# AGREEMENT

36085

THIS AGREEMENT is made and entered, in duplicate, as of September 8, 2021, for reference purposes only, pursuant to a minute order adopted by the City Council of the City of Long Beach at its meeting on September 7, 2021, by and between HDR ENGINEERING, INC., a Nebraska corporation ("Consultant"), with a place of business at 100 Oceangate, Suite 1120, Long Beach, California 90802, and the CITY OF LONG BEACH, a municipal corporation ("City").

WHEREAS, City requires specialized services requiring unique skills to be performed in connection with professional engineering and recycling/solid waste management consultant services ("Project"); and

WHEREAS, City has selected Consultant in accordance with City's administrative procedures and City has determined that Consultant and its employees are qualified, licensed, if so required, and experienced in performing these specialized services; and

WHEREAS, City desires to have Consultant perform these specialized services, and Consultant is willing and able to do so on the terms and conditions in this Agreement;

NOW, THEREFORE, in consideration of the mutual terms, covenants, and conditions in this Agreement, the parties agree as follows:

1. SCOPE OF WORK OR SERVICES.

A. Consultant shall furnish specialized services more particularly described in Exhibit "A", attached to this Agreement and incorporated by this reference, in accordance with the standards of the profession, and City shall pay for these services in the manner described below, in a total annual amount not to exceed Two Hundred Fifty Thousand Dollars ($250,000), at the rates or charges shown in Exhibit "B".

B. The City's obligation to pay the sum stated above for any one

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

fiscal year shall be contingent upon the City Council of the City appropriating the necessary funds for such payment by the City in each fiscal year during the term of this Agreement. For the purposes of this Section, a fiscal year commences on October 1 of the year and continues through September 30 of the following year. In the event that the City Council of the City fails to appropriate the necessary funds for any fiscal year, then, and in that event, the Agreement will terminate at no additional cost or obligation to the City.

C. Consultant may select the time and place of performance for these services; provided, however, that access to City documents, records and the like, if needed by Consultant, shall be available only during City's normal business hours and provided that milestones for performance, if any, are met.

D. Consultant has requested to receive regular payments. City shall pay Consultant in due course of payments following receipt from Consultant and approval by City of invoices showing the services or task performed, the time expended (if billing is hourly), and the name of the Project. Consultant shall certify on the invoices that Consultant has performed the services in full conformance with this Agreement and is entitled to receive payment. Each invoice shall be accompanied by a progress report indicating the progress to date of services performed and covered by the invoice, including a brief statement of any Project problems and potential causes of delay in performance, and listing those services that are projected for performance by Consultant during the next invoice cycle. Where billing is done and payment is made on an hourly basis, the parties acknowledge that this arrangement is either customary practice for Consultant's profession, industry or business, or is necessary to satisfy audit and legal requirements which may arise due to the fact that City is a municipality.

E. Consultant represents that Consultant has obtained all necessary information on conditions and circumstances that may affect its performance and has conducted site visits, if necessary.

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

F. CAUTION: Consultant shall not begin work until this Agreement has been signed by both parties and until Consultant's evidence of insurance has been delivered to and approved by City.

2. TERM. The term of this Agreement shall commence at midnight on June 1, 2021, and shall terminate at 11:59 p.m. on May 31, 2023, unless sooner terminated as provided in this Agreement, or unless the services or the Project is completed sooner. The term may be extended for three (3) additional one-year periods, at the discretion of the City Manager.

3. COORDINATION AND ORGANIZATION.

A. Consultant shall coordinate its performance with City's representative, if any, named in Exhibit "C", attached to this Agreement and incorporated by this reference. Consultant shall advise and inform City's representative of the work in progress on the Project in sufficient detail so as to assist City's representative in making presentations and in holding meetings on the Project. City shall furnish to Consultant information or materials, if any, described in Exhibit "D", attached to this Agreement and incorporated by this reference, and shall perform any other tasks described in the Exhibit.

B. The parties acknowledge that a substantial inducement to City for entering this Agreement was and is the reputation and skill of Consultant's key employee, named in Exhibit "E" attached to this Agreement and incorporated by this reference. City shall have the right to approve any person proposed by Consultant to replace that key employee.

4. INDEPENDENT CONTRACTOR. In performing its services, Consultant is and shall act as an independent contractor and not an employee, representative or agent of City. Consultant shall have control of Consultant's work and the manner in which it is performed. Consultant shall be free to contract for similar services to be performed for others during this Agreement; provided, however, that Consultant acts in accordance with Section 9 and Section 11 of this Agreement. Consultant acknowledges

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

and agrees that (a) City will not withhold taxes of any kind from Consultant's compensation; (b) City will not secure workers' compensation or pay unemployment insurance to, for or on Consultant's behalf; and (c) City will not provide and Consultant is not entitled to any of the usual and customary rights, benefits or privileges of City employees. Consultant expressly warrants that neither Consultant nor any of Consultant's employees or agents shall represent themselves to be employees or agents of City.

5. INSURANCE.

A. As a condition precedent to the effectiveness of this Agreement, Consultant shall procure and maintain, at Consultant's expense for the duration of this Agreement, from insurance companies that are admitted to write insurance in California and have ratings of or equivalent to A:V by A.M. Best Company or from authorized non-admitted insurance companies subject to Section 1763 of the California Insurance Code and that have ratings of or equivalent to A:VIII by A.M. Best Company, the following insurance:

i. Commercial general liability insurance (equivalent in scope to ISO form CG 00 01 11 85 or CG 00 01 10 93) in an amount not less than One Million Dollars ($1,000,000.00) per each occurrence and Two Million Dollars ($2,000,000.00) general aggregate. This coverage shall include but not be limited to broad form contractual liability, cross liability, independent contractors liability, and products and completed operations liability. City, its boards and commissions, and their officials, employees and agents shall be named as additional insureds by endorsement (on City's endorsement form or on an endorsement equivalent in scope to ISO form CG 20 10 11 85 or CG 20 26 11 85 or both CG 20 10 07 04 and CG 20 37 07 04 or both CG 20 33 07 04 and CG 20 37 07 04), and this insurance shall contain no special limitations on the scope of protection given to City, its boards and commissions, and their officials, employees and agents. This policy shall be endorsed to state that the insurer waives its right of subrogation against City,

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

its boards and commissions, and their officials, employees and agents.

ii. Workers' Compensation insurance as required by the California Labor Code and employer's liability insurance in an amount not less than One Million Dollars ($1,000,000.00). This policy shall be endorsed to state that the insurer waives its right of subrogation against City, its boards and commissions, and their officials, employees and agents.

iii. Professional liability or errors and omissions insurance in an amount not less than One Million Dollars ($1,000,000.00) per claim.

iv. Commercial automobile liability insurance (equivalent in scope to ISO form CA 00 01 06 92), covering Auto Symbol 1 (Any Auto) in an amount not less than Five Hundred Thousand Dollars ($500,000.00) combined single limit per accident.

B. Any self-insurance program, self-insured retention, or deductible must be separately approved in writing by City's Risk Manager or designee and shall protect City, its officials, employees and agents in the same manner and to the same extent as they would have been protected had the policy or policies not contained retention or deductible provisions.

C. Each insurance policy shall be endorsed to state that coverage shall not be materially changed or canceled except after thirty (30) days prior written notice to City, shall be primary and not contributing to any other insurance or self-insurance maintained by City, and shall be endorsed to state that coverage maintained by City shall be excess to and shall not contribute to insurance or self-insurance maintained by Consultant. Consultant shall notify City in writing within five (5) days after any insurance has been voided by the insurer or cancelled by the insured.

D. If this coverage is written on a "claims made" basis, it must provide for an extended reporting period of not less than one hundred eighty (180) days, commencing on the date this Agreement expires or is terminated, unless

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

Consultant guarantees that Consultant will provide to City evidence of uninterrupted, continuing coverage for a period of not less than three (3) years, commencing on the date this Agreement expires or is terminated.

E. Consultant shall require that all subconsultants or contractors that Consultant uses in the performance of these services maintain insurance in compliance with this Section unless otherwise agreed in writing by City's Risk Manager or designee.

F. Prior to the start of performance, Consultant shall deliver to City certificates of insurance and the endorsements for approval as to sufficiency and form. In addition, Consultant shall, within thirty (30) days prior to expiration of the insurance, furnish to City certificates of insurance and endorsements evidencing renewal of the insurance. City reserves the right to require copies of all policies of Consultant and Consultant's subconsultants and contractors, at any time. Consultant shall make available to City's Risk Manager or designee all books, records and other information relating to this insurance, during normal business hours.

G. Any modification or waiver of these insurance requirements shall only be made with the approval of City's Risk Manager or designee. Not more frequently than once a year, City's Risk Manager or designee may request that Consultant, Consultant's subconsultants and contractors change the amount, scope or types of coverages required in this Section if, in his or her sole opinion, the amount, scope or types of coverages are not adequate, provided that any change in these insurance requirements will require approval from Consultant or Consultant's subconsultant, as applicable.

H. The procuring or existence of insurance shall not be construed or deemed as a limitation on liability relating to Consultant's performance or as full performance of or compliance with the indemnification provisions of this Agreement.

6. ASSIGNMENT AND SUBCONTRACTING. This Agreement



OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

contemplates the personal services of Consultant and Consultant's employees, and the parties acknowledge that a substantial inducement to City for entering this Agreement was and is the professional reputation and competence of Consultant and Consultant's employees. Consultant shall not assign its rights or delegate its duties under this Agreement, or any interest in this Agreement, or any portion of it, without the prior approval of City, except that Consultant may with the prior approval of the City Manager of City, assign any moneys due or to become due Consultant under this Agreement. Any attempted assignment or delegation shall be void, and any assignee or delegate shall acquire no right or interest by reason of an attempted assignment or delegation. Furthermore, Consultant shall not subcontract any portion of its performance without the prior approval of the City Manager or designee, or substitute an approved subconsultant or contractor without approval prior to the substitution. Nothing stated in this Section shall prevent Consultant from employing as many employees as Consultant deems necessary for performance of this Agreement.

7. CONFLICT OF INTEREST. Consultant, by executing this Agreement, certifies that, at the time Consultant executes this Agreement and for its duration, Consultant does not and will not perform services for any other client which would create a conflict, whether monetary or otherwise, as between the interests of City and the interests of that other client. Consultant further certifies that Consultant does not now have and shall not acquire any interest, direct or indirect, in the area covered by this Agreement or any other source of income, interest in real property or investment which would be affected in any manner or degree by the performance of Consultant's services hereunder. And, Consultant shall obtain similar certifications from Consultant's employees, subconsultants and contractors.

8. MATERIALS. Consultant shall furnish all labor and supervision, supplies, materials, tools, machinery, equipment, appliances, transportation and services necessary to or used in the performance of Consultant's obligations under this Agreement, except as stated in Exhibit "D".

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

9. OWNERSHIP OF DATA. All materials, information and data prepared, developed or assembled by Consultant or furnished to Consultant in connection with this Agreement, including but not limited to documents, estimates, calculations, studies, maps, graphs, charts, computer disks, computer source documentation, samples, models, reports, summaries, drawings, designs, notes, plans, information, material and memorandum ("Data") shall be the exclusive property of City. Data shall be given to City, in a format identified by City, and City shall have the unrestricted right to use and disclose the Data in any manner and for any purpose without payment of further compensation to Consultant. However, any modification or reuse of the Data for purposes other than those intended by this Agreement shall be at City's sole risk and without liability to Consultant. Copies of Data may be retained by Consultant but Consultant warrants that Data shall not be made available to any person or entity for use without the prior approval of City. This warranty shall survive termination of this Agreement for five (5) years.

10. TERMINATION. Either party shall have the right to terminate this Agreement for any reason or no reason at any time by giving fifteen (15) calendar days prior written notice to the other party, provided that neither party will terminate this Agreement for cause without providing the other party written notice of breach and a reasonable opportunity to cure. In the event of termination under this Section, City shall pay Consultant for services satisfactorily performed and costs incurred up to the effective date of termination for which Consultant has not been previously paid. The procedures for payment in Section 1.B. with regard to invoices shall apply. On the effective date of termination, Consultant shall deliver to City all Data developed or accumulated in the performance of this Agreement, whether in draft or final form, or in process. And, Consultant acknowledges and agrees that City's obligation to make final payment is conditioned on Consultant's delivery of the Data to City.

11. CONFIDENTIALITY. Consultant shall keep all Data confidential and shall not disclose the Data or use the Data directly or indirectly, other than in the course of performing its services, during the term of this Agreement and for five (5) years following

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

expiration or termination of this Agreement. In addition, Consultant shall keep confidential all information, whether written, oral or visual, obtained by any means whatsoever in the course of performing its services for the same period of time. Consultant shall not disclose any or all of the Data to any third party, or use it for Consultant's own benefit or the benefit of others except for the purpose of this Agreement.

12. BREACH OF CONFIDENTIALITY. Consultant shall not be liable for a breach of confidentiality with respect to Data that: (a) Consultant demonstrates Consultant knew prior to the time City disclosed it; or (b) is or becomes publicly available without breach of this Agreement by Consultant; or (c) a third party who has a right to disclose does so to Consultant without restrictions on further disclosure; or (d) must be disclosed pursuant to subpoena or court order.

13. ADDITIONAL COSTS AND REDESIGN.

A. Any costs incurred by City due to Consultant's failure to meet the standards required by the scope of work or Consultant's failure to perform fully the tasks described in the scope of work which, in either case, causes City to request that Consultant perform again all or part of the Scope of Work shall be at the sole cost of Consultant and City shall not pay any additional compensation to Consultant for its re-performance.

B. If the Project involves construction and the scope of work requires Consultant to prepare plans and specifications with an estimate of the cost of construction, then Consultant may be required to modify the plans and specifications, any construction documents relating to the plans and specifications, and Consultant's estimate, at no cost to City, when the lowest bid for construction received by City exceeds by more than ten percent (10%) Consultant's estimate. This modification shall be submitted in a timely fashion to allow City to receive new bids within four (4) months after the date on which the original plans and specifications were submitted by Consultant.

14. AMENDMENT. This Agreement, including all Exhibits, shall not be

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

amended, nor any provision or breach waived, except in writing signed by the parties which expressly refers to this Agreement.

15. LAW. This Agreement shall be governed by and construed pursuant to the laws of the State of California (except those provisions of California law pertaining to conflicts of laws). Consultant shall comply with all laws, ordinances, rules and regulations of and obtain all permits, licenses, and certificates required by all federal, state and local governmental authorities.

16. ENTIRE AGREEMENT. This Agreement, including all Exhibits, constitutes the entire understanding between the parties and supersedes all other agreements, oral or written, with respect to the subject matter in this Agreement.

17. INDEMNITY.

A. Consultant shall indemnify, protect and hold harmless City, its Boards, Commissions, and their officials, employees and agents ("Indemnified Parties"), from and against any and all liability, claims, demands, damage, loss, obligations, causes of action, proceedings, awards, fines, judgments, penalties, costs and expenses, to the extent caused by (1) Consultant's breach or failure to comply with any of its obligations contained in this Agreement, including any failure to comply with applicable laws, including all applicable federal and state labor requirements including, without limitation, the requirements of California Labor Code section 1770 *et seq.* or (2) negligent or willful acts, errors, omissions or misrepresentations committed by Consultant, its officers, employees, agents, subcontractors, or anyone under Consultant's control, in the performance of work or services under this Agreement (collectively "Claims" or individually "Claim").

B. In addition to Consultant's duty to indemnify, Consultant shall have a separate and wholly independent duty to defend Indemnified Parties at Consultant's expense by legal counsel approved by City, from and against all Claims, and shall continue this defense until the Claims are resolved, whether by settlement, judgment or otherwise. No finding or judgment of negligence, fault,

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

breach, or the like on the part of Consultant shall be required for the duty to defend to arise. City shall notify Consultant of any Claim, shall tender the defense of the Claim to Consultant, and shall assist Consultant, as may be reasonably requested, in the defense.

C. If a court of competent jurisdiction determines that a Claim was caused by the sole negligence, active negligence, or willful misconduct of Indemnified Parties, Consultant's costs of defense and indemnity shall be (1) reimbursed in full if the court determines sole negligence by the Indemnified Parties, or (2) reduced by the percentage of active negligence or willful misconduct attributed by the court to the Indemnified Parties.

D. To the extent this Agreement is a professional service agreement for work or services performed by a design professional (architect, landscape architect, professional engineer or professional land surveyor), the provisions of this Section regarding Consultant's duty to defend and indemnify shall be limited as provided in California Civil Code Section 2782.8, and shall apply only to Claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant.

E. The provisions of this Section shall survive the expiration or termination of this Agreement.

18. AMBIGUITY. In the event of any conflict or ambiguity between this Agreement and any Exhibit, the provisions of this Agreement shall govern.

19. FORCE MAJEURE. If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor materials, governmental restrictions, governmental regulations, governmental controls, judicial orders, enemy or hostile governmental action, pandemic, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance will be excused for a period equal to the period of such cause for failure to

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

perform.

20. NONDISCRIMINATION.

A. In connection with performance of this Agreement and subject to applicable rules and regulations, Consultant shall not discriminate against any employee or applicant for employment because of race, religion, national origin, color, age, sex, sexual orientation, gender identity, AIDS, HIV status, handicap or disability. Consultant shall ensure that applicants are employed, and that employees are treated during their employment, without regard to these bases. These actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

B. It is the policy of City to encourage the participation of Disadvantaged, Minority and Women-Owned Business Enterprises in City's procurement process, and Consultant agrees to use its best efforts to carry out this policy in its use of subconsultants and contractors to the fullest extent consistent with the efficient performance of this Agreement. Consultant may rely on written representations by subconsultants and contractors regarding their status. Consultant shall report to City in May and in December or, in the case of short-term agreements, prior to invoicing for final payment, the names of all subconsultants and contractors hired by Consultant for this Project and information on whether or not they are a Disadvantaged, Minority or Women-Owned Business Enterprise, as defined in Section 8 of the Small Business Act (15 U.S.C. Sec. 637).

21. EQUAL BENEFITS ORDINANCE. Unless otherwise exempted in accordance with the provisions of the Ordinance, this Agreement is subject to the applicable provisions of the Equal Benefits Ordinance (EBO), section 2.73 et seq. of the Long Beach Municipal Code, as amended from time to time.

A. During the performance of this Agreement, the Consultant

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

certifies and represents that the Consultant will comply with the EBO. The Consultant agrees to post the following statement in conspicuous places at its place of business available to employees and applicants for employment:

"During the performance of a contract with the City of Long Beach, the Consultant will provide equal benefits to employees with spouses and its employees with domestic partners. Additional information about the City of Long Beach's Equal Benefits Ordinance may be obtained from the City of Long Beach Business Services Division at 562-570-6200."

B. The failure of the Consultant to comply with the EBO will be deemed to be a material breach of the Agreement by the City.

C. If the Consultant fails to comply with the EBO, the City may cancel, terminate or suspend the Agreement, in whole or in part, and monies due or to become due under the Agreement may be retained by the City. The City may also pursue any and all other remedies at law or in equity for any breach.

D. Failure to comply with the EBO may be used as evidence against the Consultant in actions taken pursuant to the provisions of Long Beach Municipal Code 2.93 et seq., Contractor Responsibility.

E. If the City determines that the Consultant has set up or used its contracting entity for the purpose of evading the intent of the EBO, the City may terminate the Agreement on behalf of the City. Violation of this provision may be used as evidence against the Consultant in actions taken pursuant to the provisions of Long Beach Municipal Code Section 2.93 et seq., Contractor Responsibility.

22. NOTICES. Any notice or approval required by this Agreement shall be in writing and personally delivered or deposited in the U.S. Postal Service, first class, postage prepaid, addressed to Consultant at the address first stated above, and to City at 411 West Ocean Boulevard, Long Beach, California 90802, Attn: City Manager, with a copy to the City Engineer at the same address. Notice of change of address shall be given in the same manner as stated for other notices. Notice shall be deemed given on the date

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

deposited in the mail or on the date personal delivery is made, whichever occurs first.

23. COPYRIGHTS AND PATENT RIGHTS.

A. Consultant shall place the following copyright protection on all Data: © City of Long Beach, California ____, inserting the appropriate year.

B. City reserves the exclusive right to seek and obtain a patent or copyright registration on any Data or other result arising from Consultant's performance of this Agreement. By executing this Agreement, Consultant assigns any ownership interest Consultant may have in the Data to City.

C. Consultant warrants that the Data does not violate or infringe any patent, copyright, trade secret or other proprietary right of any other party. Consultant agrees to and shall protect, defend, indemnify and hold City, its officials and employees harmless from any and all claims, demands, damages, loss, liability, causes of action, costs or expenses (including reasonable attorney's fees) whether or not reduced to judgment, arising from any breach or alleged breach of this warranty.

24. COVENANT AGAINST CONTINGENT FEES. Consultant warrants that Consultant has not employed or retained any entity or person to solicit or obtain this Agreement and that Consultant has not paid or agreed to pay any entity or person any fee, commission or other monies based on or from the award of this Agreement. If Consultant breaches this warranty, City shall have the right to terminate this Agreement immediately notwithstanding the provisions of Section 10 or, in its discretion, to deduct from payments due under this Agreement or otherwise recover the full amount of the fee, commission or other monies.

25. WAIVER. The acceptance of any services or the payment of any money by City shall not operate as a waiver of any provision of this Agreement or of any right to damages or indemnity stated in this Agreement. The waiver of any breach of this Agreement shall not constitute a waiver of any other or subsequent breach of this Agreement.

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

26. CONTINUATION. Termination or expiration of this Agreement shall not affect rights or liabilities of the parties which accrued pursuant to the Sections titled "Ownership of Data", "Confidentiality", "Breach of Confidentiality", "Law", "Indemnity", and "Audit" prior to termination or expiration of this Agreement.

27. TAX REPORTING. As required by federal and state law, City is obligated to and will report the payment of compensation to Consultant on Form 1099-Misc. Consultant shall be solely responsible for payment of all federal and state taxes resulting from payments under this Agreement. Consultant shall submit Consultant's Employer Identification Number (EIN), or Consultant's Social Security Number if Consultant does not have an EIN, in writing to City's Accounts Payable, Department of Financial Management. Consultant acknowledges and agrees that City has no obligation to pay Consultant until Consultant provides one of these numbers.

28. ADVERTISING. Consultant shall not use the name of City, its officials or employees in any advertising or solicitation for business or as a reference, without the prior approval of the City Manager or designee.

29. AUDIT. City shall have the right at all reasonable times during the term of this Agreement and for a period of five (5) years after termination or expiration of this Agreement to examine, audit, inspect, review, extract information from and copy all books, records, accounts and other documents of Consultant relating to this Agreement.

30. THIRD PARTY BENEFICIARY. This Agreement is not intended or designed to or entered for the purpose of creating any benefit or right for any person or entity of any kind that is not a party to this Agreement.

///

///

///

///

///

///

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

IN WITNESS WHEREOF, the parties have caused this document to be duly executed with all formalities required by law as of the date first stated above.

HDR ENGINEERING, INC., a Nebraska corporation

October, 1, 2021

By Anna Y. Lantin

Name Anna Lantin

Title Vice President

October, 1, 2021

By Arthur J. Conti

Name Arthur J. Conti

Title Vice President

"Consultant"

CITY OF LONG BEACH, a municipal corporation

October 19, 2021

By Linda F. Tatum

City Manager

EXECUTED PURSUANT TO SECTION 301 OF THE CITY CHARTER.

"City"

This Agreement is approved as to form on October 7, 2021.

CHARLES PARKIN, City Attorney

By

Deputy

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

IN WITNESS WHEREOF, the parties have caused this document to be duly executed with all formalities required by law as of the date first stated above.

HDR ENGINEERING, INC., a Nebraska corporation

October, 1, 2021

By _____
Name Anna Lantin
Title Vice President

October, 1, 2021

By _____
Name Arthur J. Conti
Title Vice President

"Consultant"

CITY OF LONG BEACH, a municipal corporation

_____, 2021

By _____
City Manager

"City"

This Agreement is approved as to form on _____, 2021.

CHARLES PARKIN, City Attorney

By _____
Deputy

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

# EXHIBIT "A"

## Scope of Work

City of Long Beach
Purchasing Division
411 West Ocean Boulevard, 6th Floor
Long Beach, CA 90802

# City of Long Beach

## Request For Proposal Number ER21-048

## For
## Professional Engineering and Recycling/Solid Waste Management Consultant Services

| | |
|---|---|
| Release Date: | 05/03/2021 |
| Questions Due to the City: | 05/10/2021 |
| Posting of the Q & A: | 05/20/2021 |
| Due Date: | 06/03/2021 |

*City Contact:* *Christina Sarmiento* *Buyer* *562-570-7062*

**See Section 4 for instructions on submitting proposals.**

Company Name HDR Engineering, Inc. Contact Person Arthur J. Conti

Address 100 Oceangate, Suite 1120 City Long Beach State CA Zip 90802

Telephone ( 562 ) 264.1100 Fax ( 562 ) 264.1101 Federal Tax ID No. 47-0680568

E-mail: Arthur.Conti@hdrinc.com

Prices contained in this proposal are subject to acceptance within 90 calendar days.

I have read, understand, and agree to all terms and conditions herein. Date June 3, 2021

Signed Arthur J. Conti

Print Name & Title Arthur J. Conti, Vice President

Rev 2016 0919

**Part 1: Narrative/Technical Proposal**

# Professional Engineering and Recycling/Solid Waste Management Consultant Services

**RFP ER21-048**

**City of Long Beach**

June 3, 2021

HDR

# Contents


| | | |
|---|---|---|
| i | **Cover Letter** | iv |
| 1 | **Scope of Project** | 01 |
| 2 | **Primary Contractor Information** | 13 |
| 3 | **Subcontractor Information** | 20 |
| 4 | **References** | 30 |
| 5 | **Business License** | 45 |

APPENDIX

| | | |
|---|---|---|
| A-1 | **Resumes** | 47 |
| A-2 | **Subcontractor Acknowledgment** | 89 |
| A-3 | **Letters of Commitment** | 91 |

**UNDER SEPARATE COVER**

Part 2: Cost Proposal

Part 3: City Required Purchasing Forms

Part 4: Financial Stability Documents/Statements

June 3, 2021

Ms. Christina Sarmiento, Assistant Buyer II
City of Long Beach
Purchasing Division
411 West Ocean Boulevard, 6th Floor
Long Beach, CA 90802

**RE: Professional Engineering and Recycling/Solid Waste Management Consultant Services, Request for Proposal (RFP) ER21-048**

Dear Ms. Sarmiento and Selection Committee,

With a proven commitment to forward-thinking waste management practices, the City of Long Beach (City) is continuing to look ahead and address the pending expiration of the Southeast Resource Recovery Facility (SERRF) service agreement, along with state organics management mandates. HDR is uniquely qualified to assist the City develop the right project concepts and procurements for the continued operations and future development of SERRF, including organic materials processing.

To help the City successfully meet these challenges head-on, we have formed a team possessing the right technical expertise, direct related experience, and local project management and support. HDR's team includes nationally recognized waste-to-energy (WtE) and organics experts, local permitting and regulatory support personnel, financial modeling leader Raftelis, and, as needed, legal advisor Hawkins Delafield & Wood LLP. Together, we bring the City the following benefits:

- **We know the City and SERRF.** We have successfully worked with the City for over 25 years on various projects, including our initial work with SERRF in the 1990s. More recently, in 2017, we performed a condition and operations assessment of SERRF, including a high level review of organics processing options. We'll bring this familiarity to your project. In addition to our experience with SERRF, our recent WtE life cycle assessment and planning experience at similar WtE facilities will be applied to this project to the City's benefit.

- **We are experts at facility planning and procurements.** Throughout the life of your project, we'll bring our expertise and lessons learned to help you efficiently meet your goals. Our WtE design, operations, maintenance and capital improvements planning, and procurement experience is second to none. We have direct experience with recent WtE operator transitions, including at two former Covanta-operated facilities in Minnesota and Connecticut. Our deep understanding of organics facility development will help create a successful project.

- **We are local and accessible.** HDR's Long Beach office is located within walking distance of the City's office. Our close proximity, knowledge of California regulations, and familiarity with local regulators allows us to be there with you through each step of the project.

**hdrinc.com**

100 Oceangate, Suite 1120. Long Beach, California 90802
**T** 562 264 1100 **F** 562 264 1101

By selecting the HDR team, you will have a strong partner in your corner to help assess, define, and achieve your objectives. Together with our teaming partners, we look forward to supporting you towards a successful SERRF project. Should you have questions regarding our submittal, please contact our proposed Project Manager, John Carlton at John.Carlton@hdrinc.com or by cell phone at 908.319.5992.

Sincerely,
**HDR Engineering, Inc.**

John G. Carlton, PE*, BCEE
Project Manager

Arthur J. Conti
Vice President

*Licensed in another state

**hdrinc.com**

100 Oceangate, Suite 1120, Long Beach, California 90802
**T** 562.264.1100 **F** 562.264.1101

# 1 Scope of Project

**RFP SECTION 3**

# Scope of Project

## Project Understanding

### INTRODUCTION

The City of Long Beach (City), Energy Resources Department, is seeking proposals to assist with the preparation of a Request for Proposals (RFP) for the continued operation and future development of the Southeast Resource Recovery Facility (SERRF), including:

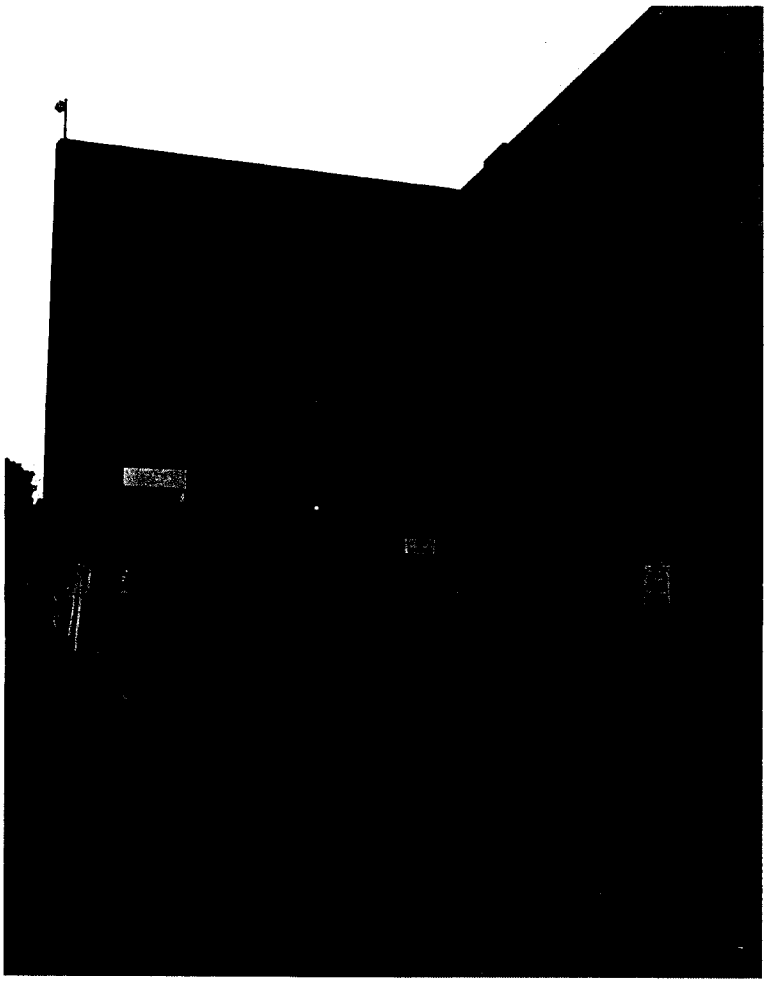
- Organic materials processing
- Addressing the City's disposal needs
- Verifying compliance with Federal and State regulations and requirements

The objectives from this high exposure project extend beyond the complex technical aspects of waste management and energy generation. These types of projects tend to be catalysts for sustainable integrated waste management practices and are a critical step toward the City's strategy to be a leader in sustainability and environmental stewardship.

Long Beach has long been a leader in waste management in the United States. The City developed a comprehensive solid waste management strategy to reduce the amount of waste to be disposed in landfills, along with reducing the consumption of natural resources by processing municipal solid waste (MSW) in the three 460 tons-per-day (TPD) combustion units and generating electricity. SERRF, which is publicly owned by the City and the Sanitation Districts of Los Angeles County (LACSD), reduces the amount of solid waste requiring landfill disposal, reduces greenhouse gas emissions, and generates renewable electrical energy. Covanta operates SERRF on behalf of the City. In 2018, Covanta and the City extended the operations agreement until at least June 30, 2024. As part of the contract amendment, the City invested $8.7 million and Covanta invested $5 million in facility improvements. It is understood that Covanta can terminate the agreement with prior notice to the City prior to 2024. It is noted that the facility improvements were a direct result of HDR's "Condition Assessment Report for the Southeast Resource Recovery Facility" in 2017.

Since the original commissioning of SERRF in 1988, the City has seen growth in population and in solid waste generation. Additionally, new organics management legislation, including Assembly Bill (AB) 1826 and Senate Bill (SB) 1383, requires the City to provide organics management services to both residents and businesses.

As part of HDR's Condition Assessment Report in 2017, we reviewed organics management options at the SERRF site, including a full anaerobic digestion (AD) system and an organics preprocessing system. This current project will help the City evaluate the continued operation and future development of SERRF through the preparation of an RFP and evaluation of proposals and operating options at SERRF.



## EXECUTIVE SUMMARY

**HDR is uniquely qualified to serve as the technical, financial, and regulatory compliance expert and advisor** to the City. We have worked with numerous clients on WtE procurements and facility evaluations, including recent WtE operator transitions at other Covanta-operated facilities in Minneapolis, MN and Hartford, CT. HDR has also been involved in several recent WtE contract extensions at WtE facilities in Lancaster, PA, Montgomery County, MD and Lee County, FL. Each WtE contract procurement, contract negotiation and operator transition is unique, and we have experience with the full spectrum of potential outcomes. HDR has significant expertise with organics management, including AD procurement assistance. In our experience on similar projects, HDR has acted as a long-term partner and an extension of our clients' staff, working together to meet the same objectives of implementing state-of-the-art solid waste infrastructure to last for the next 20 to 30 years.

HDR brings over 25 years of experience working with the City on various projects, including previous work involving SERRF. We are experts in local and state permitting, and we have an outstanding Southern California based permitting team to support the project. HDR's Project Manager, John Carlton, is local to Long Beach. He is a professional engineer (licensed in FL, MD, NJ and VA) and brings over 30 years of experience with integrated solid waste management projects, including WtE facilities and procurements. John will be supported by task managers for WtE and organics, along with a team of professionals to support procurements, permitting, and environmental reviews.

HDR will be supported by subcontractors, Raftelis and **Hawkins Delafield & Wood LLP (Hawkins).** Thierry Boveri from Raftelis has specific expertise with WtE financial modeling. If needed, the attorneys from Hawkins can help during procurement with draft agreements and support during contract negotiations. We understand the RFP did not ask for assistance with the legal aspects of the procurement process, however, we recognize this may be a need. We also recognize that the City might be addressing this need in other ways or have purchasing limitations dictating how these services are provided. HDR has experience working with Hawkins on several WtE and waste management procurements, as well as other legal firms, both as part of our team or in parallel to support procurement efforts. In addition, HDR brings experts to assist with public outreach and education associated with the project.

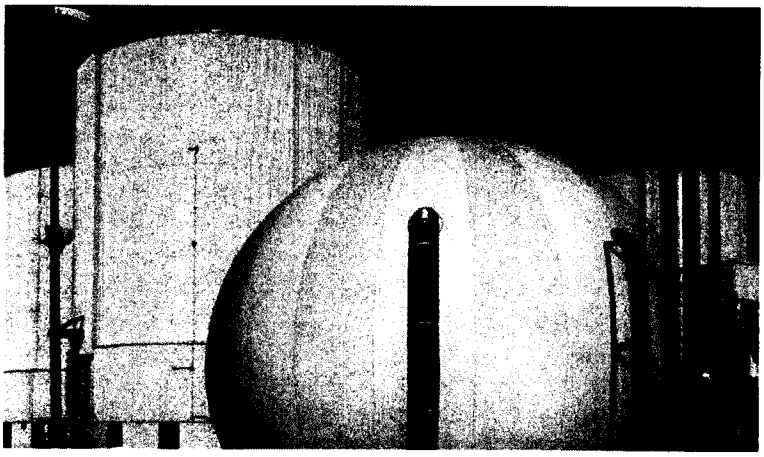
**The project's success hinges on five key success factors,** detailed in the table below. HDR's team will help the City achieve each of the critical success factors. Our proposal stands on the belief that meeting these success factors hinges foremost on the right knowledgeable and qualified team, a transparent process, innovative reliable analysis, and most importantly, listening to our clients.

| | |
|---|---|
| 1. STRONG QUALIFICATIONS IN PROVIDING SIMILAR SERVICES | The team needs to not only have waste management and procurement capabilities, but also possess diverse expertise including planning, engineering, technology assessment, permitting and regulatory support, energy generation, sustainability, energy economics, and public outreach. |
| 2. SPECIALIZED EXPERTISE | The team should tap into expertise that brings innovation, cost effectiveness, and state-of-the-art techniques that should immediately benefit the City and stakeholders, while having a strong understanding of State regulatory requirements. |
| 3. CUSTOMIZED INNOVATIVE AND PROVEN SOLUTIONS | Given the nature of the project, the project concept feasibility must be well-customized and integrate the organics process. The concept development needs to account for technical, institutional, and financial implications so that the project is effective, efficient, affordable, and has stakeholders' support. |
| 4. RESPONSIVENESS | The project requires a team that is responsive and locally available for decision-making queries. |
| 5. FORWARD-LOOKING | The team must have relevant insights about the future of energy and waste management. This is critical in developing a project suitable to meet the objectives and the future plans. |

## APPLYING HDR'S PROVEN APPROACH

For almost half a century, HDR has been the North American leader in developing state-of-the-art WtE solutions for municipal, federal, and private clients. As HDR has grown over the last two decades, we have also expanded this expertise to clients around the globe. As leaders in sustainable waste management practices, HDR has traveled North America and the world to understand and see the latest technological innovations in the management of organics firsthand. This includes observing well-operated facilities and experienced operators at related facilities that could be potential partners and suitable operators for SERRF.

HDR understands from experience that the number of existing interested WtE operators and organics processing vendors and developers are limited, and their approaches and commercial experience vary widely. This can make it difficult to decipher the difference between which operators have the right staff and appropriate plan and tools to develop and operate SERRF, which organics technologies and vendors offer a technically feasible project, and which vendors lack the experience to successfully implement their plan and technology. HDR's approach on operator and technology reviews is to partner with our clients and their teams to provide a non-biased multi-dimensional analytical assessment that looks at each alternative and at how that would fit with the City's needs and waste quantities and composition.



**Understanding the City's goals with respect to organics is key to this effort.** Clarifying expectations regarding the development of an on-site facility or coordination with an off-site service provider will be needed. Clarifying the condition and the quality of the organics is also key to an organics processing project. Whether they are mixed with MSW, green/yard waste or source separated will play a role in determining and selecting vendors with the appropriate type of processing system. The quantities available for each project, including knowing the delivery patterns and future waste projections, is a critical metric when planning the size and processing systems that will be necessary for the facility as well as the design of the tipping hall and waste storage requirements. Successfully implementing an organics technology requires a detailed understanding of the variations in waste composition and quality. HDR's global experience with researching and testing a wide variety of waste types for clients gives us the ability to quickly review the available waste characterization data and assess the low solids, high solids or dry technology selected to optimize processing.

Every project has its own unique environmental requirements that must be satisfied to successfully implement the project and get both local jurisdictional approvals, and most importantly the support of the public and residents near the facility(ies). **HDR brings the City our record of accomplishment and experience with implementing state-of-the-art facilities able to comply with the environmental standards for air, water, and residuals** (i.e., compost and other soil amendments or other residue).

HDR offers our innovative approach to meeting the environmental requirements for this project. We will work with the City to educate the local regulators (including the South Coast Air Quality Management District, Long Beach Water Department, and CalRecycle), stakeholders, and the public on the best fit technologies that offer environmental stewardship and protect the public health. Not only will our recommendations meet the requirements, but we will also advise the City on the technology options that efficiently reduce emissions and environmental impacts that are not always the most expensive options.

## TASK 1: KICKOFF MEETING AND PROJECT PLANNING WORKSHOP

HDR considers a quick and productive start to the project as a critical step to meet the project schedule. Therefore, we believe that we will be ready to convene a kickoff meeting and project planning workshop within two weeks of the award date. In particular, the kickoff meeting may address the following:

- Introduction of key project team members and identification of roles.
- Identification of key objectives and confirmation of project approach.
- Identification of key milestones, deliverables, and timeline.
- Review of operator procurement strategies.
- Review of operations-related reports and initiatives.
- Potential developers and operators.
- Proposed technical approach, including infrastructure requirement and project size, etc. for an organics processing facility.
- Availability and properties (long-term analysis) of raw water (potable water, service water) on the proposed site(s).
- Information on interconnection points, including tie-in locations on the SERRF site (if this is the selected location for the organics project).
- Specific requirements for other utility connections.
- Documentation on existing or planned boundary facilities.
- Envisaged load and operations schemes.
- Waste catchment area and basic information for the design of the organics plant.
- Owner's codes and standards to be considered.
- Environmental requirements (e.g., applicable air, water, solid waste, and other emission standards).
- Applicable laws and regulations (e.g., construction, electrical, environmental protection).
- Review of technical solutions available for residuals handling and stabilization and potential use.
- Review of organics management related reports and initiatives.
- Discussion of case studies and lessons learned from HDR's experience and client's experience on previous procurements.
- Discussion and identification of qualification criteria, along with an overview of the available information on the expected proposers for the WtE and organics project.
- Obtain facility operations and maintenance documents.
- Review of current facility condition and assessment.
- Discussion of availability of space and layout for potential organics project sites.
- Identification of general accessibility and constraints for construction access or heavy equipment.
- Identification of potential locations for major equipment, buildings, etc.
- Identification of obstacles to utility line routes out of the site that could affect the layout.
- Review of water discharge requirements and options.
- Environmental constraints or challenges.

At the kickoff meeting, we would establish the organizational relationships, contacts, ongoing meeting requirements, routines and deliverables. Immediately following the kickoff meeting, site visits will be organized to update our understanding of the SERRF's current condition and needs.

### MEETINGS

HDR has assumed that up to three of our key project members (Project Manager, WtE Lead, and AD/Organics Lead) will attend a full day kickoff meeting with the City. Additional days may be needed for associated meetings and site visits.

### DELIVERABLES

- Draft and final kickoff meeting agenda.
- Information and data request(s).
- Draft and final kickoff meeting minutes.

## TASK 2: WASTE-TO-ENERGY AND ORGANICS PROJECT CONCEPTS

During this task, HDR will work with the City to define the potential project(s) that will be the subject of the procurement(s). We will compile existing data and/or develop information that will form the basis of the project understanding on behalf of proposers, including:

- Current and projections of future waste (including organics) tonnages, composition, and characteristics.
- Waste (and organics) collection system characteristics.
- Flow control mechanisms.
- Potential organics facility sizing.
- Potential public-private-partnership opportunities.
- Current SERRF condition and required investments.
- Clarifying if off-site processing would be acceptable.
- Defining acceptable organics technologies.
- Clarifying expectations regarding odor and nuisance expectations.
- By-product off-take expectations.
- City and operator responsibilities.
- Operator transition requirements.
- Site conditions and constraints.
- Summary of local, state, and federal laws and regulations.

HDR will produce a scoping report that will be used to confirm what environmental issues (if any) should be addressed for continued operation of the WtE facility and organics project(s). HDR will prepare the Minimum Functional Specifications for the WtE and organics project(s) that will be included for the potential vendors in the RFP documents. The specifications will address general requirements, facility site information specific to the SERRF site (or alternative site), description of the sizing options desired, and the minimum technical requirements.

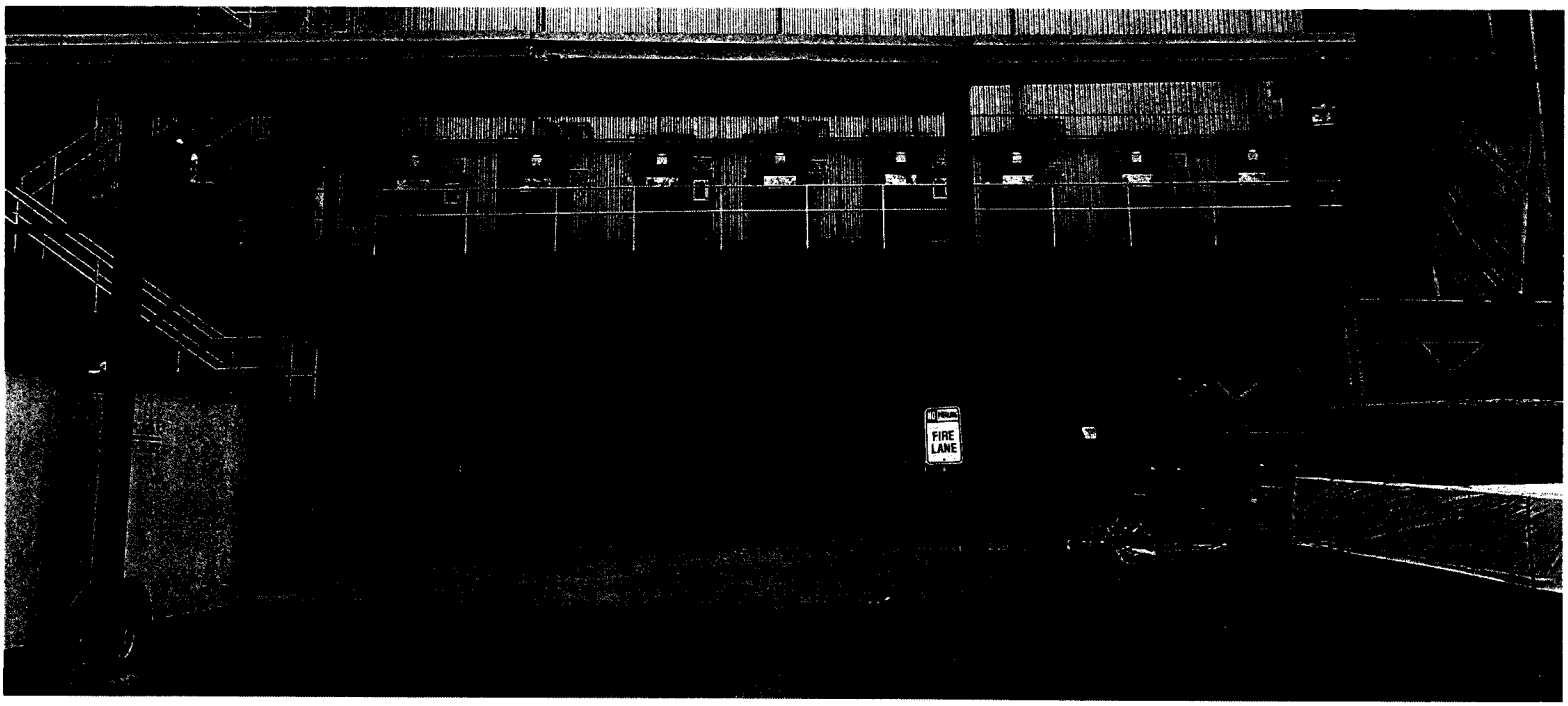
Regarding the contractual conditions that would be included in the RFP, HDR will assist the City in determining timing of contract preparation and its incorporation into the procurement process, and in development of a summary of the City's preferred risk and responsibility level which will be reflected in the draft RFP document. HDR has included Hawkins on our team to support the development of a draft service agreement, if necessary.

### MEETINGS

HDR assumes up to three meetings with the City and stakeholders during this task. Each meeting is expected to include two HDR team members and will be up to two hours in duration. These meetings may be virtual or in-person.

### DELIVERABLES

- Scoping Report including Minimum Functional Specifications.



## TASK 3: PREPARATION OF REQUEST FOR PROPOSAL

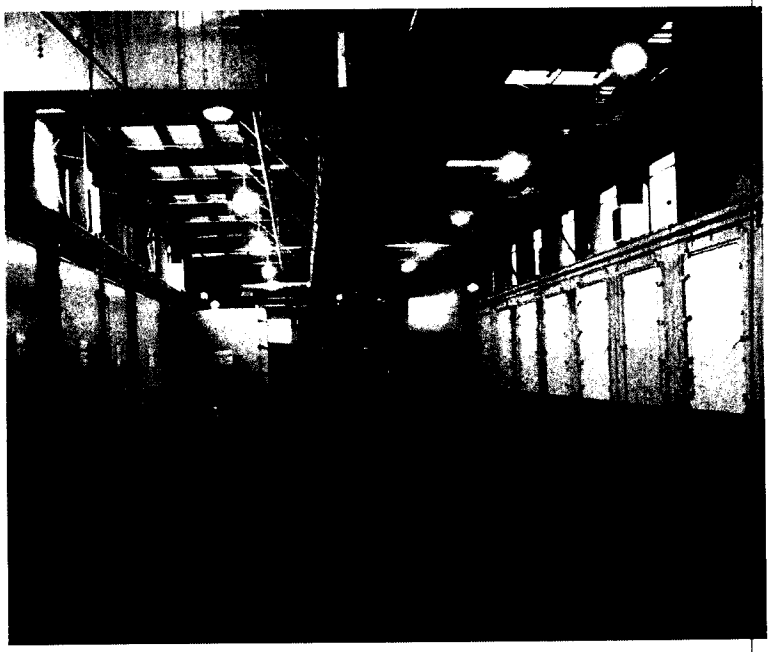
The City is seeking proposals from experienced, technically competent, and financially capable vendors. The City's preference will be for an established proven operator that is also capable of operating organics projects. During this task, the City intends to conduct a procurement process.

**Market and Vendor Recommendations**

HDR recommends one half-day workshop with the City to strategize on the approach to attract qualified and competitive vendors to the project. The workshop discussions should address the evaluation approach that would be used in the RFP stage, as it is critical to determine the approach(es) which would be acceptable within the context of the City's purchasing policy. There are limitations associated with prescriptive, highly detailed quantitative evaluation approaches. HDR has assumed that this is the most likely approach that would be used for the RFP, as this is the approach more commonly used in such processes.

A technical memo will be prepared by HDR, which will address the outcome of the workshop and which will provide recommendations with respect to:

- The potential market/vendors, based on recent WtE and organics project bid activity, active projects, and current strengths within the industry.



- The approach in the RFP process that is likely to attract qualified and competitive vendors that address both the WtE and organics aspects of the future operations. This would touch upon the allocation of project risks and responsibilities between the City and the vendors, and how the RFP needs to propose a reasonable balance that protects the City's interest while not placing undue risk on the vendor.
- The range of mandatory and evaluation criteria parameters that would be applicable at the RFP phase. This would be based on HDR's experience with other bid processes, tempered with the outcome of the discussions above.
- Project description, including descriptions of the proposed site(s) and high-level conceptual site layouts showing the potential location of the organics project.
- Procurement structure and schedule. This will reflect the discussion at the initial workshop and the project schedule.
- Facility technical qualifications. These will be based on similar provisions that have been successfully applied in other similar procurement processes, and will focus on information that should be provided regarding the WtE operations and organics project process (e.g., receiving, preprocessing/pretreatment/sorting, major components of the organics process, energy production system, air pollution control, composting operations, and residue management).
- Reference facilities requirements, including the mandatory requirements regarding reference facility operating experience and organics unit capacity and availability.
- Environmental and emissions criteria. This will reflect emissions criteria from the South Coast Air Quality Management District, as well as around North America, Europe, and Asia. The emissions criteria may be refined based on initial discussions with the City and other stakeholders.
- Management and operations qualifications.
- Organics process description.
- Organics odor and environmental compliance description.
- Organics off-take provisions.
- Engineering qualifications.
- Financial qualifications.
- Proposed project timeline.

**RFP Preparation**

HDR will prepare general technical specifications, diagrams and drawings for the RFP on behalf of the City, including the following specific deliverables:

- The tender documents shall include the following aspects of the operational approach proposed for the SERRF, including:
  - Operating plan for maximizing facility processing availability, capacity, and electrical production while maintaining residue quality and regulatory compliance.
  - Maintenance strategy discussing preventative maintenance programs, outage approach, records, and housekeeping.
  - Reagent, auxiliary fuel, and consumables projections (particularly if pass-through expenses).
  - Other proposed pass-through costs (i.e., insurance).
  - Staffing plan.
  - Training, safety, and environmental compliance plans.
  - Reporting of facility performance, maintenance, staffing, and projections.
  - Recommended spare parts for operation and strategic spares, up to the first four years after commercial operation is declared.
  - Capital replacement and life extension plan for the term of the agreement.
  - Schedule of implementation.
  - Schedules of guarantees and LDs (liquidated damages), with respect to:
    - » Schedule.
    - » Net output performance on both primary (solid waste) and back-up fuel.
    - » Reliability performance.
    - » Pass-through expenses.
    - » Heat rate on both primary and back-up fuel.
    - » Environmental noise and emission limits.
- The tender documents shall include the following technical aspects and operational approach for the organics facility:
  - Basic design data and design criteria.
  - Applicable codes and standards.
  - Margins on equipment capacities, including fouling and degradation.
  - Redundancies.
  - Detailed scope of work for mechanical and electrical plant and equipment, control and instrumentation, and civil work.
  - General technical requirements.
  - Quality assurance requirements.
  - Testing and commissioning requirements.
  - Drawings, data, and other documents, as required for a clear understanding of the scope involved.
  - Recommended spare parts for initial operation, operation, and strategic spares, up to the first four years after commercial operation is declared.
  - Schedule of implementation.
  - Schedules of guarantees and liquidated damages (LDs) with respect to:
    - » Schedule.
    - » Net output performance on both primary (solid waste) and back-up fuel.
    - » Reliability performance.
    - » Heat rate on both primary and back-up fuel.
    - » Environmental noise and emission limits.

HDR will provide technical assistance to the City and their legal advisors for the RFP in the development of the Instruction to Bidders. HDR will also assist with the preparation of the draft project agreement(s). HDR will use our experience with similar and recent WtE and organics design, construction and operating agreements to define performance requirements. HDR team member Hawkins can also assist in drafting the project agreements given their extensive expertise in WtE and organics procurements and contracting.

It is anticipated that the City will provide up to two rounds of review, along with providing comments. Should there be a need for a more iterative process, the scope of this effort will need to be confirmed in discussion with the City.

HDR will provide technical and financial assistance to the City with the development of the RFP pricing forms; particularly, the forms regarding the operating requirements for major equipment provided and costs, key performance requirements, and life cycle maintenance plan for both the SERRF facility and organics project. HDR team member Raftelis has extensive experience with WtE financial analysis and will be instrumental in the development of the pricing forms. HDR will also provide technical and financial assistance to the City in preparation of the financial model by providing technical cost estimates and reviewing technical calculations as required.

**Evaluation Criteria**

HDR will develop draft mandatory evaluation criteria for review and discussion by the City team. The level of effort required to prepare the evaluation criteria for the RFP assumes that HDR would provide recommended technical mandatory criteria (that would be applied on a pass/fail basis) and draft technical evaluation criteria that would be evaluated using a descriptive, relative rating (or qualitative) approach. These criteria would then be included in a final draft developed by the City.

HDR will assist the City with the development of an approach to the technical evaluation criteria focusing on the non-price components of the RFP. HDR will assist in identifying the technical evaluation criteria, to assist the City in understanding the criteria and how to apply the criteria to the evaluation of the technical and quantitative information expected in the RFP submissions. The level of effort required to prepare the evaluation criteria assumes that HDR would provide draft technical evaluation criteria that is intended to be applied using a prescriptive detailed scoring approach. These criteria would then be included in a final draft developed by the City. HDR would also act in an advisory capacity regarding the financial, regulatory, and other criteria as deemed appropriate for the RFP.

MEETINGS

HDR assumes having a half-day workshop with the City to strategize on the procurement approach. HDR anticipates up to three HDR team members will attend the workshop which will last approximately four hours in duration. HDR assumes two RFP document review meetings with the City, held by video conference, attended by three HDR team members and lasting up to two hours. Two HDR team members will attend the pre-proposal meeting in Long Beach.

DELIVERABLES

- Technical memorandum addressing the strategy workshop.
- Draft and final RFP technical specifications, pricing forms, and evaluation criteria.
- Assistance with drafing the Notice to Bidders and proposed form of agreement(s).

## TASK 4: ASSISTANCE DURING PROCUREMENT

Up to two representatives from HDR will participate in a half-day pre-proposal meeting anticipated to occur in Long Beach. HDR will review and provide support to the City with the review of technical questions forwarded by the City from proposers with regards to the RFP. We will identify the appropriate approach to respond to these questions (i.e., if addenda is required, or simply a clarification response). The level of effort to provide such assistance assumes that there would be some iterative discussion with the City and that draft responses to technical questions would be provided to the City electronically by HDR.

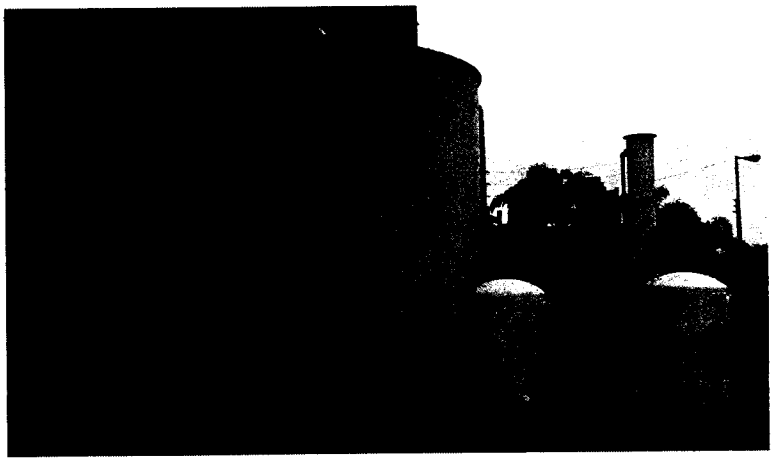
Review of the technical questions may flag items that would best be addressed via a commercially confidential one-on-one discussion directly with the proposers to understand the question more thoroughly, particularly for those issues that may arise that could have a profound effect on the outcome of the RFP process. This would be undertaken at the choice and direction of the City.

MEETINGS

HDR assumes two team members will attend the pre-proposal meeting in Long Beach.

DELIVERABLES

- Draft and final RFP addenda, including responses to questions raised by vendors.

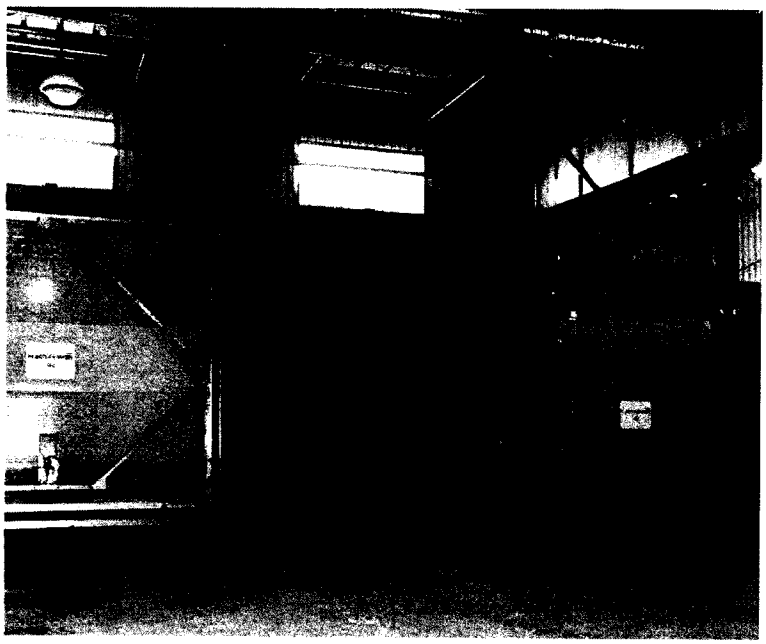


## TASK 5: EVALUATION OF BIDS

One representative from HDR will be present at the proposal opening in Long Beach as requested. The proposal packages will be obtained from potential proposers and will include a detailed summary of their experience and qualifications for successfully executing the operating contract and organics project. The proposal packages will also include a definitive proposal for the operating contract in compliance with the City's requirements, including price, schedule and other terms and conditions.

**Completeness Review.** HDR will be engaged in the evaluation of the submissions from each proposal. HDR reviewers will screen the proposals for completeness and to determine if the proposal meets the minimum technical requirements set forth in the RFP. This includes identifying those that should be rejected for being nonresponsive and identifying incomplete packages that would not be reviewed further. There are purchasing implications, and this could assist in the full review team focusing their attention more efficiently on the review of complete submissions.

**Technical Review.** HDR will then conduct a technical evaluation in conformance with the evaluation criteria identified in Task 3 and of the non-price components of the submissions received with respect to the design solution, technical, operations and maintenance, compliance, management, capital improvement and economic criteria.



HDR's technical review shall include:

- The reference WtE operation and reference organics facility information, both in respect to the ability of the vendors to meet mandatory and technical evaluation criteria. HDR will assist in confirming the reference facility information provided by vendors, which may include contacting references, if possible.
- A review and evaluation of the appropriate SERRF operating approach and performance guarantees submitted in the RFP, which may include waste acceptance, throughput, emission, net energy output, reagent and auxiliary fuel consumption, pass-throughs, metals and other products, residue generation, and by-passed waste guarantees.
- A review and evaluation of the appropriate organics facility design concepts and performance guarantees submitted in the RFP, which may include organics acceptance, throughput, emission, net energy output, compost, fuel and other products, residue generation, and by-passed waste guarantees.
- A review of the proposed project team, including the corporate experience identified in the submission; the organization that is identified, including key partners; and the experience and capability of the key human resources that are identified by the vendors for both the SERRF and organics project.
- A review and evaluation of the maintenance guarantees, including minimum standards and frequency and cost of maintenance versus capital outlays for both the SERRF and organics project.
- A review of the proposed repair and maintenance plans for both the SERRF and organics project.
- A review of the response to the Minimum Functional Specifications for the organics project.

The outcome of HDR's evaluation process would be to provide an initial draft of the technical section of the proposal evaluation report for review by the City. HDR will assist the City in the coordination and production of the final proposal evaluation report. HDR will also support in the verification of the capital, operating and revenue cost estimates supplied by the proposers and help with verification that the costs submitted are inclusive and reasonable.

HDR will act in the role of technical advisor to the City's evaluation team, participating in meetings as necessary to complete the technical evaluation process. It is expected that up to four members of the HDR evaluation team would attend these meetings.

HDR will also assist the City in reviewing the financial and business requirements, and HDR team member Hawkins could assist with the review of the impacts of the proposer's markups and/or exceptions to the draft project agreement.

HDR will assist the City in preparing the post-submission clarification questions, which are expected to be at least partially based on the technical issues or considerations identified in the Bid Evaluation Report. HDR will participate in the review of the responses. We will identify where the responses have satisfied the need for clarification, and where, in HDR's opinion, the Bidder did not provide the requested clarification responses. HDR will also assist in the preparation of the final Bid Evaluation Report and provide technical support with the shortlisting and ranking of Bidders and accompanying recommendation to the City.

HDR will assist the City in preparing and conducting a proposal clarification meeting in Long Beach or virtually. We will participate in such meeting and prepare minutes, as required, for sign off by the City and each proposer (as appropriate). HDR will provide technical assistance to the City in negotiations with the first (and to the extent required, second) ranked proposer to verify that the most competitive proposal is feasible and without material deviation.

HDR will assist the City in preparing the presentation to Long Beach stakeholders, focusing on the findings presented in the final proposal evaluation report and the outcome of the evaluation process from a technical standpoint, as well as the rationale for recommending the selected proposer. HDR's communications and outreach team has extensive capacity with this type of outreach. This would include the provision of supporting text as required, review and comment on the draft presentation, and development of graphics/charts/tables to summarize the technical information.

MEETINGS

We assume one HDR team member will participate in up to three proposal clarification meetings with vendors. These meetings may take place in Long Beach or by video conference. HDR assumes two HDR team members will attend three video conference meetings to discuss and evaluate submitted proposals. We assume one HDR team member will participate in up to two presentations to stakeholders.

DELIVERABLES

- Draft and final minute from proposal clarification meetings.
- Technical section of proposal evaluation report.
- Technical content for the presentation to stakeholders on the proposal evaluations.

## TASK 6: FINANCIAL MODELING (OPTIONAL)

HDR will assist the City by providing financial models of the WtE and organics proposals. HDR will develop the technical inputs needed in the simulation modeling that may be helpful during the evaluation of the proposals. Financial modeling may also assist with the development of proposed tariffs, sensitivity considerations, and verification of the technical and commercial modifications during the negotiations of the project agreement. HDR team member Raftelis will lead the financial modeling task.

## TASK 7: NEGOTATION OF PROJECT AGREEMENTS WITH FIRST RANKED PROPOSER

HDR will help the City in the negotiations of the project agreement with the first ranked proposer. In general, the HDR team will provide technical, financial, regulatory compliance and, if requested, legal assistance during the negotiations. This includes specific aspects of the operations and maintenance of the SERRF WtE facility and design, construction, commissioning and start-up, and operations and maintenance of the organics project. The assistance provided could include:

- Developing the list of negotiation issues and positions of parties.
- Working with the City to develop negotiating strategies.
- Evaluating negotiation position alternatives (technical, economic, compliance, etc.).
- Develop a list of key risks and potential mitigation plans associated with both projects.

Specific of areas of support for each of the facilities may include but not be limited to the following:

- For the SERRF:
  - Defining key performance metrics and guarantees.
  - Identifying hand back provisions at the end of the agreement term.
  - Defining life cycle maintenance plans and major capital projects required during the term of a new agreement, as well identifying cost sharing opportunities on projects that benefit both parties.
- For the Organics project:
  - Identifying design completion milestone and the process for completing City reviews.
  - Identifying specific construction milestones and payment schedules.
  - Defining the acceptance test criteria after the substantial completion of construction.
  - Defining key performance metrics and guarantees.
  - Identifying hand back provisions at the end of the agreement term.
  - Defining life cycle maintenance plans.

In addition, as part of this effort, HDR will review the proposer's engineering, procurement, and construction (EPC) and operations and maintenance (O&M) contracts from a technical, financial, and regulatory compliance perspective as required. HDR will assist in the preparation of obtaining final support from the Long Beach Stakeholders prior to execution of the project agreements, including attending meetings and/or making presentations.

### MEETINGS

We assume one HDR team member will participate in up to three proposal negotiation meetings with the first ranked proposer. We expect these meetings to be around one to two hours in length. We assume one HDR team member will participate in up to two presentations to stakeholders.

### DELIVERABLES

- List of negotiation issues and positions of parties.
- Documents to support the negotiation process, as needed.
- Content for presentation to stakeholders for final support and approval by City.

## TASK 8: FINANCIAL CLOSING (OPTIONAL)

HDR will attend meetings with the lenders, the lenders' engineer, the lenders' legal advisor, and City. We would expect this to entail weekly conference calls, with each call addressing a specific topic (such as the service agreement, organics project EPC contract, site planning and permitting, off-take contracts, etc.). Key areas of interest that we would expect the lenders' engineer to closely examine include the civil, process and operating contractors' track records; the interface between the contractors; contract security packages (the levels of liquidated damages, bonds, parent company guarantees, etc.); off-take contracts and contingency plans; and surety of waste supply quantity and quality.

# 2 Primary Contractor Information

**RFP SECTION 9.1**

# Primary Contractor Information

Answer to 9.1.1 – 9.1.6

## COMPANY OWNERSHIP

HDR is an **"S" Corporation** incorporated in Nebraska on March 19, 1985, and has been registered with the California Secretary of State since June 18, 1985 (Corporation #1279161).

## LOCATION OF COMPANY OFFICES

HDR has over 200 office locations worldwide. **Our California office locations are listed below.** HDR's Long Beach office is within walking distance of the City's office.

**Southern California:**

- Long Beach
- Los Angeles
- Irvine
- Riverside
- Claremont
- San Diego

**Northern California:**

- Berkeley
- Folsom
- Sacramento
- San Francisco
- Santa Clara
- Walnut Creek

## NUMBER OF EMPLOYEES

HDR has 10,300 professionals worldwide, with 440 employees in Southern California. Our Long Beach office has 20 full-time employees.

## LOCATIONS FROM WHICH EMPLOYEES WILL BE ASSIGNED

100 Oceangate, Suite 1120
Long Beach, CA 90802

The project will be led out of **HDR's Long Beach office,** with support from **local, regional and national experts** in the solid waste industry—a winning combination. Our team members were carefully selected not only for their expertise, but for their availability to work on the project for its duration.

## POINT OF CONTACT

**John Carlton, Project Manager**
100 Oceangate, Suite 1120
Long Beach, CA 90802
**T:** 908.319.5992

Answer to 9.1.7

## HDR Engineering, Inc. (HDR)

For more than 100 years, HDR has partnered with clients to shape communities and push the boundaries of what's possible. We are supported by over 10,000 employee-owners in more than 200 locations worldwide. Our engineering, architecture, environmental, and construction services bring an impressive breadth of knowledge to every project. We believe in the philosphy of being a trusted advisor to our clients, which is demonstrated by our partnership with many clients over several decades, well after the initial task or project is completed.

HDR has been a part of the Southern California business landscape for more than 40 years, with office locations in Long Beach, Los Angeles, Irvine, Riverside, Claremont, and San Diego. Locally, we have 440 professionals who specialize in the planning and design of streets/roadways, bridges/structures, drainage, water, power, and waste, as well as environmental and project/construction management services.

## Why is HDR qualified to provide these services?

### We know your facility.

We've worked with procurement for the City of Long Beach's Southeast Resource Recovery Facility (SERRF) since the 1990s and recently performed a physical assessment of the facility in 2017. We will bring this familiarity to your project.

### We can help you from beginning to end.

Throughout the life of your project, we'll bring our previous experience and lessons learned to help you efficiently meet your goals.

### We're local and accessible.

Our familiarity with local regulators and our close proximity to the City of Long Beach allow us to be there with you through each step of the project.

At HDR, we've been delivering solid waste sevices to our public and private sector clients for over 40 years. We have a global network of over 175 waste professionals that partner with you to create a tailored approach to your project.

We lead the industry in planning, design, construction, and operational support for solid waste management and processing facilities. We have been involved in evaluating, planning, designing, and procuring both traditional and trend-setting facilities, including transfer stations, materials recovery facilities, mixed-waste processing facilities, waste-to-energy facilities, maintenance facilities, and more. Our clients' award-winning facilities resulted in matching community needs to a design that stresses functionality, safety, operability and resources, and cost-effectiveness.

Our waste facility experience spans more than 200 public and private projects, including more than 100 waste transfer and processing facilities.

**Our solid waste facility experience includes:**

- Feasibility studies and facility assessments
- Facility sizing and needs assessments
- Planning and conceptual site development
- Facility engineering, design, and permitting
- Construction administration
- Construction management
- Operational supports

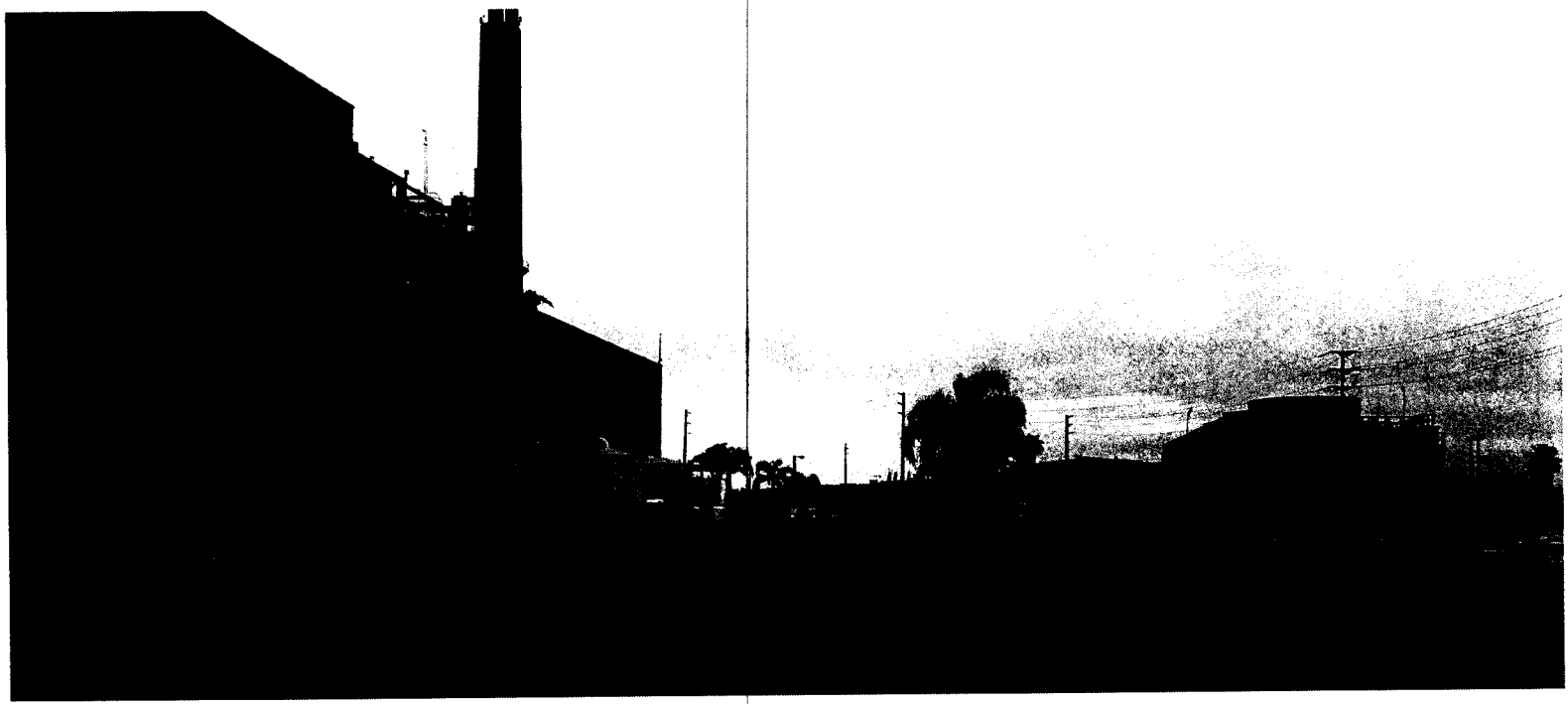
Answer to 9.1.8

# Relevant Experience

## CITY OF LONG BEACH EXPERIENCE

HDR has worked with the City of Long Beach since the 1990s on various projects, including procurement services for the SERRF. In anticipation of the expiration of the existing operating contract, we were retained by the City to prepare procurement documents and detailed operating specifications for bidding and selection of a new operating contractor. Recently, in 2017, we were retained to perform a physical assessment of the SERRF. We assessed the general condition of the facility and major equipment, identified major capital expenditures that were required or advisable at the SERRF to keep the facility operational under different scenarios, and completed a conceptual analysis for implementation of an anaerobic digestion (AD) organics processing project. This experience results in years of familiarity with your facility.

We have also successfully delivered over 30 TOs for the City under several on-call contracts, including the As-Needed Engineering Services contract and the As-Needed Traffic Engineering, Transportation Planning and Related Technical and Professional Services contracts. Under our existing contracts, HDR is providing engineering and technical studies. We will bring the same level of professionalism, expertise, commitment, and quality deliverables that we have been providing to the City for over 25 years.



## WASTE-TO-ENERGY EXPERIENCE

For almost half a century, HDR has been a North American leader in developing state-of-the-art waste to-energy (WtE) solutions for municipal, federal, and private clients. As HDR has grown over the last two decades, we have also expanded this expertise to provide waste management and energy solutions to clients around the globe.

Our experience ranges from feasibility analysis to procurement to design and design review, final construction, and testing, as well as retrofitting in-place systems.

**Our energy from waste and conversion technology experience includes:**

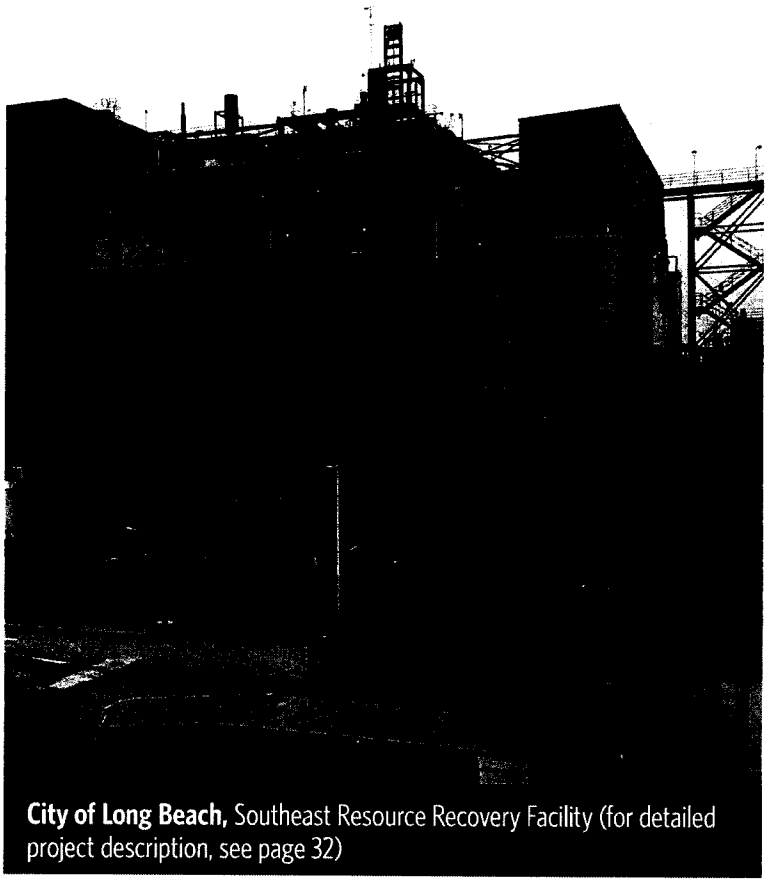
- Procurement/P3 procurement support
- Economics, finance, and sustainable value analysis
- Energy market consulting
- Feasibility studies
- Technology assessment
- Site selection and permitting
- Facility design and construction monitoring
- Facility and EFW owner's engineer services
- Environmental studies and compliance
- Plant inspections and retrofits
- District heating and steam sales
- Stakeholder and public outreach and education

We have worked on the design and implementation of over 50 of the 70+ operating WtE facilities in the U.S. and Canada, and we still work as the Owner's Engineer at many facilities to this day. HDR has a proven track record of yielding in-depth knowledge of cost effective development for WtE facilities and adopting efficient technologies for our clients.

We believe that the development of effective and efficient facilities hinges on understanding our client's unique circumstances and challenges. Our approach is to create customized solutions, rather than copying concepts from similar facilities, to tackle major waste and energy challenges.

We have worked alongside the Regional Municipality of Durham (that borders the City of Toronto in Canada) to develop the first WtE facility in Canada in over three decades. The facility is now a key piece of their 30- to 50-year waste management strategy towards a zero waste target, and includes the principle of the 5 R's: reduction, reuse, recycling, recovery and residual disposal. This is helping the Region move towards a circular economy.

Similarly, we have supported the City of Los Angeles in developing their 20-year road map toward zero waste through a two-phased approach involving financial planning, review of innovative waste-to-energy technologies, and long-range strategic planning.

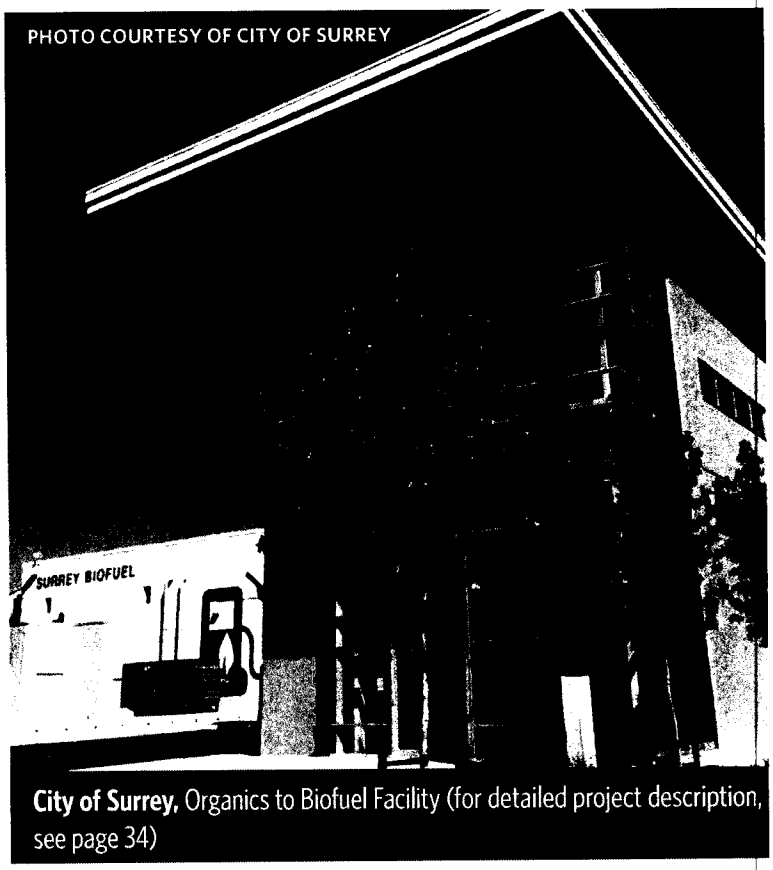


**City of Long Beach,** Southeast Resource Recovery Facility (for detailed project description, see page 32)

## ORGANICS EXPERIENCE

HDR has firsthand experience traveling North America and the world to understand and see the latest technological innovations in organics management. This includes observing well-operated facilities and experienced operators at related facilities that could be potential partners and suitable operators for SERRF.

The key to a successful organics processing project is understanding the organics quantities and quality. The quantities available for each project, including knowing the delivery patterns and future waste projections, is a critical metric when planning the size and processing systems that will be necessary for the facility. This includes the design of the tipping hall and waste storage requirements.




**City of Surrey,** Organics to Biofuel Facility (for detailed project description, see page 34)

Successfully implementing an organics technology requires a detailed understanding of the variations in waste composition and quality. HDR's global experience with researching and testing a wide variety of waste types for clients gives us the ability to quickly review available waste characterization data and assess the low solids, high solids or dry technology selected to optimize processing.

We are experienced in strategic consulting, environmental planning and compliance, planning and design, project delivery, and operations and maintenance.

**Our organic waste management experience includes:**

- Integrated organics system development and implementation
- Organics collection and pre-processing
- Organics processing
- Composting
- Anaerobic digestion
- Biogas recovery and beneficial use
- Effluent management
- Odor control and management

Our team brings years of hands-on experience to help you understand and navigate the possibilities and constraints of implementing a wide array of potential composting options.

**This includes:**

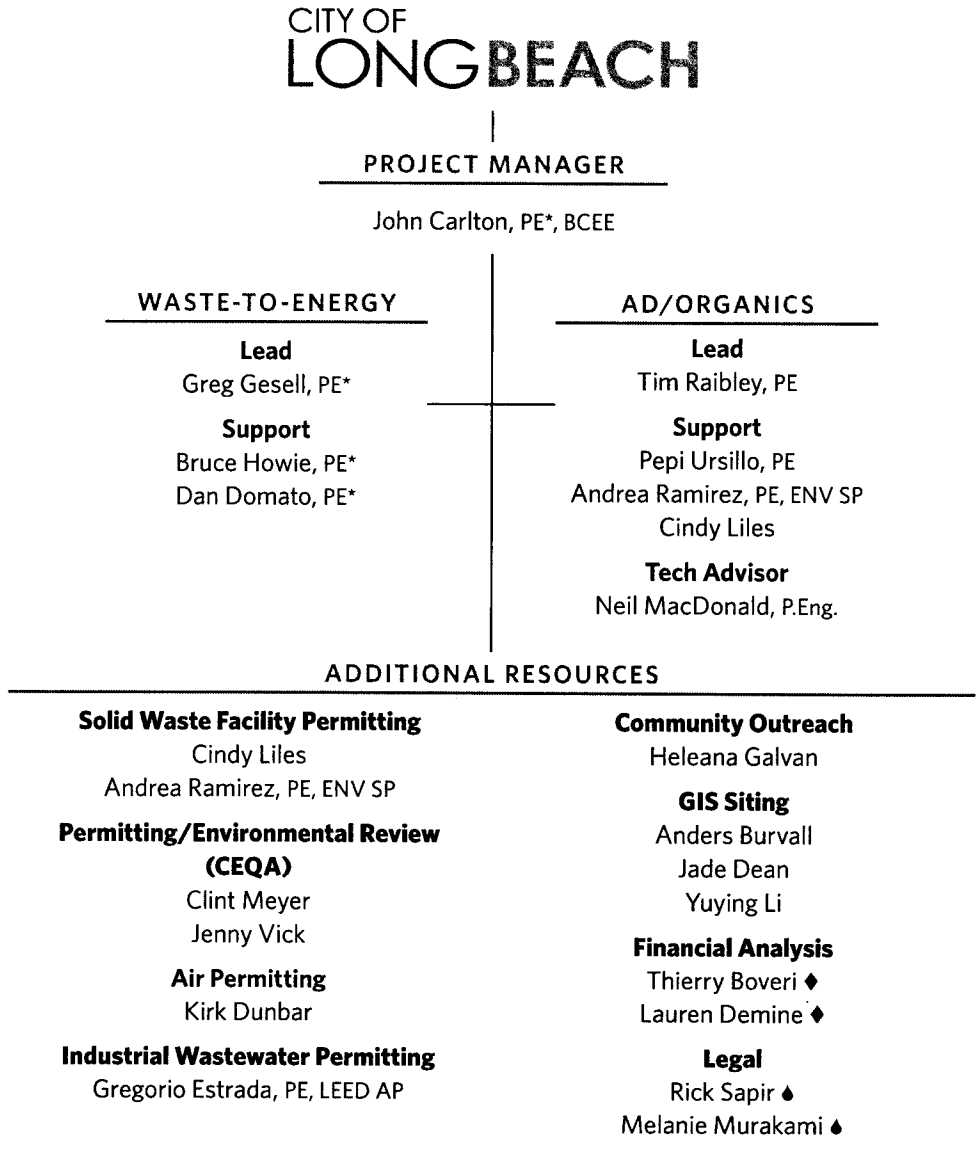
- Environmental and economic analyses
- Feasibility studies
- Site assessment
- Knowledge of various compost technologies
- Impact and market analysis
- Regulatory compliance efforts
- Strategic advising
- Planning
- Document review
- Life cycle cost and financial analyses
- Subcontractor outreach

Please refer to our project references on page 30 for more detailed project examples relating to WtE and Organics.

Answer to 9.1.9

## Organizational Chart

The key to success is assigning a team of qualified individuals who will deliver results. HDR has assembled a group of highly skilled professionals in the areas outlined in the Scope of Services, outlined in the organizational chart below. Our team is committed to the City and available to provide the required services. Resumes of our key personnel are included in the Appendix on page 47.




*Licensed in another state

SUBCONTRACTORS

♦ Raftelis

♦ Hawkins Delafield & Wood LLP

Answer to 9.1.10

## Financial Stability

As an employee-owned firm, our assets are managed and invested with exceptional care. We have established strong risk controls and are committed to managing our company with an eye toward long-term financial health and stability. This commitment has enabled us to thrive for more than 100 years in every economic environment and allows us to be a reliable partner for our clients.

Our financial statements are prepared and audited annually by Ernst & Young LLC. We are financially sound with gross revenues of $2.7 billion, a current working capital ratio of 2.2, and stockholders' equity of $0.75 billion (2020). **For our financial statements, please refer to Proposal Part 4: Financial Stability Documents/ Statements.**

## Litigation History

In today's legal environment, claims and litigation are a reality for any large company in the industry, regardless of performance or merit. When claims do occur, we are proactive and cooperative in reaching a resolution that is fair and reasonable to all. We value the confidences of our clients as well as our contractual commitments to confidentiality, and do not discuss with third parties the circumstances involving ongoing projects. We would take the same position with information regarding our work on this project.

If necessary, we would be willing to meet in person with you to discuss the merits or background of past claims. There are no claims or litigation that could impede our ability to perform this project, and we have maintained professional liability insurance in force continually since 1958 for the protection of us and our clients.

# 3 Subcontractor Information

**RFP SECTION 9.2**

# Subcontractor Information

Answer to 9.2.1

## Use of Subcontractors

Our proposal includes the use of subcontractors, listed in the table below.

| SUBCONTRACTORS | ROLE |
|---|---|
| Hawkins Delafield & Wood LLP | Legal Procurement and Contract Support |
| Raftelis | Financial Modeling and Analysis |

Our goal is to always provide our clients with the best possible consulting resources. We do this by specifically selecting teaming partners for the services required on each project. The selection of subcontractors occurs early in the team-building process to provide meaningful engagement in the development of work scopes, schedules and budgets.

- The following pages include more detailed information on our subcontractors, including **firm profiles, experience, and references.**
- An initialed copy of the subcontractor acknowledgment page from the RFP is included in the Appendix on page 89.
- Signed letters of commitment from each of our subcontractors are included in the Appendix on page 91. These letters confirm that the subcontractor has read and will agree to abide by the awarded Contractor's obligations.

Answer to 9.2.1.4

## Payment Plan of Subcontractors

The management of subcontractors is the responsibility of the project manager with direct support from the project team. Subcontractor services are integrated into the scope of project.

As part our approach, a communication plan is created which includes a primary point of contact for each subcontractor. Communication with each subcontractor occurs at both the technical level and the administrative level. The technical liaison is responsible for effectively communicating project information. The HDR business manager and accounting staff work closely with each subcontractor to verify financial and contractual reporting requirements are being achieved.

Answer to 9.2.1.5

## Subcontractor Insurance Acknowledgment

Per the RFP, HDR acknowledges we will not allow subcontractors to commence work until the insurance required of the subcontractor is obtained.

Answer to 9.2.1.1 - 9.2.1.2

# Hawkins Delafield & Wood LLP

## ROLE: LEGAL PROCUREMENT AND CONTRACT SUPPORT

Hawkins is the largest municipal contract and finance legal boutique in the country. Representation of local, state and federal governments, public authorities and districts is the core of their practice. The firm has 90 attorneys specializing in the state and local government field, and related real estate, tax, project finance and securities matters. Their public contracts group and public finance group are nationally recognized and hold top-tier market share positions in their respective specialties. Hawkins is a leader in serving as public contract counsel, bond counsel, underwriters' counsel, or special counsel for all types of alternative project delivery, public-private partnership and public finance transactions. The number and variety of governmental clients that are represented by the firm, and their continuing involvement in the development of new procurement, contracting, structuring, and financing techniques for these clients, demonstrate their current leadership in the public contracting and public finance fields.

The firm was organized in 1854 as a general practice law firm and has been specializing in municipal, business and finance law for over 115 years. Their attorneys have achieved a nationwide reputation of excellence in advising clients on the legal aspects of contract and financial transactions.

## Relevant Experience

Hawkins has been providing services described in this RFP for 40 years. Their Public Contracts and Procurement practice started in the 1970's representing public entities procuring waste-to-energy facilities. Since that time, they have assisted over 250 public entities with procurements in contracts for various types of facilities and services including waste-to-energy, organic waste processing, recycling, materials recovery facilities, landfills, digester and landfill gas beneficial use, water, wastewater, residuals, renewable energy, transportation and social infrastructure.

## COMPANY OWNERSHIP

Hawkins Delafield & Wood LLP is a Limited Liability Partnership.

## LOCATION OF COMPANY OFFICES

Los Angeles, CA; San Francisco, CA; Sacramento, CA; New York, NY; Newark, NJ; Portland, OR; Washington, DC; Hartford, CT; Ann Arbor, MI

## LOCATIONS SERVICING CALIFORNIA ACCOUNTS

Los Angeles, CA; San Francisco, CA; Sacramento, CA; New York, NY; Newark, NJ

## NUMBER OF EMPLOYEES

148 employees nationally; 17 local employees; no employees in Long Beach.

## LOCATIONS FROM WHICH EMPLOYEES WILL BE ASSIGNED

333 South Grand Avenue
Los Angeles, CA 90071

One Gateway Center
Newark, NJ 07102

## POINT OF CONTACT

**Eric (Rick) Sapir**
One Gateway Center, 24th Flr.
Newark, NJ 07102
T: 973.642.1188

## PROJECT PROCUREMENT EXPERIENCE AND EXPERTISE

Hawkins is uniquely qualified among law firms to assist the City of Long Beach based upon the depth and breadth of their procurement and contract experience assisting public owners, their specific experience in the waste-to-energy and organics processing sector, and their past work assisting public project owners with "re-procurements" for operation and management contracts following the expiration of design-build-operation contracts or operation contracts. Ten of their lawyers practice full time as owner's lead counsel in the management contract, alternative project delivery and P3 field. They have represented public agencies on over **250 projects in 25 states** delivered using management contracts and the design-build, design-build-operate-maintain, design-build-finance and design-build-finance-operate delivery methods in all infrastructure sectors, a number which is unsurpassed among American law firms. Their firm has extensive expertise and experience in management contracts and alternative project delivery and P3 transactions both regionally and nationally, has maintained a substantial specialized legal practice for more than 40 years in this field, and is widely recognized as an industry leader.

Hawkins' outstanding record of participating in projects which have not only been negotiated and financed but have actually been constructed, and are currently successfully operating (including the New Long Beach Court Building), is attributable to their broad experience in the full spectrum of facility development activities, including policy planning, system regionalization, contract negotiations and project and system financings. Hawkins' combination of extensive planning, environmental, contract and financing expertise has helped numerous clients avoid procurement failures and successfully implement a wide range of solid waste management projects.

## WASTE-TO-ENERGY EXPERIENCE

Hawkins has served as contract and finance counsel on **60 waste-to-energy projects** over 5 decades. Four transaction partners, and two tax partners, each have more than 20 years of experience in procuring and negotiating waste-to-energy contracts on behalf of state and local governments in the United States. These resource recovery projects have involved contract terms exceeding 1,000 years, over 56,000 TPD in disposal capacity, and contract value in excess of $23 billion. In the 1970s, 80s and 90s, Hawkins worked on several dozen waste-to-energy projects as procurement, contract, or finance counsel. Following the decline in new WtE project development in the mid-1990s, Hawkins assisted many of the existing project sponsors (all public entities) in contract administration matters as well as with plant retrofit issues. Equally important, during that time, Hawkins continued to develop the procurement and contract concepts that were the basis of those early projects, in the development of over 150 new municipal utility projects in the solid waste (including organic waste), renewable energy, water, wastewater and biosolids management sectors. Hawkins continues to be on the front lines as communities seek to develop long-term, sustainable, environmentally sound waste disposal strategies.

## ORGANICS PROCESSING EXPERIENCE

Hawkins has served as procurement/contract counsel on over **15 organics processing facilities**, including several composting and anaerobic digestion facilities. The Rahway Valley Sewerage Authority project in particular, is ground breaking in many ways. Hawkins assisted the Authority with the legal structuring, procurement, contract preparation and negotiation, and now contract administration, of a contract with Waste Management to (1) design, build, finance, own and operate and maintain a food waste processing facility at an existing Waste Management transfer station (2) design and build improvements to the authority's feedstock receiving facilities, and (3) guarantee the delivery of a specified quality of feedstock at specified quantities at a negotiated tipping fee on a put-or-pay basis for at least a 10 year term. The project is in the third year of operations.

## PROCUREMENTS FOLLOWING EXPIRATION OF DBO AND O&M CONTRACTS

Hawkins has assisted several public entities with the procurement of O&M agreements, sometimes including significant capital improvements, following the expiration of long term DBO or O&M contracts. They are well aware of, and are capable of successfully addressing the challenges associated with creating a level playing field and the maximizing of competition in connection with these procurements. They are also adept at addressing unique risk transfer issues associated with such "re-procurements" including most importantly the "as-is" condition risk of the assets. They have served as "re-procurement" counsel on several projects in many sectors including solid waste, residuals processing, water and wastewater.

Answer to 9.2.1.3

## References

1. State of California (Judicial Council of California, Administrative Office of the Courts), New Long Beach Court Building P3 Project. Hawkins served as lead counsel to the State of California (Judicial Council of California, Administrative Office of the Courts) for the $400 million New Long Beach Court Building. This project was a groundbreaking P3 project for the State, and a landmark event in P3 development of social infrastructure in the United States. Hawkins was the legal architect of the transaction. Their firm was centrally involved in the statutorily-required assessment of whether DBFO (P3) or traditional design-bid-build should be selected as the project delivery method, and in the extensive discussions with the State's Department of Finance about this novel approach in order to secure the DOF's formal approval of the project and the project agreement. Hawkins also participated centrally in the drafting of the RFQ and RFP; in the review of the submittals that the State received in response to each; and in the selection of the most advantageous proposer. Finally, their firm drafted the 35-year DBFO project agreement (involving annual payments of $50 million) and related project and security documents, and led the State's negotiating team.
   - **Project Start and End Dates:** 2007 - 2010
   - **Staff Assigned:** n/a
   - **Reference:** Clifford Ham, Principal Architect, 415.865.4043

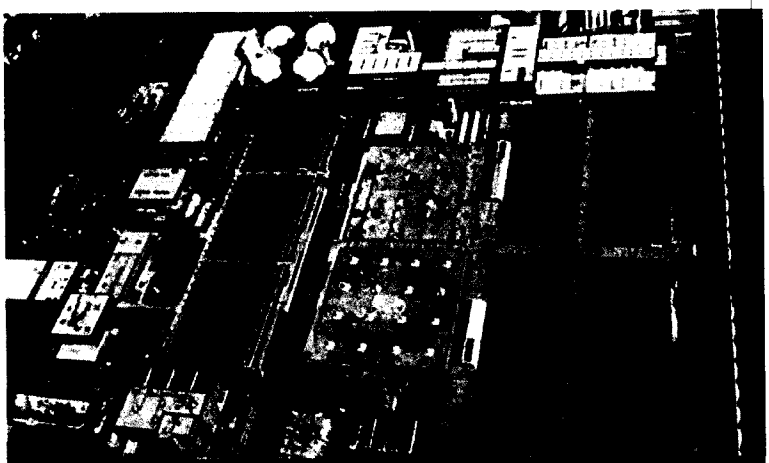
2. Rahway Valley Sewerage Authority (NJ), Specified Feedstock Enterprise Contract. Hawkins served as the lead procurement consultant assisting with the identification of the appropriate procurement law and the preparation of procurement documents. Following selection of the most advantageous proposer, the firm prepared and negotiated the Specified Feedstock Enterprise Contract and assisted the Authority in obtaining state approvals for the project. Under the Specific Feedstock Enterprise Contract, Waste Management will design and build modifications to an existing Authority tank and deliver an organic waste slurry on a negotiated tip fee basis. The Authority will utilize excess capacity in the Authority's digesters to process specified feedstock to maximize digester gas production, which will be used to fuel the Authority's existing co-generation facility. The co-generation facility will provide the electricity needed for plant operations off-setting a significant operating cost. Waste Management is responsible for siting, designing, constructing, financing, operating, and owning a facility that will process organic waste into the specified feedstock that will be delivered to the Authority's receiving facility. The Authority has engaged Hawkins to assist with contract administration matters.
   - **Project Start and End Dates:** 2016 - Ongoing
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Jim Meehan, Executive Director, 732.388.0868 (ext. 215)

**State of California (Judicial Council of California, Administrative Office of the Courts),** New Long Beach Court Building

3. County of Hawai'i, Waste-to-Energy Project. Lead Procurement and Contract Counsel I in connection with energy-from-waste project. The contract was fully procured and negotiated with Wheelabrator, however, County Council deferred the project. The County engaged Hawkins to re-procure the project a few years later but prior to receiving proposals, the County decided to terminate the procurement. Hawkins also served as procurement/contract counsel to the County for the negotiation of an organic waste composting facility delivered on a DBO basis.
   - **Project Start and End Dates:** 2005 - 2008 and 2014 - 2015 (Waste-to-Energy Project); 2015 - 2018 (Compost Project)
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Gregory Goodale, Division Chief - Solid Waste Division, 808.961.8270; William (Bill) Takaba, Former Director of Finance, 808.339.1830

4. **City of Los Angeles, Alternative Technology Project - Green Conversion Systems.** Hawkins represented the City of Los Angeles as special counsel in connection with the City's competitive procurement for a development partner to process municipal solid waste utilizing alternative technologies, premised on resource recovery. Green Conversion Systems was selected as the development partner to finance, design, build, own and operate the resource recovery facility. The facility was expected to process residential municipal solid waste generated in the City at a throughput rate of 1,000 tons per day. The City ultimately decided to defer the project.
   - **Project Start and End Dates:** 2012 - 2013
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Miguel Zermeno, Project Manager, 213.485.3611

5. **Camden County Municipal Utilities Authority, Anaerobic Digester/CHP Facility.** Hawkins served as Special Counsel to the Camden County Municipal Utilities Authority in connection with the development of an anaerobic digester and combined heat and power facility to utilize the digester gas to generate electricity for the Authority's wastewater treatment plant. In addition, the Authority has engaged Hawkins to assist with contract administration matters.
   - **Project Start and End Dates:** 2015 - Ongoing
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Scott Schreiber, Executive Director, 856.583.1261; Andy Kricun, Former Executive Director and Chief Engineer, 609.313.1648



**Camden County Municipal Utilities Authority,** Anaerobic Digester/CHP Facility

6. **York County Solid Waste and Refuse Authority, Waste-to-Energy Facility.** Contract Administration Assistance including addressing uncontrollable circumstance claims brought by existing operator (Covanta).
   - **Project Start and End Dates:** 2017 - 2018
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Dave Vollero, Executive Director, 717.845.1066

7. **City of Vancouver, WA, Wastewater Treatment Plant.** Hawkins assisted the City with its procurement of a 10-year contract for a new operator of the City's wastewater treatment plant following a previous short term contract (with Veolia) that had expired. Ultimately, a new operator (CH2M) was selected. Hawkins was able to address such challenges as making sure there was a level playing field in order to maximize competition and preparing a contract that included a reasonable allocation with respect to risk transfer.
   - **Project Start and End Dates:** 2014 - 2015
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Daniel Swensen, Engineering and Construction Services Manager, 360.487.7750

8. **Washington Borough, NJ, Wastewater Treatment Plant Operations.** Hawkins assisted the Borough with its procurement of an operator of its wastewater treatment system following the expiration of the initial design-build-operate agreement which Hawkins drafted in 1998. They drafted the procurement documents, drafted the management agreement and led the negotiation of a final agreement with Veolia Water North America Operating Services, LLC.
   - **Project Start and End Dates:** 2017 - 2019
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Matthew Hall, Borough Administrator, 908.689.3600 x120

9. **Monmouth County, NJ, Materials Processing and Recovery Facility.** Procurement of replacement operator for MPRF at expiration of initial long-term DBO contract.
   - **Project Start and End Dates:** 2007 - 2009
   - **Staff Assigned:** Rick Sapir
   - **Reference:** Richard Throckmorton, Superintendent, 732.919.1287

Answer to 9.2.1.1 - 9.2.1.2

# Raftelis

## ROLE: FINANCIAL MODELING AND ANALYSIS

Raftelis provides utilities and public-sector organizations with insights and expertise to help them operate as high-performing, sustainable entities providing essential services to their citizens. They help their clients solve their financial, organizational, and technology challenges; achieve their objectives; and, ultimately, make their communities better places to live, work, and play.

Raftelis has a unique focus on the utility and public sector. They understand how these organizations operate from top to bottom and the unique challenges they face. Their staff not only includes industry-leading consultants, but also former utility and municipal leaders with decades of hands-on experience. Their experts also sit on national finance and management committees helping to set industry standards for utility and municipal rate setting, finance, management, and operations. Their experience and expertise allow their clients to be confident that our recommendations are insightful and founded on sound industry principles.

## Relevant Experience

Raftelis began providing financial consulting services to local governments in 1993. The project team has been performing solid waste financial consulting services to local governments since 2007 and local governments operating Waste-to-Energy facilities since 2010.

## WASTE-TO-ENERGY EXPERIENCE

Raftelis and their project team has extensive experience in supporting engineering engagements for local governments operating or considering investment in waste-to-energy facilities. They perform annual financial and rate planning studies for several local governments that operate waste-to-energy facilities. More specifically, they have direct experience with developing long-range financial models to support decision makers in assessing investment, financing, contracting, resource recovery (electricity and metals) and fiscal impacts related to construction and operation of a WtE facility.

## COMPANY OWNERSHIP

Raftelis is a subchapter **S-Corporation** incorporated in the state of North Carolina on April 23, 2004. Raftelis is privately owned by shareholders.

## LOCATION OF COMPANY OFFICES

Charlotte, NC (Headquarters); Latham, NY; Austin, TX; Bellingham, WA; Natick, MA; Cincinatti, OH; Greenwood Village, CO; Greensboro, NC; Kansas City, MO; Los Angeles, CA; Memphis, TN; Murrieta, CA; Maitland, FL; Cary, NC; Seattle, WA

## LOCATIONS SERVICING CALIFORNIA ACCOUNTS

Los Angeles, CA; Murrieta, CA

## NUMBER OF EMPLOYEES

146 employees nationally; 17 local employees; no employees in Long Beach.

## LOCATIONS FROM WHICH EMPLOYEES WILL BE ASSIGNED

341 N. Maitland Avenue, Suite 300
Maitland, FL 32751

24640 Jefferson Avenue, Suite 207
Murrieta, CA 92562

## POINT OF CONTACT

**Thierry Boveri**
341 N. Maitland Avenue, Suite 300
Maitland, FL 32751
**T:** 407.628.2600

Answer to 9.2.1.3

## References

1. **Municipality of Anchorage (AK), Solid Waste Financial Advisory Services.** The Municipality of Anchorage (MOA) Department of Solid Waste Services provides disposal service to a population of approximately 292,000 and provides curbside collection service to approximately 20% of the community. The MOA processes over 300,000 tons annually and operates two transfer station and a landfill. The MOA offers a curbside organics and recycling collection program in addition to standard garbage disposal in order to increase diversion from the landfill.

   In 2020, Raftelis was engaged by the MOA Department of Solid Waste Services to perform a long-range triple-bottom-line economic analysis and cost-of-service study to examine the financial, social, and environmental costs and benefits of several solid waste disposal options, including construction of a new waste-to-energy (WtE) facility as well as recommend solid waste rates fees and charges. Another key element of the study was to assist the MOA with developing a plan of finance and identifying life cycle costs for an approximate $90 million replacement and upgrade of their principal transfer station.

   Raftelis is currently engaged with the MOA through a three-year contract to perform annual updates to the study. The 2021 study update was recently initiated and is expected to be completed by June 2021.

   - **Project Start and End Dates:** 2020 - Ongoing
   - **Staff Assigned:** Thierry Boveri
   - **Reference:** Mark Spafford, PE, General Manager, 907.343.6289

2. **Hillsborough County (FL), Solid Waste Financial Forecast and Advisory Services.** Members of the Project Team have been providing financial management services to the County's Solid Waste Enterprise Fund since 2013. The County's Solid Waste System disposes of over 1,000,000 tons of waste annually and includes a 1,800 ton per day waste-to-energy facility (WtE), landfill, yard waste processing facility, two transfer stations and community collection center, and biosolids composting facility. The County oversees franchised collection service for five collection districts to over 300,000 residential units and commercial establishments.

   Raftelis has developed detailed financial and business models for the solid waste enterprise fund, evaluated rates for services, assisted in system financings and has provided other ongoing financial and business support projects.

   Raftelis has assisted the County in development of many of the elements listed in the RFQ for item A) Rate Study including:

   - **Cost of Service Analysis:** Designed residential collection rates and variety of disposal fees by customer class.
   - **User Friendly Model:** Developed a comprehensive model with dynamic management dashboard to facilitate discussion with the ability to adjust variables and assumptions by year.
   - **Asset Assessment and Capital Funding Plans:** Developed long-range financial planning model in support of solid waste master plan, including a life-cycle cost analysis with Net Present Value (NPV) comparison of multiple scenarios under consideration by management.
   - **Long-term Liabilities and Debt Obligations:** Raftelis has assisted the County in the issuance of debt, identified funding for pension and other post-employment benefits, and closure and post-closure long-term care.
   - **Revenue Enhancements:** Raftelis recommended implementation of a cart initiation fee to help offset the cost of new cart purchases and mobilization associated with growth.
   - **Public Stakeholder Presentations:** Raftelis has supported County staff in presentations to the Board of County Commissioners and members of the public.

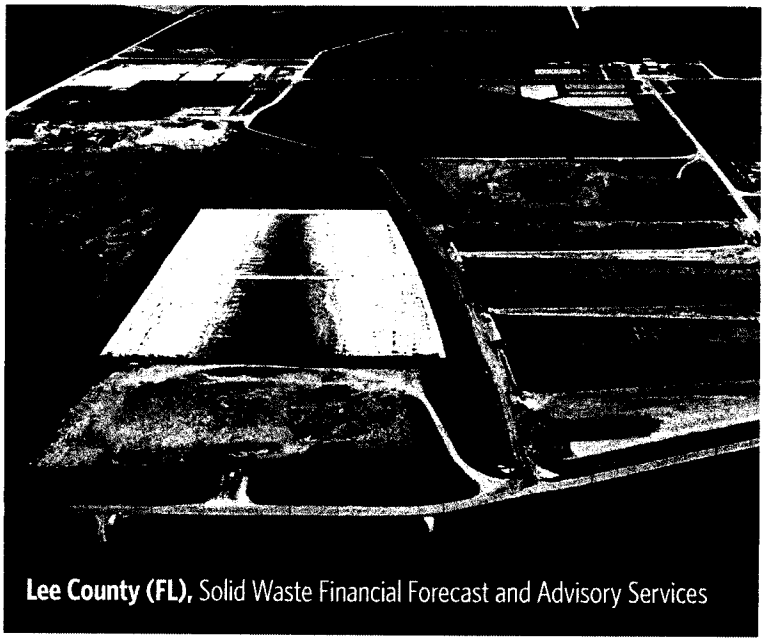
     - **Project Start and End Dates:** 2020 - Ongoing (expected completion June 2021)
     - **Staff Assigned:** Thierry Boveri
     - **Reference:** Kimberly Byer, PG, Solid Waste Division Director, 813.272.5680

3. Lee County (FL), Solid Waste Financial Forecast and Advisory Services. Members of the Project Team have been providing financial management services to the County's Solid Waste Enterprise Fund since 2015. The County's Solid Waste System disposes of over 800,000 tons of waste annually and includes a 1,836 ton per day and 54 MWh waste-to-energy facility (WtE), landfill, C&D Recycling Facility, Advanced Materials Recycling Facility, composting facility, community collection centers, and household hazardous waste facility. The County oversees franchised collection for six collection districts servicing over 253,000 residential units and commercial establishments. Raftelis has developed detailed financial and business models for the solid waste enterprise fund, evaluated rates for services, assisted in system financings and has provided other ongoing financial and business support services.

   Raftelis has assisted the County in development of a variety of financial planning and cost of service evaluations including:

   - **Capital Funding Plans:** Developed long-range financial planning model in support of solid waste master plan, including a life-cycle cost analysis with Net Present Value (NPV) comparison of multiple scenarios under consideration by management.
   - **Cost of Service Analysis:** Designed residential collection rates and variety of disposal fees by customer class.
   - **User Friendly Model:** Developed user-friendly model for staff use with ability to adjust variables and assumptions by year.
   - **Long-term Liabilities and Debt Obligations:** Raftelis has assisted the County in the issuance of debt, identified funding for pension and other post-employment benefits, and closure and post-closure long-term care.
   - **Revenue Enhancements:** Performed market based research and fee survey to recommend increase to biosolids composting fees. Analyzed and developed a recycling fee to recover the cost of processing recyclables.
   - **Fiscal Policy Development:** Drafted comprehensive financial policy including minimum cash reserves and capital reinvestment targets, among other financial objectives.
   - **Public Stakeholder Presentations:** Raftelis has supported County staff in presentations to the Board of County Commissioners and members.
     - **Project Start and End Dates:** 2020 - 2021
     - **Staff Assigned:** Thierry Boveri
     - **Reference:** Mary Kay Ditch, CPM, Public Utilities Operations Manager, 239.533.8932

4. City of Wilmington (NC), Solid Waste Financial Planning Services. Raftelis recently completed the initial of a two phase study. The initial phase consisted of development of a 10-year financial planning model to assist the City in evaluating potential operational changes to assess financial impacts and support decision making by management. Specifically, management was interested in examining potential changes to their charges for service and their fleet replacement cycle. As it relates to the fleet replacement cycle, Raftelis developed a dynamic model to examine how changes to the timing of capital investment changed the City's fleet acquisition costs, maintenance cost which varied based on the age of the vehicle, and residual value based on the age of the vehicle at the time of sale. The City is about to begin the second phase of the study which will include a more thorough operational evaluation, which will be performed as part of a project team with GT Environmental.
   - **Project Start and End Dates:** 2020 - 2021
   - **Staff Assigned:** Thierry Boveri
   - **Reference:** Dave Mayes, PE, Stormwater Utility Manager, 910.341.5880

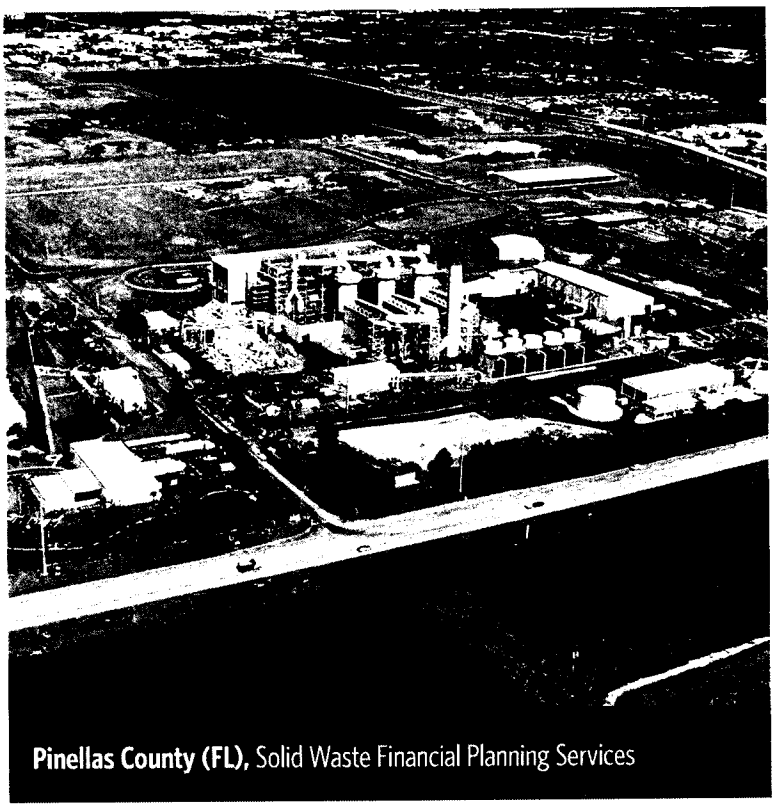


**Lee County (FL),** Solid Waste Financial Forecast and Advisory Services

5. **Pinellas County (FL), Solid Waste Financial Planning Services.** Members of the Project Team have been providing financial management services to the County's Solid Waste Enterprise Fund since 2019. The County's Solid Waste System disposes of over 1,000,000 tons of waste annually and includes a 3,000 ton per day and 75 MWh waste-to-energy facility (WtE), on-site water treatment facility, landfill, and composting facility. Raftelis has developed detailed financial and business models for the solid waste enterprise fund, evaluated rates for services, assisted in evaluating electric power purchase agreements, and has provided other ongoing financial and business support services.

   Raftelis prepares annual updates to the long-range financial planning model and rate recommendations with presentation to the County's Technical Management Committee (TMC) and the County's Board of County Commissioners.

   - **Project Start and End Dates:** 2020 - 2021
   - **Staff Assigned:** Thierry Boveri
   - **Reference:** Linda Larkins, Pinellas County Office of Management & Budget, 727.464.3901



**Pinellas County (FL),** Solid Waste Financial Planning Services

# 4 References

**RFP SECTION 9.3**

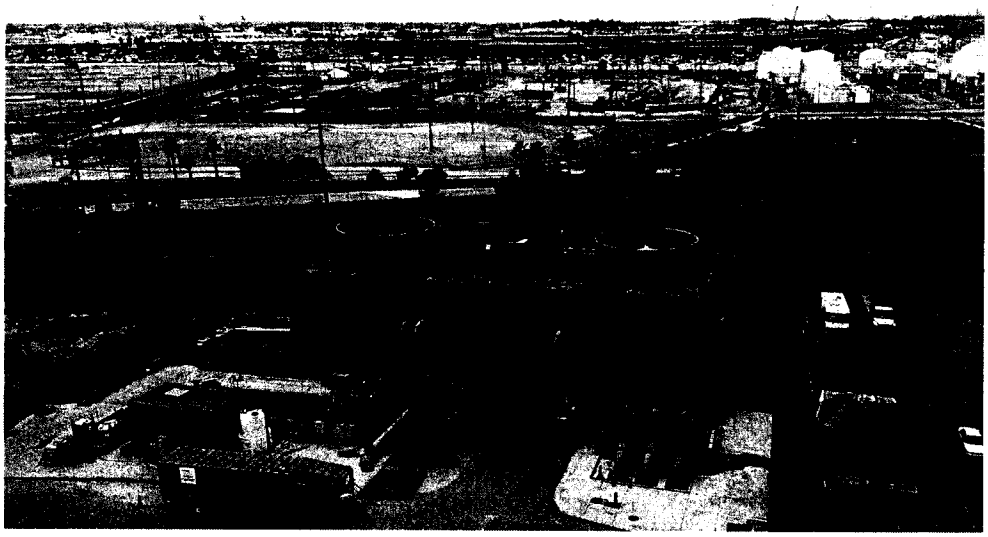
# References

On the following pages, we have included detailed project sheets with client references, which demonstrates HDR's experience providing similar services to clients.

| | SCOPE OF SERVICES | | | | | | |
|---|---|---|---|---|---|---|---|
| **PROJECTS** | PROCUREMENT ASSISTANCE | COMPLIANCE | RFP PREPARATION | CONTRACT NEGOTATION | PERMITTING | COST/ FINANCIAL ESTIMATING & ANALYSIS | PROPOSAL/ OPERATING OPTIONS EVALUATION |
| **City of Long Beach**, Operator Procurement and Condition Assessment Report for the Southeast Resource Recovery Facility | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **City of Surrey**, Organics to Biofuel Facility Public Private Partnership Procurement Assistance | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Lee County Solid Waste Division**, Independent Consultant for Resource Recovery Facility and Expansion Procurement | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Lancaster County Solid Waste Management Authority (LCSWMA)**, Procurement, Operations Oversight, Condition Assessments and Engineering Due Diligence | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Oregon Metro**, Food Scraps Anaerobic Digestion Procurement Assistance | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **H-POWER, City and County of Honolulu**, Waste-to-Energy Plant Refurbishment and Plant Expansion Procurement | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Region Municipalities of Durham and York**, Durham York Energy Centre Procurement and Operations Monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **City of San Jose**, Procurement and Development of Anaerobic Dry Fermentation Digestion Technology for Commercial Organics | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Northeast Maryland Waste Disposal Authority**, Montgomery County Waste-to-Energy Facility Operations Procurement and Monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Greater Vancouver Sewerage and Drainage District**, Metro Vancouver Waste-to-Energy Facility Procurement and Assessment Support | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Alexandria/Arlington Facility Monitoring Group**, Procurement and Independent Consulting Engineering Services for the Alexandria/Arlington Resource Recovery Facility | ✓ | ✓ | | ✓ | | ✓ | ✓ |

**PROJECT START AND END DATES**
Early 1990s - 2017

**STAFF ASSIGNED**
- Greg Gesell
- Bruce Howie
- Tim Raibley
- Andrea Ramirez



# Operator Procurement and Condition Assessment Report for the Southeast Resource Recovery Facility

**City of Long Beach**

*Long Beach, CA*

The City of Long Beach (City) and Los Angeles County Sanitation Districts contracted with Montenay Pacific Power Corporation (Montenay) to initially operate the Southeast Resource Recovery Facility (SERRF) plant through September of 1994. In anticipation of the expiration of the initial operating contract, the City retained HDR to prepare procurement documents and detailed operating specifications for bidding and selection of a new operating contractor.

HDR reviewed plant design documents, permits, and operating and maintenance records. HDR performed plant inspections to become familiar with existing operating characteristics and to compare existing operating performance with expected performance. HDR also conducted meetings with the City to review alternative terms and conditions for the proposed operating contract. HDR prepared a draft invitation for bid document (IFBD) for procuring plant operating services.

Prior to finalizing the IFBD, the City received an unsolicited proposal which included ongoing operating and maintenance services from Montenay. Simultaneous with the preparation of the draft IFBD, the City directed HDR to evaluate the Montenay proposal to determine whether it was comparable with bids that could be expected in a competitive procurement process. HDR's evaluation included comparison to six similar waste-to-energy facilities that were procured through a competitive process. The cost evaluation included analysis of varying compensation formulas and guarantees, in addition to actual operating costs.

HDR's evaluation concluded that the proposal was comparable to prices that would be available in a competitive bid process. HDR also provided the City with suggested basic contractual concepts regarding guarantees, revenue sharing and the compensation formula. HDR assisted the City during the subsequent contract negotiations. The City accepted Montenay's proposal, and the new contract and did not pursue a competitive bid process.

More recently, HDR was retained by the City to perform a physical assessment of the SERRF. The City was planning and evaluating its options for continued operation after the operating contract and the power purchase agreement would expire. It was expected that future terms would differ from the current terms.

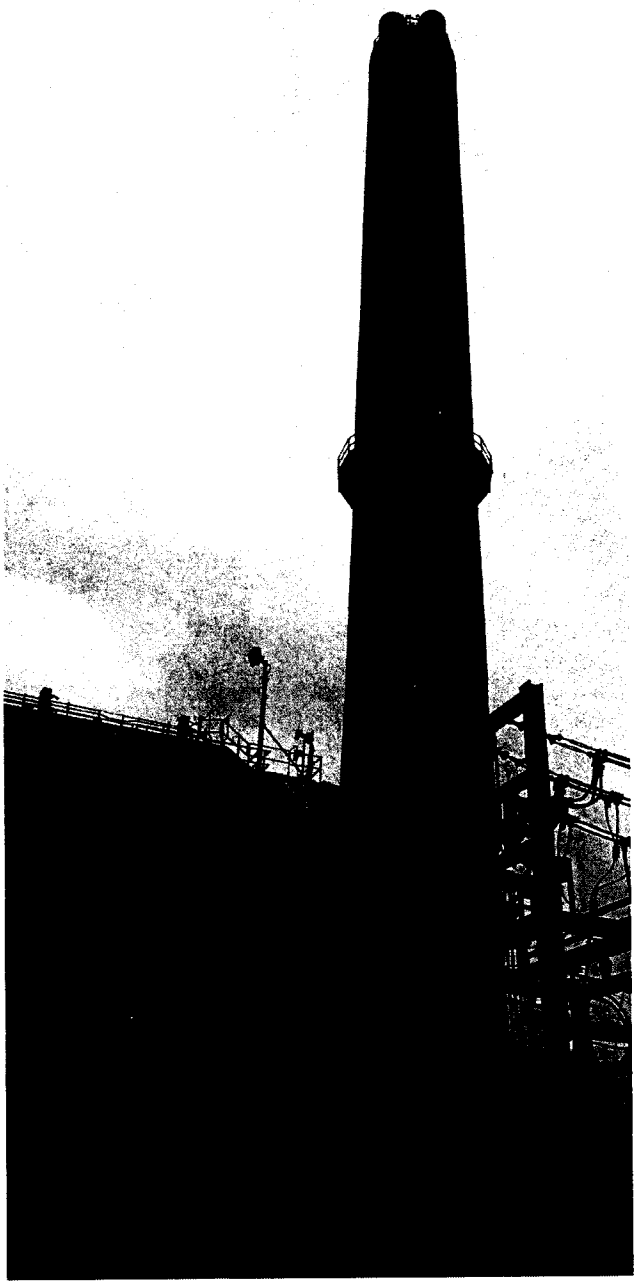
The objectives of this project were to (i) assess the general condition of the facility and major equipment; (ii) identify major capital expenditures that may be required or advisable at the SERRF to keep the facility operational considering three different scenarios; and (iii) complete

## *Operator Procurement and Condition Assessment Report for the Southeast Resource Recovery Facility (Continued)*

a conceptual analysis for implementation of an anaerobic digestion (AD) organics processing project. HDR brought its assessment team on site to review the operator's records and review the condition of the Steinmuller processing lines, power block, and associated equipment and structures. The assessment was completed during a boiler outage so that internal assessment of the boiler and air pollution control equipment condition could be considered. Using this information, along with information obtained from interviews of operating and maintenance staff and City personnel, the assessment of the current condition was completed.

HDR then estimated the remaining useful life in the existing equipment and structures and determined what measures may be necessary for continued operation of the facility. The three operating scenarios addressed included an assumption and analysis of facility refurbishment needs for short term operation through 2024. The second and third scenarios addressed the projects and facility overhauls that would be necessary for longer term operating scenarios through 2039. A timeline was developed showing when major projects were expected to be required. A high-level cost estimate projected budgetary costs for the projects. The estimates included prioritized items that would be required during the initial phase and items that could be deferred to a later time during the extended terms. The findings were summarized in the assessment report.

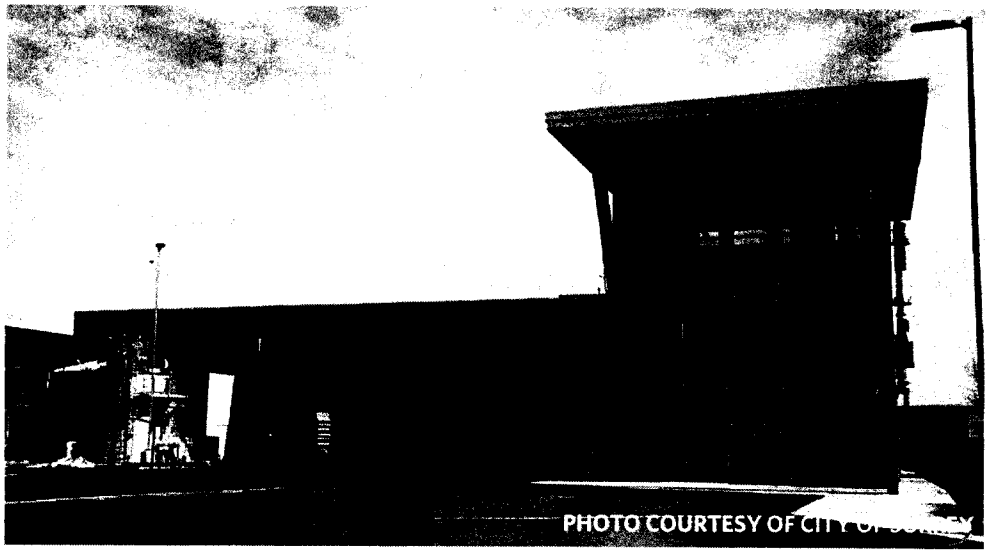
For the conceptual AD system, the site was evaluated for areas where the AD facility could be located on site. The site is tightly constrained, limiting the potential options and arrangements; however, a conceptual arrangement was developed with limited impact to the ongoing operation of SERRF. Sizing was based upon the anticipated quantity and quality of organics that would be available from the wasteshed. A high-level cost and performance projection were developed and provided as part of the assessment report.



**PROJECT START AND END DATES**
2012 - 2015

**STAFF ASSIGNED**
- Kirk Dunbar
- Tim Raibley
- Andrea Ramirez
- Pepi Ursillo

**REFERENCE**
Robert Costanzo
General Manager,
Corporate Services
604.590.7287




# Organics to Biofuel Facility Public Private Partnership Procurement Assistance

**City of Surrey**

*British Columbia, Canada*

HDR assisted the City of Surrey secure a private partner to design, build, operate, and transfer an organics to biofuel facility for its residential organic waste. The project processes approximately 110,000 metric tons of organic material per year consisting of up to 80,000 tonnes of curbside collected residential yard/kitchen wastes committed from the City of Surrey and the remainder from commercial wastes, which the proponent is required to secure privately. The biogas is cleaned and injected either into the gas grid, converted to electricity as renewable energy, or converted to compressed natural gas for use as a waste collection fleet fuel. HDR served as the technical advisor to the City for the procurement of the facility and performed technical evaluations of the vendor qualifications.

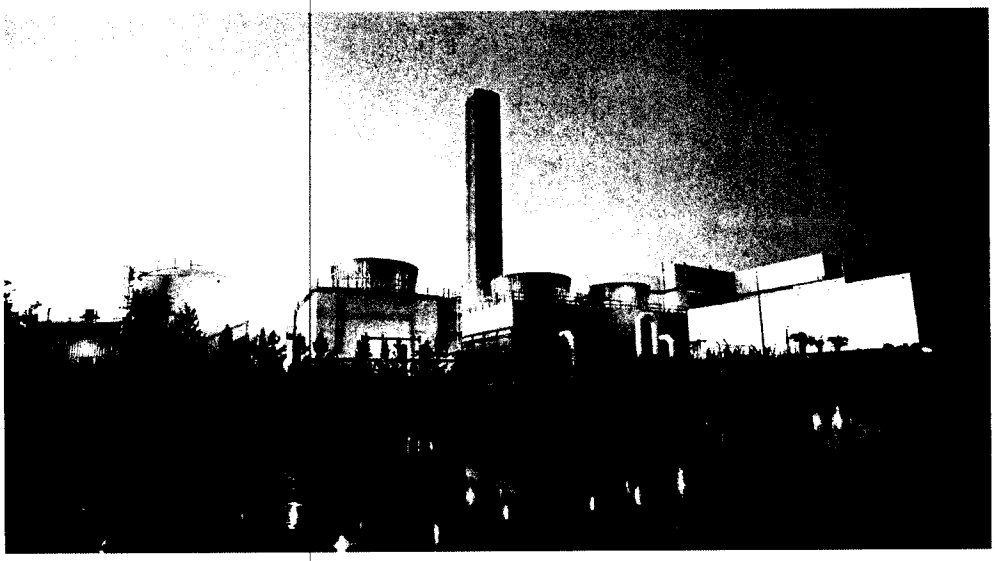
HDR led the technical evaluation team in analyzing and scoring proposals, short-listing qualified vendors, incorporating technical input from the short-listed vendors, and performed a technical analysis of the final proposal responses.

Prior to the procurement, HDR prepared an indicative design of the facility, which included the capital and operation cost of the facility. The indicative design also covered each feature of the facility, including waste receipt and unloading, pre-treatment to remove non-digestible materials, digestion function, post-digestion treatment, digestate management, effluent treatment, air collection and odor control system, biogas collection, treatment, and conversion to renewable natural gas for compression and use as a compressed natural gas. HDR also developed a facility conceptual sizing and biological calculation model, which was based on design experience in developing a broad array of project experience.

**PROJECT START AND END DATES**
2005 - Ongoing

**STAFF ASSIGNED**
- Kirk Dunbar
- Greg Gesell
- Bruce Howie

**REFERENCE**
Jason Fournier
Operations Manager
239.533.8920



# Independent Consultant for Resource Recovery Facility and Expansion Procurement

**Lee County Solid Waste Division**

*Lee County, FL*

In 2005, HDR was retained by Lee County, Florida to assist with the 636 ton-per-day (tpd) expansion of the County's 1,200 tpd mass-burn resource recovery facility. This expansion represents the first WtE facility permitted in the U.S. under EPA's New Source Performance Standards. HDR developed the engineer's feasibility report for the project's $123 million financing. HDR assisted the County in negotiating the Construction Project Management Agreement, and the New Service Agreement with the facility operator, Covanta.

For the Unit 3 Construction Project Management Agreement, HDR assisted in the negotiation of the new unit's "Basis of Design," the performance standards and acceptance testing protocols, Interim Operation (prior to Acceptance) terms, construction-period services, and start-up services. We provided construction administration and oversight for Unit 3, which went into service in November 2007.

HDR assisted the County with New Service Agreement negotiations including provisions for enforcement of repair and maintenance standards, tipping floor and refuse pit management, annual O&M fees, and guarantees. In February 2007, HDR was given the additional assignment by the County of performing Service Agreement Oversight Services. Tasks include development of monthly maintenance punchlists, inventory lists, regulatory compliance monitoring and permitting, conducting monthly operations and maintenance review meetings, and annual reports. We have provided these services since 2007 and continue to do so today.

As part of other related services provided to Lee County, HDR has conducted WtE training sessions for HDR staff. These trainings have included technical presentation on boiler operation and steam conversion to outlining the key provisions of the operating contract terms and performance guarantees. These trainings were offered to front line contract staff as well as support personnel that interfaced with the operation.

As in 2007, HDR has recently assisted the County in discussions with Covanta to develop and amendment to their operating contract. While still in development, HDR provides technical support and consults on potential future terms of the proposed amendment.

On an ongoing basis, HDR provides the County with the consulting and engineering services required to properly monitor and report on the operations and maintenance of the WtE facility. HDR performs a review of key plant operational metrics regarding performance and environmental compliance and discusses areas of concern at the Coordination Meetings with the County and

## *Independent Consultant for Resource Recovery Facility and Expansion Procurement (Continued)*

Covanta. HDR also provides monitoring of the WtE Facility during major maintenance activities, including boiler outages and turbine generator overhauls, and reviews equipment performance and overhaul reports provided by Covanta or its contractors. Internal assessments are conducted during boiler outages and conditions are documented in outage observation reports from chute to stack, depending on the outage scope.

HDR provides services related to the County's efforts for compliance with the necessary regulatory permit requirements associated with the WtE facility and advises the County of items requiring attention. HDR prepares (and submits, as appropriate) the annual Title V Fee documentation and the Title V Annual Operating Report, as well as the renewal application for the Title V Permit.

HDR maintains oversight of the Plant Inventory List provided by Covanta, using baseline equipment lists for the original and expanded facility. A Facility Spare Parts and Inventory List report is used to memorialize County owned property for use at the end of the contract term. HDR reviews red-line markups of the facility drawings and documents physical changes to the WtE Facility by Covanta. The condition of the mobile equipment is also assessed and documented on an annual basis.

At the end of 2015, the County's Power Purchase Agreement (PPA) with Seminole Electric expired without the ability for renewal. HDR assisted the County with extension of the interconnection agreement with Florida Power & Light (FPL) which allowed the County to continue to distribute power along FPL's grid and be compensated for electrical sales under the Public Utilities Regulatory Policies Act (PURPA). HDR further assisted the County with development of an RFP to solicit firms to assist and develop market strategies for electrical sales. This included executing standard offer agreements with Florida Investor-Owned Utilities (IOUs) including Duke, TECO, and Seminole Electric which extended the County'sability to utilize the benefits of PURPA. HDR conducted a training session for the RFP evaluation committee, provided technical analysis for RFP review and assisted the County with simultaneous negotiations to allow the selection committee to award a contract for these services.

Following Hurricane Irma in September 2017, HDR immediately mobilized to the Lee County Solid Waste Campus to document damage and other impacts of the storm. The observations made by HDR were included in a County Report to its insurance providers and the Federal Emergency Management Agency (FEMA). HDR also tracked and monitored repairs by Covanta, most notably structural damage to its ash house, cooling towers, and Facility roofs. HDR reviewed materials selections and repair methods that were made to "harden" the Facility and lessen the impact of future storms in Southwest Florida.

In 2019 HDR performed a Solid Waste System Condition Assessment and provided a report to address key facilities and infrastructure. Condition assessments were completed of the Buckingham Complex including the Scale Houses and Scales, Recycling Facility, Waste to Energy Facility, Fleet Maintenance Building, Transfer Station, Construction and Demolition Debris Facility, Tire and Horticultural Processing Pads, and overall Site and Roadway Conditions. Also assessed were the Lee/Hendry Landfill complex, the Hendry County Transfer Stations, the Topaz Household Hazardous Waste complex, and other existing or expanded system facilities and infrastructure. HDR provided professional engineering opinions regarding the condition of such facilities and the budgetary adequacy of County Repair and Replacement plans for the respective facilities or elements of the System. Where applicable, HDR made recommendations for expansions, additions or modifications to the System in order to meet near term service requirements, where near term considerations are on the order of three years.

Additional Features Include:

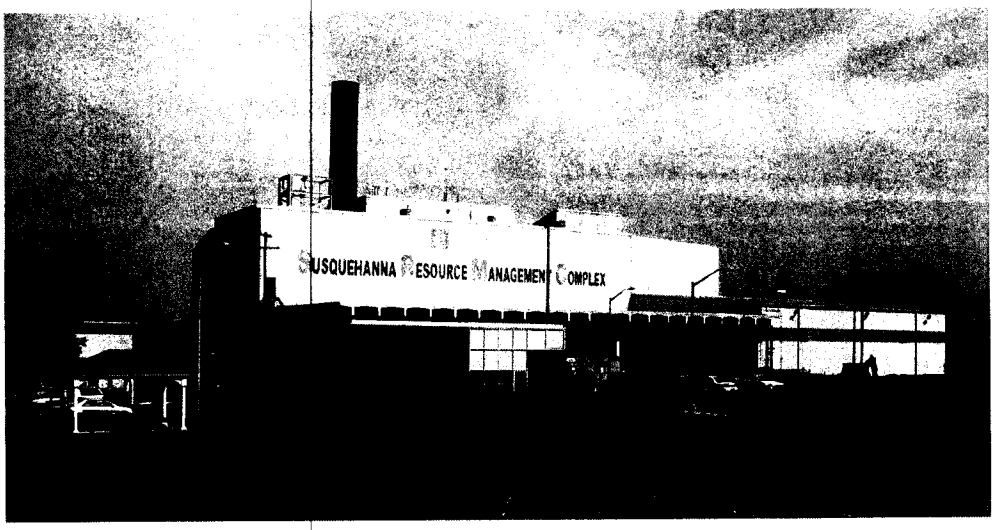
- Added capacity results in decreased dependence on landfill disposal and increased renewable electricity production.
- Compliance with lowest nitrogen oxide limits in the United States.
- First new WtE unit to be permitted and constructed this century, meeting both Federal and even more stringent State regulations.

**The Lee County Resource Recovery Facility Expansion Project has received more than 16 awards from industry organizations, industry publications, and other notable national and international engineering works.**

**PROJECT START AND END DATES**
2011 - Ongoing

**STAFF ASSIGNED**
- Dan Domato
- Kirk Dunbar
- Greg Gesell
- Bruce Howie

**REFERENCE**
Tom Adams
Chief Operating Officer
717.397.9968




# Procurement, Operations Oversight, Condition Assessments and Engineering Due Diligence

**Lancaster County Solid Waste Management Authority (LCSWMA)**

*Lancaster, PA*

HDR performed the condition assessment and engineering due diligence of the Harrisburg Resource Recovery Facility (now called the Susquehanna Resource Management Complex or "SMRC"). The review included an assessment of available operating, maintenance and environmental compliance data and inspections to evaluate general condition and identify operations and maintenance issues affecting the ongoing cost of operating the facility. HDR then prepared a report summarizing findings and recommendations for improving operations and maintenance practices.

In addition, HDR prepared estimates of probable capital and operating cost for up to a 20-year period. The estimate considered 1) reserves for major maintenance and equipment replacement, and 2) capital improvements for throughput capacity and electricity production.

As part of financing of the SRMC purchase, LCSWMA retained HDR as the independent engineer (IE) to perform a due diligence review of the principal aspects of the transaction relative to the operating condition, maintenance activities and practices, environmental compliance, and operations and maintenance costs, as well as the technical provisions in the principal project contracts and permits.

HDR reviewed LCSWMA's other assets, including their WtE facility, landfill, transfer station, landfill gas-to-energy system, and wind turbine project. HDR identified issues discovered during its review, proposed an approach to address those issues that were within its area of expertise, and worked with the LCSWMA to help resolve each issue.

Since SRMC was acquired, HDR has been supporting the Authority with the following items:

- Reviewing operating performance
- Reviewing the feasibility of exporting steam to local government and industries
- Assisting in reviewing and developing capital improvement projects at the SRMC
- Performing boiler inspections during scheduled outages to monitor Covanta's maintenance activities
- Working with the LCSWMA and Covanta to identify improvements to the design flaws with the air heaters
- Performed preliminary design, developed technical specifications and helped procure a cooling tower
- Performed a recent (in late 2020) detailed condition assessment and developed a list of long-term capital refurbishment and replacement projects

HDR also supported LCSWMA with technical negotiations support for the operating contract renewals for both the SRMC and the Lancaster WtE Facilities. HDR developed a list of future capital replacement and refurbishment projects for both facilities, and reviewed a list generated by the facility operator (Covanta) to identify projects that should be included versus items that were part of routine maintenance.

**PROJECT START AND END DATES**
2017 - 2018

**STAFF ASSIGNED**
- Kirk Dunbar
- Tim Raibley
- Andrea Ramirez

**REFERENCE**
Rob Smoot
Senior Engineer (Retired)
503.797.1689

# Food Scraps Anaerobic Digestion Procurement Assistance

**Oregon Metro**

*Portland, OR*

HDR assisted Oregon Metro in the development of the procurement of an anaerobic digestion system to process food scrap wastes from commercial waste collected in the greater Portland region. The relevance of this project is the procurement and related insights of digesting organics and related economic and lifecycle analysis, exploring various processing technologies to beneficially use food waste feedstock materials.

HDR assisted Metro to prepare and issue a RFP for companies to provide anaerobic digestion, beneficial use of biogas, and management of the system's liquid and solid residues.

In addition to preparing the RFP, HDR performed technical reviews and participated in evaluation committee meetings with Metro staff in evaluating the responses and short-listing the preferred responses. Metro did not identify favorable contract terms, so has opted to proceed with implementing the food waste receipt and pre-processing on their own.

HDR has continued to assist Metro in the role of design engineer. We evaluated and selected food waste pre-processing equipment and developed preliminary plans for the facility to be constructed at the Metro Central Station. The plans include contaminant removal and preparing the food waste into slurry that is pumped into tanks, which then fill pumper trucks that will deliver the slurry to the nearby wastewater treatment plant. Metro intends to proceed into design shortly.

**PROJECT START AND END DATES**
1988 - Ongoing

**STAFF ASSIGNED**
- Dan Domato
- Kirk Dunbar
- Greg Gesell
- Bruce Howie

**REFERENCE**
Manuel Lanuevo
Chief, Refuse Division
808.768.3406

# Waste-to-Energy Plant Refurbishment and Plant Expansion Procurement

**H-POWER, City and County of Honolulu**

*Kapolei, HI*

HDR has provided professional engineering services for the H-POWER Facility (Facility) since the late 1980s. Construction monitoring and acceptance demonstration was provided for the two train refuse derived fuel (RDF) facility. Over the next 20 years, various tasks involving engineering review and financial modeling were provided, culminating in an assessment of facility condition and development of conceptual expansion alternatives.

Since 2009, HDR has provided support services for several projects which have included:

- Refurbishment of two original energy-from-waste RDF units and associated waste processing equipment. The goal of the project was to improve the asset's useful life, preparing the units for another twenty years of operation. Since being refurbished, the units have continuously processed up to 600,000 tons per year of combustible MSW with an output of 50 MW of power.
- Construction and installation of an expansion mass burn project known as the Third Boiler, which increased the Facility's MSW throughput capacity by an additional 300,000 tons per year and added approximately 37 MW of power generation capability. The expansion unit is the first boiler designed for Very Low NOx control, reducing NOx emissions by nearly fifty percent below industry requirements.
- Installation of an additional shredder and auxiliary building for supplemental processing of bulky waste. The project improved the overall versatility of waste processing at the Facility with the objective of processing all combustible waste on the island.
- Installation of a storage bin and injection system for municipal sewage sludge. The project diverted sludge from being landfilled.
- Planning and design of a 140,000 sq. ft. building which was recently covered with solar panels (a.k.a. Solar Building). HDR assisted in preparation of technical specifications and "bridging documents" for a Design/Build solicitation to install solar panels on the building and other building roofs at the Facility. The electricity generated from the solar panels offset up to 3.5MW of the Facility's inplant load, increasing the amount of sellable power to the grid.

For the third unit, 900 TPD mass burn combustion facility expansion, HDR provided engineering support for development of the construction, service, and PPE agreements. Additional services included permitting and design review, as well as ongoing construction monitoring, and support for start-up and performance testing. A review of the boiler QA/QC program was also provided.

HDR continues to provide ongoing technical support for the H-POWER Facility operations through an annual support services contract with the City and County of Honolulu. The project team consists primarily of HDR staff from Honolulu, Omaha, and New York.

**PROJECT START AND END DATES**
2008 - Ongoing

**STAFF ASSIGNED**
- Dan Domato
- Kirk Dunbar
- Greg Gesell
- Bruce Howie

**REFERENCE**
Gioseph Anello
Waste Management Director
905.668.7711

# Durham York Energy Centre Procurement and Operations Monitoring

**Region Municipalities of Durham and York**

*Durham and York, Ontario, Canada*

The Regions of Durham and York, Ontario (the "Regions"), located north and east of Toronto, have shipped the portion of their residentially generated solid waste remaining after significant source reduction, composting and recycling to Michigan landfills for years. Facing a forced border closure for waste shipments to Michigan, the Regions began exploring alternatives. In 2004, the Durham Regional Council directed staff to proceed with an Environmental Assessment (EA) to establish the first Energy-from-Waste (EFW) Facility to be built in Ontario in 20 years. The reason for this decision was to address the increasing difficulties in securing regional long term landfill capacity.

In 2008, the Regions retained HDR to lead and provide technical support with developing a procurement process, including preparing the Request for Proposal, assisting in the evaluation of the proposals and selection of the preferred vendor and negotiations. HDR developed the technical specifications and procurement related documents for the procurement of a design-build-operate and maintain contract to construct a 140,000 metric-tonnes per year (500 tpd U.S.) mass burn EFW facility. These documents included a Basis of Design Conceptual Plan, detailed technical requirements, performance guarantees, proposal forms, acceptance testing protocols and evaluation/selection criteria. HDR also provided technical support with the preferred vendor negotiations (Covanta Energy) and the early works portion of the work, including public meetings, review of permitting documents, and meetings with the regulatory agencies.

HDR supported the Regions with technical support and turbine-generator nameplate testing during the PPA negotiations with the regional utility, Hydro One. HDR also acted as the Owner's Engineer on behalf of the Regions during the design review and provided fulltime resident construction services during the plant build, which also included startup/commissioning and acceptance testing oversight. The facility began commercial operation in 2015.

Since 2015 and the start of commercial operations, HDR has provided operations and maintenance monitoring at the DYEC on behalf of the Regions, which includes but is not limited to the following activities:

- Facility operations monitoring, including monthly site visits
- Participation in monthly operations meetings between the Regions and Covanta
- Preparation of and updating the operations punchlist, including walking down the list with Covanta and the Regions
- Scheduled and unscheduled outage inspections
- On-site monitoring of semi-annual stack tests (two per year) and ash testing (quarterly)
- Review of Annual Reconciliation, including calculating annual performance guarantees and assessing of liquidated damages
- Review of annual maintenance and lifecycle/ extension projects
- Miscellaneous technical and negotiations support for the Regions.

**PROJECT START AND END DATES**
2009 - Ongoing

**STAFF ASSIGNED**
- Greg Gesell
- Pepi Ursillo
- Tim Raibley
- Andrea Ramirez

**REFERENCE**
Michele Young
Project Manager
408.910.6210


PHOTO COURTESY OF ZWED

# Procurement and Development of Anaerobic Dry Fermentation Digestion Technology for Commercial Organics

**City of San Jose**

*San Jose, CA*

HDR assisted the City of San Jose from the initial visioning and strategy development through the implementation of the strategy by the procurement of vendors to provide enhanced processing facilities. The work culminated in the analysis of various organics processing technologies as a part of their commercial waste stream re-design effort. The relevance is the exploration of alternatives in processing community organics, and preparation of lifecycle alternatives analysis in support of making key decisions.

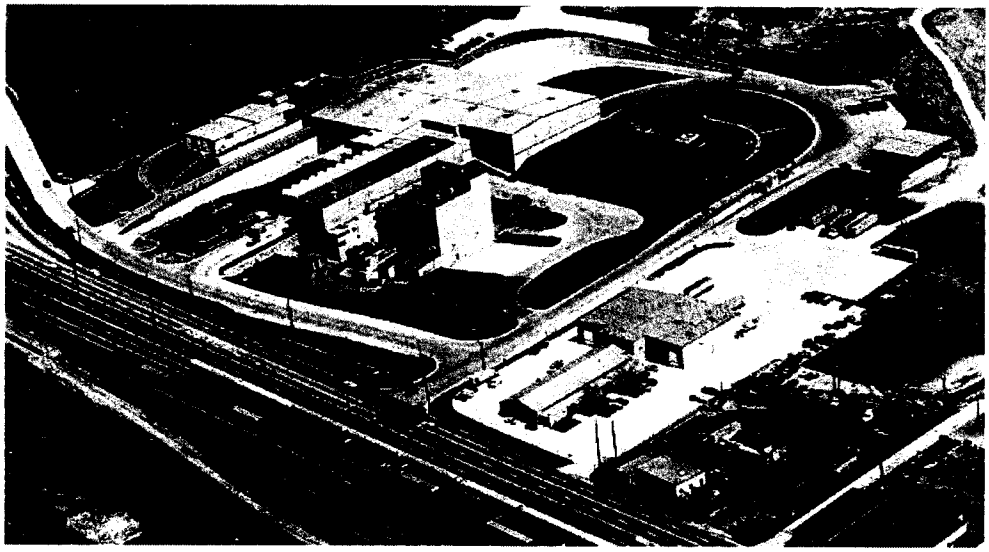
In order to reach a City green vision goal, HDR assisted the City in seeking an exclusive franchise provider to construct and operate an aggressive organics management system. HDR assisted the City in crafting an RFP and then reviewing responses to private sector proposals to construct and operate various types of Organics Processing facilities under the exclusive franchise incentive program. The process concluded selecting a dry fermentation anaerobic digestion technology which was constructed by Zero Waste Energy Development Company (ZWED) of San Jose. The facility commenced startup operations in December 2013 and is designed at full capacity of 90,000 tons per year, the largest such facility in the US.

Continuing our assistance, HDR was retained to perform an evaluation of the facility to determine if the facility is functioning in accordance with the franchise requirements due to the higher than expected residue from organic processing in the commercial system. Our analysis included an evaluation of the Newby Island Resource Recovery Park where commercial wet wastes are received and preprocessed prior to being delivered to the ZWED facility for digestion. Our findings were used to improve the overall commercial wet waste system from collection, preprocessing, digestion, and composting.

**PROJECT START AND END DATES**
1993 - Ongoing

**STAFF ASSIGNED**
- Dan Domato
- Kirk Dunbar
- Greg Gesell
- Bruce Howie

**REFERENCE**
Chris Skaggs
Executive Director
401.333.2730



# Montgomery County Waste-to-Energy Facility Operations Procurement and Monitoring

**Northeast Maryland Waste Disposal Authority**

*Baltimore, MD*

HDR has worked with the Northeast Maryland Waste Disposal Authority (NMWDA) since 1983 helping to implement and upgrade the three WtE facilities in the greater Baltimore/Metro-D.C. region, including the Montgomery County WtE Facility. Most recently, HDR was hired by the Authority and County to perform enhanced routine operations performance monitoring of the Montgomery County Resource Recovery Facility (MCRRF). HDR has been performing routine site visits as part of an enhanced operations monitoring scope and has assisted the NMWDA/County since September 2016 with reviewing Covanta's Recovery Plan and related maintenance activities at the MCRRF, including performing observations of the condition and maintenance during the boiler outages.

HDR will continue to perform site visits twice a month, as well as additional tasks for various levels of oversight including:

- Comprehensive routine inspections during the facility's major boiler maintenance outages
- Preparation of detailed reports that summarize HDR's observations and major findings during the on-site inspections of the facility
- Review of Covanta's monthly operation report summaries to the County
- Review of Covanta's Recovery Plan and the associated costs to improve operations and equipment reliability
- Participation in monthly operations meetings between the Authority, County and Covanta
- Preparing a Root Cause Analysis of the tipping floor fire in 2016 and providing recommendations to improve operating standards
- Provided technical support to the Authority/County during the end of term service agreement negotiations and extension with Covanta
- Prepared and updated a list of future capital and refurbishment projects for the facility for the next 5 to 10 years, including identifying projects that would be considered Covanta's responsibility and those that should be shared with the Authority/County.

HDR also supported the County with the preparation and presentation of the County-wide Solid Waste Master Plan.

**PROJECT START AND END DATES**
2012 - Ongoing

**STAFF ASSIGNED**
- Dan Domato
- Kirk Dunbar
- Greg Gesell
- Bruce Howie
- Tim Raibley

**REFERENCE**
Chris Allan, P. Eng.
Director, Solid Waste Operations
604.432.6468

# Metro Vancouver Waste-to-Energy Facility Procurement and Assessment Support

**Greater Vancouver Sewerage and Drainage District**

*Burnaby, British Columbia*

HDR was retained by the Greater Vancouver Sewerage and Drainage District (Corporation) in 2015 to perform a physical assessment and engineering due diligence of the Metro Vancouver Waste to Energy Facility (WtEF) located in Burnaby, British Columbia. The objectives of the project were to: (i) assess the general condition of the facility and major equipment, (ii) review and evaluate the historical performance of the facility, (iii) identify major capital expenditures and potential operating and maintenance modifications/improvements that may be required or advisable at the WtEF during the next 20 years of operations, and (iv) evaluate the current service level being offered to the haulers delivering waste to the WtEF. The potential costs associated with these modifications and/or improvements were developed. In addition, the Consultant Team identified potential facility enhancements aimed at increasing revenues and/or reducing operating costs.

In 2020, HDR was retained again to perform an update of our 2015 assessment of the physical and operating condition of the WtEF, which included an update of the capital refurbishment and replacement list. HDR currently supports the Corporation with reviewing capital project proposals, designs and capital costs presented by the WtEF operator (Covanta), including the installation of acid gas reduction system upgrades, a non-ferrous metal recovery system, economizer tube replacements, and the replacement of the waste handling crane.

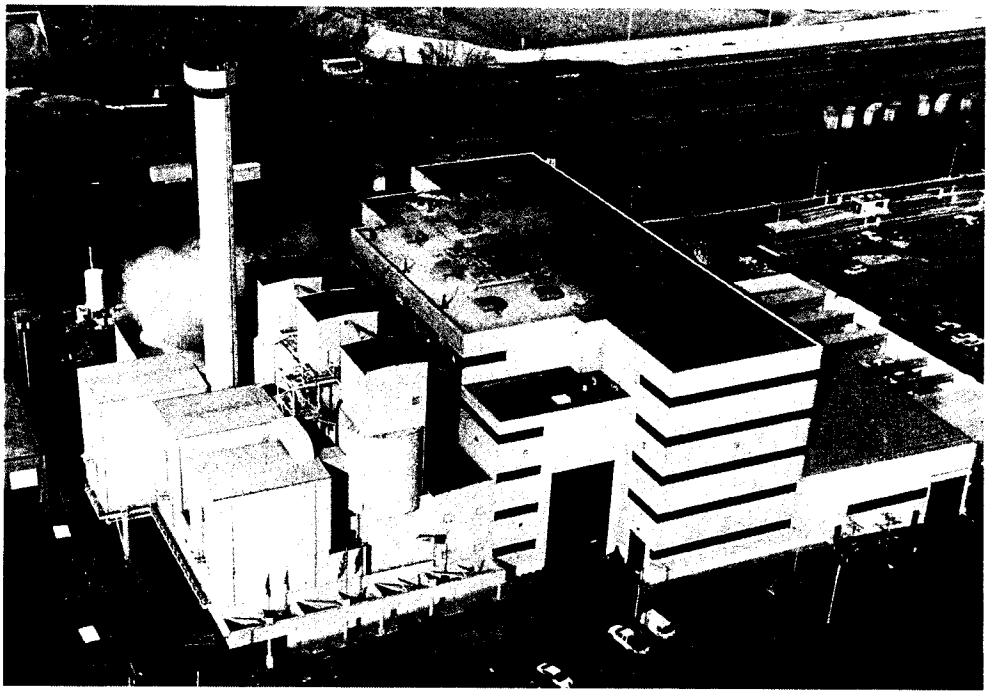
HDR helped develop and monitor a detailed startup/shutdown/malfunction testing program at the WtEF. HDR worked with the client, operator (Covanta), and emissions testing firm to develop a testing and monitoring plan. HDR and our subconsultants took the data obtained during the startup/shutdown emissions tests to prepare an air quality and human health risk assessment. HDR also supported the client with pilot testing and oversight of a biosolids coincineration program at the WtEF, which included reviewing and improving the testing program developed by the operator (Covanta) and monitoring the testing and air emission results on behalf of the client.

Finally, HDR has supported Metro Vancouver with assessing their options for increasing the capacity of the existing EfW site, which also included evaluating an alternative processing option to develop a pilot-scale solid recovered fuel (SRF) that could be accepted and proceed by regional cement kilns.

**PROJECT START AND END DATES**
1998 - 2013

**STAFF ASSIGNED**
- Bruce Howie
- Dan Domato
- Kirk Dunbar

**REFERENCE**
Jeffrey Duval
Deputy Director - Operations
703.746.4103



# Procurement and Independent Consulting Engineering Services for the Alexandria/Arlington Resource Recovery Facility

**Alexandria/Arlington Facility Monitoring Group**

*Alexandria, VA*

WtE technology provided the densely populated Arlington County and the City of Alexandria in the Washington, D.C., metropolitan area with a long-term solution to a growing solid waste problem. The 975 tpd Alexandria/Arlington Resource Recovery Facility opened in 1988, providing a sustainable and environmentally friendly solution that eliminated the need for an estimated 40,000 tractor trailer trips to carry solid waste to landfills up and down the heavily congested lanes of Interstate 95.

The Alexandria/Arlington WtE facility Trustees hired HDR to provide general engineering services during the retrofit of the air quality control system in response to the more stringent requirements of the Clean Air Act Amendments of 2000. HDR provided essential data used in the contract negotiations for the retrofit, as well as in the drafting and implementation of the construction and service agreement amendments, finding ways to reduce costs to users. HDR also performed construction monitoring and design review.

# 5 Business License

**RFP SECTION 9.4**

# Business License

A copy of HDR's City of Long Beach business license is below.

**CITY OF LONG BEACH, CALIFORNIA**
BUSINESS LICENSE
**OWNERSHIP NON-TRANSFERABLE**
LICENSE EXPIRES: 07/01/2021

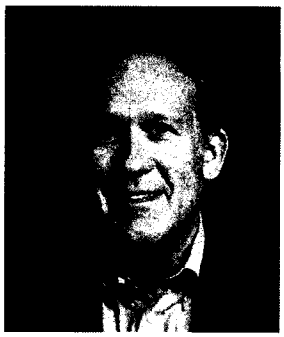
PREPARED: 07/16/2020
P343

THE LICENSEE NAMED BELOW IS AUTHORIZED TO OPERATE THE FOLLOWING:

| | | | |
|---|---|---|---|
| **ACCOUNT NUMBER:** | **BU20826860** | **BUSINESS TYPE:** | **ENGINEERING** |
| **OWNER:** | **H D R ENGINEERING INC** | | |
| **LOCATED AT:** | **100 OCEANGATE 1120** | | |
| **DBA NAME:** | **H D R ENGINEERING INC** | | |

AUTHORIZED BY: JOHN GROSS
DIRECTOR OF FINANCIAL MANAGEMENT

# **A-1** Resumes



# John Carlton, PE, BCEE
## PROJECT MANAGER

John has more than 30 years of experience in all aspects of solid waste management as a consultant and in executive positions for public-sector authorities. His strength lies in strategic planning where he has led the solid waste management planning efforts of both small rural communities and large urban cities and counties. He currently serves as HDR's national solid waste planning and consulting lead and has provided leadership within the Solid Waste Association of North America's Planning and Management Division.

John has over 12 years of experience in positions as Executive Director of the Pollution Control Financing Authority of Warren County in Oxford, NJ; and as Director, Division of Solid Waste and Recycling Services, of the Hunterdon County Utilities Authority in Flemington, NJ. During his tenure, John planned and managed solid waste systems including a waste-to-energy facility; transfer station; landfill; and recycling, household hazardous waste and electronics collection, educational, and enforcement programs.

In addition to strategic planning, John has significant experience with integrated solid waste management systems, including environmental permitting, landfill and transfer station designs, facility operator and waste collection procurements, contract negotiations, operational reviews, feasibility studies, collection franchising, financial reviews and rate setting, market assessments, and due diligence reviews. John has a strong working knowledge of solid waste management regulations and practices, and has significant experience working with stakeholders, legislators, and regulators.

**EDUCATION**
BS, Civil and Environmental Engineering, Duke University, 1989

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer: FL, #84409; MD, #47291; NJ, #24GE03976100; VA, #0402055578

American Academy of Environmental Engineers, #07-20028

**PROFESSIONAL MEMBERSHIPS**
Solid Waste Association of North America (SWANA), Planning and Management Division, Vice Director, 2020 - Present

American Academy of Environmental Engineers, Solid Waste Committee, 2011 - Present

**INDUSTRY TENURE**
31 years

## RELEVANT EXPERIENCE

**Pollution Control Financing Authority of Warren County,** *Warren County, NJ*
As Executive Director, John provided executive leadership of Warren County's integrated solid waste management system which included a waste-to-energy facility, landfill, recycling program, household hazardous waste collection program, and education and enforcement program. He led the strategic planning for the County's solid waste management plan. He successfully negotiated numerous agreements including labor union, host community, waste disposal, waste-to-energy, and landfill gas-to-energy contracts.

**Jordan Energy Sector Capacity Building Activity Waste-to-Energy Tender Preparation,** *Amman, Jordan*
As Project Manager, John assisted in developing a waste-to-energy tender document for a possible facility in Amman, the capital of Jordan. The project involved developing the overall concept for a "result-oriented" tender approach, developing the tender document and evaluation process, and recommending an evaluation committee.

**Madera County, Solid Waste Management Consulting Services,** *Madera County, CA*
As Project Manager, John provides a number of consulting services to Madera County, including franchise collection and landfill operations procurements, operations reviews, financial modeling and rate recommendations, development of an organics management plan, negotiated amendments to landfill and transfer station operating contracts and franchise collection agreements. He is considered an extension of staff and manages monthly operations meetings, quarterly financial reviews, and an annual solid waste workshop with the Board of Supervisors. John is currently working with the County to develop policies, ordinances, franchise agreement amendments, rate structures, and programs to help the County comply with SB 1383.

## *John Carlton, PE, BCEE (Continued)*

**Mendocino County, Solid Waste Management Consulting Services,** *Mendocino County, CA*
As Project Manager, John is acting as the County's Solid Waste Director through this consulting assignment. He is currently procuring a new franchise collection contractor, providing facility and franchise rate reviews, franchise contract management including amendments to address new California regulations (SB 1383), solid waste records management, and other services as needed.

**Sonoma County, Solid Waste Management Consulting Services,** *Sonoma County, CA*
As Project Manager, John is providing Sonoma County with various consulting services including helping the County clarify financial terms of the County landfill operations contract, evaluating solid waste collection rate structures, and other related solid waste matters.

**Waste Reduction and Recycling Project,** *Cleveland, OH*
This project involved the procurement of a mixed waste processing system that will recover recyclables and create an engineered fuel to power a district heating system. The scope included the development of a Request for Proposals that defines the proposed system including waste stream quantities and characteristics; waste collection system; existing and proposed waste reduction and recycling programs; sites available for a proposed system; acceptable technologies and approaches; performance standards; and, ownership options. The project also included assisting the City during the procurement process, the evaluation of proposals, and contract negotiations.

**City of Santa Monica, Operational Analysis and Rate Study,** *Santa Monica, CA*
As Project Manager, John worked with the City and R3 in identifying the City's current cost of service, developing specific budget allocation factors and structures for the rate model; and assisting the City in transitioning from line-item to program-based budgeting.

**Detroit Shoreway Community Development Organization, Compost Facility Feasibility Study,** *Cleveland, OH*
John was the Project Manager for a compost facility feasibility study and operations plan. The project included identifying commercial organic waste sources within 10 miles of the community, evaluating collection systems for organic waste, evaluating markets for compost materials in Northeast Ohio, and developing a conceptual facility plan with capital and operations costs.

**City of Alexandria Resource Recovery Division, Strategic Plan Review,** *Alexandria, VA*
As Technical Reviewer, John provided quality control reviews of solid waste strategic plan elements. The reviews included current operations, benchmarking, environmental impacts, economic benefits, and alternate disposal methods.

**Lee County, Long-Term Integrated Waste Management Plan,** *Lee County, FL*
As Project Manager, John helped lead the development of the Lee County Long-Term Integrated Waste Management Plan. This comprehensive plan sought to provide guidance for the management of the County's solid waste over the next 20 years. Project elements included a waste characterization study, an evaluation of the County's current system, a review of regional systems and national best practices, an evaluation of available technologies, a needs forecast, and an analysis of options.

**Connecticut Resources Recovery Authority, Transition Plan,** *Hartford, CT*
Responding to state legislation, John assisted the Connecticut Resources Recovery Authority develop a forward-looking Transition Plan identifying options for financial and operational sustainability.

# Gregory Gesell, PE
## WASTE-TO-ENERGY LEAD

Greg is a mechanical engineer experienced in design, performance, and acceptance testing of waste-to-energy (WtE) and conversion technology plants, material handling systems (all types of MRFs, ash, fuels and RDF), transfer stations, air pollution control systems, metals and ash recovery, and other mechanical engineering projects. His experience includes conceptual and detailed design, preparation of general and site arrangements, flow diagrams, P&IDs, cost estimating, construction and start-up monitoring and performance testing on more than 75 WtE projects around the world. During his career he has served as an industry representative with trade associations and USEPA as well as other Federal research committees for WtE related facilities including specialized emissions testing, ash characterization, operating requirements, training programs, technology evaluation, and emission source analysis. He worked for a WtE owner/operator (American Ref-Fuel) for 16 years. A short sampling of project experience is provided below, and a few examples of presentations are in the margin.

**EDUCATION**
MBA, University of Nebraska Omaha, 1991

BS, Mechanical Engineering, University of Nebraska Lincoln, 1983

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer: NE, #E-7455

**PROFESSIONAL MEMBERSHIPS**
American Society of Mechanical Engineers, Member PTC-34 Committee, 1984 - Present

Solid Waste Association of North America, WCER TD Advisory Board Delegate, 2019 - Present

**RELATED PUBLICATIONS/ PRESENTATIONS**
H-POWER Waste-to-Energy Expansion and Refurbishment

Pretreatment Technologies for Anaerobic Digestion for Food Waste, Co-Collected Organics, Animal Manure and Seasonal Waste

Single-Stream MRF Design Considerations MRF Planning – In Front of the Line

## RELEVANT EXPERIENCE

**City of Long Beach, Southeast Resource Recovery Facility WtE,** *Long Beach, CA*
Greg's role was project manager. The City of Long Beach needed to confirm the condition of the Southeast Resource Recovery Facility (SERRF) processing lines and facility to help with end of term decisions. HDR reviewed relevant documents, interviewed key personnel, and completed an assessment of the condition of the facility including internal review of the boiler, grate, air pollution control equipment, and ductwork. Based on the data and discussions, the condition of the equipment was established, an assessment of what components likely would need to be replaced or refurbished, associated costs, and the anticipated timeframe. This information was used to complete three work scopes associated with potential future operating scenarios. In addition, a conceptual plan and associated cost was developed for a potential anaerobic digestion (AD) system that may be required under some of the operating scenarios.

**Lee County, WtE Facility and MRF Facility**
*Lee County, FL*
As Mechanical Engineer, Greg was the lead engineer for acceptance testing for a 660 tpd facility expansion. He negotiated testing provisions, monitored testing, and completed test review and approval. Lee County also had an existing 25 tph dual stream MRF that required conversion to allow it to receive single stream material. Proper separation of containers from fibers and processing of glass was critical to the conversion of the facility. Greg provided engineering services to assist with development of a technical specification, MRF vendor proposal review and selection, design review and support for building modifications, and review of shop drawings and construction monitoring. The project was completed under a tight time schedule culminating in a comprehensive acceptance test.

**Honolulu Department of Environmental Services, Review and Assessment of H-POWER WtE Plant and Expansion,**
*Honolulu, HI*
As Project Manager, Greg completed an assessment of the SWANA-award winning H-POWER RDF-fired WtE Facility for an end of term review. Various tasks included permit and design review, condition assessment, cost development, re-development of ash and metals recovery systems, performance assessment, and refurbishment projects to prepare for a long term contract extension. Projects

## *Gregory Gesell, PE (Continued)*

MRF Tech is Rising, Bringing Financial Challenges

Issues to Assist in Evaluating Recycling Options, ISOSWA

Waste-to-Energy's Role in Climate Change

H-POWER Facility Expansion

H-POWER Facility Optimization

Retrofitting a Spray Dryer ESP-Equipped Facility

Experience with a Carbon Injection System at a Spray Dryer/Electrostatic Precipitator Equipped Waste-to-Energy Facility

Sorting It Out, The Latest Innovations and Developments in Sorting Equipment for MRFs

**INDUSTRY TENURE**
37 years

have included replacement of boiler furnace waterwalls and superheaters, modification of RDF processing lines, ash handling, metals recovery, control systems, dump condenser addition, GHG calculations, and other areas. Greg wrote the performance specifications for addition of solar panels to offset 3.5 MW of operating power and currently is completing other engineering assessment tasks. Project management for addition of an innovative 900-tpd specially equipped mass burn combustion unit expansion to the existing RDF facility enables the City and County of Honolulu to nearly eliminate landfilling of all combustible wastes and prepare for ash recovery along with metals on the island and assist with the goal of total closure of the inland's only MSW landfill. Startup and performance testing monitoring was completed for the unit as well as a first of its kind in the US sludge combustion system and a bulky waste processing facility.

**Region of Durham and York, Energy from Facility,** *Ontario, Canada*
As Project Engineer, Greg provided engineering assistance with technology RFP development, environmental project hearings, and reviewed design and construction progress. During startup and testing, Greg monitored performance testing, metal recovery, and environmental testing including continuous dioxin sampling systems, continuous emission monitoring testing, and compliance testing activities. He performed bottom ash and fly ash quality and quantity test monitoring and sampling including quality analysis of fly ash, cement and pozzolan blends.

**Greater Vancouver Sewerage and Drainage District, Metro Vancouver Waste-to-Energy Facility** *Burnaby, British Columbia*
As Lead Engineer, Greg has assisted with several projects associated with solid waste management for the District. Most recently, a testing plan was developed and implemented to demonstrate emissions during startup and shutdown periods. Testing during these intervals are particularly difficult due to the intended transition of the operating unit. The testing plan needed to address these issues and was successfully completed. In two separate assignments Greg oversaw and analyzed several rounds of biosolids pilot testing at the facility. Demonstration of performance included physical ability of the facility to manage the biosolids, stack emissions performance, as well as ash quality impacts on the facility.

**City of Los Angeles, Solid Waste Integrated Resources Plan (SWIRP),** *Los Angeles, CA*
As Mechanical Engineer, Greg completed analysis of selected solid waste processing technologies that were considered for waste management for the City of Los Angeles. Technologies considered included various forms of recycling, composting, combustion (WtE), gasification, mechanical biological treatment (MBT), anaerobic digestion (AD), and plasma arc gasification. Innovative integration of MRF concepts with combustion and integration of AD and of other forms of energy recovery, state-of-the-art ash recovery and air pollution control systems were reviewed. A review of eight reference facilities around the world was completed to see firsthand demonstration and commercial operation of evaluated equipment for materials and energy recovery, material handling, and waste reduction. Comparison was made based upon economic analysis, potential waste diversion, and environmental impact for proven technologies. Support was provided for contract negotiations with selected vendors.

# Bruce Howie, PE
## WASTE-TO-ENERGY SUPPORT

Bruce is a Vice President and professional associate at HDR that serves as the Waste-to-Energy Global Practice Leader. Bruce has over 20 years of experience with the procurement, process design, operations and testing of waste-to-energy and other thermal waste conversion technology facilities. In addition, Bruce has experience with the development of technical specifications, flue gas treatment system design, developing test plans and protocols, and startups of WtE facilities. The following projects represent Bruce's experience.

**EDUCATION**
MS, Chemical Engineering, The Pennsylvania State University, 1999

BS, Chemical Engineering (Minor in Environmental Engineering), Manhattan College, 1997

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer - Mechanical: NY, #081013

**PROFESSIONAL MEMBERSHIPS**
Solid Waste Association of North America (SWANA), NYS Chapter President, WtE Technical Division Director

American Society of Mechanical Engineers (ASME)

**INDUSTRY TENURE**
24 years

## RELEVANT EXPERIENCE

**City of Long Beach, Southeast Resource Recovery Facility Condition Assessment,** *Long Beach, CA*
Bruce prepared the scope of work and provided technical and quality control support to the HDR team tasked with assessing the operating condition and performance of the facility. This task also included identifying operating deficiencies and identifying maintenance and capital replacement needs and estimating the associated probable costs.

**Susquehanna Resource Management Complex, Facility Technical Upgrades and Operations Monitoring Services,** *Harrisburg, PA*
Bruce led HDR's efforts on behalf of the Lancaster County Solid Waste Management Authority to identify operating deficiencies and identify maintenance and capital replacements needs at this 800 ton-per-day waste-to-energy facility and the associated probable costs. Bruce currently supports the LCSWMA with reviewing the implementation of these projects at the facility.

**H-POWER, Expansion and Existing Facility Retrofit,** *Honolulu, HI*
Bruce was a senior technical advisor involved in the refurbishment of the existing 1,800-ton per day (tpd) refuse derived fuel (RDF) fired units, including a complete replacement of the boiler tubes and upgrading the air pollution control equipment. Bruce also worked on the development of the startup and acceptance test protocol, observing the actual testing and reviewing the results of the test for a 1,000,000-tpa expansion of the existing H-POWER Waste-to-Energy Facility.

**Lee County, Waste-to-Energy Operations Monitoring and Facility Expansion,** *Ft. Myers, FL*
Bruce has assisted the County with reviewing operating performance and performing inspection of maintenance activities during scheduled boiler outages. He was also a senior mechanical engineer involved in developing the startup and acceptance test protocol, observing the actual testing and reviewing the results of the test for a 550-tonne per day expansion of the existing Lee County Waste-to-Energy Facility.

**Montgomery County, Resource Recovery Facility Operations Monitoring,** *MD*
Bruce coordinated HDR's efforts with reviewing the operations and maintenance practices, including the implementation of capital replacement/refurbishment projects, of this 1,800 tpd WtE facility for conformance with the Service Agreement and accepted industry standards.
Bruce was also involved in the review of proposals for lowering the emissions from oxides of nitrogen (or NOx) from the Montgomery County Resource Recovery Facility.

## *Bruce Howie, PE (Continued)*

**Pasco County, Waste-to-Energy Facility Expansion, FEL1 Preliminary Design,** *FL*
Bruce was a project principal and quality control manager for HDR's efforts with preparing the Basis of Design and FEL1 deliverables, which includes the development of general arrangement and equipment layout drawings, preliminary schedules, a Class 4 cost estimate, and preliminary engineering calculations.

**Regions of Durham and York, Durham York Energy Centre Implementation and Construction,** *Ontario, Canada*
Bruce was the lead technical manager responsible for coordinating the efforts related to developing and implementing a 160,000 ton-per-annum energy-from-waste (or "EFW") Facility for the Regions of Durham and York (in Ontario, Canada). Bruce worked with the client and the project team in the selection of the type and number of processing lines, flue gas treatment equipment, power block equipment and the turbine-generator, and developed performance-based specifications for this equipment. Bruce was also involved with the design review, construction monitoring and acceptance testing during facility implementation. The facility became fully operational in January 2016.

**Metro Vancouver, Waste-to-Energy Facility Inspection and Capital Expenditure Planning Services,** *Burnaby, British Columbia*
Bruce was the project manager responsible for organizing and performing an condition assessment of the Metro Vancouver WtEF. His responsibilities included inspecting the WtEF to review operations and maintenance practices, identification of potential repairs, improvements and capital refurbishment projects at the facility for the next 15 to 20 years, and the development of estimates of probable costs for these projects. Bruce was involved in an update of this assessment in 2019, and continues to support the client with reviewing the costs and scope associated with major capital improvements, including replacing the primary economizer section of the boilers and replacing the original waste handling cranes.

**Harford County Resource Recovery Facility Expansion,** *Joppa, MD*
Bruce was the project manager responsible for evaluating design options for expanding the processing capacity of an existing 350-tpd WtE facility capacity to include an additional unit. As part of this effort, Bruce developed both the prequalification procurement documents and the final request for tender, which included performance-based specifications for a new 500,000 tonne-per-annum WtE mass burn facility, performing environmental assessments of the potential sites, reviewing the final proposals and costs, and negotiations with the successful respondents.

**Frederick and Carroll Counties, Waste-to-Energy Facility,** *MD*
Bruce served as the project manager responsible for assisting the client with the development of a 500,000 tonne-per-annum WtE facility that would serve Frederick and Carroll Counties in Maryland. Bruce's responsibilities include coordinating the waste-to-energy technology assessment efforts, developing the performance-based specifications for the new facility, performing environmental assessments of the potential sites, developing the pre-qualification and final request for tender, and reviewing the final proposals and costs. Bruce has also provided technical assistance during County Commissioner and other public meetings during the approval process for the facility.

# Daniel Domato, PE
## WASTE-TO-ENERGY SUPPORT

Daniel received a Bachelor and Master of Science in Chemical Engineering and has his professional license as a mechanical engineer. He has over 10 years of technical and project management experience. A majority of the projects that Daniel has been involved with are in the solid waste management field (particularly in energy-from-waste and other waste conversion technologies). His project experience includes: design, procurement, permitting, construction oversight, commissioning, operations and maintenance oversight, facility condition assessments, master plan development, and feasibility studies.

**EDUCATION**
MS, Chemical Engineering, Manhattan College, 2010

BS, Chemical Engineering, Manhattan College, 2009

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer: HI, #PE-17037

**PROFESSIONAL MEMBERSHIPS**
Solid Waste Association of North America (SWANA)

**INDUSTRY TENURE**
10 years

## RELEVANT EXPERIENCE

**Northeast Maryland Waste Disposal Authority, Enhanced Oversight of the Montgomery County Resource Recovery Facility,** *Dickerson, MD*
Daniel serves as the project manager supervising and performing technical tasks for the enhanced Operations and Maintenance oversight of the MCRRF. This project includes multiple tasks including: site visits to monitor operations and the condition of the facility, outage monitoring events, attendance and participation in monthly operations meetings, and operations data review (included in quarterly and annual reports). Outside the normal tasks under this project, HDR has also assisted the Authority and County with: Root Cause Analysis of the December 2016 Pit Fire, Turbine-Generator Outage Support in 2019 and 2020, review and oversight of a Covanta implemented recovery plan (including capital refurbishment project), and review of facility improvement projects.

**The Regional Municipality of Durham and York, Consulting Engineering Services for the Energy from Waste Facility,** *Ontario, Canada*
Daniel serves as a project engineer providing operation and maintenance support for the Regions of Durham and York's EFW Facility. Daniel was also involved in the design, construction, and commissioning phases of the facility. During design and construction of the facility, he was responsible for performing design reviews of the design drawings and specifications. He also provided construction oversight support during the construction phase of the facility. Prior to commencement of operations, he provided monitoring support during the acceptance testing of the Facility. Daniel also had a major role in the organization and administration of the project's technical design review.

**City and County of Honolulu, Construction Management for Third Boiler Expansion and Operations Support,** *Honolulu, HI*
Daniel served as the on-site engineer observing facility operations and construction closeout. His tasks included daily monitoring of the H-POWER facility, construction closeout of the expansion unit, review and monitoring of the facility refurbishment projects, and outage monitoring support. During construction of the expansion boiler at the H-POWER facility, Daniel provided design review support.

**Metro Vancouver, WtE Facility Non-Ferrous Project Review,** *Vancouver, Canada*
Daniel served as the lead project engineer for a review of a non-ferrous recovery system that was proposed to Metro Vancouver. This was a third-party due diligence review that was required by the local council before a construction contract was to be implemented.

## *Daniel Domato, PE (Continued)*

**Metro Vancouver, WtE Facility Condition Assessment,** *Vancouver, Canada*
Daniel provided support during the development of the condition assessment report for the Metro Vancouver's WtE Facility. His responsibility was to review the Facility's operation and maintenance data and analyze the trends over the past few years.

**Lancaster County Solid Waste Management Authority, On-Call General Engineering Services,** *Lancaster, PA*
Daniel was a project engineer assisting with the evaluation of the Harrisburg Resource Recovery Facility for the Lancaster County Solid Waste Management Authority. This evaluation of the facility included a condition assessment. His roles for this project included an in-depth facility assessment which included multiple site visits and boiler outage monitoring. Daniel was also included in the preparation of the various reports that were associated with this facility assessment.

**City of Alexandria and Arlington County, Support Services to the FMG, Alexandria/ Arlington Waste-to-Energy Facility,** *Alexandria, VA*
Daniel serves as the project manager on the project. In addition to the project management tasks related to the project, he provides the executive level support for the FMG and is the FMG's point of contact. Since succeeding Ms. Raila, Dan has provided the FMG with the normal administrative support and has also assisted with the FMG's evaluation of the LN system that Covanta is installing at the WtE Facility. Dan also assists with the monitoring and assessment of the WtE Facility operations.

**Town of Huntington, Huntington Resource Recovery Facility Technical Evaluation,** *Huntington, NY*
As a project engineer, Daniel was part of a team that evaluated the Huntington Resource Recovery Facility (HRRF), including data collection and review, facility inspections and report preparation to assist the Town in conducting an assessment of the HRRF's present plant condition and to determine what large maintenance items may be on the horizon in an effort to assist in the negotiations for Covanta's extended Service Agreement. The evaluation included a site visit at the HRRF for the purposes of visual inspection of equipment condition to quantify general operational and environmental compliance history to identify any areas of potential concern that would affect the capability of the HRRF to continue operations for the foreseeable future.

**Dutchess Resource Recovery Agency, General Engineering Services for the Dutchess Resource Recovery Facility,** *Poughkeepsie, NY*
Daniel served as a project engineer for the operations and maintenance monitoring project for the Dutchess Resource Recovery Agency. His roles included environmental compliance monitoring and outage monitoring. Daniel also provided support during the annual part 360 reviews.

**Islip Resource Recovery Agency (Agency), MacArthur Resource Recovery Facility,** *Islip, NY*
Daniel was a project engineer responsible for reviewing facility operations, performing boiler and facility inspections, and gathering operating data for other Westinghouse/O'Connor mass burn waste-to-energy facilities and developing an "Enhanced Operations Monitoring Report" for the Agency. Daniel also provided support during the annual part 360 reviews.

# Timothy Raibley, PE
## AD/ORGANICS LEAD

Tim has more than 30 years of environmental and civil engineering experience including extensive solid waste diversion-based facilities such as single stream recycling facilities, organic/compost facilities, anaerobic digester facilities, solid waste transfer, materials recovery and recycling facility engineering and development, landfill permitting and design, landfill operations efficiency evaluations, waste stream economic analysis, and waste stream management. He has designed or provided project management services for solid waste facilities, including landfill closures, environmental control facilities, transfer stations, and materials recovery facilities with project involvement ranging from conceptual planning, fatal flaw analysis, peer review, design of working plans, and specifications to construction management and construction quality assurance.

**EDUCATION**
BS, Civil Engineering, California State University, San Jose, 1980

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer: CA, #35222; WA, #44393

**INDUSTRY TENURE**
40 years

## RELEVANT EXPERIENCE

**City of Long Beach, Southeast Resource Recovery Facility WtE/Organics,** *Long Beach, CA*
Tim served as technical advisor for the City of Long Beach, who retained HDR to confirm the condition of the Southeast Resource Recovery Facility (SERRF) processing lines and facility to help with end of term decisions. Although the primary focus of the effort was to review relevant documents and interview key personnel associated with performing an assessment of the condition of the facility, Tim's role was to develop a conceptual plan and associated cost for a potential anaerobic digestion (AD) system that may have been required under some of the operating scenarios.

**City of Surrey, Organics to Biofuel Facility,** *British Columbia, Canada*
Tim served as the technical advisor and principal engineer in assisting the City of Surrey secure an Organics to Biofuel project developer/operator. The City selected HDR as one of the team members using the Public Private Partnership (P3) funding mechanism. HDR's role was to provide technical support to the City in the scoping of the project, determination of the affordability ceiling the City should accept, and solicitation of the vendors using a two stage (RFQ/RFP) process. The project is designed to process 85,000 metric tons of co-collected residential yard and kitchen/ food wastes per year and convert them to renewable natural gas. The RFP required the prospective vendors to secure organic wastes from the industrial, commercial and institutional (ICI) open franchise system to improve the digester economies of scale. Our work included the preparation of an Indicative Design to assist the City in determining the appropriate cost of service. We assisted the City through the award and financial close of the selected vendor.

**City of San Jose, Evaluation and Procurement of Anaerobic Digestion for Commercial Organics,** *San Jose, CA*
Tim assisted the City of San Jose from the initial visioning and strategy development through the implementation of the strategy by the procurement of vendors to provide enhanced processing facilities. The work culminated in the analysis of various organics processing technologies as a part of their Commercial Waste Stream Re-design effort. In order to reach a City green vision goal, HDR assisted the City in seeking an exclusive franchise provider to construct and operate an aggressive organics management system. HDR assisted the City in crafting an RFP and then reviewing responses to private sector proposals to construct and operate various types of Organics Processing facilities under the exclusive franchise incentivize program. The process concluded selecting a dry fermentation anaerobic digestion technology which was constructed by ZWED of San Jose. The facility commenced startup operations

## *Timothy Raibley, PE (Continued)*

in December 2013 and is designed at full capacity of 90,000 tons per year.

**Oregon Metro, Food Scraps Anaerobic Digestion Procurement Assistance,** *Portland, OR*
Tim served as the technical advisor assisting Oregon Metro in the development of an anaerobic digestion system to process food scrap wastes from commercial waste collected in the greater Portland region. HDR assisted Metro prepare and issue a Request for Proposals for companies to provide anaerobic digestion, beneficial use of biogas and management of the system's liquid and solid residues. In addition to preparing the RFP, HDR performed technical reviews and participated in evaluation committee meetings with Metro staff in evaluating the responses and short-listing the preferred responses. Metro has identified the top two respondents and is now preparing to enter negotiations with the finalist. The selected vendor will be issued a 15 year contract to process 50,000 tons per year of the region's commercially-derived food waste.

**Capital Regional District, Procurement of Integrated Resources Management Services,** *Victoria, British Columbia, Canada*
Tim served as the lead technical advisor to Capital Regional District (CRD) in procuring Integrated Resources Management Services for its waste residuals. The effort began with HDR assisting in the development of an RFEOI (Request for Expressions of Interest) as a part of the CRD's exploration of waste management options out of a desire to better understand the current market capabilities for managing residues from the Region's existing solid and future liquid waste management facilities. HDR also assisted in a subsequent market sounding exercise. The effort sought to secure services for its waste biosolids, MSW, source separated kitchen wastes and yard/garden wastes. In addition to the RFEOI, HDR assisted the CRD in the preparation of reference facility processing information in lieu of the CRD having to go to visit the reference facilities. HDR reviewed and analysis of the responses for the respondent's technical attributes and capabilities that could be relevant to the CRD's needs. HDR assisted the CRD in the preparation and execution of a market sounding exercise. HDR compiled the information and presented an overview of strategies to the CRD Board in a series of two half-day workshops. With the insights presented by HDR, the CRD Board elected to cease exploration of an IRM, electing for a series of individual processes that, in effect, accomplished the same goal.

**City of Sunnyvale, SMaRT Facility Operations Procurement Assistance,** *CA*
Tim served as technical advisor to assist the City of Sunnyvale in the procurement of a new operator for the Sunnyvale Materials Recovery Transfer Station (SMaRT Station). The SMaRT is a 1,500-ton-per-day facility serving Palo Alto, Mountain View, and Sunnyvale, California processing mixed waste from the three cities as well as curbside collected recyclables from Sunnyvale. Our role initially included providing technical input into the RFP documents which were prepared by HFH. Our focus was to develop terms of incentivizing the operator to increase diversion performance standards. The initial phase included reviewing proposals, and in particular evaluating them in terms of the vendor offerings of renovating the facility to improve its performance. The proposed alternations vary in terms of adding new processing equipment or staff to improve the quality and quantity of recovered materials. One of the more persistent issues is the issue of MRF fines which are predominantly organic but also include glass, ceramics, metals, grit, film plastics, etc. We prepared comparative analysis of the various improvements offered by proponents and worked with the City's Evaluation Team to advise them of our findings and recommendations. HDR and HFH are continuing to assist the City in procurement activities. We are currently soliciting organics processing services for the SMaRT to be in compliance with SB 1383 requirement.

# Pepi Ursillo, PE
## AD/ORGANICS SUPPORT

Pepi has more than 21 years of consulting experience in the water and wastewater industry. He has led the process design and process review for numerous anaerobic co-digestion projects for a variety of organic feedstocks. These projects included various roles as owner's engineer/advisor and facility designer using traditional design-bid-build, design-build, and P3 delivery.

**EDUCATION**
MS, Environmental Engineering, Vanderbilt University, 1998

BS, Civil Engineering, University of Massachusetts, 1997

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer - Civil: CA, #67984

**INDUSTRY TENURE**
23 years

**RELEVANT EXPERIENCE**

**City of Surrey, Surrey Biofuel Facility,** *British Columbia, Canada*
Pepi served as owner's engineer for a new renewable energy anaerobic digestion facility that co-digests curbside-collected organics (food waste and yard waste) to energy. The biofuel facility processes the city's organic waste into a 100% renewable natural gas. The renewable natural gas is then be used to fuel the city's natural gas powered waste collection vehicles and its growing fleet of natural gas powered operations service vehicles, and provides a renewable fuel source for the District Energy System, which heats and cools Surrey's city center. The city's corporate carbon footprint was reduced. The facility will produce a high-end compost product that is used in agricultural and landscaping applications. The facility processes upwards of 115,000 tons of organic waste per year. The majority of this waste will come from Surrey's residential curbside collection program. Commercial organic waste is also processed at this facility. Processing commercial organic waste helps support the Metro Vancouver Food Scraps Recycling Program. The project also included supporting the city with conceptual design, request for qualification (RFQ)/request for proposal (RFP) development, and anaerobic digestion vendor proposal review and scoring. The focus was on the technical content and proposed anaerobic digestion approach including biogas recovery and solids handling.

**City of San Jose, Evaluation of Anaerobic Dry Fermentation Digestion Technology Performance,** *San Jose, CA*
Pepi assisted in the analysis of the City's dry fermentation digestion facility and identified opportunities for process improvement. Preprocessing was unable to manage the quantity of contamination in the raw organic feedstock which passed through the digestion process and impacted digestate quality. Recommendations were made for improved feedstock management to support higher quality composted digestate.

**Heartland Biogas, LLC, Biogas Production Facility,** *LaSalle, CO*
Pepi provided basis of design and served as design manager for the largest biogas production facility in North America. Manure and a wide variety of food-based organics (supermarket food waste, food processing wastes, and FOG [fats, oils, and grease]) is preprocessed onsite and anaerobically co-digested to produce biogas, which is cleaned to pipeline quality and injected into the Colorado Interstate Gas Pipeline as renewable natural gas. Digested effluent is dewatered and the dewatered solids are composted and used as cow bedding or sold for its nutrient value. Dewatering centrate is further digested in a covered anaerobic lagoon. Lagoon effluent is stored in one of two large lined storage ponds and then land applied locally during the growing season.

## *Pepi Ursillo, PE (Continued)*

**Delta Diablo, East County Bioenergy Project, Organics Co-digestion, Owner's Advisor,** *Antioch, CA*
Pepi was responsible for the review of co-digestion process review, food waste feedstock preprocessing, feedstock characteristics, technology vendor mass balance, technology selection, and preliminary design documents.

**University of California Davis, Renewable Energy Anaerobic Digester Facility,** *Davis, CA*
This project included evaluating the feasibility of developing a renewable energy anaerobic digester commercial-scale facility that fuels campus life with renewable energy made from organic wastes from the campus, such agricultural and food waste. Additional feedstock materials like waste paper, towels, municipal solid waste, and biosolids from the wastewater treatment plant were also considered for this high-solids, two-phased batch anaerobic digestion technology. Pepi also provided preliminary design of an anaerobic co-digestion facility accepting food waste generated at the university campus, manures from campus agricultural and animal science facilities, and potentially source-separated organic waste from municipal solid waste generated on campus. He also provided plan checking and peer review services.

**National Renewable Energy Laboratory, Haiti Waste-to-Energy Study,** *Haiti*
This project included conducting a study that evaluated the feasibility of converting the organic fraction of municipally generated solid waste in the Port au Prince, Haiti region to renewable energy using anaerobic digestion.

**King County, Anaerobic Digestion Facility Study,** *Seattle, WA*
This project included exploring the feasibility of implementing a renewable energy anaerobic digestion program as a way of reaching its waste management goals. The study explored a variety of technologies, including low solids, high solids, dry digestion, and co-digestion. The study evaluated the use of the region's wastewater treatment plant digester capacity at the Renton facility for co-digestion, as well as exploring both small distributed and centralized regional dedicated digestion facilities.

**PPP Canada, Anaerobic Co-Digestion Conceptual Design and Pricing,** *Quebec, Canada*
Pepi served as project manager for a feasibility study and preliminary design of co-digestion facilities to develop pricing for evaluation of alternatives. The new facility accepts biosolids and the organic fraction of municipal solid waste and co-digest or compost it for other beneficial uses. These materials have been landfilled and the Province of Quebec has set landfill diversion goals requiring alternative management of these materials including anaerobic digestion and composting.

**County of Santa Barbara, Analysis of Dry Fermentation Anaerobic Digestion Development Plan,** *Santa Barbara, CA*
This project included exploring the appropriateness of using a dry fermentation type of anaerobic digestion offered by Mustang Power using the Bekon patented technology to process the regions organic wastes. Subsequent efforts have included preparation of independent reviews of biogas production and overall capital costs.

# Andrea Ramirez, PE, ENV SP
## AD/ORGANICS SUPPORT; SOLID WASTE FACILITY PERMITTING

Andrea has experience supporting clients on a variety of planning and design projects for both waste disposal and waste diversion programs. She has performed feasibility studies, site evaluations, conceptual site designs, and master planning for an assortment of waste management and diversion facilities, including composting facilities, transfer stations, resource recovery parks, anaerobic digesters and other alternative energy facilities. In addition, Andrea has performed evaluations of economic and environmental impacts for waste management programs, including greenhouse gas emissions estimates, waste diversion studies, zero waste management plans, and recycling economic analyses.

**EDUCATION**
MS, Civil and Environmental Engineering, California Polytechnic State University, San Luis Obispo, 2006

BS, Environmental Engineering, California Polytechnic State University, San Luis Obispo, 2006

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer - Civil: CA, #C73180; AZ, #72222

Envision Sustainability Professional Credential

**PROFESSIONAL MEMBERSHIPS**
Solid Waste Association of North America (SWANA), Member, 2009 - Present

SWANA, Arizona Chapter Member, 2019 - Present

SWANA, Young Professionals Region 1 Representative, 2013-2015, 2017 - 2018

Gold Rush Chapter Board Member and Young Professionals Chapter Liaison, 2015-2017

**INDUSTRY TENURE**
14 years

## RELEVANT EXPERIENCE

**City of Long Beach, Condition Assessment Report for the Southeast Resource Recovery Facility (SERRF),** *Long Beach, CA*
HDR was retained by the City of Long Beach to assist with planning ahead and evaluating its options for continued operation of SERRF after the term of the current operating contract and the power purchase agreement would expire. The project included assessing the general condition of the facility and major equipment and identifying major capital expenditures that may be required or advisable at the SERRF to keep the facility operational considering three different scenarios, and completing a conceptual analysis for implementation of an anaerobic digestion (AD) organics processing project. Andrea was the project engineer for the AD portion of the project, which examined the feasibility of developing an AD facility at SERRF, including developing a conceptual site arrangement and a high-level cost and performance projection.

**City of Surrey, Organics to Biofuel Facility Public Private Partnership Assistance,** *British Columbia, Canada*
As Project Engineer, Andrea was part of the HDR team that assisted the City of Surrey with securing an Organics to Biofuel project developer/operator. The City selected HDR as one of the team members using the Public Private Partnership (P3) funding mechanism. HDR's role was to provide technical support to the City in the scoping of the project, determination of the affordability ceiling the City should accept, and solicitation of the vendors using a two stage (RFQ/RFP) process. The project is designed to process 85,000 metric tons of co-collected residential yard and kitchen/ food wastes per year and convert them to renewable natural gas. The RFP required the prospective vendors to secure organic wastes from the industrial, commercial and institutional (ICI) open franchise system to improve the digester economies of scale. HDR's work included the preparation of an Indicative Design to assist the City in determining the appropriate cost of service. HDR assisted the City through the award and financial close of the selected vendor. As Project Engineer, Andrea assisted with technical support during the initial scoping stages and with evaluating vendors.

**City of San Jose, Development of Anaerobic Dry Fermentation Digestion Technology for Commercial Organics,** *San Jose, CA*
HDR provided consultant services for organics conversion to assist the City in reaching its Zero Waste goals. HDR assisted the City of San Jose from the initial visioning and strategy development through the implementation of the strategy by the procurement of vendors to provide enhanced processing facilities. As Project Engineer, Andrea assisted the City of San Jose in its evaluation of vendor proposals by providing a conceptual comparison of

## *Andrea Ramirez, PE, ENV SP (Continued)*

greenhouse gas (GHG) emissions from vendor proposals for organic waste stream processing. Andrea used the USEPA WAste Reduction Model (WARM) to the process described in each vendor proposal. For proposals involving anaerobic digestion, which could not be evaluated with the version of WARM available at the time, digesters were evaluated for the equivalent amount of carbon dioxide emissions that are offset by the amount of energy they produce.

**Recology Grover Composting Facility (now Blossom Valley Organics), Master Plan and Site Improvement Plans,** *Vernalis, CA*
Andrea served as project engineer for the design of a new receiving and pre-processing area for the facility and master planning for increased production at the facility. The work included assisting with the design and production of grading, utility, and site circulation plans and specifications for bid. Other work included site storm water management evaluation and design and sizing calculations for site planning, presented in a series of technical memorandums.

**PPP Canada, Evaluation of Anaerobic Digestion and Composting for Landfill Waste Reduction at Haute-Yamaska Regional County Municipality,** *Quebec, Canada*
HDR developed a planning level site design and cost estimate for a waste treatment center using either anaerobic digestion or composting technology to reduce landfill organic waste and divert 60% of organic waste (organics derived from municipal solid waste and biosolids from the wastewater treatment plant) from the landfill, and convert them in to usable (profitable) products like compost and biogas. Andrea was the project engineer for the composting option.

**City of Visalia, Transfer Station and Anaerobic Digestion Feasibility Studies,** *Visalia, CA*
Andrea's role was project engineer. HDR prepared an analysis to assist the City of Visalia with exploring a variety of Solid Waste Operations options. The analysis provided planning level cost estimates associated with developing a City-owned Transfer and Recycling facility. It also evaluated the technical and financial appropriateness of processing green waste/compostable materials in an anaerobic digestion facility, with the goal of using the biogas to produce fuel for the City's waste collection truck fleet. HDR also provided information on the financial incentives, regulatory hurdles, and technical viability of using the biogas from the digestion process as a transportation fuel.

**University of California Davis, Feasibility Study for Anaerobic Digester Facility,** *Davis, CA*
HDR assisted the University of California at Davis with the evaluating the feasibility of an anaerobic digester facility on campus that would process agricultural wastes, food wastes, and potentially municipal solid waste from the University, and create green energy. As Project Engineer, Andrea coordinated tours for the project team (HDR and University) of all facilities that could potentially provide feedstocks for the facility. She also quantified the feedstocks and their availability for the project, performed the greenhouse gas emissions analysis for different project options, and assisted with cost estimates, conceptual facility plans, figures, and the feasibility report.

# Cindy Liles

## AD/ORGANICS SUPPORT; SOLID WASTE FACILITY PERMITTING

Cindy has seven years of experience working with the waste industry. She started off her career implementing organics separation and compost workshops at her University, and has since worked on over 75 different waste-related facilities. This includes work on the design, permitting, development, and/or environmental compliance of over a dozen organic waste processing facilities and several feasibility studies for both the public and private sectors. She also helped secure several grants amounting to over $5 million for compost infrastructure and research, and over $10 million for renewable energy projects.

**EDUCATION**

MS, Environmental Engineering, California State University, Fullerton, 2020

BS, Environmental Sciences, University of California, Riverside, 2012

**REGISTRATIONS/ CERTIFICATIONS**

Qualified Industrial Stormwater Practitioner (QISP), #00176

Certified Air Permitting Professional (CAPP), #1106

**INDUSTRY TENURE**

7 years

**RELEVANT EXPERIENCE**

**Los Angeles County Department of Public Works, Conversion Technology Evaluation,** *Los Angeles, CA*
Los Angeles County was interested in evaluating a one ton per day in-vessel composting facility at Pitchess Detention Center. Cindy acted as technical lead in determining the permitting pathway for this proposed facility. In addition, Cindy developed general permitting flowcharts to provide the County guidance on composting operations, anaerobic digestion facilities, biomass gasification plants, and municipal solid waste gasification plants. The flowcharts included the required permits and estimated schedule to obtain each permit depending on the project's projected pathway.

**Mesa Grande Band of Mission Indians, Compost and Anaerobic Digestion Feasibility,** *San Diego, CA*
As Permitting Expert, Cindy helped assess the local, regional, and federal requirements for a compost and anaerobic digestion facility proposed to be located on tribal lands. The initial phase of the project would have 73,000 tons per year (tpy) of organic waste to composting and an additional 72,000 tpy to the AD system with bio-derived combined heat and power. Cindy's role was to coordinate with the respective EPA offices to interpret the federal permitting requirements, as well as identify the regulations applicable at the local level.

**EastWest Bank, Anaerobic Digestion Technology Engineering Evaluation,** *San Diego, CA*
Prior to giving additional funding to BioStar Energy Solutions, EastWest Bank retained Cindy to perform an engineering evaluation on the proposed technology. This involved conducting a site evaluation to report on the construction status, intimate review of the technology's design, and economic assessment based on anticipated tip fee and product revenues. Cindy compared the project's specifications, projected throughput capacity, and estimated product generation to other AD technologies to assess the technical viability of the project.

**West Coast Waste, Integrated Organics Recycling Facility Permitting,** *Fresno, CA*
The project consisted of expanding an existing chip/grind facility to include a material recovery facility, transfer station, covered composting system, and an anaerobic digestion facility. Cindy acted as project manager through the Conditional Use Permit/Mitigated Negative Declaration process with the Lead Agency and obtaining a full Solid Waste Facility Permit. This work included design considerations, plan preparation, and report generation. The project team crafted, issued, and managed a Request for Proposals to anaerobic digestion technology vendors which ultimately led to the selection of a preferred vendor to work on the next stages of facility development.

## *Cindy Liles (Continued)*

**City of Davis, Organics Processing Facility Feasibility Analysis,** *Davis, CA*
Cindy served as project manager and lead liaison between the City, subcontractors, and regional regulatory agencies to complete this feasibility analysis. The purpose was to evaluate the City's organic waste diversion options, including a City-owned and operated organics processing facility. The Clements team reviewed Yolo County Central Landfill's new organics processing system, regional Recology organics facilities, and anaerobic digestion and composting technologies for a potential City facility. Cindy coordinated closely with the Yolo-Solano Air Quality Management District, and gained expert knowledge of other regional permitting authorities as related to the project. The findings of the analysis recommended the City to consider a City-owned facility or partnership with a UC Davis-owned facility as a viable option in their long-term organics capacity planning.

**Mid Valley Disposal, Covered Compost System Permitting and Compliance,** *Kerman, CA*
Cindy was brought onto the project during the compost operation's air permitting process, and helped settle the applicability and practicality of the Authority to Construct's (ATC) conditions with San Joaquin Valley Air Pollution Control District. Additional permit technical assistance was provided to obtain and maintain compliance with the facility's Solid Waste Facility Permit (SWFP), WDR, and Stormwater Industrial General Permit. The project team then helped secure $1.5 million to expand the composting from 200 to 300 tons per day, which required permit modifications, in particular the ATCs and staying below Title V thresholds. Cindy has acted as lead liaison with the Air District since 2015, which, in addition to permitting, included facilitating the approval of facility's successful emissions source test.

**Harvest Power, East Bay Municipal Utility District (EBMUD) Organic Waste Projects,** *Oakland, CA*
Clements was retained to prepare the necessary solid waste facility reports for two organic waste projects proposed to be co-located at EBMUD's wastewater treatment plant in Oakland. The first was creating a Transfer Processing Report for an organics facility operated by Harvest Power that consisted of several organic waste conditioning equipment. The second was the development of an In-Vessel Digestion Report for EBMUD's Food Waste and Urban Organics Processing Facility designed to receive organic waste from Recology. Cindy led the bulk of the effort to prepare these reports, as well as coordination with Harvest Power on facility specifications. These reports detailed the use of dedicated foodwaste digesters for the Recology and Harvest Power prepared feedstocks, and included the technical descriptions of each pre- and post-processing system, supporting design calculations, and compliance with state minimum standards. Although the documents were prepared, the projects were put on hold due to change in project direction.

# Neil MacDonald, P.ENG.
## AD/ORGANICS TECH ADVISOR

Neil has 35 years of engineering experience working in Canada and the United States. He has worked both as an engineering consultant and as section manager for large metropolitan municipalities. Neil is a Professional Engineer licensed in Ontario, with a track record of success delivering a wide range of design and construction projects. His scope of experience encompasses studies, assessments, investigations, permitting, designs, procurement processes, construction contract administration, operations, and maintenance. Neil's areas of expertise include: multi-disciplinary design and construction of many different types of facilities, project management, contract management, solid waste management, renewable energy, and contaminated site remediation.

**EDUCATION**
Bachelor of Civil Engineering Technology, Environmental, Ryerson Polytechnical University, Toronto, 1987

Civil Engineering Technology Diploma, Municipal, Ryerson Polytechnical University, Toronto, 1985

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer: Ontario, #90241712

**INDUSTRY TENURE**
35 years

## RELEVANT EXPERIENCE

**City of Toronto, Design and Construction of Solid Waste Management Facilities,** *Canada*
As the Manager of Capital Delivery for the Solid Waste Management Services Division, Neil fulfilled the role of project director for design and construction of a number of facilities. In this role, Neil's responsibilities included: direction and review of the work of the City's project teams, project consultants, and Contractors; direction of engineering procurements and construction tenders; conduct of strategic negotiations; review and comment on multi-disciplinary technical work product; verify compliance with Ontario Building Code and other applicable regulations; proactive problem solving and intervention; response to issues/challenges; change management; contract enforcement; implementation of corrective measures in response to consultant or contractor performance issues; monitoring and control of budget and schedule; liaison with regulatory agencies; coordination with diverse project stakeholders; and media communications.

**Dufferin Organics Processing and Renewable Natural Gas Facilities, Design Build Commission,** *Canada*
Neil was the project director for the Design Build Commission contract for the 55,000 tonne/year anaerobic digestion facility processing source separated (i.e. Green Bin) organic solid waste. Utilizing the OREX™ press waste pre-processing technology and incorporating on-site wastewater treatment, this $70M project involved extensive project management and collaboration of engineering and construction professionals in the fields of: architecture, civil engineering, structural, building envelope, HVAC, process mechanical, electrical, instrumentation and controls, environmental, permitting and approvals. Through a partnership with Enbridge, the organics processing facility project was coupled with creation of renewable natural gas using pressure swing adsorption technology.

**Disco Organics Processing Facility, Design Build Commission,** *Canada*
Neil was the project director for the final commissioning stage of the Design Build Commission contract for the 75,000 tonne/year source separated organics (i.e. Green Bin) anaerobic digestion facility. Utilizing the BTA™ waste processing technology and incorporating on-site wastewater treatment, this $60M project involved extensive project management and collaboration of engineering and construction professionals in the fields of: architecture, civil engineering, structural, building envelope, HVAC, process mechanical, electrical, instrumentation and controls, environmental, permitting and approvals. Despite experiencing early challenges in the design phase which

## *Neil MacDonald, P.Eng. (Continued)*

required later rectification, the project was successfully completed within budget without interruption of waste processing operations.

**Regional Municipality of Niagara, Renewable Energy Recovery from Organic Wastes,** *Canada*
Neil was the senior waste management specialist and project manager responsible for preparing and conducting a workshop exploring the potential for recovery of renewable energy from co-management of Niagara Region's source separated organic solid wastes and wastewater treatment bio-solids.

**Southern Alberta Energy from Waste Alliance, Energy from Waste Facility, Conceptual Analysis and Development Plan,** *Canada*
Neil served as the senior waste management specialist and project manager for conceptual level analysis of options for implementation of energy from waste to serve a population of roughly 265,000 in Southern Alberta. Neil was responsible for assessment and reporting on estimation of waste quantities and composition, review of technology options, estimation of energy generation and emissions, review of permitting/approvals requirements, waste transfer and transportation logistics, siting and stakeholder consultations needs, cost estimates and project economics. Following completion of the initial conceptual phase, Neil then prepared a comprehensive energy from waste development program laying out the roadmap for implementation including: initial business plan, regulatory requirements plan, communications plan, procurement plan, siting plan. SAEWA has adopted the development program and is currently proceeding with site selection.

**Waste Management Inc., Post-Closure Management of Six Ontario Landfill Sites,** *Canada*
Neil was the project manager for post-closure management of six closed Ontario landfill sites. Neil was responsible for the coordination of environmental monitoring and reporting, supervision of operation of landfill gas control systems, direction of leachate collection and disposal operations, supervision of site infrastructure maintenance, liaison with Provincial and Municipal Government agencies, communication with neighbouring property owners and other members of the community, direction of procurement and work of Contractors.

**Environment Canada, Assessment of Organic Waste Management Alternatives,** *Canada*
Neil was the project manager and specialist expert on sanitary landfills and bioreactor landfills to assess the potential effects of organic waste management options. Working as a member of a multi-faceted team, Neil's responsibilities included: development of three hypothetical landfill site and bioreactor landfill facility options including definition of primary parameters and community setting assumptions resulting in 18 different potential scenarios to be evaluated; modelling and assessment of potential emissions and leachate impacts for various organic waste management alternatives; identification and quantification of several potential social impacts; preparation of cost estimates & determination of unit costs for disposal on a full-cost lifecycle basis; contribution to the final report; presentation of results at a series of national workshop sessions.

# Clint Meyer

## PERMITTING/ENVIRONMENTAL REVIEW (CEQA)

Clint has more than 20 years of professional planning experience that inlcudes preparing environmental documentation pursuant to the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) for a variety of public and private entities throughout California. He brings a diverse technical background in the environmental sciences and has extensive project experience in land use planning, infrastructure master planning, resource management, and regulatory permitting under the Clean Water Act, Endangered Species Act, and National Historic Preservation Act. Clint has demonstrated success in delivering environmental documentation and regulatory permits for large, complex projects that include controversy and organized project opposition. Clint's project experience, creativity, and broad technical background provide him with the skill set necessary to deliver projects both cost-effectively and on schedule.

**EDUCATION**

BS, Natural Resources, California State U Humboldt, 2000

Certificate, Geographic Information Systems, California State U Humboldt, 2000

Certificate, Environmental Policy, California State U Humboldt, 1999

**REGISTRATIONS/ CERTIFICATIONS**

American Institute of Certified Planners (AICP): CA, #025921

**PROFESSIONAL MEMBERSHIPS**

American Planning Association Member, 2012 - 2021

**INDUSTRY TENURE**

21 years

**RELEVANT EXPERIENCE**

**City of Los Angeles Department of Public Works, Bureau of Sanitation, Lopez Canyon Equestrian Trail and Trailhead Project IS/MND,** *Los Angeles, CA*

As Project Manager, Clint assisted the City of LA's Bureau of Sanitation (LASAN) in the preliminary design and coordinating with the CEQA and NEPA review of a new multiple use trail within the buffer lands of Lopez Canyon Landfill. Clint managed an initial study and mitigated negative declaration (IS/MND) on behalf of the City of Los Angeles Bureau of Sanitation for the approximately 5-mile equestrian trail and trailhead project. Adoption of the final IS/MND for the project occurred in mid-2018 and the trail is now constructed and in use.

**Los Angeles County Department of Public Works, Los Angeles County Siting Element Program EIR,** *Los Angeles County, CA*

As Deputy Project Manager, Clint is managing the preparation of an EIR for the County of Los Angeles's Siting Element. HDR is preparing a Program EIR for the County of Los Angeles's Siting Element (Revision); a long-term planning document that describes how the County and the cities within the County, plan to manage the disposal of their solid waste. The purpose of the Siting Element Revision is to update strategies, policies, and guidelines to address the solid waste disposal needs of the entire County for a 15-year planning period.

**Orange County Transportation Authority (OCTA), OC Streetcar (formerly known as Santa Ana-Garden Grove Fixed Guideway Transit Project) - CEQA Addendums and FTA 130c NEPA Re-evaluation,** *Orange County, CA*

As Environmental Task Lead, Clint supported OCTA's Streetcar Project through the preparation of multiple CEQA Addendums and a FTA 130c NEPA Re-evaluation for this important project that will close a transit gap between the cities of Santa Ana and Garden Grove. Clint managed the air quality/GHG, noise and vibration, cultural and historic resources, and visual quality and aesthetics technical reports to support multiple CEQA Addendums and an FTA 130c NEPA re-evaluation. Clint also supported FTA with the formal consultation process with SHPO and U.S. Army Corps of Engineers (USACE) to help secure the necessary agency approvals for bridge modifications over the Santa Ana River, including preparation of an Environmental Assessment to supplement the request for permission to modify or alter a federal project (Section 408 permit).

## *Clint Meyer (Continued)*

**City of Orange, Lemon Street Parking Structure Project IS/MND,** *Orange, CA*
As Technical Advisor, Clint assisted in the environmental clearance strategy, Section 4(f) analysis, and environmental justice evaluation. The project would construct a new parking structure to provide parking to serve transit users (Metrolink) and the general public in the City's Old Town area. The project includes a bicycle plaza that would accommodate City bicycle lockers and bicycle racks, and photovoltaic panels on the top deck of the parking structure to generate power for the structure.

**City of Vista, Sewer Mitigation Program and Long-Term Access Environmental Clearance, Final Design, and Permitting,** *Vista, CA*
As Project Manager, Clint managed the environmental clearance, permitting, and design for three sewer projects proposed by the City of Vista. These include two sewer trunk access roads and a compensatory mitigation site at Buena Vista Park. Clint streamlined the project's environmental clearance by leveraging the City's prior Program EIR for its Sewer Master Plan. In addition, Clint is leading the design for the Roman Creek Mitigation Project, which will be used as a source of compensatory mitigation for current and future sewer projects.

**Eastern Municipal Water District, Pressure Zone 1627 Tank Siting Study,** *Perris, CA*
As Environmental Task Lead, Clint worked with EMWD to isolate potential site locations to facilitate the construction of potable water storage within EMWD's 1627 Pressure Zone. Clint helped define the initial siting criteria to define properties containing sufficient land area at the required elevations and in close proximity to existing and planned water conveyance infrastructure.

**County of Kern, McKittrick Class II Landfill Expansion (PP12237) EIR,** *CA*
Clint served as the lead technical analyst for preparation of the McKittrick Class II Landfill Expansion EIR. This project involves an increase to the overall waste disposal capacity and daily capacity limit, which involves the expansion of the existing landfill area, reconfiguration of the permit waste disposal boundary, increase in permitted height, and reconfiguration of various components of the landfill operations and facilities. Key environmental issues are hazards and hazardous materials, air quality and greenhouse gas emissions, water quality/hydrology, and biological resources.

**Recycled Water Project CEQA and NEPA Compliance Services,** *Pasadena, CA*
Clint assisted in the management and preparation of a joint IS/EA for the Pasadena Water and Power proposed Recycled Water Project. The project involved the construction of recycled water distribution infrastructure to increase PWP's water supply reliability by enabling for the delivery of non-potable water sources its service area. The IS/EA specifically evaluated the effects of wheeling water through Glendale Water and Power's system, using non-potable water supplies within PWP's service area for landscape irrigation and industrial and commercial use and associated surface and groundwater quality concerns, and environmental justice.

# Jenny Vick
## PERMITTING/ENVIRONMENTAL REVIEW (CEQA)

Jenny is an experienced environmental professional with a proven track record in project management, mitigation monitoring, and resource development in the environmental consulting industry. She has experience working for environmental consulting firms focused on traditional and renewable energy permitting and compliance projects throughout the U.S., including CEQA, NEPA, and other state or federal permitting or regulatory processes.

Jenny is proficient in the preparation of Environmental Impact Reports (EIRs), Environmental Impact Statements (EISs), Environmental Assessments (EAs), and other environmental documents required for maritime, transportation, energy and other projects. She is experienced at directing the technical and administrative aspects of complex environmental studies; providing technical Quality Assurance (QA); and problem resolution to verify project completion on time and within budget. She is also experienced at developing and managing project-related permitting and regulatory compliance strategies for all stages of project development from initial site assessments, through permitting, public scoping, construction compliance, and post-construction close-out.

**EDUCATION**
Master of Applied Science, Marine Biology, James Cook University, 2012

BA, Biological Sciences, University of California, Santa Barbara, 2005

**INDUSTRY TENURE**
14 years

## RELEVANT EXPERIENCE

**City of Long Beach, Laserfishe Office Project Initial Study/Mitigated Negative Declaration (IS/MND),** *Long Beach, CA*
Jenny was the project manager for the preparation of an IS/MND for the City of Long Beach Laserfiche Office Project. She directed the team of technical specialists in the preparation of technical studies and the CEQA document. She had direct contact with the client and managed the budget and administrative duties. The City of Long Beach retained HDR to produce an IS/MND for a new office building located at 3443 Long Beach Boulevard and 210 E. 35th Street. The project was approximately is 2.1 acres in size and located between Locust Avenue and Long Beach Boulevard.

**City of Long Beach, Spring Street Mixed-Use Development Project Initial Study/ Mitigated Negative Declaration (IS/ MND) and Environmental Impact Report (EIR),** *Long Beach, CA*
Jenny serves as the project manager for the EIR. She directs the team of technical specialists in the preparation of technical studies and the CEQA document. Jenny has direct contact with the client and manages the budget and administrative duties. The City of Long Beach has retained HDR to produce an EIR for a new office park located at 2851 Orange Avenue. The project is approximately 7.8 acres and located on the corner of Spring Street and Orange Avenue.

**City of Long Beach, Anaheim Street and Walnut Avenue Mixed-Use Development Project Initial Study/Mitigated Negative Declaration (IS/MND) and Housing and Urban Development (HUD) Environmental Assessment (EA),** *Long Beach, CA*
Jenny was the project manager for the preparation of an IS/MND and HUD EA for the City of Long Beach Anaheim Street and Walnut Avenue Mixed-Use Development Project. She directed the team in the preparation of technical studies, the CEQA document, the NEPA document, and Section 106 Consultation. Jenny had direct contact with the client and managed the budget. The City of Long Beach retained HDR to produce an IS/MND and EA (for the Department of Housing and Urban Development) for a new mixed-use, 100 percent affordable housing complex on the corner of Anaheim Street and Walnut Avenue.

## *Jenny Vick (Continued)*

**City of Long Beach, Mercy Housing Affordable Housing Project Environmental Assessment (EA),** *Long Beach, CA*
Jenny was the project manager for the preparation of an EA for the City of Long Beach Mercy Housing Affordable Housing Project. She directed the team in the preparation of the NEPA document. She had direct contact with the client and managed the budget. The City of Long Beach retained HDR to produce an EA for the Department of Housing and Urban Development for a new mixed-use, 100 percent affordable senior housing complex on the corner of Pacific Coast Highway and Martin Luther King Jr Avenue.

**City of Long Beach, 1401 Long Beach Boulevard Affordable Housing Project Environmental Assessment (EA),** *Long Beach, CA*
Jenny is the project manager for the preparation of an EA for the City of Long Beach 1401 Long Beach Boulevard Affordable Housing Project. She directed the team in the preparation of the NEPA document and associated technical studies. She had direct contact with the client and managed the budget. The City of Long Beach retained HDR to produce an EA for the Department of Housing and Urban Development for a new mixed-use, 100 percent affordable housing complex on the corner of Long Beach Boulevard and 14th Street.

**City of Long Beach, Century Villages at Cabrillo Phase VI Affordable Housing Project Environmental Assessment (EA),** *Long Beach, CA*
Jenny is the project manager for the preparation of an EA for the City of Long Beach Century Villages at Cabrillo Phase VI Affordable Housing Project. She directed the team in the preparation of the NEPA document and peer review of applicant prepared studies. She had direct contact with the client and managed the budget. The City of Long Beach retained HDR to produce an EA for the Department of Housing and Urban Development for a new mixed-use, 100 percent affordable housing complex within the Century Villages at Cabrillo campus.

**Los Angeles County Metropolitan Transportation Authority (Metro), Link Union Station (Link US) Project EIR and EIS,** *Los Angeles, CA*
As Senior Environmental Planner, Jenny provided senior-level project management support during the preparation of the EIR and facilitated preparation of responses to comments in the Final EIR. She provided quality control reviews of EIR documentation, as well as support for scheduling and document logistics. Jenny has been integral in the preparation of the Draft EIS for the project. The Link US Project will transform LAUS from a "stub-end tracks station" into a "run-through tracks station" with a new passenger concourse that would improve the efficiency of the station and accommodate future growth and transportation demands in the region. HDR is conducting the preliminary engineering and passenger concourse design, and also preparing the environmental clearance documentation required pursuant to CEQA and NEPA, including an EIR and an EIS with a full range of supporting technical studies. The Link US Project EIR was certified on June 27, 2019.

# Kirk Dunbar
## AIR PERMITTING

Kirk specializes in the air quality modeling and permitting of solid waste management facilities, as well as other industrial and municipal facilities. His experience includes preparation of PSD, state construction, and Title V permit applications; emission rate reviews; setup and execution of air dispersion modeling; negotiating permits with state and federal regulatory agencies; and review of stack testing plans and reports. Kirk has reviewed numerous state and federal regulations and evaluated their applicability and impacts.

**EDUCATION**
BS, Aeronautical/ Astronautical Eng (Aerospace Engineering), Iowa State University, 1989

**INDUSTRY TENURE**
30 years

### RELEVANT EXPERIENCE

**Clarington Municipality, Regional Municipality of Durham, Durham York Energy Centre,** *Ontario, Canada*
This project included:

- Presentation at the Durham Council EfW Education Day regarding stack emissions, continuous emissions monitoring systems (CEMS), and stack testing.
- Preparation of memos regarding current state of the technology for pollutant CEMS.
- Observation of initial and subsequent compliance testing programs, review of test results, and interpretation of results for the faciltiy Owner.

**Lee County Solid Waste Resource Recovery Facility,** *Fort Myers, FL*
This project included:

- Preparation of multiple Title V permit renewal applications and Title V modification applications.
- Preparation of PSD permit application to remove and modify permit terms and, subsequently, remove and modify those permit terms from the Title V permit.
- Preparation of a PSD permit application and successful permit language negotiation to allow the facility to burn up to 5% biosolids from sewage sludge.
- Title V permit compliance assistance activities, including review of deviations reports; review of annual operating, stack test, and emission inventory reports; witnessing stack testing program for a 1900 ton per day municipal solid waste (MSW) waste-to-energy facility in Florida, and developing and conducting training for County personnel.
- Preparation of a Title V permit revision application, including a submittal of all Title V permit application forms, to incorporate newly constructed Unit 3 into the facility's Title V permit.

**City of Los Angeles Bureau of Sanitation,** *Los Angeles, CA*
This project included:

- Review and evaluation of estimated emissions data provided by a number of vendors facilities to process waste for the City. Technologies included treatment using mass burn, anaerobic digestion, plasma arc, and gasification. Associated emission units ranged from internal combustion engines to boilers to municipal waste combustors.
- Evaluation of greenhouse gas (GHG) impacts of the various technologies as compared to a baseline of continued landfilling at a site with gas collection and flaring. EPA's WARM software, in combination with alternate calculation methods for technologies such as anaerobic digestion not accommodated by WARM, was used to estimate net GHG impacts.

## *Kirk Dunbar (Continued)*

- Comparison of emissions information to SCAQMD rules to determine air permitting requirements, probability of a given proposer to meet those requirements, and potential cost of compliance. The effort included review of SCAQMD toxic pollutant rules, a Tier 1 analysis of each proposer's emissions, discussions with SCAQMD to determine the details of an emission reduction credit (ERC) moratorium in place at the time of the project, and verification of permitting requirements generally applicable to each proposer's facility.

**Stanislaus Resource Recovery Facility,** *CA*
Kirk reviewed facility permits, discussed facility compliance history and status with state and local regulators, reviewed and summarized operating and test data, evaluated the impact of future regulatory initiatives, and used this information to prepare the environmental compliance section of a bonding report.

**City and County of Honolulu, H-POWER Expansion,** *HI*
Kirk was the environmental lead for a multi-disciplinary review of environmental permitting documents prepared by others for the expansion of the facility. Specifically, he reviewed and provided comments to the NSR permit application and associated BACT and air dispersion modeling analysis, Draft Environmental Impact Statement, and Human Health Risk Assessment. Kirk also coordinated other HDR discipline leads in reviewing Underground Injection, Water Use, and Solid Waste permits. He provided regulatory interpretation of the applicability of sewage sludge incinerator rules to the addition of sewage sludge and related materials to the slate of approved fuels. He also reviewed Covanta prepared periodic reports and submittals.

**MacArthur Resource Recovery Facility,** *Islip, NY*
Kirk prepared the initial New York Title V permit application, reviewed annual emission inventories, reviewed Title V renewal permit application, developed response to NYSDEC information request regarding the applicability of compliance assurance monitoring (CAM) requirements to the facility, reviewed and commented regarding the fee penalty aspects of Section 185 of the Clean Air Act.

**Spokane Waste to Energy Facility,** *WA*
Kirk reviewed facility permits, discussed facility compliance history and status with state and local regulators, reviewed and summarized operating and test data, evaluated the impact of future regulatory initiatives, and used this information to prepare the environmental compliance section of a bonding report.

# Gregorio Estrada, PE, LEED AP
## INDUSTRIAL WASTEWATER PERMITTING

Gregorio has extensive experience in planning, design, construction, and management of water and wastewater projects in Southern California. He specializes in wastewater treatment processes with particular interest in advanced treatment, including nutrient removal, filtration, membranes, and disinfection. His project experience includes responsible charge of investigations, planning, design, construction, and contract preparation and administration. Specifically, projects have involved the design of utility and infrastructure facilities and systems, economic evaluations, regulatory compliance, negotiations with regulatory agencies, investigation and design of wastewater collection and distribution facilities, wastewater treatment plant design, wastewater pumping and lift stations, and collection and conveyance infrastructure.

**EDUCATION**
BS, Civil Engineering, Stanford University, 2001

**REGISTRATIONS/ CERTIFICATIONS**
Professional Engineer - Civil: CA, #67066

LEED Accredited Professional, US

**INDUSTRY TENURE**
19 years

### RELEVANT EXPERIENCE

**City of San Mateo, Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion - Design Phase,** *San Mateo, CA*
As Design Manager, Gregorio provided schematic design, final design, and bid phase services for $400 million in improvements to the San Mateo/Estero Municipal Improvement District (EMID) Wastewater Treatment Plant, which included: (1) realignment and extensions of on-site influent sewer forcemains with flow metering to a new headworks facility; (2) four new covered rectangular primary clarifiers, with primary sludge pumps, scum pumps, and a primary effluent pumping station; (3) influent flow equalization basin (convert existing aeration basins) and equalization pumping station; (4) bioactiflo for wet weather treatment, consisting of a biological contact tank and high rate clarification process, along with associated mixers, aeration, blowers and pumps; (5) chemical storage and feed facility; (6) biological nutrient removal (BNR) and membrane bioreactor (MBR) treatment facilities, mechanical/electrical building (pumps and blowers), with associated piping. The project site is located on Bay Mud, so facilities are pile supported. The project was delivered using a Construction Manager at Risk (CMAR) delivery method.

**Irvine Ranch Water District, Sewerage Treatment Master Plan,** *Irvine, CA*
Gregorio served as project manager. The master plan developed sewage management strategies that optimized collection, distribution, and treatment of sewage, and maximized beneficial use of recycled water. The plan characterized IRWD sewage and determined impacts to the existing treatment systems, determined future sewage conveyance requirements to each of the two recycling plants, identified future treatment processes and their associated capacities at both the Michelson Water Recycling Plant (MWRP) and Los Alisos Water Recycling Plant (LAWRP), identified beneficial uses of sewage, and identified strategies for managing the sewage collection and treatment systems in the most cost-effective manner while balancing the projected sewage flows with projected recycled water demands. The master plan identified capital improvement projects necessary to implement the recommendations and a corresponding implementation program for those improvements. The plan met the IRWD objectives of unrestricted use of recycled water throughout the IRWD service area, improved cost-effectiveness of sewage treatment and recycled water production, maintain and improve system resiliency, anticipate and meet future water quality regulatory requirements, and explore interagency collaboration opportunities.

## *Gregorio Estrada, PE (Continued)*

**Irvine Ranch Water District, Michelson Water Recycling Plant Phase 2 Expansion,** *Irvine, CA*
Gregorio had an active leadership role throughout the project; he served as task manager during conceptual design and preliminary design phases, and project manager during final design phase and construction phase services. Gregorio also served as resident engineer during construction and managed the commissioning of all major processes. This award-winning $114 million project expanded capacity of the Michelson Water Recycling Plant to 33 mgd for preliminary and primary treatment processes, and 28 mgd for secondary, tertiary, and disinfection treatment processes. Improvements included influent sewers, new headworks, expansion of the primary sedimentation tanks, new primary effluent pumping station and flow control, modified flow equalization basins, secondary treatment expansion with new membrane bioreactor(MBR) facility, new high-rate clarifier to treat filter backwash, new ultraviolet (UV) disinfection system, recycled water pumping,modifications to chlorine contact basins, chemical feed systems, new pumping and other ancillary facilities, and electrical modifications.

**South Orange County Wastewater Authority, JB Latham Treatment Plant, Aeration and Cogeneration Upgrades,** *Dana Point, CA*
As Project Manager, Gregorio led the project team responsible for the evaluation and design of aeration and cogeneration systems upgrades for the JB Latham Treatment Plant. The HDR team completed the final design and bid phase services, and were selected to provide Engineering Services During Construction of the JBLTP Aeration and Cogeneration Project. Services included preliminary and final design, development of performance specifications, development of start-up and commissioning plans, bid phase services, construction phase services, preparation of conformed drawings, review and response to Submittals and Requests for Information, preparation of Change Order documentation, field visits, start-up services, and preparation of record drawings.

**Goleta Sanitary District, Wastewater Treatment Plant Upgrade,** *Goleta, CA*
As Project Engineer, Gregorio was responsible for process performance evaluation and development of process performance evaluation and alternatives evaluation. After preparing the preliminary design report and validation study HDR modified the headworks, upgraded the treatment plant to full secondary standards using a trickling filter/ activated sludge system, designed a new blower building, expanded secondary sedimentation capacity, designed for new flow equalization, and designed a new thickening and dewatering building. In the thickening and dewatering building waste activated sludge is thickened with screw thickeners and dewatering utilizes two new screw presses. Design also included site/civil work, paving and grading, and a new shower and locker facility. The improvements expand the capacity of full treatment to approximately 9 mgd.

**Irvine Ranch Water District, Filter Pump Station No. 2 Discharge Header Replacement,** *Irvine, CA*
Gregorio's role was principal and technical lead. HDR was selected to develop the design to replace the corroded discharge header for the Michelson Water Recycling Plant (MWRP) Filter Pump Station No. 2 (FPS-2) FPS-2 is a critical part of the MWRP conventional treatment train to convey up to 22 mgd of secondary effluent. HDR developed a detailed construction sequencing and bypass pumping plan to execute the work while keeping the plant in operation. The resulting transition occurred smoothly and without incident.

# Heleana Galvan
## COMMUNITY OUTREACH

Heleana is a strategic communications manager with more than 22 years of experience working for a variety of public agencies and the private sector. Her communications expertise extends from transportation projects to water/wastewater projects working within the early planning stages, through design and into construction. Throughout her career, she has strategized, developed and implemented many successful educational and outreach programs that involved a range of public relations, advertising, media relations, social media plus external and internal communications. She has extensive experience working within highly technical environments to bridge communications with the public, understand their issues, and work collaboratively to address concerns and solve problems ensuring projects stay on track. Her ability to foster strong relationships and make connections with her target audiences aids in her effectiveness as a communications professional.

**EDUCATION**
BA, Organizational Communications, California State University, Stanislaus, 1999

**PROFESSIONAL MEMBERSHIPS**
California Water Environment Association Member (1/13 - Present); Public Education Committee Member (6/12-6/14); 2014 Annual Conference Publicity Chair (1/13-7/14)

Public Relations Society of America (PRSA), California Capital Chapter & California Association of Public Information Officials, Member (1/06-10/13)

Central Valley Clean Water Association, Outreach Committee Member (10/09-10/13)

Water Environment Federation, Collection Systems Specialty Conference, Social Event Chair (11/11-6/13)

**INDUSTRY TENURE**
22 years

## RELEVANT EXPERIENCE

**Nevada County Public Works Department, Solid Waste Division, McCourtney Road Transfer Station Renovation Project,** *Nevada County, CA*
Heleana's role is strategic communications manager. Nevada County's McCourtney Road Transfer Station (MRTS) provides solid waste and recycling services for the communities of Grass Valley, Nevada City and the unincorporated areas of western Nevada County, California. The MRTS was constructed in 1994 after the McCourtney Road Landfill closed. The compact site serves a large number of self-haul customers and in recent years, the number of those customers and associate vehicle traffic at the site has dramatically increased, resulting in long vehicle queuing and substantial wait times during peak periods. To address both current facility challenges and future operations as well as accommodate growth leading to increased materials received and customers served, HDR is assisting Nevada County with the MRTS Renovation Project that includes building a new transfer station and other facilities at the site. Heleana is managing the public outreach and engagement activities throughout the project development process. Since the project's inception, Heleana has been overseeing the development and maintenance of a project-specific website with its own unique URL as well as project materials, social media and media relations support, facilitation and logistic planning of virtual public meetings, stakeholder communications as well as development of a contact database and comments management.

**City of Folsom Solid Waste Division, Mandatory Organics & Recycling Compliance Program,** *Folsom, CA*
Heleana's role is strategic communications manager. HDR is assisting the City's Solid Waste Division to develop, implement and maintain the City's state mandatory commercial organics and recycling compliance program. Activities include, but are not limited to, planning and development, monitoring and reporting, best practices and franchise agreements/amendments related to City policies, programs, and ordinances to verify compliance with state law as well as minimize impacts on residents and businesses. As part of the program, Heleana and her Strategic Communications Team are supporting the City with development and implementation of an Education and Outreach Program to provide ongoing education to generators to achieve compliance with Senate Bill 1383.

## *Heleana Galvan (Continued)*

**City of Carlsbad, 2019 Utilities Master Plan Executive Summary,** *Carlsbad, CA*
Heleana's role is strategic communications manager. Carlsbad is a predominantly residential community located 30 miles north of downtown San Diego with an estimated population of 109,000. Water and recycled water services are provided by Carlsbad Municipal Water District, a subsidiary district of the City of Carlsbad, while sewer service is provided by the City of Carlsbad. The City's Master Plan process identified the infrastructure improvements necessary to continue to deliver these vital services. The City's past master plans were developed between 2009 and 2011, prior to the economic recession and extended drought conditions that have changed the City's water consumption behaviors. HDR's Strategic Communications team assisted the City with development of a high-quality infographic brochure for management, staff and regional elected officials to help summarize the City's 2019 Utilities Master Plan. The brochure condensed and streamlined very technical information with simplified content and graphics to visually tell the story about the City's utility sustainability.

**Orange County Sanitation District, 2019 Asset Management Plan Report & Executive Summary,** *Fountain Valley, CA*
Heleana's role is strategic communications manager. Orange County Sanitation District (OCSD) is a special district that provides wastewater collection, treatment and recycling services to over 2.6 million people in central and northern Orange County, California. OCSD is the third largest regional wastewater agency west of the Mississippi River that serves residential, commercial and industrial customers within a 479 square-mile area. OCSD has two operating facilities that treat wastewater from residential, commercial and industrial sources. As responsible environmental stewards of the community, OCSD is committed to providing wastewater collection, treatment and recycling services for its ratepayers to reliably meet regulatory mandates and levels of service approved by its Board of Directors in the most efficient and cost-effective manner. To fulfill this commitment, OCSD has augmented and solidified its asset management program through restructuring its organization to better align its Engineering and Operations & Maintenance departments. Through this reorganization they have established an Asset Management Group within the Planning Division consisting of nine Area Engineers who serve as ambassadors for each of their assigned areas. A main deliverable for the Area Engineers is the annual Asset Management Plan (AMP). HDR's Strategic Communications team is assisting OCSD with strategic communications counseling, QA/QC and creation of visual graphics for the overall AMP as well as development of an infographic AMP Executive Summary brochure. The high-quality summary condenses and streamlines very technical information with simplified content and graphics to visually tell the story about OCSD's asset sustainability to management, staff and regional elected officials.

# Anders Burvall
## GIS SITING

Anders is a senior geographic information systems (GIS) analyst with HDR. Throughout his 13 year tenure with HDR's Southern California GIS team, Anders has been an integral component on a wide array of projects throughout the United States. His experience includes many large scale projects encompassing a wide array of disciplines including transportation planning and design, energy, federal, environmental, biological resources, solid waste, waste water, water resources and cultural resources. Anders' geospatial expertise encompasses all aspects of the GIS workflow including data management, database design, advanced spatial analysis, cartography, web mapping, and mobile data collection. Anders is an expert in cartographic design, and he leads the HDR cartographic practice group which develops company standards and provides educational resources to the internal geospatial community.

**EDUCATION**
MS, Geography, San Diego State University, 2007

BS, Environmental Science, San Diego State University, 2004

**INDUSTRY TENURE**
16 years

**RELEVANT EXPERIENCE**

**City of County of Honolulu, H-POWER,** *Honolulu, HI*
HDR is performing a rigorous landfill constraints and suitability analysis to support the City and County of Honolulu in identifying future landfill locations that will adhere to important regulatory requirements. As Lead GIS Analyst, Anders is managing geospatial data and providing supporting the HDR engineering team with spatial constraints and suitability analysis and 3D data that form the basis of the landfill conceptual design. Anders is also managing multiple web based applications that provide access to the ongoing project data for both HDR and Honolulu staff and allows them to view constraints and landfill designs in plan and 3D view.

**Port of Long Beach, Stormwater Master Plan,** *Long Beach, CA*
As GIS Lead, Anders worked closely with project engineers to provide them geospatial analysis support for the inundation modeling effort. Anders also coordinated with the Port of Long Beach internal GIS team to confirm that the extensive data deliverable would transfer into the Port's existing GIS infrastructure.

HDR conducted a port-wide stormwater infrastructure master plan of the POLB, which includes comprehensive hydraulic modeling, condition and capacity analysis of existing drainage system and pump stations and development of a 20-year capital improvement plan. Work included: data collection, screening, and processing; catchment area delineation and characterization; hydraulic model development; hydrology and hydraulic simulation of the storm drain system and pump stations for design storm scenarios based on the LA County approved methods; inspection and condition assessment of existing facilities, analysis of improvement alternatives and identification of preferred alternatives; development of cost estimates and the capital improvement plan.

**Metro, Link US,** *Los Angeles, CA*
As Lead GIS Analyst, Anders is an integral part of the diverse design and environmental team responsible for delivering this monumental project. Anders is responsible for managing geospatial data, supporting field data collection, performing spatial analysis and developing and implementing the cartographic standards used for document deliverables.

HDR was first awarded a contract by Metro in 2014 to perform preliminary engineering, environmental document, final design and construction support for the Link Union Station (Link US), formally

## *Anders Burvall (Continued)*

known as SCRIP. In 2005, Caltrans and Federal Railroad Administration (FRA) environmentally cleared the Los Angeles Union Station (LAUS) Run-Through Tracks Project that would transform LAUS from a "stub-end" station to a "run-through" station, increasing the station's operational capacity. Over the last decade, the Link US project has become more than a runthrough tracks project. With the development of the LAUS Master Plan (LAUSMP) and anticipated increase in regional rail ridership, the LAUS Run-Through Tracks Project evolved to become SCRIP/Link US, which included an additional track on the west bank of the Los Angeles River to accommodate northbound travel. In 2016, Link US was updated again to include accommodation of future transit services, anticipating the arrival of California High-Speed Rail (HSR) in 2029, and the LAUS Master Plan passenger concourse. In the March 2017 Metro Board Meeting, HDR was tasked with studying an above-grade concourse to compare to the at-grade concourse recommended by the Masterplan.

**Riverside County Transportation Commission, Coachella Valley-San Gorgonio Pass Rail Corridor Service Development Plan (SDP),** *Riverside and Los Angeles Counties, CA*
As GIS Lead, Anders worked closely with the large engineering and analysis team to develop high quality mapping products. Anders also implemented an innovative cartography procedure that was used to efficiently generate straight line diagram drawings for the 140-mile alignment.

HDR was selected to provide services to RCTC for preparation of a SDP for the Coachella Valley-San Gorgonio Pass Rail Corridor, a 140-mile-long rail corridor between LA Union Station and the City of Indio. The SDP was developed in two phases. The first phase involved conducting an Alternatives Analysis (AA) for the corridor, and the second phase includes development of the SDP following Federal Railroad Administration (FRA) guidelines, as well as a Tier 1/Program Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for the proposed service. The Alternatives Analysis included definition of a Purpose & Need (P&N) statement, preparation of a market analysis for the corridor, identification of alternatives to address the P&N, and evaluation of the alternatives. Stakeholder and public outreach included numerous one-on-one briefings with elected officials, regular coordination with a Technical Advisory Committee, and multiple public meetings in different parts of the corridor and via webinar.

**Southern California Edison, FAA Legacy Assessment Project,** *Pomona, CA*
To help Southern California Edison (SCE) adhere to the important regulatory requirements set forth by the Federal Aviation Administration (FAA), HDR performed a rigorous compliance analysis of SCE's entire transmission line network. Aviation experts analyzed SCE's historical archives of FAA compliance communications and a diverse team of engineers and GIS professionals utilized 3D PLSS CAD models to analyze over 450 individual circuits totaling more the 7800 miles of transmission lines. HDR developed a comprehensive GIS database of the 3D spatial data linked historical documents that enabled SCE staff to efficiently view the lighting and marking compliance of their existing power grid and provided a geographical framework to track historical and future FAA correspondence regarding system compliance.

As GIS Lead, Anders worked with transmission line engineers to convert PLSS CAD data into a 3D GIS infrastructure. He delivered a web application that allowed the SCE staff visualize and analyze their transmission line network in a user friendly and efficient framework.

# Jade Dean
## GIS SITING

Jade is a GIS analyst in HDR's Long Beach office. She has worked with GIS in a professional and academic environment for almost 10 years. During that time, Jade has worked on a wide range of technical studies in support of Environmental Impact Reports, created interactive map stations for public meetings and created and trained staff on best practices for GIS. Her technical skills include proficiency in Esri (ArcGIS, ArcGIS Online, ArcInfo, ArcEditor, ArcView) program suite, Adobe Illustrator, Excel and UrbanFootprint. She played a key role in the Interstate 605 (I-605) Corridor Improvement Project in Los Angeles County, California and Shoemaker Bridge in Long Beach, California. Jade's broad experience has proven useful to providing spatial analysis and project data coordination and management. Her experience also includes on-call contracts, capital improvement projects, land development, and field data collection.

**EDUCATION**

BA, Geography, California State University, Long Beach, 2011

Certificate, Geographic Information Science (GIS), California State University, Long Beach, 2011

**INDUSTRY TENURE**

11 years

**RELEVANT EXPERIENCE**

**City of Long Beach, Shoemaker Bridge Replacement,** *Long Beach, CA*
As Lead GIS Analyst, Jade delivers spatial analysis, data management, and cartography to our environmental and engineering staff. She works together with the engineers and environmental leads to communicate data and project needs internally and with sub-consultants. The City of Long Beach in cooperation with Caltrans has selected HDR to prepare the Project Report and Environmental Document (PR&ED) and the Plans Specifications and Estimates (PS&E) for the replacement of the Shoemaker Bridge (West Shoreline Drive). The proposed project will replace the existing Shoemaker Bridge over the Los Angeles River with a new bridge located just south of the existing bridge.

**West Basin Municipal Water District (MWD) Recycled Water Master Plan Update,** *Los Angeles County, CA*
As the Lead GIS Analyst, Jade created and implemented cartographic standards to verify consistency with West Basin's branding. She assisted with data management and QA/QC for spatial analysis conducted by technical leads. The Master Plan includes an updated recycled water demand analysis, aimed at increasing recycled water production from 34 mgd to 70 mgd, an evaluation of the existing treatment plant performance and condition, an update and calibration of the distribution system hydraulic model in InfoWater, evaluation of expansion alternatives and development of a capital improvement program.

**Los Angeles County Metropolitan Transportation Authority (LA Metro), I-605 Corridor Improvement Project PA&ED (formerly known as I-605/SR-60 Interchange Improvement Project),** *Commerce, CA*
As Lead GIS Analyst, Jade provides spatial analysis, data management, and cartography. She is also responsible for coordinating with the project management team, engineers, and other GIS leads to verify consistency between the analysis and presentation of data. HDR was selected to prepare the PA&ED for highway improvements along the I-605 corridor, including improvements to the SR-60 and I-5, which would help to reduce congestion, improve freeway operations, improve and enhance safety, and improve local and system interchange operations.

**Caltrans, Interstate 5 (I-5) Widening Project, Segment 3: Alicia Parkway to El Toro Road,** *Orange County, CA*
As Lead GIS Analyst, Jade contributes to the project by managing data, performing spatial analysis, and creating figures to

## *Jade Dean (Continued)*

support the Revalidation of the MND/FONSI (2014). She directly supports the project manager to coordinate with engineers and staff to provide analysis and figures. Caltrans, in cooperation with Orange County Transportation Authority (OCTA), the City of Lake Forest, the City of Laguna Hills, the City of Laguna Niguel, and the City of Mission Viejo, is proposing to widen I-5 between SR-73 and El Toro Road. The project is in the Plans, Specifications, and Estimates (PS&E) phase and has been divided into three segments: Segment 1: SR-73 to Oso Parkway; Segment 2: Oso Parkway to Alicia Parkway; and Segment 3: Alicia Parkway to El Toro Road. During the PS&E phase, the design of the Project limits have been refined. As a result, additional effects have been identified within Segment 3: Alicia Parkway to El Toro Road.

**Riverside County Transportation Commission (RCTC), I-15 Express Lanes Project Southern Extension (ELPSE) PA/ED,** *Riverside County, CA*
Jade serves as the lead GIS analyst and coordinates with technical leads, project managers, and external project teams to support figure creation, spatial analysis, data management, and Web Apps. She is also responsible for coordinating with the project management team, engineers, and other GIS leads to verify consistency between the analysis and presentation of data. HDR is the lead firm for RCTC to study the I-15 ELPSE for the next 15 miles of express lanes being studied in Western Riverside County to join two other express lane systems.

**Imperial County Planning and Development Services Department, Citizens Solar,** *Imperial County, CA*
As GIS Analyst, Jade coordinates with the project manager to prepare and organize data, create figures, and perform spatial analysis. The Citizens Imperial Solar, LLC Project involves the construction of a 30 megawatt (MW) alternating current (AC) solar photovoltaic (PV) energy generating facility on approximately 223 acres of land owned by the Imperial Irrigation District (IID). The lifespan of the project is expected to be 25 years. The project would provide lower-cost energy to low-income customers through the eGreen program administered by IID.

**Imperial County Planning and Development Services Department, Laurel Cluster Solar Farms Project (formerly Big Rock),** *Imperial County, CA*
As GIS Analyst, Jade coordinates with the project manager to conduct spatial analysis, prepare and organize data, and create figures. The Laurel Cluster Solar Farms Project involves the construction of four utility-scale photovoltaic (PV) solar facilities on approximately 1,380 acres of privately-owned land. The four projects would generate a combined total of up to 325 megawatts (MW). Power generated by the projects will be delivered from the project sites via up to 230 kilovolt (kV) overhead and/or underground electrical transmission line(s) originating from an on-site substation(s)/switchyard(s) and terminating at the proposed Imperial Irrigation District Fern/Liebert Substation. Alternatively, power may be delivered to the San Diego Gas & Electric's Imperial Valley Substation.

**Imperial County Planning and Development Services Department, Vega Solar,** *Imperial County, CA*
As GIS Analyst, Jade works directly with the project manager to create figures, prepare and organize data, and perform spatial analysis. The proposed project involves the construction of a 100-megawatt (MW) photovoltaic (PV) solar energy facility with an integrated 100 MW battery storage system on approximately 574 acres of land. The project would include a ground mounted PV solar power generating system, supporting structures, electronic/electrical equipment, on-site substation, retention basins, access roads, and fencing.

# Yuying Li
## GIS SITING

Yuying is a GIS analyst with over 20 years of GIS consulting and software development and customization experience. Yuying has extensive knowledge of GIS data modeling, geodatabase design/development, spatial analysis, and mobile app implementation, including Esri Collector, Survey123, and custom apps. Yuying is also well versed in programming and database management, which she has applied to several customized desktop and web-based GIS applications using .net, ASP, HTML, Javascript, etc.

**EDUCATION**

MA, Geography, San Diego State University, 2003

BS, Environmental Sciences/Studies, East China Normal University (ECNU), 1997

**PROFESSIONAL MEMBERSHIPS**

Urban and Regional Information Systems Association (URISA), Sothern California, Board Member, Member, 2003-2013

**INDUSTRY TENURE**

22 years

## RELEVANT EXPERIENCE

**Port of Long Beach, POLB Pier B Port-Wide Stormwater Infrastructure Master Plan,** *Long Beach, CA*

POLB hired HDR to develop a stormwater infrastructure master plan and prepare a 20-year capital improvement program (CIP). POLB engaged HDR to update the stormwater GIS maps and data; accurately survey the locations of inlets and catch basins; inspect pipelines larger than 18-inches in diameter using closed circuit television (CCTV) methods; inspect and evaluate existing pump stations; evaluate hydraulic models and select one; develop the model; and identify improvements. Yuying deployed the mobile app so that as the field crew verified the information on the ground, the data was sent to the central server and ready for QC.

**County of San Diego Dept. of General Service, Flood Control Facilities Master Plan Update,** *San Diego, CA*

HDR is assisting the County of San Diego to update their existing Special Drainage Areas 5 (Bostonia) and 6 (Lakeside) Drainage Facilities Master Plan (DFMP) to make it consistent with the updated San Diego County Hydrology Manual, updated planned land use data and other updated information. HDR is revising the existing hydrologic model using a GIS platform and AES/SIMS software. As GIS Analyst/Programmer, Yuying developed tools to facilitate the data formatting processing for model input.

**City of Los Angeles, Bureau of Engineering (LABOE), Safe Sidewalks LA Program Civil Design & Construction Management (Sidewalk Repair Program),** *Los Angeles, CA*

As GIS Mobile App Lead, Yuying provided technology support for mobile data collection prototype: including sidewalk repair specifics, ADA compliance, and tree removal requirements. The mobile data collected are used in contact bid preparation. As part of our on-call contract with the City, HDR has been working on a task order to provide program management and engineering services for the Safe Sidewalks LA Program. The program identifies and corrects existing non-American with Disabilities Act (ADA) accessible sidewalks and curb ramps as well as provides new ADA accessible sidewalks, curb ramps and cross walks.

**Los Angeles Metro Transportation Authority, Link US (formerly known as Southern California Regional Interconnector Project - SCRIP),** *Los Angeles, CA*

HDR is performing preliminary engineering environmental document final design and construction support for Metro's Link US (formerly known as SCRIP). The project includes raising the rail yard, inclusion of a new elevated concourse, new run through tracks over US 101, and active transportation connections. Yuying's role is senior GIS analyst.

*Yuying Li (Continued)*

**Orange County Public Works, PL 84-99 Channel Inspections,** *Santa Ana, CA*
HDR is hired by Orange County Public Works to inspect thirteen flood control facilities to confirm previously identified issues as well as new deficiencies. Each facility will receive a "U" or "M" rating and issues must be addressed to obtain an "A" rating from USACE in order to remain eligible under the USACE Public Law 84-99 Rehabilitation and Inspection Program. Yuying worked with project team and leveraged the Esri Collector app to collect inspection information with the detailed photo log. The app allows the field crew to easily locate the facilities, record required inspection data via pick list or description. The inspection information is then stored in a central database for review and QC. Photo logs and summary reports are generated using python script to streamline the process.

**Orange County Transportation Authority, OCTA Task Order 1 - Long Range Transit,** *Orange, CA*
The GIS staff in San Diego supported the OCTA GIS program with processing existing operational and survey data for use in long-range transit planning and transportation studies for Measure M. The data sources for the analysis included farebox transaction records in a ridership data mart and origin and destination records from a 2001 on-board survey. Both of these data sets have been geocoded to transit stops or other xy coordinate locations. HDR GIS developed three ArcGIS desktop tools to perform the data processing, including a Farebox Trip Table Tool, Farebox Link Volume Tool, and Trip Itinerary Analyst Tool. Yuying's role was senior GIS analyst/programmer.

**San Bernardino County, Redlands Passenger Rail Program (RPRP),** *San Bernardino, CA*
As Senior GIS Analyst, Yuying was responsible for managing GIS data and analysis associated with the development of a commuter rail service operating between the Rialto Avenue and San Bernardino Transit Center and the University of Redlands, approximately nine miles, and five stations. GIS assisted with visualization, transportation planning and to obtain approval for a combined CEQA and NEPA environmental document to clear the project environmentally.

**Nevada DOT Headquarters, Southern Nevada Traffic Study,** *NV*
The Southern Nevada Traffic Study (SNTS) was a regional traffic forecasting, traffic analyses, alternatives evaluation and benefit/cost analyses of urban southern Nevada freeways in coordination with ongoing projects and studies. HDR performed traffic data collection, traffic forecasting and planning, traffic operational analysis, benefit-cost analysis and performance measurement. Yuying's role was senior GIS analyst.

Hawkins
DELAFIELD & WOOD LLP

# Eric (Rick) J. Sapir

## Partner

Rick joined Hawkins upon graduation from law school in 1986 as an associate in the solid waste and municipal utilities group. He soon began working on waste-to-energy projects which launched his career as a public contracts lawyer in the solid waste, recycling, water, wastewater, residuals, renewable energy and social infrastructure fields. Rick has worked exclusively as owner's representative and has helped structure, procure, draft and negotiate contracts involving every form of complex alternative delivery method.

Rick has served as lead negotiating counsel for over 100 engagements on complex public contracts. His practice spans North America where he has served as special counsel for the development of environmental facilities in over 20 States, three Provinces and two Territories. Rick's services regularly include advising on project planning and delivery matters, structuring of the procurement to ensure compliance with law and to maximize the optimal competition, preparation of procurement documents, helping clients review, clarify, understand and evaluate proposals, and the drafting and negotiation of the key project agreements.

Among the clients that Rick has assisted with complex projects in the solid waste sector are: the City of Los Angeles (Waste-to-Energy); Huntington, NY (Waste-to-Energy); Onondaga, NY (Waste-to-Energy); Montgomery County, MD (Waste-to-Energy); Metro Vancouver, BC (Waste-to-Energy); Monmouth County, NJ (Waste-to-Energy, Baling, Landfill Gas-to-Energy, Recycling, Household Hazardous, Waste, Bulky Waste Transportation and Disposal, and Solar); Montgomery County, OH (Transportation and Disposal); Polk County, FL (Collection); Virgin Islands Waste Management Authority (RDF, Landfill Gas-to-Energy and Baling/Transfer); Halifax Metropolitan Authority (Waste-to-Energy); County of Hawaii (Waste-to-Energy, Landfill DBO and Green Waste Processing); New Hanover County, NC (Waste-to-Energy, MRF, Transfer, Transportation and Disposal); Northeast Maryland Waste Disposal Authority (Waste-to-Energy); Wake County, NC (Landfill Gas-to-Energy, Landfill DBO); Glasgow, KY (Landfill Gas-to-Energy); Clarkstown, NY (Transfer Station); and Greensboro, NC (Recycling and Transfer, Transportation and Disposal).

Other infrastructure projects on which Rick served as special counsel include: City of San Jose, CA (Cogen, Headworks and Dewatering); City of Vancouver, WA (Wastewater); Monmouth County, NJ (Leachate Treatment); Laredo, TX (Water/Wastewater); Phoenix, AZ (Water Treatment); West Milford, NJ (Water/Wastewater); Middletown, NY (Biogas); the Township of North Brunswick, NJ (Water/Wastewater); Camden County Municipal Utilities Authority, NJ (Residuals Processing, Anaerobic Digestion/CHP and Solar); the Rahway Valley Sewerage Authority, NJ (Residuals and Co-digestion-to-Energy); Tacoma, WA (Wet


CONTACT

T 973-642-1188
C 908-209-1423
F 973-642-6773
E esapir@hawkins.com


PRACTICE AREAS

Public Contracts
Public Private Partnerships
Solid Waste
Waste-to-Energy
Water, Wastewater and Residuals
Social Infrastructure
Renewable Energy

EDUCATION

Union College, BA

Fordham University School of Law, J.D.

ADMITTED

New Jersey
New York
Connecticut

Weather Wastewater Upgrade and Stormwater Interceptor); City of Fillmore, CA (Wastewater Treatment); Fulton County, GA (Wastewater Treatment); Nashville, TN (Residuals Processing); San Marcos, TX (Water and Wastewater); the Bergen County Utilities Authority, NJ (Wastewater); the Warren Township Sewerage Authority, NJ (Wastewater); Spokane County, WA (Wastewater); Maple Shade, NJ (Water); Orangeville, Ont. (Wastewater); Monmouth County, NJ (Leachate Treatment); California American Water (Drinking Water Desal); Burlington County, NJ (Residuals); City of San Jose, CA (Wastewater); Long Hill Township, NJ (Wastewater); New Jersey School Construction Authority (School) and New Jersey City University (Dormitories).

Rick has also served as bond or underwriter's counsel for several waste-to-energy projects including, but not limited to, Montgomery County, MD; Onondaga County, NY; Huntington, NY; Hempstead, NY; Babylon, NY; Union County, NJ; and Essex County, NJ. In addition, Rick has served as bond counsel on dozens of economic development projects on behalf of the Connecticut Development Authority.

Rick has lectured on solid waste, water, wastewater, residuals and other municipal utility issues before several forums including the Solid Waste Association of North America, the National Council for Public-Private Partnerships, the Design Build Institute of America, New York State Solid Waste Federation, Biocycle, Water Environment Federation, the Compost Council, the EPA LMOP Program, the Public Securities Association, the New Jersey Association of Environmental Authorities, the Municipal Waste Management Association, the New York City Bar Association and the New York State Legislative Commission on Solid Waste, and he is a faculty member for a class provided at the annual Wastecon Conference regarding the development of waste-to-energy facilities. Rick has been the Legal Advisory Member of the New Jersey Chapter of the Solid Waste Association of North America and is an active member of the Solid Waste Association of North America, the New Jersey Association of Environmental Authorities and the New Jersey/New York/Connecticut Chapter of the Design Build Institute of America.

Hawkins
DELAFIELD & WOOD LLP

# Melanie Murakami

Partner

Ms. Murakami is a member of the firm's infrastructure procurement, contract and finance group advising public agencies and leaders in developing public works projects on an alternative delivery and P3 basis. She acted as counsel to the potential private placement purchasers of debt for the LaGuardia Airport Terminal B Redevelopment Project. She also is one of several attorneys at the firm acting as special counsel to the USEPA as lender under a WIFIA program for numerous projects, including loans to several municipalities in the State of California.

In addition to her infrastructure procurement practice, Ms. Murakami has over twenty years of experience in a broad variety of public finance transactions, particularly in California, and in particular has specialized in the representation of credit and liquidity providers. She has extensive public finance experience in short-term financings, including variable rate demand obligations and commercial paper, both as counsel to the credit and liquidity providers and as bond counsel, in a broad variety of public finance transactions, including lease revenue, assessment, special tax, teeter obligation, sales tax revenue, pension obligation, enterprise revenue bonds, certificates of participation, bond anticipation notes and commercial paper, and tax-exempt financings for universities, museums and hospitals. Ms. Murakami's practice also includes the representation of commercial banks in loans, lines of credit and private placement purchases.

Ms. Murakami joined the firm as a partner in 2009 and is based in the firm's Los Angeles office.

## CONTACT

P 213.236.9063
E mmurakami@hawkins.com

## PRACTICES

Alternative Project Delivery
Bank Counsel
Bond Counsel
Project Finance
Public-Private Partnerships

## INDUSTRIES

Cultural Institutions
Education
Health Care
Power and Renewable Energy
Public Buildings
Solid Waste
Transportation
Water

## EDUCATION

University of California, Los Angeles, B.A.
University of California, Berkeley School of Law, J.D.

## ADMISSION

California

Thierry Bouvelot

## PROJECT MANAGER

**Senior Manager**

### ROLE

Thierry will manage the day-to-day aspects of the project ensuring it is within budget, on schedule, and effectively meets the City's objectives. He will also lead the consulting staff in conducting analyses and preparing deliverables for the project. Thierry will serve as the City's main point of contact for the project.

### PROFILE

Thierry is a Senior Manager with Raftelis (previously he was an Associate of Public Resources Management Group, Inc.) and brings a client focused approach with a strong desire to provide value and client satisfaction. Thierry has performed numerous revenue sufficiency and cost of service utility and cost of service studies for over 40 local governments, has prepared financial feasibility and disclosure reports totaling over $1 billion in debt proceeds issued through the traditional bond market, state revolving loans.

Thierry specializes in the performance of solid waste cost of service and financial evaluations with the following areas of concentrations:

- Solid waste collection cost of service and rate studies;
- Disposal cost of service and rate studies;
- Assistance in formation of Solid Waste Enterprise Fund and development of residential assessments;
- Financial and economic evaluations of solid waste system operations;
  - E.g., full and marginal cost evaluations, cost benefit analyses, Landfill financial assurance, revenue enhancements (host fees, out-of-county rates, etc.), recycling market evaluations and other analyses.
- Long-Range Financial Modeling / Planning in Support of Master Plans;
- Landfill capacity utilization and valuations;
- Review of contractual arrangements (e.g., evaluation of collection hauler bids/contracts);
- Assistance in development of municipal interlocal agreements; and
- Assistance in feasibility studies in the issuance of debt (i.e., Bond Feasibility studies) and assistance in development of Bond Resolution / Trust Indenture agreements.

Thierry is an active member of several industry associations, including SWANA, and has been a primary author to several publications and a featured speaker at several conferences including the 2017 Waste to Energy Conference to present the *Lee County Success Story, Weathering the Storm to Achieve Financial Sustainability*, the 2018 Florida SWANA conference to present on *The Circular Economy (CE) and Solid Waste Management* and the 2019 Florida SWANA conference to lead a panel discussion regarding the *State of Curbside Recycling in Florida.*

### Specialties

- Solid waste fees
- Water & sewer rate fees
- Parks & recreation fees
- Wholesale fees
- Impact fees
- Feasibility study
- Utility acquisition/valuations
- Capital planning tools
- Business/strategic plans/negotiations
- Desktop financial asset evaluation/ reinvestment
- Cost/benefit analysis/life cycle NPV analysis
- Financial policies/best management practices

### Professional History

- Raftelis: Senior Manager (2019-present)
- PRMG: Associate (2005-2019)

### Education

- Bachelor of Arts in Economics; Bachelor of Arts in International Business - Rollins College (2005)

### Certifications

- Certified Government Financial Manager, No. 15483

### Professional Memberships

- Solid Waste Association of North America: Florida - Finance & Planning Committee
- AWWA: Florida Section - Finance & Rates Committee
- WEF: Utility Management Committee
- Association of Government Accountants
- Government Finance Officers Association

KEY PROJECT EXPERIENCE

### Municipality of Anchorage (AK)

The Municipality of Anchorage, Alaska (MOA) provides refuse collection and solid waste disposal services to a population of approximately 292,000 residents. Raftelis worked with the Solid Waste Services department to develop a long-range solid waste collection and disposal model for use by staff to analyze the sufficiency of existing rate revenues to fund: program capital financing alternatives, test sensitivity of disposal alternatives to landfilling, assess the sufficiency of the current closure fund reserves, and perform a triple bottom line evaluation to assess the environmental and social impacts of disposal alternatives, under consideration by the MOA.

### Hillsborough County (FL)

Hillsborough County (County) is located on the gulf coast of central Florida and provides solid waste and collection disposal services to approximately 300,000 assessed residential dwelling units and processes over 1 million tons of waste annually. The County operations include waste-to-energy facility, landfill, composting, material recycling facility, household hazardous waste, transfer stations and local community collection sites. Thierry has performed annual solid waste forecasts for the County since 2011, including retail and wholesale rate setting, cost / benefit evaluations, assistance in review of franchise collection agreements, landfill gas RFP procurement, determination of average and marginal cost of operation by disposal facility, support for credit rating agency surveillance and feasibility analyses. As it relates to review of contract operations, Thierry was responsible for:

- Modeling and forecasting contracted operating costs;
- Independent review associated with calculation of allowable indexing to various contracted service rates for collection, facility operations and waste disposal; and
- Development of a proposed contracted services pass-through provision to the solid waste assessment and tip fees.

Thierry also assisted the County with their issuance of the Solid Waste and Resource Recovery Facility Bonds Series 2016 A/B in the combined principal amount of approximately $114 million.

As a result of the recent change in market conditions for the sale of recovered materials, the County requested Thierry assist in the analysis and review of the County's currently curbside recycling agreement. The evaluation is currently on-going.

### Lee County (FL)

Lee County (County) is located on the gulf coast of southwest Florida and provides solid waste and collection disposal services to approximately 167,000 assessed residential dwelling units located in unincorporated areas of the County, as well as, providing disposal service to several municipalities within the County. The County operations include waste-to-energy facility, ash landfill, composting, material recycling facility, C&D recycling facility, household hazardous waste, transfer stations and local community collection sites. Thierry has performed annual solid waste forecasts for the County since 2015, including performing comprehensive revenue sufficiency and cost of service evaluations for the solid waste system resulting in the adoption of the current solid waste assessment and tip fees currently charged by the County. As it relates to review of contract operations, Thierry was responsible for:

- Modeling and forecasting contracted operating costs;
- Review of historical charges relative to actual contract terms;
- Master plan support services and
- Assistance in drafting of a new bond resolution with specific consideration of contracted services.

### Babcock Ranch Community Independent Special District (BRCISD)

BRCISD is in Southwest Florida and is a new planned residential and retail commercial known as America's first solar powered community. Thierry assisted the BRCISD in the creation of a solid waste collection enterprise fund model as part of the creation of the Babcock Ranch CDD. The study required assistance in the development of interlocal agreements, pricing mechanisms, life-cycle cost analysis and financial projections. The financial projections required detailed accounting of future costs related to expansion and scaling of vehicles, warehousing and CNG fueling facilities, as well as, expected timing and cost of vehicle replacements. In addition, Thierry assisted in developing estimated routes, hours of operation and staffing needs. The study resulted in the approval of the recommended rates for service and the provision of a working financial model for staff use for planning and budgeting.

# Lauren Devine

## STAFF CONSULTANT

**Senior Consultant**

### ROLE

Lauren will work at the direction of Thierry in conducting analyses and preparing deliverables for the project.

### PROFILE

Lauren has a background in geology and geophysics. During her time with Raftelis, Lauren has become proficient in financial modeling, data analysis, and technical writing. She joined Raftelis in 2017 as an associate consultant after working as a geophysicist for more than ten years. As a geophysicist she worked with private firms and water districts to address capital infrastructure needs, mitigate the potential of groundwater contaminants, and evaluate the integrity of groundwater basins/well locations.

### KEY PROJECT EXPERIENCE

**Beaumont-Cherry Valley Water District (CA)**

The Beaumont-Cherry Valley Water District commissioned Raftelis in 2019 to develop a financial plan and cost-of-service study. The main objectives of the study were to ensure financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves. Lauren served as lead consultant and was responsible for gathering and analyzing data, creating the financial plan and rate model, developing rate options, and drafting the detailed report highlighting the decisions made and the explaining the calculation of the final rates. Raftelis provided recommendations to the rate structure to ensure compliance with the cost of service principles of Proposition 218. Residential water rates switched from a two-tiered rate structure to a three-tiered rate structure. Additionally, Raftelis calculated drought rates.

**Dublin San Ramon Services District (CA)**

The Dublin San Ramon Services District commissioned Raftelis in 2018 to develop a financial plan and cost-of-service study for the water utility. The main objectives of the study were to ensure financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves. Lauren was responsible for gathering and analyzing data, creating the financial plan, developing the cost-of-service model and rate model, and assisted in drafting the detailed report highlighting the decisions made and the explaining the calculation of the final rates. Raftelis recommended that the District adjust revenue by 3% for each of the next five years and incorporate a pass-through provision for increased costs incurred from their wholesaler, Zone 7 Water Agency. In addition, Raftelis provided recommendations to the rate structure to ensure compliance with the cost of service principles of Proposition 218. Residential switched from a three-tiered rate structure to a uniform rate structure and non-residential rates were adjusted from a seasonal rate structure to a uniform rate structure.

**East Bay Municipal Utility District (CA)**

East Bay Municipal Utility District (District) hired Raftelis in 2018 to perform a comprehensive wastewater cost of service study and to update the capacity fee for its wastewater utility. The last comprehensive cost of service study was done in 2015 for the wastewater treatment charges. As part of the study, Raftelis thoroughly examined the District's cost structure, analyzed wastewater flow and customers data, and evaluated alternative billable constituents to develop an

**Specialties**

- Excel modeling
- Utility financial analysis
- Utility cost of service & rate structure studies
- Capacity fee studies
- Data collection & analysis
- Geophysical data analysis
- Groundwater sustainability analysis
- Database management
- Technical report writing & review

**Professional History**

- Raftelis: Senior Consultant (2021-present); Consultant (2019-2020); Associate Consultant (2017-2018)
- GEOVision Geophysical Services: Senior Staff Geophysicist (2007-2017)
- GeoConcepts, Inc.: Staff Geologist (2005-2007)

**Education**

- Bachelors in Geology - California State University, San Bernardino (2012)

**Professional Memberships**

- California Society of Municipal Finance Officers

equitable rate structure that meets Proposition 218 requirements and the District's goals and objectives. While the proposed treatment rates retain the current rate structure, the individual rates are realigned to reflect the cost of service. Lauren assisted with data collection and model development for both the cost of service and capacity fee studies.

**City of Galt (CA)**
In early 2017, the City of Galt (City) began working on a comprehensive wastewater rate study for the City. The goal of the project was to evaluate several cost allocation and rate structures to ensure compliance with Proposition 218. Additionally, the City hired Raftelis to perform annual updates of the financial plan for both water and wastewater. Lauren worked with the City and project manager to assist with completing the 2019 annual update.

**Helix Water District (CA)**
The Helix Water District (District) hired Raftelis to conduct a comprehensive cost-of-service analysis and financial plan update. The last cost-of-service study was conducted back in 1988 and needed to be updated to be in compliance with Government Code Section 54999.7(c). Rates for a five-year period were adopted in October of 2015. Additionally, the District hired Raftelis to perform annual updates of the financial plan. Lauren worked with the District and project manager to assist with completing the 2018 and 2019 annual updates.

**Jurupa Community Services District (CA)**
The Jurupa Community Services District commissioned Raftelis in 2019 to develop financial plans and cost-of-service studies for the water and wastewater services. The main objectives of the study were to ensure financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves. Lauren was responsible for gathering and analyzing data, creating the financial plans, developing the cost-of-service and rate models, and drafting the detailed report highlighting the decisions made and the explaining the calculation of the final rates. Raftelis provided recommendations to the rate structure for the water utility to ensure compliance with the cost of service principles of Proposition 218. Water rates retained the four-tier rate structure for single-family residential customers but revised the tier definitions based upon water demand patterns. Multi-family residential and non-residential accounts switched from a four-tiered rate structure to a uniform rate structure.

**Lake Hemet Municipal Water District (CA)**
The Lake Hemet Municipal Water District commissioned Raftelis in 2017 to develop financial plans and cost-of-service studies for the water and wastewater services. The main objectives of the study were to ensure financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves. Lauren was responsible for gathering and analyzing data, creating the Garner Valley enterprise financial plan, developing the cost-of-service model and rate model, and assisted in drafting the detailed report highlighting the decisions made and the explaining the calculation of the final rates. As part of the study, Raftelis evaluated interfund loans between enterprises with varying repayment terms and modeled various rate structures.

**Las Virgenes Municipal Water District (CA)**
Lauren assisted in the preparation of the 2018 miscellaneous fees study report for Las Virgenes Municipal Water District (District). In this report, she documented the principles and methodologies used to update the District's miscellaneous fee schedule. The miscellaneous fees included both penalty fees, charged when users violate terms of agreement/service, and user fees charged to recover the costs of a service provided by the District.

**Leucadia Wastewater District (CA)**
The Leucadia Wastewater District hired Raftelis to update its financial plan for both its wastewater and recycled water enterprises and to update the capacity fee for its wastewater utility. The main objectives of the study were to ensure long-term financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves over a 20-year planning period. Lauren assisted with data collection and model development for both enterprises and assisted in drafting the detailed report highlighting the decisions made.

# **A-2** Subcontractor Acknowledgment

register with the State of California Secretary of State before a contract can be executed (http://www.sos.ca.gov/business/).

9.1.2 Location of the company offices.

9.1.3 Location of the office servicing any California account(s).

9.1.4 Number of employees both locally and nationally. Specify the number of full time and part-time employees residing in Long Beach.

9.1.5 Location(s) from which employees will be assigned.

9.1.6 Name, address and telephone number of the Contractor's point of contact for a contract resulting from this RFP.

9.1.7 Company background/history and why Contractor is qualified to provide the services described in this RFP.

9.1.8 Length of time Contractor has been providing services described in this RFP to the **public and/or private sector**. Please provide a brief description.

9.1.9 Resumes for key staff to be responsible for performance of any contract resulting from this RFP.

9.1.10 Financial stability: Proposers must provide financial statements giving the City enough information to determine financial stability. These statements may include, but are not limited to:

a) Financial Statement or Annual Report;
b) Business tax return;
c) Statement of income and related earnings;

The level and term of documentation required from the proposer to satisfy the City will be commensurate with the size and complexity of the contract and proposers should submit accordingly. If the information submitted by the proposer, or available from other sources, is insufficient to satisfy the City as to the proposer's contractual responsibility, the City may request additional information from the proposer or may deem the proposal non-responsive. The City's determination of the proposer's responsibility, for the purposes of this RFP, shall be final.

9.2 Subcontractor Information

9.2.1 Does this proposal include the use of subcontractors?

Yes __X__ No _____ Initials

If "Yes", Contractor must:

9.2.1.1 Identify specific subcontractors and the specific requirements of this RFP for which each proposed subcontractor will perform services.

9.2.1.2 Provide the same information for any subcontractors as is indicated in Section 9.1 for the Contractor as primary contractor.

# **A-3** Letters of Commitment

May 21, 2021

HDR Engineering, Inc.
Mr. John Carlton, Project Manager
100 Oceangate, Suite 1120
Long Beach, CA 90802

**Subject:** **Letter of Commitment for the City of Long Beach Request for Proposal Number ER21-048 for Professional Engineering and Recycling/Solid Waste Management Consultant Services**

Dear Mr. Carlton,

Hawkins Delafield & Wood LLP is pleased to commit legal procurement and contract support services to HDR Engineering, Inc. (HDR) for the City of Long Beach's Professional Engineering and Recycling/Solid Waste Management Consultant Services contract.

Per the RFP, Hawkins Delafield & Wood LLP has read and will agree to abide by HDR's obligations, if awarded this contract.

We look forward to a successful contract working with the City and HDR.

Sincerely,
**Hawkins Delafield & Wood LLP**

Eric J. Sapir
Partner

May 21, 2021

HDR Engineering, Inc.
Mr. John Carlton, Project Manager
100 Oceangate, Suite 1120
Long Beach, CA 90802

**Subject:** **Letter of Commitment for the City of Long Beach Request for Proposal Number ER21-048 for Professional Engineering and Recycling/Solid Waste Management Consultant Services**

Dear Mr. Carlton,

Raftelis is pleased to commit financial modeling and analysis services to HDR Engineering, Inc. (HDR) for the City of Long Beach's Professional Engineering and Recycling/Solid Waste Management Consultant Services contract.

Per the RFP, Raftelis has read and will agree to abide by HDR's obligations, if awarded this contract.

We look forward to a successful contract working with the City and HDR.

Sincerely,
**Raftelis**

Thierry Boveri, CGFM
Senior Manager

# EXHIBIT "B"

## Rates or Charges

**Part 2: Cost Proposal**

# Professional Engineering and Recycling/Solid Waste Management Consultant Services

**RFP ER21-048**

**City of Long Beach**

June 3, 2021

HDR

# Contents

**1 Cost Proposal** **01**

UNDER SEPARATE COVER

Part 1: Narrative/Technical Proposal

Part 3: City Required Purchasing Forms

Part 4: Financial Stability Documents/Statements

# 1 Cost Proposal

City of Long Beach
Purchasing Division
411 West Ocean Boulevard, 6th Floor
Long Beach, CA 90802

# Appendix A

# COST PROPOSAL

| COST PROPOSAL Please provide the hourly rate for each service. Cost shall be all-inclusive. | |
|---|---|
| DESCRIPTION OF SERVICE | HOURLY RATE |
| Principal | $330 |
| Sr. Project Manager | $315 |
| Sr. Manager | $290 |
| Sr. Engineer | $245 |
| Sr. Consultant | $225 |
| Project Engineer | $200 |
| Environmental Planner | $190 |
| Sr. GIS Mapping | $185 |
| Outreach Specialist | $180 |
| GIS Mapping | $150 |
| Project Accountant | $140 |
| Administrative Assistant | $125 |
| Project Coordinator | $90 |
| Attorney | $525 |
| Paralegal | $150 |

# EXHIBIT "C"

City's Representative:

Lauren Rivera

# EXHIBIT "D"

Materials/Information Furnished: None

# EXHIBIT "E"

## Consultant's Key Employee:

## Eric J. Sapir