CRRA
REGULAR BOARD MEETING
AUGUST 21, 2013

CONNECTICUT
RESOURCES
RECOVERY
AUTHORITY

100 Constitution Plaza • Hartford • Connecticut • 06103 • Telephone (860)757-7700
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MEMORANDUM

TO: CRRA Board of Directors

FROM: Moira Kenney, HR Specialist/Board Administrator

DATE: Aug. 14, 2013

RE: Notice of Regular Board Meeting

There will be a Regular Board Meeting of the Connecticut Resources Recovery Authority Board of Directors on Wed. Aug. 21, 2013, at 9:00 a.m. The meeting will be available to the public in Classroom B at the Mark Twain House, 351 Farmington Ave, Hartford, CT 06105.

Please notify this office of your attendance at (860) 757-7787 at your earliest convenience.

Connecticut Resources Recovery Authority
Regular Board of Directors Meeting
Agenda
August 21, 2013
9:00 AM

I. Pledge of Allegiance

II. Public Portion

A ½ hour public portion will be held and the Board will accept written testimony and allow individuals to speak for a limit of three minutes. The regular meeting will commence if there is no public input.

III. Finance

1. Board Action will be sought for Approval of the Resolution Regarding Reassignment of Certain Assets (Attachment 1).

2. Board Action will be sought for Approval of the Resolution Regarding the PILOT Agreement with the City of Hartford (Attachment 2).

IV. Management Report

1. Review and Discussion – Public Act 13-285 and Section 9 Transition Plan Process (See Attached Package).
2. Board Action – will be sought for Approval of Resolution Regarding Expenditure In Support of PA13-285 Sec. 9 Transition Plan.

VII. Executive Session

An Executive Session will be held to discuss pending litigation, trade secrets, personnel matters, security matters, pending RFP's, and feasibility estimates and evaluations.

RESOLUTION REGARDING REASSIGMENT OF CERTAIN CRRA ASSETS AND LIABILITES

WHEREAS, The Mid-Connecticut Project (the "Project") officially ended on November 15, 2012; and

WHEREAS, The Connecticut Solid Waste System (the "CSWS") officially began operations on November 16, 2012; and

WHEREAS, The Authority recognized the need to distinguish between the revenues and expenses of the expiring Project and the successor Authority Divisions; and

WHEREAS, This Board of Directors (the "Board") adopted the Reassignment of Certain CRRA Assets and Liabilities on October 25, 2012, which assigned certain Project assets to the CSWS on November 16, 2012; and

WHEREAS, Subsequent communications with the Authority's auditors has determined that the Authority's assets should be consolidated and recorded in a manner that better represents the ownership and contractual relationship of those assets; and

WHEREAS, In Fiscal Year 2013, certain reserves and expenses were established and recorded as part of CSWS expenses and assets and now need to be reassigned to the Property Division; and

WHEREAS, The Fiscal Year 2014 Property Division and CSWS budgets now need to be revised to accommodate the reassignment of these assets;

NOW THEREFORE, it is

RESOLVED: That this Resolution regarding Reassignment Of Certain CRRA Assets And Liabilities supersedes in its entirety the Resolution of this Board of the same name dated October 25, 2012; and

FURTHER RESOLVED: That, as of November 16, 2012, the net assets listed on Attachment A hereto, will be included in the Landfill Division; and

FURTHER RESOLVED: That, as of November 16, 2012, those Project Net Assets not part of the Landfill Division will be included in the Property Division; and

FURTHER RESOLVED: That the Capital Expenditure Reserve be reassigned to the Property Division and that the Fiscal Year 2013 contributions be made as a transfer from CSWS to the Property Division; and

FURTHER RESOLVED: That the Fiscal Year 2013 operating capital depreciation expenses for the CSWS be recorded in the Property Division and reimbursed by the CSWS; and

FURTHER RESOLVED: That the Fiscal Year 2014 contributions to the Capital Expenditure Reserve be made as a transfer from the CSWS to the Property Division; and

FURTHER RESOLVED: That any Fiscal Year 2014 operating capital depreciation expenses be funded through the Capital Expenditure Reserve and that the CSWS would contribute additional funds in the amount of those expenses to replenish the Reserve.

CRRA
"Landfill Division"
11/16/2012

Assets

Barbarino Property/Wallingford
Ellington DEP Landfill Trust Fund
Ellington Landfill Post Closure Reserves
Hartford Landfill Post Closure Reserves
All Landfill Equipment & Buildings
Shelton DEP Landfill Trust
Shelton Landfill Future Use Reserve
Shelton Landfill Post Closure Reserves
Wallingford DEP Landfill Trust Fund
Wallingford Landfill Post Closure Reserves
Waterbury DEP Landfill Trust
Waterbury Landfill Post Closure Reserves

Attachment A

RESOLUTION REGARDING PILOT AGREEMENT WITH THE CITY OF HARTFORD

Resolved: That the President is hereby authorized to execute an Agreement for Payments in Lieu of Taxes with the City of Hartford for a term commencing upon execution thereof by both parties and ending on June 30, 2014, substantially as presented and discussed at this meeting; and

Further Resolved: That the Resolution adopted by this Board at its May 30, 2013 meeting authorizing the President to negotiate a payment schedule of a new PILOT Agreement with the City of Hartford is hereby amended such that the anticipated payment date of the first installment of PILOT shall be within ten (10) business days of execution of the Agreement by both parties.

DRAFT

AGREEMENT FOR PAYMENTS IN LIEU OF TAXES

PREAMBLE

This AGREEMENT FOR PAYMENTS IN LIEU OF TAXES (this "Agreement") is made effective as of [**DATE**] (the "Effective Date"), by and between the CONNECTICUT RESOURCES RECOVERY AUTHORITY, a body politic and corporate, and a political subdivision of the State of the Connecticut ("CRRA"), and the CITY OF HARTFORD, a municipal corporation having its territorial limits with the County of Hartford and the State of Connecticut (the "City"). CRRA and the City are sometimes hereinafter referred to individually as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Conn. Gen Stat. § 22a-270 provides, inter alia, that CRRA shall be exempt from state and municipal taxes but may enter into agreements to make payments in lieu of such taxes ("PILOT"); and

WHEREAS, the prior agreement between the Parties for the payment of PILOT by CRRA to the City (the "Prior PILOT Agreement") expired on or about November 15, 2012; and

WHEREAS, on or about September 27, 2012, the Board of Directors of CRRA approved a resolution authorizing the payment of PILOT by CRRA to the City after the expiration of the Prior PILOT Agreement, such resolution having been amended by the CRRA Board on or about February 28, 2013, and further amended by the CRRA Board on or about May 30, 2013, and further amended by the CRRA Board on or about August 21, 2013 (as so amended, the "Resolution"); and

WHEREAS, the Parties wish to enter into this Agreement for the payment of PILOT by CRRA, in a manner consistent with the Resolution;

NOW THEREFORE, in consideration of the mutual promises herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby covenant and agree as follows:

1. DEFINITIONS; CONSTRUCTION:

(a) Incorporation of Recitals. The recitals to this Agreement are incorporated into the body of this Agreement as a part hereof.

(b) General Definitions and Construction. As used in this Agreement, except as expressly provided or unless the context otherwise requires: (i) the terms defined herein include the plural as well as the singular; and (ii) the words "herein," "hereof" and "hereunder" and words of similar import refer to this Agreement as a whole and not to any particular section or subsection.

2. TERM; RATIFICATION OF RESOLUTION:

The term of this Agreement (the "Term") shall begin on the Effective Date and shall end on June 30, 2014; provided, that the obligation of CRRA to pay PILOT to the City shall commence as of the execution by both parties of this Agreement.

Each Party recognizes and ratifies the incorporation of the Resolution herein and agrees to be bound by the Resolution. The Resolution is described in Attachment A hereto and made a part hereof.

3. AMOUNT AND PAYMENT OF PILOT:

CRRA shall pay PILOT to the City: (i) within ten (10) business days of the execution by both parties of this Agreement, in the amount of ONE MILLION ONE HUNDRED THOUSAND DOLLARS ($1,100,000); and (ii) on or before June 30, 2014, contingent upon the determination by the CRRA Board of the adequacy of CRRA's then-current cash position, in the amount of ONE MILLION ONE HUNDRED THOUSAND DOLLARS ($1,100,000); the sum of the amounts paid pursuant to (i) and (ii) of this Section 3(a) constituting full satisfaction of CRRA's PILOT obligations to the City for the Term. The Parties agree that, except as contemplated by this Agreement, no other PILOT or tax payments shall be paid by CRRA to the City during the Term.

4. MUTUAL REPRESENTATIONS AND WARRANTIES:

Each Party represents and warrants that (i) it has the full power and authority to execute and perform its obligations under this Agreement; (ii) it has taken all necessary action to authorize its execution and performance hereunder; and (iii) this Agreement is the legal, valid and binding obligation of such Party and is enforceable in accordance with its terms.

5. MISCELLANEOUS:

(a) Payments. All PILOT due hereunder shall be sent by CRRA to the City via wire transfer or first-class mail to the following address, or to such other address as the City may designate from time to time.

[PAYMENT ADDRESS]

(b) Notices. All notices and other correspondence with respect to this Agreement shall be sent via first-class mail or overnight courier to the following addresses:

If to CRRA:

Connecticut Resources Recovery Authority
100 Constitution Plaza, 6th Floor
Hartford, CT 06103
Attn: President

If to the City:

[ADDRESS]

(c) Captions for Convenience Only. The captions in this Agreement are for convenience only and shall not change, restrict or otherwise alter the express provisions hereof.

(d) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Connecticut, except for any requirements concerning choice of law, the effect of which would be to apply the substantive law of a state other than the State of Connecticut.

(e) Entire Agreement. This Agreement constitutes the entire agreement of the Parties concerning the subject matter hereof and supersedes all previous agreements between the Parties with respect thereto. The terms and provisions hereof shall not be modified, amended or otherwise altered except by a writing executed by each Party.

(f) Survivorship. If any term or provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or otherwise in conflict with applicable law, the validity of the remaining terms and provisions hereof shall not be affected thereby, and the rights and obligations of the Parties shall be construed and enforced as if this Agreement did not contain the particular term or provision held to be illegal, invalid or otherwise in conflict with applicable law.

(g) Joint Effort. This Agreement shall be deemed to be the product of joint drafting by the Parties and shall not be strictly construed against either Party.

(h) Execution and Delivery. This Agreement may be executed in any number of original or facsimile counterparts and as separate counterparts, all of which when so executed and delivered will together constitute one and the same instrument. If the Parties elect to execute this Agreement by facsimile or other electronic means, the same shall have the same force and effect as if this Agreement had been manually executed by the Parties in one complete document, and the Parties shall exchange wet-signature original signature pages within a reasonable time after such execution.

IN WITNESS WHEREOF, the Parties have hereunto set their hands as of the date first written above.

THE CITY OF HARTFORD

Witness_____

Witness_____

By:_____
[NAME]
Its [TITLE], duly authorized

CONNECTICUT RESOURCES RECOVERY AUTHORITY

Witness_____

Witness_____

By:_____
[NAME]
Its [TITLE], duly authorized

Attachment A

Resolved: CRRA will pay a PILOT to the City of Hartford, in an amount to be determined on an annual basis as part of CRRA's budgeting process; and

Further Resolved: That the portion of this Board of Directors' September 27, 2012 Resolution Regarding the New PILOT Agreement with the City of Hartford which prescribed the manner in which the amount of PILOT would be calculated each year is hereby rescinded, and that the President is authorized to negotiate a payment schedule with the City for a new PILOT which is reflected in the Fiscal Year 2014 Budget at $2.2 million; and

Further Resolved: That the payment schedule for an annual Payment in Lieu of Taxes ("PILOT") to be negotiated with the City of Hartford by the President, as authorized by this Board at its February 28, 2013 meeting, shall anticipate semi-annual installments of PILOT, payment of the first installment to be in July and payment of the second installment to be after December contingent upon determination by the Board of the adequacy of CRRA's then-current cash position; no payment shall be made until the Board has approved a final agreement with the City; and

Further Resolved: That the Resolution adopted by this Board at its May 30, 2013 meeting authorizing the President to negotiate a payment schedule of a new PILOT Agreement with the City of Hartford is hereby amended such that the anticipated payment date of the first installment of PILOT shall be within ten (10) business days of execution of the Agreement by both parties.

CRRA
Board Meeting
August 21, 2013
P.A. 13-285
Section 9 Transition Plan Process

I. **Section 9 Transition Plan Summary**

II. **Timetable & Milestones**

III. **Transition Plan Outline**

IV. **External Resource Requirements**

- **Summary Scope of Services**
- **Estimated Cost**

V. **Board Resolution – Budget and Funding**

VI. **Attachment's**

A. **Consultants' Background**
B. **Public Act No. 13-285**
C. **Solid Waste Plan, Executive Summary – 2006**
D. **Business Model Scenario and Required Analysis**

Section 9 Transition Plan Summary

CRRA
PA 13-285
Section 9 Transition Plan Summary

A. Requirements

1. CRRA to develop a Transition Plan for
   a. Achieving a sustainable business model that improves the long-term stability of said authority or
   b. Conducting the dissolution of said authority and the dispensing of said authority's assets
   c. Submittal of plan by November 30, 2013 to appropriate executive and legislative bodies
   d. The plan to be developed in consultation with the Section 8 task force.
   e. The plan shall detail and give consideration to, but not be limited to, an assessment of:
      (1) The benefits and consequences of: (i) The closure or sale of the Mid-Connecticut Resource Recovery Facility, (ii) the transition of such facility to an alternative use such as a solid waste management facility, and (iii) the sale of other authority assets;
      (2) The reductions in authority expenses, including, but not limited to, management fees, labor costs, contract obligations and legal fees;
      (3) Said authority's financial and legal liabilities and an evaluation of whether such liabilities may be eliminated or mitigated;
      (4) The operational requirements of said authority's regional transfer stations, landfills and any other functional role of said authority;
      (5) Said authority's state-wide role in the area of bonding, education and development and how much transition plan affects that role; and
      (6) The post-closure responsibilities and liabilities of said authority for landfills under said authority's care and control.

B. Key Assumption

1. The transition plan will be predicated on the most current State of Connecticut Solid Waste Plan dated December 2006 and using the 2006 plan and existing MSA's and contracts as the baseline for CRRA's financial forecast and enabling statutes.

Timetable & Milestones

CRRA
Timetable & Milestones/Section 9 of P.A. 13-285

Board Meeting to Review PA 13-285 and CRRA direction	7/18/13
Management commencement of Process (Internal and External)	7/19/13
Distribute Board Package (Section 9 process)	8/14/13
Board meeting to approve Section 9 Transition Plan Process and supporting Resolutions	8/21/13
Public Input Regarding PA 13-285 – Publish Legal Notice	8/23/13
Customer Web Based Survey	8/23/13
Public Comments Due	9/13/13
lst Draft of document for internal review by Management	10/8/13
2nd Draft of document for internal review by Management	10/16/13
Send Draft of Section 9 Transition Plan to Board	10/21/13
Board comments due	10/28/13
Submit Transition Plan to Section 8 Task Force for comment	11/1/13
Responses due from Section 8 Task Force	11/8/13
Finalize Section 9 Report by Management	11/14/13
Submit Final Transition Plan to Board	11/15/13
Board Meeting and approval of Transition Plan	11/21/13
Submission to State of Section 9 Transition Plan	11/30/13

Transition Plan
Outline

CRRA
Transition Plan Outline
P.A. 13-285

1. Executive Summary
    - A. Purpose
    - B. Current Role of CRRA
    - C. Description of Plan
        - (1) Benefits
        - (2) Consequences

2. Sustainable Business Model
    - A. Existing Facility Operation Model Discussion
    - B. Transition to Transfer Mode
    - C. New Technology Mode

3. Conducting Dissolution Discussion

4. Discussion of Benefits and Consequences
    - A. Closure or Sale
    - B. Transition to Alternative Use
    - C. Sale of Authority Assets

5. Assessment of authority expense
    - A. Management fee's, labor costs, contract obligations, legal fees
        - (1) Historical Efforts
        - (2) Future Outlook

6. Assessment of Financial and Legal Liabilities and Evaluation (Elimination/Mitigation)

7. Assessment of Operational Requirements (Description for transfer stations, landfills and other functional role)
    - A. Towns (e.g. Community Host Fee's)
    - B. MSA's
    - C. Haulers
    - D. Operator Contracts
    - E. Federal, State and Local Permits
    - F. Other Contracts
    - G. Administrative support to the Southeast Regional Resources Authority

H. Administrative support to the Southwest Division (i.e. Fairfield County Towns)
I. Implementation of State Solid Waste Plan
J. See Section 9 for landfills.

8. Assessment of State-wide authority roles in bonding, education and development and impact on roles from Transition Plan

9. Assessment of Post Closure Responsibilities and Liabilities for landfills

10. Exhibits
    A. 5 Year Authority Operating Forecast
    B. 10 Year Capital Expenditure Forecast
    C. Technology Assessment
    D. Competitive/Economic Assessment
    E. Out of State Landfill Assessment
    F. Valuation Assessment
    G. Solid Waste Plan
    H. Enabling Statute
    I. Authority Retrofit Costs to MidConn Facility to transfer site
    J. Liability Review Matrix
    K. Northeast Region Disposal Options Map
    L. Summary of Public Comments

External Resource Requirements

External Resource Requirements

Transition Plan

Issue/Activity/Scope	Consultant	Start Date
I. General Transition Plan Support		
A. Assist in coordinating documents among CRRA and other consultants working on the Transition Plan B. Attend/ participate in meetings & Conference calls with CRRA and other consultants to effectuate development and completion of transition plan C. Assist in providing information to the RRF Task Force D. Provide review, editing and production support for transition plan outputs (draft plan; exhibits, presentations). Deliverable: Assist in developing information, drafting documents, participating in meetings necessary to produce the transition plan Estimated Cost: GBB, Inc.: $40,000 Environmental Capital: $15,000	GBB, Inc. and Environmental Capital LLC	8/12/13

External Resource Requirements

Transition Plan

II. Economic Market Assessment and Support		
A. Review Publicly owned Solid Waste Facilities in Northeast/Mid-Atlantic region and assess market competitiveness without public option. 1. Evaluate market conditions supporting the facilities (e.g., flow control, market participation) 2. Provide an assessment of market competitiveness in the regions around the RRFs with/without landfill availability 3. Assess impact on Pricing with CRRA removed as a "defacto" price cap regulator	GBB, Inc. and Environmental Capital LLC	8/22/13
B. Long Term Financing (debt issue) availability for public solid waste facilities 1. Impact of financing on cost structure	Environmental Capital LLC	
C. This analysis to provide Support for Financial Forecast & Models	Both	
Deliverable: An economic market assessment report that addresses the impacts of eliminating the Mid-Connecticut Resource Recovery Facility. Estimated Cost: GBB, Inc.: $26,000 Environmental Capital LLC: $49,000		

External Resource Requirements

Transition Plan

III. Out of State Disposal (T&D) Market Assessment		
A. Assume CRRA has 500,000 TPY of MSW from 4 locations 1. CSWS RRF (as transfer station); Essex TS; Torrington TS; Watertown TS B. Identify candidate landfills able to accept up to 500,000 TPY of MSW C. Disposal Facility data to be tabulated 2. Name, location, owner, operator, types of waste accepted, current estimated capacity, available capacity, availability of rail access, tip fee range D. Provide current estimated costs for MSW T&D to out-of-state Landfills & RRFs Deliverable: Report summarizing results of assessment Estimated Cost: $10,000	GBB, Inc.	8/22/13
IV. Analysis of MSW supply in Central Connecticut Region for Hartford RRF		
A. Forecast Projected Annual Quantity of MSW available in region for Hartford RRF 1. Consider region to include Springfield, MA area 2. Consider "what if" compostables diverted from CT waste stream 3. Consider "what if" enhanced recycling for other materials; increase in diversion rate? 4. Review CT Governor's Recycling Task Force Report, CY2012 i. Assess Timeframe & likelihood 5. Consider Demographic changes Deliverable: Report summarizing results of analysis Estimated Cost: $13,000	GBB, Inc.	8/22/13

External Resource Requirements

Transition Plan

V. Technology Assessment		
A. Develop Report entitled New & Emerging Technologies for MSW Disposal 1. Summarize new and emerging technologies 2. Identify technologies that have capability for consideration as cost-effective alternatives to traditional W-T-E for management of up to 720,000 TPY of MSW 3. Estimate Timeframe to bring on line 4. Estimate Cost to Bring on line, and subsidy needed 5. Identify possible legislative actions to support development Deliverable: Report on New & Emerging Technologies for MSW Management Estimated Cost: $49,000	GBB. Inc.	8/22/13
VI. Transitioning the RRF to a Solid Waste Transfer Station		
A. Develop estimate of cost to modify RRF to operate as transfer station B. Timetable to Modify 1. Permit Modification 2. Construction Deliverables: TBD Estimated Cost: TBD	TBD	TBD

External Resource Requirements

Transition Plan

VII. Review CRRA Internal RRF Capital Expenditure Budget for Next 10 Years		
A. Review CRRA Capital Expenditure Budget for RRF Deliverable: Letter report containing opinion on budget Estimated Cost: $TBD	HDR, Inc.	TBD
VIII. Five Year Energy Market Forecast:		
A. Five Year Forecast of electric revenue for the Hartford RRF, beginning July 1, 2014 1. Plant availability based on averaging past four years of operation 2. Revenue estimate based on prices estimated for the CRRA Node/Connecticut Zone using forward curves for electric prices and natural gas prices Deliverable: Power revenue forecast in Excel format; letter report discussing forecast and documenting methodology and assumptions. Estimated Cost: $10,000	LaCapra Associates	8/14/13

External Resource Requirements

Transition Plan

IX. **Transition Plan for Conducting Dissolution and Sale of Authority (business and/or component assets)**		
A. Outline the Prospectus B. Delineate the Process C. Develop Timetable D. Identify Legal Requirements/Considerations 1. Existing Contract and Non-Contract Obligations i. MSAs ii. NAES Agreement iii. ISO-NE Issues iv. SCRRRA 2. Statutory considerations Deliverable: Report that outlines the Prospectus, summarizes the process to be conducted and the associated timeframe, and the legal obligations and considerations regarding dissolution. Estimated Cost: Environmental Capital LLC: $37,000 Halloran & Sage: $TBD	Environmental Capital LLC | H&S | | | | | |	8/22/13

External Resource Requirements

Transition Plan

X. Valuation - Mid-CT RRF – Cost of Decommission/Demolition		
A. Undertake analysis to develop an order of magnitude cost estimate for demolition the South Meadows RRF. B. Considerations to include 1. Any hazardous materials in or under building. 2. South Meadows property remediation already underway pursuant to Transfer Act 3. Scrap Value Deliverable: Report presenting cost estimate to retire and demolish the South Meadows RRF Estimated Cost: $TBD	TRC Environmental Corp	8/22/13
XI. Valuation - Mid-CT RRF	TBD	
XII. Valuation - Jets (Assuming no Trading Order)	TBD	
XIII. Valuation - Transfer Stations (Ellington, Essex, Watertown, Torrington0	TBD	
XIV. Valuation - 211 Murphy Road Recycling Center & Education Center	TBD	

Board Resolution –
Budget & Funding

RESOLUTION REGARDING EXPENSES IN SUPPORT OF PUBLIC ACT 13-285 SECTION 9 TRANSITION PLAN

WHEREAS, The State of Connecticut (the "State") passed Section 9 of Public Act 13-285 which states that the Connecticut Resources Recovery Authority (the "Authority") shall develop a transition plan; and

WHEREAS, This Board of Directors (the "Board") adopted the Fiscal Year 2014 Property Division Budget on May 30, 2013, which budget anticipated that the Authority would reserve $688,000 for solid waste future development; and

WHEREAS, The initial estimated cost of the Authority's transition plan to be approximately $350,000 to accomplish Section 9 and now considers it prudent to revise the Property Division Budget to incorporate this expense;

NOW THEREFORE, it is

RESOLVED: That the Solid Waste Future Development Reserve be used to fund Authority expense for activities related to the Section 9 Transition Plan of Public Act 13-285 in an amount not to exceed $350,000.

Attachments

A

EDWARD J. MALLEY

EDUCATION

Juris Doctor, Seton Hall Law School, 1991
M.B.A., Finance, Seton Hall University, 1981
B.S., Chemical Engineering, Catholic University, 1976

PROFESSIONAL REGISTRATIONS/LICENSES

State of New York, Attorney and Counselor at Law
Supreme Court of New Jersey, Attorney at Law

TECHNICAL SPECIALTIES

Mr. Malley manages TRC's RE POWER™ Program and is a Senior Principal Consultant with expertise in the following areas:

- Transforming aging power plant sites through retirement, retrofit, replacement and/or redevelopment
- Decommissioning, demolition, remediation, permitting and restoration
- Exit Strategy environmental liability risk transfer and insurance
- Engineering, procurement and construction
- Brownfield redevelopment
- Real estate transactions and asset management
- Negotiation of complex regulatory instruments with federal, state and local agencies

REPRESENTATIVE EXPERIENCE

Mr. Malley has 25 years of technical, financial and legal experience in the environmental consulting and petrochemical industries. He leads TRC's RE POWER™ Program for transforming obsolete power plants sites. He also managed TRC's Exit Strategy program in the greater NYC area, and completed two major brownfield development projects on 30 acres of water front sites. His qualifications include planning and execution of major brownfield redevelopment projects and value creation for corporate real estate portfolios. His background includes service to energy, petroleum and chemical companies as well as real estate developers. Mr. Malley has initiated and completed work throughout the United States, Europe and Asia.

He currently serves as TRC's National REPower Program Manager, focusing on transforming obsolete power plant sites throughout the United States.

New York Power Authority and National Grid – New York 2010- Present

Principal consultant for decommissioning of the Poletti, Far Rockaway and Glenwood Land power plants. Work includes pre-demolition surveys, utility relocation engineering, procurement and construction support.

Con Edison, First Avenue Properties – New York, NY (Principal: 2001 – Present)
Mr. Malley serves as Principal for the Con Edison First Avenue Properties Project. Under this $103 million contract and a $295 million environmental insurance policy, TRC is responsible for decommissioning, demolition and remediation of this former steam and electric generating station in midtown Manhattan. TRC is preparing this nine acre Site for mixed use development pursuant to a voluntary brownfield cleanup agreement with the New York State Department of Environmental Conservation. East River Realty Company has purchased this Site for $680 million and plans to develop over 5,000,000 square feet of commercial and residential space.

Rockrose, Queens West and PepsiCo, Stage 2 Remediation – NY (Principal: 2005 – Present)
Mr. Malley serves as Principal for this 21 acre waterfront site in Long Island City, New York. TRC is responsible for remediating this former petroleum refinery site and preparing it for redevelopment into 3,200 residential apartment and parks. Responsibilities included soil and groundwater investigations, remediation and restoration in accordance with voluntary brownfield cleanup agreements.

Witco Corporation, Asset Restructuring – Greenwich, CT (Director of Global Restructuring: 1997 – 2001)
Mr. Malley served as Director of Global Restructuring for this $3 billion petroleum and chemical company. He led a three year, $300 million engineering, procurement and construction program to upgrade and expand manufacturing facilities. He decommissioned and closed 30 manufacturing plants in the US, Europe and Asia, reducing fixed costs by $200 million per year. He sold 23 plants for $20 million in cash, and reduced contingent financial reserves by $70 million. He represented the company in arbitration of construction disputes with a multi-national contractor.

Witco Corporation, Director of Engineering – New York, NY (Director of Engineering : 1991 – 1997)
Mr. Malley served as Director of Engineering for a $2 billion petroleum and chemical company. He was responsible for engineering, procurement, construction and project management and a capital budget of $100 million per year. Mr. Malley was also responsible for energy management for the firm, and implemented various energy conservation initiatives, including cogeneration, Green Lights and Energy Star Programs.

Witco Corporation, Manager of Remediation – Woodcliff Lake, NJ (Manager of Remediation: 1981 – 1991)
Mr. Malley managed large environmental projects, including air and water pollution control facilities and soil and groundwater remediation projects. He represented the company in complex litigation with the federal and state governments and citizen groups. He also prepared insurance claims and under

legacy general liability policies, and helped recover over $100 million under various policies.

BASF Corporation, Operations Engineer – Kearny, NJ (Operations Engineer: 1976 – 1982)
Mr. Malley served as Operations engineer for the BASF Corporation working on environmental projects.

PROFESSIONAL AFFILIATIONS
Environmental Law Institute
New York City Bar Association – Environmental Law Committee
New York State Bar Association – Executive Committee, Environmental Law Section

CARL N. STOPPER, PE, VP

EDUCATION
B.S., Civil Engineering, University of Connecticut, 1978

PROFESSIONAL REGISTRATIONS
Professional Engineer, Connecticut, 1984 (#13255)
Professional Engineer, New Jersey, 1992 (#37254)

AREAS OF EXPERTISE
Mr. Stopper has 34 years of experience encompassing:

- Landfill Engineering, Permitting & CQA
- Remedial Design/Construction Management
- Environmental Permitting
- Technical Review
- Water Supply and Distribution
- Flood Control and Drainage
- Geotechnical Engineering
- Civil and Site Engineering

REPRESENTATIVE EXPERIENCE
Connecticut Resources Recovery Authority (CRRA), New Landfill Development, Franklin Ash Landfill – Franklin, CT
Mr. Stopper was the program manager for the development of a new approximately 100 acre lined municipal combustor ash landfill facility located on an approximately 350 acre greenfield site along the Shetucket River. Services included critical flaw analysis, geologic/hydrogeologic site investigations, pumping tests, aquifer analysis, traffic study, wetland delineation, ecological site characterization, threatened/endangered species, archaeological/cultural assessment, regulatory assistance and public presentations.

Connecticut Resources Recovery Authority (CRRA), Landfill Closure Design & Construction Quality Control, Hartford Landfill Phase I Ash Area – Hartford, CT
Designed and managed a RCRA Subtitle D cap for both phases of the closure of the 18.7 acre solid waste combustor ash landfill. The project included design of the membrane cap, cap drainage, surface drainage, and sedimentation and erosion protection for project performed in two separate phases. Stability analysis for the cap design was performed. TRC also prepared the Construction Stormwater Pollution Control Plan and permit application to the CTDEEP. The first phase of the closure construction was completed in 2008 and TRC was responsible for construction assistance, quality assurance and closure certification.

Connecticut Resources Recovery Authority (CRRA), Landfill Closure Design & Construction Quality Control, Waterbury Landfill – Waterbury, CT
Designed and managed a low permeability soil cap for the closure of the 6 acre bulky waste landfill. The project included design of the soil cap, surface drainage, and sedimentation and erosion protection for project. Stability analysis for the cap design was performed. TRC also prepared the Construction Stormwater Pollution Control Plan and permit application to the CTDEEP. The closure construction was completed in 2008 and TRC was responsible for construction assistance, quality assurance and closure certification.

Connecticut Resources Recovery Authority (CRRA), Landfill Design, Hartford Landfill Vertical Expansion – Hartford, CT
Responsible for design and management of the vertical expansion for the municipal solid waste, special waste and lined ash area for this approximately 80 acre facility. Design included detailed geotechnical evaluation of the landfill stability and effect of differential settlement on liner integrity and drainage. Other design analyses included stormwater management, traffic studies, fill sequencing, gas collection, cap alternatives, and leachate quality/quantity resulting from contaminated special wastes. Detailed operation and management drawings and plans were prepared for the expansion. Special landscaping and site reuse evaluations were performed.

Connecticut Resources Recovery Authority (CRRA), South Meadows Exit Strategy® Project – Hartford, CT
TRC assumed complete liability for past environmental problems at this turn-of-the-century electric generating station and municipal solid waste processing facility. Through the Exit Strategy®, TRC facilitated the transfer of the 70-acre property from the Connecticut Light and Power Company (CL&P) to the CRRA. The site has active electric switchyard areas, a former mercury boiler facility, active coal storage, former and active bulk aboveground fuel tank storage, residuals from historical on-site ash disposal in soils as well as buried construction/demolition debris containing asbestos. Serving as Project Manager for the investigation, remediation and site development of the facility which includes extensive soil remediation, asbestos and mercury remediation, and operation and maintenance of a ground water extraction and treatment system.

Connecticut Resources Recovery Authority (CRRA), Environmental Permitting, Hartford Landfill – Hartford, CT
Prepared solid waste and ground water discharge permit applications for vertical expansion of the landfill, including the Non-Processable Waste Disposal Area, Special Waste Area and Lined Ash Area. Conducted meetings with various regulatory units at Connecticut DEEP and participated in public presentations and permit hearings.

Connecticut Resources Recovery Authority (CRRA), Landfill Gas Collection and Control, Ellington and Wallingford Landfills – Ellington and Wallingford, CT
Managed the evaluation of landfill gas collection, monitoring and control systems at these two facilities to identify operational and maintenance problems and recommended corrective actions. The Ellington landfill required extensive reconfiguration of the gas collection system to improve gas capture and thermal destruction. Recommendations have been implemented and have significantly improved system reliability.

City of New Haven, Capital Improvement Services and O&M Services for Closed New Haven Landfill Site – New Haven, CT
Project Manager for O&M services at the closed New Haven Landfill site since February 2002. Services include O&M of the landfill cap, drainage and landfill gas collection (LFG) and control system. TRC performs quarterly monitoring and adjustment of the landfill gas collection wells and enclosed flare system to optimize gas recovery, prevent off-site gas migration and maintain compliance with the system air permit. TRC also responds to flare system failures via an alarm auto dialer system to ensure continuous system operation. Quarterly ground water and gas migration monitoring and reporting is performed. Semi-annual O&M reports are prepared. Periodic repairs to the cap, drainage and LFG systems are provided by TRC.

Paul Cleri, PE
[Sr. Project Manager]

Mr. Cleri is a senior project manager with background in energy from waste (EFW), renewable energy, and power projects, including feasibility and design, development, due diligence, construction monitoring, start-up, performance test monitoring, start-up, and operations. He has 30 years of engineering and project management experience in the energy industry and has worked on many EFW facilities, covering most EFW combustion technologies, and has worked on many wind energy farms, biofuels and ethanol facilities, fuel cell power projects, natural gas fired, simple cycle and combined cycle, combustion turbine power plants (IPPs), coal-fired power plants, integrated gasification combined cycle (IGCC) projects, internal combustion engine plants, combined heat and power (CH&P) plants, and district heating and cooling (DH&C) plants.

Mr. Cleri has experience in energy project development and finance, including bond financing. Mr. Cleri has provided design review, construction monitoring, startup monitoring, and operations review of many solid waste facilities, including citizen drop-off centers, material recycling facilities (MRFs), and transfer stations. He has provided mediation and negotiation services in energy generation, production, and commodity distribution. He has experience in environmental regulatory permitting and law, knowledge of federal and state environmental regulations applicable to solid waste facilities, provided or supported the permitting of solid waste facilities and other energy facilities, and experience in emissions reduction credits (ERCs) and emissions banking.

[Relevant Experience]

Connecticut Resources Recovery Authority, Mid Connecticut Project, Hartford, CT. As senior project engineer, Mr. Cleri reviewed the condition, operations and maintenance (O&M) practices, the O&M budget, and the capital expenditure budget for, and provided other technical assistance to the Connecticut Resources Recovery Authority with regard to the Mid-Connecticut Project, which is a refuse-derived-fuel, EFW facility that generates electric power from pre-sorted MSW.

DSNY, Alternate Technical Procurement, New York, NY. As senior project engineer, Mr. Cleri provided technical assistance in the preparation of a request-for-proposals (RFP) for new and emerging solid waste technologies to be employed in the metro-New York City area using solid wastes collected by the DSNY. Mr. Cleri is now reviewing proposals submitted by respondents to the RFP.

Northeast Maryland Waste Disposal Authority, Harford Waste-to-Energy Facility, Aberdeen Proving Ground, MD. Mr. Cleri is the project manager for a project for Harford County and the Northeast Maryland Waste Disposal Authority (NMWDA) whereby HDR is performing a re-use feasibility study of the Harford Waste-to-Energy Facility (HWTEF), which is approaching its contractual end of life. Because the HWTEF is situated on and presently provides thermal energy to the U.S. Army's Aberdeen Proving Ground (APG), Mr. Cleri is working closely with U.S. Army representatives and APG Command to identify reuse options that will continue to serve the needs of the APG and satisfy the U.S. Military's sustainability objectives as well as mission critical objectives. Among other things, HDR is tasked with looking at the feasibility of reusing the HWTEF as an organic waste to biofuel manufacturing facility that may provide fuel for APG military activities.

Northeast Maryland Waste Disposal Authority, Baltimore Compost Facility, Baltimore, MD. As senior project engineer, Mr. Cleri provided technical assistance to the Northeast Maryland Waste Disposal Authority with regard to reviewing ongoing operations and maintenance of the Baltimore Compost Facility, which is a facility that generates agricultural-grade compost from organic wastes.

Education

Master of Science Engineering
Energy & Environmental Systems
Northeastern University, 1999

Bachelor of Science Mechanical
Engineering, Thermodynamics
& Advanced Energy Systems
Northeastern University, 1988

Professional Registrations

Professional Engineer (CA, CT, FL, MA, NH, NY, VA)

Years of Experience

30 years

Shawn Worster

[Sr. Solid Waste Management Consultant]

Mr. Worster has over 25 years of successful implementation-oriented project development, management consulting and executive management in the integrated solid waste management sector, including serving as the Executive Director of the North East Solid Waste Committee representing a regional consortium of 23 municipalities delivering their solid waste to a 1,500 TPD Wheelabrator owned energy from waste facility. His recent activities have included assisting public sector clients involved in regional waste to energy projects with transitioning at the end of term. He is a skilled manager of project teams consisting of engineers, environmental specialists, scientists, financial analysts, attorneys, and public and media relations specialists involved in the development, implementation and management of energy and environmental projects. He has interacted routinely with key stakeholders involved in environmentally, economically and politically sensitive projects, including federal, state and local elected officials and regulators, the media and non-governmental organizations. The following projects represent Mr. Worster's experience:

- Mr. Worster managed the project development process from conceptual planning through procurement, permitting, financing, construction and acceptance testing on energy and environmental projects with an installed capital cost in excess of $300 million.
- Mr. Worster managed the independent engineer's due diligence review of energy and environmental projects on facilities with an installed capital cost totaling over a billion dollars.
- Mr. Worster was the lead technical negotiator on construction, operation, energy purchase and sales, waste and material supply contracts on energy and environmental projects with capital costs totaling over a half a billion dollars. Negotiated contract terms and provisions that reduced clients' risk exposure and cost and/or increased revenues.
- Mr. Worster managed the procurement process on over a half a dozen energy and environmental projects worth over three-quarters of a billion dollars. Prepared procurement documents (RFQ's, RFP's, RFD's, RFS's), analyzed vendor responses, prepared clarification issues, developed negotiating strategy, analyzed and prepared counter proposals, developed memoranda of understanding and assisted counsel in drafting contract provisions.

[Relevant Experience]

Bristol Resource Recovery Facility Operating Committee, Consulting Engineering Services, Bristol Resource Recovery Facility, CT. Project Manager. Mr. Worster serves as the Project Manager on HDR's activities related to the development and implementation of the BRRFOC's long-term strategic plan. In 2007, HDR was brought in to assist the BRRFOC in assessing its options. Initial tasks include examining system options, regulatory and legislative issues, case studies of similar projects, review of objectives and development of implementation aspects of the plan.

County of Fairfax, Fairfax County Professional Engineering Services, Fairfax County, VA, Fairfax, VA. Mr. Worster has provided end-of-term negotiation and analytical support to the County's Negotiating Team as they address end-of-term issues regarding waste disposal services being furnished by Covanta. Mr. Worster evaluated and revised a financial model prepared by Covanta used to estimate costs and revenues associated with restructuring and extending the Service Agreement between Covanta and the County. The model examined the tipping fees and revenues to the vendor and costs to the County on a year to year and net present value basis.

DSNY, Staten Island Operations Procurement and Other Waste Disposal Services Procurements, New York, NY. Mr. Worster is assisting the HDR team in the evaluation of various proposals related to the long term waste management program being implemented by the New York City Department of Sanitation. Mr. Worster has also been involved in reviewing portions of the proposed economics related to the implementation of the City's Recycling Program.

Education

Master of Science, Health Sciences, Harvard University, 1999

Bachelor of Science, Engineering Management, Northeastern University, 1978

Bachelor of Science, Mechanical Engineering, McGill University, 1973

Professional Affiliations

- Air and Waste Management Association
- Solid Waste Association of North America (SWANA)
- Water Environment Association, New England, Member

Years of Experience

38 years

PROFESSIONAL 1

Name:	**Bruce Howie, PE**	Staff Level:	**Sr. Technical Staff**
Title:	**Sr. Engineer/Quality Control Officer**	% of Time Available:	**10**
Probable areas of responsibility:	**Resource Recovery and Recycling Consulting and Engineering**		
Other Categories Of Services:	**General Engineering, Environmental Consulting and Engineering, Landfill Consulting and Engineering, Solid Waste Consulting**		
Background:	**Mr. Howie is a Vice President and Professional Associate in HDR's Waste Management Market Sector. He serves as the Section Manager for HDR's Waste Facilities Engineering Group in the Northeast. He is responsible for overall coordination of the group's efforts in the design, permitting and management of waste facilities, including waste-to-energy facilities, transfer stations and recycling facilities. Mr. Howie has more than 15 years of experience with process and mechanical design, preparing procurements, and monitoring the operations and maintenance of various types of municipal waste facilities, including retrofits and expansions of existing facilities as well as greenfield facility procurement and implementation.**		

PROFESSIONAL 2

Name:	**John Clark, PE**	Staff Level:	**Sr. Technical Staff**
Title:	**Sr. Project Manager**	% of Time Available:	**50-75**
Probable areas of responsibility:	**Resource Recovery and Recycling Consulting and Engineering**		
Other Categories Of Services:	**General Engineering, Environmental Consulting and Engineering, Landfill Consulting and Engineering, Solid Waste Consulting**		
Background:	**Mr. Clark is a senior project manager with extensive background in construction monitoring, start-up, operations and maintenance, contract management and negotiations, and testing of steam and power production facilities. He has over 25 years of experience in the energy from waste (EFW) industry and has worked on many EFW facilities, covering most combustion technologies as well as coal facilities, gas turbine, internal combustion engine, steam generator, simple and combined cycle, and cogeneration facilities.**		

PROFESSIONAL 5

Name:	**Paul Cleri, PE**	Staff Level:	**Sr. Technical Staff**
Title:	**Sr. Project Manager**	% of Time Available:	**50-75**
Probable areas of responsibility:	**Resource Recovery and Recycling Consulting and Engineering**		
Other Categories Of Services:	**Solid Waste Consulting, Environmental Consulting and Engineering**		
Background:	**Mr. Cleri is a senior project manager with background in energy from waste (EFW), renewable energy, and power projects, including feasibility and design, development, due diligence, construction monitoring, start-up, performance test monitoring, start-up, and operations. He has 30 years of engineering and project management experience in the energy industry and has worked on many EFW facilities. Mr. Cleri has experience in energy project development and finance, including bond financing. Mr. Cleri has provided design review, construction monitoring, startup monitoring, and operations review of many solid waste facilities, including citizen drop-off centers, material recycling facilities (MRFs), and transfer stations. He has experience in environmental regulatory permitting and law, knowledge of federal and state environmental regulations applicable to solid waste facilities, provided or supported the permitting of solid waste facilities and other energy facilities, and experience in emissions reduction credits (ERCs) and emissions banking.**		

PROFESSIONAL 6

Name:	**Debra Frye, PE, LEED AP**	Staff Level:	**Sr. Technical Staff**
Title:	**Sr. Solid Waste Management Consultant**	% of Time Available:	**50-75**
Probable areas of responsibility:	**Solid Waste Consulting**		
Other Categories Of Services:	**General Engineering, Environmental Consulting and Engineering, Landfill Consulting and Engineering**		
Background:	**Ms. Frye is HDR's national technical director for solid waste facilities including transfer stations and material recovery facilities. She has national experience in strategic planning, successful public involvement, siting, conceptual design, facility sizing, equipment operations, construction document development, permitting and construction assistance for transfer stations, material recovery facilities and supporting facilities including administration buildings, maintenance and fueling facilities, wash facilities and public drop-off facilities. The following projects represent a of Ms. Frye's relevant experience.**		

White Street Landfill
City of Greensboro, North Carolina

Since 1994, HDR has been providing comprehensive technical services to the City of Greensboro for their 800-acre, Subtitle D municipal solid waste landfill. The landfill consists of three separate municipal solid waste landfills (Phase I, II, and III). HDR developed a landfill gas master plan for Phase III to be constructed in several phases. Construction cost estimates were developed for each phase. The innovative design consisted of dual phase landfill gas extraction capabilities that included the use of horizontal gas collection trenches which allowed for re-injection of leachate and gas extraction at the same time, creating a "bioreactor type" facility. This design was permitted as one of the first leachate recirculation projects in the State of North Carolina. HDR conducted a study of Greensboro's unlined Phase II gas system in 2001 to identify potential enhancements in collection efficiency and to provide insight on improved operations. In 2002, HDR designed the landfill gas collection system for Phase III. This design required the addition of a skid-mounted flare and blower system that would allow the City to either flare the landfill gas or integrate it into Phase II's transmission pipeline to Cone Mills. The flare and blower system was bid and constructed in 2002 along with Phase A of the landfill gas collection system. HDR provided start-up assistance and training of personnel on the gas collection system and flare station. In 2010, HDR expanded the Phase III gas collection system into Cell 3.

HDR also started assisting the City in its annual air quality reporting in 2000 and continues to provide these services, including air quality toxics modeling, semi-annual/annual reporting, and greenhouse gas reporting. In addition, HDR has been providing operation oversight for the landfill staff to ensure good operation of its landfill gas systems and compliance with New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations.

Solid Waste & Recycling Consulting

While there is growing support for "zero waste" solutions, we must still provide environmentally sound ways to dispose of solid waste residuals. Managing existing land systems and planning for new landfills safely and economically can be a significant challenge. HDR works closely with clients on full life-cycle services from land systems design, operations and monitoring, to site closure. We also have extensive experience in landfill regulatory and permitting requirements.

HDR understands all facets of land systems for waste management, from the latest technologies to economics to regulatory requirements. Whether a client's needs involve secure dry tombs, bioreactors, landfill gas systems, exposed geomembrane and solar energy, or technologies to prevent leachate excursion, our projects combine environmental protection, public safety, community acceptance, and fiscal responsibility with land system designs to maximize space and increase operational efficiency.

As population increases and we continue to generate waste while our waste management infrastructure ages, waste resource planning is an increasingly important issue. The variety of systems and techniques to manage waste resources varies greatly across the country. Whether looking for innovative ways to minimize waste creation, divert waste or design an environmentally friendly traditional landfill or other disposal system, HDR can tailor waste management solutions that integrate methods of management and disposal that suit any community.

HDR has the experience, talent and leadership to provide comprehensive consulting services for sustainable waste resource management solutions. We provide context sensitive solutions and assist our clients in promoting interactive communication with communities and other stakeholders to create collaborative and interdisciplinary approaches to solve waste resource challenges. Working with HDR can result in a long-term waste resource plan with realistic economic goals and solid environmental stewardship combined with workable strategies for waste reduction and diversion.

As we move closer to managing waste as a resource, HDR has become a leader in developing and shaping "zero-waste" planning. This concept recognizes that waste is not inevitable and establishes diversion and prevention goals for

gasification, plasma arc; biological: anaerobic digestion, composting; chemical: hydrolysis, waste-to-biofuel; and/or any combination of technologies proposed. HDR is providing support in the procurement and negotiations of a project to demonstrate the efficacy of a new Alternative Technology Project. The work effort specifically involves the preparation of procurement documents, the evaluation of proposals, the preparation of clarification questions and proposer interviews, contract negotiations, and will also provide DSNY with technical, financial, economic and other support as needed.

Waste-to-Energy Feasibility Analysis

Region of Peel Solid Waste Management | Ontario, Canada

The Region of Peel is responsible for the collection, transfer, processing and disposal of residential garbage, blue box material, household organic material, leaf and yard waste, white goods and Household Hazardous Waste (HHW). It provides these services through a combination of public and private partnerships utilizing various solid waste management facilities throughout the Region. With such an extensive integrated waste management system, the Region currently achieves a waste diversion rate of approximately 50 percent, which places it in the top tier of Ontario municipalities.

The Region is at a crossroads in terms of its long term solid waste planning. A major component of the Region's existing system is the Region's agreement with the privately owned and operated Algonquin Power EFW facility. This agreement is approaching the end of its original term in 2012. The Region is in the process of considering what role, if any, this existing facility should play in the Region's long-term program. A key aspect of that assessment is a full understanding of what other processing and disposal alternatives may be available to the Region.

HDR has been assisting the Region over the past two years in evaluating its long-term disposal options. Our initial assignment was to assess a variety of options being presented to the Region by Algonquin Power, including extension of the existing agreement, and expansion of the existing facility, with the Region purchasing the facility. As part of this task, HDR staff conducted a condition assessment of the Facility, a review of the operating and maintenance practices, an assessment of the current and proposed capital investment and an assessment of the ability of the facility to provide a long term reliable disposal option to the Region, as well as an examination of the operating costs and revenues over the proposed extension period.

HDR was also tasked with preparing a long term disposal options alternatives assessment which evaluated the technical, environmental and economic aspects of other potential disposal options available to the Region. These options included in-Region and out-of Region alternatives. HDR activities during this portion of the assignment included: an assessment of the quantity and composition of the materials to be managed over the planning term; establishing the methodology upon which the selection process was to be based using metrics that are robust, effective and capture all key relevant factors; assembling a list of potential waste disposal options that reflected the available universe of possible contenders, including established as well as new and emerging technologies including various low temperature and high temperature processing options; and preparing a list of up to five potential system options.

Solid Waste Integrated Resource Plan, Zero Waste Master Plan

City of Los Angeles, California

The City of Los Angeles is striving to accelerate diversion goals to 70 percent diversion by 2013, to add materials and curbside collection programs, and to convert the City's 700+ collection trucks to clean-burning liquefied natural gas. HDR is assisting the City in developing its Solid Waste Integrated Resources Plan that is envisioned to be the City's 20-year zero solid waste master plan. The process includes a multi-phase approach that involves the following project elements:

Advisory Committees. This plan includes perhaps the most extensive public involvement process ever employed for a solid waste management plan. Our process includes house meetings, stakeholder and advisory

Composition Study; determining solid waste generation rates and making projections; defining regulatory and policy issues; evaluating the department s financial program and identifying issues; identifying preliminary alternatives; and performing a fatal flaw analysis. Another significant Phase I task is the establishment and conduct of a citizen Solid Waste Advisory Committee and facilitation of a public input and advisory process.

Specific tasks for Phase II will depend in large measure on the results of the Phase I effort, but in general, will consist of a detailed analysis of alternatives identified in Phase I, including a facilities and programs plan, implementation strategies, and cost projections. The public information and advisory process will continue throughout Phase II, which will culminate with the preparation of the long-term Solid Waste Master Plan.

Solid Waste System Master Plan and Implementation

Salinas Valley Solid Waste Authority | Salinas, California

HDR is currently developing a 75 percent diversion plan for the Salinas Valley Solid Waste Authority which will identify the programs and facilities needed to reach the Authority's goal of 75 percent diversion by 2015. We are also conducting an alternatives analysis to identify 50 years of disposal capacity for the Authority through maximizing diversion, utilizing remaining capacity at existing Authority landfills, identifying alternative landfills outside of the Authority, developing alternative technologies to reduce the volume of residual wastes, and, potentially, developing new landfill capacity within the Authority region.

Strategic Planning. HDR managed the negotiations process that led to the formation of the Authority, including developing the joint powers agreement, inter-agency agreements, and property transfer documents. HDR was then hired to evaluate the Authority's existing resources and determine the most cost-effective future solid waste management system for long-term disposal capacity assurance. This work led to a successful $9 million bond issue to finance recommended capital improvements. HDR defined and analyzed 13 scenarios for long-term disposal capacity for the Authority using various combinations of existing, expanded and closed facilities. We prepared 30-year life cycle cost analyses for each scenario, including construction, operation, maintenance, closure and post-closure costs; evaluated each scenario against key environmental constraints/issues, identified key policy and institutional issues for each scenario, and provided final recommendations to the Authority Board.

Public Workshops. As a component to our work for the Authority in planning and developing new landfill capacity in Monterey County, HDR served as staff to the Landfill Siting Task Force comprised of governmental officials, businesses entities, and the general public and conducted a series of public meetings and workshops in the siting area for concerned stakeholders. Our responsibilities included scheduling the public workshops, developing the PowerPoint presentations and handouts, facilitating the workshops by providing an overview of the objectives of each meeting, coordinating the agenda, and presenting each issue to the public and Task Force members.

Facility Design & Permitting. HDR also provided supporting permitting and engineering services to the Authority on an ongoing basis including: preparing Joint Technical Documents and solid waste facility permit/waste discharge applications for three landfills, preparing and/or managing CEQA compliance for various solid waste projects, performing construction management for liner installation at the Crazy Horse and Johnson Canyon Road landfills, preparing landfill gas collection system designs for the Lewis Road, Johnson Canyon Road, and Jolon Road landfills, preparing leachate collection and removal system designs for the Johnson Canyon Road landfill, and conceptual design, site selection and cost estimates for two transfer stations (N&S) with varying levels of recycling. As a result, the Authority has approved a forty year-long term disposal capacity plan for the region.

Recycling Technical Assistance/ Collection Procurement. HDR prepared new base year studies for each of the member cities to document compliance with AB 939. A component of this project included AB 939 enhanced services providing recycling technical assistance to businesses within the Authority service areas.HDR has assisted four of the member cities to procure new solid waste, recycling and green waste collection services, including developing the Request for Proposals and draft franchise agreements, evaluating the proposals and making recommendations to the City Councils.

CONNECTICUT RESOURCES RECOVERY AUTHORITY

FIRM BACKGROUND AND EXPERIENCE FORM

In the space below, summarize work performed/services provided of a similar nature to that specified in the RFQ Package Documents which have been performed by the SOQ submitter and which will enable CRRA to evaluate the experience and professional capabilities of the SOQ submitter.

Prepare and submit a separate Background And Experience Form for each Category Of Services for which the SOQ submitter wishes to be considered.

CATEGORY OF SERVICES

In the table below, check the box for the Category of Services for which this Background And Experience Form is being submitted.

☐	General Engineering Services
☐	Resource Recovery and Recycling Consulting and Engineering Services
☐	Environmental Consulting and Engineering Services
☐	Landfill Consulting and Engineering Services
☒	Solid Waste Consulting Services
☐	Electric Marketing, Procurement and Consulting Services
☐	Land Surveying

BACKGROUND AND EXPERIENCE

[Attach Additional Pages If Necessary]

Gershman, Brickner & Bratton, Inc. (GBB), as a consultant working exclusively in the field of solid waste management for over 32 years, has been involved in diverse solid waste management projects throughout the nation and has substantial experience in areas of service for which CRRA is requesting qualifications. In addition to its national expertise, GBB has significant relevant experience in Connecticut, having provided consulting services to CRRA and to the Southeastern Connecticut Regional Resources Recovery Authority.

The knowledge acquired while working with CRRA, our understanding of the local solid waste management landscape, and our national expertise provide CRRA with a uniquely qualified Project Team, ready to provide valuable assistance to the authority from the get-go.

INTRODUCTION TO GBB

At Gershman, Brickner & Bratton, Inc. (GBB), we believe effective management of solid waste is an imperative that directly affects the health of our plane - both today and far into the future. In a

Knowing the cost of providing solid waste services is the key to management. GBB has analyzed the costs associated with providing each of the individual solid waste services on a cost center or business unit basis for several communities. GBB uses the full-cost accounting format developed by the EPA as the basic structure and adapts that to the needs of the individual community. The new GASB 34 requirements for asset management provide an additional incentive to modernize accounting structures. GBB can develop a single fiscal year snapshot to set a baseline, help plan an enterprise fund for waste management, and specify or develop software to implement a new system.

== Administrative and Management Evaluations ==

GBB provides analysis and guidance in planning and designing the administrative structure for the effective management of solid waste systems. This includes organizational analysis and design, development of performance measures to gauge efficiency of programs and services, and evaluation of administration of personnel, physical, and financial resources, and Benchmarking. GBB has prepared organizational audits, designed management information systems, and assisted in organizational planning and evaluation and selection of personnel to fill key positions. GBB identifies the organizational strategy and then plans the structure of resources needed to implement effective system management to achieve the goals of the organization.

== Managing and Administering Operations ==

GBB has a broad array of experience, skills, resources, and a unique combination of strategic planning and hands-on management expertise. Either on a temporary or long-term basis, GBB staff has stepped in to manage and significantly improve solid waste management and waste-to-energy operations and facilities. Examples include: managing the long-term planning and day-to-day operations of a Solid Waste Division, transfer stations, household hazardous waste and curbside trash collection programs, and overseeing the design and construction of a new landfill; providing continued assistance to a waste-to-energy facility, including providing key advice on strategy and business issues, and negotiating with sources of waste supplies; and developing, overseeing, and managing a district energy project, including management of the system, financial and system planning, customer service, and business development. Results include improved allocation of resources, expanded and reliable services, reduced customer complaints, lower costs, and setup of solid foundations for successful long-term operations and services.

== Procurement, Evaluation, and Construction, Acceptance, and Operations Monitoring ==

GBB's procurement experience includes preparing RFQs and RFPs for various facilities and services; evaluating vendor responses; recommending a preferred vendor or ownership financing strategy; negotiating contracts; assisting with bond offerings; developing test protocols and review criteria; and monitoring construction, performance testing, and operations. These specialized services are critical in implementing large-scale projects or privatizations that include complex technologies such as waste-to-energy and district energy systems.

== Collection and Routing ==

GBB conducts collection analyses for both large and small jurisdictions, including evaluating existing collection equipment; vehicle/crew configurations; staff skill levels and training efforts; administrative and management practices and procedures; and public education activities. GBB recommendations have resulted in service improvements and substantial cost savings. GBB, using its proprietary FleetRoute™ software, can optimize the collection route structure, increasing productivity by 10 to 25 percent based upon recent projects. GBB also advises clients on franchise and contract agreements for privatization of solid waste management services.

== Construction Waste and Demolition Debris Recycling ==

12 – Appendices

Harvey W. Gershman

GBB President

Harvey Gershman, President of GBB has been active in the solid waste management field as an adviser to government and industry for over 40 years, specializing in strategic guidance and infrastructure and services development assistance to solid waste service/system managers and owners. He has managed the preparation of many long-term plans, market studies, cost and independent feasibility analyses, technology reviews, contractor procurements, contracts development and negotiations, and project financing activities for a broad range of recycling, composting, solid waste management, waste-to-energy, and district energy projects. These projects have resulted in sustainable, efficient integrated waste management systems accepted by the community and its leadership.

As a thought leader, Mr. Gershman is a sought-after presenter at national industry conferences such as WasteCon, WasteExpo, North American Waste-to-Energy Conference, Municipal Solid Waste Association Conference, and many other regional conferences. He also regularly contributes articles to leading industry publications, including MSW Management, Renewable Energy from Waste, WasteAdvantage, and WasteAge. Mr. Gershman has been a member of the International Board of SWANA and the Board of Directors for the National Recycling Coalition (NRC). He served as President of the Maryland Recyclers Coalition (MRC) from 1995 to 1997. In 1993, Mr. Gershman was awarded SWANA's Professional Achievement Award.

Education: B.Sc., Mechanical Engineering, Northeastern University, 1971

Areas of Expertise: Areas of expertise include, but are not limited to:

- Solid Waste Management
- Recycling
- Collection
- Materials Recovery Facility Procurement
- WTE Project Development
- Facility (Disposal Services Project Development)
- Market Studies
- District Energy

Selected Representative Experience

Office-in-Charge for GBB which has been appointed as Receiver for the Solid Waste Management Division of the Department of Public Works in Guam in a March 2008 Court Order issued by the United States District Court of Guam. GBB's objective is to work with Guam's government, the Guam Solid Waste Authority, solid waste companies, the people of Guam, and the U.S. military to establish a long-term, financially viable and sustainable waste management system for Guam. More information on the receivership is available at www.guamsolidwastereceiver.org.

Appendix A - Résumés

Robert H. Brickner

GBB Executive Vice President

Mr. Robert Brickner, GBB Executive Vice President, has more than 40 years of experience in the solid waste management field. He is an expert in solid waste handling systems, including collection and processing equipment, especially equipment costs and systems analysis. Mr. Brickner is well versed in cost allocation methods and economic/financial modeling, and life-cycle costing. Mr. Brickner has served as the lead evaluator for GBB on many systemwide evaluations and vendor solicitations, and as lead negotiator on numerous projects that have been financed. He has authored independent reports for bond sales and has made supportive presentations to rating agencies on Wall Street. Mr. Brickner has presented expert witness testimony at arbitration proceedings and permit hearings on waste-related programs.

During the last twenty years, Mr. Brickner has conducted hundreds of field visits to review local collection programs (for trash, recyclables and brush) and solid waste management programs (including materials recovery facilities (MRFs), waste-to-energy facilities, C&D recycling systems, transfer stations, and landfill facilities) in the United States, and abroad. He has written numerous articles, lectured at many national solid waste conferences (e.g., WasteExpo, WASTECON, NRC and EPA conferences), and served for four years as a contributing editor to an industry magazine.

Education: B.S., Civil Engineering, University of Pittsburgh, 1970

Areas of Expertise: Areas of expertise include, but are not limited to:

- Construction Waste and Demolition Debris (C&D Waste) and
- Wood Waste Recycling
- Cost Evaluations and Rate Reviews
- Solid Waste Management Planning
- MRF/Recycling/Transfer Stations
- Collection
- Waste Characterization and Composition
- Waste-to-Energy/Technical Assistance
- Landfill/Landfill Gas Recovery
- Expert Reports, Depositions and Testimony

Representative Experience

Mr. Brickner served as GBB's Project Manager for services provided to the Greater Detroit Resource Recovery Authority (GDRRA) which has a contract to supply waste to a private 3,000 tons-per-day Refuse Derived Fuel fired boiler system. GBB was retained to develop a Request for Proposals for any

Appendix A - Résumés

James J. Binder, P.E., President

Mr. Binder, President of J Binder Consulting LLC, is an independent Consultant. He was a former Principal at ARI. Over the last 35 years, he has been active nationwide on more than 100 solid waste, water, wastewater, and sewage-sludge projects for cities as large as New York and for jurisdictions with populations less than 1,000. Municipal solid waste projects have included recycling, materials recovery, waste-to-energy, gasification, anaerobic digestion, waste-to-fuel, and landfill facilities. Activities have included feasibility studies, permitting, procurement, contract negotiations, and contract monitoring. Mr. Binder specializes in project procurement, contract negotiation and implementation for projects developed using public/private partnerships.

Education

M.S. Major: Mechanical Engineering, Minor: Environmental Engineering, Northeastern University, 1974

B.S. Mechanical Engineering, Northeastern University, 1969

Professional Experience at ARI

- Review of alternative solid waste management technologies – gasification, plasma, hydrolysis and anaerobic digestion – for inclusion in current solid waste plan for New York City. Also, directed follow on Siting Study and comprehensive Project Economic Analysis.
- Project Manager for feasibility study and preparation of RFP for energy/compost facility using anaerobic digestion or gasification of food scraps, yard trimmings and biosolids, Palo Alto, CA.
- Project Manager for review of alternative technologies, siting analysis, and procurement activities for commercial, alternative technology solid waste management facility (up to 1800 TPD) for Taunton, MA.
- Preparation of planning level evaluation of gasification, anaerobic digestion, and waste to ethanol technologies as an alternative to replace existing conventional waste-to-energy facility in Connecticut.
- Project Director for evaluation of alternative technologies and procurement for alternative technology facility to be constructed at the Tajiguas Landfill for City and County of Santa Barbara, CA.
- Project Director for facilitation of development of alternative technology demonstration and commercial facilities in Southern California, for Los Angeles County Department of Public Works.
- Review and audit of waste disposal contracts, operations and maintenance practices and costs for recycling and waste-to-energy facilities serving the communities of Greater Bridgeport Solid Waste Advisory Board in southwest Connecticut. Preparation of report of findings, including recommendations to reduce costs.

PROFESSIONAL 1

Name:	**Richard McCarthy**	Staff Level:	**Senior**
Title:	**President**	% of Time Available:	**50%**
Probable areas of responsibility:	**Principal Contact**		
Background:	**Mr. McCarthy is the founder and President of Environmental Capital. Since its establishment, Environmental Capital has advised municipal issuers on financings of over $2,000,000,000. Environmental Capital has performed a wide variety of other financial advisory assignments for county, city and town clients, such as water, sewer and solid waste system consolidations, mergers and sales; the development of regional authorities; financial feasibility studies; utility rate studies; etc. While Environmental Capital was founded to focus on the field of environmental finance, the firm's practice has expanded to encompass many other areas of public finance, including general municipal and not-for-profit finance.** **Mr. McCarthy has worked in the area of public finance for the last thirty years. He has worked on solid waste financings since 1985. Prior to establishing Environmental Capital in 1990, he was a Vice President at Bear Stearns in charge of solid waste financings (1987-1990) and the manager of the Resource Recovery and General Obligation Bond Group in the Public Finance Department at Manufacturers Hanover Trust Company (1982-87). Before entering the field of public finance, he was a Vice President at Manufacturers Hanover Trust Company in corporate finance.** **Mr. McCarthy specializes in start up financings and financings with new or unusual structures. He has advised seven New York State authorities on their development and initial financings. He serves as the financial advisor to ten New York State authorities, to which he provides a variety of financial and strategic advice. He has pioneered the use of subsidized loans offered by the New York State Environmental Facilities Corporation for solid waste projects and for advance refundings. Over the past several years, Mr. McCarthy has been responsible for developing advance refundings that have saved his clients over $29 million.** **Mr. McCarthy serves as the Treasurer of the Columbia-Greene Hospital Foundation, the fundraising arm of the Columbia Memorial Hospital in Hudson, N.Y. He also serves on the Board of the Olana Partnership, a not-for-profit organization that seeks to preserve and use as a base for art education Olana, the home of Frederic Church, one of the most renowned landscape painters of the 19th Century.** **Mr. McCarthy received his Bachelors degree from Cornell University and his Masters of Business Administration from the University of Chicago. He is a Certified Public Accountant**		

PROFESSIONAL 2

Name:	**Denise Farrell**	Staff Level:	**Senior**
Title:	**Managing Director**	% of Time Available:	**50**
Probable areas of responsibility:	**Back-up Contact**		
Background:	**Ms. Farrell has extensive experience in public finance. Ms. Farrell leads Environmental Capital's team in the emerging market for all types of greenhouse gas emission reduction projects as well as renewable energy project financings. She is responsible for the structuring and placement of carbon credit assets for municipal and corporate clients as well as advising carbon credit purchasers on portfolio acquisitions. Ms. Farrell has placed over 1,000,000 landfill VERs to date including one of the largest placements generated by a New York State project. Currently Ms. Farrell is developing carbon credit projects for waste water and avoided deforestation projects. Ms. Farrell has experience in all types of municipal bond financings including Environmental Facilities Corporation State Revolving Fund borrowings, solid waste authority projects and water and wastewater projects.** **Prior to working for Environmental Capital she worked for over 12 years in the Municipal Underwriting and Acquisition Finance areas specializing in structured finance. Ms. Farrell also taught credit analysis in domestic and international training programs. Ms. Farrell serves on the Board of Advisors for the New York Community Trust's Westchester Division as well as the Georgetown University's Alumni Admissions Program.** **She holds a BS from Georgetown University and an MBA from Fordham University's School of Business and attended the Columbia School of International and Public Affairs.**		

PROFESSIONAL 3

Name:	**Pranita Suvarna**	Staff Level:	**Junior**
Title:	**Associate**	% of Time Available:	
Probable areas of responsibility:	**Financial Analysis**		

Background:	**Ms. Suvarna has worked on solid waste financings for the Franklin Solid Waste Management Authority, Rockland County Solid Waste Management Authority, Oneida-Herkimer Solid Waste Management Authority, Development Authority of the North County, Ulster County Resource Recovery Agency and the Connecticut Resources Recovery Authority. She was responsible for the financial capability analyses for a $158,000,000 sewer control project for Oneida County and for an $110,000,000 sewer control project for the City of Utica. Before joining Encap, Ms. Suvarna worked at Mercer Human Resources Consulting in the Retirement, Risk and Finance Group as an actuarial analyst. Her past experience includes numerous internships in business development for non-profit organizations. She holds a Bachelors degree from Columbia University in Applied Mathematics.**

PROFESSIONAL 4

Name:		Staff Level:	
Title:		% of Time Available:	
Probable areas of responsibility:			
Background:			

2. BACKGROUND AND EXPERIENCE

Describe the SOQ Submitter's experience and capabilities in solid waste and resource recovery transactions or similarly complex revenue bond issues. Specifically identify the SOQ Submitter's participation in any transaction(s) where CRRA was a direct or indirect participant.

Environmental Capital has specialized in solid waste financings and financial consulting for solid waste authorities since it was formed in 1990. Since that time, we have assisted clients on 76 solid waste financings, including financings for resource recovery, landfill construction, landfill closure, recycling facilities, transfer stations, C&D facilities, composting facilities and other solid waste projects. Of those financings, 32 were refundings that we initiated and for which we provided the financial analysis. We have initiated and completed complex advance refundings for other clients, and have initiated and completed complex financings securitizing tobacco settlement payments. Prior to forming Environmental Capital, Mr. McCarthy had extensive experience in resource recovery and landfill financings. He was the head of solid waste financing at both Bear Stearns and Manufacturers Hanover Trust Co. During that time, he worked as a Co-Senior Manager on the CRRA's Southeast Project.

We have developed a number of innovative and complex financial techniques to finance solid waste facilities. We have used the Clean Water State Revolving Fund ("CWSRF") administered by the New York State Environmental Facilities Corporation ("EFC") to obtain subsidized financing for a variety of solid waste projects, including landfill construction and closure, realizing millions of dollars of savings for our clients in the process. We have completed 43 solid waste financings through the CWSRF, including 34 refundings. We also developed the technique of combining back weighted public bond issues using zero coupon bonds of 30 to 40 year maturities with 20 year EFC subsidized financing to achieve level debt service over the life of all of the clients' bonds.

We have extensive experience assisting clients with a variety of solid waste issues. The following is a list of solid waste authority clients and the number of financings in which we have participated. Please See Appendix A for a full list of our solid waste financing experience:

Oneida-Herkimer Solid Waste Management Authority, 16
Montgomery-Otsego-Schoharie Solid Waste Management Authority, 4
Ulster County Resource Recovery Agency, 20
Rockland County Solid Waste Management Authority, 17
Development Authority of the North Country, 5
Franklin County Solid Waste Management Authority, 6
Connecticut Resources Recovery Agency, 3
Islip Resource Recovery Agency, Consulting
Bristol Resource Recovery Facility Operating Committee, Consulting
Lancaster County Solid Waste Management Authority, Consulting

We have assisted the following counties, cities and towns on solid waste financings:

- Warren County, NY
- Oneida County, NY
- Orange County, NY
- Oswego County, NY
- Cattaraugus County, NY
- Chemung County, NY
- Fulton County, NY
- Columbia County, NY
- Steuben County, NY
- Kent County, MI
- Town of Hempstead, NY
- Town of Colonie, NY
- Town of Rotterdam, NY
- Town of Unionvale, NY
- Town of Brookhaven, NY
- City of Saratoga Springs, NY
- City of Watertown, NY
- City of Auburn, NY
- City of Springfield, MS

Prior to founding Environmental Capital, Mr. McCarthy had substantial experience in resource recovery financings having worked for the following resource recovery clients:

1. CRRA – Southeast Project
2. Regional Waste System (Portland, ME)
3. Detroit Resource Recovery Authority
4. Pollution Control Financing Authority of Warren County, NJ
5. Delaware Solid Waste Authority
6. Camden County Improvement Authority
7. Passaic County Utilities Authority
8. Irwindale Resource Recovery Authority
9. Rhode Island Solid Waste Management Corporation
10. Morris County, NJ

Other complex financings include the following:

Connecticut Resource Recovery Authority

We have served the Connecticut Resources Recovery Authority ("CRRA") as its Economic Advisor since 2003. This engagement has had many aspects to it and included the following financings:

- 2010 SCRRA Bonds Refunding

In 2010, Environmental Capital advised the Authority on the issuance of $27,750,000 Resource Recovery Revenue Refunding Bonds. Proceeds from the sale of the Bonds were used to refund the outstanding Connecticut Resources Recovery Authority Resource Recovery Revenue Bonds (American REF-FUEL Company of Southeastern Connecticut Project) 1998 Series A, which resulted in total net present value savings of $2,444,809. We provided the refunding analysis that showed the potential savings. Before this financing could be completed, the plant operator, Covanta, requested that the security provided by Covanta and its corporate parent be restructured. We assisted the Authority in analyzing the proposed changes and in negotiating the security changes that were made. We assisted the Authority in obtaining the approval of the State Treasurer for those changes. We assisted the Authority in issuing an RFP for underwriters and we assisted the Authority in the selection of the winning firm.

Other CRRA Work

We have also advised on and provided all of the financial analysis for the

defeasance of approximately $150 million of three different series of bonds. We have provided research on a variety of financial topics. We have served as an expert witness in a dispute between the Authority and a town regarding the delivery of recyclable materials. This required us to build a sophisticated financial model that reflected the contractual terms between the parties. The analysis resulted in the Authority receiving a substantial settlement. We have provided general advice on conditions in the municipal marketplace.

We have advised the Authority on defeasance options. We advised the Authority on its negotiations with the Wallingford towns and provided bond sizings and debt service schedules. We provided analyses on a variety of financing and strategic options for the Mid-Conn project. We provided various financing analyses for the ash landfill and a potential materials recovery facility. We assisted in presentations to the rating agencies. We have provided strategic advice in the form of reports on activities and business plans pursued by other solid waste authorities around the nation. We provided information on flow control.

In addition to Environmental Capital's work on solid waste financings, the firm has also provided advisory services in regards to a number of highly complex non-solid waste related projects. Two examples follow:

- MCWA

We assisted the Authority in a 2010 issuance of $94.5 million in bonds to finance the East Side Water Supply Project. This issue alone tripled the amount of bonds that MCWA had outstanding. Notwithstanding this substantial increase in debt, we were able to assist MCWA in retaining its Aa2 and AA+ ratings, a significant achievement.

One series of the 2010 Bonds consisted of $92.9 million of Build American Bonds ("BABs"). The remainder of the bonds were comprised of traditional tax-exempt bonds. BABs held the prospect of significant savings compared to tax-exempt bonds due to the 35% interest subsidy offered by the U.S. Treasury. However, the BABS program was to expire on December 31, 2010 and the MCWA was not certain that it would be able to issue prior to that. We assisted MCWA by designing a savings analysis that compared issuing BABs to issuing tax-exempt bonds under a series of interest rate assumptions and timing of issuance assumptions. MCWA concluded that using BABS would produce substantial savings. We then worked with MCWA and its finance team to prepare a BABs issue, pending the receipt of acceptable bids for the final set of construction contracts. When acceptable bids were received, MCWA was able to issue BABs in December 2010, just barely beating the deadline of December 31, 2010. This BABs issuance resulted in a net present value savings to MCWA of $10.4 million.

- Town of Ramapo, New York

We have worked with the Town of Ramapo to provide financing for a large number of new projects, the most significant of which was a new minor league baseball stadium. Since January of 2010 we have served as the Financial Advisor on 10 bond and BAN issues totaling $142,615,000. In addition, we assisted the Town in the creation of the Ramapo Local Development Corporation and the $25,000,000 bond issue that was used to finance the stadium construction. These financings included a variety of competitive and negotiated issues.

- **Tobacco Asset Securitizations for Columbia and Oneida Counties, New York**

We assisted Columbia County with its $12,510,000 Tobacco Settlement Asset-Backed Bonds. We advised on all aspects of their participation in the New York Counties Tobacco Trust bond issue, including performing cash flow analyses to evaluate using the proceeds of the tobacco bonds to defease the majority of their existing general obligation debt. In addition, we assisted the County with the review and submission of all documentation necessary for the defeasance.

We helped Oneida County evaluate its financing options with respect to its $57,380,000 Tobacco Settlement Asset-Backed Bonds. In particular, we performed the initial present value cash flow analysis to allow the County to better assess the benefits of securitizing. We also helped the County to assess competing underwriting proposals. Finally, we assisted the County with their eventual participation in the New York Counties Tobacco Trust pooled bonds.

3. KNOWLEDGE AND EXPERIENCE

For each of the major categories of economic advisory services that are listed below and that are specified in the Scope Of Services (**Exhibit A** of the Agreement), provide a brief description of the SOQ Submitter's degree of knowledge and experience. CRRA does not require an SOQ submitter it selects to have expertise in all of the areas specified in the Scope Of Services. CRRA may select an SOQ submitter pursuant to this RFQ just because it has expertise in one of the subcategories of services listed below and specified in the Scope Of Services.

A. FINANCIAL AND ECONOMIC EVALUATION WITH REGARD TO LONG-TERM STRATEGIC PLANS

Environmental Capital has substantial experience in advising its solid waste authority clients in the financial and economic aspects of their strategic plans. Our most pertinent experience is that we have advised the Authority on its strategic plans since 2003. We are familiar with the Authority's goals, and both the challenges in meeting those goals and the strengths that CRRA possesses to overcome those challenges.

As is described elsewhere in our response, we have advised four of our solid waste authority clients since their creation. We were participants in the development of the legislation and agreements that serve as the legal and organizational framework on which these authorities rest. We provided advice and analysis on a variety of financial and economic matters as part of the development process. These matters included the development of "system financings" as opposed to project financings; feasibility analysis of various project options; security structures for bonding; rating agency strategy; how to provide new services; and many others.

We have continued to advise these and other solid waste clients on a number of strategic matters as a part of our ongoing relationships. Some of our relationships have existed for as long as twenty-two years, a fact of which we are most proud. We have a total of 139 years of experience in advising our solid waste clients on their strategic plans. We are in constant contact with these clients and, as a result, we are knowledgeable of the solid waste business. Some of the more important examples of the matters for which we have provided strategic advice include the following:

1. We served as the financial advisor to the Islip (New York) Resource Recovery Agency on a 750 tons per day expansion to their existing 500 tons per day resource recovery facilities. The estimated cost of the expansion was approximately $250 million. A central aspect of our assignment was the construction of a model that compared the annual costs of the expansion with the annual costs of a retro-fit to the existing facility. We worked with the Agency's consulting engineers in the preparation of the financial aspects of their Feasibility Study.

2. We provided Warren County, New York with an evaluation of whether or not to purchase a resource recovery facility with which they had a service contract. To do this we developed a large model that projected the revenues and expenses at the facility under a variety of case assumptions over a twenty year period. We performed the necessary refunding analysis necessary for the various cases. Ultimately, the County decided not to acquire the facility. We then assisted the

County in procuring a replacement vendor at the facility. We assisted in evaluating the responses to the RFP for replacement vendor and in the negotiations with the preferred vendor. We then advised the County on refunding the debt associated with the original construction of the facility with a savings of $6.6 million.

3. We performed a comprehensive capital study for the Development Authority of the North Country (New York) in which we analyzed and recommended the optimal capital structure for the Authority. Our study covered a 54-year period representing the expected useful life of the Authority's landfill and involving over $300,000,000 in capital expenditures for equipment, cell expansion, closure and post-closure costs.

4. We prepared a market study for the City of Springfield (MO) Utilities to assess the carbon credits and Renewable Energy Credits (RECs) associated with the operation of its Noble Hill Renewable Energy Center, a landfill gas-to-energy operation operating since 2005. City Utilities has historical deficiencies in its equipment calibration. We recommended three carbon credit protocols that could be used that rely on electrical generation rather than calibrated measurements of gas flow to get credits from these historical operations verified and sold. We also made recommendations to improve the marketability of future City Utilities carbon credits and RECs, primarily by increasing calibration frequencies.

5. We served as financial advisor to Steuben County, NY in the development of a Landfill-Gas-To-Energy facility at the County Landfill. We developed a model to evaluate proposals made to the County by developers under a variety of sets of assumptions. This enabled the County to select the optimal proposal. The engagement included the development and sale of the greenhouse gas reduction credit resulting from the burning of the landfill gas.

6. We served as financial advisor to Kent County, Michigan in the development of a Landfill-Gas-to-Energy facility at the County Landfill. We evaluate a number of developer proposals made to the County.

7. We performed an analysis of the financial condition of the Tunxis Recycling Operating Committee with particular attention to their level of fund balance. We developed data on comparable agencies and provided an assessment of the adequacy of their fund balance. We performed a comparable assessment for the Bristol Resource Recovery Facility Operating Committee.

8. We performed a total strategic evaluation for Oswego County, NY of its solid waste system, which includes a resource recovery facility, a municipal solid waste landfill, several transfer stations and a closed materials recovery facility. We were asked to evaluate all potential operational, ownership and financial alternatives available to Oswego County for the solid waste system and for any of its individual assets. Our report included evaluation of the potential for sale, private sector partnerships and leases, opportunities for cost reductions, opportunities to increase revenues and waste flows, the potential to reopen the materials recovery facility, creating a public authority, instituting flow control or districting to control waste flows and other matters.

9. We prepared a report for Warren County, NY on the feasibility of creating solid waste disposal districts, as a means of establishing flow control within the County.

10. We have assisted our clients in dealing with the loss of flow control resulting

from the C&A Carbone vs. the Town of Clarkstown U.S. Supreme Court decision. We assisted one client in developing an assessment fee structure that obviated the need for flow control. For another client, we analyzed the effect of entering into contracts with its haulers at fixed tipping fees, which included an early subsidy as an incentive to the haulers. For another, we assisted by providing a comprehensive analysis of the costs of the dissolution of that authority.

11. Several of our clients have been approached by private firms offering various "privatization" concepts, especially regarding resource recovery facilities and landfills owned or to be constructed by those clients. We have provided advice in discussions with those private firms and analyses of the economic and financial aspects of their proposals.

12. One of our clients was asked by its constituent counties to solicit proposals from private firms to provide proposals for waste disposal, recycling and other services. We advised on the development of an RFP for this process and provided the financial and economic analysis of the responses.

13. We worked with a client to develop a report on the trends in solid waste disposal prices and markets in the Northeast that look out over a ten-year period. The authority staff and board utilized this report as a guide to understand the financial aspects of developing a new regional landfill and to make the decision to proceed with development.

Recent Large Non Solid Waste Financial and Economic Evaluation

14. We completed a $26 million financial feasibility assessment for the Binghamton-Johnson City Joint Sewage Board. The Board is in the process of implementing a Flow Management Plan on the Binghamton Johnson City Joint Sewage Treatment Plant water system mandated by the NYS DEC. The assessment projects the impact of implementing the additional costs associated with the changes required by the Flow Management Plan. In addition, we determined the financial burden imposed on the residents, on a household level, in the service areas by these new costs.

15. We assisted the City of Utica on the development of a $110 million financial capability assessment in relation to a Combined Sewer Overflow ("CSO") Project mandated by the New York State Department of Environmental Conservation ("NYS DEC"). This assessment included analysis on the potential issuance of over $110 million in bonds for a large regional sewer project. This analysis gauged whether these public works expenses would impose a significant economic impact on the residents of the City of Utica.

16. We assisted Oneida County on a $158 million Sanitary Sewer Overflow Project mandated by the NYS DEC. We provided the financial analysis for the potential issuance of over $158 million in bonds and loans to rehabilitate the Oneida County Sewer District. This included developing models that showed the impacts of the proposed project on sewer rates and feasibility at the household level of the project as proposed by NYS Department of Environmental Conservation.

B. PROVIDING MARKET INFORMATION ON OTHER COMPARABLE SOLID WASTE AUTHORITIES
Because we have acted as a financial advisor to twelve solid waste authorities over an extended period of time, we believe that we can provide insightful market information to CRRA that will be very helpful in its decision-making. Also, as a function of our business, we are familiar with authorities that are not part of our client base, but whose activities and experiences will be useful to the CRRA. We are active in the Solid Waste Association of North America (serving as a speaker or panel participant on a number of occasions and an annual speaker at the SWANA Senior Executives Management Seminar) and the New York State Association for Solid Waste Management. As your advisor, we prepared an analysis of the credit structure of a wide variety of solid waste and bond issuers. We identified a number of different credit structures for CRRA to consider. Our analysis focused on four issues of pure solid waste revenue bonds, i.e., ones with no governmental support.

C. PROVIDING MARKET INFORMATION ON INNOVATIONS WITHIN THE SOLID WASTE FIELD
On a more general basis, Environmental Capital has consistently innovated for its solid waste clients. Our most notable innovations include: 1. Carbon Credit Sales. We have initiated, assisted in the development and sold over $9 million for our solid waste clients. 2. State Revolving Fund Subsidized Loans (SRFs). We have assisted many of our solid waste clients in borrowing or refunding existing borrowings through SRFs, resulting in savings of over $26 million. 3. Solid Waste Technical Innovation. As daily participants in the solid waste business, we are knowledgeable of innovations within the solid waste field. Primarily, we are knowledgeable of financial innovations and have analyzed and/or implemented a number of these innovations for our clients (see response to item "D" below). We bring a healthy skepticism to our assessment of technical innovations. In our 30 years of solid waste work (at Environmental Capital and at other firms), we have been asked by clients to review various "innovative proposals." Most "innovative proposals" have proven to be infeasible or too risky, and we have frequently advised against them. Others have proven sound and have produced the benefits that are promised. We are very careful to limit our advice to areas (such as finance, economics, cost/benefit assessment, and risk assessment) that we feel are within our

knowledge and expertise.

Also, because of our long time participation in the solid waste industry, we have a wide variety of contacts, such as engineers, lawyers and other solid waste officials from whom we can obtain information. We have accessed a number of these to obtain relevent information for CRRA over the past 10 years.

D. RECOMMENDING AND EVALUATING ALTERNATIVE FINANCIAL OPTIONS

Our credentials for providing recommendations and evaluations of financial options are very strong. The essence of our business is the evaluation of financial options available to our clients and the making of recommendations based on those evaluations. We have advised on the following issues, among others:

1. Revenue versus general obligation bonds

2. Advance and Current Refundings—We have completed 45 refundings for solid waste bonds.

3. Bonds with interest subsidized through State Revolving Funds—We have initiated and advised on 44 subsidized solid waste financings through State Revolving Funds.

4. Bonds subsidized by various federal government programs—We have advised clients on Build America Bonds ("BABs"), Clean Energy Bonds ("CREBs"), and Qualified Clean Energy Bonds ("QCEBs"), all of which carry different levels of federal subsidy and a variety of pros and cons.

5. Bond structuring—We advise clients on their bond structuring options and on the costs, pros and cons for each option.

6. Investments--We advise our clients on their options for investing unpsent bond proceeds.

7. Fixed and variable rate financing—We have advised our clients on the merits of selecting fixed or variable rate financing.

8. SWAPs and other structuring techniques.

E. BUSINESS PLAN MODELING

A number of the assignments that we have executed for CRRA involved extensive spreadsheet modeling. As a part of our work on the Town of Greenwich/SWEROC litigation, we built a very large model that simulated all of the marginal revenues and costs that would have occurred had the Town of Greenwich delivered all of the recyclables that it was obligated to deliver under its contract with CRRA/SWEROC. From this model we determined the damages that were due to CRRA, SWEROC and Fairfield County Recycling, Inc.

We also built several spreadsheet models that enabled us to determine the optimal amount of 1996A Mid-Connecticut bonds to defease, when CRRA had funds to do so. This enabled us to use all of the funds available to CRRA, plus funds in the debt service reserve fund. The spreadsheet allowed us to iterate solutions until we reached the optimal one.

We have extensive additional experience with business plans and spreadsheet modeling, which we would bring to the CRRA. Several additional examples that illustrate our experience are:

1. Islip Resource Recovery Agency

As described earlier, Environmental Capital has advised the Agency on the development of a new $250,000,000, 750 ton per day resource recovery facility to be located adjacent to the Agency's existing facility. We created the model used to evaluate several different potential partnership structures with other municipalities.

2. As described earlier we have constructed financial models for the Development Authority of the North Country, Steuben County, NY and Kent County, MI that simulated the life cycle costs and expenses for various solid waste projects and capital expenditures.

3. Warren County, New York

As described earlier, Warren County retained Environmental Capital to provide an analysis of the feasibility and desirability of acquiring the waste-to-energy facility that serves the County.

Our analysis, performed largely using spreadsheet models and analyses, compared and contrasted a variety of ownership structures and refinancing options. These models were structured over several different refinancing periods. In order to determine the inputs to the models, we held extensive conferences with County supervisors, the County Attorney, local counsel, and the County's engineering consultant. All of their requirements had to be addressed and the models adjusted accordingly, so as to produce models that were feasible, legal, and easy to understand. The analysis led the County to procure a new vendor.

After the facility was transferred the new vendor, we assisted the County in refinancing the outstanding bonds that resulted in a $6.6 million savings.

4. Dutchess County, New York Water and Wastewater Authority ("DCWWA")

DCWWA was asked by Dutchess County, New York to assist in solving the financial problems that were created when a local fire and water district constructed a water treatment plant that was oversized for its service area and had acquired too much

debt. Because of the extremely high benefit assessments (analogous to property taxes) set by the district, a large number of properties were forfeited to the County, which resulted in the County paying approximately $1 million per year in benefit assessments to the district.

Environmental Capital developed a series of spreadsheet models that simulated a variety of scenarios based on changes in such variables as refinancing alternatives, rate structures, subsidy payments, interest rates, growth assumptions, etc. We also assisted in the negotiations among Dutchess County, DCWWA and the district. We were eventually able to develop a structure on which all parties were in agreement. This structure resulted in the acquisition of the water treatment plant and the remainder of the district's water system by the DCWWA. A new benefit assessment methodology was instituted that was acceptable to the district and its ratepayers. The subsidy being paid by Dutchess County was dramatically and immediately reduced. The subsidy is to be eliminated over time, and an accounting system was devised that records all of the Dutchess County subsidies that are paid. As debt is paid down and growth occurs in the district service area, the accumulated subsidy will be repaid to Dutchess County from the Authority's increased revenues.

F. CASH INVESTMENT ADVISORY SERVICES

We have extensive experience in advising our clients in regards to cash management and investments. We have assisted our clients in investing the bond proceeds of almost everyone of the 116 revenue bond issues that we have completed. Depending on the individual client's circumstances, investment goals and risk tolerances, we have advised on investments including government money market funds, US Treasury Bonds, laddered US Treasury Bonds, repurchase agreements, guaranteed investment contracts, forward purchase agreements, etc. We have developed bid specifications for these investments and assisted in negotiating the agreements.

Franklin County Solid Waste Management Authority
$1,970,585 Guaranteed Investment Contract

Montgomery-Schoharie-Otsego Solid Waste Management Authority
$10,330,588 Flexible Repurchase Agreement

Oneida-Herkimer Solid Waste Management Authority
$28,537,563 Collateralized Repurchase Agreement
$21,790,000 Collateralized Repurchase Agreement
$19,263,746 Collateralized Repurchase Agreement
$5,089,641 Collateralized Repurchase Agreement
$39,090,000 Forward Delivery Agreement
$5,776,000 Guaranteed Investment Contract

Rockland County Solid Waste Management Authority
$10,989,445 Collateralized Investment Agreement
$1,651,017 Guaranteed Investment Contract

Ulster County Resource Recovery Agency

$15,936,627	Collateralized Repurchase Agreement
$6,358,948	Purchase and Resale Agreement

Upper Mohawk Valley Regional Water Finance Authority

$8,050,000	Investment of Bond Proceeds
$16,500,000	Investment Agreement
$570,346	Forward Delivery Agreement
$8,356,543	Master Repurchase Agreement

Water Authority of Western Nassau County

$7,146,564	Investment Agreement

We have also assisted our solid waste authority clients on cash management issues. For one client, we performed a study to determine if cash could be used more efficiently. More specifically, we analyzed whether account receivables could be turned into cash more quickly, and whether investments could be held for longer periods of time. We then assisted in developing an RFP for banking services, which included controlled disbursements, internet banking and investment services.

We have recently advised our clients in the development of investment programs entailing the purchase of FDIC insured certificates of deposit. This brought our client a positive return, while having investments backed by the US government.

G. FINANCIAL FEASIBILITY ANALYSIS

We have substantial experience with financial feasibility analyses. As described in item "E" above, we have performed such analyses ourselves. In addition, by virtue of the fact that most publicly offered revenue bond financings require engineering feasibility and/or rate studies, we have worked closely with engineering and accounting firms to develop the required reports. These reports have ranged from extensive studies of new systems to short summary reports on established borrowers.

H. ANALYSIS OF STATE AND FEDERAL LAWS AND REGULATIONS RELATIVE TO SOLID WASTE MANAGEMENT AND MUNICIPAL BONDS

We have worked with CRRA in reviewing pertinent state legislation that governs CRRA's activities, such as that which set up CRRA and that which control the application of the Special Capital Reserve Fund ("SCRF").

We have frequent recourse to the legislation that created our various authority clients to assist them in evaluating new proposals and possible activities. Their powers are set forth in the legislation, and as a result, an understanding of those laws is essential in determining certain options for our clients. Knowledge of these laws enables us to review our authority clients' powers and authorized activities.

Furthermore, we work closely with legal firms to understand how their legal analyses will affect our clients. For example, on a recent solid waste financing that involved the sale of taxable bonds, we were able to convince the tax counsel to include a number of costs in his tax analysis that had initially been excluded. This resulted in a smaller amount of taxable bonds being issued, thereby creating a more favorable outcome for the client.

We have also participated in the fight to restore flow control for governments. When the C&A Carbone vs. the Town of Clarkstown decision was first announced, we were instrumental in organizing a group of solid waste authorities and municipalities to respond. We reviewed various versions of flow control legislation for our clients to assist them in determining if such legislation could be helpful to them.

One of our clients, the Oneida Herkimer Solid Waste Management Authority ("OHSWMA"), recently prevailed in a flow control case presided over by the Second Circuit Court of Appeals. This decision stated that flow control might be legal for government bodies. We assisted OHSWMA in obtaining that decision, which is applicable to our other authority clients as well. On September 26, 2006 the Supreme Court accepted this case for review.

4. CURRENT OPPORTUNITIES

Briefly describe any areas of opportunity in the finance area that SOQ Submitter believes exist for CRRA today and how SOQ Submitter would help CRRA capitalize on those opportunities.
The most significant opportunity/challenge for CRRA is to achieve financial stability in the new Connecticut Solid Waste System ("CSWS"), the successor to the Mid-Conn Project. The CSWS plays a critical role in the cost of solid waste disposal in the State. It supplies a significant share of the total State disposal capacity. Because it is publicly owned and not operated for profit, the price that it charges for its services act as a check on prices charged by for-profit companies at other in-State facilities. Without CSWS facilities it seems likely that prices would rise to reflect the cost of transportation to and disposal in large out-of-state facilities in New York, Pennsylvania and Ohio with the significant attendant economic and environmental costs. **The problem in achieving financial stability has been the reluctance of some towns to sign new Municipal Service Agreements ("MSAs"), taking advantage of other offers of solid waste disposal service that may be attractive in the short-term, but not in the long term, especially if the economic viability of CSWS is undetermined.** **Since CSWS provides such critical economic and environmental value to the State and its citizens, we believe that it is in the State's best interest to ensure the continuance of the CSWS facilities. Such support could be in the form of direct or indirect subsidiaries, such as providing a surcharge for energy generated at CSWS facilities, or perhaps through flow control.** **We have experience advocating on behalf of our clients. We very much look forward to the opportunity to assist the Authority in making the case for the criticality of the mission it performs for the citizens of Connecticut.**

Appendix to Business Information Form-Environmental Capital LLC Solid Waste Experience

Authority Solid Waste Financings

	Year	Financings	Refundings	SRF Financings	SRF Refundings	Total
Oneida-Herkimer Solid Waste Management Authority*	1990	10	3	3	2	$ 171,780,675
Montgomery-Schoharie-Otsego Solid Waste Management Authority*	1990	4	3	1	1	54,776,238
Pollution Control Financing Authority of Warren County, NJ	1990	1	0	0	0	39,225,000
Ulster County Resource Recovery Agency*	1993	20	12	10	10	100,574,467
Rockland County Solid Waste Management Authority*	1994	17	6	6	4	151,144,228
Franklin County Solid Waste Management Authority	1995	6	2	2	1	32,393,526
Development Authority of the North Country	1995	5	4	3	3	49,472,105
Warren & Washington Counties Industrial Development Agency	2001	1	1	0	0	48,145,000
Connecticut Resources Recovery Authority	2004	3	1	0	0	193,575,000
Bristol Resource Recovery Facility Operating Committee	2007	Consulting				
Islip Resource Recovery Agency	2007	Consulting				
Lancaster County Resource Recovery Agency	2008	Carbon Credits				
Subtotal		**67**	**32**	**25**	**21**	**$ 841,086,239**

General Obligation Solid Waste Financings

	Financings	Refundings	SRF Financings	SRF Refundings	Total
Chautauqua County	1	1	1	1	$ 17,425,000
Chemung County	1	1	1	1	7,650,700
City of Auburn	1	1	1	1	2,132,615
City of Johnstown	1	1	1	1	1,012,000
City of Saratoga Springs	2	1	1	1	7,465,400
City of Watertown	1	0	0	0	6,115,000
County of Columbia	1	1	1	1	7,040,000
Fulton County	2	2	2	2	7,770,000
Orange County	1	0	1	0	363,100
Town of Brookhaven	2	2	2	2	20,508,987
Town of Colonie	1	1	1	1	4,796,000
Town of Gloversville	1	0	1	0	1,480,141
Town of Hempstead	2	1	2	1	8,490,000
Town of Orangetown	1	0	0	0	1,500,000
Town of Rotterdam	1	1	1	1	3,307,672
Town of Unionvale	2	0	2	0	826,333
Subtotal	**21**	**13**	**18**	**13**	**$ 97,882,948**
Total Solid Waste Financings	**88**	**45**	**43**	**34**	**$ 938,969,187**

* Environmental Capital helped organize

B

Substitute Senate Bill No. 1081

Public Act No. 13-285

AN ACT CONCERNING RECYCLING AND JOBS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 22a-207a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2013*):

(a) As used in sections 22a-208d, 22a-208q and subsection (b) of section 22a-228: (1) "Composting" means a process of accelerated biological decomposition of organic material under controlled conditions; (2) "mixed municipal solid waste" means municipal solid waste that consists of mixtures of solid wastes which have not been separated at the source of generation or processed into discrete, homogeneous waste streams such as glass, paper, plastic, aluminum or tire waste streams provided such wastes shall not include any material required to be recycled pursuant to section 22a-241b; [,] and (3) "mixed municipal solid waste composting facility" means a volume reduction plant where mixed municipal solid waste is processed using composting technology.

(b) As used in this chapter, "end user" means any person who uses a material for such material's original use or any manufacturer who uses a material as feedstock to make a marketable product.

Sec. 2. Section 22a-208f of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2013*):

Notwithstanding the provisions of section 22a-208a, a scrap metal processor, as described in section 14-67w, shall not be required to obtain a permit under [said] section 22a-208a if on or before [July 1, 1990] July 31, 2014, and annually [on March thirty-first thereafter, he] thereafter, such scrap metal processor submits to the Commissioner of Energy and Environmental Protection, on a form prescribed by the commissioner, the amount of scrap metals generated within the borders of the state and purchased or received [from any municipality, municipal or regional authority, the state or any political subdivision of the state listed by town of origin. He shall also send to each Connecticut municipality included in such listing a copy of such information pertaining to the municipality] by such processor for the prior state fiscal year, including a good faith estimate of the amount received directly from instate construction or demolition sites. Such report shall identify the monthly

amounts of scrap metal generated within the state, other recyclable materials generated within the state and recycling residue generated, each of which was sent out by such processor, and indicate the destination facility type for such materials, including an indication of whether such facility is in this state.

Sec. 3. Subsection (g) of section 22a-220a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2013*):

(g) As used in this section, "collector" means any person who holds himself out for hire regularly to collect solid waste [on a regular basis] from residential, business, commercial or other establishments. "Collector" does not include: (1) Any person who transports solid waste that is incidentally generated during professional or commercial activities unrelated to the collection of solid waste, such as residential property repairs, provided such solid waste is self-generated by such person's professional or commercial activities and such solid waste is transported to an authorized recycling facility, a permitted recycling facility, or a permitted solid waste facility, and (2) any person who transports used materials for the purpose of delivering such materials to a charitable organization that distributes reused household items or to a retail facility that sells reused household items.

Sec. 4. Subsection (a) of section 22a-226e of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2013*):

(a) [Not later than six months after the establishment of service in the state by two or more permitted source-separated organic material composting facilities, as defined in section 22a-207, that have a combined capacity to service the needs of commercial food wholesalers or distributors, industrial food manufacturers or processors, supermarkets, resorts or conference centers that each generate an average projected volume of not less than one hundred four tons per year of source-separated organic materials] (1) On and after January 1, 2014, each commercial food wholesaler or distributor, industrial food manufacturer or processor, supermarket, resort or conference center that is located not more than twenty miles from an authorized source-separated organic material composting facility and that generates an average projected volume of not less than one hundred four tons per year of source-separated organic materials shall: [(1)] (A) Separate such source-separated organic materials from other solid waste; and [(2)] (B) ensure that such source-separated organic materials are recycled at [a permitted source-separated organic material composting facility that is not more than twenty miles from such wholesaler, distributor, manufacturer, processor, supermarket, resort or conference center, as applicable] any authorized source-separated organic material composting facility that has available capacity and that will accept such source-separated organic material.

(2) On and after January 1, 2020, each commercial food wholesaler or distributor, industrial food manufacturer or processor, supermarket, resort or conference center that is located not more than twenty miles from an authorized source-separated organic material composting facility and that generates an average projected volume of not less than fifty-two tons per year of source-separated organic materials shall: (A) Separate such source-separated organic materials from other solid waste; and (B) ensure that such source-separated organic

materials are recycled at any authorized source-separated organic material composting facility that has available capacity and that will accept such source-separated organic material.

Sec. 5. (NEW) (*Effective October 1, 2013*) The Commissioner of Energy and Environmental Protection, in consultation with other state agencies or quasi-public agencies, shall identify opportunities for the establishment of a new, or the expansion of any existing, recycling infrastructure investment program.

Sec. 6. (NEW) (*Effective October 1, 2013, and applicable to assessment years commencing on or after said date*) (a) For the purposes of this section:

(1) "Municipality" has the same meaning as provided in section 12-129r of the general statutes.

(2) "Recycling" has the same meaning as provided in section 22a-207 of the general statutes.

(b) Any municipality may, by ordinance adopted by its legislative body, provide an exemption from property tax for any machinery or equipment used in connection with recycling that is installed on or after October 1, 2013. Any such exemption shall apply only to: (1) The increased value of the commercial or industrial property that is attributable to such machinery or equipment, and (2) the first fifteen assessment years following installation of such machinery or equipment.

Sec. 7. (NEW) (*Effective from passage*) (a) Not later than June 30, 2013, the Department of Energy and Environmental Protection, in consultation with the Office of Policy and Management, shall initiate one or more audits of the Connecticut Resources Recovery Authority. The Connecticut Resources Recovery Authority shall cooperate fully with any such audit and shall pay the cost of any such audit provided such payment shall not exceed a cumulative total of five hundred thousand dollars. Any such audit may include, but need not be limited to, a review or analysis of: (1) The results of any such audits, review of any investigation of said authority or by said authority that occurred prior to the effective date of this section, (2) the financial condition of said authority, (3) said authority's short and long-term liabilities, including, but not limited to, such liabilities to bond holders, employees, former employees and such liabilities from lawsuits, leases, contractual obligations and any other matter, (4) said authority's existing and projected revenues, (5) said authority's cash flow projections for each of the next three calendar years, (6) said authority's operations, including, but not limited to, human resources, facilities use, information technology services, and identification of potential operating efficiencies, (7) said authority's internal controls, financial management and risk management practices, and (8) any transaction of said authority.

(b) On or before October 30, 2013, the Department of Energy and Environmental Protection, in conjunction with the Office of Policy and Management, shall provide a summary of the findings of such audits to the Governor and the joint standing committees of the General Assembly having cognizance of matters relating to the environment, appropriations and government administration.

Sec. 8. (*Effective from passage*) (a) There is established a Resources Recovery Task Force to study the operations, financial stability and business models for resource recovery facilities operating in the state.

(b) The task force shall consist of the following members:

(1) One appointed by the speaker of the House of Representatives, who shall be a municipal official or a representative of an organization that represents municipalities;

(2) One appointed by the president pro tempore of the Senate, who shall be a municipal official or a representative of an organization that represents municipalities;

(3) One appointed by the minority leader of the House of Representatives, who shall be a municipal official or a representative of an organization that represents municipalities;

(4) One appointed by the minority leader of the Senate, who shall be a municipal official or a representative of an organization that represents municipalities;

(5) One appointed by the majority leader of the House of Representatives, who shall be a representative of the solid waste hauling industry;

(6) One appointed by the majority leader of the Senate, who shall have experience in energy procurement;

(7) Four appointed by the Governor, each of whom shall represent resource recovery facilities in this state or have experience in energy procurement;

(8) The Commissioner of Energy and Environmental Protection, or the commissioner's designee;

(9) The Secretary of the Office of Policy and Management, or the secretary's designee; and

(10) The Commissioner of Administrative Services, or the commissioner's designee.

(c) All appointments to the task force shall be made not later than thirty days after the effective date of this section. Any vacancy shall be filled by the appointing authority.

(d) The Commissioner of Energy and Environmental Protection, or the commissioner's designee, shall serve as the chairperson of the task force. Such chairperson shall schedule the first meeting of the task force, which shall be held not later than sixty days after the effective date of this section.

(e) The administrative staff of the Department of Energy and Environmental Protection shall serve as administrative staff of the task force.

(f) Not later than December 15, 2013, the task force shall submit a report on its findings and recommendations to the joint standing committee of the General Assembly having

cognizance of matters relating to energy, in accordance with the provisions of section 11-4a of the general statutes. Such report shall include:

(1) A review of the applicable statutes and regulations regarding renewable energy certificate credits provided to resource recovery facilities in the state and a recommendation on whether such statutes should be modified. For any such recommendation, the task force shall specify the expected economic impact that such recommendation will have on resource recovery facilities, municipalities and energy consumers in the state;

(2) An analysis of the financial status of the resource recovery facilities operating in the state and recommendations to improve such status, including, but not limited to, whether bilateral purchasing agreements between resource recovery facility-based businesses and the state or municipalities would provide a mechanism for improving the long-term financial stability of such facilities;

(3) Recommendations for any changes to the statutes and regulations concerning bilateral purchase agreements and a description of the effect that such recommendations would have on the anticipated structure of such agreements and the financial impacts such agreements would have on resource recovery facilities, municipalities, and energy consumers in the state;

(4) A recommendation on whether resource recovery facilities in this state should be defined as an "electric municipal utility" for the purpose of the municipalities such facilities serve; and

(5) Any other recommendations the task force deems appropriate concerning the future of resource recovery facilities in the state and the long-term financial status of such facilities.

(g) The task force shall terminate on the date it submits such report or December 15, 2013, whichever is later.

Sec. 9. (NEW) (*Effective from passage*) The Connecticut Resources Recovery Authority shall develop a transition plan for: (1) Achieving a sustainable business model that improves the long-term financial stability of said authority, or (2) conducting the dissolution of said authority and the disposing of said authority's assets. Such plan shall be transmitted to the Governor and the joint standing committees of the General Assembly having cognizance of matters relating to energy and the environment on or before November 30, 2013. Such plan shall be developed in consultation with the Resources Recovery Task Force established in section 2 of this act. In developing such plan, the authority shall detail and give consideration to, but not be limited to, an assessment of:

(A) The benefits and consequences of: (i) The closure or sale of the Mid-Connecticut Resource Recovery Facility, (ii) the transition of such facility to an alternative use such as a solid waste management facility, and (iii) the sale of other authority assets;

(B) The reductions in authority expenses, including, but not limited to, management fees, labor costs, contract obligations and legal fees;

(C) Said authority's financial and legal liabilities and an evaluation of whether such liabilities may be eliminated or mitigated;

(D) The operational requirements of said authority's regional transfer stations, landfills and any other functional role of said authority;

(E) Said authority's state-wide role in the areas of bonding, education and development and how such transition plan affects that role; and

(F) The post-closure responsibilities and liabilities of said authority for landfills under said authority's care and control.

Sec. 10. Section 22a-261 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) There is hereby established and created a body politic and corporate, constituting a public instrumentality and political subdivision of the state of Connecticut established and created for the performance of an essential public and governmental function, to be known as the Connecticut Resources Recovery Authority. The authority shall not be construed to be a department, institution or agency of the state.

(b) On and before May 31, 2002, the powers of the authority shall be vested in and exercised by a board of directors, which shall consist of twelve directors: Four appointed by the Governor and two ex-officio members, who shall have a vote including the Commissioner of Transportation and the Commissioner of Economic and Community Development; two appointed by the president pro tempore of the Senate, two by the speaker of the House, one by the minority leader of the Senate and one by the minority leader of the House of Representatives. Any such legislative appointee may be a member of the General Assembly. The directors appointed by the Governor under this subsection shall serve for terms of four years each, from January first next succeeding their appointment, provided, of the directors first appointed, two shall serve for terms of two years, and two for terms of four years, from January first next succeeding their appointment. Any vacancy occurring under this subsection other than by expiration of term shall be filled in the same manner as the original appointment for the balance of the unexpired term. Of the four members appointed by the Governor under this subsection, two shall be first selectmen, mayors or managers of Connecticut municipalities; one from a municipality with a population of less than fifty thousand, one from a municipality of over fifty thousand population; two shall be public members without official governmental office or status with extensive high-level experience in municipal or corporate finance or business or industry, provided not more than two of such appointees shall be members of the same political party. The chairman of the board under this subsection shall be appointed by the Governor, with the advice and consent of both houses of the General Assembly and shall serve at the pleasure of the Governor. Notwithstanding the provisions of this subsection, the terms of all members of the board of directors who are serving on May 31, 2002, shall expire on said date.

(c) On and after June 1, 2002, the powers of the authority shall be vested in and exercised by a board of directors, which shall consist of eleven directors as follows: Three appointed by

the Governor, one of whom shall be a municipal official of a municipality having a population of fifty thousand or less and one of whom shall have extensive, high-level experience in the energy field; two appointed by the president pro tempore of the Senate, one of whom shall be a municipal official of a municipality having a population of more than fifty thousand and one of whom shall have extensive high-level experience in public or corporate finance or business or industry; two appointed by the speaker of the House of Representatives, one of whom shall be a municipal official of a municipality having a population of more than fifty thousand and one of whom shall have extensive high-level experience in public or corporate finance or business or industry; two appointed by the minority leader of the Senate, one of whom shall be a municipal official of a municipality having a population of fifty thousand or less and one of whom shall have extensive high-level experience in public or corporate finance or business or industry; two appointed by the minority leader of the House of Representatives, one of whom shall be a municipal official of a municipality having a population of fifty thousand or less and one of whom shall have extensive, high-level experience in the environmental field. No director may be a member of the General Assembly. Not more than two of the directors appointed by the Governor shall be members of the same political party. The appointed directors shall serve for terms of four years each, provided, of the directors first appointed for terms beginning on June 1, 2002, (1) two of the directors appointed by the Governor, one of the directors appointed by the president pro tempore of the Senate, one of the directors appointed by the speaker of the House of Representatives, one of the directors appointed by the minority leader of the Senate and one of the directors appointed by the minority leader of the House of Representatives shall serve an initial term of two years and one month, and (2) the other appointed directors shall serve an initial term of four years and one month. The appointment of each director for a term beginning on or after June 1, 2004, shall be made with the advice and consent of both houses of the General Assembly. The Governor shall designate one of the directors to serve as chairperson of the board, with the advice and consent of both houses of the General Assembly. The chairperson of the board shall serve at the pleasure of the Governor. Any appointed director who fails to attend three consecutive meetings of the board or who fails to attend fifty per cent of all meetings of the board held during any calendar year shall be deemed to have resigned from the board. Any vacancy occurring other than by expiration of term shall be filled in the same manner as the original appointment for the balance of the unexpired term. As used in this subsection, "municipal official" means the first selectman, mayor, city or town manager or chief financial officer of a municipality that has entered into a solid waste disposal services contract with the authority and pledged the municipality's full faith and credit for the payment of obligations under such contract.

(d) The chairperson shall, with the approval of the directors, appoint a president of the authority who shall be an employee of the authority and paid a salary prescribed by the directors. The president shall supervise the administrative affairs and technical activities of the authority in accordance with the directives of the board.

(e) Each director shall be entitled to reimbursement for said director's actual and necessary expenses incurred during the performance of said director's official duties.

(f) Directors may engage in private employment, or in a profession or business, subject to any applicable laws, rules and regulations of the state or federal government regarding official ethics or conflict of interest.

(g) Six directors of the authority shall constitute a quorum for the transaction of any business or the exercise of any power of the authority, provided, two directors from municipal government shall be present in order for a quorum to be in attendance. For the transaction of any business or the exercise of any power of the authority, and except as otherwise provided in this chapter, the authority shall have power to act by a majority of the directors present at any meeting at which a quorum is in attendance. If the legislative body of a municipality that is the site of a facility passes a resolution requesting the Governor to appoint a resident of such municipality to be an ad hoc member, the Governor shall make such appointment upon the next vacancy for the ad hoc members representing such facility. The Governor shall appoint with the advice and consent of the General Assembly ad hoc members to represent each facility operated by the authority provided at least one-half of such members shall be chief elected officials of municipalities, or their designees. Each such facility shall be represented by two such members. The ad hoc members shall be electors from a municipality or municipalities in the area to be served by the facility and shall vote only on matters concerning such facility. The terms of the ad hoc members shall be four years.

[(h) There is established, effective June 1, 2002, a steering committee of the board of directors, consisting of at least three but not more than five directors, who shall be jointly appointed by the Governor, the president pro tempore of the Senate and the speaker of the House of Representatives. Said committee shall consist of at least one director who is a municipal official, as defined in subsection (c) of this section. The steering committee shall forthwith establish a financial restructuring plan for the authority, subject to the approval of the board of directors, and shall implement said plan. The financial restructuring plan shall determine the financial condition of the authority and provide for mitigation of the impact of the Connecticut Resources Recovery Authority-Enron-Connecticut Light and Power Company transaction on municipalities which have entered into solid waste disposal services contracts with the authority. The steering committee shall also review all aspects of the authority's finances and administration, including but not limited to, tipping fees and adjustments to such fees, the annual budget of the authority, any budget transfers, any use of the authority's reserves, all contracts entered into by or on behalf of the authority, including but not limited to, an assessment of the alignment of interests between the authority and the authority's contractors, all financings or restructuring of debts, any sale or other disposition or valuation of assets of the authority, including sales of electricity and steam, any joint ventures and strategic partnerships, and the initiation and resolution of litigation, arbitration and other disputes. The steering committee (1) shall have access to all information, files and records maintained by the authority, (2) may retain consultants and utilize other resources necessary to carry out its responsibilities under this subsection, which have a total cost of not more than five hundred thousand dollars, without the approval of the board of directors, and may draw on accounts of the authority for such costs, and (3) shall submit a report to the board of directors and the General Assembly, in accordance with section 11-4a, on its findings, progress and recommendations for future action by the board of directors in carrying out the purposes of this subsection, not later than December 31, 2002.

Said report shall also include a report on any loans made to the authority under section 22a-268d. The steering committee shall terminate on December 31, 2002, unless extended by the board.]

[(i)] (h) The board may delegate to three or more directors such board powers and duties as it may deem necessary and proper in conformity with the provisions of this chapter and its bylaws. At least one of such directors shall be a municipal official, as defined in subsection (c) of this section, and at least one of such directors shall not be a state employee.

[(j)] (i) Appointed directors may not designate a representative to perform in their absence their respective duties under this chapter.

[(k)] (j) The term "director", as used in this section, shall include such persons so designated as provided in this section and this designation shall be deemed temporary only and shall not affect any applicable civil service or retirement rights of any person so designated.

[(l)] (k) The appointing authority for any director may remove such director for inefficiency, neglect of duty or misconduct in office after giving the director a copy of the charges against the director and an opportunity to be heard, in person or by counsel, in the director's defense, upon not less than ten days' notice. If any director shall be so removed, the appointing authority for such director shall file in the office of the Secretary of the State a complete statement of charges made against such director and the appointing authority's findings on such statement of charges, together with a complete record of the proceedings.

[(m)] (l) The authority shall continue as long as it has bonds or other obligations outstanding and until its existence is terminated by law. Upon the termination of the existence of the authority, all its rights and properties shall pass to and be vested in the state of Connecticut.

[(n)] (m) The directors, members and officers of the authority and any person executing the bonds or notes of the authority shall not be liable personally on such bonds or notes or be subject to any personal liability or accountability by reason of the issuance thereof, nor shall any director, member or officer of the authority be personally liable for damage or injury, not wanton or wilful, caused in the performance of such person's duties and within the scope of such person's employment or appointment as such director, member or officer.

[(o)] (n) Notwithstanding the provisions of any other law to the contrary, it shall not constitute a conflict of interest for a trustee, director, partner or officer of any person, firm or corporation, or any individual having a financial interest in a person, firm or corporation, to serve as a director of the authority, provided such trustee, director, partner, officer or individual shall abstain from deliberation, action or vote by the authority in specific respect to such person, firm or corporation.

Sec. 11. Subsection (a) of section 22a-221 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) The state, any municipality or any municipal or regional authority may make contracts for the exercise of its corporate or municipal powers with respect to the collection,

transportation, separation, volume reduction, processing, storage and disposal of its solid wastes for a period not exceeding thirty years and may pledge its full faith and credit for the payment of obligations under such contracts. Said thirty-year limitation shall not apply to the extension of any such contract that was in force as of December 31, 2008, and that was approved by the commissioner pursuant to subsection (a) of section 22a-213.

Sec. 12. Sections 22a-268c to 22a-268f, inclusive, of the general statutes are repealed. (*Effective from passage*)

C

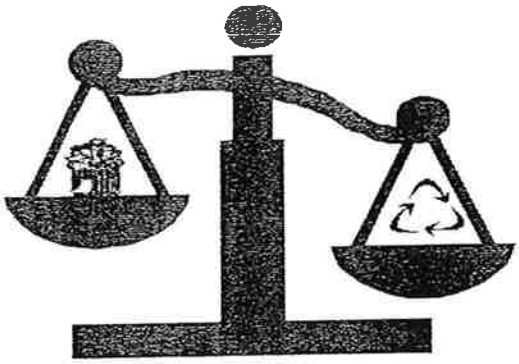
STATE OF CONNECTICUT

State Solid Waste Management Plan

Amended December 2006

Executive Summary & Table of Recommended Strategies

Gina McCarthy, Commissioner



Changing the Balance

State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127
www.ct.gov/dep

Pursuant to Connecticut General Statutes Section 22a-228 and Section 22a-228-1(b) of the Regulations of Connecticut State Agencies (RCSA), the State Solid Waste Management Plan has been amended. Pursuant to RCSA Section 22a-228-1(b)(8), notice of this amendment was provided on December 20, 2006. The effective date of the Amended State Solid Waste Management Plan shall be December 20, 2006.

Gina McCarthy
Commissioner
Connecticut Department of Environmental Protection

Dated: December 20, 2006

CT DEP ADA Publication Statement

The DEP is an affirmative action/equal opportunity employer. In conformance with the ADA, individuals with disabilities who need information in an alternative format, to allow them to benefit and/or participate in the agency's programs and services, should call TDD(860) 424-3000 and make their request to the receptionist. Requests for accommodations to attend meetings and/or educational programs, sponsored by the DEP, must be made at least two weeks prior to the program date.

These requests may be made directly to Marcia Z. Bonitto, ADA Coordinator, via e-mail: Marcia.Bonitto@po.state.ct.us

Executive Summary and Table of Recommended Strategies
Excerpted from
STATE OF CONNECTICUT SOLID WASTE MANAGEMENT PLAN,
AMENDED DECEMBER 2006

This document contains excerpts from the State of Connecticut State Solid Waste Management Plan, Amended December 2006. Included are the **Executive Summary** and the **Table of Recommended Strategies** which lists the objectives and corresponding strategies and outlines for each: the type of action needed; the assigned priority; anticipated new costs; the initiation timeframe; and the lead and or key partners for implementation.

The entire Plan can be accessed on the CT DEP website at: www.ct.gov/dep The Plan consists of five chapters and eleven appendices. The Plan's contents includes the following:

- **Chapter 1** is the introduction which provides the purpose of the Plan, statutory and regulatory authorities for the Plan, the adoption process, solid waste management plan consistency requirements, the solid waste planning framework, and identifies variables potentially impacting solid waste management in Connecticut.
- **Chapter 2** summarizes Connecticut's current conditions and practices, provides solid waste projections, identifies key factors affecting solid waste management in Connecticut, and identifies key issues that will determine the State's future directions.
- **Chapter 3** presents Connecticut's long range vision to treat solid waste as a valuable resource, including principles and goals that will be used as a guide to the State's efforts in managing solid waste.
- **Chapter 4** presents an outline for action, including specific objectives and strategies for eight critical areas.
- **Chapter 5** outlines implementation approaches to the Plan and begins with a discussion on roles and responsibilities by both the public and private sectors and ends with a comprehensive listing of recommended strategies.

The appendices to this Plan were prepared to provide detailed background information that was considered during the development of the Plan.

The Plan includes eight objectives, with a total of seventy-five strategies. Listed below are the objectives, each with a descriptive narrative.

- **Source Reduction** – Catalyze shifts in consumer, business, product manufacturing, and solid waste processing practices that reduce the amount and toxicity of waste generated in Connecticut.
- **Recycling and Composting** – Move aggressively to strengthen Connecticut's public and private reuse, recycling and composting efforts and infrastructure to increase the quantity and quality of recovered materials and to build resilient, highly efficient and continually improving programs to reduce the amount of solid waste Connecticut disposes, both now

and in the future. Therefore, Connecticut needs to maximize recycling and composting for all types of solid waste generated in the state. Throughout the Plan, recycling includes composting and composting efforts refer only to the composting of source-separated organic material.

- **Management of Solid Waste Requiring Disposal** – Assure that the need for new disposal capacity is minimized, that existing solid waste facilities are used as efficiently as possible, and that the public is fully aware of the potential need for and impacts of disposal options and specific proposals, through a robust public participation process.
- **Management of Special Wastes and Other Types of Solid Waste** – Maximize source reduction, recycling, and beneficial use of special waste and other types of solid waste in a manner that protects human health and the environment; and also assure that special waste and other types of waste that require disposal are disposed in compliance with the State's solid waste management hierarchy in facilities that meet all regulatory standards for protection of human health and safety, natural resources and the environment.
- **Education and Outreach** – Significantly increase awareness and understanding of waste management needs, impacts and the critical social, economic, and environmental issues facing Connecticut, and build support for programs to engage citizens in actions needed to maximize waste reduction and recycling and minimize the need for additional disposal capacity.
- **Program Planning, Evaluation and Measurement** – Enhance local, state and regional planning, measurement and program evaluation practices to drive continual progress towards achieving Connecticut's waste management goals.
- **Permitting and Enforcement** - Ensure that permitting and enforcement decisions promote the goals of the Plan and are made in a manner that is fully protective of human health and the environment; promote continuous improvement of the environmental permit application review and decision making process; achieve the highest level of environmental compliance through predictable, timely, and consistent enforcement and effective compliance assistance where appropriate; and improve communication with municipalities, business, industry, and the public on the regulatory process in order to facilitate and improve compliance with environmental requirements.
- **Funding** – Adopt stable, long-term funding mechanisms that provide sufficient revenue for state, regional and local programs while providing incentives for increased source reduction and recycling.

The State Solid Waste Management Plan as amended provides a comprehensive approach to managing the State's solid waste. All of Connecticut's citizens will play a critical role in achieving the State's vision to treat solid waste as a valuable resource.

EXECUTIVE SUMMARY

Introduction

The Connecticut Department of Environmental Protection (the Department or CT DEP) has amended the State Solid Waste Management Plan in accordance with Section 22a-228 of the Connecticut General Statutes (CGS). It replaces the State Solid Waste Management Plan that was adopted in 1991. CGS Section 22a-229 requires that *"after adoption of a state-wide solid waste management plan pursuant to section 22a-228, any action taken by a person, municipality, or regional authority that is governed by this chapter shall be consistent with such plan."* Since the adoption of the 1991 Plan, solid waste management has changed dramatically from mainly a state and local issue to one that is increasingly a regional, national, and global issue.

This new Plan will now serve as the basis for Connecticut's solid waste management planning and decision making for the period fiscal year 2005 through FY2024. The Plan addresses a wide range of solid wastes, focusing primarily on municipal solid waste (or MSW, what is commonly considered household and commercial trash) and debris resulting from construction and/or demolition activities (C&D waste). Though some other special wastes are addressed, hazardous wastes are not covered. The Plan examines the existing state of solid waste management in Connecticut, identifies the problems that exist and the barriers to solving those problems, sets out a vision and goals and presents strategies to help achieve those goals and realize the vision. Within the immediate five-year period, Connecticut will focus on implementing the higher priority strategies listed in the Plan.

In developing this Plan, the Department worked extensively with the public and the specially created CT DEP Solid Waste Management Plan External Stakeholders Working Group. The External Stakeholders Working group included representatives from municipal and government associations, regional solid waste management authorities, the solid waste management industry, the recycling sector, community and environmental groups, and business and waste generating industries. Implementing the Plan will involve all the citizens of Connecticut to address the solid waste issues facing the state and will require not only changes in personal and business practices, but also legislative changes and increases in funding at the state, regional, and local levels to support new and expanded solid waste management programs.

Vision Statement and Goals

Connecticut's long-range vision for solid waste management is to:

- Significantly transform our system into one based on resource management through collective responsibility for the production, use, and end-of-life management of products and materials in the state;

- Shift from a *throwaway society* towards a system that reduces the generation and toxicity of trash and treats wastes as valuable raw materials and energy resources, rather than as useless garbage or trash; and
- Manage wastes through a more holistic and comprehensive approach than today's system, resulting in the conservation of natural resources and the creation of less waste and less pollution, while supplying valuable raw materials to boost manufacturing economies.

The goals of the State Solid Waste Management Plan are:

- Goal 1: Significantly reduce the amount of Connecticut generated solid waste requiring disposal through increased source reduction, reuse, recycling, and composting.
- Goal 2: Manage the solid waste that ultimately must be disposed in an efficient, equitable, and environmentally protective manner, consistent with the statutory solid waste hierarchy.
- Goal 3: Adopt stable, long-term funding mechanisms that provide sufficient revenue for state, regional, and local programs while providing incentives for increased waste reduction and diversion.

Current Status Of Solid Waste Management

Through State legislation, Connecticut has formally adopted an integrated waste management hierarchy as a guiding framework for solid waste management efforts. Connecticut's system adheres to this hierarchy by emphasizing source reduction, recycling, composting, and energy recovery from solid waste, while relying on landfill disposal as a last resort.

MSW

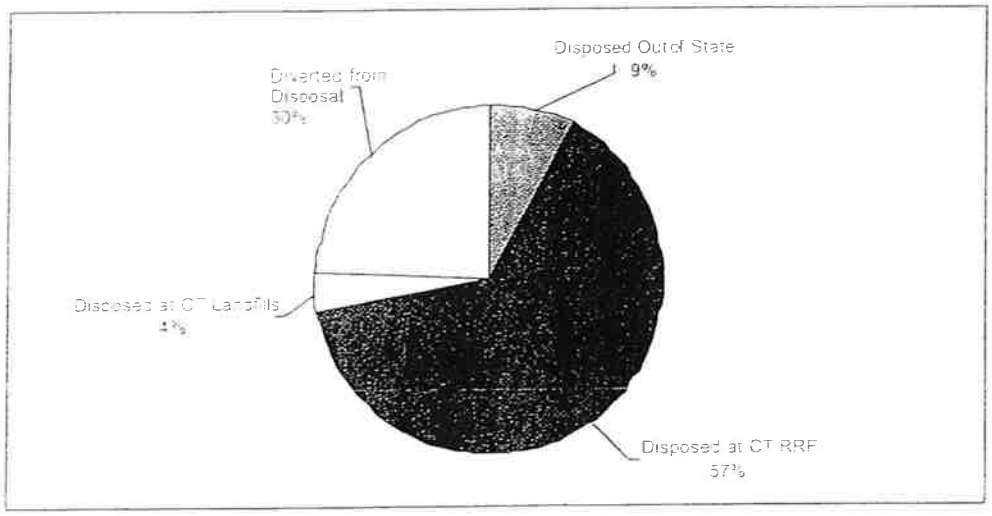
As shown in ES Figure 1, it was projected that in FY2005 approximately thirty percent of the municipal solid waste (MSW) generated was recycled; fifty-seven percent was burned at six regional MSW Resource Recovery Facilities (RRFs); nine percent was disposed out-of-state; and four percent was disposed at in-state landfills. Connecticut is more reliant on waste-to-energy facilities than any other state in the country. This reliance on RRFs results in a significant reduction in the volume of waste ultimately needing disposal at a landfill.

Over the past decade, Connecticut has become more reliant on out-of-state disposal options for MSW (mostly at out-of-state landfills). Since FY1994, out-of-state disposal of Connecticut-generated MSW has increased from approximately 27,000 tons/year to 327,000 tons/year in FY2004. This raises issues regarding inconsistency with the statutory hierarchy, and increased risk due to disposal cost fluctuations and availability.

ES Figure 1

Management of Connecticut MSW, FY 2005: MSW Generated is Estimated at 3,805,000 tons.

(Estimated by R.W. Beck, Inc. for FY2003 & FY2004 Data Reported to the CT DEP and Estimates of Non-reported Recyclables)



Through recycling efforts in Connecticut, MSW recycling rates have increased from less than five percent before recycling became mandatory in 1991 to almost thirty percent of the MSW generated in FY2005. This estimate includes non-reported recyclables such as bottle bill material and additional commercial recycling. Composting of yard wastes (leaves and brush) and grass cycling have been successful in Connecticut at both diverting waste from disposal and yielding useful end products. However, composting of other organic materials has been less successful. Consequently, composting of source separated organics remains significantly under-utilized in Connecticut. Although recycling and composting have been successful in Connecticut, recycling rates have stagnated over the last ten years. At the same time, the population and per capita waste generation rates have increased. As a result, if waste reduction and recycling efforts are not reinvigorated and if more waste is not diverted from disposal, Connecticut will face an increasing need for disposal capacity at a time when available land is in shorter supply, construction and operating costs are higher, and the public is less willing to accept additional waste disposal facilities.

RRF Ash Residue

The six MSW RRFs in the State generate an average of approximately 551,000 tons per year of ash residue. Two landfills in the State are permitted to accept and dispose of RRF ash residue. The Connecticut Resources Recovery Authority (CRRA) ash landfill in Hartford is estimated to reach capacity and close in October 2008. The Wheelabrator ash landfill in Putnam is estimated to reach capacity and close by FY2018. This is based on a number of assumptions detailed in the Plan, including the following: no new RRF capacity will be built in Connecticut, all Connecticut RRFs will continue to operate, and the Bristol RRF will start sending its ash residue to the Putnam ash landfill after June 2008, when its current contract with a New York state landfill expires.

Construction and Demolition (C&D) Waste/Oversized MSW

Currently, most of the Connecticut C&D waste/oversized MSW is disposed, with only about seven percent (not including clean fill) reported as being recycled. C&D waste recycling occurs at a much higher level in many other states. Connecticut's low recycling rate, coupled with a severe lack of disposal capacity in Connecticut for C&D related waste, results in most of Connecticut's C&D waste/oversized MSW being disposed of at out-of-state landfills. In FY2004, in-state C&D volume reduction facilities (VRFs) and transfer stations (TSs) reported sending approximately 909,000 tons of Connecticut generated C&D waste/oversized MSW to out-of-state landfills for disposal. All but one of the twenty-four remaining active Connecticut bulky waste landfills are municipally-owned, and most serve only their communities. Many are expected to close soon.

Special Waste

A special waste category of increasing concern is electronic waste. Our reliance on computers and other electronic devices, along with the continuing advances in technology, have created a huge increase in the volume of these materials requiring disposal. Efforts have been undertaken to develop a consistent national approach to this issue, but no consensus has been reached. As a result, recycling of electronic waste in this state has been limited to those few manufacturers willing to take back old products and to those few municipalities and authorities willing to conduct costly collection programs. In addition to electronic wastes, the Plan discusses other types of special waste. These include land clearing debris, household hazardous wastes, animal mortalities, road wastes, contaminated soils, dredge materials, sewage sludge, water treatment residual solids, disaster debris, waste treated wood, waste sharps and waste pharmaceuticals.

Projections for MSW, MSW RRF Ash Residue, and C&D Waste

This Plan sets a target to achieve a fifty-eight percent MSW disposal diversion rate by FY2024. Solid waste planning needs to provide strategies for achieving targets and goals and include contingency plans in the event that targets are not met. To provide some of the information needed to develop this Plan, projections were made for the twenty year period FY2005 through FY2024 to help predict the amount of: (1) Connecticut MSW, C&D waste/oversized MSW, and RRF ash residue generated, disposed, and diverted from disposal; (2) the in-state disposal capacity for those wastes; and (3) the in-state disposal capacity shortfall for those wastes. The projections developed are based on a number of factors including: solid waste data reported to the CT DEP; estimates of data not captured by the reporting system; and the development and use of a regression analysis based on Connecticut's population and gross state product. These analyses resulted in the assumption of a 1.6 percent annual increase for some components of the solid waste stream. The assumptions used in making these projections can be found in Chapter Four – Tables 4-1, 4-2, and

4-3, with a more full discussion in Appendix J. Projections were made for four broad scenarios.

MSW Projections Scenarios

Connecticut's *MSW in-state disposal capacity* is determined by the in-state landfill capacity and the in-state RRF capacity. The *MSW in-state disposal capacity shortfall* is the MSW disposed subtracted from the in-state disposal capacity.

Scenario 1. The current MSW diversion from disposal rate, 30 percent, remains the same and would result in increasing annual in-state disposal capacity shortfalls reaching 1.5 million tons by FY2024.

Scenario 2. The current MSW diversion rate increases to 40 percent (goal prescribed by state statute) by FY2015 and remains at 40 percent through FY2024. A 40 percent MSW disposal diversion rate would still result in increasing annual in-state disposal capacity shortfall for MSW of 931,000 tons by FY2024.

Scenario 3. The current MSW diversion rate increases to 49 percent by FY2024 thereby maintaining a consistent tonnage of MSW requiring disposal from FY2005 through FY2024. A 49 percent MSW disposal diversion rate would only slightly increase the current annual in-state disposal capacity shortfall and would be 471,000 tons by FY2024.

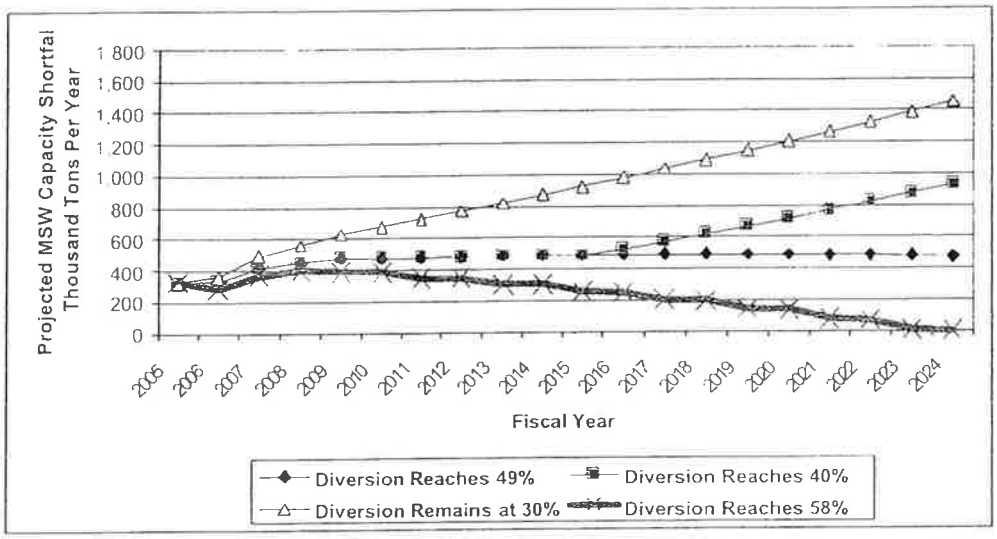
Scenario 4. The Plan's target of a 58 percent MSW disposal diversion rate is achieved by FY2024 and the projected in-state disposal capacity shortfall is eliminated by FY2024.

Unless Connecticut can successfully divert more waste from disposal, the in-state disposal capacity shortfall for MSW will grow as depicted in ES Figure 2 which shows the projections of in-state MSW disposal capacity shortfall under the four scenarios described above.

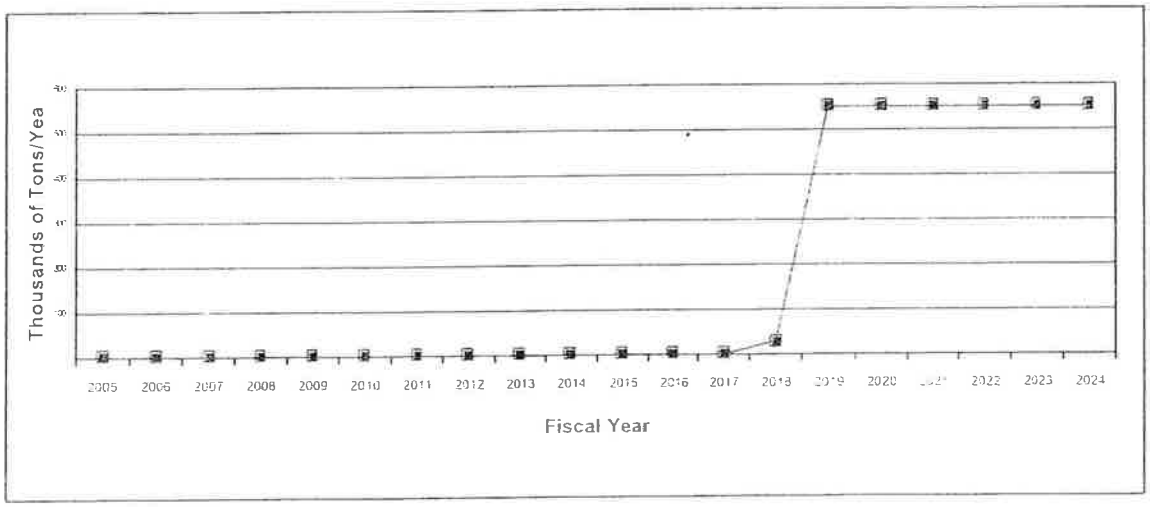
MSW RRF Ash Residue Projection Scenarios

Based on a number of assumptions as detailed in the Plan, it is projected that in-state disposal capacity for MSW RRF ash residue will be sufficient to meet the needs of all the state's RRF ash residue generated through the end of FY2018. Projections of generation of Connecticut MSW RRF ash residue requiring disposal and in-state disposal capacity were made based on the following: no new MSW RRF capacity will be built in-state during the planning period; the amount of MSW processed at Connecticut RRFs remains constant; and the amount of RRF ash residue requiring disposal remains constant. Figure 3 shows the projections of in-state MSW RRF ash residue disposal capacity shortfall for the period FY2005 through FY2024.

ES - Figure 2
Projections of In-State MSW Disposal Capacity Shortfall Under Various Waste Diversion Assumptions for the Period FY2005 through FY2024.



ES - Figure 3
Projections of In-State MSW RRF Ash Residue Disposal Capacity Shortfall for the Period FY2005 through FY2024



C&D waste/oversized MSW Projection Scenarios

Based on the available data regarding the generation of C&D waste oversized MSW, it is difficult to set a specific goal for reducing the amount of this type of waste requiring disposal. Nonetheless, an effort will be made to maximize the diversion of this waste from disposal. The projections for the amount of C&D waste generated was based on reported data and assumed a 1.6 percent annual increase in the amount of such waste generated. Listed below are three scenarios.

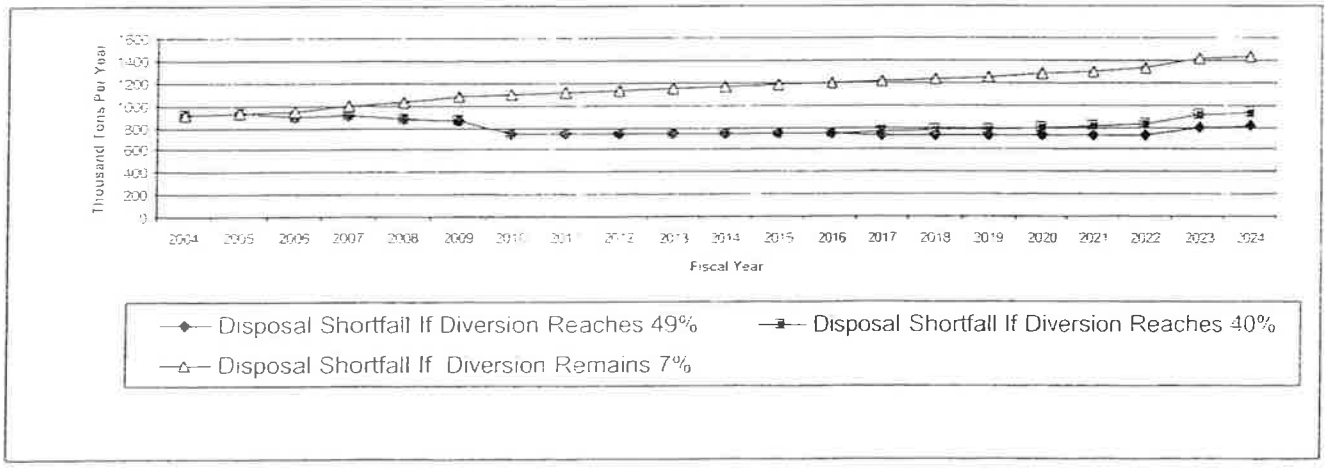
Scenario 1. The current diversion from disposal rate, seven percent, for C&D waste oversized MSW remains the same through FY2024. This would result in increasing annual in-state disposal capacity shortfalls through FY2024 for C&D waste oversized MSW and would be 1.4 million tons by FY2024.

Scenario 2. The current C&D waste/oversized MSW disposal diversion rates increases to 40 percent by FY2015 and remains at 40 percent through FY2024. A 40 percent disposal diversion rate by FY2024 is projected to slightly decrease and then increase the level of C&D waste oversized MSW annual disposal capacity shortfall so that by FY2024 the disposal capacity shortfall would be similar to current levels.

Scenario 3. The current C&D waste oversized MSW diversion rate increases to 48 percent by FY2024 and would result in a slight decrease in the annual in-state disposal capacity shortfall for this waste by FY2024.

Unless Connecticut can successfully divert more waste from disposal, the in-state disposal capacity shortfall for C&D waste oversized MSW will grow as depicted in ES Figure 4 which shows the projection for in-state C&D waste oversized MSW disposal capacity shortfall.

ES Figure 4.
Projections of In-State C&D Waste/Oversized MSW Disposal Capacity Shortfall
Under Various Waste Diversion Assumptions for the Period FY2005 through FY2024.



Key Factors Affecting Solid Waste Management in Connecticut

The context for solid waste management in Connecticut has changed substantially since the last statewide solid waste management plan was adopted in 1991. The following are among the key issues that will shape solid waste management in coming years:

- If Connecticut doesn't substantially increase the rate of MSW disposal diversion, it is projected to have an increasing shortfall of MSW in-state disposal capacity.
- Currently there is increasing out-of-state capacity for solid waste disposal at competitive prices.
- Solid waste is a commodity subject to interstate commerce laws.
- Bonds that financed the construction of the MSW RRFs will be paid off, and municipal contracts to supply MSW to Connecticut's RRF facilities will expire over the next two to fourteen years. Over this same time period, disposal capacity at four of the six MSW RRFs may shift from public to private ownership.
- Recycling and solid waste management services are increasingly privately run and market-driven.
- Connecticut's waste diversion infrastructure is stagnant and State and municipal funding is inadequate to support and achieve increased source reduction, reuse, recycling, and composting.
- Nationally, recycling of non-traditional material streams has grown significantly.
- National and global recycling markets have grown substantially.
- Other states and communities have demonstrated an ability to achieve higher waste diversion rates than Connecticut has achieved to date.
- There is a growing interest in product stewardship and producer responsibility policies.

Major Recommendations

MSW Disposal Diversion Rate

The Plan has established a target of 58 percent MSW disposal diversion by FY2024. To help identify and assess the strategies needed to meet this target rate, the Department will conduct a waste characterization study; continue to monitor the State's disposal diversion rates and conduct a comprehensive analysis of that rate at the mid-point of this planning period, i.e. by FY2016, for the purpose of determining the success to date and future expectations in achieving the desired results; and encourage and promote research, consider and evaluate new technologies, and assess and eliminate institutional barriers in order to establish such activities in-state.

Source Reduction, Recycling, Composting

The recommendations regarding source reduction, recycling, and composting represent the centerpiece of this Plan. After rapid growth in the early to mid 1990s, Connecticut's recycling efforts have become stagnant and are in need of reinvigoration. This Plan sets forth objectives and strategies to be implemented so as to reduce our per capita disposal rate from 0.8 tons/person year in FY2005 to 0.6 tons person year in FY2024. This is to be accomplished by adopting a fifty-eight percent MSW disposal diversion rate by FY2024. This rate is consistent with the Connecticut Climate Change Action Plan 2005 recommendation that called for an increase in recycling and source reduction of municipal solid waste to achieve significant greenhouse gas reductions. While much of the burden of accomplishing this will fall on the Department, a greater amount will necessarily be borne by municipalities and businesses. Significant increases in funding will be needed to support these efforts.

The State needs to take advantage of increasing demand for recycled material, especially in overseas markets, by increasing the amount of marketable material recovered for recycling. The State must also facilitate the development of a more robust recycling business infrastructure in Connecticut for almost all materials including paper, metals, electronics, and compostable organics. In particular, significant results can be achieved through increased efforts to compost source separated commercial and institutional food wastes, as is being done in other states. In order to reduce the amount and toxicity of waste being generated, Connecticut must focus more effort on packaging. The State will continue to work with the Toxics in Packaging Clearinghouse to enforce existing laws and to encourage producers to reduce the amount and toxicity of packaging being used.

Disposal Capacity

There is not enough disposal capacity in-state to handle all the Connecticut solid waste requiring disposal. This is true for the major components of the solid waste stream: MSW and C&D waste. The adopted 1991 State Solid Waste Management Plan and the proposed 1999 Plan were based on the premise that the state should have sufficient in-state capacity for recycling, processing and disposal to manage all Connecticut MSW and ash residue generated by Connecticut resources recovery facilities. This Plan continues to recognize that self-sufficiency in managing our solid waste represents good public policy for Connecticut for many reasons, including the ability to better control costs and other risks related to solid waste disposal. This Plan emphasizes that a significant reduction in the amount of waste disposed must be achieved as the primary means of attaining self-sufficiency.

Public or Private Ownership and Control

Another key issue is whether the RRF capacity in Connecticut and the RRF ash residue landfill capacity in Connecticut will be owned and controlled by public or private entities. Bonds that financed the construction of the RRFs will be paid off

over the next two to fourteen years and contracts for disposal at the RRFs will expire over that same time. Further, the Hartford landfill, where CRRA sends the ash generated at the Hartford RRF, will be closing in two years, leaving one (privately owned) RRF ash residue landfill in Connecticut. These events will lead to a major shift in control of the majority of the MSW and RRF ash residue disposal capacity in the state from public to private entities. Private owners will be free to enter into contracts with out-of-state generators for some of the existing capacity that today is contracted to and/or used by Connecticut's municipalities. While this Plan does not advocate for or against private ownership, it does urge the state's decision-makers to take note of the issue, fully debate it, and make the prudent decisions necessary to ensure that the interests of Connecticut's citizens and businesses are protected.

Planning, Evaluation, and Measurement

This Plan replaces the last Plan adopted by the Department fifteen years ago in 1991. That is clearly too much time between plan revisions. Therefore, one of the recommendations of this Plan is that the Department regularly identify the critical solid waste issues facing the state and make appropriate revisions to this Plan. In order to ensure that these efforts are comprehensive and reflect diverse views, the Department will form a standing Solid Waste Management Advisory Committee, with representation from the public and private sectors. Finally, rather than expecting 169 towns to prepare their own solid waste management plans as envisioned by existing law, the Department should ensure that its planning efforts thoroughly evaluate and reflect municipal accomplishments, needs, and trends. Collecting data is critical to perform these evaluations. To facilitate this, changes must be made to existing municipal reporting requirements so they are less burdensome and more meaningful.

Permitting and Enforcement

During the public process, many urged the Department to streamline its permitting processes, especially for those activities that support the goals of this Plan, such as increased recycling and composting. The Department agrees with these suggestions, and this Plan makes several recommendations for improving the permitting process. Some of the most significant recommendations are as follows:

- make review of the applications for recycling, composting, and other beneficial facilities a high priority for the permit program;
- develop fact sheets, model permits, and other helpful materials for prospective permit applicants;
- form a review team whose primary responsibility will be to review applications for beneficial activities;
- require permitting or some other regulation of waste haulers, consistent with the Governor's Task Force Report recommendations that are carried forward; and
- evaluate opportunities to reduce permitting requirements for the beneficial reuse of certain waste materials.

It is recognized that the Department must make enforcement of solid waste laws a high priority, and the Plan includes recommendations for accomplishing this task. In addition, recognizing that most of the potential for improvement in recycling rates exists in the municipalities, recommendations are made to increase the level of enforcement at the local level, using existing authorities. The Department will work with municipalities to identify barriers to accomplishing this and will partner with municipalities to take appropriate enforcement actions.

Funding

This Plan charts an aggressive course for meeting the challenges of managing Connecticut's solid waste over the twenty year planning period. Action is recommended through the implementation of seventy-five strategies over the next several years to deal with these difficult issues. As with many other important programs, addressing these needs will require significant support in the form of funding at the local, state, and regional level.

One of the most difficult, but clear, challenges that face decision-makers and the citizens of Connecticut is to find the resources for these programs when other critical needs are competing for the same limited public dollars. As the public, legislators, and other officials make decisions on which strategies will be implemented, appropriate sources of funding must be identified. The following are the specific potential funding sources identified in this Plan:

- capture some or all of the unclaimed bottle and can deposits (escheats);
- expand the Solid Waste Assessment to all disposed solid waste, including all MSW, C&D debris, and oversized MSW, whether disposed in-state or out-of-state;
- increase the Solid Waste Assessment beyond the present $1.50 per ton;
- direct enforcement penalties to a special account for distribution to municipalities and regional authorities aimed at recycling; and
- bond funds for infrastructure to support demonstration projects and or development of publicly controlled recycling facilities.

Without adequate funding, many of the critical needs identified in this Plan will not be met. It is up to all citizens of Connecticut to fully debate these issues and make the decisions necessary to properly manage the solid waste that we generate.

Statutory and Regulatory Changes Needed

Many of the changes needed to meet the goals of this Plan cannot be implemented without action by the legislature to change Connecticut's solid waste statutes, and possibly other areas of the law such as those affecting taxes and revenue. The following are some of the more significant recommendations identified in this Plan that will require statutory and or regulatory change:

- establish a recycling program for electronics;

- increase funding sources, and increase the authority to pass adequate funding along to municipalities and regional entities;
- prohibit the disposal of unprocessed construction and demolition waste;
- add plastics #1 and #2 and magazines to the list of mandated recyclables;
- create incentives to encourage businesses to create or expand activities that will move the state forward in meeting its waste diversion goals;
- amend the permit program;
- expand the bottle bill to include plastic water bottles, and increase the deposit to ten cents;
- require liners for all new C&D/oversized MSW/bulky waste landfills; and
- comprehensively align and update solid waste management laws.

Critical Issues for Decision Makers

The issues raised in this Plan present significant challenges to Connecticut's citizens, businesses, and government leaders. Many critical decisions must be made over the next several years in order to successfully meet those challenges. The most critical issues or decisions, and those who will need to help address them, are outlined below:

State Legislators

- Find ways to help fund the actions outlined in this Plan, and support those needing additional resources including state agencies, regional authorities, and municipalities.
- Evaluate the role of CRRA given the changing conditions in the state with regards to the MSW RRFs and the changing and complex nature of managing the solid waste stream.
- Expand authority allowing state agencies, regional authorities, and municipalities to more effectively manage and regulate solid wastes.
- Help define what role government entities should play in directly managing and/or controlling the solid waste management infrastructure.
- Expand recycling mandates.
- Establish incentives to encourage expansion and creation of new recycling and composting infrastructure.
- Continue to support environmentally preferable purchasing by state government, including Connecticut's state colleges and universities.

Department of Environmental Protection

- Serve as a model for other governmental entities, businesses, and citizens to enhance source reduction, composting, recycling, and buying environmentally preferable products.
- Maximize resources to support and maintain solid waste education, assistance, recycling, permitting, and enforcement.
- Establish a standing Solid Waste Management Advisory Committee.
- Establish permitting of beneficial activities as a high priority for the Agency.
- Continually monitor solid waste issues nationally, regionally, and locally and help guide Connecticut to manage its solid waste in response to those issues in a manner that best protects the environment and human health.

Other State Agencies

- Provide support to research, develop, and market recycling processes and products.
- Adopt purchasing practices that create less waste and buy environmentally preferable products.
- Increase source reduction and recycling efforts in agency operations.

Local Officials and Regional Waste Authorities

- Continue to play an active role in the proper and efficient management of solid waste in their communities.
- Expand recycling source reduction programs and efforts.
- Increase enforcement of local recycling ordinances.
- Enact or amend ordinances to reflect new State programs.
- Change purchasing practices to create less waste and purchase environmentally preferable products.

Businesses

- Provide cost effective and efficient solid waste management opportunities.
- Increase efforts to recycle and source reduce the solid waste generated.
- Establish new businesses to expand recycling and composting infrastructure.
- Change purchasing practices to create less waste and buy environmentally preferable products.
- Adopt a product stewardship ethic.

Citizens

- Change practices to create less waste
- Purchase environmentally preferable products
- Increase recycling efforts.
- Compost food waste and other organics.

Summary

The efforts made over the next five to ten years will largely determine the success or failure of the State in meeting the challenges set out in this Plan. Connecticut's existing approach to solid waste management has served its citizens well. However, the solid waste field has continued to evolve to the point where new approaches and greater effort will be needed to meet the challenges. Future discussions and actions will determine the State's success in significantly reducing our per capita disposal rate, reliance on Resource Recovery Facilities, the potential need for new disposal facilities, the role of landfills, and how much Connecticut will pay for these programs. Most importantly, they will determine whether or not Connecticut's citizens and businesses will make a greater commitment to source reduction, recycling, and composting. This Plan is only a starting point. The on-going, hard work of a diverse set of stakeholders will be needed for Connecticut to achieve its Solid Waste Management Vision.

Table of Recommended Strategies

Excerpted from
STATE OF CONNECTICUT SOLID WASTE MANAGEMENT PLAN,
AMENDED DECEMBER 2006

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Table of Recommended Strategies

This Plan proposes numerous strategies for achieving the State's long-term solid waste management goals. For planning purposes, as well as the prudent use of resources, it is essential that priorities among the Plan's strategies be established. The relative importance of each strategy needs to be assessed given that resources will be insufficient to undertake all strategies simultaneously or to the fullest possible extent. In addition, strategies need to be mapped chronologically so that all parties involved have a sense of when they are to be undertaken. These priorities were established based on consideration of the following criteria:

- The importance of the strategy in bringing Connecticut closer to its solid waste vision and goals;
- The ease of implementation and institutional feasibility of the strategy;
- The costs and cost-effectiveness of the strategy relative to the resources available; and
- The extent to which other strategies are dependent upon the strategy.

Table 5-1 presents an annotated list of recommended strategies for solid waste management in Connecticut. The Table identifies for each of the seventy-five strategies, the following: the type of action needed; the assigned priority; new costs; initiation time frame; and the lead and/or key partners for implementation. Of the total number of strategies, forty-five are high priority; twenty-two are medium priority; and eight are low priority. The CT DEP will, in conjunction with the Agency Solid Waste Management Advisory Committee, be preparing an operational work plan that will target those high priority strategies and will further refine associated implementation costs. Many of the high priority strategies are focused on attaining a much higher diversion rate for MSW disposal. Diversion includes reducing MSW at the source, recycling or composting. As discussed in the Plan, the greatest opportunity for increasing diversion rates is to develop new programs for materials that have very low diversion rates at present, while enhancing, improving and maintaining existing source reduction, composting and recycling programs.

Based on available information and best professional judgment, cost estimates have been prepared for those high priority strategies found in Table 5-1. Assuming that the focus of the efforts will be directed towards:

- Enhancing and improving the existing municipal recycling programs;
- Targeting certain waste streams, such as: the recycling of electronics, mixed paper, and commercial C&D wastes; and the composting of commercial food waste.
- Promoting and developing options for Pay as you Throw (PAYT) programs or unit pricing throughout Connecticut for MSW;
- Enhancing and improving the state's solid waste management database system;
- Conducting a waste characterization study; and

- Improving permitting and enforcement activities

Program costs under each of these efforts may include staffing and education, collection and processing infrastructure and other related costs. Much of the responsibility for implementing these efforts will involve multiple partners, including the CT DEP and other state agencies, regional waste authorities, municipalities, private haulers, processors, environmental groups, and private citizens. It is expected that in the first 12 to 18 months, the need for new resources necessary for administration, planning and coordination, and start-up activities would be evenly divided between state and regional/municipal partners. From year two forward, resource allocations would favor regional/municipal partners in ratios of 3 to 1, to as much as 5 to 1. The estimated costs for the first five years of implementation, targeting high priority strategies, are estimated to be approximately 28 million dollars ranging from 4.5 million dollars the first year to about 7 million dollars in the peak second and third years. As programs become established, some programs are expected to become self-sustaining through user fees and, in addition, the annual costs level off again in the 4.5 million dollar range.

Of the estimated costs, a combination of funding mechanisms may be appropriate and could include: an on-going general fund line item appropriation; bonding; and fee based programs. As indicated throughout the Plan, a large portion of the work will be undertaken at the regional and municipal level and the allocation of resources would necessarily follow this level of effort. Refinement of these cost estimates will need to follow the development of more detailed action plans and will require a great deal of additional discussion with stakeholders. The State Solid Waste Management Plan provides the foundation for the work that must be done to best manage our solid waste in a social, economic and environmentally responsible manner.

Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
Objective 1	Source Reduction					
1-1	Continue to implement the CT DEP's Pollution Prevention Plan that establishes goals and identifies strategies to reduce the quantity and toxicity of wastes discharged to the land, air, and waters of the state.	Administrative	Medium	Staff = $	Existing	DEP
1-2	Educate consumers and businesses about the effects of their purchasing choices and behaviors on waste generation, and provide education and incentives to help change purchasing and behavioral practices to reduce the amount and toxicity of waste produced.	Administrative	High	Staff = $$ Other = $$	Short term	DEP
1-3	Continue to support regional and national efforts to change manufacturer practices to produce products that generate less waste and less toxic waste.	Administrative	Medium	Staff = $	Existing	DEP
1-4	Continue to promote environmentally preferable purchasing ("EPP") standards in state and local government; encourage state agencies and municipalities to become members of EPA's WasteWise Program; and support green design standards and encourage their adoption by Connecticut local governments and institutions.	Administrative	High	Staff = $	Existing	DAS/ DEP & municipalities
1-5	Provide funding to promote reuse and publicize product reuse opportunities.	Legislative, Administrative	Medium	Other = $	Short term	TBD
1-6	Promote through such activities as technical assistance, start-up funding, and/or other incentives, the implementation of effective pay-as-you-throw (PAYT) pricing systems by municipalities and haulers for managing solid waste from residents and small businesses to achieve waste reduction.	Administrative	High	Staff = $$ Other = $$	Mid term	TBD/ Municipalities & Regional

(1) Costs estimates include start up & on-going implementation. $ = ~ 1 FTE or < $100,000. $$ = 2-5 FTEs or $100,000 to $500,000. $$$ = >5 FTEs or > $500,000. Other costs include capital costs, grants, consultant fees, etc.
(2) Existing; Short term = 2006-2008, Mid term = 2008-2010, Long term after 2010
(3) Lead will be responsible for initiating action; Key Partners may be responsible for implementation

Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
1-7	Seek partnerships, provide funding, and coordinate a model source reduction program to reduce the amount and toxicity of solid waste generated in at least one Connecticut community.	Administrative	Low- Medium	Staff = $ Other = TBD	Mid term	DEP/ Municipalities and others TBD
1-8	Continue to enforce Connecticut's Toxics in Packaging Act and other toxic reduction programs and efforts. Continue to work in conjunction with the Toxics in Packaging Clearing House and other member states to assess compliance rates with toxics in packaging laws.	Administrative	Medium	Minimal	Existing	DEP/ Regional
Objective 2	**Recycling and Composting**					
2-1	Update Connecticut's beverage container deposit system by increasing the deposit amount and expanding coverage to at least plastic water bottles.	Legislative	High	Staff = $ Other = $$$	Short term	DEP/ Private sector
2-2	Add plastics PET #1 and HDPE #2 and magazines to the list of State mandated recyclables.	Legislative	High	Staff = $ Other = $$	Short term	DEP/ Municipal & private sector
2-3	Continue to support Environmentally Preferable Purchasing (EPP) at CT DAS and promote and ensure state agencies and political subdivision utilization of EPP standards. CT DEP and CT DAS will evaluate the relevant statutes to ensure their completeness and effectiveness in actual State purchasing practices.	Administrative	High	Minimal	Short term	DAS/ DEP & municipal
2-4	Through the Agency's Solid Waste Management Advisory Committee identify incentives for municipalities and haulers to implement effective PAYT pricing systems for managing solid waste from residents and small businesses to achieve waste reduction. (See 6.3)	Administrative	High	Minimal	Mid term	DEP/ Multi-stakeholder committee

(1) Costs estimates include start up & on-going implementation: $ = ~ 1Fte or < $100,000, $$ = 2-5 Ftes or $100,000 to $500,000, $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc

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Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
2-5	Increase technical assistance, education, outreach, and enforcement with regard to the business and industry sectors (especially the small businesses) and institutions to decrease their waste disposal rates by increasing recycling and source reduction. Promote EPP, including recycled content products, by Connecticut's businesses, industries, and institutions	Administrative Regulatory	High	Staff = $$ Other = $$	Short term	DEP/ Municipal, regional and others TBD
2-6	Continue the CT DEP s Municipal Recycling Honor Roll Awards Program and the Green Circle Awards Program to recognize and support exemplary source reduction and recycling practices and promote technology transfer.	Administrative	Medium	Minimal	Existing	DEP
2-7	CT DEP, in collaboration with regional authorities and the hauling industry, will identify incentives for haulers to increase the amount of material recovered for recycling.	Administrative	Medium	Staff = minimal Other = $ - $$	Mid term	DEP/ Private, Regional
2-8	Develop the infrastructure necessary to increase the amount of paper that is recycled. Create incentives and funding for increased paper recycling and for source reducing the amount of waste paper generated.	Administrative	Medium	Staff = $ Other = $	Mid term	TBD/ Regional Private
2-9	Support the continued recycling of non-mandated recyclables.	Administrative	Low	Minimal	Existing	Municipal & Regional
2-10	CT DEP, the Agency's Solid Waste Management Advisory Committee and other State Agencies will work with recycling business representatives to facilitate the development, expansion, and creation of markets for recycled materials.	Administrative	Low - Medium	Staff = $ Other = $$	Mid term	DEP/ other state agencies TBD
2-11	Build local, regional, and state capacity for implementing State recycling policies, regional planning and program implementation, and recycling information sharing.	Administrative	High	Staff = $$$	Short term	TBD/ DEP Municipal, Regional, & others

(1) Costs estimates include start up & on-going implementation. $ = ~ 1Fte or < $100,000; $$ = 25 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, consulting fees, etc.

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Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
2-12	CT DEP and regional recycling entities will work to build partnerships with groups that can assist with and support the State's recycling efforts. Potential partners include regional recycling programs, municipalities, CRRA, trade associations, non-governmental organizations, universities and others.	Administrative	Medium	Staff = $	Mid term	DEP/ Regional & other stakeholders
2-13	CT DEP will designate a "State Source Reduction and Recycling Coordinator" to coordinate and implement the strategies described in this section and other sections of the Plan to increase source reduction, recycling, and composting.	Administrative	High	Staff = $	Short term	DEP
2-14	Identify the internal barriers and solutions to streamlining the permitting process for source separated organic material recycling, especially for those institutional, commercial, and industrial operations that process food scraps, soiled paper and waxed cardboard.	Administrative	High	Staff = $	Mid term	DEP/ Private
2-15	The Agency's Solid Waste Management Advisory Committee will be requested to discuss options that could stimulate organics recycling, especially food scraps, soiled paper, and waxed cardboard from the institutional, commercial and industrial sectors.	Administrative	High	Minimal	Short term	DEP/ Stakeholders
2-16	Include compost and compostable materials in a statewide or regional on-line materials exchange to link generators of source separated organic material with processors and compost users.	Administrative	Low	Staff = $ Other = $	Mid term	TBD/ Private
2-17	Encourage the marketing of compost products for such uses as erosion control, potting soil blends, topsoil blends, playing field mediums, etc.	Administrative	Low	Minimal	Mid term/ existing	TBD/ Stakeholders
2-18	Promote home composting and grasscycling.	Administrative	Medium	Other = $-$$	Mid term	DEP/ Municipal

(1) Costs estimates include start up & on-going implementation: $ = ~ 1Fte or < $100,000; $$ = 25 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc

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Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
Objective 3	Management of Solid Waste Requiring Disposal					
3-1	Minimize the need for additional capacity for disposal of MSW, MSW RRF ash residue and C&D waste through aggressive implementation of the source reduction, recycling, composting, and other initiatives in this Plan. This Plan establishes a target of achieving a 58 percent MSW disposal diversion rate by FY2024.	All types	High	$$$	Short term	all partners
3-2	The State will monitor waste generation and capacity on a regular basis, and with input from the Agency's Solid Waste Management Advisory Committee, evaluate the need for additional MSW, MSW RRF ash residue and C&D waste disposal capacity.	Administrative	High	Staff = $	Mid term	DEP
3-3	The Department will seek legislative authorization to require any applicant for new RRF or landfill capacity, at the time any application is submitted to the CT DEP, to create a fund to be accessed by the host municipality to: (1) fund a local advisory committee and (2) hire appropriate expertise to assist the host municipality in reviewing the application and taking part in the application process. The local advisory committee should include elected officials and residents from both the host community and contiguous communities.	Legislative, Administrative	High	Staff = $ Other = $$	Short term	DEP/ Applicants and stakeholders
3-4	Require C&D waste to be processed to the greatest extent practicable prior to its disposal at any solid waste facility.	Legislative Administrative	High	Staff = $ Other = $$$	Short term	DEP/ Private sector
3-5	Research and track new solid waste management technologies that have the potential to reduce environmental impacts and maximize benefits.	Administrative	Low	Minimal	Long term	TBD

(1) Costs estimates include start up & on-going implementation. $ = ~ 1Fte or < $100,000; $$ = 2-5 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, [illegible]

(2) Existing; Short term = 2006-2008; Mid term = 2008-2010; Long term after 2010

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Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
Objective 4	Management of Special Waste and Other Types of Waste					
4-1	The Agency Solid Waste Management Advisory Committee will be requested to discuss and identify opportunities to reuse and recycle building related C&D waste.	Administrative	High	Staff = $	Short term	DEP/ Private
4-2	Revise the statutory and regulatory definitions of solid wastes and solid waste categories to more accurately reflect the character and management of these wastes.	Legislative, Regulatory	Medium	Staff = $	Mid term	DEP
4-3	Manage building related C&D waste that cannot be reduced, reused, recycled, or composted, in a manner that ensures protection of land, air, and water resources and the public health, in compliance with the state hierarchy for managing solid waste.	Administrative, Regulatory	High	Staff = $ Other = $$$	Mid term	DEP/ Private & other stakeholders
4-4	Support reuse and recycling of highway/road C&D waste, and dispose of that portion that cannot be reduced, reused, recycled, or composted, in a manner that ensures protection of land, air, and water resources and the public health in compliance with the state hierarchy for managing solid waste.	Administrative	Medium	Minimal	Existing	DEP/ DOT Municipal
4-5	Increase the recycling, composting, and beneficial use of land clearing debris.	Administrative	Medium	Staff = $ Other = $$	Mid term	DEP/ Private, Municipal, private sector
4-6	Increase the reuse and recycling of oversized MSW.	Administrative	Low	TBD	Long term	DEP/ Regional, and other partners
4-7	Manage oversized MSW that cannot be reused or recycled in a manner that ensures protection of land, air, and water resources and the public health in compliance with the state hierarchy for managing solid waste.	Administrative, Regulatory	High	Staff = $ Other = $$$	Mid term	TBD
4-8	Seek legislation that provides for recycling of electronic wastes based on a producer responsibility model.	Legislative	High	Staff = $ Other = TBD	Short term	DEP/ private stakeholders

(1) Costs estimates include start up & on-going implementation: $ = ~ 1Fte or < $100,000, $$ = 2-5 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc
(2) Existing, Short term = 2006-2008, Mid term = 2008-2010, Long term after 2010
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Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
4-9	Enhance the statewide Household Hazardous Waste Program.	Administrative	Low	Staff = min Other = $$$	Long term	DEP/ municipal
4-10	CT DEP will continue to monitor and research management options for other types of special wastes that have not been adequately addressed to date, or as problems and the need arises, and as resources allow. Types of wastes that need to be addressed include: animal mortalities, road wastes, dredge material from Long Island Sound; contaminated soils; sewage sludge; water treatment residual solids, preservative treated wood; sharps and waste pharmaceuticals, disaster debris, and other materials as appropriate.	Administrative	Low - high	TBD	Short term - Long term	DEP/ Others
Objective 5	**Education and Outreach**					
5-1	Undertake education and outreach actions using minimal additional resources. Such actions could include: coordinating existing resources and sharing information; enhancing the CT DEP website; promoting awareness through recognition programs; integrating solid waste issues with other environmental issues; ongoing outreach to media; and encouraging municipalities to provide solid waste and recycling information to residents and businesses.	Administrative	High	Staff = min. Other = $	Short term	DEP/ Municipal and others TBD
5-2	Undertake education and outreach actions using additional resources. These actions can include: providing comprehensive assistance to regional and local outreach programs; developing partnerships; and assessing and modifying outreach programs on a two year basis.	Administrative	High	Staff = $ Other = $$	Mid term	DEP/ Municipal and others TBD

(1) Costs estimates include start up & on-going implementation. $ = < 1Fte or < $100,000. $$ = 2-5 Ftes or $100,000 to $500,000. $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, [illegible]

(2) Existing. Short term = 2006-2008. Mid term = 2008-2010. Long term after 2010

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Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
5-3	Undertake education and outreach actions using expanded resources. These actions can include: researching and developing effective outreach approaches; disseminating new educational and outreach materials; developing an independent recycling web site that acts as a clearinghouse and listserve for municipal and regional recycling coordinators; and developing education and technical assistance for targeted sectors.	Administrative	High	Staff = $$ Other = $$$	Long term	DEP/ Municipal and others TBD
Objective 6	**Program Planning, Evaluation, and Measurement**					
6-1	Establish per capita waste disposal minimization goals for MSW and C&D/oversized MSW	Administrative	High	Minimal	Short term	DEP
6-2	Minimize the reporting burden for municipalities and others by only requiring the collection of data necessary to support the goals of the Plan and provide the information needed for on-going solid waste management planning and evaluation.	Administrative. Regulatory	High	Staff = $ Other = $$	Mid term	DEP/ Municipal
6-3	Establish a standing Agency Solid Waste Management Advisory Committee of affected stakeholders to help implement the new State Solid Waste Management Plan, revise the Plan, identify emerging issues, and find solutions.	Administrative	High	Staff = $	Short term	DEP
6-4	Implement an iterative planning process for the State's Solid Waste Management Plan to allow revisions on a more frequent and as needed basis, following a management system model of Plan/Do/Check/Act. A strong on-going stakeholder process, local and regional planning, and an improved methodology for measuring success will inform the planning cycle.	Administrative	High	Staff = $	Short term	DEP/ Stakeholders

(1) Costs estimates include start up & on-going implementation: $ = ~ 1Fte or < $100,000; $$ = 2-5 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc

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Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame (2)	Responsibility Lead/ Key Partners (3)
6-5	Evaluate and make recommendations for changes to underlying legal authorities to improve state, regional, and local solid waste planning and coordination. Develop system performance benchmarks relevant at both the state and local levels aimed at achieving a unified solid waste management vision. Explore opportunities to fund planning activities at the state, regional, and local level and develop incentives for full participation.	Administrative	High	Staff = $$ Other = $$	Mid term	DEP/ Stakeholders
6-6	Provide training and informational materials to municipal officials, regional and local waste management and recycling staff regarding best practices and strategies for strengthening solid waste and recycling programs. Encourage communities and regional recycling programs to share their best practices and strategies. Investigate the possibility of established a municipal solid waste/recycling mentor program.	Administrative	High	Staff = $ Other = $	Short term	DEP/ Municipal
6-7	The CT DEP will conduct a solid waste characterization study.	Administrative	High	Other = $$	Short term	DEP/Stakeholders
Objective 7	**Permitting and Enforcement**					
7-1	CT DEP will make the permitting of solid waste facilities that increase waste diversion from disposal a priority.	Administrative	High	Minimal	Short term	DEP
7-2	CT DEP will designate a permitting team whose responsibility is to review all solid waste diversion applications and to make determinations in a timely manner.	Administrative	High	Minimal	Short term	DEP
7-3	CT DEP will facilitate the permitting process by developing model permits and fact sheets for applicants and interested parties, so that the process and the applicant's obligations are well defined and readily comprehensible.	Administrative	Medium	Staff = $ - $$	Mid term	DEP
7-4	CT DEP will establish target time frames for acting on solid waste diversion and beneficial use applications.	Administrative	Low	Minimal	Mid term	DEP

(1) Costs estimates include start up & on-going implementation. $ = < 1Fte or < $100,000. $$ = 2-5 ftes or $100,000 to $500,000. $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, contracts, fees, etc.

(2) Existing. Short term = 2006-2008. Mid term = 2008-2010. Long term after 2010.

(3) Lead will be responsible for initiating action. Key Partners may be responsible for implementation.

Table 5-1
Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame (2)	Responsibility Lead/ Key Partners (3)
7-5	CT DEP will conduct a comprehensive assessment of the state statutes and regulations as they relate to solid waste management and to the implementation of the State Solid Waste Management Plan. It its review, the CT DEP should take into account broader environmental concerns, such as air and water issues.	Administrative, Legislative, Regulatory	High	Staff= $ Other = 0	Short term	DEP
7-6	CT DEP will streamline the beneficial use process, with consideration given to an exemption from permitting for certain types of materials.	Administrative, Legislative, Regulatory	High	Staff = $	Short term	DEP/ Stakeholders
7-7	CT DEP will establish a streamlined method of regulating waste haulers in order to incorporate reporting and other substantive requirements, along with a simple means of assessing the solid waste fee. Any action taken by the CT DEP will be consistent with the Governor's Task Force Report recommendations that are carried forward.	Legislative, Regulatory	High	Staff = $ Other = $$	Short term	DEP/ Stakeholders
7-8	CT DEP will seek authority to establish categories of demonstration projects that would not require traditional permitting.	Legislative, Regulatory	Medium	Staff = $	Mid term	DEP
7-9	CT DEP will continue to identify activities appropriate for approval by general permit, and devote staff resources to this effort.	Administrative	Medium	Staff = $	Existing	DEP
7-10	CT DEP will develop a procedure to allow the modification of existing permit approvals in order to facilitate improved or modified business operations and enhanced protection of the environment that are needed due to evolving technologies, markets conditions, and environmental concerns.	Administrative, Regulatory	Medium	Staff = $	Mid term	DEP

(1) Costs estimates include start up & on-going implementation: $ = ~ 1Fte or < $100,000; $$ = 2-5 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc

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Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
7-11	CT DEP will seek amendments to CGS Section 22a-208a(d) to allow municipal transfer stations to accept and do minimal separation of residentially generated construction and demolition waste without requiring full permit modifications and fees.	Legislative, Regulatory	Medium	Staff = $	Short term	DEP
7-12	CT DEP will establish criteria for C&D waste Volume Reduction Facilities to help ensure that more of this waste stream is diverted from disposal.	Administrative	Medium	TBD	Mid term	DEP
7-13	CT DEP will seek and encourage public input at the appropriate steps with regard to the development of General Permits for certain activities and Beneficial Use General Permits.	Other	High	Minimal	Short term	DEP
7-14	CT DEP will consider host community agreements as part of the re-writing of the solid waste regulations. Until such time regulations are adopted, host community agreements shall be encouraged on a case-by-case basis.	Administrative, Regulatory	High	Minimal	Short term	DEP
7-15	CT DEP will continue to evaluate the environmental impacts of the alternatives for solid waste disposal and will examine its authority to require an applicant for new capacity and disposal to provide detailed information on such impacts.	Administrative	High	Minimal	Short term	DEP/private sector
7-16	CT DEP will increase its compliance outreach efforts to develop a more comprehensive and mutually supportive network of communications with land use, public works, and other municipal officials who are directly involved in solid waste activities. CT DEP will take appropriate actions to ensure compliance.	Administrative	High	Staff = $-$$	Short term	DEP, Municipal and others
7-17	CT DEP will take enforcement actions against recycling law violators as necessary to ensure compliance.	Administrative	High	Staff = $ Other = $$	Existing	DEP, Municipal and others
7-18	CT DEP will evaluate incentives that would encourage municipalities to take on enforcement responsibilities they are already authorized to do.	Administrative	High	Staff = $	Short term	DEP/ Municipal

(1) Costs estimates include start up & on-going implementation. $ = < 1Fte or < $100,000, $$ = 25 Ftes or $100,000 to $500,000, $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, consulting [illegible]

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Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame(2)	Responsibility Lead/ Key Partners (3)
7-19	CT DEP will establish civil penalty regulations for violations of recycling laws.	Regulatory	Medium	Staff = $	Short term	DEP
7-20	CT DEP will evaluate additional tools for taking enforcement actions against violators of the solid waste statutes, regulations, and permits.	Administrative	Medium	TBD	Mid term	DEP/ Stakeholders
7-21	CT DEP will ensure that RRF's and other solid waste facilities including landfills and transfer stations comply with CGS Section 22a-220c(b) which requires solid waste facilities periodically to inspect loads delivered to them for significant quantities of recyclables and report such violation back to the municipalities.	Administrative	High	Staff = $$	Mid term	DEP/ Municipal Authorities & Private sector
Objective 8	Funding					
8-1	Adopt a comprehensive, long term, integrated solid waste management funding system to ensure that adequate revenue is available to implement the strategies and achieve the goals of this Plan. The Agency's Solid Waste Management Advisory Committee will assume a major role in identifying appropriate funding mechanisms.	Legislative	High	$$$	Short term	DEP/ OPM, Stakeholders
8-1(1)	Expand the current $1.50 fee on waste processed at Connecticut RRFs to all disposed solid waste, including all MSW, C&D debris, and oversized MSW, whether disposed in-state or out-of-state.					
8-1(2)	Capture some portion of the unclaimed bottle and can deposits (escheats) to fund needed solid waste source reduction and recycling/composting programs at the state, regional, and local levels.					
8-1(3)	Direct penalty monies from solid waste enforcement actions to municipal and regional recycling and other diversion programs.					

(1) Costs estimates include start up & on-going implementation. $ = ~ 1Fte or < $100,000, $$ = 2-5 Ftes or $100,000 to $500,000; $$$ = >5 ftes or > $500,000; Other costs include capital costs, grants, consulting fees, etc

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Annotated List of Recommended Strategies for Solid Waste Management in Connecticut

Strategy Number	Recommended Strategy	Type of Action	Priority	New Costs (1)	Initiation Time Frame (2)	Responsibility Lead/ Key Partners (3)
8-1(4)	Increase the Solid Waste Assessment beyond the present $1.50 per ton.					
8-1(5)	Use state bond funds for needed infrastructure projects such as publicly controlled composting facilities and recycling facilities					
8-2	CT DEP will initiate discussion with the Connecticut General Assembly regarding options for funding, including directing a significant portion of any new funds to municipal and regional programs.	Legislative	High	Other = $$$	Short term	DEP
8-3	CT DEP will work with the CT Department of Economic Development and Community Development to identify the types of economic assistance that are needed and could be provided to businesses, especially recycling, composting or other businesses that directly support the goals of the Plan.	Administrative	High	Staff = $	Short term	DEP, State Agency

(1) Costs estimates include start up & on-going implementation. $ = < 1Fte or < $100,000; $$ = 2-5 Ftes or $100,000 to $500,000. $$$ = >5 ftes or > $500,000. Other costs include capital costs, grants, consulting fees, etc.

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I. Business Model(s)
Ongoing Scenario

	Existing Scenario	Sale Scenarios	
	(A)	(B)	(C)
	Continue Existing RRF & Transfer Operations	Sales of MSW Assets & Continue RRF Operations	Sales of MSW Assets & Discontinue RRF Operatio

II. Requirement for Analysis

A. Economic Market Assessment	✓	✓	✓
B. Out of State Landfill Market Assessment	✓	✓	✓
C. Analysis of MSW Supply in CT	✓		
D. Technology Assessment			
E. Transition So. Meadows to a Transfer Station	✓		
F. Capital Expenditure Conformation	✓	✓	✓
G. Five Year Energy Forecast	✓	✓	✓
H. Valuations (Miscellaneous)			