



# Dental Amalgam Recovery Program

*for Cotati, Rohnert Park, Santa Rosa and Sebastopol*

February 2009

## What are the new requirements?

Dental practices that remove and/or place amalgam fillings must use approved amalgam management practices and install an amalgam separator. Such a separator is in addition to chair-side traps and vacuum filters that may already exist. The separator device must be ISO-certified to remove 95% of amalgam particles.

These new regulations are going into effect in the following cities: Cotati, Rohnert Park, Santa Rosa and Sebastopol.

## Why is this requirement being enacted?

The Laguna Subregional Wastewater System needs to control sources of mercury discharged to the sanitary sewer collection system as a result of very strict effluent limits in the permit issued by the Regional Water Quality Control Board (RWQCB). Dental wastewater has been identified as a source of mercury to the system. Control of dental amalgam discharges is an integral part of the Subregional System's mercury control strategy.

Based on results in other jurisdictions, it is estimated that mercury discharges to the air, biosolids and water from the City of Santa Rosa's Laguna Wastewater Treatment Plant could decrease 25 to 50 % upon full compliance with the new requirements.

## Exempted Facilities

*A facility is exempt from this requirement if amalgam fillings are removed or placed 3 or fewer days per year **and** the facility serves the following primary function:*

- Orthodontics
- Periodontics
- Oral and maxillofacial surgery
- Radiology
- Oral pathology or oral medicine
- Endodontics
- 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 December 5, 2009 (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-site, available for an inspection.

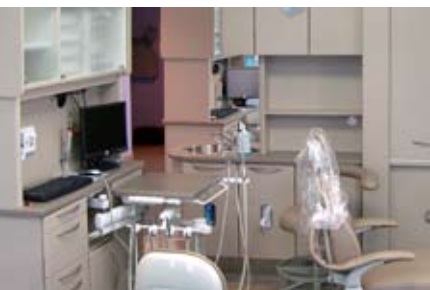


# STEP 1 Comply with Required “Best Management Practices”

The following amalgam management practices are now mandatory:

1. Do not rinse chairside traps, vacuum screens, or amalgam separator equipment in a sink or other sanitary sewer connection. Recycle chairside traps, vacuum screens, and amalgam separator waste.
2. Train staff in the proper handling and disposal of amalgam materials and fixer-containing solutions. Training records shall be available for inspection.
3. Do not use bleach or other chlorine-containing disinfectants to disinfect the vacuum line system. Bleach-containing disinfectants have been shown to dissolve mercury from amalgam. The disinfectants in the box at right are bleach-free, and therefore meet this requirement.
4. Do not use bulk liquid mercury; only precapsulated dental amalgam is permitted. Handle precapsulated containers as mercury waste.
5. Store amalgam waste in accordance with recycler or hauler instructions.

If you have questions about any of these practices, please contact us.



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## Some Bleach-Free Line Cleaners

All-In-One	Green and Clean	Super-Dent
E-Vac	MAXI-EVAC	Turbo Vac Line Flush
Evacuation	ProE-Vac	VacuCleanse
Cleaner	Purevac	
EZ-Zyme	Sani-Treet Plus	
Gobble Plus	Stay-Clean	

Disclaimer: This list may be incomplete; inclusion on this list does not constitute an endorsement of products or companies.

# STEP 2 Install Approved Amalgam Separator by December 5, 2009

Amalgam separators employ filtration, settlement, or ion exchange to remove amalgam and its metal constituents from the office vacuum system before it discharges to the sewer. While chairside traps capture the largest waste amalgam particles, amalgam separators focus on removing the remaining, much smaller particles. Also, in the case of ion exchange units, dissolved or ionic silver and mercury is removed.

Separators should either be installed in the vacuum line at each chair or in a central location that receives vacuum line wastewater from all chairs. Dental practices that are served by a shared vacuum system may elect to have one amalgam separator installed at the central location.

Separators must be maintained according to the manufacturer’s recommendation and disposal of amalgam wastes must be in accordance with applicable regulations.

### Approved Amalgam Separators

Approved separators are those that meet the International Organization for Standardization’s standard ISO 11143 and are certified by the American Dental Association or other qualified testing laboratory to remove at least 95% of amalgam. A list of recommended amalgam separators is available at the following web site:  
[www.srcity.org/amalgam](http://www.srcity.org/amalgam)

## CHOOSING THE RIGHT

### Vacuum System Compatibility

Does your office use a wet vacuum or a dry vacuum system? Does the practice want individual chair-side separators or a central unit that will handle all the chairs? Some amalgam separators are approved only for chair-side use or for use with a particular type of vacuum pump.

If a practice shares a central vacuum with other dental practices, make sure the selected separator will be compatible with the central vacuum. Alternatively, a central separator may be more practical to serve all of the practices in the building.

## STEP 3 Submission of Compliance Forms

### 1) "Self-Certification of Amalgam Management Requirements"

This form indicates compliance with best management practices and presents the dental practice's plan for amalgam separator installation. This form was mailed to dentists in February 2009 and is required to be completed by March 2009. Additional copies are available at our website (see back of brochure).

### 2) "Self-Certification of Amalgam Separator Installation"

This form must be submitted by the dental practice, with appropriate attachments, within 30 days of installation of the amalgam separator. The form will be mailed to dental practices in the summer of 2009. It is also available at our website.



## STEP 4 Maintain Amalgam Separator

Amalgam separators employ filtration, settlement, or ion exchange to remove amalgam and its metal constituents from the office vacuum system before it discharges to the sewer. While chair-side traps capture the largest waste amalgam particles, amalgam separators focus on removing the remaining, much smaller particles. Separators must be maintained according to the manufacturer's recommendation and disposal of amalgam wastes must be in accordance with applicable regulations.



## STEP 5 Record Keeping

Dental practices must keep the following information on site for 3 years:

- Staff training records
- Separator installation and maintenance records
- Amalgam waste disposal records

All records must be provided to municipal inspectors upon request.

## CHOOSE THE RIGHT AMALGAM SEPARATOR

*The type of amalgam separator you choose depends on several factors. Vendors will also be able to suggest units that will best serve your office configuration.*

### Equipment Size and Location

*How much physical space is available for the equipment? Do you want to install an amalgam separator at individual chairs, or in one central location that will serve the entire office?*

*Choose an amalgam separator that easily handles your peak flow, such as when the vacuum system is flushed at the end of the day. Consider both current and future capacity. Also, if chair-side cuspidors connect to your vacuum lines, include this volume when sizing a separator system. If chairs are currently used for hygiene work, but may be used for general dentistry in the future, vacuum lines from these chairs should be routed to the separator. Some separators will need 120V AC power supply.*

### Maintenance

*How often does one need to dispose of accumulated waste sludge? Is the sludge collected in a canister that can be replaced or in one that must be emptied? Does the vendor provide regular maintenance or is it the responsibility of the practice? If the vendor maintains the unit, find out the following: who the vendor contracts with to haul the waste away; where the contractor sends it, and what waste documentation the vendor provides as part of the service fee.*

*Are dental personnel available to maintain the equipment? Some separators require more staff time than others. For example, daily decanting may be necessary with a batch settling system. If no one is available for this task, then a separator that uses a different technology may be a better solution.*

### Costs

*Costs will depend on the size of the practice and will include the cost of purchasing, installing, and maintaining the amalgam separator unit, and for proper removal and disposal of amalgam wastes collected. For the average practice, approved amalgam separators can range in purchase price from \$150 to \$2000; installation can range from \$50 to \$1000; annual maintenance can range from \$250 to \$600 (including the cost of waste disposal).*

*Disclaimer: Costs cited here are only estimated, based on review of vendor information, and are subject to change.*



## Frequently Asked Questions

### ***To whom does the new ordinance apply?***

It applies to the Subregional partner municipalities that have dental practices in their jurisdiction: Cotati, Rohnert Park, Santa Rosa, Sebastopol and the Sonoma County South Park Sanitation District.

### ***Are chairside traps and vacuum filters suitable to meet the requirement?***

No, chairside traps and vacuum filters are independent devices that do not meet the amalgam removal requirement.

### ***What if my practice already has an amalgam separator?***

If your practice operates an air-water separator device with large top-draining sedimentation tank, you may be eligible for an exemption. See the website for details.

### ***How does the WWTP know the mercury coming into its wastewater treatment plant is from dental practices?***

Many dentists use amalgam, which contains approximately 50% mercury. Studies have shown that a significant amount of the amalgam mixed for placement ends up as waste. With proper management, much of this waste, as well as amalgam waste from filling removals, will be prevented from being discharged to the sanitary sewer.

In the United States, dentists are the third largest users of mercury. In 1997, 40 metric tons of mercury were used for dental purposes.

### ***What if the landlord or a separate dental practice overseas the vacuum system?***

Each dental practice is legally responsible for ensuring that an approved amalgam separator has been installed for a shared vacuum system. Communicate with the other dental practices and building owner and determine who will be responsible for installation and maintenance.

### ***Why can't wastewater treatment plants just remove the mercury?***

Wastewater treatment plants, including the Laguna Wastewater Treatment Plant, are designed to treat wastewater containing conventional pollutants such as human waste and food waste. Heavy metals, such as mercury, are not removed by conventional treatment. As a result, mercury ends up in the wastewater discharged to the Laguna de Santa Rosa or in biosolids that are incinerated or used for land application and landfill cover.

### ***Why not dispose of it in the garbage?***

If amalgam is disposed of with other garbage the mercury may end up in the landfill leachate, which may eventually contaminate groundwater or surface water.

For more information : <http://www.srcity.org/amalgam>



**SEBASTOPOL**  
Local Flavor. Global Vision.



City of Santa Rosa Laguna Wastewater Treatment Plant  
4300 Llano Road, Santa Rosa, CA 95407