
MICHELLE P. LEONARD

Education

BS – Environmental Studies (with honors), University of California, Berkeley, 1980

Affiliations

Solid Waste Association of North America (SWANA), International Board President;
Recycling and Special Waste Technical Division Past Director; Southern California
Founding Chapter, Board of Directors (2009 to Present)

Past Director, Southern California Waste Management Forum

Past President, Women's Environmental Council

Professional Experience

Ms. Leonard has nearly 30 years of experience in environmental consulting and project management, with emphasis in solid waste management planning and facilities. She has assisted public and private sector clients in the preparation of solid waste management plans; designed and implemented waste reduction, recycling, and reuse programs; and evaluated existing programs to identify opportunities to reduce, reuse, and recycle solid waste. Ms. Leonard has prepared plans and permits for transfer stations, material recovery facilities, and drop-off and buy-back centers. Ms. Leonard has a strong working knowledge of solid waste management regulations and practices, and has presented numerous successful projects to city, county, and state regulators.

Solid Waste Planning

- **County of Los Angeles Smart Business Recycling Program.** Project Director. Directing SCS' effort to assist the County of Los Angeles Public Works Department to meet the requirements of the California Integrated Waste Management Act of 1989 and Assembly Bill 341 Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organics. The business sector contributes significantly to the amount of waste generated in Los Angeles County, so to help businesses reduce waste and, thereby, preserve landfill capacities, the County established the Smart Business Recycling Program (Program. The goal of this Program is to help businesses and institutions comply with State recycling requirements and achieve recycling and diversion. The contract includes a wide variety of types of work, ranging in complexity from site visits and reporting to graphic design and procurement of promotional items.
- **Extended Producer Responsibility Study and White Paper.** Project Manager for the preparation of the study and white paper comparing European, Canadian, and US policies and programs for EPR. The study evaluates definitions of MSW, recycling rates, and methodologies, and compares the reported impacts of EPR on recycling in these entities.
- **Zero Waste Strategic Plan, City of Pasadena, CA.** Project Manager for the Zero Waste Strategic Plan for the City, which includes evaluating existing programs and determining needs,

performing a waste characterization study, identifying options to address needs, developing guiding principles, and screening and selecting options for implementation. The project also includes a stakeholder engagement process, including workshops and outreach efforts.

- **Zero Waste Strategic Operations Plan, City of Santa Monica, CA.** Project Manager responsible for preparing a strategic operations plan for the City that evaluates the current conditions, and will recommend policies, programs and infrastructure to reach the City's goal of zero waste by 2030. The project includes the preparation of a zero waste ordinance, guiding principles, waste characterization and generation projections, and the review and recommendation of options. The plan will also evaluate the impacts on the City's rate structure, and mechanisms to finance the program.
- **Spokane County Solid Waste Management Plan Update, Spokane County and the City of Spokane, WA.** Project Director. Spokane County is home to almost 500,000 residents and is served by a solid waste system that consists of public and private operations. The Spokane Solid Waste Management System, a department of the City of Spokane, operates two transfer stations, a waste-to-energy plant, and collection service for City residents. The remaining cities and county unincorporated areas are served by private franchised haulers who utilize the Systems facilities. Update of all elements of the County's solid waste plan, with particular focus on infrastructure, waste stream projections, financial impacts of alternatives, transfer system improvements, moderate risk waste, composting options, and addressing construction, demolition, and land clearing (CDL) waste options.
- **City of Toledo/University of Toledo Organic Waste Recycling and Construction and Demolition Debris Recovery Facilities Feasibility Study, Toledo, OH.** The project includes a feasibility study to optimize the operation of two permitted composting sites, and evaluate development of a new regional food scraps and organic waste management facility. The project also includes an evaluation of developing a construction and demolition debris materials recovery facility to recycle concrete, asphalt, and other inert materials. The project incorporates design, permitting, and environmental issues, and includes a siting study to identify potential locations for the facilities. An evaluation of the financial aspects of developing and operating the facilities is also included in the project.
- **Solid Waste System Audit, Malibu, CA. Project Director.** Conducted an evaluation of the City's solid waste program to identify the strengths, weaknesses, opportunities and challenges of the existing program. Tasks including conduct an inventory of Existing Policies and Programs, and preparing a comparison of the City's policies and programs with industry standards and trends. SCS contacted 10 municipalities with similar demographics to Malibu, and obtained information on existing policies and programs in place, and relevant information, such as year adopted or implemented, affected sector, diversion impacts and/or rate, cost per capita, household or business. This information was compiled in a matrix to facilitate review and evaluation by the City. The study report includes the following:
 - Assessment of the future program needs based on growth projections and proposed and pending regulations/legislation
 - Recommendations for revisions to existing policies and programs

- Recommendations for new policies and programs
- Suggested measures to track progress in meeting goals and objectives, both quantitatively and qualitatively
- **Third Party Diversion Study, Pasadena, CA.** Project Director. Verified third party diversion for commercial businesses in the City of Pasadena, on behalf of Athens Services. Project includes contacting businesses to verify the types and quantities of materials that are source reduced, recycled, composted or diverted through programs outside of the haulers control.
- **Composting Facility Conceptual Design and Costs, Athens Services, CA.** Project Director. In support of the potential development of a new composting facility, SCS prepared conceptual design for a 100 acre site to handle yard debris and food scraps. The plan includes the layout for receiving, processing, and storing of finished product, as well as stormwater and other environmental controls. As part of the project, SCS prepared estimated costs for the development of the site, including site preparation, buildings, and equipment.
- **Solid Waste System Business Plan, Santa Cruz County, AZ.** Project Director. The County owns and operates two landfills, transfer station, and drop off centers for recycling. SCS was contracted to evaluate the system costs, revenues, and liabilities over a 30 year planning period, and identify options for the County, including continued operation, privatization of operations, and sale of the assets.
- **City of San Gabriel Electronic Annual Report and Disposal Tracking, San Gabriel, CA.** Project Director. For over 15 years, SCS has assisted the City of San Gabriel to prepare its Solid Waste Annual Report to the State of California (CalRecycle) which identifies the City's compliance with diversion mandates, program and policy implementation. SCS has also conducted disposal tracking for the City, which identifies disposal tonnage misallocated to the City, and reallocates it to the City of origin for disposal reporting purposes.
- **Solid Waste Management Plan, Mecklenburg County, NC.** Senior Technical Advisor. Contributed to the update of the County's solid waste plan, including the design of high diversion, reduction, reuse and C&D policies and programs. Assisted in the financial impact analysis, diversion estimates, and waste characterization study.
- **Solid Waste Management Master Plan, Miami-Dade County Department of Solid Waste, Miami-Dade County, FL.** Senior Technical Advisor for preparation of a solid waste master plan for the County that identifies options and improvements to the County's solid waste system, including collection, transfer, and processing. A series of public workshops and meetings have been conducted to identify the preferred options for implementation over the planning period.
- **City of Rancho Palos Verdes Solid Waste Programs, Rancho Palos Verdes, CA.** Project Director. Provides annual solid waste management services. Work includes a series of projects intended to increase the City's diversion, including expansion of the City's multi-family recycling program. As part of this project, conducted workshops at a number of homeowner association groups to introduce the new program, and to help managers

implement the recycling methods. Also conducted a workshop for haulers and contractors on the City's Construction and Demolition debris recycling program, and participated in a variety of other public education and outreach programs.

- **City of Irvine, Zero Waste Technical Assistance, Irvine, CA.** Project Director. This project originated in 2004 to include conducting waste audits and providing information to businesses on recycling and waste reduction. The project was later expanded to include outreach and education to schools and other city facilities, zero waste program for restaurants, preparation of a construction and demolition debris ordinance, preparation and negotiations for a semi-exclusive solid waste franchise agreement, and recycling programs for special events and public venues.
- **City of Lakewood, CA, Solid Waste Generation Study and Solid Waste Support Services.** Project Director responsible for City of Lakewood Environmental Programs. In 2000, SCS was selected to prepare a conducting a solid waste generation study in support of a new base year modification and compliance order, and provide solid waste support services. Based on the success of that project, SCS has provided ongoing solid waste support services to the City, including disposal reporting system review and analysis, commercial waste audits, public education and outreach, Used Oil Grant administration, Annual Report preparation, and design and implementation of special recycling events.
- **CalTech Waste Audit and Waste Characterization Study, Pasadena, CA. Project Manager.** Conducted a waste audit and waste characterization study at the university to determine the types, quantities, and sources of compostables in the waste stream, material suitable for incineration, and the sources and potential reusability of packaging in the campus waste stream. A total of 66 samples were collected from 11 generator groups, and sorted according to 27 different material types. The results of the study were also used to evaluate potential costs and savings from the implementation of new and/or expanded recycling programs.
- **Island County Solid Waste Operational Assessment and Benchmarking Study, Coupeville, WA.** The goal of this study was to develop data and information that would ensure that the County is providing efficient management of solid waste programs, services, and infrastructure. During the course of the study, we explored possible opportunities for improvements, costs savings, and revenue enhancements.

SCS completed the following analysis and provided recommendations in these areas:

- Operational assessment of current drop-off stations.
 - Assessment of transfer stations.
 - Evaluate additional recycling opportunities.
 - Evaluate new capital investment.
 - Expansion of curbside collection programs.
 - Conduct benchmarking survey.
 - Financial analysis of County program.
- **City of Anaheim Disposal Agreement Rate Model Analysis, Orange County, CA.** Project Director. Performed an analysis of the landfill rate model prepared by Orange County, CA.

The 34 cities of Orange County have a disposal agreement with the County to dispose of all city waste at the three County-owned landfills for a set tipping fee. The existing 10-year agreement expires in 2009, and the County has proposed a new tipping fee, based on a financial model. identified and advised the Waste Management Committee of the Orange County City Managers Organization about any facts or issues that may enable the cities to constructively negotiate contract terms or a contract rate that is more favorable to the cities. assisted the cities in analyzing the relative merits of the alternative fee structures (i.e., flat fee vs. adjusted annually based on inflation), and assisted the cities in designing a policy and methodology for the County to declare a dividend (or rate reduction) in the event actual expenses are less than projected or if actual tonnage quantities are greater than expected.

- **City of Santa Maria, Collection and Disposal Rate Study, Santa Maria, CA. Project Director.** Worked with the city to review the existing collection and disposal rates charged to residents, businesses and industrial customers. A thorough analysis of existing rate structure has been completed, based on the city's budget, operations, and financial reports. A financial model was developed that can be utilized to estimate the appropriate rate structure for all aspects of the city's solid waste system, and to estimate the costs and revenues associated with specific system programs.
- **City of Redondo Beach Solid Waste Franchise Agreement Audit, Redondo Beach, CA. Project Director.** Performed an independent audit of the Solid Waste Handling Services Agreement between the City of Redondo Beach and Consolidated Disposal Service. The project included reviewing background information relative to the operation of the City's solid waste system, issuing a request to Consolidated for pertinent financial and operational data and documents, verifying the supporting documentation and recalculating the AB 939, administration, and HHW fees. Also sampled commercial bin service accounts for testing and performed selected site inspections to document service levels and contacted the largest multi-family accounts by telephone and/or performed selected site inspections to identify any differences with the hauler's customer database. Prepared a report that documented the findings and recommendations.
- **City of Pasadena Residential Collection Rate Study, Pasadena, CA. Project Director.** The City of Pasadena currently provides solid waste and recycling collection service to approximately 27,000 residential units (single-family residences and multi-family units) within the City's incorporated limits. A rate model was developed that enabled projections of financial performance of residential refuse collection for the upcoming 10-year planning period (2006 to 2015), and model various user rate structures to help eliminate the Refuse Fund's existing negative cash balance. Based on data and information provided by City staff, these individual spreadsheets were linked to develop an overall rate model to evaluate the impact of critical City cost and program revenues areas on different potential rate options.
- **City of Santa Clarita, CA, Waste Generation Study and Disposal Reporting System Review.** Project Manager responsible for conducting a waste generation study for the City to establish the current and potential recycling rate in the City. As part of the study, SCS completed on site waste assessments at the City's largest businesses, identified diversion from City programs, and other activities in the City that divert solid waste, including recycling,

composting, and source reduction. Also, SCS also completed a comprehensive review and evaluation of the City's 1999 and 2000 DRS reports, after a 65,000-ton spike in disposal was reported in 2000. The project included review of hauler reports and comparison of this data with landfill records. A report to Council was prepared, with recommendations to correct previous errors and avoid future discrepancies.

- **Los Angeles County, CA, Department of Public Works, Countywide Yard Waste Program.** Project Manager responsible for a 2-year project involving the Los Angeles County Department of Public Works Countywide Yard Waste Program. This project was a 2-year effort to design, manage, and implement the Countywide Yard Waste Program. Work involved providing a broad range of public education, outreach, and training related to yard waste composting, worm composting, water-wise gardening, and grass recycling. The project also incorporates a statistical survey of program awareness and efficacy, and evaluation and monitoring of program results.
- **Los Angeles County, CA, Department of Public Works, Recycling Program Study.** Project Director responsible for development of the ACCESS database of over 1,400 County departments and facilities in support of the County's recycling program. SCS is the prime contractor for this project, which involves developing an ACCESS database of over 1,400 Los Angeles County departments and facilities. The information is used to identify and maintain a list of existing recycling efforts. The project also involved providing recommendations for the expansion of existing or new recycling programs for all County facilities/departments.
- **Los Angeles County, CA, Waste Generation Study.** Project Director responsible for conducting the Los Angeles County Waste Generation Study. Ms. Leonard oversaw preparation of two waste generation studies for the unincorporated area of Los Angeles County. As part of the project, a waste characterization of residential and commercial generators was also conducted. Over 1,000 surveys were distributed to residents, businesses, haulers, and facility operators to determine diversion activities throughout the County. Results from the surveys of grass recycling and organics, inert materials, materials recovery facilities and transfer stations, scrap metal and electronics will be calculated to determine the optimum new base year for the County.
- **Sonoma County, California, Solid Waste Management Alternatives Analysis.** Project Manager responsible for evaluating solid waste management alternatives for the Sonoma County Solid Waste Management Alternatives Analysis Project. SCS worked with the County and a 35-member Local Task Force to identify and select alternatives for disposal of the County's waste, following closure of its landfill in 2015. The project included an analysis of the existing solid waste management system, projection of future demographics and solid waste generation, review and evaluation of alternatives, and completion of a strategy that may include options for disposal, alternative technologies, diversion programs, and policies.

Waste Characterization Studies

- **Sonoma County Waste Management Agency, Sonoma, CA.** A two season waste characterization study will evaluate the types and quantities of waste disposed in the County by residential, commercial, and self-haul sectors. The study will be used by the Agency to identify opportunities to increase diversion of waste from landfilling. Approximately 250 samples will be hand-sorted, and 300 samples will be visually characterized.
- **City of Sausalito Waste Characterization Study, Sausalito, CA.** Project Manager. SCS Engineers conducted a waste characterization study for the City of Sausalito in the Spring of 2013. The purpose of the project was to help the City collect baseline data for measuring the effectiveness of existing waste minimization strategies and diversion programs. Using the data collected during the field study, SCS calculated the waste composition for each of the waste generating sectors. The study revealed that approximately 68 percent of the City's waste stream is recoverable using existing composting and recycling programs.
- **Athens Services, Industry, CA, Waste Composition Study, Athens Services, Industry, CA.** Project Director responsible for conducting a number of waste composition studies at the Athens Services MRF/Transfer Station in Los Angeles County. The studies were conducted in accordance with CIWMB protocol, and included preparation of a sampling plan, sorting of waste into 57 different categories, and preparation of report findings. The results of the analysis were used to determine the recycling rate or recyclable portion of the incoming waste stream from a number of municipalities.
- **Los Angeles County Sanitation District, Waste Characterization Study.** Project Director responsible for conducting a waste characterization study for the Downey Area Recycling and Transfer Facility (DART) in Los Angeles, California. Numerous waste stream analyses were conducted of cities serviced by the facility. The waste streams from the commercial, industrial, and residential sectors were typically sampled for quantities and types of waste and recyclables, and characterizations are established for each individual sector. The information was used in the design of facilities and programs for collection and processing.
- **Orange County, California, Waste Characterization Study.** Project Director responsible for conducting a self-haul waste characterization study in Orange County, California. Waste sampling and analysis was conducted at all three active landfills, and data were analyzed to determine the quantity and composition of waste from self-haul and roll-off loads from all jurisdictions within the County. The project included a two-season sort, the first of which was conducted in Summer 2003, and the second in Winter 2004.
- **Waste Characterization Study, Santa Barbara County, CA.** The first study was conducted in 2003, and a second study in 2009. This first study characterized 110 loads of municipal solid waste at the Tajiguas Landfill and the Santa Barbara County transfer station in order to provide detailed composition estimates of waste disposed in Santa Barbara County. The second study was conducted in support of the County's efforts to site an organics process/waste to energy facility at the landfill. Analysis was conducted of all incoming waste at the landfill for use by potential facility vendors to propose a technology that could utilize the incoming waste stream..

- **State of California, Statewide Generator Study.** Project Director responsible for SCS is conducting the waste generator task of the statewide waste characterization study. The study characterized waste generated, both disposed and diverted, from 10 commercial generators that are major sources of waste in the state. The study consisted of field sampling, sorting, and quantification, used to establish a comprehensive waste generation for each business type.
- **Stanislaus County Waste Composition Study and MRF Analysis.** conducted a waste analysis and materials recovery facility (MRF) assessment at the Fink Road Landfill for the purpose of determining the feasibility of a MRF processing facility at the landfill site. Conversion Technology
- **Conversion Technology Study, City of Glendale, CA.** Project Manager. The City of Glendale is taking an active role to find a more sustainable solution to process the City's disposed municipal solid waste (MSW). The project includes the initial evaluation of the technologies, establishing a short-list of vendors/technologies from whom to receive more in-depth information, and identification of a site for the potential development of a facility. It is anticipated the first phase of the project will be completed by the end of 2011 or early 2012.
- **Conversion Technology Study, County of San Bernardino, CA.** Project Manager responsible for conducting an in-depth analysis of the feasibility of developing a solid waste conversion facility in the county. The project includes a waste characterization study to determine the feedstock, an evaluation of vendor technologies, including an independent engineering analysis, recommendations of vendors to solicit proposal from, a siting study to identify potential locations of a facility, and coordination with other County agencies and stakeholders. The project will be completed within one year.
- **Rialto Renewable Energy Center, Rialto, CA.** Project Manager. Responsible for the solid waste facility permit for the proposed facility to be located at the Rialto wastewater treatment facility. The project includes a 3,300 ton per day greenwaste gasification facility. Prepare the Process Facility Report and permit application, as well as provided support services for the Environmental Impact Report prepared for the project.
- **Alternative Technologies Study, Monterey Regional Waste Management District.** Prepared an overview and analysis of emerging technologies and other programs and policies to reduce solid waste disposal. The study included an analysis of conversion technologies that are capable of converting post-recycled residual solid waste into useful products and chemicals, including ethanol, biodiesel and clean renewable energies. The technologies reviewed included thermal, chemical, and biological. The study provided a general overview of the technologies, compared the process advantages and disadvantages, and presented information on capital and operating costs, tipping fees, diversion potential, technology viability, and market products. The study also included an update of the status of a number of projects and studies, in California and throughout the United States.

Facility Permitting and Compliance

- **Interior Removal Specialist, Inc. (IRS), Permitting for Construction, Demolition, and Inert Debris Processing and Transfer Facility, California.** Project Manager responsible for preparing all documents and assisting IRS in permitting a construction, demolition, and inert debris processing and transfer facility. The facility can handle up to 3,000 tons per day (tpd) of construction and demolition materials, and processes the materials to divert an average of 75 to 85 percent of the incoming waste. Facility improvements include a sorting line, new scale, baler, and other support operations. As part of the project, SCS assisted in preparing the application for a revised Conditional Use Permit, CEQA analysis, and hazardous materials permits.
- **Norwalk Industries/Ecology Auto Parts Facilities, Santa Fe Springs, CA, Permits for Transfer Station and Green Waste Chipping and Grinding Facility.** Project Manager responsible for preparation of revised permits for transfer station and green waste chipping and grinding facility, Norwalk Industries/Ecology Auto Parts Facilities, Santa Fe Springs, CA. The existing transfer station will be expanded to handle up to 100 tpd of municipal solid waste, and the green waste operation will be expanded to process up to 500 tpd. SCS has prepared the facility plans for both operations, and an Odor Management Plan for the Green Waste facility.
- **Pebble Beach Municipal Landfill, Five-Year Review and Report on Disposal Site Information.** Project Manager responsible for preparing a Five-Year Permit Review and a revised Report of Disposal Site Information for the Pebble Beach municipal solid waste landfill on Santa Catalina Island, including new site plan, facility operations plans. The project also included revisions to the Closure and Post-Closure Maintenance Plans.
- **Reliance Landfill, Disposal Site Information and Waste Discharge Reports and Application for Finding of Conformance, Irwindale, CA.** Project Manager responsible for preparation of Report of Disposal Site Information, Report of Waste Discharge, and application for the Finding of Conformance for Reliance Landfill, an inert, unclassified facility located in Irwindale. The project involved significant negotiations with the regulatory agencies, and in-depth analyses and recommendations regarding the facility operations and plans. The permit was subsequently issued by the Local Enforcement Agency, with concurrence from the California Integrated Waste Management Board.
- **Two Harbors Landfill, Santa Catalina Island, CA, Preliminary Closure and Post-Closure Maintenance Plans.** Project Manager responsible for preparing the Preliminary Closure and Post-Closure Maintenance Plans for Two Harbors Landfill on Santa Catalina Island. The project included coordinating the development of grading, drainage, and revegetation plans, and establishing the availability and compatibility of suitable on-site cover material. Also responsible for establishing requests for exemptions from requirements for groundwater, leachate, and methane gas systems.