

## I. TABLE OF SELECTED LIST OF SERA SOLID WASTE CLIENTS

<b>SERA SOLID WASTE PROJECT EXPERIENCE</b>		
<b>Type of Project</b>	<b>Clients</b>	<b>Project Assignments</b>
Rate Studies – PAYT, Commercial, Landfill, Transfer station, and other	<p>Boulder, CO</p> <p>Longmont, CO Santa Barbara, CA Edgewater, CO Anchorage, AK</p> <p>Port Angeles, WA Island County, WA UC-Boulder</p> <p>Jackson Hole, WY, Summit County CO, others Porterville, CA San Jose, CA Kitsap County Santa Clarita, CA City of Sacramento Largo, FL Sacramento County Gilroy, Morgan Hill, CA Austin, TX Montara, Granada, San Luis Obispo Seattle, WA</p> <p>Berkeley, CA Cincinnati, OH Pasadena, CA Oak Park, IL King County, WA Seattle, WA</p>	<ul style="list-style-type: none"> <li>• Rate study for single stream &amp; yard waste services, every other week collection, pilot analysis</li> <li>• PAYT rate study and analysis</li> <li>• Commercial rate study including organics</li> <li>• PAYT rate study</li> <li>• PAYT, landfill, transfer station, and other rates for new programs / services</li> <li>• Solid waste rate study</li> <li>• Rate study for solid waste and septage</li> <li>• Rate study / structure for recycling &amp; gbg service in institutional setting / PAYT</li> <li>• PAYT research and assistance for EPA Region 8 grant; background through rate computation assistance</li> <li>• Rate study for SF to incorporate recycling program</li> <li>• Rate study for Multifamily dwellings</li> <li>• Residential/commercial/transfer station/program rates</li> <li>• Residential Variable can rates; franchised hauler</li> <li>• Residential and commercial rates</li> <li>• Residential and commercial rates</li> <li>• Variable can rates, yard waste program charges</li> <li>• Residential rates, options for program charges</li> <li>• Res. variable can rates</li> <li>• Rate structure assessment / comparison, rate impacts, rates and hauler review</li> <li>• Multiple years, variable can, detachable containers, transfer stations</li> <li>• Res. and commercial collection, transfer stations</li> <li>• New res. variable rate system - hybrid</li> <li>• Res. variable can and yard waste rates</li> <li>• Res. variable can, yard waste, and recycling rates</li> <li>• Expert witness testimony on res. variable can rates</li> <li>• Analysis of optimal rate timing</li> </ul>
User Fee/ Incentives Feasibility Studies	<p>Knoxville, TN Ohio DNR Anchorage, Wyoming State of Georgia Sacramento County, CA</p> <p>Cincinnati, OH Gilroy, Morgan Hill, CA Oak Park, IL Sunrise, FL Largo, FL Ft. Wayne, IN Victoria, CRD, BC Anchorage, AK Orange County, CA Seattle, WA/EPA</p> <p>Ventura, CA</p>	<ul style="list-style-type: none"> <li>• PAYT / VR options, design, potential</li> <li>• PAYT/VR lists, statewide analysis, pilot community ass't</li> <li>• Variable rates feasibility studies (Wyoming 5 cities)</li> <li>• On call assistance to cities/municipalities in GA</li> <li>• Feasibility, design of variable rate option, yard waste charge</li> <li>• Feasibility analysis and implementation plan, hybrid</li> <li>• Variable rate and diversion charges feasibility/design</li> <li>• Variable rate feasibility analysis</li> <li>• Development of recycling credits program</li> <li>• Analysis of variable rates and weight-based feasibility</li> <li>• Assistance for feasibility analysis</li> <li>• Detailed feasibility analysis and implementation plan</li> <li>• Variable rate feasibility assessment</li> <li>• Case study comparisons for feasibility</li> <li>• Garbage by the Pound Study (pioneering weight-based rates pilot program)</li> <li>• Implementation of variable rates, education</li> </ul>

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Workshops, Manuals on PAYT/User Fees/Rates and Funding Options	EPA National EPA Region 9 EPA Region 8 Alameda StopWaste Reason Foundation, Michigan Client EPA, Region 10 EPA Headquarters CA IL DNR Coalition of NE Governors (CONEG) Ontario Ministry of E&E Southern States Energy Board, GA	<ul style="list-style-type: none"> <li>• Webinars on Effective recycling programs, climate change, and other topics.</li> <li>• PAYT assistance for Region 9 towns, counties, tribes</li> <li>• PAYT assistance for Colorado cities, counties, tribes</li> <li>• Analysis of funding options for diversion programs</li> <li>• Fact sheets and manuals on latest findings on PAYT, including frequently asked questions, etc.</li> <li>• Variable Rates...</li> <li>• Unit Pricing...</li> <li>• CA Integrated Waste Management Board, <i>Unit Pricing...</i></li> <li>• IL Dep't of Energy and Nat'l Resources, <i>Quantity-Based Disposal Rates</i></li> <li>• Decision-Makers Guide...</li> <li>• User Pay Demonstration Manual</li> <li>• Authored portions of handbook on PAYT systems</li> </ul>
Funding/Financing Options Assessment	Alameda StopWaste San Jose, CA  Denver, CO Alachua County, FL  Commonwealth of Massachusetts State of Iowa Akron, OH  Portland Metro, OR  City/County of Honolulu  Boulder, CO  Berkeley, CA  Sunrise, FL  Seattle, WA Sacramento County, CA King County, WA Seattle, WA Seattle, WA Seattle, WA Nat'l Assoc. of Counties  California Resource Recovery Ass'n Texas Natural Resources Conservation Commiss. Largo, FL; Berkeley, CA	<ul style="list-style-type: none"> <li>• Options for funding diversion programs</li> <li>• Assess funding options for solid waste and recycling program, model scenarios</li> <li>• Review of funding / fee options in budget crisis</li> <li>• Review of rate stabilization, contingency fund, and financial practices</li> <li>• Funding options/costs for recommended strategies to increase recycling</li> <li>• Funding options for State Strategic Plan Options</li> <li>• Economic alternatives to flow control; funding of new system; disposal options analysis</li> <li>• Analysis/design of two dozen funding options; case studies for revenue replacement from shortfall</li> <li>• Analysis of appropriate market development strategies and funding / incentive methods</li> <li>• Analysis of revenue options for funding new integrated county-wide programs; design/recommendations</li> <li>• Options for new revenue sources, leveling playing field for commercial, "environmental" fees</li> <li>• Options for recycling charges/rebates; case studies; design</li> <li>• Revenue sources assessment, policies</li> <li>• Revenue options for program funding</li> <li>• Revenue options with new programs</li> <li>• Long term revenue options for comprehensive plan</li> <li>• Financial analysis for bond issue</li> <li>• Cash analysis for timing of rate change</li> <li>• Presentation on funding options and analysis of appropriate match of beneficiaries to payers</li> <li>• Presentation on economic alternatives to flow control; generator fees in communities, case studies, pros/cons</li> <li>• Case studies and appropriate funding options presentation before task force</li> <li>• Cash analysis, rate timing analysis/alternatives</li> </ul>
Integrated Facility and Program Planning, Economic Analysis of	State of Colorado Southern Cal Gas	<ul style="list-style-type: none"> <li>• Analysis of "next steps" for State diversion planning</li> <li>• Integrated solid waste planning / economic analysis assistance toward greenhouse gas / sustainability plans</li> </ul>

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Alternatives	<p>Anchorage AK Pitkin County, CO</p> <p>Boulder County, CO</p> <p>Anchorage, AK</p> <p>Fort Collins, CO</p> <p>Boulder, CO UC-Boulder</p> <p>Oregon DEQ</p> <p>Snohomish County</p> <p>State of Massachusetts</p> <p>Tukwila, WA Anchorage San Francisco Montgomery Co., MD</p> <p>Boulder, CO</p> <p>Seattle, WA Grand Canyon National Park King County, WA</p>	<ul style="list-style-type: none"> <li>• Integrated Solid Waste Master Plan</li> <li>• Detailed diversion potential assessment modeling, cost and tonnages of options and packages</li> <li>• Detailed diversion potential assessment modeling, cost and tonnages of options and packages</li> <li>• Detailed analysis of recycling program feasibility, incentives, programs, and service procurement</li> <li>• Goalsetting, program options modeling / analysis, strategies to reach 50% diversion</li> <li>• Recycling program visioning / next steps</li> <li>• Recycling potential assessment model / scenarios for cost-effective recycling programs for 20 years.</li> <li>• Dev'p/analyze 16 strategies to increase recycling statewide; develop model, estimate tons, costs</li> <li>• Analyze alternative recycling/yard program/facility scenarios</li> <li>• Analysis and work w/ task force to identify best strategies to reach 46% goal</li> <li>• Review Current rate, service, hauler options</li> <li>• Analyze performance/potential of recycling program</li> <li>• Analyze program/facility "fit", suitability, needs</li> <li>• Feasibility/options for new/emerging materials for residential and commercial sectors</li> <li>• Analysis of program options, design of cost-effective mix of services and programs for solid waste management system</li> <li>• Cost-benefit analysis of program options</li> <li>• Analysis of program options, cost-effective mix of recycling and garbage service options</li> <li>• Cost-effectiveness analysis of yard waste and other program options</li> </ul>
Detailed Program Planning and Evaluation, Integrated Plan, Master Plan	<p>Mesa County, CO Anchorage, AK Pitkin County, CO</p> <p>Edgewater, CO Fort Collins, CO Seattle and other clients</p> <p>City of Boulder City of Boulder Boulder County City of Boulder City of Boulder</p> <p>Iowa DNR Mutliclient</p> <p>Oregon DEQ San Francisco (City &amp; County)</p> <p>Montara, San Luis Obispo,</p>	<ul style="list-style-type: none"> <li>• Integrated / Master Plan for Solid Waste</li> <li>• Detailed recycling feasibility analysis / modeling;</li> <li>• Detailed integrated plan for county landfill, transfer station, programs, facilities, strategies, economic plan</li> <li>• Integrated solid waste plan</li> <li>• Analyzed commercial diversion for City tracking</li> <li>• Analyzed / refined multi-resource comm'l audit programs</li> <li>• Evaluation of yard waste program</li> <li>• Evaluation of wood waste program</li> <li>• Evaluation of recycling drop-off center use</li> <li>• Evaluation of recycling drop-off center use</li> <li>• Measuring recycling diversion from City's curbside and PAYT ordinance</li> <li>• Estimating impacts of education on diversion</li> <li>• Quantifying impacts of different PAYT/VR system types and rate differentials on diversion</li> <li>• Evaluation of 2 statewide cleanup programs</li> <li>• Project evaluating hauler diversion incentive options program, rate methodology options, rates and service provision options</li> <li>• Detailed surveys of rates and services in other communities for rate comparisons and benchmarking</li> </ul>

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	Granada, San Francisco Multi-client  Seattle/King County Health Dept.  Portland Metro  Local Gov't Commission & Cal Waste Board CA Local Gov't Commis. & Cal Waste Board Seattle/King County  Seattle, WA Largo, FL  Seattle, WA  WA Dep't of Ecology  Multi-client  Reason Foundation  Reason Foundation	<ul style="list-style-type: none"> <li>• Methods for measuring source reduction; estimates of the source reduction benefits of variable rates</li> <li>• Evaluation design for the LHWMP including 21 collection, education, and compliance programs for res. and comm'l.</li> <li>• Program eval, performance eval. for haz programs and scalehouse operations, efficiencies, benchmarking</li> <li>• Evaluating used oil programs, evaluation design, and conducting workshops on evaluating used oil programs</li> <li>• Process, impact, performance evaluation of materials exchange program</li> <li>• Process, impact, and performance evaluation of Haz waste plan including 2 dozen programs for residential and commercial sectors</li> <li>• Garbage by the Pound pilot test</li> <li>• Cost-effectiveness of recycling and yard waste; cost component analysis of solid waste management system</li> <li>• Detailed tracking of recycling, tonnage, revenue, and cost performance vs. goals</li> <li>• Assessment of industrial solid waste regulations, sufficiency, practices, comparison to other states</li> <li>• Statistical analysis of diversion and cost-effectiveness of alternative recycling, diversion, and incentive programs</li> <li>• Costs and benefits of weight-based systems; technical alternatives</li> <li>• Impacts of variable rates; performance issues; methods to evaluate programs</li> </ul>
Zero Waste	Boulder County, CO  Anchorage, AK  Alameda County, CA  Superior, CO Boulder, CO Boulder County, CO Seattle, WA  Superior, CO	<ul style="list-style-type: none"> <li>• Impacts, costs, GHG, and other effects from Zero Waste programs / plan</li> <li>• Zero Waste plan, providing program options for City to achieve recently-adopted zero waste goal; detailed model prepared</li> <li>• Assessment of source reduction options for commercial businesses to develop program for moving toward County's zero waste goal; included detailed model</li> <li>• Staffed Zero Waste special town events</li> <li>• Task force to develop zero waste plan for city</li> <li>• Task force to develop zero waste plan for County</li> <li>• Detailed multi-resource audit program assessment (commercial businesses integrating waste, energy, and water audits)</li> <li>• Conducted detailed commercial audits focusing on waste reduction, energy conservation, and water conservation for businesses across town</li> </ul>
Program Evaluation, Coll'n and Programs Efficiency	Metro Vancouver, BC  Boulder, CO Porterville, CA Private client  Private client	<ul style="list-style-type: none"> <li>• Evaluation of "next steps"/leading programs to increase diversion</li> <li>• Evaluation of single stream &amp; yard waste program</li> <li>• Program design/ costs / options for curbside recycling</li> <li>• Analysis of impacts of drop-off program on curbside tonnage</li> <li>• Detailed analysis of single stream collection, processing, and markets; and analysis of bins and educational options</li> </ul>

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	Gainesville, FL West Jordan, UT Massachusetts  Rhode Island SWANA (Calif. Chapters)  State of North Carolina, APC, and multiclient  Largo, FL  <i>Resource Recycling</i> three- article series  Portland Metro  Santa Clarita Gilroy, Morgan Hill, CA  King County, WA Akron, OH  Berkeley, CA Austin, TX Multiclient (including EPA, MN, others)	<ul style="list-style-type: none"> <li>• Collection efficiency study; feasibility of coll'n changes</li> <li>• Program review, benchmarking; develop hauler RFP</li> <li>• Cost-Effectiveness of residential and MF recycling and YW programs – quantitative analysis and surveys</li> <li>• Analysis of containers, recycling programs</li> <li>• Detailed analysis of program features, performance, costs, cost-effectiveness of achieving different diversion levels, commercial and residential</li> <li>• Nationwide study of program diversion and cost impacts for alternative program features / high performing programs.</li> <li>• Recycling, comm'l, yard, bulky, residential coll'n efficiencies/ productivity; benchmarking; analysis of automated collection.</li> <li>• Recycling, yard waste, and garbage collection, programs, efficiencies, differences by community/collection types</li> <li>• Efficiency of hazardous waste programs, scalehouse/transfer operation</li> <li>• Analysis of weight-based rates/efficiency</li> <li>• Evaluation of costs, efficiencies for yard waste, multi-family, and commercial recycling programs</li> <li>• Assessment of yard waste program</li> <li>• Comparison/analysis of system disposal/ management options</li> <li>• Assess comm'l competitiveness, cost comparisons</li> <li>• Comparison of coll'n efficiencies, options</li> <li>• Detailed analysis of program designs, effects on capture rates, cost-effectiveness</li> </ul>
Source Reduction Measurement, Assessment, Hard to Measure Effects, Education and outreach	Alameda StopWaste ACEEE, SWEEP, ECEEE  California Communities Alameda County, CA Portland Metro Multiclient Study  Alameda County  Alameda County Reason Foundation Ft. Collins, CU-Boulder, Other Iowa DNR / multiclient Superior, CO  Fort Collins, CO Superior, Boulder, Green Campus, W. Jordan (UT)	<ul style="list-style-type: none"> <li>• Recommended Measurement / tracking options</li> <li>• Assessment of social marketing, attitudes, and advanced topics/strategies in education and outreach</li> <li>• Measuring impacts of sustainability initiatives</li> <li>• Methods to measure comm'l waste prevention options</li> <li>• Methods for measuring home composting</li> <li>• Measuring source reduction, analysis of PAYT programs, benefit cost analysis and payback</li> <li>• Measuring source reduction in commercial sector / model</li> <li>• Waste prevention library</li> <li>• Analysis of techniques for measuring source reduction</li> <li>• Waste prevention and diversion programs analysis (tons &amp; costs) and recommendations to reach goals</li> <li>• Measuring impacts of education / outreach programs</li> <li>• Measuring Non-monetary impacts from diversion programs</li> <li>• Willingness to pay for diversion &amp; SR programs</li> <li>• Effects of "self-efficacy" / CBSM on diversion program participation</li> </ul>
Service / Franchise / Contract Options, Districting, Franchise	Waukesha County WI MARC, Missouri Louisville, CO Broomfield, CO	<ul style="list-style-type: none"> <li>• Program / service options, RFP development</li> <li>• Analysis of franchise options for service / workshop</li> <li>• Review RFPs / analyze residential service options</li> <li>• Assessment of districting, incentives, hauler options</li> </ul>

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Fee Analysis, RFPs	<p>Superior CO Porterville, CA West Jordan, UT Washington County, OR</p> <p>Easttown, PA, Seattle Berkeley, CA Santa Clarita, CA Morgan Hill, Gilroy, CA Snohomish County, WA</p>	<ul style="list-style-type: none"> <li>• Preparation/review of RFP for residential coll'n svc.</li> <li>• Program review / Prepare recycling service RFP</li> <li>• Program review / prepare RFPs for Recy, YW, gbg</li> <li>• Analysis / review of service delivery options / franchise arrangements for commercial service provision</li> <li>• Analysis of service contracts / RFPs</li> <li>• Analysis of franchise fees, reasonableness, alternatives</li> <li>• Analysis of franchise fees, alternatives</li> <li>• Analysis of franchise fees, alternatives</li> <li>• Analysis of franchise fees, alternatives</li> <li>• Analysis of transfer station incentives and options</li> </ul>
Single Stream Studies	<p>Loveland, CO</p> <p>Metro Vancouver Ecocycle / Boulder AF&amp;PA</p> <p>Ecocycle / Boulder County</p> <p>Private Client</p> <p>Private Client</p>	<ul style="list-style-type: none"> <li>• Analysis of single stream options for glass; modeled costs, diversion, and equipment options and environmental impacts of alternatives.</li> <li>• Single stream vs. dual stream analyses</li> <li>• Analysis of residential Single Stream options</li> <li>• Detailed analysis of SS and MSS impacts on tons, costs, and total system value at collection, processing, and mills.</li> <li>• Analysis of commercial single stream options, performance, equipment, potential.</li> <li>• Analysis of SS and MSS, gathering data from 70 communities and analyzing performance changes attributable to SS</li> <li>• Quantitative analysis and structured interviews with stakeholders to identify impacts of SS on tons, costs, markets.</li> </ul>
Implementation, Implementation Plans Outreach Plans	<p>Edgewater, CO Fort Collins, CO Pitkin Co, CO Anchorage, AK Commonwealth of Massachusetts</p> <p>State of Oregon's WPLG Committee</p> <p>West Jordan, Utah</p> <p>Santa Clarita, CA</p> <p>Superior CO</p> <p>State of Ohio Wyoming Seattle Solid Waste</p> <p>Sacramento County Seattle, WA</p>	<ul style="list-style-type: none"> <li>• Public meetings, implementation plan</li> <li>• Public meetings on SWMP</li> <li>• Public meetings on SWMP, Implementation plan</li> <li>• Public meetings on SWMP, Implementation plan</li> <li>• Background research, presentation of issues / pros / cons, and facilitation of wide-ranging task force / blue ribbon panel to recommend / get buy-in on "next steps" for recycling strategies in State / Commonwealth.</li> <li>• Background research, issues analysis, research on benefits / costs of integrated plan &amp; policy options for state; worked with / facilitated blue ribbon panel on developing options.</li> <li>• Organized and ran/ facilitated / presented at public hearings on new garbage / recycling / rates plan</li> <li>• Public hearing information planning, scheduled / gave public hearings on new service plan / comp plan</li> <li>• Gathered feedback on desired services (mail / phone survey), developed outreach materials, staffed booths</li> <li>• Outreach plans, implementation plans for pilot towns</li> <li>• Outreach plans, implementation plans for pilot towns</li> <li>• Worked with / facilitated focus groups with numerous stakeholder groups on residential collection issues/ comprehensive solid waste management plan</li> <li>• Outreach for new programs</li> <li>• Prepared outreach materials, worked with press, presented at public hearings on new rate and service / comprehensive plan.</li> </ul>

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	Multiple Largo Iowa, Seattle Ventura, CA Multiple	<ul style="list-style-type: none"> <li>• Variable rates for Seattle, 5 CA cities, Largo, others</li> <li>• Automated collection implementation</li> <li>• Weight-based rates implementation</li> <li>• Outreach introducing variable rates</li> <li>• Tracking/evaluation for Seattle, Portland, Sea/KC Haz Waste Program; IMEX and CALMAX exchange pgms.</li> </ul>
Collection/Program Cost Review	Louisville, CO Longmont, CO West Jordan, UT Massachusetts North Carolina, APC,  Largo, FL Multiclient & 15 CA cities SWANA Gilroy/Morgan Hill, CA  Santa Clarita, CA Seattle, WA Cincinnati, OH Easttown, PA Akron/Summit	<ul style="list-style-type: none"> <li>• Review of PAYT bids and service options</li> <li>• System review and cost of service for program changes</li> <li>• Benchmarking /evaluation of programs and costs</li> <li>• Cost-effectiveness of SF/MF recycling &amp; YW programs</li> <li>• Detailed review of nationwide collection/diversion costs, programs</li> <li>• Assessment of conversion to automated collection</li> <li>• Detailed analysis of coll'n &amp; recy. costs, diversion, pgms</li> <li>• Review of costs for recycling, yard waste programs</li> <li>• Calculation/review of franchised hauler program &amp; gbg col'n costs; costs to implement weight based rates</li> <li>• Review of contracted hauler costs for rate study</li> <li>• Review of hauler costs for rate study</li> <li>• Review of collection and program costs for rate study</li> <li>• Review of collection RFP/ incentives</li> <li>• Review of disposal options, detailed costs</li> </ul>
Garbage by the Pound / Weight- Based Rates -- GBTP	Seattle, WA Vancouver, Washington  Florida  New Zealand town  Iowa  Sacramento County Reason Foundation  Utah Workshop, Case studies  City of Seattle	<ul style="list-style-type: none"> <li>• Updated research on GBTP systems, use in US</li> <li>• Detailed research / analysis of equipment, billing, feasibility, mock bills, and survey to analyze results</li> <li>• Research on equipment and billing; feasibility and pilot testing GBTP for application in city/county</li> <li>• Research and experience – US and international on all GBTP pilot tests and implementations – experience</li> <li>• Equipment research, data collection, feasibility and preliminary implementation of GBTP in community</li> <li>• Research and feasibility study</li> <li>• Detailed research on concept, equipment, pilot tests and implementations to date; detailed benefit-cost analysis.</li> <li>• Research and pilot project design</li> <li>• Conducted workshop on status of GBTP / issues and for another client, prepared case studies of programs</li> <li>• Pioneered, designed, managed, and analyzed pilot test of 2 GBTP methods for 1500 homes.</li> </ul>
Recycling and Compost Markets Analysis	Loveland/Fort Collins, CO Anchorage, AK Ecocycle, City of Boulder, Boulder County, Alameda County UC – Boulder  AF&PA  NYSERDA  King County, WA City/County of Honolulu	<ul style="list-style-type: none"> <li>• Analysis of local / regional glass markets &amp; enduses</li> <li>• Local / regional glass markets analysis</li> <li>• Identified materials currently recycled, prices, and options for materials recycled by commercial businesses</li> <li>• Investigated materials prices / comparisons for products recycled by university</li> <li>• Investigate market prices / contamination / likely market effects from single stream on paper, containers, plastics, and other commodities / markets.</li> <li>• Analysis of markets / practices in recycling appliances in New York State</li> <li>• Compost market analysis, potential</li> <li>• Assess markets &amp; incentives needed to increase recycling; market development options / analysis</li> </ul>

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	<p>Bonneville Power Admin.</p> <p>Regional SW Agencies (Boulder, Nat'l Parks)</p>	<ul style="list-style-type: none"> <li>• Analysis of regional markets, potential for standard materials, compost, C&amp;D, used equipment; procurement practices</li> <li>• Assessment of market potential for cost-benefit analysis of integrated program options</li> </ul>
Waste Sorts / set out surveys / audits	<p>Longmont, CO</p> <p>Mesa County, CO</p> <p>Edgewater, CO</p> <p>Boulder, CO</p> <p>Fort Collins, CO</p> <p>Superior CO</p> <p>San Francisco</p> <p>UC-Boulder</p> <p>Boulder County</p> <p>Superior, CO</p> <p>Snohomish County</p> <p>Cincinnati, OH</p> <p>Anchorage, AK, Cincinnati, OH, Oak Park, IL, Gainesville, FL; Alachua County, FL, others</p>	<ul style="list-style-type: none"> <li>• Waste sort and set out survey</li> <li>• Waste sort – urban and rural</li> <li>• Set out survey</li> <li>• Pilot and control group residential set out surveys &amp; sort</li> <li>• Designed set out survey for City</li> <li>• Comm'l on-site waste audits</li> <li>• Commercial and office on-site waste audits</li> <li>• Waste sort, all</li> <li>• Waste sort, commercial sector</li> <li>• Waste sort, residential sector</li> <li>• Waste sort, all sectors</li> <li>• Waste sort, residential sector</li> <li>• Residential set out surveys</li> </ul>
Forecasting Waste Generation, Program Tonnage	<p>Anchorage, Pitkin Co, Fort Collins, Island Co, others</p> <p>Multiclient study</p> <p>Snohomish Co., WA</p> <p>Seattle, WA</p> <p>Oak Park, IL</p> <p>Cincinnati, OH</p> <p>Portland Metro, OR</p> <p>Santa Clarita, CA</p> <p>Austin, Berkeley, Largo, others</p> <p>Multi-client</p>	<ul style="list-style-type: none"> <li>• Specialized tonnage projections in support of program planning needs for these clients – multi-sectors, 20 yrs.</li> <li>• Techniques for measuring source reduction; quantitative analysis of source reduction from PAYT/VR programs</li> <li>• Detailed tonnage forecast for all sectors &amp; facilities, short/long run; waste migration and recycling forecast</li> <li>• Forecast of residential and transfer station tonnages</li> <li>• Forecast residential garbage, yard waste, recycling tonnage</li> <li>• Forecast residential garbage, yard waste, recycling tons</li> <li>• Detailed forecast of Metro/non-Metro revenue and non-revenue tons at facilities in three-county area</li> <li>• Res. tonnage &amp; pgm projection for rate analysis</li> <li>• Forecast of sector and program tonnage for rates models</li> <li>• Case studies of 12 communities' approaches to forecasting, assessment, recommendations</li> </ul>
Commercial Sector Analysis	<p>Alameda County, CA</p> <p>Mecklenburg Co, NC</p> <p>Santa Barbara CA</p> <p>Alameda County, CA</p> <p>Superior, CO</p> <p>San Francisco, CA</p> <p>Seattle City Light</p> <p>Anchorage; similar for Pitkin County</p>	<ul style="list-style-type: none"> <li>• Analysis of mandatory programs</li> <li>• Design diversion programs to suit small business community</li> <li>• Rates for diversion including hauler incentives and composting / food waste program</li> <li>• Best practices for Source Reduction for Comm'l; specific targets, measurement of impacts, materials reductions, most promising strategies by business types</li> <li>• On-site business waste, energy, water audits</li> <li>• On-site business waste audits</li> <li>• Evaluation of waste / energy / water audit program</li> <li>• Commercial survey of volumes, generation, recycling, source reduction, problem materials, willingness to pay,</li> </ul>



**SERA SOLID WASTE PROJECT EXPERIENCE**

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	Ecocycle/ Boulder County  City of Boulder  Alameda County Washington County, OR Snohomish County Snohomish County Largo, Berkeley, Seattle, Gilroy, Sacramento, Multi Client, SWANA, Montgomery Co. (MD) Morgan Hill, CA Snohomish County  CRRA	barriers, program preferences, etc. for program design work <ul style="list-style-type: none"> <li>• Commercial sector waste sort, survey, and analysis of potential of commercial Single Stream program</li> <li>• Commercial sector waste sort, survey, and analysis of potential of commercial sector programs</li> <li>• Commercial activities / generation/recycling survey</li> <li>• Commercial sector service options / benchmarking</li> <li>• Commercial/industrial generator survey</li> <li>• Commercial/industrial generator/recycling survey</li> <li>• Commercial/Dumpster /rolloffs rate studies</li> <li>•</li> <li>• Commercial incentives / recycling analysis</li> <li>•</li> <li>• Commercial / dumpster / rolloffs rate study</li> <li>• Commercial sector recycling, tonnage, forecasting, programs</li> <li>• Workshops on commercial recycling incentives, rates, pricing</li> </ul>
Workshops on Evaluation, Rates, Funding, Tracking, Integrated Planning	EPA Region 8 Maui County SWANA Commonw. Of Pennsylv. U.K. Enviro Agency/Gov't  GVRD / Vancouver, BC  Snohomish County, WA States of WY, OH Santiago, Chile Nat'l Recyc.Coalit.(NRC) Nebraska Recyc. Assn LGC, Cal Waste Board Iowa DNR, 2 projects Greater Vancouver R.D., NE Enviro Expo CA Integ. Waste Board Coalition NE Governors BC Environment ICMA Yale Ontario MOEE, Halifax, Calgary, Edmonton Montana University of Wisconsin SWANA EPA Clemson University Numerous Cities, Ass'ns CRRA	<ul style="list-style-type: none"> <li>• PAYT workshop series</li> <li>• Workshop on PAYT</li> <li>• Webcast workshop on single stream programs</li> <li>• Webcast workshop on PAYT/VR</li> <li>• Workshops and training manual for recycling / solid waste managers; workshops in England &amp; Scotland.</li> <li>• Integrated planning / evaluation of recycling, energy, and other resources</li> <li>• Program evaluation</li> <li>• Variable Rates workshops (multiple around each state)</li> <li>• Variable Rates workshop/ work session followed</li> <li>• Variable Rates (VR) Workshop (one-day)</li> <li>• Rural Recycling &amp; Variable Rates Workshops</li> <li>• Workshop on performance evaluation, measurement</li> <li>• Train the Trainer on VR, 10 community workshops</li> <li>• Unit pricing workshop</li> <li>•</li> <li>• Four workshops on unit pricing</li> <li>• Train the Trainer workshop on variable rates</li> <li>• Two workshops on variable rates</li> <li>• Three workshops on variable rates/source reduction,</li> <li>• Integrated planning and incentives (2)</li> <li>• User Pay Workshops (4)</li> <li>•</li> <li>• Rural PAYT Workshop</li> <li>• Variable rates, collection efficiencies/automation (3)</li> <li>• Weight-based rates</li> <li>• Variable rates roundtable</li> <li>• Workshop on variable rates</li> <li>• Workshops/presentation on comm'l rates, variable rates, program efficiencies, reaching 50%, economic flow control</li> </ul>
Surveys	Mecklenburg Co, NC Metro Vancouver	<ul style="list-style-type: none"> <li>• Commercial survey for solid waste programs, needs</li> <li>• Survey for single stream/switch from dual stream pgm..</li> </ul>

**SERA SOLID WASTE PROJECT EXPERIENCE**

<i>Type of Project</i>	<i>Clients</i>	<b>Project Assignments</b>
	Nationwide client State of Colorado Nationwide client  Boulder, CO  Pitkin County, CO  Anchorage, AK  Louisville, CO  Private client Superior, CO  City of Boulder  City of Boulder, CO  Gainesville/Alachua, FL West Jordan, UT Washington County Alameda County Superior, CO  Snohomish County Washington County, OR National Recycling Coalit.  Oregon DEQ Snohomish County Honolulu Multiple  State of Wyoming Santa Clarita, CA Anchorage, AK Clean WA Center Oak Park, IL CA Waste Board Fort Wayne, IN Cincinnati, OH Seattle, WA  Berkeley, CA Austin, TX Renton, WA Portland Metro, King County, many others Kittitas Co., Multi-client	<ul style="list-style-type: none"> <li>• Nationwide community solid waste system survey</li> <li>• Data from Colorado communities for “next steps”/needs</li> <li>• Surveyed all 50 states on legislation, needs, programs, costs, landfills, etc.</li> <li>• Surveyed households in pilot and non-pilot area on behaviors, preferences, service needs, willing to pay, satisfaction, etc.</li> <li>• Data on programs, service needs, behaviors, preferences, willingness to pay for new programs.</li> <li>• Data on programs, service needs, behaviors, preferences, willingness to pay for new programs.</li> <li>• Analyzed residential survey addressing satisfaction, preferences, programs</li> <li>• Data collection on communities in 50 largest SMSAs</li> <li>• Conducted set out survey to measure recycling progress, behaviors, problems</li> <li>• Conducted set out survey, measuring tons recycled and disposed to estimate generation and diversion rate</li> <li>• Residential and commercial surveys of participants and non-participants in yard waste and wood waste program</li> <li>• Residential customer set out survey / tracking</li> <li>• Residential customer survey – garbage, recy, YW, rates</li> <li>• Survey of commercial rates and services / comparables</li> <li>• Commercial activities / generation / recycling survey</li> <li>• Conducted set out survey and mail survey, measuring tonnages curbside and matching to reported behaviors, program preferences, information sources, etc.</li> <li>• Commercial / industrial generation/recycling survey</li> <li>• Survey of comm'l generators on services, satisfaction</li> <li>• Survey of users / non-users of electronic recycling markets site</li> <li>• Survey of cleanup site owners and consultants</li> <li>• Designed commercial/industrial generator survey</li> <li>• Survey of recycling businesses, tonnage, barriers</li> <li>• Survey of variable rates communities; survey of program costs, tonnage, design, etc.</li> <li>• Hauler survey, municipal/rural survey</li> <li>• Design/analysis of customer set out survey</li> <li>• Residential customer survey</li> <li>• Survey of recycling potential in industrial sectors</li> <li>• Mail survey, set-out survey and analysis</li> <li>• Hauler survey, case studies of residential collection</li> <li>• Set-out survey and analysis</li> <li>• Set-out survey/analysis</li> <li>• Transfer station customer survey, residential customer survey, pilot collection program survey</li> <li>• Commercial customer survey, hauler survey</li> <li>• Set-out survey</li> <li>• Utilities, recycling, solid waste residential survey</li> <li>• Surveys and case studies of haz programs, transfer/scalehouse, financing options, costs, efficiencies</li> <li>• Illegal dumping options survey</li> </ul>

## SERA SOLID WASTE PROJECT EXPERIENCE

<i>Type of Project</i>	<i>Clients</i>	<b>Project Assignments</b>
Testimony/Legislation/ Policy Assistance	American Beverage Association CAFR Alameda StopWaste State of Colorado  Reason Foundation  Commonw. Of Mass.  Iowa DNR  Private client State of California GA legislature/subcmte WA Util/Trans. Commiss. State of Florida Texas NRCC Nat'l Conf. of State Legislatures (NCSL) NCSL  ALEC Sunrise, FL Multiple Multiple Multiple	<ul style="list-style-type: none"> <li>• Research, tools, and model language on PAYT legislation</li> <li>• Legislative / policy assistance on PAYT</li> <li>• Analysis of multiple policies (bans, EOW collection)</li> <li>• Analysis of "next steps" for statewide solid waste planning</li> <li>• Analysis of Electronics Waste Policy Options / Legislation</li> <li>• Assistance in developing statewide policy and options to encourage recycling</li> <li>• Assistance in developing / reviewing State comprehensive plan, policies, funding options</li> <li>• Testimony summarizing impacts of program in Canada</li> <li>• Legislative hearing on AB939</li> <li>• Model legislation on variable rates</li> <li>• Rate incentives</li> <li>• Expert witness testimony in residential rate case</li> <li>• Legislative committee on ADFs vs. variable rates</li> <li>• Analysis for Task force on options for state/variable rates</li> <li>• State-level legislative initiatives on variable rates, recommendations on model legislation to legislators</li> <li>• Update on legislative initiatives on variable rates</li> <li>• Legislation on variable rates in states</li> <li>• Ordinances for incentives, rates</li> <li>• Report on model legislation on variable rates</li> <li>• Biannual update; analysis of state legislation on variable rates</li> </ul>
Model Development	Loveland, CO  UC Boulder San Jose, CA UC-Boulder Massachusetts, Oregon, Honolulu  Numerous Snohomish Co., WA  Snohomish County, WA City and County of San Francisco Berkeley, Austin, Cincinnati, Largo, Sacramento County, Gilroy, Morgan Hill Seattle, WA Portland, Seattle, Cincinnati Seattle, Berkeley Austin, TX, Iowa DNR, WY, OH	<ul style="list-style-type: none"> <li>• Detailed model of single stream program and collection options including/excluding glass, also measuring climate change and job creation impacts</li> <li>• Detailed model of institutional solid waste and recycling flows, costs, and rates</li> <li>• Detailed funding options model</li> <li>• RPA model for 20 year program planning</li> <li>• Models to estimate the tonnage, recycling, and cost impacts of alternative state/county policies, materials, strategies</li> <li>• Rates models</li> <li>• Forecasting model/scenario analysis; transfer station siting scenarios</li> <li>• Recycling potential assessment model</li> <li>• Detailed model of tonnage, rates, program allocation, and hauler diversion incentive options</li> <li>• Spreadsheet model for variable rates; scenario analysis model</li> <li>• Spreadsheet model to evaluate rates timing, cash flow</li> <li>• Cost-benefit model for program changes</li> <li>• Demand and revenue forecast models</li> <li>• Customer reaction/subscription models</li> <li>• Cost-of-service and rates model</li> </ul>

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<i>Type of Project</i>	<i>Clients</i>	<b>Project Assignments</b>
Environmental and Economic Benefits, Migration studies, economic analysis and other work	Marin County, CA	<ul style="list-style-type: none"> <li>• Impacts and recommendations for energy, water, and other programs for sustainability / carbon footprint</li> </ul>
	National	<ul style="list-style-type: none"> <li>• Cost and GHG impacts of recycling programs vs. energy, water, and transportation initiatives</li> </ul>
	Superior, CO	<ul style="list-style-type: none"> <li>• Investigated LEEDS and other ranking and certification programs</li> </ul>
	NRC, UK client	<ul style="list-style-type: none"> <li>• Nationwide literature search for web library</li> </ul>
	Alameda County	<ul style="list-style-type: none"> <li>• Nationwide literature search for web library</li> </ul>
	Portland Metro	<ul style="list-style-type: none"> <li>• Nationwide literature search on BY composting research</li> </ul>
	National	<ul style="list-style-type: none"> <li>• Environmental (GHG)and other benefits from PAYT / VR</li> </ul>
	Ohio	<ul style="list-style-type: none"> <li>• GHG reductions from PAYT / VR</li> </ul>
	Iowa	<ul style="list-style-type: none"> <li>• Bottle bill analysis</li> </ul>
	Multi-client	<ul style="list-style-type: none"> <li>• Evaluating impacts of different types of PAYT/VR systems and of rate differential levels on diversion</li> </ul>
	Iowa	<ul style="list-style-type: none"> <li>• Evaluating impacts of education expenditures on recycling; optimal education design/levels</li> </ul>
	State of Mass	<ul style="list-style-type: none"> <li>• Environmental and economic benefits of recycling</li> </ul>
	City/County of Honolulu	<ul style="list-style-type: none"> <li>• Environmental and economic benefits of recycling</li> </ul>
	International Client	<ul style="list-style-type: none"> <li>• Garbage By the Pound analysis/ weight based rate</li> </ul>
	Snohomish Co., WA	<ul style="list-style-type: none"> <li>• Waste Migration analysis; tonnage at risk</li> </ul>
WA Dept of Ecology	<ul style="list-style-type: none"> <li>• Industrial solid waste survey and regulatory review</li> </ul>	
Summit-Akron	<ul style="list-style-type: none"> <li>• Alternatives to flow control, economic evaluation of options</li> </ul>	
Multiple clients	<ul style="list-style-type: none"> <li>• Measuring Source Reduction</li> </ul>	
TNRCC; CRRA	<ul style="list-style-type: none"> <li>• Economic alternatives to flow control</li> </ul>	
Seattle, WA	<ul style="list-style-type: none"> <li>• Computer program mapping collection misses/generate hauler work orders</li> </ul>	
Seattle;Easttown,PA	<ul style="list-style-type: none"> <li>• Assistance in preparing RFPs, evaluation procedures</li> </ul>	
Multiple	<ul style="list-style-type: none"> <li>• Biannual count of communities with variable rates/analysis</li> </ul>	
Multiple	<ul style="list-style-type: none"> <li>• Annual survey of variable rates legislation at state level</li> </ul>	
Snohomish Co. WA, Santa	<ul style="list-style-type: none"> <li>• Illegal dumping/experience/strategies/case studies</li> </ul>	
Clarita, CA	<ul style="list-style-type: none"> <li>• Waste Sort Analysis</li> </ul>	
CWC, NRC, WSRA	<ul style="list-style-type: none"> <li>• Survey/committees/workshops on future of recycling</li> </ul>	
Seattle, multiple	<ul style="list-style-type: none"> <li>• Joint comm'l/res recycling/water/energy etc. audits</li> </ul>	