

County of San Bernardino Landfills – Non-Routine Services

County of San Bernardino, California

Client

County of San Bernardino, California

Timeframe

1997-Present

Contract Amount

\$10,000,000+

Personnel

Gary Lass

Mike Reason

Jason Sapp

Luis Mariscal

Stacy Baird

Adrienne Thibeault



The relationship between GLA and San Bernardino County' Solid Waste Management Division (SWMD) spans more than two decades, and during that time, GLA has provided the County with a wide variety of environmental, engineering design, permitting, construction quality assurance, and litigation support services in support of their environmental monitoring programs. In fact, over the last 20+ years, GLA has developed and implemented more than 720 task orders for a wide range of services that include the following:

Environmental Monitoring and Reporting Program Modifications: The County's monitoring network includes approximately 400 monitoring stations located at 26 of the County's 39 landfills. As part of our non-routine services, GLA periodically evaluates SWMD's monitoring system, and over the course of our contract, we have significantly reduced the scope and cost of monitoring by reducing monitoring frequency, the number of monitoring points, and eliminating redundant monitoring parameters. GLA negotiated the complete elimination of monitoring at the Cajon, Plunge Creek, Devore, and Cooley Ranch landfills, located within the jurisdiction of the Santa Ana RWQCB. At the closed Parker Dam Landfill, located within the jurisdiction of the Colorado River Basin RWQCB, GLA negotiated reduced monitoring and reporting to every five years. These reductions have resulted in cost savings estimated to be more than \$13 million dollars over the last 15 years.

Hydrogeologic Investigations and Groundwater Remediation: GLA has conducted hydrogeologic characterizations, EMPs, and EFS when impacts to groundwater are identified; and designed, permitted, constructed, and operated remediation systems to treat impacted groundwater. GLA negotiated the corrective action program acceptance with the RWQCBs, prepared construction-level designs for the remediation system, provided in-field supervision of construction, and prepared the construction completion report. These

Project Highlights

- Well maintenance, abandonment, and replacement
- Field and laboratory hydrogeologic investigations
- MODFLOW and MODPATH hydrogeologic modeling
- CAP containment/treatment system
- Program modifications, including reductions in wells, monitoring parameters, and monitoring frequency to reduce monitoring and reporting costs

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groundwater treatment systems have included groundwater extraction and treatment, leachate treatment, enhanced landfill gas extraction, vapor extraction, bioremediation, and monitored natural attenuation.

Litigation Support: GLA provides technical expert services to support SWMD’s legal counsel. Notable work has included expert testimony, groundwater monitoring and 3-D groundwater flow and contaminant fate and transport modelling to demonstrate that the County is not responsible for basin-wide groundwater impacts in the Rialto-Colton basin near its Mid-Valley Landfill. In addition, GLA provided expert testimony and litigation support to demonstrate to the US EPA that the Cajon Disposal site does not contribute to groundwater contamination in the Muscoy plume to any degree of significance. US EPA’s acceptance of this finding allowed the Santa Ana RWQCB to approve elimination of monitoring at the site.

Well Maintenance, Construction, and Abandonment: As part of the non-routine services provided, GLA has installed more than 100 monitoring wells and abandoned more than 20 wells. Work has included installation/abandonment workplan preparation, negotiations with the RWQCBs, well permitting, drilling contracting, providing field supervision and logging, well development, and preparation of well construction reports for agency submittal. GLA also periodically conducts down-hole inspections of existing monitoring wells when the well is no longer functioning as designed. GLA contracts with geophysical companies to conduct downhole video inspections of problematic wells to assess the well condition and develop a suitable course of action to repair or replace the well based on the inspection findings. In addition, GLA has coordinated and supervised well maintenance, including replacement of pumps, well monument and bollard replacement, revising well-head labels, and vegetation removal in the vicinity of monitoring wells.

Treatment System Operations and Maintenance: The County’s Mid-Valley, Milliken, and Heaps Peak landfills are equipped with groundwater and/or leachate treatment systems that require periodic inspection, maintenance, and servicing. GLA monitors treatment system performance and provides recommendations to the County for optimizing their performance. In addition, GLA coordinates, supervises, and documents contracted work on each system. This work has included coordination of GAC change-outs, testing and repairs of leachate collection and removal system components, soil-vapor extraction system adjustments, groundwater extraction system adjustments, and bioremediation system media replacement and inoculation.