

THE POSITION
of the GLENOAKS CANYON HOMEOWNERS ASSOCIATION
with regard to FURTHER DEVELOPMENT
of the SCHOLL CANYON LANDFILL

May 2015

GLENOAKS CANYON HOMEOWNERS ASSOCIATION'S (GOCHA) POSITION
ON THE FURTHER DEVELOPMENT OF THE SCHOLL CANYON LANDFILL
2015

INTRODUCTION

GOCHA represents the families of approximately 775 single-family homes within Glenoaks Canyon ("Canyon"), which is located at the eastern part of Glendale in the San Rafael Hills. The Scholl Canyon Landfill ("Landfill") forms the easternmost boundary of the Canyon and is situated at the summit of a section of the San Rafael Hills directly above the Canyon. The Landfill extends from the summit of the San Rafael Hills to upper Glenoaks Canyon and Lower Scholl Canyon Park. The Landfill's address is 3001 Scholl Canyon Road, Glendale, California, 91206. It can be reached from the Ventura Freeway (State Route 134) by taking the Figueroa Street exit in Eagle Rock, City of Los Angeles. The Landfill consists of 535 acres, of which 440 acres of which are designated for landfill operations and 95 acres are designated for other related operations. Of the area designated for landfill operations, 314 acres are currently active and 126 acres are inactive. The Landfill was first opened in 1961 and currently serves a waste shed consisting of the cities of Glendale, Pasadena, La Canada-Flintridge, San Marino, Sierra Madre, and South Pasadena, and the unincorporated communities of Altadena, La Crescenta, Montrose, and East Pasadena. (See Appendix, pages 11-13.)

EXECUTIVE SUMMARY

GOCHA is opposed to the City of Glendale (The City) prolonging the current more than 50-year-life of the Scholl Canyon Landfill (1961 to 2015) either through the construction of an anaerobic digestion facility or expansion of the landfill site for waste disposal, as proposed in the Environmental Impact Report that will soon come before the City Council for review. Opposition is based on anticipated air pollution, the continuing pollution of ground water at the site, and seismic hazards that threaten existing engineered structures critical to minimizing the pollution of the aquifer, i.e., the underground layer of water-bearing permeable rock or unconsolidated materials from which the ground water can be extracted. The central goals of our Association are to decommission the Scholl Canyon Landfill, and to protect all of the citizens of Glendale and bordering communities.

SEISMIC HAZARDS

Several relatively small-scale faults have been mapped or observed within the area of the Scholl Canyon Landfill showing displacements of several feet to tens of feet. "A significant shear/fault zone" (Scholl Canyon Fault) is located in the southeast part of the site. This fault zone strikes northwest and dips to the northeast. A water collection and extraction system consisting of two sumps and two collection trenches has been constructed at the location of this fault zone, whose trend is roughly perpendicular to Barrier 1 (California Regional Water Quality Control Board, Order No. 88-112, Waste Discharge requirements for

Count Sanitation Districts of Los Angeles County [Scholl Canyon Landfill] [File No. 60-117, p. 3, 1988; Historical Seismicity Map [1985-2002], Earth Consultants International, Project Number 2506, 2005, and Seepage Collection System [Sump 2], Scholl Canyon Landfill Expansion EIR, Figure 6.9-2 v.1, 2014).

VERDUGO FAULT

The overall trend of the Verdugo Fault is northwest-southeast; however, near the landfill and east of Highway 2 the trend is east-west. The fault is present: (a) beneath the 134 Freeway, (b) along the southern slope of the ridge south of Glenoaks Canyon, and (c) approximately one-half mile south of the Scholl Canyon Landfill.

It is estimated that the Verdugo Fault and its continuation to the east as the Eagle Rock Fault can generate an earthquake with a magnitude of 6 to 6.8 on the Richter Scale. Movement on the San Gabriel Fault, upper right corner of the map on page 5, can generate an earthquake with a magnitude of 6.6; the Hollywood Fault, present at the southernmost limit or boundary of Glendale, less than three miles from the landfill, can generate an earthquake with a magnitude ranging from 5.8 to 6.5.

Characteristics of Richter Scale magnitudes from 5.0 to 9.0

5.0-5.9	Moderate	VI to VIII	Can cause moderate to major damage to poorly constructed buildings. At most, none to slight damage to all other buildings. Felt by everyone. Deaths can depend on the effects.	1,000 to 1,500 per year
6.0-6.9	Strong	VII to X	Can be damaging/destructive in populated areas in regions of any size. Damage to many to all buildings. Earthquake-resistant structures survive with slight to moderate damage. Poorly-designed structures receive moderate to severe damage. Felt in wider areas; likely to be hundreds of miles/kilometers from the epicenter. Can be damaging of any level further from the epicenter. Strong to violent shaking in epicentral area. Death toll between none and 25,000.	100 to 150 per year
7.0-7.9	Major		Causes damage to many to all buildings over areas. Some buildings partially or completely collapse or receive severe damage. Well-designed structures are likely to receive damage. Felt in enormous areas. Death toll is usually between none and 250,000.	10 to 20 per year
8.0-8.9	Great	VIII to XII ^[19]	Major damage to poorly-designed buildings and most structures, likely to be destroyed. Will cause moderate to heavy damage to normal and earthquake-resistant buildings. Damaging in big areas. Possible total destruction. Definitely felt in unusually large regions. Death toll is usually between 100 and one million; however some earthquakes this magnitude have killed none.	One per year (rarely none, two, or over two per year)
9.0-9.9			Severe damage to all or most buildings with massive destruction. Damage and shaking extends to distant locations. Ground changes. Death toll usually between 1,000 and several million.	One per 5 to 50 years

THE BARRIERS

Two subsurface barriers (Barriers 1 and 2), comprised of a cement/bentonite or volcanic ash, are present at the western edge of the Scholl Canyon Landfill. Extraction-monitoring wells are immediately up- and down-gradient of the barriers (Figures 6.9-2 and 6.9-3, Scholl Canyon Landfill Expansion EIR, v.1, 2014). Carcinogenic substances are reported up gradient of the barriers (Scholl Canyon Landfill Expansion EIR, v. 1, Table 3 below). This is of concern to GOCHA because, due to the porous nature of the fractured granitic and metamorphic rocks beneath the barriers, carcinogens are likely percolating underneath the barriers and being absorbed into the Los Angeles aquifer. Moreover, the flow downhill from one of the barriers is not currently being monitored. Thus, there is no substantive data concerning the amount and type of pollutants that are penetrating in the Canyon past the barrier. Deeply concerning, seismic activity could damage the barriers and release into the aquifer and the Los Angeles River

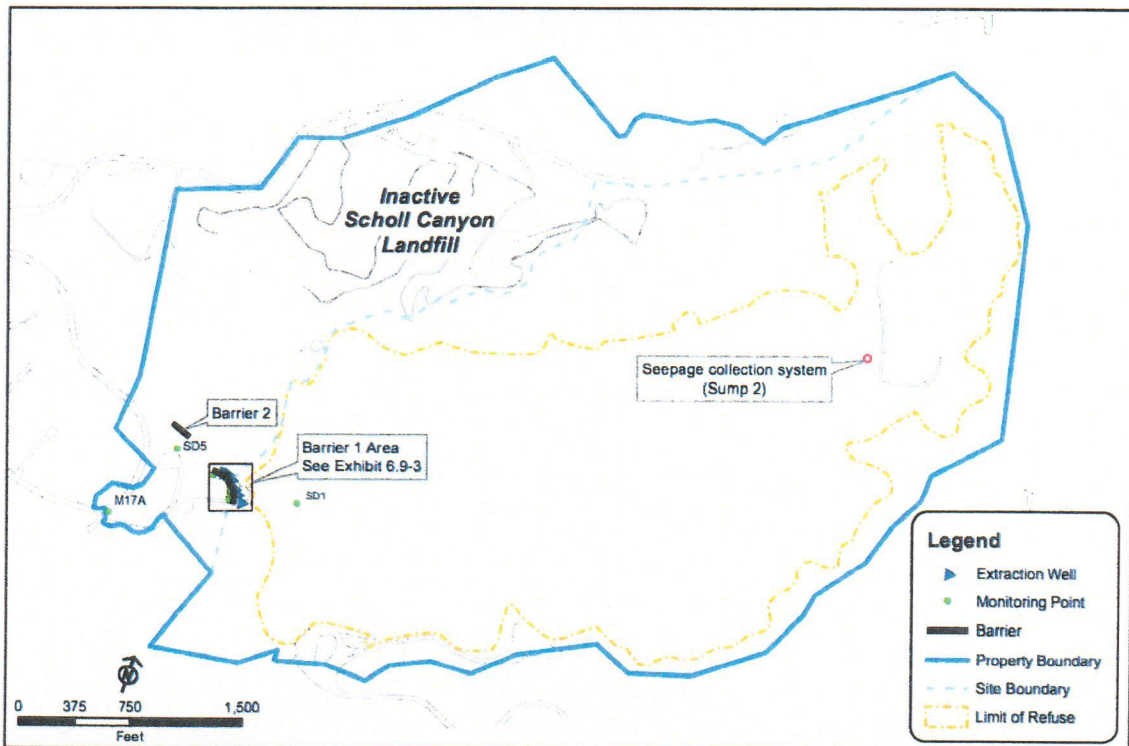
Basin the pollutants (Table 3 below) backed up behind the barriers. (See discussion on page 2 about the Verdugo-Eagle Rock fault zone.)

Table 3
Scholl Canyon Landfill Constituents of Concern

Iron	Dichlorodifluoromethane
Lead	Dibromochloromethane
Mercury	Dibromomethane
Nickel	Ethylbenzene
Selenium	Ethyl methacrylate
Silver	isobutyl alcohol
Thallium	1,3-Dichlorobenzene
Tin	m+p-Xylenes
Vanadium	Methacrylonitrile
Zinc	Methyl ethyl ketone (MEK)
	Methyl Iodide
<u><i>Volatle Organic Compounds</i></u>	Methyl Isobutyl Ketone (MIBK)
1,1,1,2-Tetrachloroethane	Methyl methacrylate
1,1,1-Trichloroethane	Methylene Chloride
1,1,2,2-Tetrachloroethane	o-Xylene
1,1,2-Trichloroethane	Propionitrile
1,1-Dichloroethane	Styrene
1,1-Dichloroethene	Tetrachloroethene
1,1-Dichloropropene	Toluene
1,2,3-Trichloropropane	trans-1,4-Dichloro-2-butene
1,2-Dibromo-3-chloropropane	trans-1,2-Dichloroethene
1,2-Dibromoethane	trans-1,3-Dichloropropene
1,2-Dichlorobenzene	Trichloroethene
1,2-Dichloroethane	Trichlorofluoromethane
1,2-Dichloropropane	Vinyl Acetate
1,3-Dichloropropane	Vinyl Chloride
1,4-Dichlorobenzene	
2,2-Dichloropropane	
2-Hexanone	<u><i>Pesticides</i></u>
Acetone	2,4,5-T
Acetonitrile	2,4,5-TP (Silvex)
Acrolein	2,4'-D
Acrylonitrile	p,p'-DDD
Allyl Chloride	p,p'-DDE
Benzene	p,p'-DDT
Bromochloromethane	alpha-BHC
Bromodichloromethane	Aroclor 1016
Bromoforn	Aroclor 1221
Bromomethane	Aroclor 1232
Carbon Disulfide	Aroclor 1242
Carbon Tetrachloride	Aroclor 1248
Chlorobenzene	Aroclor 1254
Chloroethane	Aroclor 1260
Chloroform	beta-BHC
Chloromethane	delta-BHC
Chloroprene	Dieldrin
cis-1,2-Dichloroethene	Dimethoate
cis-1,3-Dichloropropene	Dinoseb

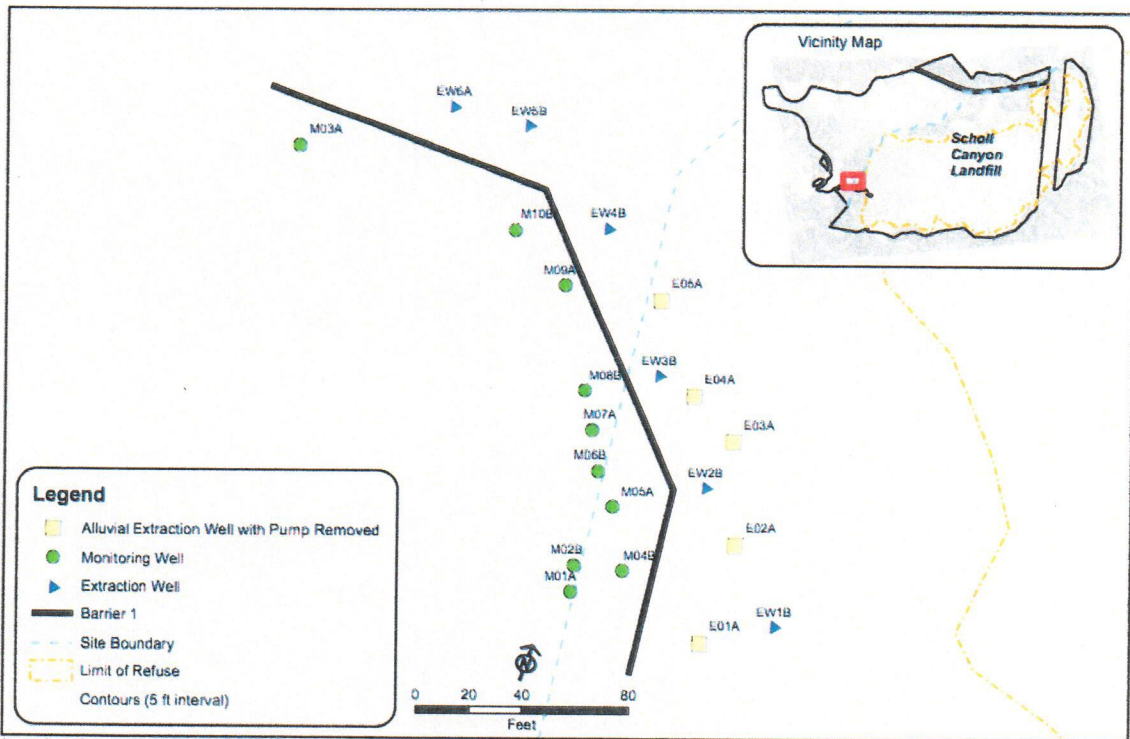
Table 3
Scholl Canyon Landfill Constituents of Concern

Disulfoton	a,a-Dimethylphenethylamine	N-Nitrosodimethylamine
Endosulfan I	Acenaphthene	N-Nitrosodiphenylamine
Endosulfan II	Acenaphthylene	N-Nitrosomethylethylamine
Endosulfan sulfate	Acetophenone	N-Nitrosopiperidine
Endrin	Anthracene	N-Nitrosopyrrolidine
Endrin aldehyde	Benzo(a)anthracene	Naphthalene
Parathion	Benzo(a)pyrene	Nitrobenzene
gamma-BHC (Lindane)	Benzo(b)fluoranthene	o-Cresol
Heptachlor	Benzo(g,h,i)perylene	2-Nitroaniline
Heptachlor epoxide (Isomer B)	Benzo(k)fluoranthene	2-Nitrophenol
Methoxychlor	Benzyl alcohol	o-Toluidine
Methyl parathion	bis(2-Chloroisopropyl)ether	p-(Dimethylamino)azobenzene
Phorate	Bis(2-Chloroethoxy)methane	4-Chloroaniline
Technical Chlordane	Bis(2-Chloroethyl)ether	4-Nitroaniline
Thioazine (Zirophos)	bis(2-Ethylhexyl)phthalate	4-Nitrophenol
Toxaphene	Butyl benzyl phthalate	p-Phenylenediamine
	Chlorobenzilate	Pentachlorobenzene
<u><i>Semivolatile Organic Compounds</i></u>	Chrysene	Pentachloronitrobenzene
0,0,0-Triethylphosphorothioate	Di-n-butyl phthalate	Pentachlorophenol
1,2,4,5-Tetrachlorobenzene	Di-n-octyl phthalate	Phenacetin
1,2,4-Trichlorobenzene	Diallate (Avadex)	Phenanthrene
1,4-Naphthoquinone	Dibenzo(a,h)anthracene	Phenol
1-Naphthylamine	Dibenzofuran	Pronamide
2,3,4,6-Tetrachlorophenol	Diethyl phthalate	Pyrene
2,3,7,8-TCDD	Dimethyl phthalate	Safrole
2,4,5-Trichlorophenol	Diphenylamine	1,3,5-Trinitrobenzene
2,4,6-Trichlorophenol	Ethyl methanesulfonate	
2,4-Dichlorophenol	Famphur	
2,4-Dimethylphenol	Fluoranthene	
2,4-Dinitrophenol	Fluorene	
2,4-Dinitrotoluene	Hexachlorobenzene	
2,6-Dichlorophenol	Hexachlorobutadiene	
2,6-Dinitrotoluene	Hexachlorocyclopentadiene	
2-Acetylaminofluorene	Hexachloroethane	
2-Chloronaphthalene	Hexachloropropene	
2-Chlorophenol	Indeno(1,2,3-cd)pyrene	
4,6-Dinitro-2-methylphenol	Isodrin	
2-Methylnaphthalene	Isophorone	
2-Naphthylamine	Isosafrole	
3,3'-Dichlorobenzidine	Kepon	
3,3'-Dimethylbenzidine	m,p-Cresol	
3-Methylcholanthrene	1,3-Dinitrobenzene	
4-Aminobiphenyl	3-Nitroaniline	
4-Bromophenyl phenyl ether	Methapyrene	
4-Chloro-3-methylphenol	Methyl methanesulfonate	
4-Chlorophenyl phenyl ether	N-Nitrosodi-n-butylamine	
5-Nitro-o-toluidine	N-Nitroso-n-propylamine	
7,12-Dimethylbenz[a]anthracene	N-Nitrosodiethylamine	



Source: County Sanitation Districts of Los Angeles County

Figure 6.9-2
Monitoring Point Locations
Scholl Canyon Landfill Expansion EIR



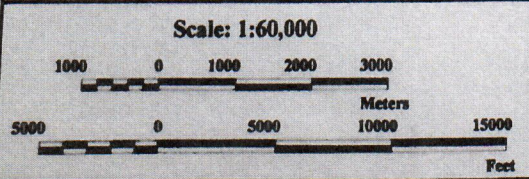
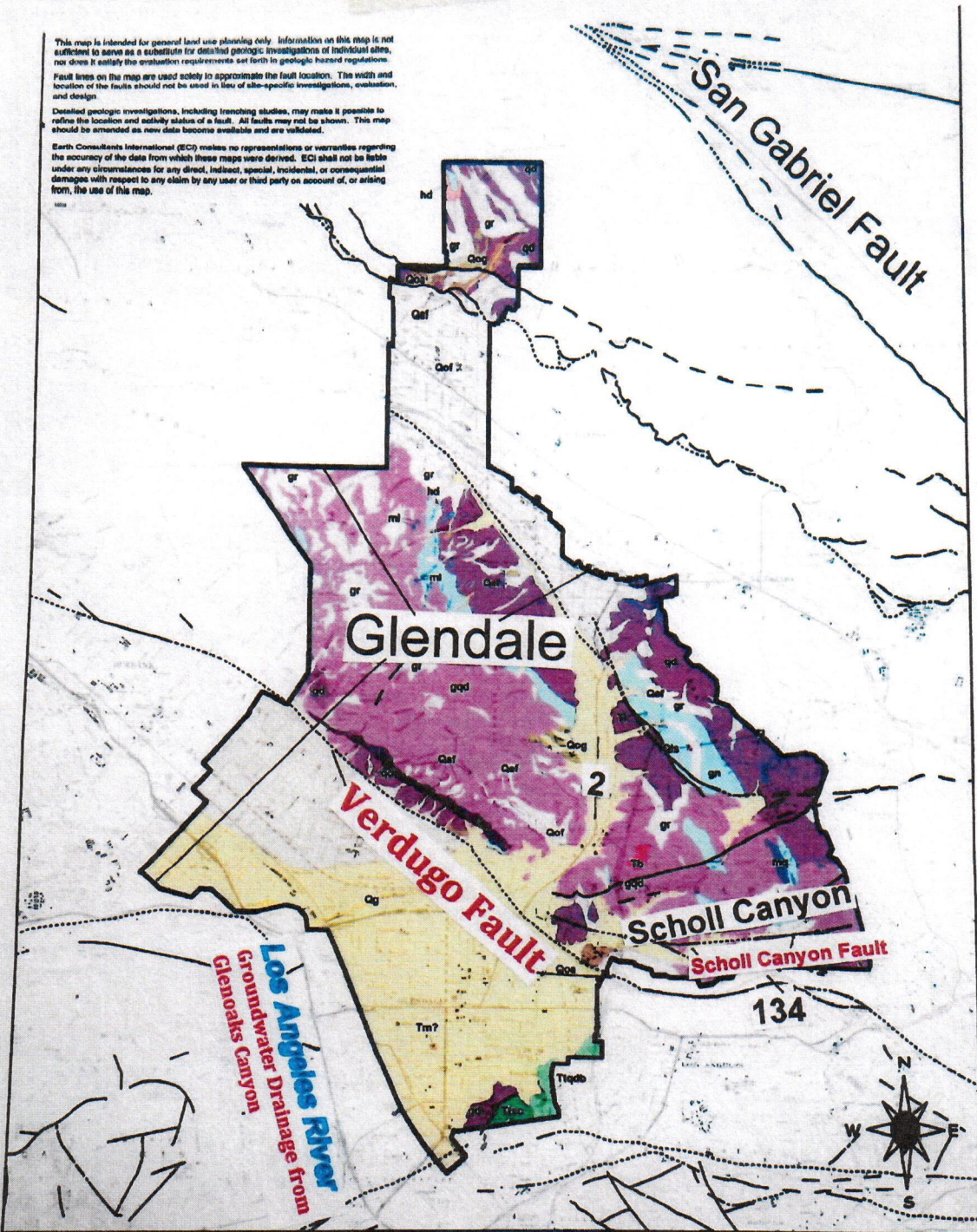
Source: County Sanitation Districts of Los Angeles County

Figure 6.9-3
Subsurface Barrier 1 System
Scholl Canyon Landfill Expansion EIR

This map is intended for general land use planning only. Information on this map is not sufficient to serve as a substitute for detailed geologic investigations of individual sites, nor does it satisfy the evaluation requirements set forth in geologic hazard regulations. Fault lines on the map are used solely to approximate the fault location. The width and location of the faults should not be used in lieu of site-specific investigations, evaluation, and design.

Detailed geologic investigations, including trenching studies, may make it possible to refine the location and activity status of a fault. All faults may not be shown. This map should be amended as new data become available and are validated.

Earth Consultants International (ECI) makes no representations or warranties regarding the accuracy of the data from which these maps were derived. ECI shall not be liable under any circumstances for any direct, indirect, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of this map.



Base Map: USGS Topographic Map from SureIMAPS RASTER
 Sources: Weber, 1980; Dibblee, 1989a, 1989b, 1991a, 1991b, 2002; Rubin, 1992; Yerkes, 1997; Yerkes and Graham, 1997; Byer, 1988.



Project Number: 2103
 Date: July, 2003

Geologic Map Glendale, California

Plate
 2-1

CONCLUSIONS REGARDING SEISMIC HAZARDS

Lateral and/or dip-slip movement along the Verdugo Fault could cause strong to violent shaking. As a result, the barriers at the Scholl Canyon Landfill could suffer moderate to severe damage. The barriers could be breached, releasing carcinogenic materials (noted above) into the aquifer, further contaminating Glendale's water wells and the Los Angeles River Basin.

At a minimum, Barriers 1 and 2 should be strengthened and a backup barrier should be constructed south of Barrier 1. The barriers should be designed to be capable of withstanding strong to violent shaking of the ground generated by an earthquake with a magnitude of 6.5 or higher.

HEALTH ISSUES

Residents of Glenoaks Canyon have expressed concern about the affects of the Landfill on the health of people living in the Canyon. GOCHA recognizes that many different sources of pollution may contribute to the high incidence of cancer, repertory and other serious illnesses in the Los Angeles Basin. Yet, it certainly seems that the few remaining operating landfills in the Basin must be major contributors. The Scholl Canyon Landfill generates a significant amount of methane and other by-product gases that are known to be harmful to humans and other animal and plant life. Due to this fact, an underground methane reclamation piping system was installed within the Scholl Canyon Landfill to recover and transport such gases in pipes below city streets directly to the Grayson Power Plant where its combustibility is being harnessed as a fuel to generate electrical energy for the City.

The Environmental Impact Report (EIR) commissioned by the City, in its form currently available to the public, is devoid of any medical study or information related to the current or projected health, safety, and well being of the residents in the proximate area of the Landfill. The draft EIR also fails to evaluate whether or not the current methane recovery system at the Landfill is adequate to ensure the continuing safety of the local residents should the Landfill be expanded or converted to another use.

GOCHA believes that the health issues associated with the operation of the Scholl Canyon Landfill must be given a much more prominent place in the EIR than they have been given in the draft released to the public one year ago. Not only is the Scholl Canyon Landfill a hazard to health in Glenoaks Canyon, but its ill effects are surely felt in the other surrounding communities of Pasadena, Eagle Rock, Chevy Chase, Flintridge, and, in fact, the communities set in the entire Los Angeles River system south and west of the San Rafael Hills. The disruptive effect of any landfill on health is likely to be substantial. Landfills located on high ground, such as the Scholl Canyon Landfill, are geographically situated to create damage to an even greater area than those located on lower ground.

ANAEROBIC DIGESTION

The City's proposed development of an anaerobic digestion facility by the Zero Waste Energy Company at the Scholl Canyon Landfill would further industrialize and expand the landfill site. Since the development of an anaerobic digestion of food and green waste facility would be intended to generate electricity in order to encourage the use of renewable resources, it makes sense to locate the proposed facility at the site of The City's existing steam-electric generating plant, namely, the Grayson Power Plant, Utility Operations Center, at 800 Air Way in Glendale, and not at the Landfill.

The complete mitigation of odors during the anaerobic digestion process is of concern to GOCHA. Since there is no guarantee that the in-vessel composting system used by Zero Waste Energy will completely prevent the dissemination of odors generated by this process, it is unacceptable to the affected residents to place the anaerobic digestion facility at the Scholl Canyon Landfill, in immediate proximity to the recreational facilities of Upper and Lower Scholl Canyon Parks, Scholl Canyon Golf Course, as well as to the residents of Glenoaks and Chevy Chase Canyons, and other neighboring residential communities.

Another factor is that the proposed development of the anaerobic digestion facility at the Landfill site may lead to a conundrum for the City once the landfill operation must cease for any number of reasons, including the eventual filling of the landfill site or a decision to adopt a cleaner alternative technology before the site is filled. According to the Joint Powers Agreement of April 29, 1959, which was executed between the City and the County as final plans were being made for constructing the Landfill, the property identified and used as the site for the Landfill is to be set aside for park and recreational purposes once the waste-burying operation is completed. Thus, beginning at that future time, any purpose other than a recreational one would be inconsistent with the Joint Powers Agreement. Consequently, an anaerobic digestion facility or any other waste-to-energy operation that may be constructed on the site while the Landfill is still operating must be shut down if the promises of the Joint Powers Agreement are to be kept. Certainly the residents of Glenoaks Canyon, as well as residents living throughout the City, were led to believe that the City would honor its commitment to restore all of the Landfill site to recreational purposes once the Landfill is no longer in operation.

AESTHETIC CONSIDERATIONS

Many Glenoaks Canyon residents have commented on the negative aesthetic effect that would be caused by raising the height of the Landfill 175 feet, as proposed in both alternatives favored by the draft Environmental Impact Report. Currently the disruption to geological features caused by the Landfill is noticeable only from the west side – from Glenoaks Canyon and other locations mostly in Glendale. Once the 175-foot mound would be completed, it would become clearly visible in Pasadena, La Canada-Flintridge, and many locations in Los Angeles, as well as in Glendale. Not only would this conspicuous land form appear grotesquely unnatural, it would compromise the aesthetic integrity of what now

remains of the San Rafael Hills. The Scholl Canyon Landfill would become a perpetual beacon, constantly reminding those who view it of the environmental devastation that landfills present to the landscape. Certainly a decision to implement these alternatives would be inconsistent with plans currently being studied to include the San Rafael Hills in a Rim of the Valley National Recreation Area.

HIGH-TECH ALTERNATIVE SOLUTIONS

Our Association urges the City to explore *plasma technology* and other newly developed high-tech methods as an alternative to expansion of the Scholl Canyon Landfill.

A major benefit of these technologies is the high value of the abundant energy-producing gases that many of them generate. These gases are being harnessed in several countries in Western Europe to provide a major supplement to fuels purchased on the commercial market for the production of electric power. The value of these gases makes it possible for government entities to negotiate long-term deals that allow the technology to be installed without requiring large cash payments by the purchaser. Companies that install these technologies are often willing to accept payment through the sale of the gasses generated by the high-tech facility once the facility is installed. Even though some of these technologies have been expensive in the past, future break-throughs toward lowering costs may be anticipated. Moreover, it is possible that one or more of the suppliers of innovative waste disposal technologies will be willing to discount their prices if a government entity such as Glendale would join them in a pioneering effort to demonstrate that advanced waste disposal technology can be successfully implemented in the United States as well as in Europe.

GOCHA understands, however, that current out-dated governmental regulations prevent the installation of many of the new technologies in the State of California. These regulations fail to recognize the scientific advances in waste-to-energy systems based on these technologies.

GENERAL CONCLUSIONS

1. Owing to the immediate proximity of several active earthquake faults at or near the Scholl Canyon Landfill, there is a strong possibility that a strong earthquake will breach the existing physical barriers that are intended to safeguard and prevent the westward migration of toxic waste from the Landfill. Whether or not the Scholl Canyon Landfill is determined to be expanded or converted to another use, these barriers must be strengthened and one or more backup barriers constructed to protect Glendale's aquifers from additional pollution.

2. Because the Anaerobic Digestion System can generate odors that can be carried by Santa Ana winds into Glenoaks and Chevy Chase canyons, or by winds from the west into Pasadena, La Canada Flintridge, and Eagle Rock, such a system located at the present Scholl Canyon Landfill represents an ecological hazard. In addition, the accumulation of combustibles and organic materials prior to processing required in this system represent an environmental health hazard.
3. No further plans should be pursued to expand or develop the Landfill for waste disposal, including the installation of an anaerobic digestion facility.
4. Instead, The City should focus on plans to decommission the Landfill while exploring means of replacing it with plasma technology or another of the high-tech waste disposal alternatives now being employed in other countries.
5. The City should undertake a serious effort to mobilize other local government entities in a campaign to bring pressure on the State to modernize its regulations on waste disposal through the use of plasma technology and other advanced technologies.
6. The facility used for the high-tech system The City selects should be located in an industrial area. Sites in the area near the Grayson Power Plant would seem to be the most logical location. For example, having a plasma gasification facility, which requires a relatively small footprint, near the power plant would simplify the transmission of the produced gases to the plant. Also, the various recycling facilities related to this endeavor are also located in this area. On the other hand, sites a few miles to the southwest along San Fernando Road in Los Angeles may be appropriate, as the new technology may allow for an expansion of the current waste shed to include some sections of the City of Los Angeles.
7. Obviously, predictable costs of waste disposal must be taken into account. Yet GOCHA believes that the most significant costs of the Scholl Canyon Landfill are the unknowable health costs that have been paid in the past and are now being paid by the people who are adversely affected by the pollutants that come from this facility. GOCHA contends that the health of its residents and the residents of other affected communities must be the primary concern in any decision on the future of the Landfill.

APPENDIX

1. Anaerobic Digestion: Anaerobic digestion is capable of converting green waste into gasses, which in turn can be used to produce electricity. However, this process is unable to handle much of the waste that is left after the recycling system envisioned by The City has diverted, optimistically, 80% of the waste received for disposal.
2. Plasma technology: Plasma technology, as employed in waste disposal, creates extremely hot plasma by ionizing gas (i.e. oxygen) through a strong electrical arc. The temperature of such plasma is very high, ranging from 2000 to 6000 degrees Celsius. In the presence of such high temperatures, all waste constituents, including metals, toxic materials, and silicon, are totally melted forming a non-toxic mass of solid impurities. Plastic, biological and chemical compounds, and toxic gases yield complete dissociation into simpler gases, mainly hydrogen and carbon dioxide. Hydrogen can be used as fuel to generate heat and electrical energy, thus decreasing significantly (even to zero) the cost of plasma formation and waste utilization. Regained metals from the dissociation process can safely return to the metallurgic industry, and slag can be used as an additive to road and construction materials.

The utilization of municipal waste using this method does not cause the emission of foul odors and does not produce a harmful ash. Because of the high temperatures, the low volume of gas emissions, and the dissociation of organic compounds, gaseous emissions from plasma gasification waste processes are much cleaner than from other kinds of gasification or incineration processes.



Scholl Canyon Landfill
 sanitation districts
 dump sites



Figure 17: San Clemente Landfill
 400 tons

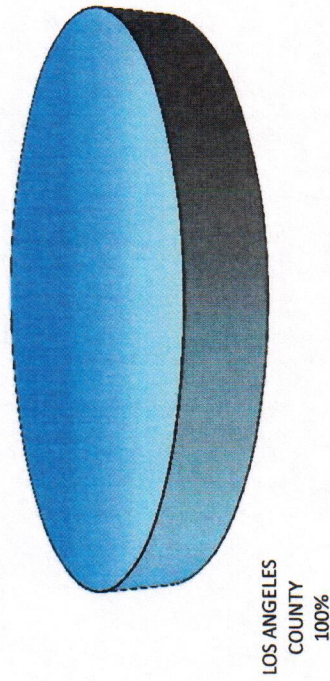


Figure 18: Whittier (Savage Canyon) Landfill
 78,000 tons

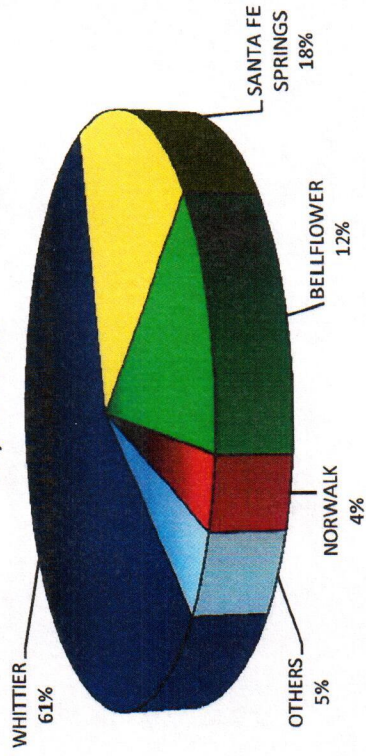


Figure 19: Scholl Canyon Landfill
 211,000 tons

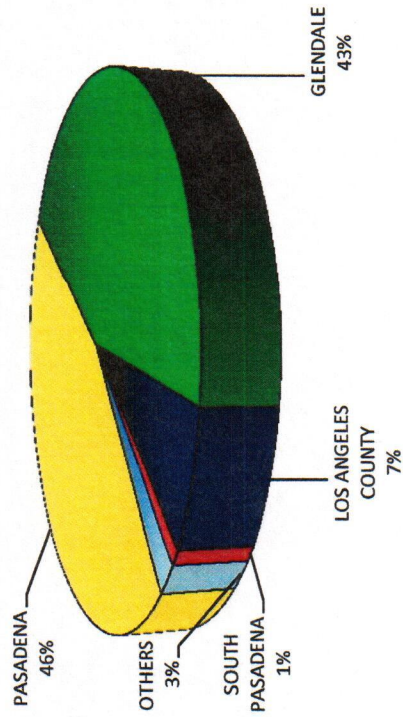


Figure 20: Southeast Resource Recovery Facility
 432,000 tons

