



## Statement of Qualifications

*A Global Leader in  
Environmental and Logistical  
Consulting Solutions*

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## Section 1 – Firm Overview

**WIH Resource Group, Inc. (WIH)** is leading independent provider of environmental, waste management, recycling, transportation, alternative fuels, financial and logistical matters. WIH provides its clients with fully integrated solutions to day to day business challenges and offers Clients creative solutions to solve complex business issues and related matters for government municipalities, industrial companies, environmental, engineering firms, non-profits and commercial customers alike.

WIH Staff takes our Client relationships seriously and strive to exceed our client's individual expectations and stated needs. We look to establish long term relationships with our clients, ones where we are called on regularly to assist our clients in developing viable and sustainable solutions.

The key factor that differentiates WIH Resource Group from other solid waste consulting firms is that we offer our clients operational management experience and logistical expertise from having worked in the waste, recycling and transportation industries in all lines of business including: collection vehicle routing, solid waste collections, recycling, transfer station, landfill operations, operational optimization studies, rate/policy making and environmental compliance.

WIH Resource Group is a 100% employee-owned company provides its Clients the type of attention and commitment they would expect from the company owner. The firm combines passion for its work with industry expertise and innovative analytics to produce compelling results throughout the entire project life cycle, from analysis and design through implementation and improvement.



### RELEVANT PUBLICATIONS

As a leading authority in the areas of waste and recycling operations and management, fleet and logistics issues as well as alternative fuels, Mr. Wallace has authored several publications.

**"Solid Waste Rate Setting and Financing Guide"** American Public Works Association (APWA) Solid Waste Committee

**"Natural Gas-Power Refuse Truck Use Flourishes in the U.S."**, American Recycler News, August 2013

**"Industry Trends: The Future of Recycling, Transfer Stations & Landfills"**, Waste Advantage Magazine, August 2011

**"Enhancing Your Bottom Line: Waste and Recycling Collection Vehicle Routing Optimization"**, Waste Advantage Magazine, March 2010

**"Fleet Maintenance & Best Management Practices"**, Waste Advantage Magazine, January 2010

**"Solid Waste Rate Setting and Financing Guide"**, American Public Works Association (APWA) Press, August 2007

**"Emerging Trends Include Rail, Governments Acting Like Business - 2006 in Review"**, Solid Waste Report, January 2007

**"Is Rail Haul Heading For the Mainline?"** MSW Management Magazine, Nov/Dec 2005

**"Getting On Track"**, Waste Age, March 2004

## Section 1 – Firm Overview

### OUR TEAM OF EXPERTS

WIH Resource Group, Inc. has assembled a dedicated team of expert consultants that bring an extensive breadth of experience to WIH's Clients. WIH's team excels in all technical and practical issues relating to problem solving for our Clients, while also providing a unique understanding of key issues and alternative solutions.

#### **Bob Wallace, MBA, Principal and VP of Client Solutions**



Mr. Wallace has over 27 years of experience in solid waste and recycling collections programs management, transportation / logistics operations, alternative fuels

(CNG, LPG, LNG & biodiesel), Fleet Management, Operational Performance Assessments (OPAs), Waste-by-Rail programs, recycling / solid waste collections, planning and development.

Mr. Wallace has expertise in the areas of collection, disposal and transportation rate and contract negotiations, strategic business planning and conducting both solid waste collections and Landfill & Waste-by-Rail operational performance assessments.

Mr. Wallace has extensive experience in working with clients in both the private and public sectors. Prior to WIH Resource Group, Mr. Wallace served as the Director of Transportation & Logistics for Waste Management, the largest provider of waste management and recycling services in North America. He was responsible for implementing

company-wide collection vehicle routing, alternative fuels assessments and Business Improvement Process initiatives throughout the United States. He led efforts to improve underperforming company assets in their solid waste and recycling business units.

Mr. Wallace has led solid waste collection fleets alternative fueling projects that includes the City of Boise, City of Mesa, City of Tacoma and City of Tucson.

Mr. Wallace previously served as a board member for the Arizona Chapter of SWANA and serves on the National Solid Waste Rate Committee for the American Public Works Association (APWA). He is also a former board member of the California Refuse and Recycling Association's (CRRA) Global Recycling Council (GRC).

#### **Kelly Sarber, Senior Associate, Environmental Management, Biosolids & Biogas Expert**



Kelly Sarber is an industry veteran in the environmental business with combined value of projects developed worth

more than \$2 billion. Ms. Sarber has a proven reputation in growing environmental companies through organic growth and acquisitions and regularly assists private equity and venture capital firms on due diligence related to mergers and acquisitions, IPO's or other transactions.

For over 25 years with stints at Waste Management, Wheelabrator and Synagro, she is skilled in business development and has

## Section 1 – Firm Overview

successfully developed a variety of facilities including waste-to-energy plants, renewable energy from wastes, wastewater and fresh water treatment facilities, solid waste landfills, renewable energy plants and MRF's. She is at the forefront of commercializing new technologies in the waste-to-energy and water industries and is an expert on biosolids, biogas and anaerobic digestion. Sarber graduated from UCLA with degrees in Economics and Political Science, received an MBA from the University of Colorado at Boulder in Finance and completed post graduate work in finance at The Harvard Business School.

### **Chris Bell, CPA, Senior Associate and Financial & Operational Analyst**



Mr. Bell is a Certified Public Accountant practicing in the field of integrated solid waste management with an emphasis in the financial analysis and operational evaluation of solid waste and recycling collection systems.

He has assisted numerous public and private entities with setting collection rates, program implementation, financial and performance audits, planning, franchise reporting, and systems analysis.

Prior to solid waste consulting, Mr. Bell served as Assistant Divisional Controller for Waste Management of Oregon. His responsibilities were the monthly financial close, budgeting, reconciliation, reporting, operational performance analysis, audit preparation, and annual franchise reporting for three separate collection companies and two transfer stations.

In addition, Mr. Bell was in charge of fixed assets and accounts payable for all six Oregon and Southwest Washington collection companies.

### **Holly Stirnkorb, Senior Associate, Program Planning & Public Policy**



Ms. Stirnkorb is an environmental consultant with more than 20 years of experience in the area of integrated solid waste management. Her experience encompasses a wide

range of problem solving projects completed for both the public and private sectors. Her qualifications include the management of complex program planning and implementation efforts related to transfer stations; landfills, clean energy facilities, waste collection, transportation, disposal, and recycling, and waste minimization facilities/services.

She is skilled in program planning, implementation, evaluation, public policy development, facility siting and permitting, and community relations. She has negotiated and administered agreements for waste and recycling collection, performed waste characterization studies, and prepared reports and presentations to citizen groups, the media, and elected officials for planning and facility siting projects.

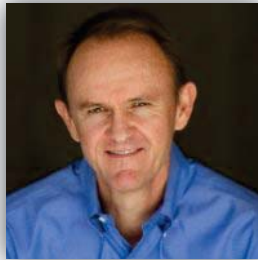
Ms. Stirnkorb is known for her consideration of local needs and conditions and ability to deliver consensus-based results. As a practiced facilitator, she works well with citizens, business owners, service providers and elected leaders.



## Section 1 – Firm Overview

### **Reb Guthrie, Senior Associate, Alternative Fuels & Program Planning**

Mr. Guthrie is a Principal and co-founder of Fuel Solutions Inc. He has managed most of the



projects performed by company since its inception, including the assessment, specification, development and installation of CNG fueling stations for more than 40

municipalities, transit authorities, counties, school districts and federal agencies.

Mr. Guthrie's recent project-management work includes providing lead technical consulting to the Los Angeles County MTA in the procurement of a \$40+ million public/private-partnership contract for the construction and long-term operation of five MTA bus-operating divisions. Reb is also leading the design of a diesel fueling system for the City of Mesa (Arizona) Transit Maintenance Facility. Additionally, he managed the competitive procurement of approximately 180,000 Therms per year of natural gas for MBTA/Boston Transit for use in its first CNG-transit fueling facility. Solid waste fueling projects that Reb has led include Waste Management in Oceanside, the City and County of Denver, and City of Santa Fe.

He has also been certified by the NGV Institute and Southern California Gas Company as an NGV Fueling Facility Planner. Reb has a BS in Economics from the College of Business at Arizona State University.

### **Jonathan Kiser, MBA, Senior Associate, Technical Research, Due Diligence Audits & Quality Assurance**



Mr. Kiser has more than 30 years of waste management and recycling experience working on behalf of public and private sector organizations, the federal government, and others on an

international level. Jonathan has more than 80 publications relating to timely, technical environmental issues and has given more than 80 presentations/training sessions in public forums across the U.S., in Europe and Australia. He received a Speaker's Recognition Award from the ASME St. Louis Chapter, a Writer's Excellence Award from Solid Waste & Power Magazine, and is a Research Associate with Columbia University in New York City.

Mr. Kiser's specialty areas include: Technical Research & Analysis, Technical Writing & Editing, Quality Assurance/Quality Management; Benchmark Surveys; Due Diligence/Environmental Audits, Strategic Planning, Feasibility Studies, Training/Workshops, and Cost of Service/Full Cost Accounting. Mr. Kiser is also the President of Kiser Environmental Consulting (KEC), based in Harrisonburg, Virginia.

## Section 1 – Firm Overview

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### **Michelle Nicholls, MBA**

Ms. Nicholls has over 15 years of diverse experience in program design and



implementation. She works with both municipalities and private industry in a variety of solid waste management elements, including policy-making, strategic planning, feasibility studies, program development

and support, economic analysis, forecasting, and public involvement. She is recognized in the solid waste industry through presentations at numerous conferences and publication of articles.

Her project portfolio encompasses many aspects of sustainable program development, including diversion program analysis and planning; system-wide solid waste management and financial plans; technical assistance and compliance; program design, implementation, and monitoring; waste characterization studies; waste generation analysis and projections; financial analysis of solid waste services; disposal alternatives analysis; and stakeholder collaboration.

Her areas of expertise further include: Feasibility Studies; Financial Analysis and Modeling; Integrated Solid Waste Management Planning; Operational and Financial Audits; Permitting and Compliance; Policy Development; Public Education and Outreach; Technology Evaluation; Waste Characterization and Green Energy Studies; and Zero Waste and Strategic Planning.

## Section 2 – Services

### WIH Resource Group's Diversified Services

As a global leader in providing waste management, recycling and transportation / logistics consulting services, WIH offers a wide range of diversified solutions to assist its Clients in meeting their specific goals, objectives and respective initiatives.



The following is a summary of WIH's diversified services:

- Advertising Services to Waste, Recycling & Environmental Industries
- Strategic Integrated Solid Waste Management Planning
- Waste Shed Studies
- Alternative Fuels Solutions for Fleets
- Customer Satisfaction Surveying & Polling
- Mergers & Acquisitions
- OPA – Operational Performance Assessments
- Expert Witness Services
- Landfill & Transfer Station Operational Improvement Solutions
- WastebyRail Solutions
- Strategic Business Consulting
- Sustainability Services and Planning
- Transportation & Logistical Management
- Cost of Service Studies
- GPS and RFID Fleet Technology
- Fleet Management & Technologies
- Industry Best Management Practices

### PLANNING

#### Appraisals & Valuations

- Asset Valuation & Consulting
- Appraisals & Valuations - Solid Waste and Recycling Equipment
- Appraisals & Valuations - Solid Waste and Recycling Collection Fleets

#### Due Diligence

- Environmental Studies & Permits
- Operations & Maintenance
- Project Costs & Schedules
- Project Feasibility & Development
- Project Pro Formas
- Sales Contracts
- Divestiture Support
- Economic Analysis
- Enterprise Risk Management (ERM)
- Environmental Regulations
- Market Price Studies
- Market-based Dispatch
- Mergers & Acquisitions
- Resource Optimization
- Resource Projections
- Strategic Investment
- Variable Operating Cost Projections
- Wholesale Market Price Projections



#### Enterprise Risk Management

- Regulatory Compliance Support
- Risk Analysis Outsourcing
- Risk Assessment and Communication



## Section 2 – Services

- Risk Management Program Development
- Risk Management Strategy
- Strategic and Business Planning
- Systems and Technology Transfer

### Facility Planning & Design

- Facility Planning - Solid Waste
- Alternative Project Delivery (Design-Build, Design-Build-Operate)
- Bidding Assistance
- Capital Improvement Program Development and Implementation
- Environmental Impact Assessments
- Operations and Maintenance Assistance
- Permitting
- Rate, Economic and Financing Studies
- Site Planning
- Sludge Management

### Financial and Economic Analysis

- Finance and Economic Analysis - Solid Waste, Recycling, Processing, Transportation and Disposal
- Acquisitions, Divestitures and Mergers
- Economic Analyses
- Price Studies - Competitive Market Analysis
- Project Financing
- Rate Setting
- Rate Studies - Cost of Service Analysis
- Financing
- Due Diligence
- Environmental Studies and Permits
- Operations and Maintenance
- Project Feasibility and Development,
- Project Pro Formas

### Planning – Solid Waste, Recycling Programs

- Planning - Solid Waste
- Comprehensive Integrated Solid Waste Master Plans

- Strategic and Business Planning
- Waste Generation and Characterization
- Litter Evaluations and Illegal Dumping Studies
- Public Involvement, Outreach and Training
- Market Research, Surveys and Information Management

### Program Management & Project Planning

- Program Management & Capital Project Planning - Solid Waste
- Contractor Selection
- Needs Assessments
- Cost Estimating
- Program Conceptualization
- Stakeholder Involvement
- Implementation Oversight
- CIP Development



### Rates and Regulatory Support

- Cost-of-Service Rate Studies
- Fixed and Variable Operation Cost Forecasting
- Fuel Pricing Studies
- Locational Marginal Pricing
- Marginal Cost-Based Pricing
- Off- and On-Peak Pricing
- Operations Engineering
- Power Market Price Assessments
- Rate Modeling, Studies and Design

## Section 2 – Services

### ALTERNATIVE FUELS

WIH provides a wide range of consulting services including alternative fuels fleet conversion professional services and serves as a resource providing current Compressed Natural Gas (CNG) information and Client-specific analysis to those who are trying to increase their knowledge and understanding of CNG and fleet fueling conversions.

WIH Resource Group is one of North America's leading transportation, alternative fuels, fleet management, refuse (waste) and recycling consulting firms dedicated to providing technical and financial analysis and support services for the Compressed Natural Gas fuel infrastructure markets. Our highly qualified staff has over 50 years of experience in alternative fuels (CNG and LNG) fleet conversions giving our Clients access to a depth of experience and capabilities that are unmatched in the industry and insure that we deliver innovative solutions for our Clients' alternative fuels fleet conversion projects.



Our financial and technical expertise enables us to provide a full suite of professional services for your Compressed Natural Gas fueling project. WIH Resource Group, and its Teaming Partner experts, provide services from project conceptual analysis, financial analysis, feasibility studies, through the RFP / procurement process, design and construction phases to the

development of maintenance and support programs. WIH Resource Group's extensive fleet, transportation, alternative fuels and waste industries experience ensures that your project will progress to a timely and successful conclusion.

WIH Resource Group provides a combination of technical and financial analysis services dedicated to the Natural Gas for Vehicles (NGV) fuel infrastructure market for both the private sector and government agencies.

We can assist you and your organization in achieving greater results in your operations, air emissions, fleet noise reduction and improving profits.

### Waste to Energy & New Technology Evaluation

- Cost and Performance Estimates and Projections
- Environmental Quality, Siting and Permitting Services
- Operation Support
- Performance Optimization
- System Opportunity Assessments
- Technology Evaluations
- Upgrade Assistance
- Environmental Studies & Permits
- Operations & Maintenance
- Project Costs & Schedules
- Project Feasibility & Development
- Project Pro Formas
- Sales Contracts
- Economic Analysis
- Enterprise Risk Management (ERM)
- Environmental Regulations
- Market Price Studies
- Mergers & Acquisitions
- Resource Optimization
- Resource Projections
- Strategic Investment

## Section 2 – Services

### Renewables/Clean Energy Technology

- Renewables/Clean Energy Technology - Waste to Energy
- Renewables/Clean Energy Technology - Biofuels/Biogas
- Biomass
- Due Diligence
- Environmental Studies
- Feasibility Analyses
- Grant/Proposal Preparation
- Siting Studies

### Operations & Performance Assessment (OPAs)

- Operations & Performance Enhancement - Solid Waste
- Competitiveness Assessments
- Collection Efficiency Studies
- Environmental Site Assessment
- Cost Reduction and Revenue Enhancement Evaluation
- Fleet Management Reviews
- Performance Benchmarking
- Facility Operational Efficiency Reviews

## SOLID WASTE CONSULTING SERVICES

### Collection, Processing, Transfer & Disposal Procurement

- Collection, Processing, Transfer & Disposal Procurement - Solid Waste
- Procurement Strategy
- RFP Development, Issuance and Vendor Assessment
- Franchising/Licensing/Ordinances
- Contract Development
- Vendor Proposals Evaluation
- Vendor & Contract Negotiations Selection

### Recycling Program Design

- Recycling Program Design - Solid Waste
- Sourcing Studies
- Feasibility
- Waste Prevention and Reduction
- Best Management Practices
- Program Evaluation and Implementation
- Training and Workshop Development
- Public Education and Outreach
- Economic Impact Studies
- Market Development
- HHW/Special Wastes Management
- Organics/Composting Management
- Construction and Demolition Management

### Environmental Services

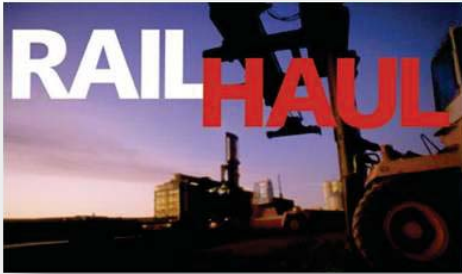
- Best Management Practices Planning
- Compliance Assessments and Training
- Emergency Management and Disaster Contingency Planning
- Expert Testimony and Litigation Support
- Feasibility Studies and Alternatives Analysis
- Independent Review and Oversight
- Public Participation and Information
- Site Assessments and Impact Statements
- Siting Studies
- Technical Reviews



## Section 2 – Services

### WASTE BY RAIL SOLUTIONS

When confronted with a solid waste challenge, WIH Resource Group can help find a creative, innovative, practical transportation and disposal solution.



Across the United States and in Canada, WIH offers extensive experience in Waste-by-rail offers to cities, counties, states, companies, manufacturers and others dealing with everything from landfill closures to toxic waste spills.

Working closely with the railroads, site clean-up projects are carefully coordinated to meet client deadlines.

WIH Resource Group works with a wide range of both the Class One Railroads and short line railroads for the transportation and logistics management, rail car leasing companies for rail cars, and a host of large disposal companies with rail served sites that own and operate landfills that are either Subtitle C or D permitted.

Partner landfills accept a variety of waste streams including non-hazardous oilfield waste (non DOW), non-hazardous Industrial solid waste, special waste, commercial waste, domestic and municipal solid waste and hazardous wastes (Subtitle C site only).

In addition, WIH Resource Group conducts feasibility studies for clients interested in Wastebyrail programs that may be unsure as to whether shipping waste by rail is economically viable.

### EMPLOYEE AND CUSTOMER SATISFACTION SURVEYS

WIH Resource Group (WIH) has formed a Strategic Business Alliance with a leading national firm specializing in customer satisfaction polling and surveying. Our Partner has over three decades of experience in conducting customer satisfaction polling and surveying services to benefit you.

Four powerful Business Class services are now available from WIH Resource Group and its Strategic Partners as follows:

- Survey Research (Polling)
- Statistical Analysis
- Focus Group Facilitation
- Executive Report Services

Your organizational / corporate image and corporate performance are closely linked. Our polling service provides consumer feedback regarding name and brand identification, customer satisfaction of services or products and general favorability.



## Section 2 – Services

### **EXPERT WITNESS / TESTIMONY / DUE DILIGENCE & LITIGATION SUPPORT**

WIH's experienced staff will provide specialized expertise as expert witnesses for lawsuits, arbitrations and litigation for clients in the areas of environmental compliance, recycling services, solid waste management, environmental law, and transportation operational related matters.



- Expert Testimony/Litigation Support - Solid Waste, Recycling, Disposal & Transportation
- Acquisitions, Divestitures and Mergers
- Appraisals and Valuations
- Economic and Financial Matters
- Rates
- Regulatory and Environmental Issues

WIH Resource Group's team of experts is available to respond in filling the needs of clients who are either the plaintiff or defendant in cases.

### **Independent Program Advisory**

- Independent Program Advisory - Solid Waste, Recycling & Logistics
- Environmental Services
- Expert Testimony and Litigation Support
- Facility Review and Evaluation
- Operations and Maintenance
- Planning and Feasibility Studies
- Project Siting

- Project Startup and Implementation
- Public Participation and Information
- RFP Writing and Proposal/Bid Evaluation
- Risk Management
- Technical Reviews

### **MERGERS, ACQUISITIONS AND DIVESTITURES**

- Mergers, Acquisitions and Divestitures - Waste Management Facilities, Operations and Associated Assets
- Facility Appraisals and Valuations
- Equipment Appraisals and Valuations
- Asset Inventory and Mapping
- Business, Market and Financial Analyses and Planning
- Buyout Assistance and Negotiation
- Cost-of-Service Projections
- Environmental Assessments
- Expert Testimony and Litigation Support
- Finance Structuring
- Municipalization Studies
- Operations and Maintenance Evaluations
- Organizational and Management Efficiency Studies
- Risk Assessments and Management Planning
- Technical Studies and Assessments of Physical Facilities
- Term Sheet Negotiation





## Section 3 – Project Communications & Delivery

WIH Resource Group realizes our client's needs are multi-dimensional and that they have to be examined with a "systems" perspective. Best practice solutions aren't found by looking at one piece of the puzzle. Success is achieved by making sure that each system component works well with the rest of the system.

Project management oversight is conducted to keep the project on schedule and within budget, communicating project status and issues to Client Staff and to provide a single point of contact within WIH.

Effective project management is a key to delivering WIH's services on time and within budget. WIH's large volume of repeat business is a testament to our effectiveness. At the onset of any new project, the Program Manager will prepare an internal Project Management Plan (PMP) containing the objectives, scope of work, deliverables, schedule, budget, and key staff assigned. The PMP will restate details concerning the specific lines of communication and chain of command.

WIH's project management approach for these services comprises a distillation of the most effective measures WIH has applied on a wide range of relevant projects. WIH has developed an effective project management approach that is responsive to client needs and expectations.



This approach consists of four activities:

- Work planning (budgeting, scheduling, task work plans, work breakdown structures, management review)
- Management and administrative controls (work authorization processes, critical path tracking, cost controls, communications controls, document and data controls, management and peer review)
- Progress reporting (technical, cost, and schedule items; problem resolution; and planned activities)
- Performance visibility (milestone development and tracking, other measures of completion, schedule of deliverables)

Formal communications between the Client's Staff and the WIH Project Manager occur in the form of phone and electronic communications and / or meetings. All decisions and action items that are a result of verbal communications are documented in a memorandum or email and provided to the Client's staff for review and concurrence.

## Section 4 – Select Experience



### **REFUSE COLLECTION FLEET ALTERNATIVE FUELS & FACILITIES ANALYSIS**

#### **CITY OF BOISE, IDAHO**

The City of Boise, Public Works Department, Solid Waste Programs Division retained the services of WIH Resource Group to assist the City in researching the use of Compressed Natural Gas (CNG) fuel as an alternative to traditional diesel fuel in its contracted residential refuse and recycling collection vehicles operated under contract by Allied Waste Services (Republic Services) with the City of Boise. The research and final report determined that replacing the City of Boise's diesel powered refuse trucks with Compressed Natural Gas models resulted in the City achieving multiple benefits, not just in the near term but also in the long term. Their use also helps address severe pollution and greenhouse gas challenges the City was facing as an EPA designated non-attainment zone.



### **TRUCK, RAIL & BARGE WASTE TRANSPORTATION STUDY & PROCUREMENT**

#### **METRO REGIONAL GOVERNMENT - PORTLAND, OREGON**

Metro sought the services of a consultant experienced in the transportation of solid waste from transfer stations to landfill and knowledgeable about multi-modal transportation options; truck, rail and barging. WIH was retained and the project required an analysis of their current solid waste system, waste handling, compaction, trailer loading and transportation alternatives. The WIH team conducted industry research for the three transportation modes including truck, rail and barg. It also included assessing the greenhouse gas (GHG) emissions impacts to develop parameters for each mode for eventual use in Metro's Solid Waste Long Haul Transportation RFP that was later issued. The development of the parameters and cost estimates for each mode allowed Metro a glimpse into what they could expect to pay by mode for future solid waste transportation services, as well as the respective intricacies of each mode.



### **WASTE & RECYCLING COLLECTION / LANDFILL PLANNING (VARIOUS STUDIES)**

#### **CITY OF WALLA WALLA, WASHINGTON**

The City retained WIH Resource Group on several occasions to conduct various studies and financial assessments throughout the past decade. They have involved operational reviews and financial assessments of the City's operations in waste and recycling, including assessments of the City's residential curbside waste collection, composting and landfill operations. Throughout the various studies, WIH has made operational and financial recommendations that the City has implemented to cut costs and improve services to residents.

## Section 4 – Select Experience



### **REFUSE COLLECTION VEHICLE ROUTING SOFTWARE COMPARATIVE STUDY**

#### **CITY OF TUCSON, ARIZONA**

The City of Tucson, Environmental Service Department (ESD), retained the services of WIH Resource Group to assist the City in researching the various types of software and hardware available for collection vehicle routing and residential roll cart delivery. The final report included calculations of service costs and potential savings, as well as the performance and efficiency of the five options evaluated. The study also included information on implementing a pilot study through one of the vendors interviewed during the study that resulted in a more efficient roll cart delivery system with reduced system redundancies and lower operating costs.



### **LONG RANGE SOLID WASTE MANAGEMENT STRATEGY**

#### **CITY AND BOROUGH OF JUNEAU, ALASKA**

The City and Borough of Juneau (CBJ) retained WIH Resource Group (WIH) to assist with conducting a long range solid waste management strategy and disposal alternatives analysis. In order to achieve the City's objectives, the project work was performed in two phases. Phase One consisted of information gathering and preliminary analysis and Phase Two work consisted of identifying, analyzing and making recommendations on disposal, transportation (truck, barge and rail combinations) and recycling alternatives. The final report provided a strategy for implementing environmentally prudent and cost-effective integrated solid waste management components to enhance or upgrade the CBJ's existing solid waste management and recycling systems. The Council adopted all WIH's report recommendations.



### **WASTE MANAGEMENT SERVICES STRATEGY & PROPOSAL DEVELOPMENT**

#### **TUCSON RECYCLING & WASTE SERVICES (TRWS) - TUCSON, ARIZONA**

WIH was retained by the Client to assist in developing a business and pricing strategy to pursue the development of a Proposal in response to an RFP that Pima County, Arizona issued. The strategy and resulting Proposal developed by WIH resulted in TRWS being successfully awarded the multi-year contract with the County to manage their active and closed landfills, regional transfer stations and a long term waste disposal contract for the County's waste.

## Section 4 – Select Experience



### **CNG FUELING FACILITY UPGRADES & FACILITIES ANALYSIS**

#### **CITY OF TUCSON, ARIZONA**

The City of Tucson (City), Environmental Service Department (ESD) retained the services of WIH Resource Group to assist the City in assessing the costs and impacts of upgrading the City's 23 year old CNG fueling facility. The research also reviewed existing conditions of the existing fueling facilities, dispensing systems and refueling transportation and logistical cost impacts to the City. WIH determined what equipment, piping infrastructure and controls from the existing plant could be utilized in the future. The project also considered the potential of the City using a third party provider for the necessary grant match requirements, provide additional funding for other desired plant upgrades and other fueling capability, renovate the existing facility, build new facilities and operate them. In essence this third party would provide the desired fueling capability and the City would pay for the fuel dispensed. The City implemented many of WIH's final recommendations.



### **BULK FUELS TRANSPORTATION PRICING STUDIES**

#### **TIDEWATER BARGE LINES - VANCOUVER, WASHINGTON**

WIH Resource Group was retained on several occasions to assist in researching transportation costs for bulk fuels. WIH analyzed the transporting cost and related company fuel surcharges and compared those to the cost of transporting bulk fuel commodities by barge and long-haul truck to distant locations in the Columbia River Gorge from Portland, OR and Seattle, WA. The financial comparison models developed for this project covered the projected annual costs and rates for competitively bid barge and truck transport.



### **REFUSE COLLECTION FLEET ALTERNATIVES FUELS FEASIBILITY STUDY**

#### **CITY OF MESA, ARIZONA**

WIH Resource Group was retained to conduct a feasibility study for the City to convert its 85+ refuse collection truck fleet from diesel and biodiesel to Compressed Natural Gas (CNG). The study involved assessing the financial costs, operational and personnel impacts for fleet maintenance, truck drivers / operators and facilities management. The research also reviewed conditions of the existing fueling facilities, dispensing systems and refueling transportation and logistical cost impacts of routing waste and recycling collection fleet to the City. The end results proved significant cost reductions over time to the City by converting the fleet and created beneficial impacts to residents and truck drivers / operators in terms of reduced noise and emissions from the collection fleet.

## Section 4 – Select Experience



### **OPERATIONAL REVIEW, PROGRAM IMPLEMENTATION AND RATE SETTING**

#### **CITY OF RICHLAND, WASHINGTON**

Chris Bell assisted the City of Richland with the cost analysis and rate setting for various diversion programs outlined in their recently adopted solid waste management program. Richland is a vertically integrated system managed by the public works department, so all collection and disposal services were reviewed. In order to accurately set the collection rates, an RFP was developed for the processing of residential recyclable materials as well as a cost analysis of a compost facility located at the landfill. Collection rates were established for the rollout of the residential yard debris and recycling programs as well as updated fees for disposal and self-haul at the City's Horn Rapids Landfill.



### **RECYCLING PROGRAM IMPLEMENTATION AND RATE SETTING**

#### **CITY OF LARAMIE, WYOMING**

Chris Bell assisted the City of Laramie with the implementation and cost calculation of a comingled recycling program utilizing 95 gallon roll carts. A critical aspect was the procurement of material processing services. Mr. Bell drafted the RFP that requested services and solutions. The result of the service procurement was a long-term contract with an out-of-state service provider for transport and processing of a single stream recycling mix.



### **SOLID WASTE STUDY AND COLLECTION SERVICE PROCUREMENT**

#### **KODIAK ISLAND BOROUGH, ALASKA**

Chris Bell & WIH Resource Group were contracted by the Borough to evaluate the existing solid waste collection and disposal methods to determine the most comprehensive, environmentally sound, and cost effective method of operation for the Borough. A solid waste management plan was completed that provided the Borough with three system alternatives. The plan was officially adopted by the Borough Assembly which recommended a fully carted collection system, a lined landfill, and an expanded recycling program. The second phase of the project assisted the Borough with procuring collection and recycling services based on the direction of the solid waste plan.



## Section 4 – Select Experience

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### **SOLID WASTE MANAGEMENT SYSTEM & DISPOSAL ALTERNATIVES ANALYSIS**

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#### **CITY OF COOLIDGE, ARIZONA**

WIH Resource Group was retained to assist the City of Coolidge staff in evaluating current solid waste management practices of the Public Works Department and to propose and develop recommended improvements or changes to the City's operations. The analysis covered key system components such as staffing, daily operations, types of collection vehicles, solid waste collection containers types, recycling, privatization of commercial collection operations and other factors affecting both the cost and efficiency of the City's solid waste operations. The final recommendations were unanimously accepted and approved by the City's Council and resulted in a follow-up project in the drafting of a commercial waste collection RFP for procuring private sector services for collection and transportation of the City's commercial solid waste.

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#### Silver Bar Mine Regional Landfill

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### **WASTE TRANSPORT & DISPOSAL PROCUREMENT / RFP DEVELOPMENT**

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#### **SILVER BAR MINE REGIONAL LANDFILL (SBMRL) - PHOENIX, ARIZONA**

WIH Resource Group was retained by SBMRLF on several projects to assist them in marketing, proposal writing, strategic planning and other related strategic business planning and business development efforts. WIH developed a comprehensive marketing proposal for the Client in response to a waste disposal RFP issued by three major cities in Arizona. Under another engagement, WIH assisted the Client in creating an updated marketing brochure. SBMRL continues to be a valued client for WIH Resource Group.



### **SOLID WASTE & RECYCLING SYSTEM PROCUREMENT**

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#### **CITY OF LEWISTON, IDAHO**

Chris Bell was retained in the development of the City's updated integrated solid waste and recycling system. Every aspect of the system was addressed: solid waste collection, curbside recycling, yard waste collection, composting, bulky waste collection, transfer station operations, solid waste transportation (long haul), and landfill. Four service contracts were drafted: (1) refuse, yard waste and bulky waste collection; (2) recycling collection and processing, (3) refuse transport (from the City's transfer station) and disposal, and moderate risk waste recycling and disposal, and (4) yard waste composting and sewage sludge processing, and tied together with a Master Agreement. Each component of the system was reviewed for projected costs and operational feasibility, updated to meet the City's long term goals, and then placed out to bid.

## Section 4 – Select Experience



### **EXPERT WITNESS SERVICES – FACILITIES & ASSETS VALUATION LAWSUIT**

#### **WEISS SEROTA HELFMAN PASTORIZA COLE & BONISKE - BROWARD COUNTY, FLORIDA**

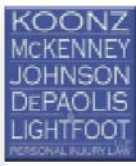
WIH Resource Group was retained by a law firm representing 24 governmental jurisdictions (cities) that were part of a lawsuit with a regional solid waste authority. After all members voted to disband the regional authority, a dispute arose over payout of the amassed funds from assessed fees over the 20+ years that the authority existed, resulting in the lawsuit. WIH's team assessed the fair market valuations of the facilities (landfill & landfill useful remaining life, ash monofills, existing contracts, transfer stations and owned land) to determine a fair market valuation for mediation discussion purposes.



### **SOLID WASTE PROCUREMENT SYSTEM ANALYSIS**

#### **CITY OF MERCER ISLAND, WASHINGTON**

Mr. Bell assisted the City of Mercer Island during the contract negotiations with Allied Waste of Bellevue. Part of the process was reviewing the additional costs associated with program changes and service enhancements and the impact on collection rates over the initial ten year term of the contract.



### **EXPERT WITNESS SERVICES – PERSONAL INJURY LAWSUIT**

#### **WASHINGTON, DISTRICT OF COLUMBIA (D.C.)**

WIH Resource Group was retained by two law firms as an Expert Witness to assist in resolving a case between the Plaintiff, who had fallen off of a loaded solid waste transfer trailer at the Defendant's transfer station in Washington D.C. and the Defendant who claimed no negligence. WIH Resource Group was retained by the Plaintiff's Attorney. Mr. Wallace of WIH Resource Group provided an analysis of the case in the form of an Expert Analysis and Opinion Report that examined all of the case depositions for both the Plaintiff and the Defendant and provided a professional expert opinion in favor of the Plaintiff. He also provided expert witness deposition regarding the matter whereby the Defendant's attorney cross examined Mr. Wallace. Largely, as a result of Mr. Wallace's deposition, the end result was a resolution reached between the parties and the case was settled out of court through arbitration in favor of WIH's Clients (the Plaintiffs). The Plaintiff was successful in being awarded a substantial settlement.

## Section 4 – Select Experience



### **EXCLUSIVE FRANCHISE SYSTEM FOR SOLID WASTE COLLECTION RFP**

#### **CITY OF LOS ANGELES, CALIFORNIA**

WIH Resource Group was retained as part of a master project team to assist the City of Los Angeles in an effort to establish an exclusive waste and recycling collection franchise system. Throughout the development of the RFP for the City of Los Angeles, the WIH team assisted the City and project staff by completing the following project work:

1. Assisted the City with input on commercial collection operations in an open market.
2. Provided commercial operational data such as costs, productivity, performance measurement, and expected results for open market and franchised systems.
3. Developed the cost of service rate approach for waste and recycling adopted for the RFP. Assisted with the refinement of the Excel rate model to include the break out of collection cost components such as disposal, truck costs, overhead, revenue from recycling, and customer service.
4. Reviewed numerous RFP drafts and provided input on the information that will be requested from the proposers including daily collection operations, container delivery, invoicing, customer service standards, use of collection technology, and route supervision and management.
5. Assisted with the proposal review packages and provided input on the financial and operational evaluation items.



### **REGIONAL WASTE SHED STUDY - SACRAMENTO, CALIFORNIA**

#### **DTE ENERGY – DETROIT, MICHIGAN**

WIH Resource Group was retained by DTE Energy to conduct a regional waste Shed Study for a 100 mile radius surrounding a large landfill located in Sacramento, CA. The study included a regional solid waste and biosolids disposal capacity demand market needs assessment, transportation cost analysis and other related professional consulting services. The impetus was to determine if the regional landfill in question was capable of maintaining and/or increasing annual waste flows to generate enough methane gas to meet DTE's requirements for a power generation facility.

## Section 4 – Select Experience



### **SOLID WASTE & RECYCLING COLLECTION EFFICIENCY STUDY**

#### **CITY OF CALGARY, ALBERTA CANADA**

The City of Calgary's Waste & Recycling Services Department (W&RS) retained WIH Resource Group, and it's Teaming Partner, for several different projects including two primary as follows: 1. Recycling Materials Transfer Facility Feasibility Study and 2. Residential Collection Efficiency Study. The second Study was to conduct a review of the City's current residential collection practices in order to inform the City Council of upcoming decisions impacting Calgary's residential diversion and waste collection. The findings of the first Study assisted the City in making informed decisions about whether the City should site a recycling transfer facility to reduce transportation costs in waste and recycling collection vehicles. As part of the Collection Efficiency Study, WIH's report showed how the types of collection services and methods of the City's service delivery compare to peer jurisdictions, and provided information about the relative efficiency and effectiveness of its collection services. The results were used to inform the City Council on the actions it might take to improve service delivery. The results also allowed The City to make informed decisions about whether The City should continue to provide a full suite of residential collection services (black, blue and green carts), or whether introducing some form of private sector involvement would present an opportunity to deliver desired service levels at lower cost.



### **REGIONAL WASTE SHED STUDY – PHOENIX / TUCSON ARIZONA**

#### **HUNT DEVELOPMENT GROUP – EL PASO, TEXAS**

WIH Resource Group was retained by Hunt to conduct research and develop a regional waste shed study for a proposed landfill to be located in Pinal County, Arizona. The study included a regional solid waste and biosolids disposal capacity demand market needs assessment, transportation cost analysis and other related professional consulting services to assist Hunt in making an informed decision in a large regional investment in the landfill.



### **RECYCLING FEASIBILITY STUDY**

#### **SHOSHONE-PAIUTE TRIBES – OWYHEE, NEVADA**

Under an EPA Grant, WIH was retained to perform the Study to determine if increased recycling could be achieved by developing a more formal infrastructure on Tribal grounds to gain greater scales of economy by collecting, sorting and transporting either bulk or baled recyclables to primary markets for sale. The anticipated results were to achieve both increased recycling for the Tribes and for providing revenues to cover the costs of the proposed recycling program.

## Section 4 – Select Experience

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### **WASTE & RECYCLING TRANSFER AND DISPOSAL ALTERNATIVES ANALYSIS**

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#### **CITY OF SPOKANE VALLEY, WASHINGTON**

The City of Spokane Valley retained WIH Resource Group, and its Teaming Partner, to complete the requested feasibility evaluation. The project team researched current prevailing market landfill disposal (tipping) fees at regional landfills for waste delivered under long term contracts. Typically, contract rates are lower than posted “gate” rates, and WIH evaluated what potential cost reductions may be available.

WIH also researched / interviewed peer jurisdictions that use private sector transfer stations to provide transfer and disposal services. To complete this task, WIH secured copies of existing contracts and from county tipping fee information published by Washington’s Department of Ecology to identify counties that have lower tipping fees than the Spokane Regional Solid Waste System.

WIH developed a cost model to estimate a range of costs for a private transfer station serving Spokane Valley. WIH also considered the impact of current surcharges embedded in the Spokane System tipping fee (for recycling programs, moderate risk waste programs, etc.) on transfer stations costs.

WIH’s evaluation of risk factors primarily focused on economic and market issues. The findings enabled the City to weigh potential cost savings against the risk factors and determine whether to pursue a private transfer alternative or remain in the Regional Solid Waste System.



### **WASTEByRAIL INTERMODAL FACILITY SITING AND FEASIBILITY STUDY**

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#### **CITY OF SEATTLE PUBLIC UTILITIES - SEATTLE, WASHINGTON**

The City of Seattle ships solid waste by train to the Columbia Ridge Landfill located about 320 miles away in northern Oregon. The City requires that waste be shipped on a dedicated train destined for the landfill, also referred to as a unit train, as opposed to a merchant train that hauls different cargo to different locations. WIH Resource Group was retained to assist the City of Seattle in conducting a feasibility and cost assessment in siting a new intermodal rail facility in South Seattle. The City’s efforts were an attempt for the City to gain joint line service to both the BNSF and UPRR railroads to better manage railroads transportation costs and maintain competition for service.



## Section 4 – Select Experience



### **RECYCLING FEASIBILITY STUDY**

#### **BLUE HILLS ENVIRONMENTAL – APACHE COUNTY, ARIZONA**

Under a Grant from Arizona Department of Environmental Quality (ADEQ), WIH was selected and retained to perform a regional recycling feasibility study for Apache County. The Study was designed to determine if increased recycling could be achieved by developing a more formal infrastructure throughout the rural County to gain great scales of economy and collect, sort and transport either bulk or baled recyclables to primary markets for sale, resulting in both increased recycling for the County and its residents and providing revenues to cover the costs of the proposed recycling program.



### **CNG REFUSE FLEET & FUELING FACILITIES ANALYSIS & FUELING FACILITY DESIGN PROCUREMENT / RFP DEVELOPMENT**

#### **CITY OF TACOMA, WASHINGTON**

The City retained WIH Resource Group and its teaming partner to provide expertise in the area of CNG fueling systems, refuse fleet conversion from biodiesel and diesel to CNG, assess fleet maintenance facility conversion costs, the permanent fueling facility design and costs and to help develop an RFP for procurement of a design build and possibly operate of a CNG fueling facility for the City's 65+ refuse collection fleet for third parties. WIH's Team also developed much of the technical specifications that were included in the RFP. WIH Resource Group also assisted in the evaluation of the proposals that the City received from third party vendors.



### **ALTERNATIVE FUELS USE IN REFUSE COLLECTION FLEETS WHITE PAPER**

#### **400+ CLIENTS THROUGHOUT NORTH AMERICA & INTERNATIONALLY**

The Industry White Paper was developed by WIH Resource Group (WIH) and was initially released in 2008 after WIH was retained by the City of Boise, Idaho, to conduct research on the topics of alternative fuels. The White Paper has been updated several times to keep the content current and relevant and include additional information gathered through other client engagements / projects. Current information includes findings from industry research and analysis of the current use of Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) in waste and recycling collection vehicles by both public sector agencies and private sector service providers throughout the United States. The waste management industry's interest in this information is to assess the potential for utilizing CNG fueled refuse collection vehicles in their own organizations or subcontracted solid waste and recycling collection vehicles and operations.

## Section 4 – Select Experience

### CLIENT REFERENCES

Client	City	State	Project Description	Contact	Phone
<b>Public Sector Clients</b>					
Metro Regional Government	Portland	OR	Parameters for Waste Transportation Procurement	Chuck Geyer	503-797-1691
City of Boise	Boise	ID	Waste & Recycling Fleet Alternative Fuels Conversion Study	Catherine Chertudi	208-384-3912
Seattle Public Utilities	Seattle	WA	WastebyRail Feasibility Study	Henry Friedman	206-733-9147
City of Tucson	Tucson	AZ	On Call Environmental Services	Andrew Quigley	520-837-3784
Apache County / Blue Hills Environmental	St. Johns	AZ	Waste, Recycling Collection & Disposal Planning	Ray Davis	928-337-2357
City of Spokane Valley	Spokane Valley	WA	Waste, Recycling Collection & Disposal Planning	Mike Jackson	509-720-5200
City & Borough of Juneau	Juneau	AK	Integrated Solid Waste Management Planning	Jim Penor	907-806-6009
City of Walla Walla	Walla Walla	WA	Waste, Recycling Collection & Disposal Planning	Ki Bealey / Nabel Shawa	509-527-4522
City of Mesa	Mesa	AZ	Waste & Recycling Fleet Alternative Fuels Conversion Study	Michael Comstock	480-644-2490
City of Calgary Alberta Canada	Calgary	AB	Waste & Recycling Collection Efficiencies Study	Christy Lyons	403-268-8444
Central Contra Costa Solid Waste Authority	Walnut Creek	CA	Waste & Recycling Collections Customer Satisfaction Survey	Lois Courchaine	925-906-1801
Escambia County	Pensacola	FL	Transfer Station Asset Valuation	Charlie Peppler	850- 595-5112
Snohomish County	Everett	WA	Integrated Solid Waste Management Plan Review	Brian Goodnight	425-388-6509
City of Tacoma	Tacoma	WA	Refuse Collection Fleet Alternative Fuels Study	Lewis Griffith	253-573-2420
<b>Private Sector Clients</b>					
Tucson Waste & Recycling	Tucson	AZ	Proposal Development for Contract Landfill Management	Larry Henk	602-390-6846
Silver Bar Mine Regional Landfill	Phoenix	AZ	Proposal Development for Landfill Waste Disposal	Mike Cowley	602-385-4200
Gregory Canyon Landfill	San Diego	CA	Regional Waste Shed Study and Landfill Planning	Rich Felago	603-490-3444
Ecology	Santa Fe Springs	CA	Waste & Recycling Transportation Business Development	Aaron Siroonian	562-404-8683
Weiss Serota Helfman Pastoriza Cole & Boniske	Ft. Lauderdale	FL	Broward County Waste and Recycling Assets Valuation	Jamie Cole /Justin Luger	954-763-4242
Koonz, McKenney, Johnson, DePaolis & Lightfoot, L.L.P.	Washington	DC	Waste Transfer Injury Claim Expert Witness Services	Kasey Murray	202-659-5503
Recology / CleanScapes	Seattle	WA	Waste and Recycling Merger & Acquisition Services	Chris Martin	206-859-6705
Basin Disposal, Inc.	Pasco	WA	Business Assets Valuation	Darrick Dietrich	509-547-2476
Santek Waste Services	Cleveland	TN	Solid Waste Landfill Disposal Contract Support Services	David Klein	423-413-7372
DTE Energy	Sacramento	CA	Regional Waste Shed Study and Landfill Planning	Tara D 'Andrea	734-716-9243

## Section 5 – Contact Information

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no boundaries for our creative  
and innovative solutions.

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