

Groundwater Pollution at the Existing Puente Hills Landfill

Testimony Presented to LA County Sanitation Districts

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The Los Angeles County Sanitation Districts (Districts) asserted in the Districts' staff's Environmental Impact Report (EIR) on the proposed Puente Hills Landfill expansion and in testimony that the existing Puente Hills Landfill is not polluting groundwaters and that the proposed expansion of the Puente Hills Landfill would therefore not pollute groundwater. In connection with that argument the Districts' staff made a variety of statements in the Districts' EIR and in testimony about the lack of leachate generation at the existing landfill, the adequacy of the groundwater monitoring program that has been conducted to detect leachate migration, and the efficacy of the groundwater barriers (slurry walls) that have been constructed for the purpose of preventing migration of any contaminated groundwater that did occur offsite to pollute the San Gabriel Basin. Those not knowledgeable in the details of groundwater pollution by municipal solid waste landfills of the Puente Hills type at a geological setting such as occurs at Puente Hills might be led to believe that the Districts' assessment of the existing pollution of groundwaters at the Puente Hills site by the current landfill is a reliable assessment of what is occurring at that site. This, in turn, could lead to support for expansion of that landfill based on the statements made by the Districts in their EIR. However, an understanding of the characteristics of municipal landfill leachate, the development of groundwater monitoring systems for landfills located in a geological setting of the Puente Hills type, the expected performance of groundwater barriers (slurry walls) of the type that the Districts have constructed, and the potential impact of municipal solid waste landfill leachate of the type being generated in the Puente Hills Landfill on groundwater resources shows that the Districts have not presented a reliable assessment of the current groundwater pollution situation at the existing Puente Hills Landfill and of the potential to pollute groundwaters hydraulically connected to the San Gabriel Basin groundwater aquifer system.

While the Districts' Board of Directors and the Planning Commission Commissioners chose to ignore comments made by the representatives of Hacienda Heights, Dr. Dennis Williams, and others including us, concerning the unreliability of the Districts' assessment of current groundwater pollution at the Puente Hills Landfill, the recent submission of the Stetson Engineers' report (Stetson Engineers, 1993) on the current groundwater pollution that is occurring at the Puente Hills Landfill as well as the adequacy and reliability of the Districts' groundwater monitoring program, the ability of the Districts to reliably carry out the regulations governing the Puente Hills Landfill operations, the Districts' attitude towards cooperation with Stetson Engineers and others in making data and other information available to Stetson Engineers as requested, coupled with the inability of the Regional Water Quality Board to review and enforce regulations governing the Districts' operations at the Puente Hills Landfill gives cause great concern about any proposed expansion of the Puente Hills Landfill as proposed by the Districts. The Puente Hills Landfill is the second largest landfill in the United States. The Districts propose to continue to operate that landfill at the rate of 12,000 tons/day to more than double the current amount of solid waste present in the landfill today. The current

Puente Hills Landfill represents a massive threat to groundwater resources in the vicinity of the landfill, which are key resources for a large number of people who depend on the San Gabriel Basin for their domestic water supply.

An objective peer review assessment of the existing and proposed Puente Hills Landfill expansion will lead to the following conclusions:

- The Puente Hills site is a very poor site for a landfill, especially the second largest landfill in the United States. The fractured rock geology and hydrogeology of the site make it essentially impossible to reliably monitor the groundwater pollution that has occurred at the existing Puente Hills Landfill and that will eventually occur at the Districts' proposed landfill expansion.
- The Districts' operations at the existing Puente Hills Landfill have been poorly conducted; the landfill has had significant, repeated adverse impacts on adjacent and nearby property owners and users through severe, obnoxious odors and traffic problems due to inadequate provisions for garbage truck traffic.
- As would be expected, the existing Puente Hills Landfill has been polluting groundwaters in the vicinity of the landfill with landfill leachate/gas. A review of the groundwater monitoring data, the actions required by the Regional Board and the Districts to try to stop offsite migration of leachate-contaminated groundwaters through the construction of so-called groundwater barriers shows that they will not be effective in preventing groundwater pollution in the San Gabriel Basin aquifer system.

It is also clear that the Districts' mode of operations of the Puente Hills Landfill, in which the Regional Water Quality Control Board has relied on Districts' self-policing of the groundwater quality protection provisions, is not reliable for ensuring groundwater quality protection. The Stetson report documents the sloppy and inadequate operations of the Districts in providing for groundwater quality protection. From the Districts' staff refusal to cooperate with Stetson Engineers in providing information requested, the failure of the Districts to admit that groundwater pollution would be expected to occur and that groundwater pollution has occurred at the existing Puente Hills Landfill, and the attempts of the Districts to ignore the pollution as exemplified in the EIR prepared by the Districts' staff, it is very clear that the Districts cannot be relied on for reliable self-policing of groundwater quality protection. It is also clear that if the Regional Board is not adequately funded or staffed to provide the kind of protection that is appropriate to ensure that when the eventual failure of the groundwater barriers systems to prevent offsite migration of leachate from the existing landfill occurs, corrective action will, in fact, be taken before widespread pollution of the San Gabriel Basin aquifer system occurs.

Thomas Stetson of Stetson Engineers, Inc. submitted a cover letter to the Board of Directors of the Upper San Gabriel Valley Municipal Water District on his firm's review of the Los Angeles County Sanitation Districts' groundwater quality evaluation, monitoring, and management program at the Puente Hills Landfill. In his June 2, 1993 cover letter, Mr. Stetson summarized their key findings. These findings and their meaning to water quality protection of the San Gabriel Basin

aquifer system are presented and discussed in these comments.

Mr. Stetson concluded that there appear to be deficiencies in the basic requirements for water quality monitoring at the existing Puente Hills Landfill. This is a very significant finding and is in accord with our independent evaluation of the Districts' and Los Angeles Regional Water Quality Control Board's water quality protection program for the Puente Hills Landfill. We have concluded, based on independent evaluation, that the Districts and the Regional Board have not been, and are not now, conducting an adequate, reliable groundwater quality monitoring, evaluation, and management program. Based on the testimony of the Districts' staff (Maguin and Chan) in the Puente Hills Landfill expansion Environmental Impact Report (EIR) hearings last fall and the Los Angeles County Planning Commission hearings this spring, it is clear that the Districts' management staff for the Puente Hills Landfill operations has provided the Districts' Board of Directors and the Los Angeles County Planning Commission with highly unreliable, inaccurate, and misleading information on the impacts of the current landfill operations on groundwater quality in the vicinity of the Puente Hills Landfill. As reported by Stetson Engineers (1993), significant groundwater pollution has been occurring and will continue to occur at the Puente Hills Landfill from its existing operations. While the Districts' staff Mr. Maguin claimed at the April 8, 1993 Planning Commission hearing that there is no leachate generated at the landfill, with the implication is that there is no groundwater pollution, it is obvious and common sense that leachate has been and continues to be generated at the landfill and that groundwater pollution is occurring due to that leachate. Municipal landfill leachate-polluted groundwater contains a wide variety of highly hazardous chemicals, conventional chemicals that can render a water unusable for domestic purposes, and non-conventional chemicals whose hazards to public health and the environment are unknown but that could readily be of significance to public health, groundwater resources and the environment due to hazardous and otherwise deleterious chemical compounds.

Beginning in 1989, on behalf of the Upper San Gabriel Valley Municipal Water District and Main San Gabriel Basin Watermaster, the authors conducted a review of the Azusa Landfill operations in the San Gabriel Basin. That landfill is operated under the "supervision" of the Los Angeles County Regional Water Quality Control Board. We have found many of the same kinds of problems at the Puente Hills Landfill as were found with the Azusa landfill. A review of the groundwater monitoring data for the Azusa Landfill showed that that landfill had been polluting groundwaters for many years, yet the Regional Board had not, and still has not, implemented the requirements set forth in Article 5 of Chapter 15 for determining the degree and extent of groundwater pollution and for initiating corrective action to clean up the polluted aquifer to the extent possible. Under the supervision of the Los Angeles Regional Water Quality Control Board, more than \$100 million worth of groundwater in the vicinity of the Azusa Landfill has been destroyed for use for domestic purposes. That is the cost of trying to clean up the groundwater pollution plume that now exists to the extent possible, and to purchase replacement water for that which has been destroyed by leachate-pollution. As with the Puente Hills Landfill, the Los Angeles Regional Water Quality Control Board staff claimed in hearings before the State Water Resources Control Board that there was no pollution of groundwater by the Azusa Landfill, while it was immediately obvious from examination of the data that had been submitted by the landfill owner every quarter over the past almost 10 years, that were in the Los Angeles Regional Water Quality Control Board's files, that

highly significant pollution had been and continues to occur at that landfill. It is clear that the Los Angeles Regional Water Quality Control Board does not have the staff or the funds necessary to properly implement Article 5 of Chapter 15. Since that article is the key to groundwater quality protection from pollution by landfill leachate, the groundwater quality protection program for the Azusa Landfill is seriously flawed and not being implemented.

The Azusa Landfill situation has considerable relevance to the Puente Hills Landfill situation in that Stetson Engineers reported in their June 1993 report the same kind of significant deficiencies in the evaluation and management of groundwater quality associated with the Puente Hills Landfill as is occurring with the Azusa Landfill.

Selected Specific Comments on Stetson Engineers (1993) Report

Page II-1

The report mentions in paragraph 2 the difficulties encountered in obtaining information from the County Sanitation Districts including their not furnishing data that the Districts had collected.

Page II-3

Paragraphs 3 and 4 discuss the significant deficiencies in how the Sanitation Districts have carried out their sampling and analysis program.

Page II-4

The report indicates that because of inadequate staff, changing staff, and budget constraints, the Regional Water Quality Control Board has been unable to maintain close scrutiny of the Puente Hills Landfill operations and relies on the Districts to police their own operations. It is clear from the Stetson Engineers report that the Districts policing of their own operations is inadequate and unreliable for providing protection of public health, groundwater resources, and the environment.

Page III-2

Listed on this page are the groundwater quality protection standards established by the Regional Water Quality Control Board. A review of those standards shows them to be significantly deficient compared to what is needed to protect the groundwaters of the San Gabriel Basin.

Page III-7

The first paragraph indicates that the Districts have not used adequately sensitive lower detection limits in measuring various contaminants of concern. The second paragraph discusses that the Districts have not complied with requirements set forth in determining groundwater velocity and direction.

These are just a few of the highly significant deficiencies in the way in which the Districts, under the supervision of the Los Angeles Regional Water Quality Control Board staff, have conducted the minimum required groundwater pollution evaluation and management at the existing Puente Hills Landfill.

It is clear that the Puente Hills Landfill should not be expanded because of the past and potential future groundwater pollution.

Reference

Stetson Engineers, "Puente Hills Landfill Investigation," Report to Upper San Gabriel Valley Municipal Water District," Stetson Engineers, West Covina, CA, June (1993).