



King County

Department of Natural Resources and Parks

Water and Land Resources Division

Hazardous Waste Management Program

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Testimony of David V. Galvin, King County, Washington, to the U.S. House of Representatives, Subcommittee on Human Rights and Wellness of the Committee on Government Reform, at its hearing on "The Environmental Impact of Mercury-Containing Dental Amalgam," held October 8, 2003.

My name is David Galvin and I am a program manager for King County's Department of Natural Resources and Parks, based in Seattle, Washington. King County operates the major wastewater treatment system for the metropolitan Seattle area, including two large wastewater treatment plants with total average flows of 200 million gallons per day. We discharge treated effluent into Puget Sound, a sensitive marine waterway. One-hundred percent of the residual solids from our treatment plants, known as biosolids, is reused beneficially in wheat and hop fields in Eastern Washington, on forest lands in the Cascade Mountains, and in a composted product available for landscaping. We control sources of contaminants into our system, by means of a major industrial pretreatment program and extensive work with small businesses and households.

Toxic metals, including mercury, don't go away or get magically "treated" in wastewater treatment plants; rather, they either settle out into the solids or are discharged in the water effluent. Most mercury that enters our system ends up in the biosolids. Even though our biosolids currently meet all federal and state regulations for mercury, our concerns for future marketability of these solids drives our efforts to continuously make them cleaner. The potential for more stringent mercury limits in the future is also of concern.

Under an agreement with the Seattle-King County Dental Society, we conducted an extensive, collaborative program from 1995 through 2000 to promote voluntary compliance. We encouraged purchase and installation of amalgam separator units, which research showed would allow dentists to meet King County's local mercury limit. The results after six years were that 24 dental offices, out of approximately 900, installed amalgam separators.

In 2001, King County in consultation with the local dental society decided that the voluntary program had failed and notified local dentists that they would be required to meet our local discharge limit of 0.2 parts per million total mercury. We gave them the choice of installing separators or applying for a permit and proving they meet our limits without a separator. We gave them two years to meet compliance – until July 1, 2003.

We provided extensive outreach to the dental offices, including technical assistance site visits by staff from Public Health - Seattle & King County to every office in the county. We provided monetary incentives via vouchers reimbursed at 50% of costs up to \$500. We worked closely with the local dental society as they held trade fairs and technical workshops. Local dentists did not fight this requirement, but rather sought practical information about purchasing separators and got on with the task. Results in the two years since the requirement was announced: approximately 750 additional dental offices (more than 80%) installed amalgam separator units, with the remaining offices quickly following suit in this last quarter.

In conclusion:

- Mercury is best controlled at the dental office, not at the wastewater treatment plant. Control at the source is the best way to manage such toxic metals.
- A voluntary program did not result in significant change in King County. Once separators were mandated, compliance happened quickly, dramatically and with little resistance.
- Amalgam separator units are effective at removing 95% of mercury; they are readily available, low tech, reasonably priced and easily installed and maintained.
- The attached graph illustrates our experience.

Thank you for the opportunity to testify today. I would be happy to answer any questions from the committee members.