

Feb 23 2006 version of mercury BMP table for MRP

BMP	Level of Implementation	Reporting Requirements
Pollution Prevention/Source Control/Erosion Control		
Collection and Recycling of Mercury containing materials <ul style="list-style-type: none"> • Collect thermostats/switches, bulbs • Develop outreach materials or distribute materials already prepared by DTSC 	<ul style="list-style-type: none"> • Highest priority medium and large businesses and municipal facilities • Lower priority residential 	<ul style="list-style-type: none"> • Investigate compliance challenges • Help ensure compliance with Universal Waste Rule
Management of construction activities.	<ul style="list-style-type: none"> • Incorporate into municipal construction inspection programs 	<ul style="list-style-type: none"> • Report of current municipal ordinances that regulate construction wastes and building improvements projects
	<ul style="list-style-type: none"> • Train inspectors 	<ul style="list-style-type: none"> • Compile information for a report on pilot program effectiveness
<ul style="list-style-type: none"> • Develop outreach materials or distribute materials already prepared by DTSC 	<ul style="list-style-type: none"> • Identify buildings with Hg-containing materials 	<ul style="list-style-type: none"> • Report results of program effectiveness
<ul style="list-style-type: none"> • Implement Hg material removal during maintenance or demolition activities 	<ul style="list-style-type: none"> • Perform pilot inspection project 	<ul style="list-style-type: none"> • Develop measures of effectiveness
<ul style="list-style-type: none"> • Control reuse/disposal of Hg containing materials 	<ul style="list-style-type: none"> • Coordination with Federal and State Regulatory Agencies (TSCA & RCRA) 	
<ul style="list-style-type: none"> • Distribute outreach materials for contractors that identify Hg in building materials 	<ul style="list-style-type: none"> • Generate building inspections training materials and inspections forms and train inspectors 	
<ul style="list-style-type: none"> • Develop outreach program 		
Investigation/Surveillance	<ul style="list-style-type: none"> • Develop and implement protocol for investigations 	
<ul style="list-style-type: none"> • Targeting industrial facilities and possibly construction sites where legacy contamination is likely or during remodeling or demolition (hg in lights and switches). • Investigate sites and establish priorities for cleanup 	<ul style="list-style-type: none"> • The investigation or surveillance could be triggered by monitoring information, land use information, historical activity, or other relevant info. • Two categories of work envisioned here - inspection of facilities in "hot" areas, and recon of hot areas themselves. 	Reporting requirements as necessary to complete clean-up
<ul style="list-style-type: none"> • This is an activity that leads to the discovery of a future cleanup sites. 	<ul style="list-style-type: none"> • Direction needs to be given to facility inspectors for what to look for. 	
Cleanup of on-land Hg "hot spots".	Develop program structure	<ul style="list-style-type: none"> • Report current municipal ordinances to regulate and oversee site cleanup on private properties
	<i>See CEP Project 4.28</i>	<ul style="list-style-type: none"> • Report Hg abatement effectiveness
<ul style="list-style-type: none"> • Based on work from Investigation/Surveillance 		<ul style="list-style-type: none"> • Demonstrate reasonable progress this permit term toward remediating priority sites and submit a schedule for completing all priority sites during next permit term.

<ul style="list-style-type: none"> Determine potential for off-site migration 	<ul style="list-style-type: none"> Implement cleanup action in at least x priority site per municipality (unless opt-out demonstrated for a muni) 	
<ul style="list-style-type: none"> Identify oversight agency/<i>funding sources (e.g., CERCLA, CAA...)</i> 	<ul style="list-style-type: none"> Abate Hg contamination in identified priority zones 	
<ul style="list-style-type: none"> Identify PRP(s) 		
<ul style="list-style-type: none"> Select remedy 		
<p>Oakland's Ettie St. PCBs is a good model where Oakland uses grants to investigate and abate PCBs in public right of way and storm drains by power washing and disposal at EBMUD. Long-term investigation and cleanup by RPs might be done under DTSC's oversight due to human health concerns.</p>		
<p>Increased routine sediment management practices</p> <ul style="list-style-type: none"> Stormwater inlet cleaning 	<p>Expand existing programs</p>	<ul style="list-style-type: none"> Report effectiveness of current management practices to reduce Evaluate benefits to increase, retrofit, or optimize current practices
<ul style="list-style-type: none"> Catch basin/pump station cleaning 	<ul style="list-style-type: none"> Enhance degree to which these practices are targeted to areas of high concentrations 	
<ul style="list-style-type: none"> Street sweeping 		
<p>Targeted sediment removal from stormwater conveyances</p> <ul style="list-style-type: none"> Identify stormwater conveyance Hg hot spots <i>Attempt to identify responsible parties</i> Perform targeted dry season sediment removals using routine maintenance practices Perform street washing with wastewater collection and treatment 	<ul style="list-style-type: none"> Abate Hg contamination in stormwater conveyances 	<p>Develop program structure</p> <p>Implement Program</p> <p>Report effectiveness</p> <p>Evaluate and report on Identify Hg contamination within stormwater conveyance systems</p> <p><i>(not explicitly in BP. BP says develop and implement source control program. Water Board staff feel this relates to statement at the top of this document – implementing BMPs to MEP)</i></p>
<p>Clean-up of materials at point of discharge</p> <ul style="list-style-type: none"> Identify stormwater discharge point Hg hot spots 	<ul style="list-style-type: none"> Identify areas with Hg contaminated sediments at Bay margin discharge points Abate Hg contaminated sediments 	<ul style="list-style-type: none"> Report Hg abatement effectiveness <p><i>(not in BP: Water Board staff strongly feel this is a BMP)</i></p>
<ul style="list-style-type: none"> Perform targeted sediment removals using routine practices 		

Retrofit		
Site Design	RB wants exploration of this in current permit, consideration of mandatory in future permits.	Report on findings of implementation
<ul style="list-style-type: none"> Incorporation of site design features that minimize impervious surfaces and retain pollutants on site. 	<ul style="list-style-type: none"> Develop criteria and recommendations for such design features targeting POC 	
<ul style="list-style-type: none"> May involve treatment controls as part of design. 	<ul style="list-style-type: none"> C3 enhancement 	
<ul style="list-style-type: none"> Applies mainly to new or redevelopment in near term 	<ul style="list-style-type: none"> This may be a required action for some munis that opt-out because lack of industrial areas or hot spots 	
Stormwater Treatment		
Stormwater runoff treatment retrofits for fine sediment control	Develop program structure	<ul style="list-style-type: none"> Report on BMPs'
	<ul style="list-style-type: none"> Identify opportunities to create new treatment streams and BMPs for stormwater 	
<ul style="list-style-type: none"> Evaluate sediment BMP options (detention basins, sand filters, infiltration basins, wetlands...) 	<ul style="list-style-type: none"> Conduct pilot project(s) to evaluate effectiveness of BMPs in reducing Hg loads 	
<ul style="list-style-type: none"> Construct and maintain BMP 		
<ul style="list-style-type: none"> Monitor effectiveness 		
Stormwater treatment by POTWs	Develop program structure, including cost sharing agreements	<ul style="list-style-type: none"> Report on effectiveness of stormwater treatment by POTW
	<ul style="list-style-type: none"> Identify opportunities of routing stormwater to POTWs for treatment Conduct pilot project(s) to treat stormwater by POTW 	
	<ul style="list-style-type: none"> Evaluate drainage areas, flow volume and timing needs 	
	<ul style="list-style-type: none"> Identify potential partnerships between urban stormwater agencies and POTWs 	
	<ul style="list-style-type: none"> Identify trading credits for partners 	
	Build and maintain infrastructure	
Other Activities		
Development of a risk reduction program	<ul style="list-style-type: none"> Develop and implement a risk reduction strategy to mitigate Participate in regional risk reduction program 	Reporting?
Fate and Transport Studies	<ul style="list-style-type: none"> Identify particular information needs consistent with this BP obligation 	Reporting?

Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, and biological uptake in San Francisco Bay and tidal areas	<ul style="list-style-type: none"> Identify studies ongoing that are accomplishing a portion of this 	
We need to understand the fate and transport and effects of mercury discharged in urban runoff and have a way to compare these features to mercury entering the Bay from other source categories	<ul style="list-style-type: none"> Plan for filling data gaps 	
Consult with Caltrans regarding Caltrans portion of allocation	<ul style="list-style-type: none"> Develop an equitable allocation-sharing scheme in consultation with Caltrans (see BPA and Staff Report for explanation) to address Caltrans roadway and non-roadway facilities in the program area, and report the details to the Water Board; 	<ul style="list-style-type: none"> self-explanatory
Monitoring Activities		
Stormwater Loads or Loads avoided (SHALL DO)	Develop and implement long-term monitoring plan	<ul style="list-style-type: none"> While developing program to accomplish above measures, submit proposal to water board regarding credit to be given and rationale
<ul style="list-style-type: none"> Develop and implement a monitoring system to quantify either mercury loads or loads reduced through treatment, source control, and other management efforts; 	If measuring loads avoided:	Report on loading study/loads avoided results
<ul style="list-style-type: none"> Demonstrate progress toward (a) the interim loading milestone, or (b) attainment of the program area allocations, by using one of the following methods: 	Establish criteria for credit to be given for certain types of actions	
	Quantify loads avoided through program activities	
1) Quantify the annual average mercury load reduced by implementing (a) pollution prevention activities, and (b) source and treatment controls. The benefit of efforts to reduce mercury-related risk to wildlife and humans should also be quantified.		
2) Quantify the mercury load as a rolling five-year annual average using data on flow and water column mercury concentrations.	Conduct baseline loading measurements or quantify loads avoided	
3) Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the suspended sediment target.	During first permit term, the programs should be able to demonstrate achievement of a load avoided goal totaling 20 kg/year (this is 25% of the load avoided necessary to reach the load allocation).	