

Ensuring Compliance with Dental P2 in the SF Bay Mercury Watershed Permit



Stephanie Hughes, ChE P.E.
Consulting Engineer
steifehughes@yahoo.com
(408) 499-9271

Outline for Today's Discussion

- Review of dental components of watershed permit
- Summarize the *regional* approach to permit *metrics*
- Draft surveys
 - Review in small groups
 - Discuss as full group
- Discuss possible regional dental outreach piece
- Next steps and approximate schedule



Mercury Watershed Permit

- The Order became effective March 1, 2008
- Includes a dental mercury source control program
- To whom does this apply?
 - **All municipal dischargers** that discharge to San Francisco Bay (Region 2)



Dental Components of Permit – Part I

- *“Dischargers ... shall **develop, implement, and document** cost-effective pre-treatment/ pollution prevention reduction strategies for dental offices to manage and reduce the amount of mercury amalgam that is discharged from dental offices into the public wastewater”*
- Specifically...
 - By March 1, 2010, *“...the municipal wastewater Dischargers shall ~~develop and begin to implement~~ a dental amalgam program...”*



What is a “Dental Amalgam Program”?

- May be EITHER a voluntary or mandatory program
- MUST include outreach about “best management practices”
 - For example – mailings, newsletter articles
 - Should include info re. amalgam separator installation



Minimum Requirements for your “Dental Amalgam Program”

- You MUST at MINIMUM have a MEASUREABLE participation
 - For instance:
 - Survey
 - Permit
 - Site visit data
 - Other evaluation of BMP use in your service area
- NOT ENOUGH to tell dentists they are all in your program and then count that as 100% participation

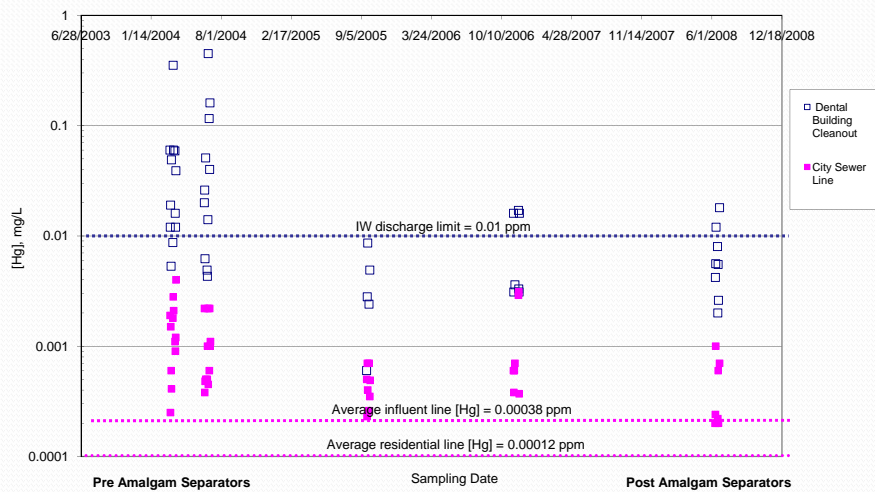


While you can choose voluntary... consider a MANDATORY approach

- By mandatory, I mean require BMPs and amalgam separator installation
- Why consider “mandatory” approach?
 - We have a collective Bay Area track record
 - Should have little or no push-back from dental societies and dental offices
 - In the long run, should save your agency time and money
 - It works
 - See attached pre- and post- data from Palo Alto



Palo Alto 2004-2008 Dental Cleanout and Manhole Data:
Before and After Installation of Amalgam Separators
(Amalgam Separators Required March 31, 2005)




Dental Components of Permit – Part II

- Regionally, we will be evaluated based on two metrics:
 - *“target for this program is that 85% of dental offices that generate mercury amalgam waste in the region will be participating in an amalgam program”*
 - DEADLINE: March 1, 2013
 - *“Dischargers... shall estimate of the dental amalgam collected (with description of basis for the estimation)... Dischargers may collaborate to provide this information in a single report...”*
 - DEADLINE: Provide this to Board by June 30, 2012



These are REGIONAL Goals

- BACWA is coordinating regional review of metrics
 - BACWA will develop a ult for each of these metrics, based on input
- You are NOT responsible for:
 - Reporting to the Board on these metrics
 - Quantifying dental amalgam collected in your service area
- You ARE responsible for:
 - Initiating a “program” by March 2010
 - Providing survey data to BACWA



Let's review the two metrics



- **85% dental office participation** with an amalgam program by March 1, 2013
- Estimate the **dental amalgam collected** (with description of basis for the estimation)



How do we define “Dental Office”?

- Why is this important????
 - Different types of dental office structure
 - How we count this reflects back on that 85% metric and what that means
- What has been decided
 - **EACH individual amalgam practitioner** in your service area will count as a single “dental office” for purposes of quantifying participation



How do we define “Amount of Amalgam Collected”?

- It is NOT about specific amalgam waste hauling by dental offices
- To do so would overinflate the amalgam collection:
 1. dental offices are required to manage their hazardous waste and have been diverting amalgam waste to hazardous waste for many years
 2. much of this waste is diverted from landfill, and not expected to have a transport mechanism to wastewater
 3. use of “waste hauling” data would include mass of non-amalgam waste (e.g., teeth, gauze)



Then what is “amount amalgam collected”?

- The goal is to estimate the mass of mercury
 - diverted ONLY from wastewater (vs. landfill diversions)
 - and ONLY that attributable to implementation of voluntary and mandatory dental programs by POTWs



So how will we measure “Amount of Amalgam Diverted”?

- Based on a methodology originally developed by Bill Johnson, Betsy Elzufon, and Tom Barron
- Excel-based tool to estimate the mass of amalgam diverted from influents
 - We will use agencies with existing dental programs for model calibration
 - We will incorporate **survey** information provided by all of **YOU** including number of offices, type of dental program (e.g., BMPs-only vs separators, voluntary vs mandatory).



**YOU are the Key to a
Successful Regional Approach**

This is a Survey-Based Analysis

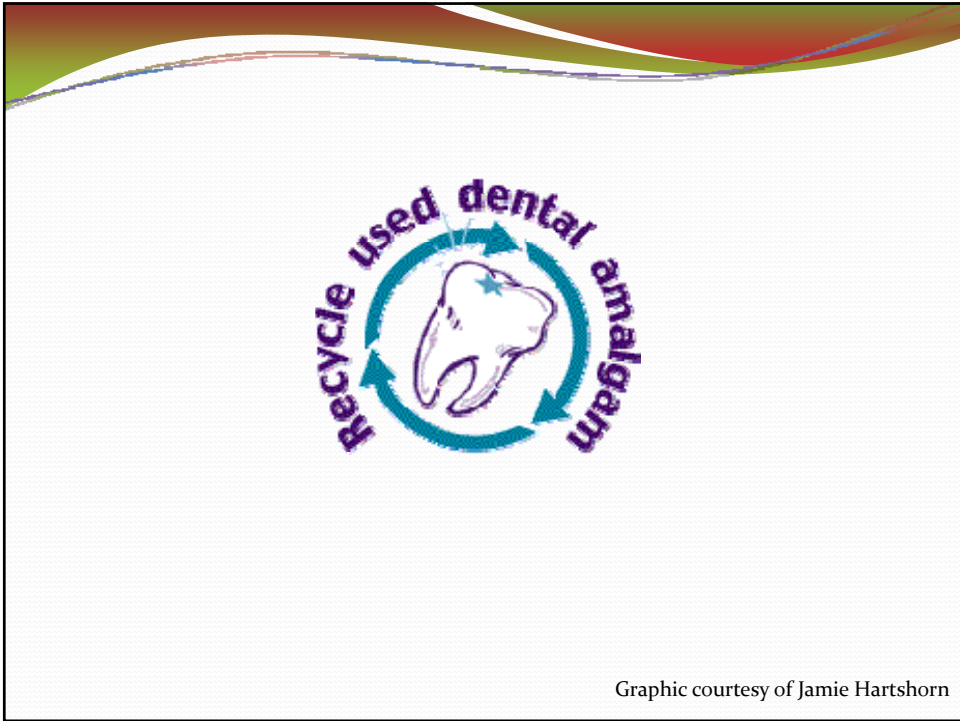
1. DENTAL OFFICE survey
 - Only needed for agencies that have not yet surveyed or inspected dental offices
2. Survey of MUNICIPAL DISCHARGERS
 - Don't worry – it's short... but necessary for estimating success w.r.t. both metrics
 - 85% dental offices
 - Amount of amalgam diverted



Let's review the surveys!

1. **General dental survey** (draft from SBSA)
 - Will your dental staff understand the terms?
 - Will you receive accurate data?
 - What did we leave out?
 - Will you be able to tabulate results?
2. **Municipality survey** (draft from BACWA)
 - Anything difficult to interpret?
 - How might we further clarify the questions?
 - Would your agency have difficulty gathering accurate data?





Please give us feedback!

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Thanks for your review and insight

NEXT UP: Discussion of possible regional dental outreach piece



Past Outreach

Set a Shining Example:

Don't Flush Mercury Down the Drain!

Mercury-containing wastes are a part of life in dental offices. But washed down the drain or otherwise improperly disposed, they can find their way into San Francisco Bay, impacting its quality and contaminating fish. Even those fish is especially harmful to pregnant women, children, and developing fetuses. Your local wastewater treatment facilities are working to reduce mercury discharges to the Bay...and you can help!

Don't flush mercury: These essential tools in an airtight container labeled "Toxic Mercury Waste" and recycle through one of the bins listed on back.

Seal up amalgam: Place excess remaining at the end of a procedure in an airtight container labeled "Toxic Amalgam." Remove this waste in a way metal or recycle as above.

Amalgam waste collected in traps: Empty reusable traps into an airtight white-capped container labeled "Amalgam for Recycling." Place disposable traps directly into the container. Other waste amalgams, such as extracted teeth with amalgam restorations, should also be placed in this container. Recycle or dispose of as hazardous waste.

recycle used dental amalgam

More Tips

- 1 ▶ Remove three traps in the sink. The largest mercury-containing amalgam will go directly to the sewer and wastewater treatment plant, which isn't equipped to handle it.
- 2 ▶ Don't put mercury-containing waste in medical waste containers. Incineration and solid waste disposal can release mercury directly into the environment.
- 3 ▶ Used amalgam capsules should be put in your recycling container.
- 4 ▶ Don't place other materials in your mercury waste or recycling containers. The added volume will cost more and may make disposal or recycling more difficult.
- 5 ▶ Don't mix waste streams without checking with your waste handler first. Mixing may limit recycling and disposal options and result in higher costs.
- 6 ▶ Talk to your waste handler about specific handling requirements for each mercury-containing waste stream.

* Additional tips & requests address on back

Dental Amalgam Recovery Program

for East Palo Alto, Palo Alto, Los Altos, Los Altos Hills and Mountain View
May 2004

What are the new requirements?

Dental offices that remove and/or store amalgam filings must use approved amalgam management practices and install an amalgam separator. Filings separator is in addition to the amalgam traps and vacuum lines that may already exist. The separator (breaks down the PCBs used) to remove 95% of amalgam particles.

These new regulations are going into effect in the following cities: San Francisco, Palo Alto, Los Altos, Los Altos Hills and Mountain View.

Why is this requirement being enacted?

San Francisco Bay is considered impaired due to high levels of mercury in fish, water and sediments. Because of the concerns with mercury in San Francisco Bay, the Regional Water Quality Control Plan (RWQCP) needs to reduce mercury discharges to the estuary. Dental wastewater has been identified as a major source of mercury to the RWQCP. The latest discharge permit for the RWQCP mandates that the cities within the RWQCP service area develop an amalgam recovery program to reduce mercury from their source.

Because amalgam is often jawbreakers, it is not treated. But mercury discharges to the air and water from the RWQCP could be reduced by 75 to 95% upon full compliance with the new requirements.

Exempted Facilities

A facility is exempt from this requirement if amalgam filings are removed or placed in or fewer days per year and the facility serves the following primary functions:

- Orthodontics
- Periodontics
- Oral and maxillofacial surgery
- Radiology
- Oral pathology or oral medicine
- Prosthodontics

What does a dental facility need to do to comply?

- STEP 1** - Comply immediately with required best management practices described on page 2.
- STEP 2** - Install an approved amalgam separator by March 31, 2005 (see pages 2 and 3).
- STEP 3** - Submit documentation that certifies that your office is complying with the requirements.
- STEP 4** - Keep training, disposal, and equipment records on file available for an inspection.

This document will guide you through the process.



A Regional Piece...

- Opportunity to provide in one place
 - Description of regional regulatory environment
 - BMPs
 - Describe use of amalgam separators
 - Briefly, w reference to SFPUC weblink for list of acceptable technologies)
- Need to be careful with our language
 - Needs to be flexible to mandatory and voluntary approaches



Shall We Include an Updated Regional Recycler List?

Amalgam Waste Recyclers

The following companies accept amalgam waste. Contact the recycler directly to determine container and labeling requirements

			Scrap Amalgam	Amalgam Traps & Filters	Amalgam Storage	Bulk Elemental Mercury	Spill Cleanup Materials	X-ray Fixer	X-ray Lead Foils
EcoSolutions/Stericycle	- Milpitas	(408) 935-8050	▼	▼	▼	▼	▼	▼	▼
Safety-Kleen Corporation	- San Jose	(408) 294-8778	▼	▼	▼	▼	▼	▼	▼
Integrated Waste Control	- Hayward	(510) 583-7980	▼	▼	▼	▼	▼	▼	▼
Photo Waste Recycling	- San Rafael	(415) 459-8807	▼			▼	▼	▼	▼

Will this “date” our outreach piece?

BACWA’s Next Steps

- Email to muni dischargers:
 - Dental survey
 - Dental outreach pieces
 - First - basic description of regulatory environment and list of BMPs (to send with survey)
 - Later – more colorful regional piece
- Contact dental societies
 - Provide newsletter article and/or attend a meeting
- Determine submittal date for first municipal survey



Next Steps for Individual Agencies

- If you are NEW to this, Initiate your Program!

MINIMUM for 2009:

- Decide on Voluntary or Mandatory
- Obtain lists of dental offices in service area
- Communicate with local dentists
 - Dental survey (from BACWA)
 - Outreach piece(s) (from BACWA and/or CDA or other sources)
- Tabulate dental survey results
- Develop next steps
 - Voluntary program: site visits and other follow-up outreach
 - Mandatory program: due date for installations; inspections
- Return initial muni survey to BACWA for tabulation



Thanks for your attention!



STEPHANIE HUGHES, ChE P.E.
Consulting Engineer / University Lecturer

steifehughes@yahoo.com • (408) 499-9271