

PREFACE

Knowledge of the characteristics of highway runoff (concentrations and loads of constituents and the physical and chemical processes which produce this runoff) and the performance of best management practices are important for decision makers, planners, and highway engineers to assess and mitigate possible adverse impacts of highway runoff on the Nation's receiving waters. In November 1998, the Federal Highway Administration, the Massachusetts Highway Department, and the U.S. Geological Survey began an investigation to determine the effectiveness of three best management practices in reducing suspended-solid loads and related constituents along the Southeast Expressway (Interstate Route 93) in Boston, Massachusetts.

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CONVERSION FACTORS, WATER-QUALITY UNITS, AND ABBREVIATIONS

CONVERSION FACTORS

Multiply	By	To obtain
cubic feet per second (ft ³ /s)	0.02832	cubic meters per second
foot (ft)	0.3048	meter
foot per hour (ft/h)	0.3048	meter per hour
gallon (gal)	3.785	liter
inch (in.)	2.54	centimeter (cm)
inch (in.)	25.4	millimeter (mm)
inch (in.)	25,400	micron (mm)
mile (mi)	1.606	kilometers
square feet (ft ²)	0.0929	square meters
ton	907.2	kilogram (kg)
Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows: °F=1.8°C+32		

WATER-QUALITY UNITS

Abbreviated water-quality units used in this report: Chemical concentrations, water temperature, and specific conductance are given in metric units. Chemical concentration of constituents in solution or suspension is given in milligrams per liter (mg/L) or micrograms per liter (µg/L). Milligrams per liter is a unit expressing the concentration of chemical constituents in solution as weight (milligrams) of solute per unit of volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter. Concentrations of sediment-quality constituents are expressed in parts per million (ppm) by weight. Bacteria densities are expressed as number of colonies per 100 milliliters of water (col/100 ml).

ABBREVIATIONS

BMP	Best management practice
EMC	Event mean concentration
SSC	Suspended-sediment concentration
PZF	Point of zero flow
RPD	Relative percent difference
MRL	Minimum reporting level
NTU	Nephelometric turbidity units
µS/cm	Microsiemens per centimeter

