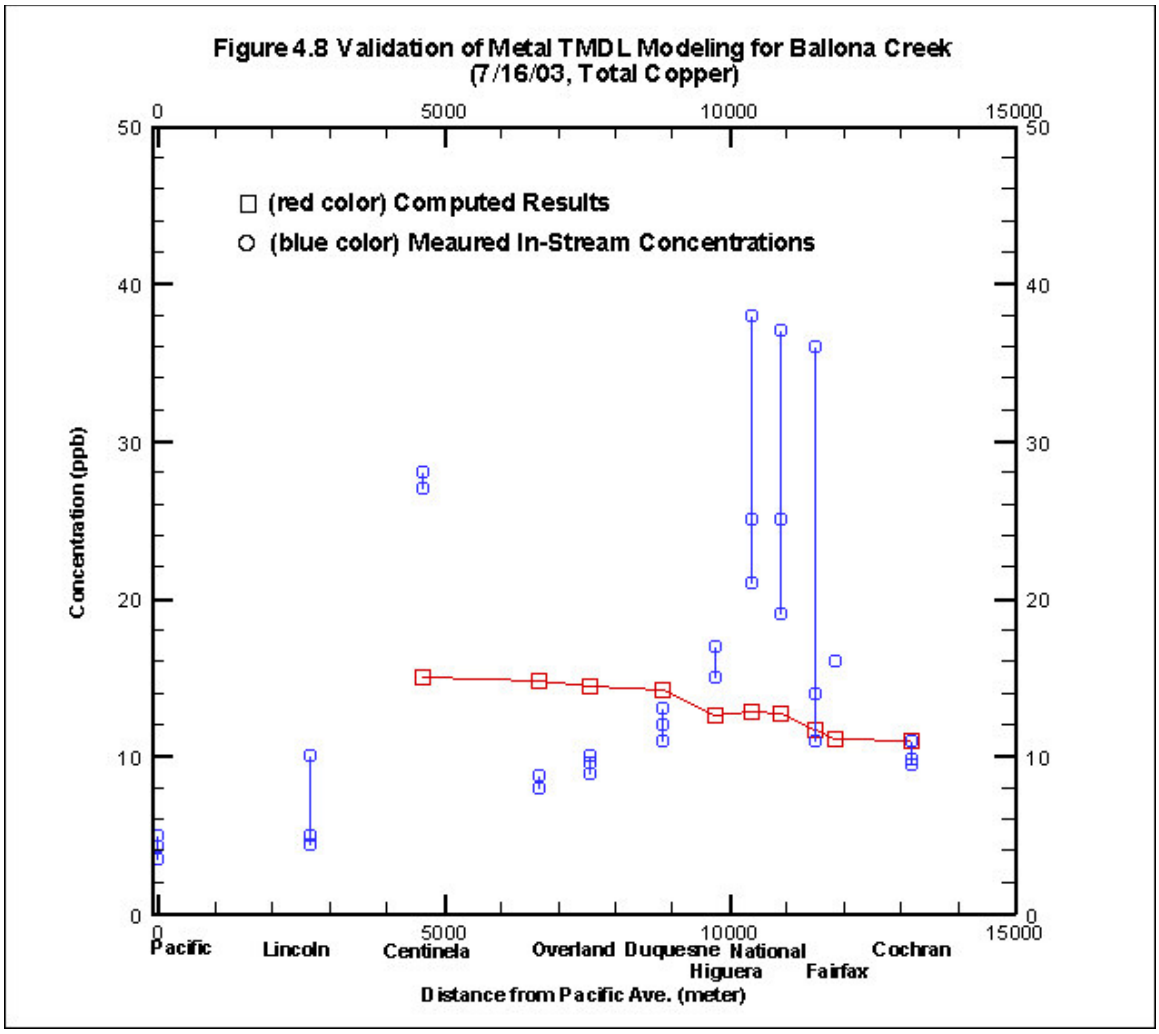


Figure 4.8 Validation of Metal TMDL Modeling for Ballona Creek
(7/16/03, Total Copper)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
0
10
20
30
40
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

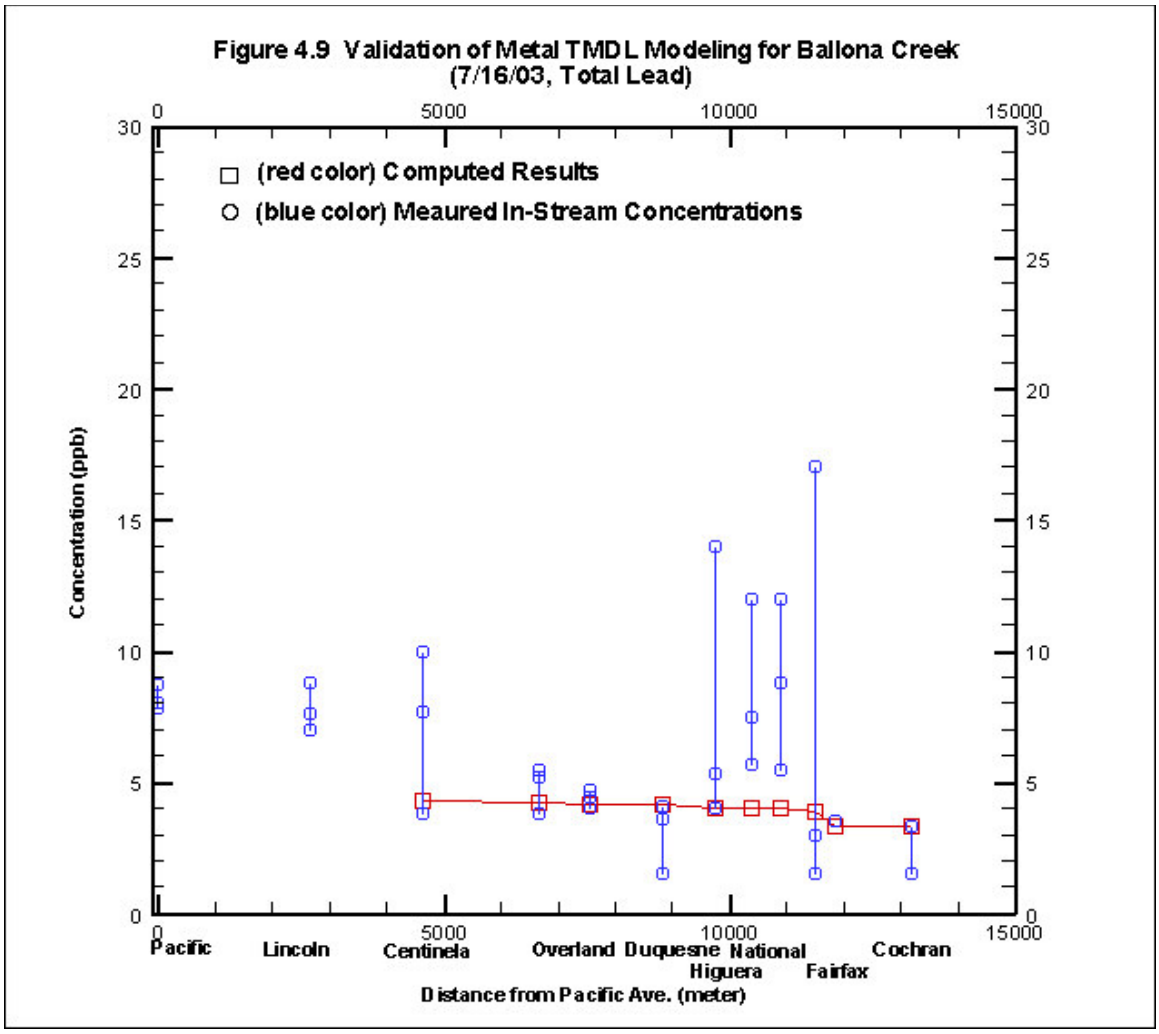


Figure 4.9 Validation of Metal TMDL Modeling for Ballona Creek
(7/16/03, Total Lead)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
0
5
10
15
20
25
30
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

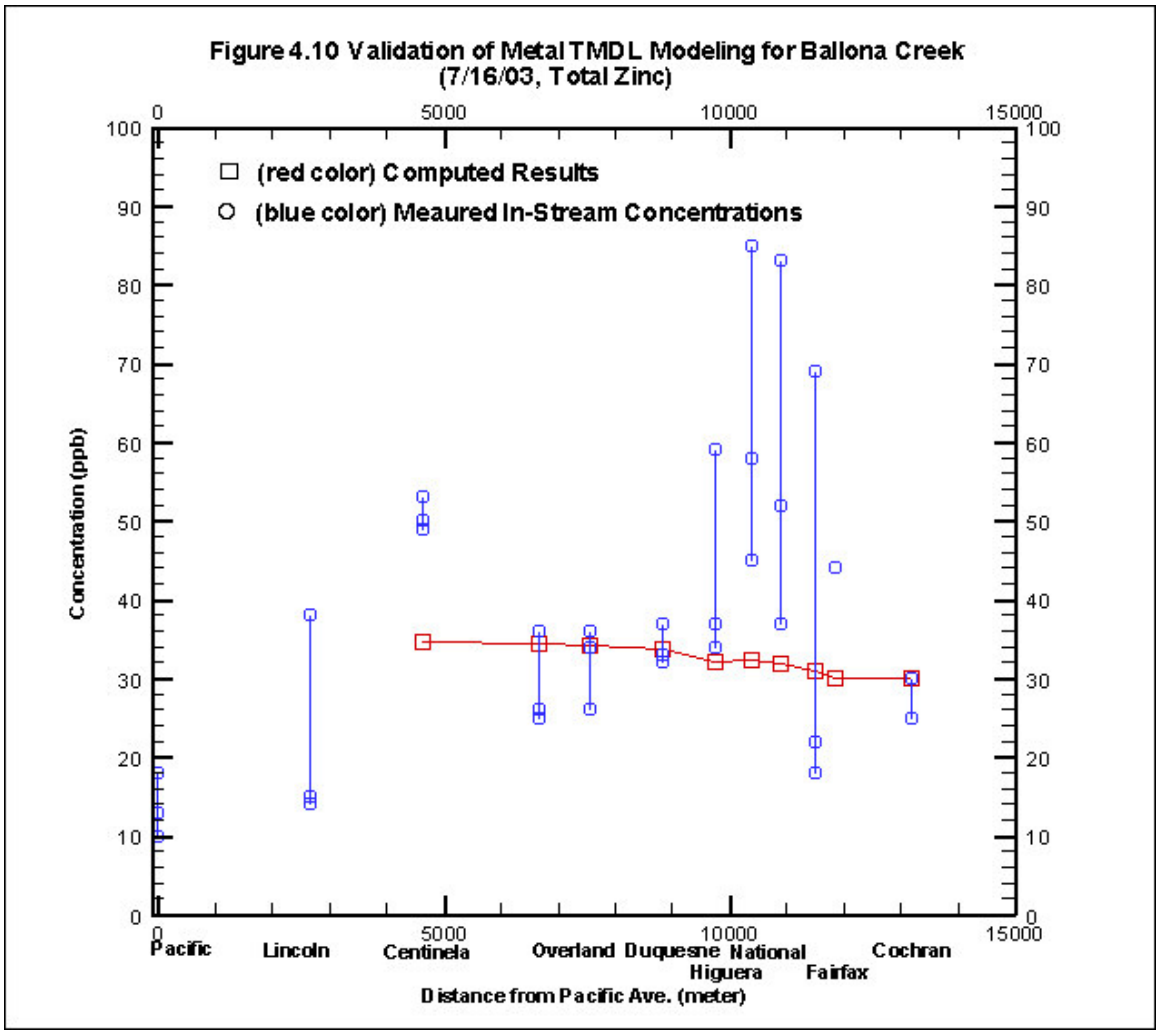


Figure 4.10 Validation of Metal TMDL Modeling for Ballona Creek
(7/16/03, Total Zinc)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
Distance from Pacific Ave. (meter)
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
0
5000
10000
15000
0
10
20
30
40
50
60
70
80
90
100

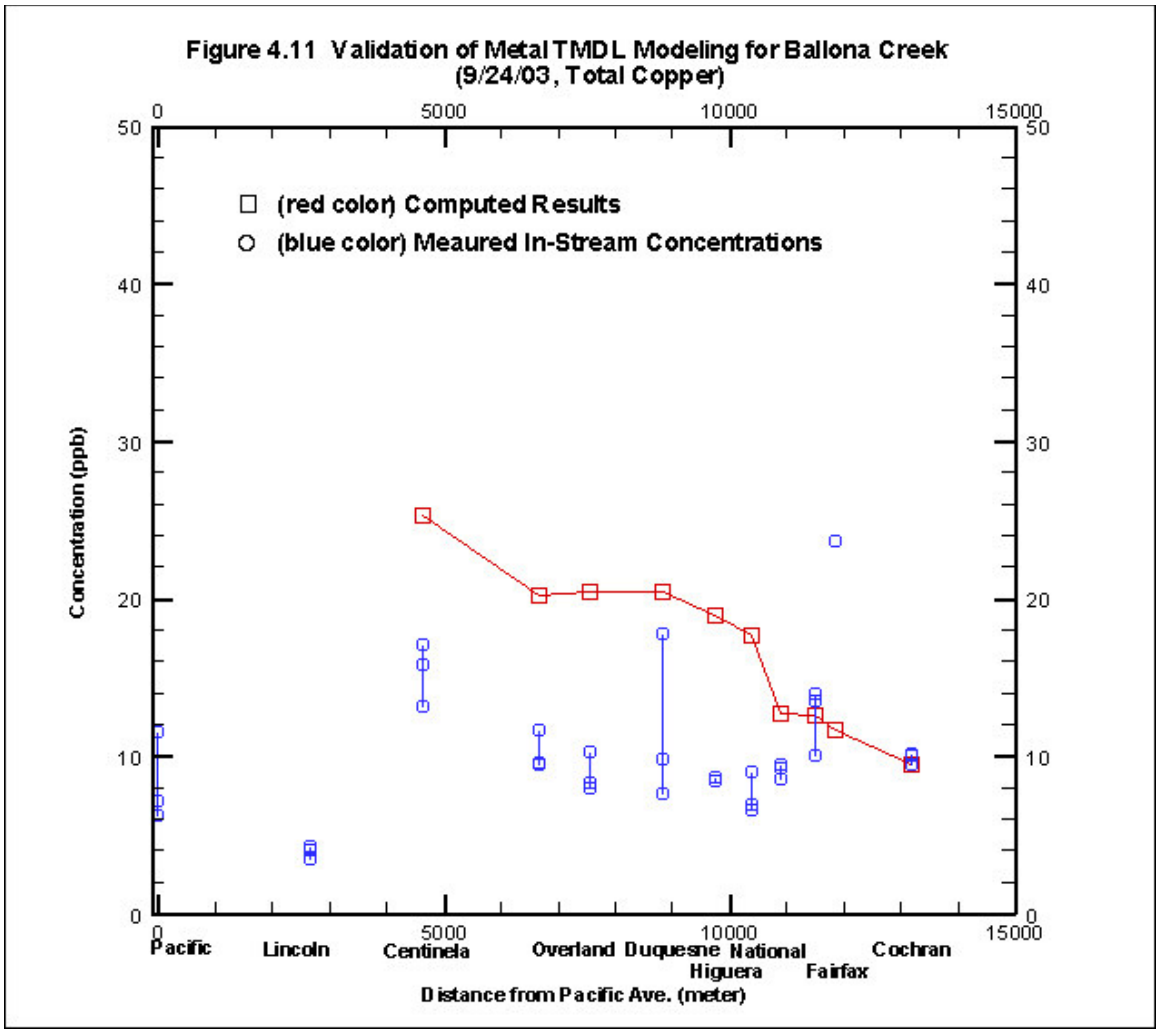


Figure 4.11 Validation of Metal TMDL Modeling for Ballona Creek
(9/24/03, Total Copper)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
0
10
20
30
40
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

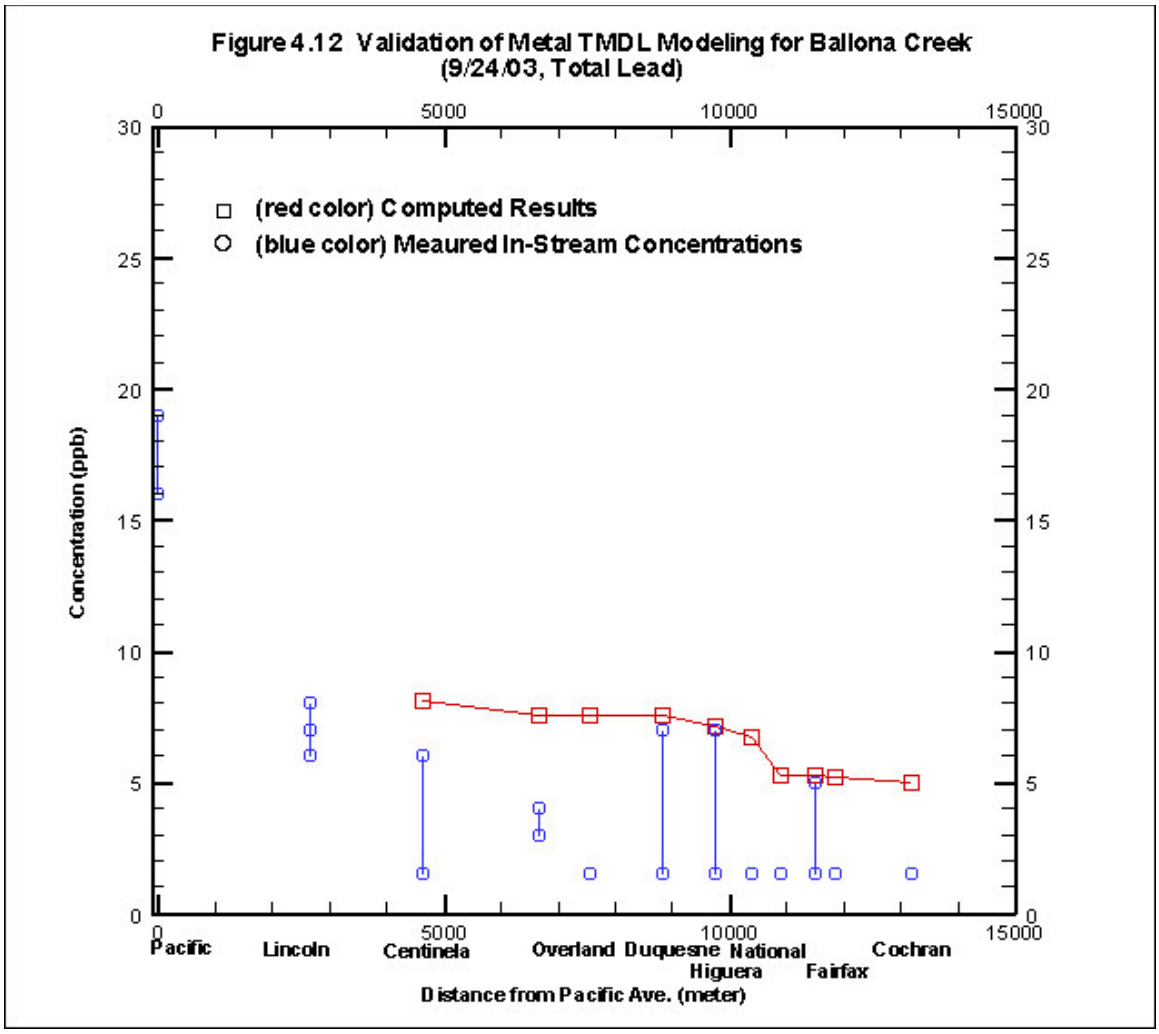


Figure 4.12 Validation of Metal TMDL Modeling for Ballona Creek
(9/24/03, Total Lead)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
Distance from Pacific Ave. (meter)
0
5000
10000
15000
0
5
10
15
20
25
30
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran

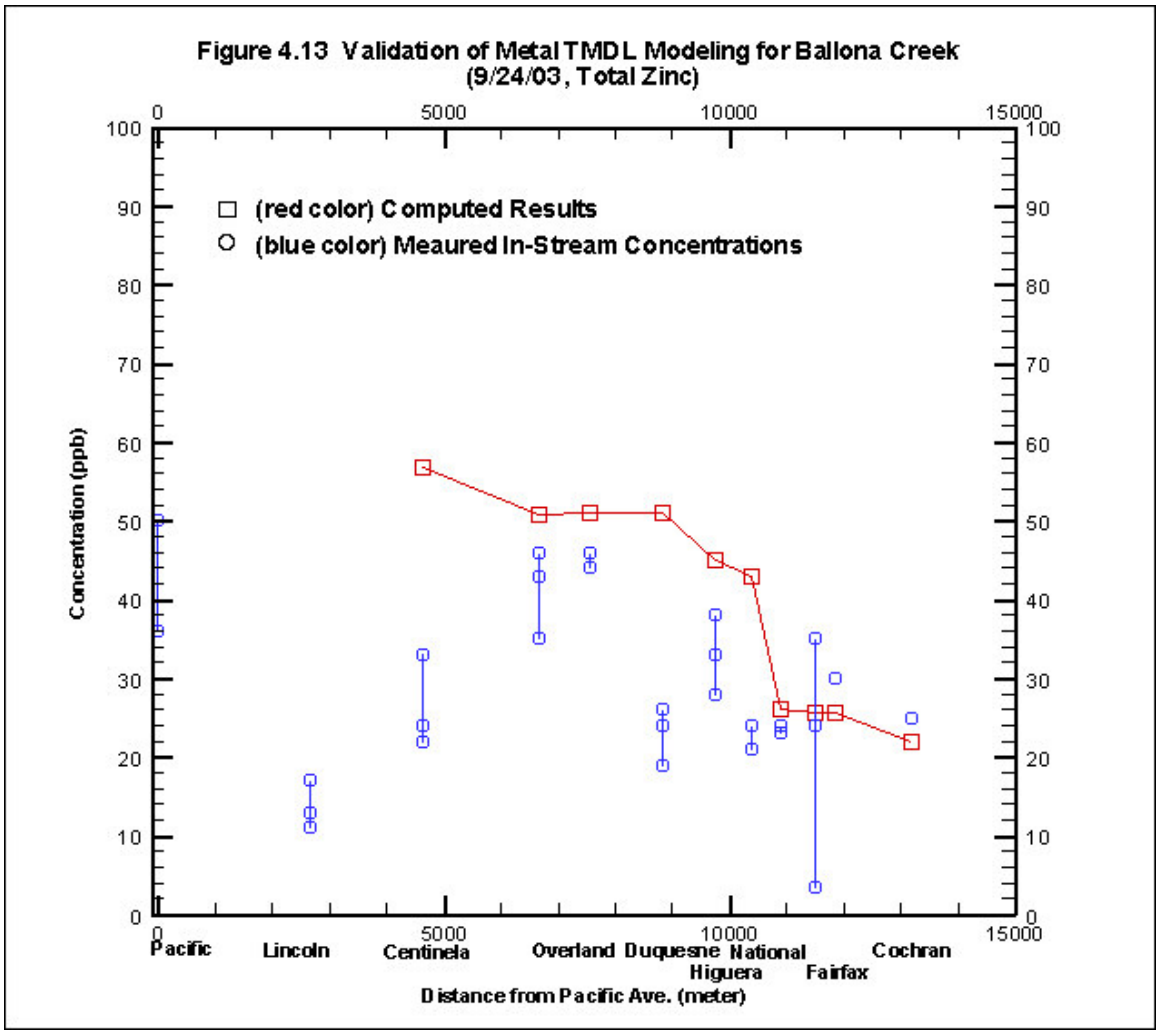


Figure 4.13 Validation of Metal TMDL Modeling for Ballona Creek
(9/24/03, Total Zinc)
(red color) Computed Results
(blue color) Meaured In-Stream Concentrations
Concentration (ppb)
Distance from Pacific Ave. (meter)
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
0
5000
10000
15000
0
10
20
30
40
50
60
70
80
90
100

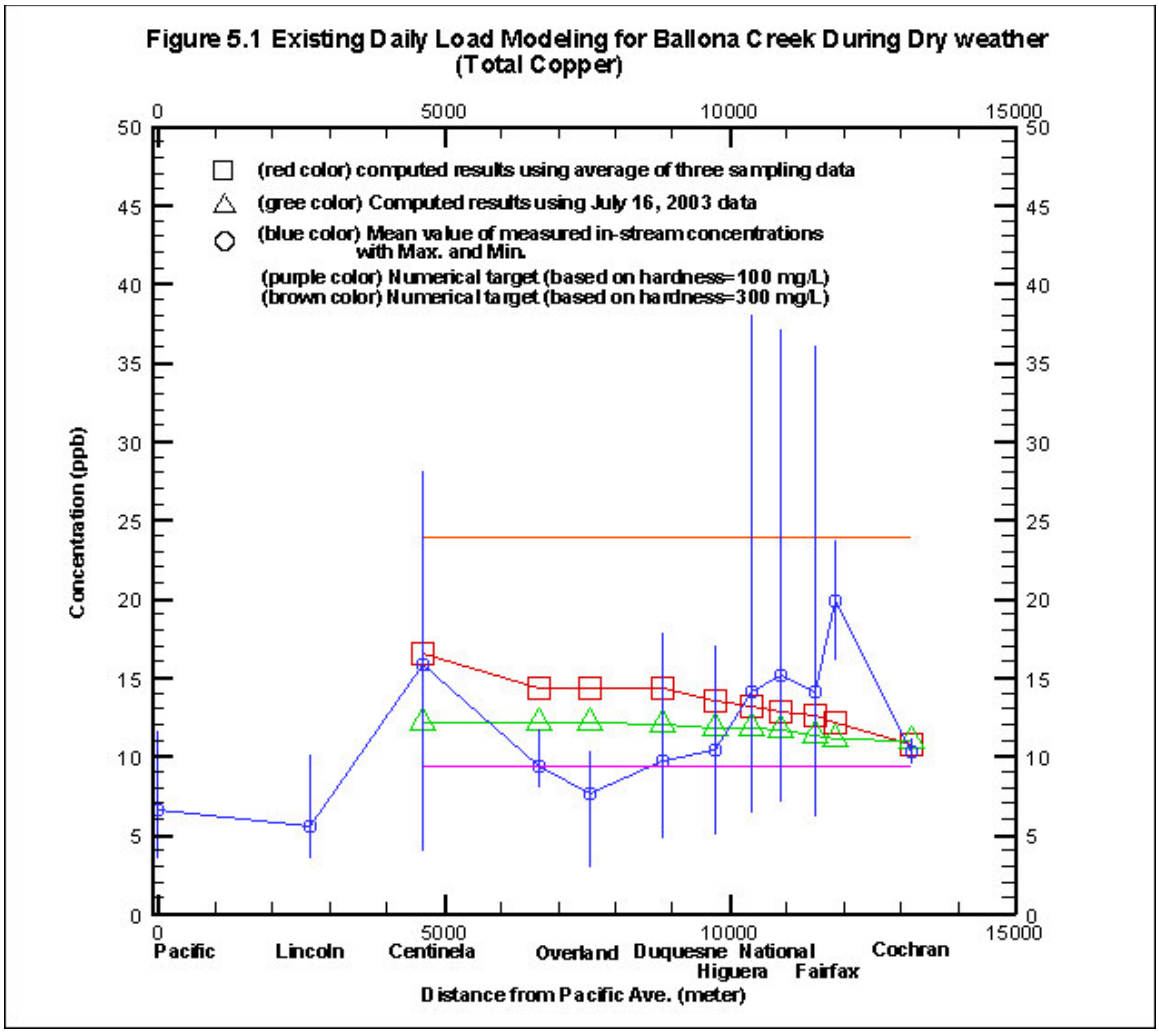
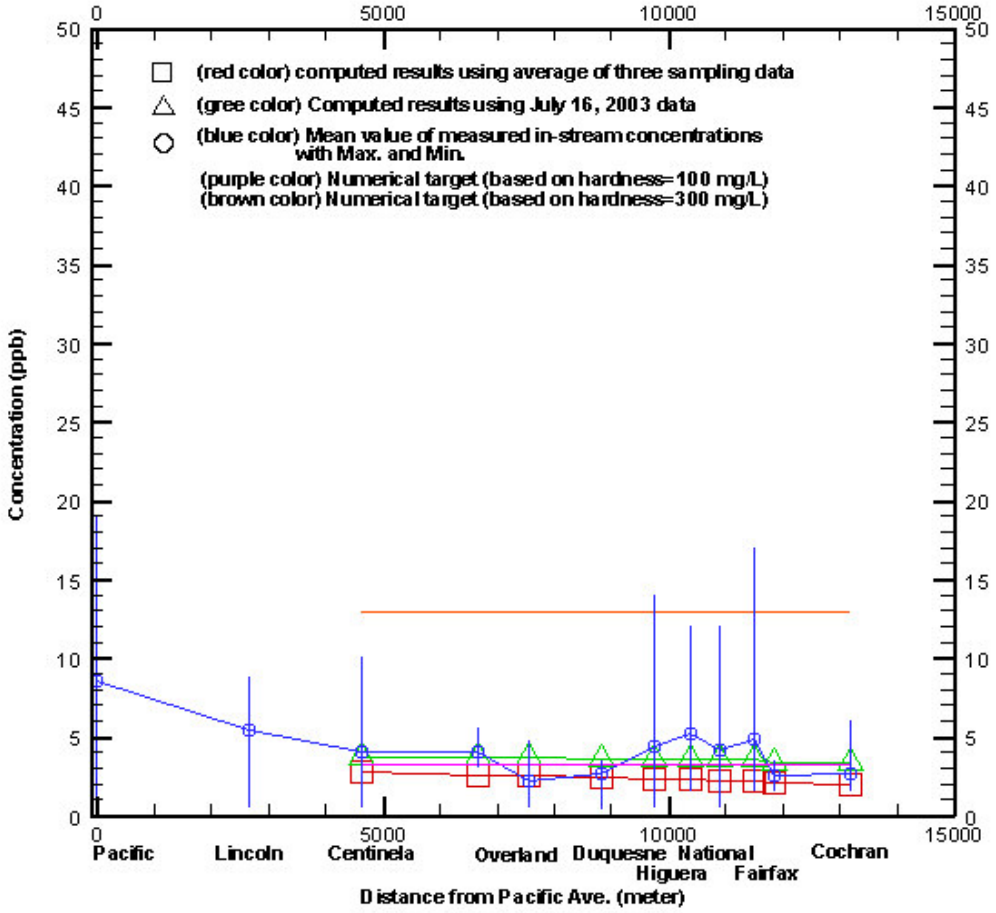


Figure 5.1 Existing Daily Load Modeling for Ballona Creek During Dry weather
(Total Copper)
(red color) computed results using average of three sampling data
(gree color) Computed results using July 16, 2003 data
(blue color) Mean value of measured in-stream concentrations with Max. and Min.
(purple color) Numerical target (based on hardness=100 mg/L)
(brown color) Numerical target (based on hardness=300 mg/L)
Concentration (ppb)
0
5
10
15
20
25
30
35
40
45
50
0
5000
10000
15000
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran
Distance from Pacific Ave. (meter)

Figure 5.2 Existing Daily Load Modeling for Ballona Creek During Dry weather (Total Lead)



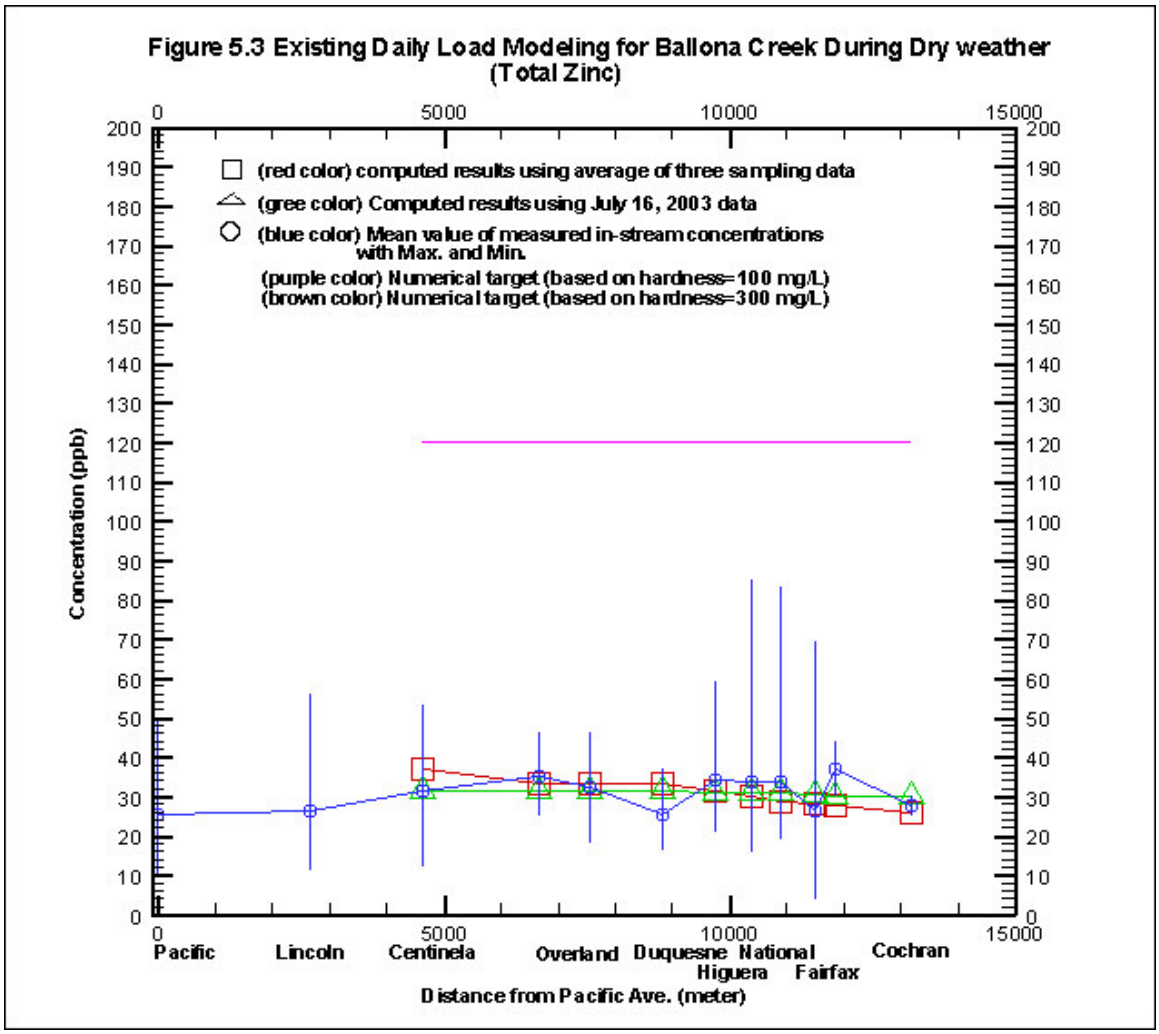


Figure 5.3 Existing Daily Load Modeling for Ballona Creek During Dry weather
(Total Zinc)
(red color) computed results using average of three sampling data
(gree color) Computed results using July 16, 2003 data
(blue color) Mean value of measured in-stream concentrations with Max. and Min.
(purple color) Numerical target (based on hardness=100 mg/L)
(brown color) Numerical target (based on hardness=300 mg/L)
Concentration (ppb)
Distance from Pacific Ave. (meter)
Pacific
Lincoln
Centinela
Overland
Duquesne
Higuera
National
Fairfax
Cochran