



Guidelines for the Treatment of Spent Fixer Solution

The majority of dental practices contract with a licensed hauler to dispose of their spent fixer waste solution. Another available option is to treat the spent fixer solution onsite at the dental practice. These guidelines only apply to dental practices that treat spent fixer solution and discharge the treated waste to the sanitary sewer. Dental practices that have their spent fixer solution offhauled are required to document this volume on the *Annual Technical Report Form*.

The discharge of untreated spent fixer solution to the sanitary sewer is prohibited and is in violation of EBMUD Ordinance No. 311A –03. Dental practices shall at a minimum, use the following treatment technology and best management practices to recover silver from the spent solution prior to discharge to the sanitary sewer. Note: Dilution is not a form of treatment.

TREATMENT REQUIREMENT

- Install at a minimum two properly sized metallic replacement cartridges.
- Date cartridges upon installation. Record date in a treatment logbook.
- Replace cartridges when they no longer remove silver efficiently. Record date in the treatment logbook.
- Replace cartridges according to the manufacturer's specifications. Specifications for the cartridge in use must be available to EBMUD inspectors upon request.
- Install a flow-restricting device upstream from the first cartridge to maximize contact time of the solution and to minimize channeling through the cartridge. Ensure that the flow rate meets the manufacturer's specifications or does not exceed 300 ml/min (3 1/3 cups per minute). Record annual flow rate measurements representing standard operating conditions in the logbook.
- Test the treated fixer solution from the cartridge on a weekly basis using a silver test strip sensitive to at least 5 ppm. Immediately stop the discharge to the sanitary sewer if the silver test strip shows increased silver levels, indicating that the cartridge is no longer effectively removing silver.
- If there is an alternative treatment method in place of the minimum treatment method described above, submit a written request to the District for review prior to use.

BEST MANAGEMENT PRACTICES

Best management practices shall be employed to promote waste minimization and ensure effective treatment of spent fixer solution prior to discharge to the sanitary sewer.

- Perform weekly inspections and maintenance on waste treatment equipment.
- Maintain onsite for no less than three years, records of equipment inspections and maintenance, operation times, amount (volume) of waste treated, flow rate of discharge, silver tests, change-out dates of metallic replacement cartridges, and all waste-hauling records.
- Maintain current treatment and disposal procedures describing the method used to treat and dispose of the spent fixer solution. The disposal procedures shall include a step to notify EBMUD – Environmental Services Division at (510) 287-1651 immediately upon any accidental spill to the sanitary sewer.
- Maintain up-to-date installation, operation, maintenance and parts manuals for the waste treatment equipment.
- Train employees on proper operating and spill procedures.
- Post the EBMUD sign in the work area indicating that employees are prohibited from discharging untreated spent fixer-solution to the sanitary sewer.