

Summary of RWQCP Copper Reduction Measures

Source	Action
Metal finishers	Strict permit requirements
Printed circuit board manufacturers	Strict permit requirements
All other industry and institutions	Strict permit requirements
Vehicle brake pads	Initiated international partnership effort to reduce brake copper content
Roof runoff from copper using industry	Investigating; considering requirements
Erosion from construction sites	Permits, inspections
Cooling towers	Permits required (large); must discharge to sewer; educational program
Copper-containing cooling system additives	Banned
Automobile parts stores	Inspect parking lots
Home vehicle maintenance	Educational materials at parts stores
Facility maintenance	Educate facility managers
Hospitals (accelerated copper pipe corrosion from additional drinking water disinfection)	Investigated methods to minimize; working with hospitals
Machine shops	Permits; eliminated most discharges
Metal fabricators	Permits; eliminated most discharges
Mobile cleaners (fleet washing, cleaning buildings, plazas, awnings, and parking lots)	Enforcement; training
Copper pipe corrosion (systems in place)	Education for plumbers and residents
Building design elements (e.g., pipe selection, circulating hot water systems, pipe flow velocities, use of ornamental copper)	Education for architects and design engineers
Pottery and art (copper in some glazes and some other art materials)	Education (few discharges); inspections
Printers (copper in some inks)	Education (few discharges)
Source (continued)	Action (continued)
Vehicle service facilities	Permit, inspect; Most discharges prohibited.

Car washes	Permit, inspect; all treat & recycle wash water
Copper and brass wastewater piping	Prohibited
Copper pipe (new installation)	Providing technical support for state process to legalize use of plastic pipe
Copper-based root killers	Banned
Use of copper or copper-containing devices to control algae in pools, spas, and fountains	Banned
Pool, spa, and fountain discharges	Required to go to sewer
Copper roofs and gutters	Investigating
Copper-using water disinfection systems	Banned
Equipment condensate lines and cooling water system blowdown lines	Must be connected to sewer
Residential car washing	Education; distribute discount coupons for commercial car washes
Cars (general)	Education to reduce vehicle miles traveled
Airports	Small planes only in Palo Alto; drainage design removes metals; EPA data show not a major source
Boat paint	No marinas
Gun maintenance	No firing ranges
Copper-containing pesticides	No agriculture; residential use investigated; small source)
Water supply	Investigated; small source
Copper sulfate water supply treatment	Not used
Mines	None in area
Dumping and leaks of motor oil, coolant, and other vehicle fluids	Education to reduce leaks, prevent illegal dumping (investigated; small sources)
Vehicle tailpipe emissions	Investigated; small source
Tires	Investigated; small source
Industrial air emissions	Investigated; small source