



MEMORANDUM

TO: MIRA Board of Directors
FROM: Donald S. Stein
DATE: May 17, 2019
RE: Notice of Regular Board Meeting

There will be a regular meeting of the Board of Directors of the Materials Innovation and Recycling Authority (MIRA) *on Thursday, May 23, 2019 at 1:00 p.m. in the Board Room at 200 Corporate Place, Suite 202, Rocky Hill, CT. 06067.*

- I. Pledge of Allegiance
- II. Public Comment – 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.
- III. Review and Approve – April 10, 2019 Board Meeting Minutes (*Attachment 1*).
- IV. Finance Committee Report.
 - a. Board action will be sought for Resolution Regarding Annual and Quarterly State Reporting (*Attachment 2*).
- V. OS & HR Committee Report
 - a. Board action will be sought for Resolution Regarding 3 Year Agreement for 401K Plan Services (*Attachment 3*).
 - b. Review of HR Committee decision on Employee Benefits Program.
- VI. Policies and Procurement Committee Report:
 - a. Board action will be sought for Resolution Regarding Three Year on-call Agreements for Engineering Consulting and Power Product Professional Services (*Attachment 4*).
 - b. Board action will be sought for Resolution Regarding a Cooperative Service Agreement between MIRA and the USDA Animal and Plant Health Inspection Services/Wildlife Services for Bird Control (*Attachment 5*).
 - c. Board action will be sought for Resolution Regarding Market Driven Purchase/Exchange of Solid Waste Disposal Capacity (*Attachment 6*).
 - d. Board action will be sought for Resolution Regarding Additional Projected Legal Expenditures (*Attachment 7*.)
- VII. Chairman and President's Report
 - a. Attached Supplemental Information / Other Matters
- VIII. Executive Session will be held to discuss pending litigation, security matters, feasibility estimates and evaluations, personnel matters, trade secrets and pending RFP's.

TAB 1

MATERIALS INNOVATION AND RECYCLING AUTHORITY

FOUR HUNDRED AND NINETY NINE

April 10, 2019

A Regular Board meeting of the Materials Innovation and Recycling Authority Board of Directors was held on Wednesday, April 10, 2019 in the Board Room at Suite 202, 200 Corporate Place, Rocky Hill, CT 06067. Those present were:

Directors:

Vice-Chairman Dick Barlow
John Adams
Jim Hayden (arrived at 9:43am)
Scott Shanley
Patricia Widlitz (present via telephone)
Edward Bailey
Lizz Milardo
Bob Painter
Thomas Swarr, CSWS Project Ad Hoc

Present from MIRA:

Tom Kirk, President
Mark Daley, Chief Financial Officer
Laurie Hunt, Director of Legal Services
Jeffrey Duvall, Director of Budgets & Forecasting
Thomas Gaffey, Director of Recycling & Enforcement
Roger Guzowski, Contract and Procurement Manager
Deepa Krishna, Manager of Accounting and Financial Reporting
Cheryl Kaminsky, Manager of Accounting and Financial Reporting
Vicki Arnum, Buyer/Administrative Assistant

Public Present:

Ann Catino, Esq. (Halloran & Sage)
Luis De La Parte, SRRT
John Doyle, Doyle, D'Amore & Balducci
John Pizzimenti, USA Hauling

Vice-Chairman Barlow called the meeting officially to order at 9:32 a.m. and said that a quorum was present.

PUBLIC PORTION

Vice-Chairman Barlow said the agenda allowed for a public portion in which the Board would accept written testimony and allow individuals to speak for a limit of three minutes. As there were no members of the public who wished to address the Board, the meeting commenced.

APPROVAL OF THE MARCH 13, 2019, BOARD MEETING MINUTES

Vice-Chairman Barlow requested a motion to approve the minutes of the March 13, 2019 Board meeting. Director Shanley made the motion which was seconded by Director Bailey.

The motion previously made and seconded was approved. Vice-Chairman Barlow, Director Adams, Director Shanley, Director Milardo, Director Bailey, Director Widlitz and, Ad Hoc Member Swarr voted yes. Director Painter abstained.

Directors	Aye	Nay	Abstain
Vice Chairman Barlow	X		
John Adams	X		
Scott Shanley	X		
Lizz Milardo	X		
Edward Bailey	X		
Pat Widlitz	X		
Bob Painter			X
Ad Hoc Members	Aye	Nay	Abstain
Tom Swarr, CSWS Ad Hoc	X		

APPROVAL OF THE MARCH 28, 2019, BOARD MEETING MINUTES

Vice-Chairman Barlow requested a motion to approve the minutes of the March 28, 2019 Board meeting. Director Adams made the motion which was seconded by Director Shanley.

The motion previously made and seconded was approved. Vice-Chairman Barlow, Director Adams, Director Shanley, Director Painter, Director Bailey, Director Widlitz and Ad Hoc Member Swarr voted yes. Director Milardo abstained.

Directors	Aye	Nay	Abstain
Vice Chairman Barlow	X		
John Adams	X		
Scott Shanley	X		
Lizz Milardo			X
Edward Bailey	X		
Pat Widlitz	X		
Bob Painter	X		
Ad Hoc Members	Aye	Nay	Abstain
Tom Swarr, CSWS Ad Hoc	X		

CHAIRMAN AND PRESIDENTS REPORT

Mr. Kirk presented the Board with information on operations and financial data, reflecting the performance of the organization for the reporting period through February 28, 2019. He said the facility is coming out of the outage, and has operated without any public health and safety risks throughout the period. Mr. Kirk provided a brief update on the turbine issues, repairs, property insurance and business expense. Mr. Kirk mentioned that today is Deepa Krishna’s last day at the Authority and Cheryl Kaminsky’s first day in her new position. Everyone thanked Deepa for all her excellent work.

RESOLUTION REGARDING MARKET DRIVEN PURCHASES OF DISPOSAL CAPACITY AND TRANSPORTATION SERVICES FOR THE DIVERSION OF MUNICIPAL SOLID WASTE FROM MIRA’S CONNECTICUT SOLID WASTE SYSTEM (CSWS)

Vice-Chairman Barlow requested a motion on the above referenced item. The motion was made by Director Shanley and seconded by Director Bailey.

WHEREAS: From time-to-time MIRA must divert waste from the CSWS due to elevated MSW inventory levels at the CSWS Resource Recovery Facility (RRF) that may occur periodically; and

WHEREAS: on March 13, 2019, MIRA’s Board of Directors unanimously approved the Resolution Regarding Market Driven Purchases of Disposal Capacity And Transportation Services For The Diversion of Municipal Solid Waste from MIRA’s Connecticut Solid Waste

System. However, Tables 1a and 1b referenced in the March resolution were inadvertently omitted from the Board Package and are therefore attached to this resolution.

Now therefore, be it

RESOLVED: that the President is authorized to enter into market driven purchases of transportation and disposal services in accordance with the requisitions included in April Table 1 substantially as discussed and presented at this meeting; and

FURTHER RESOLVED: that the Board hereby affirms its approval of the March 13, 2019 Resolution Regarding Market Driven Purchases of Disposal Capacity And Transportation Services For The Diversion Of Municipal Solid Waste From MIRA’s Connecticut Solid Waste System (CSWS).

The motion previously made and seconded was approved unanimously by roll call. Vice-Chairman Barlow, Director Adams, Director Hayden, Director Painter, Director Widlitz, Director Bailey, Director Shanley, Director Milardo, and Ad Hoc Member Swarr voted yes.

Directors	Aye	Nay	Abstain
Vice Chairman Barlow	X		
John Adams	X		
Jim Hayden	X		
Scott Shanley	X		
Lizz Milardo	X		
Edward Bailey	X		
Pat Widlitz	X		
Bob Painter	X		
Ad Hoc Members	Aye	Nay	Abstain
Tom Swarr, CSWS Ad Hoc	X		

EXECUTIVE SESSION

Vice-Chairman Barlow requested a motion to enter into Executive Session to discuss pending litigation and pending RFP responses, potential lease of MIRA real estate, trade secrets, personnel matters, security matters, and feasibility estimates and evaluations. The motion was made by Director Shanley and seconded by Director Hayden. Vice-Chairman Barlow requested that the following people remain for the Executive Session, in addition to the Board members:

Tom Kirk
 Mark Daley
 Laurie Hunt
 Ann Catino
 Tom Gaffey

The motion previously made and seconded was approved unanimously by roll call. Vice-chairman Barlow, Director Hayden, Director Adams, Director Widlitz, Director Bailey, Director Shanley, Director Milardo, Director Painter and Ad Hoc Member Swarr voted yes.

Directors	Aye	Nay	Abstain
Vice Chairman Barlow	X		
Jim Hayden	X		
John Adams	X		
Scott Shanley	X		
Lizz Milardo	X		
Edward Bailey	X		
Pat Widlitz	X		
Bob Painter	X		
Ad Hoc Members	Aye	Nay	Abstain
Tom Swarr, CSWS Ad Hoc	X		

The Executive Session commenced at 9:46 a.m.

The meeting was reconvened at 10:57 a.m. The door was opened, and the Board Secretary and all members of the public (of which there were none) were invited back in for the continuation of public session. Vice-Chairman Barlow noted that no votes were taken.

ADJOURNMENT

Vice-Chairman Barlow requested a motion on the above-referenced item. The motion was made by Director Shanley and seconded by Director Milardo.

The motion previously made and seconded was approved unanimously by roll call. Vice-Chairman Barlow, Director Hayden, Director Adams, Director Widlitz, Director Bailey, Director Shanley, Director Milardo, Director Painter and Ad Hoc Member Swarr voted yes.

Directors	Aye	Nay	Abstain
Vice Chairman Barlow	X		
Jim Hayden	X		
John Adams	X		
Scott Shanley	X		
Lizz Milardo	X		
Edward Bailey	X		
Pat Widlitz	X		
Bob Painter	X		
Ad Hoc Members	Aye	Nay	Abstain
Tom Swarr, CSWS Ad Hoc	X		

The meeting was adjourned at 10:59 a.m.

Respectfully Submitted,

Kanchan Arora
Consultant

TAB 2

RESOLUTION FOR THE MATERIALS INNOVATION AND RECYCLING AUTHORITY BOARD OF DIRECTORS
REGARDING ANNUAL AND QUARTERLY STATE REPORTING

WHEREAS: The Materials Innovation and Recycling Authority (the "Authority") is obligated under Section 1-123 and Section 22a-263 of the General Statutes to develop certain annual and quarterly financial and statistical reports, and to submit same to the Governor, General Assembly, and certain offices and committees thereof, as summarized on Exhibit A attached hereto ("Statutory Reports"); and

WHEREAS: Sections 1-123 and 22a-263 of the General Statutes do not specify a deadline by which such Statutory Reports are to be submitted; and

WHEREAS: The Authority has heretofore complied with Sections 1-123 and 22a-263 of the General Statutes by first completing its Annual Independent Audit Report (Audit Report) by September 30 of each year, and its Comprehensive Annual Financial Report (CAFR) by December 31 of each year, which deadlines and processes are mandated by the Office of the State Comptroller and the Government Finance Officers Association; and

WHEREAS: The Authority has further heretofore complied with Sections 1-123 and 22a-263 of the General Statutes by developing and submitting quarterly Statutory Reports consistent with and sequentially following completion the Audit Report and CAFR; and

WHEREAS: The State's Auditors of Public Accounts have issued a report dated April 17, 2019 concerning the Authority's operations for the Fiscal Years ended June 30, 2015 and 2016 which report recommends the Authority ensure the Statutory Reports are submitted in a timely manner; and

WHEREAS: The Authority has evaluated this recommendation and desires to act upon it in a manner that continues to ensure that the Statutory Reports are developed and submitted consistent with and sequentially following completion the Audit Report where appropriate, and that further ensures the anticipated content of such Statutory Reports is readily and timely available to the users thereof reasonably in advance of the submission of final reports.

NOW, therefore, be it:

RESOLVED: That effective for the fourth quarter of Fiscal Year 2019, management is directed to develop and submit the Statutory Reports independent of the deadlines and processes associated with the CAFR; and

FURTHER RESOLVED: That effective for the fourth quarter of Fiscal Year 2019, except as indicated on Exhibit A, management is directed to develop and submit the Statutory Reports consistent with and sequentially following completion the Audit Report; and

FURTHER RESOLVED: That management is directed to incorporate the tentative content of Statutory Reports indicated on Exhibit A into the monthly Board of Director's Financial Report and the Authority's website and make such tentative content available to the users of the Statutory Reports each month.

Exhibit A
Materials Innovation and Recycling Authority
Statutory Reporting Requirements

Statutory Reference	Reporting Period	Recipients	Content	Tentative	Subject To	
				Data	Audit Report	CAFR
Section 1-123 (a)	Annually	1. Governor 2. Auditors of Public Accounts 3. Legislative Program Review & Investigations Committee	1. List of bonds issued in prior year	No	Yes	No
			2. List of projects receiving financial assistance			
			3. List of payees receiving in excess of \$5,000			
			4. A complete set of financial statements			
			5. Outstanding bond values			
			6. Affirmative action statement and workforce composition			
			7. Planned activities for current fiscal year			
Section 22a-263	Annually	To the General Assembly	1. Listing of waste management contracts and charges	No	Yes	No
			2. Listing of private contracts for system operations			
			3. Map of facilities owned or leased			
			4. Waste received and processed			
			5. Outstanding notes and bonds			
			6. Administrative expense budget			
			7. Report of revenues from all sources			
			8. Report of redistribution of surplus revenue			
Section 22a-263	Quarterly	To the Governor	1. Listing of waste management contracts and charges	Web Site	Yes	No
			2. Listing of private contracts for system operations	Web Site		
			3. Map of facilities owned or leased	Web Site		
			4. Waste received and processed	BOD Report		
			5. Outstanding notes and bonds	BOD Report		
			6. Administrative expense budget	BOD Report		
			7. Report of revenues from all sources	BOD Report		
			8. Report of redistribution of surplus revenue	BOD Report		
Section 1-123 (b)	Quarterly	Office of Fiscal Analysis	1. Beginning fiscal year balance of each fund	BOD Report	Yes	No
			2. Funds expended and revenue collected by end of quarter	BOD Report		
			3. Expenditures and revenues estimated at end of fiscal year	BOD Report		
Section 1-123 (c)	Quarterly	Office of Fiscal Analysis	1. Number of employees at end of quarter	No	No	No
			2. Positions vacated and filled during quarter			
			3. Positions estimated to be vacant and filled at end of FY			
Section 22a-263 (b)	Within 7 days of receipt	General Assembly	A copy of each independent audit of the Authority	No	No	No

TAB 3

**RESOLUTION REGARDING 3-YEAR AGREEMENT FOR
401(k) PLAN SERVICES.**

RESOLVED: That the President is hereby authorized to execute an agreement with the following firm for 401(k) Plan Services, substantially as presented and discussed at this meeting:

- Hooker & Holcombe

Materials Innovation and Recycling Authority

Agreement Summary

401(k) Plan Services

Presented to the MIRA Board on: May 23, 2019

Vendor/Contractor(s): Hooker & Holcombe

Effective Date: July 1, 2019

Contract Type/Subject Matter: 401(k) Plan Services

Facility(ies) Affected: Not Applicable

Contract Dollar Value: All costs are based on the hourly charges to complete the Services, as presented herein. Although costs during the 3-year term are expected to be less than \$50,000, there is a chance that the total expenditures related to this contract could exceed \$50,000. As such, this is being brought to the Board in an abundance of caution to ensure compliance with Sec. 8 of Section 22a-265 of the Connecticut General Statutes.

Term: Through June 30, 2022

Amendment(s): Not applicable

Term Extensions: Not applicable

Scope of Work: Consultant services are intended to fulfill all of MIRA's due diligence requirements for oversight of its 401(k) plan investment options. The Consultant shall provide quarterly analyses of the financial performance of MIRA's 401(k) Plan's investment options, in coordination with MIRA's 401(k) Committee, including on-going recommendations for keeping MIRA's 401(k) Plan up to date. Consultant also provides MIRA employees with annual education sessions.

Termination: May be terminated by MIRA upon at least thirty (30) days advance written notice.

Materials Innovation and Recycling Authority

Agreement Summary

401(k) Plan Services

Organizational Synergy & Human Resources Committee

May 23, 2019

Executive Summary

This is to request that the Board of Directors authorize the President to enter into an agreement with the following firm for 401(k) Plan Services, substantially as presented and discussed at this meeting:

- Hooker and Holcombe

Discussion

According to section 5.3.5 of MIRA's Procurement Policies and Procedures, MIRA solicits proposals at least once every three years for professional services, including financial advisory services.

The current agreement for 401(k) Plan Services expires on June 30, 2019.

MIRA issued a Request for Proposals (RFP) for 401(k) Plan Services on January 28, 2019.

Via this RFP, MIRA sought to engage a Consultant to provide quarterly analyses of the financial performance of MIRA's 401(k) Plan's investment options including on-going recommendations for keeping MIRA's 401(k) Plan up to date. Consultant shall also provide MIRA employees with annual education sessions.

Consultant services are intended to fulfill all of MIRA's due diligence requirements for oversight of its 401(k) plan investment options including, but not limited to:

- Review of general economic conditions affecting relevant members
- Performance of funds included in MIRA's 401(k) plan in comparison to relevant benchmarks and similar funds
- Recommendation and alerts concerning funds that should be removed from or added to MIRA's 401(k) Plan investment options.

At its discretion, MIRA may require that prior to undertaking work on a specific task, Consultant and an Authorized Representative mutually agree in writing upon a detailed Scope of Services required for such task, together with an estimate of the time, cost, and expenses for such Services. Any such future work would be procured through an RFS, and any RFS for more than \$50,000 per fiscal year would require prior approval by the MIRA Board of Directors.

Overview of RFP

MIRA issued a Request for Proposals (RFP) for 401(k) Plan Services on January 28, 2019.

The availability of the RFP was advertised on the Department of Administrative Services State Contracting Portal website and on the MIRA website.

In addition, a notice regarding the availability of the RFP was sent to firms who submitted a notice of interest form 3 years ago when the authority last issued an RFP for these services.

Responses to the RFP for 401(k) Plan Services were due by March 14, 2019. MIRA received notices of interest from four (4) firms and proposals from two (2) firms:

- Hooker and Holcombe (“H&H”)
- GYL Financial Synergies, LLC (“GYL”)

Evaluation of Proposals

MIRA’s President identified Chris Shepard, MIRA’s Environmental Compliance Manager (who is a member of MIRA’s 401(k) Committee) and Roger Guzowski, MIRA’s Contract and Procurement Manager (collectively the “Evaluation Team”) to evaluate the Proposals that were received.

Comparison of billing proposals

The MIRA RFP requested that respondents provide an hourly billing rate for individuals who would be providing the 401(k) plan services to MIRA.

H&H proposed a variable billing rate structure for each member of their team as requested in the RFP. These hourly rates ranged in FY2020 from \$196/hour to \$489/hour. H&H’s proposed FY20 hourly rate would remain unchanged from their FY19 hourly rates and would increase at 2.5% during the subsequent years in the contract Term.

GYL did not submit an hourly billing rate as requested in the RFP. As an alternate, GYL proposed an annual fixed fee billing structure of \$22,500 per annum, or \$67,500 over the three-year term of the agreement.

To compare the H&H hourly rate with the GYL fixed fee annual rate, the Evaluation Team looked at the total annual cost for the last full FY for which MIRA has data (FY18) and then escalated that FY18 annual total by the increase in the hourly rate: 3% for FY19 (the last year of the current contract), then 0% for FY20 and 3% each year in FY21 and FY22, in accordance with the hourly rate increases proposed in the H&H proposal. Based on that comparison, the three-year fixed fee total proposed by GYL would be \$67,500 and the projected 3-year total for H&H would be less than \$34,000.

Other considerations:

In addition to price considerations above, the Evaluation Team noted the following other considerations between the proposers:

- Firm Longevity and experience: H&H was incorporated in 1956 as a full-service actuarial firm. GYL began in 2016 as a fully independent Registered Investment

Advisor. GYL's principal advisors have worked together since the 1990s for a variety of firms (due to a variety of mergers, joint ventures, etc.) including Prudential Securities Inc, Wachovia Securities, Wells Fargo Advisors and Goldberg, Yolles & Lepore LLC, an independent contractor within the Wells Fargo Advisors Financial Network. Earlier this year, GYL merged with Resnick Advisors an investment advisory firm in Westport, Connecticut.

- Staff experience: H&H provided qualifications information for six (6) staff. Their primary contact (Director) has 34 years of experience. GYL listed an account executive and 3 other staff in their proposal. The account executive has 20 years of experience advising Connecticut municipal clients.
- Proximity: Both H&H and GYL are located in West Hartford, CT, and are readily geographically accessible from MIRA's Headquarters if needed for specific tasks.
- References: H&H listed three references for whom they provide 401(k) plan services. GYL did not provide any references for whom they provide 401(k) plan services – for each of their references GYL provides other investment advisory services including pension plans, OPEB Trusts, 403(b) plan, and 457 plan services.

After reviewing the proposals The Evaluation Team recommends Hooker and Holcombe Investment Advisors, Inc. to provide 401(k) Plan Services for MIRA.

Financial Summary

MIRA is billed on an hourly basis by the Consultant for the Services specified in the scope of services. These services are undertaken in coordination with MIRA's 401(k) Committee.

Under the term of the current 3-year contract, which expires June 30, 2019, MIRA's total expenditures for these services will have been approximately \$31,000, assuming that the invoices for the last six months of FY19 are consistent the first six months of FY19. Based on the hourly rates proposed by H&H, these expenditures are expected to be less than \$34,000 over the next 3-year term, which would begin July 1, 2019.

At its discretion, MIRA may require that prior to undertaking work on a specific task, Consultant and an Authorized Representative mutually agree in writing upon a detailed Scope of Services required for such task, together with an estimate of the time, cost, and expenses for such Services. Any such future work would be procured through an RFS, and any RFS for more than \$50,000 per fiscal year would require prior approval by the MIRA Board of Directors.

TAB 4

**RESOLUTION REGARDING
ENGINEERING, CONSULTING, AND POWER-
PRODUCT PROFESSIONAL SERVICES**

RESOLVED: That the President is hereby authorized to enter into contracts with the following firms and individuals for Engineering, Consulting, and Power-Product Professional Services, substantially as discussed and presented at this meeting:

<p>General Engineering Services</p> <p>Diversified Technology Consultants, Inc. Fuss & O'Neill, Inc. GNCB Consulting Engineers, P.C. HDR Engineering, Inc. HRP Associates, Inc. Kallisto Engineering LLC Langan CT, Inc. Milone and MacBroom, Inc. SCS Engineers Tighe & Bond, Inc. Wright-Pierce</p> <p>Resource Recovery and Thermal Energy-from-Waste</p> <p>Alternative Resources, Inc. Arcadis U.S., Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. Mott MacDonald LLC Project Management Associates, LLC</p> <p>Biological Energy From Waste</p> <p>Alternative Resources, Inc. Arcadis U.S., Inc. Avant Energy, Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. SCS Engineers Wright-Pierce</p> <p>Composting, Organics Recovery and Organic Waste</p> <p>Alternative Resources, Inc. Arcadis U.S., Inc. Avant Energy, Inc., Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. SCS Engineers Tighe & Bond, Inc. Wright-Pierce</p>	<p>Power-Product Marketing, Procurement and Consulting</p> <p>Avant Energy, Inc. Daymark Energy Advisors, Inc. Power Advisory LLC</p> <p>Multi-material segregation</p> <p>Arcadis U.S., Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. Tighe & Bond, Inc.</p> <p>Recycling & Scrap</p> <p>Arcadis U.S., Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. Mott MacDonald LLC Project Management Associates, LLC Tighe & Bond, Inc.</p> <p>Solid Waste Consulting Services</p> <p>Alternative Resources, Inc. Arcadis U.S., Inc. CalRecovery, Inc. Gershman, Brickner, & Bratton, Inc. HDR Engineering, Inc. Mott MacDonald LLC Project Management Associates, LLC SCS Engineers Tighe & Bond, Inc.</p> <p>Environmental Consulting and Engineering Services</p> <p>Analytical Consulting Technology, Inc. Arcadis U.S., Inc. Blue River Engineering LLC Diversified Technology Consultants, Inc. Fuss & O'Neill, Inc. HDR Engineering, Inc. Kleinschmidt Associates Langan CT, Inc. Sanborn, Head & Associates, Inc. SCS Engineers Tighe & Bond, Inc., TRC Environmental Corporation</p>
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Materials Innovation and Recycling Authority

Agreement Summary

Engineering, Consulting, and Power-Product Professional Services Agreement

Presented to the MIRA Board on: May 23, 2019

Vendor/ Contractor(s): Various (See Attached)

Effective date: July 1, 2019

Contract Type/Subject matter: Three-year on-call services Agreement for Engineering, Consulting, and Power-Product Professional Services

Facility(ies) Affected: Not Applicable

Original Contract: Not Applicable

Term: July 1, 2019 through June 30, 2022

Contract Dollar Value: Not Applicable

Amendment(s): Not applicable

Term Extensions: Not applicable

Scope of Services: On-call engineering and consulting services in the following areas: General Engineering; Resource Recovery and Thermal Energy-from-Waste; Biological Energy-from-Waste; Composting, Organics Recovery & Organics Waste; Power-Product Marketing, Procurement and Consulting; Multi-Material Segregation; Recycling & Scrap; Solid Waste Systems; and Environmental Consulting and Engineering Services.

Other Pertinent Provisions: Any work awarded under the Agreements will be pursuant to a Request for Services ("RFS"). Any RFS in excess of \$50,000 per fiscal year will require approval by the Board of Directors.

Materials Innovation and Recycling Authority

Consulting, Engineering and Land Surveying Services

May 23, 2019

Executive Summary

From time to time MIRA requires the assistance of firms and individuals to provide technical and professional consulting services in a variety of solid waste consulting, engineering and environmental areas. MIRA's "Procurement Policies and Procedures" establishes a "Request for Qualifications" ("RFQ") process to obtain such services. The current Agreements for engineering services and land surveying services expire June 30, 2019.

This is to request approval of the MIRA Board of Directors for the President to enter into agreements with the firms and individuals identified on the attached list to provide services as described below for the three-year period beginning July 1, 2019 and ending June 30, 2022. Any work performed under such an agreement will be pursuant to a Request for Services ("RFS"), and any RFS that is in excess of \$50,000 per fiscal year will require approval of the Board of Directors.

Discussion

MIRA's "Procurement Policies and Procedures" establishes an RFQ process as "the process by which MIRA identifies persons to perform services on behalf of . . . MIRA through the solicitation of qualifications, experience, prices and such other matters as MIRA determines may bear on the ability to perform services." After completing the RFQ process, MIRA's Procurement Policies and Procedures further specify that MIRA "may determine in its sole and absolute discretion, to engage the services of any one or more professional or technical services provider(s) qualified through the RFQ process." MIRA has historically used the RFQ process to pre-qualify firms for a variety of technical services that it requires (e.g., engineering services). In accordance with its Procurement Policies and Procedures and Connecticut State Statute, MIRA is required to solicit for technical and professional services at least once every three years. Agreements for engineering services and land surveying services that are currently in effect will expire on June 30, 2019.

Overview of RFQ

MIRA issued a RFQ for engineering, consulting, and power-product professional services on January 28, 2019. The availability of the RFQ was advertised on MIRA's website, and the Connecticut State Contracting Portal. A notice regarding the availability of the RFQ was also emailed to all firms who submitted a Notice Of Interest Form or Statement of Qualifications 3 years ago when an RFQ for these services was last issued.

In addition a notice regarding the availability of the RFQ was posted on the Solid Waste Association of North America (SWANA) discussion forum, and a notice regarding the availability of the RFQ was provided to The Environmental Business Council of New England, the Northeast Recycling Council and J.G. Press (the publishers of Biocycle Magazine) to share with their networks.

Responses to the Engineering, Consulting, and Power-Product Professional Services RFQ were due by March 28, 2019.

MIRA received responses to the RFQ from 25 firms. Table 1 below indicates the categories of services for which each of the respondents to the RFQ requested consideration.

The responses were first evaluated for administrative sufficiency, and then evaluated for technical merit. As identified by MIRA's President, MIRA Operations and Environmental staff conducted the technical evaluations. Responses were evaluated based on the respondent's qualifications and experience, the experience of the individuals who would be assigned to do work, the respondent's fee structure, organization and approach, and the respondent's Connecticut presence.

Firms meeting the requirements of a small business enterprise (SBE), or a minority business enterprise (MBE) were also considered in the review process. Five (5) of the respondents indicated that they qualified as SBEs (four [4] of which are registered with the State of Connecticut as SBEs) and three (3) of the respondents indicated that they were qualified as MBEs (all of which are registered with the State of Connecticut as MBEs). It is MIRA's intention to request that the firms that are qualified to register with the State as SBEs pursue such registration with the State upon contract award.

Based on the evaluation conducted by MIRA staff, the following firms/individuals were selected for recommendation to the Board of Directors in each of the following service categories:

General Engineering Services

Diversified Technology Consultants, Inc.
Fuss & O'Neill, Inc.
GNCB Consulting Engineers, P.C.
HDR Engineering, Inc.
HRP Associates, Inc.
Kallisto Engineering LLC
Langan CT, Inc.
Milone and MacBroom, Inc.
SCS Engineers
Tighe & Bond, Inc.
Wright-Pierce

Resource Recovery and Thermal Energy-from-Waste

Alternative Resources, Inc.
Arcadis U.S., Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
Mott MacDonald LLC
Project Management Associates, LLC

Biological Energy From Waste

Alternative Resources, Inc.
Arcadis U.S., Inc.
Avant Energy, Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
SCS Engineers
Wright-Pierce

Composting, Organics Recovery and Organic Waste

Alternative Resources, Inc.
Arcadis U.S., Inc.
Avant Energy, Inc., Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
SCS Engineers
Tighe & Bond, Inc.
Wright-Pierce

Power-Product Marketing, Procurement and Consulting

Avant Energy, Inc.
Daymark Energy Advisors, Inc.
Power Advisory LLC

Multi-material segregation

Arcadis U.S., Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
Tighe & Bond, Inc.

Recycling & Scrap

Arcadis U.S., Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
Mott MacDonald LLC
Project Management Associates, LLC
Tighe & Bond, Inc.

Solid Waste Consulting Services

Alternative Resources, Inc.
Arcadis U.S., Inc.
CalRecovery, Inc.
Gershman, Brickner, & Bratton, Inc.
HDR Engineering, Inc.
Mott MacDonald LLC
Project Management Associates, LLC
SCS Engineers
Tighe & Bond, Inc.

Environmental Consulting and Engineering Services

Analytical Consulting Technology, Inc.
Arcadis U.S., Inc.
Blue River Engineering LLC
Diversified Technology Consultants, Inc.
Fuss & O'Neill, Inc.
HDR Engineering, Inc.
Kleinschmidt Associates
Langan CT, Inc.
Sanborn, Head & Associates, Inc.
SCS Engineers
Tighe & Bond, Inc.,
TRC Environmental Corporation

The agreements that are to be executed with these firms will have an effective date of July 1, 2019 and will extend through June 30, 2022.

Financial Summary

MIRA makes no financial commitment to any firm or individual in the three-year services Agreements. This selection simply qualifies a firm or individual as eligible to undertake work for MIRA at a later date, when a specific need is actually identified. By qualifying multiple firms under each service category, MIRA will have the opportunity to solicit competitive cost proposals from multiple firms before procuring services under the three-year services Agreements. Any such future work would be procured through an RFS, and any RFS for more than \$50,000 per fiscal year would require prior approval by the MIRA Board of Directors.

It should be noted that the cost for any particular task-specific RFS that is negotiated with any particular engineering firm pursuant to these three-year service agreements will be based on the hourly rates for time (i.e., professional labor rates) and materials (e.g., daily rental rate for required equipment) that are pre-established in these three year service Agreements.

TAB 5

**RESOLUTION REGARDING COOPERATIVE SERVICES
AGREEMENT BETWEEN THE MATERIALS INNOVATION AND
RECYCLING AUTHORITY AND THE UNITED STATES
DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH
INSPECTION SERVICES / WILDLIFE SERVICES**

RESOLVED: That the President is hereby authorized to execute an agreement with the United States Department of Agriculture Animal and Plant Health Inspection Services - Wildlife Services, for the control of nuisance birds at the South Meadows Waste Processing Facility, substantially as presented and discussed at this meeting.

Materials Innovation and Recycling Authority
Cooperative Service Agreement with the United States Department of
Agriculture Animal and Plant Health Inspection Service at the
CSWS Waste Processing Facility

Presented to the MIRA Board on: May 23, 2019

Vendor/ Contractor(s): United States Department of Agriculture,
Animal & Plant Health Inspection Services,
Wildlife Services

Effective date: July 1, 2019

Contract Type/Subject matter: Service Agreement for bird and other pest
control at the South Meadows Waste
Processing Facility.

Facility Affected: CSWS Waste Processing Facility

Original Contract: This is a new contract.

Term: July 1, 2019 through June 30, 2020

Contract Dollar Value: \$31,000.00

Amendment(s): NA

Term Extensions: NA

Scope of Services: Provide integrated bird control services at
the South Meadows WPF.

Other Pertinent Provisions: USDA is engaged as a contractor with
Special capability pursuant to section
3.1.2.5 of MIRA's Procurement Policies &
Procedures; accordingly, this contract is
awarded as an exception to the competitive
process.

Materials Innovation and Recycling Authority Connecticut Solid Waste System

Cooperative Services Agreement with United States Department of Agriculture for the Control of Birds

May 8, 2019

Executive Summary

This is to request approval of the MIRA Board of Directors for the President to enter into an agreement with the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS), Wildlife Services (WS) to perform work at the South Meadows Waste Processing Facility on Maxim Road to control nuisance birds.

Discussion

As the owner and solid waste permittee of the South Meadows Resource Recovery Facility (RRF), MIRA has a regulatory obligation to control vectors, including birds. Historically, the South Meadows RRF has seasonally experienced excessive bird activity. Despite attempts in past years by MIRA's contractor and project staff to control bird activity using various means, including pyrotechnics, nuisance bird activity has been a recurring issue and if not managed adequately, may present a potential threat to the incoming and outgoing aircraft at the neighboring Brainard Airport.

In 2004, MIRA staff made inquiries to the solid waste management facility operators in other states, as well as to regulatory agencies, with the intent of identifying additional options for controlling birds at its waste facilities. MIRA's search revealed that the USDA is equipped to provide support in management of nuisance birds. Consequently MIRA entered into a Pilot Agreement with the USDA to provide services at the both the Hartford Landfill and the South Meadows Waste Processing Facility. The approach used in controlling birds has involved several methods, using various types of pyrotechnics, visual deterrents and safe traps, as well as toxicants and firearms. The USDA program proved successful, and MIRA has contracted with the USDA for these activities since 2004.

Based on annual reports provided by the USDA during the past decade, and observations made by USDA and MIRA personnel, the work performed by USDA continues to be effective in controlling the number of nuisance birds at the CSWS Waste Processing Facility. Although the vector control activities conducted by USDA at the WPF primarily involve control of nuisance birds, USDA also provides management of other nuisance animals as necessary, including skunks, raccoons and possum. The USDA Report for the past year's activities is included in the supplemental information package.

In addition to the on-site vector control services, USDA Wildlife Services also provides support to MIRA in completing, submitting and timely processing of the vector depredation permit, which authorizes MIRA – and through MIRA the USDA Wildlife Services – to undertake these depredation activities. MIRA obtains the depredation permit from the USDA, and must renew the permit on an annual basis.

MIRA management recommends contracting with the USDA for these bird control activities in FY 2020.

Financial Summary

The term of the contract is July 1, 2019 through June 30, 2020. The total not-to-exceed cost is \$31,000, which includes the cost of personnel, vehicles, supplies and administration. This is the same contract price as the current year.

These nuisance bird management activities were contemplated when the FY 2020 budget was developed, and sufficient funds are available in the FY 2020 CSWS WPF operating budget for this purpose.

**FINAL ACTIVITY REPORT
FOR THE
MATERIALS INNOVATION
AND
RECYCLING AUTHORITY (MIRA)
CONNECTICUT SOLID WASTE
SYSTEM FACILITY**

**Final Report
May 2019**

*Submitted by:
United States Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services
463 West Street
Amherst, MA 01002
(413) 253-6684*

Timothy S. Cozine Staff Wildlife Biologist, Amherst, Massachusetts

*Project was monitored by:
Donald J. Wilda, District Supervisor*

*Assistance Provided by: Wildlife Specialist Michael Parenteau,
Massachusetts, Rhode Island and Connecticut*

Introduction

The United States Department of Agriculture, Animal Plant Health Inspection Service, Wildlife Services (USDA/APHIS/WS) has a long standing working relationship with Connecticut Resources Recovery Authority (CRRA) now the Materials Innovation and Recycling Authority (MIRA) by providing assistance in the management of migratory bird species causing damage to property and posing a threat to human health and safety.

WS began assisting CRRA in the management of migratory birds at the Hartford Landfill in 2003. When the Hartford Landfill closed in 2008, WS transitioned operational control activities to the Mid-Connecticut Project, now referred to as the Connecticut Solid Waste System Facility, for the remainder of the agreement. During this time WS provided operational control to reduce threats to human health and safety at the facility. WS also worked closely with Hartford-Brainard Airport to reduce threats to aviation. WS regularly communicated with the airport when performing operational control activities at the facility to prevent any added risk to aircraft.

On July 1, 2018 WS renewed the cooperative agreement with MIRA. The purpose of this agreement was to facilitate APHIS/WS conducting operational control at the Connecticut Solid Waste System Facility to reduce the number of birds and other wildlife that pose a threat to human health and safety and pose a threat to aviation at the adjacent Hartford-Brainard Airport for one year.

Legal Authority of Wildlife Services

The USDA is directed by law to protect American agriculture and other resources from damage associated with wildlife. APHIS, WS has statutory authority under the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C.426-426b) as amended, and the Act of December 22, 1987 (101Stat. 1329-331, 7 U.S.C. 426c), to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions while conducting a program of wildlife service's involving mammal and bird species that are reservoirs for zoonotic diseases, or animal species that are injurious and/or a nuisance to, among other things, agriculture, horticulture, forestry, animal husbandry, wildlife, and human health and safety

The WS program is a non-regulatory, federal cooperative wildlife management program whose mission is to provide leadership in reducing conflicts between people and wildlife. WS has the primary responsibility for responding to threats caused by migratory birds. A growing focus of WS is to help promote the safe operation of aircraft by working with airport management to document, monitor and manage wildlife hazards at airports throughout the country.

Legal Status of Wildlife Species

Federal, state, or municipal laws protect most forms of wildlife and their habitats. Before conducting any control action at the Connecticut Solid Waste System Facility, whether lethal or non-lethal, the identification and legal status of the target species should be determined. Regulatory agencies governing wildlife issue permits to trap or kill wild animals depending on the species and method of control involved. MIRA is responsible for adhering to the current regulations regarding wildlife control and for obtaining the appropriate permits to take or harass specific types of wildlife. Potential non-target animals should be identified, as well, to aid in determining the appropriate control methods that would avoid killing or harassing these species.

Federal Regulations

The U.S. Congress has passed several acts for the protection of wildlife including the Migratory Bird Treaty Act (MBTA), the Lacey Act, the Endangered Species Act, Bald and Golden Eagle Protection Act, the National Environmental Policy Act (NEPA), the Federal Insecticide, Fungicide, and Rodenticide Act

(FIFRA) and the Clean Water Act regulated by the U.S. Army Corps of Engineers. These are the basis of most wildlife regulations that have been issued in the Codes of Federal Regulations (CFR). Several agencies are responsible for implementing these regulations and many of these regulations affect wildlife management. Federal wildlife laws are administered by the U.S. Fish and Wildlife Service (USFWS) and primarily involve migratory birds protected under the MBTA and all species protected under the Endangered Species Act. Permits from the USFWS must be updated annually unless otherwise stated on the permit.

MIRA is currently managing wildlife under U.S. Fish and Wildlife Service Depredation Permit Number MB 826758-0 (Appendix 1). This permit authorizes MIRA and those listed as a sub-permittee to kill “non-endangered and non-threatened species of migratory birds only after non-lethal techniques have been tried.” To avoid lapses in permits, MIRA should “submit a written application at least 30 days prior to the expiration date of the permit.” Depredation permits are also subject to the conditions stated in 50 CFR § 21.27 Special Purpose Permits. Under these guidelines MIRA is required to document the permitted activity including type of action, species and numbers involved, and disposition of carcasses. These records should be readily available when needed.

USDA Wildlife Services has long been excluded from activities to control urban rodents under our enacting legislation. However, no definition of urban rodents was provided and Wildlife Services has operated with definition of urban rodents to mean commensal rodents, specifically Norway and black/roof rats and house mice. Due to conflicts with the National Pest Management Association and others, Wildlife Services has redefined and clarified the definition of urban rodents as follows.

For the purposes of activities authorized under the Act of December 22, 1987 (7 U.S.C. 426c), the term "urban rodent control" shall mean actions to directly control mice, rats, voles, squirrels, chipmunks, gophers, woodchucks, and groundhogs in a city or town with a population greater than 50,000 inhabitants and the urbanized area contiguous and adjacent to such a city or town, except actions involving: (1) federal agencies; (2) government entities engaged in a cooperative service agreement with APHIS to provide direct control of rodents as of October 1, 2013; (3) a state in which direct control of the rodent species has been expressly authorized by state law, rulemaking, or a local jurisdiction's ordinance promulgated by public notice and an opportunity for public comment or as otherwise promulgated as required and authorized by the respective state or local law; and (4) railways and airport air sides areas. APHIS will refer all requests for operational assistance with "urban rodent control" from private entities such as home and business owners and associations to the private sector.

Due to the population of the City of Harford and its clear urban setting, Wildlife Services will remain unable to conduct control of woodchucks, also known as groundhogs, on MIRA property in the absence of a state law or local ordinance specifically authorizing Wildlife Services to conduct rodent control. However, woodchuck damage management was a minor part of Wildlife Services activities in the past.

State and Local Regulations

Connecticut state wildlife laws generally follow the federal regulations for migratory bird species and further regulate actions concerning mammals, upland game birds and other vertebrates. The Connecticut Department of Energy and Environmental Protection Wildlife Division (CT DEEP WD) state permit issued to Hartford-Brainard Airport allows for the harassment and lethal removal of game and fur bearing species to protect public safety: white-tailed deer, Eastern wild turkey, coyote, red fox, grey fox, and raccoon. This permit further allows that mammals interfering with bird control measures may be trapped and euthanized from the Connecticut Solid Waste System Facility (MIRA) at 300 Maxim Road in Hartford, CT.”

The permit letter is issued by the state to protect property and human health and safety. Wildlife in Connecticut is regulated primarily by Connecticut General Statutes (CGS), Title 26: Chapter 460 Fisheries and Game and Chapter 495 Connecticut Endangered Species.

WILDLIFE SURVEYS RESULTS AND ANALYSIS

Wildlife Service's Employed Methods

WS utilized a variety of equipment to perform operational control at the Connecticut Solid Waste System facility to manage migratory bird species and mammals. WS completed surveys during each visit to the facility. The data gathered during the surveys was used to create wildlife population indices. Indices, unlike true population counts, loosely represent wildlife populations and are useful in showing changes in populations over time or comparing one population to another. The survey information is not intended to represent the total wildlife population at Connecticut Solid Waste System Facility, but the technique allows Wildlife Services to build an index of species presence and behavior which satisfies the intent of this study. Because there was no hypothesis being tested, other statistical analysis was not necessary.

WS again did not need to utilize propane cannons to harass wildlife from 2018 to 2019 due to overall lower bird numbers. WS maintained a decoy trap in the load out area of the yard to capture European starlings and house sparrows to help reduce overall starling and house sparrow numbers. This kind of trap is baited with food and a few European starlings and also provides water and shelter. Birds can enter the trap but cannot escape. Captured birds were euthanized and non-target species were released unharmed. All captured starlings and house sparrows were euthanized with carbon dioxide gas, cervical dislocation, or other AVMA approved methods.

WS utilized two types of pyrotechnics to harass wildlife at the Connecticut Solid Waste System Facility. One type emits a loud scream while the other emits a loud bang after discharge. WS would sometimes follow up harassment with the use of an air rifle to target specific American crows and herring gulls at the Connecticut Solid Waste System Facility which did not respond to the harassment. WS utilized vehicle chasing to disperse crows and starlings at the Connecticut Solid Waste System Facility.

Observations

The Connecticut Solid Waste System Facility is highly attractive to a wide variety of wildlife. WS identified three groups of birds that congregate in numbers and pose a threat to human health and safety, property damage, and pose a serious threat to aviation. These birds are blackbirds (European starlings), Corvids (American crows), and gulls (great black-backed, herring, and ring-billed gulls). Rock pigeons also occur in small numbers and pose a minor threat to human health on site and to aviation safety.

Other bird species are attracted to the site due to the volume of other bird species. These include a wide variety of hawk species. These birds do not pose a threat to human health and safety on property at the Connecticut Solid Waste System Facility, but instead pose a serious threat to aviation at the adjacent Hartford-Brainard Airport.

WS has also identified raccoons as another species of wildlife that pose a serious threat to property damage and human health and safety at the Connecticut Solid Waste System Facility.

Gull Guild:

Description: Gulls are large bodied, robust birds with webbed feet, long pointed wings, and stout bills. Most adults are white with a gray or black back and wings, however, juveniles are typically mottled brown or gray for the first two to three years of life. Gulls are commonly attracted to areas when food or water is available. Food sources may include refuse from dumpsters or nearby landfills, shellfish, fish,

earthworms, insects, or carrion. These birds become habituated quickly to easy sources of food such as handouts at construction sites and parking areas.

Legal Status: Gulls are classified as migratory non-game birds and can be killed with a USFWS depredation permit and a concurrent state depredation permit.

Control Measures: Habitat modifications are the most effective methods for controlling gulls. Clean and contained trash areas, elimination of standing water, and prevention of food handouts will usually deter gulls, especially if combined with an active hazing and shooting program. However, gulls quickly habituate to dispersal techniques (pyrotechnics, bioacoustics and visual scare devices) and individuals may need to be shot to reinforce non-lethal methods.

Damage Threat to Aircraft: Gulls are hazardous to aircraft due to their large body size, abundance, expanding distributions, flocking behavior, and relatively slow flight characteristics. Nationally, gulls account for 12.23% of known species bird-aircraft strikes and 20.62% of damaging strikes with known species in the United States resulting in \$58,887,723 in damage from 1990 to 2015 (Dolbeer et al. 2016). Gulls are the third most commonly struck species group reported to the National Wildlife Strike Database, and when struck they are ranked 10th out of the 21 species causing significant damage to aircraft (Dolbeer et al. 2000).

Observations: WS noted a significant decline in gull numbers between 2009 and 2017. Gulls numbers increased during 2018-19. There was an increase of 1,764.0%, from 25 herring gulls observed during 2017-18 to 466 (432 herring gulls and 34 great black-backed gulls) observed during 2018-19. Although this seems very significant, numbers observed during 2017-18 were very low.

Gulls were observed during 23 of 68 visits. The highest recorded single day observations were 58 herring gulls on January 7, 2019. The average and median number of gulls surveyed daily, during the 23 days when gulls were observed, was 20.26 and 17.0 respectively. This is an increase from last year when an average and median of 3.125 and 3.0 gulls, respectively, were observed per visit, when gulls were observed. This ends a three year trend of decreasing gull numbers.

WS's harassment program continued to benefit from the change in practices, including closing of doors, implemented by NAES. Overall gulls respond well to harassment. However, there were 16 herring gulls and three (3) great black-backed gulls lethally removed using an air rifle.

Blackbirds:

Description: The blackbird guild at MIRA consisted solely of European starlings again during 2018-19, Brown-headed cowbirds and common grackles have not been observed in significant numbers since July 1, 2013.

European starlings are gregarious or flocking birds, and are known to form large flocks, sometimes mixed with other black-bird species, which can range in the thousands during the winter months. Flocks typically form near areas with suitable roosting sites and adequate foraging habitats. European starlings are opportunistic feeders and consume a variety of foods, including fruits, grains, weed seeds, and insects. Starlings were introduced into the United States in the 1890's and quickly spread throughout North America. The European starling is a cavity nester and seeks out nesting areas with both suitable nesting cavities, usually near buildings, and short grass areas for foraging.

Legal Status: European starlings are an introduced species and are not protected by federal law and are minimally protected by Connecticut law. They may be killed at any time of year without a permit when concentrated in a manner that constitutes a threat to human health and safety. Other black-birds such as brown-headed cowbirds and common grackles are protected by the Migratory Bird Treaty Act, but may be taken under the Federal Crow and Blackbird Depredation Order. Under the order, cowbirds "may be

taken when causing or about to commit damage to...or when concentrated in numbers or in a manner as to constitute a health hazard or nuisance". There is a newly required reporting requirement under the blackbird depredation order, which is currently being handled by Wildlife Services.

Control Measures: Habitat management (i.e., grass management, roost removal, etc.) and exclusion are usually the most cost effective methods because they serve as long term deterrents. Exclusion can be considered as covering trailers full of residue material awaiting transport and closing roll-up bay doors to prevent access to the interior of the facility. If doors cannot be closed due to safety or fire concerns, bird barriers such as clear plastic barrier straps or forced air barriers can be installed in the door way.

Habitat management alone is not enough to discourage European starlings. Often birds simply move to another location at the facility so it is important to be persistent in harassing this bird species. Shooting as reinforcement to harassment, toxicant applications, or trapping can also be used as population control methods if the birds become habituated to pyrotechnics or other non-lethal methods. Other black-birds are much less common on site and they are generally controlled in conjunction with starlings when necessary.

Damage Threat to Aircraft: European starlings and black-birds are considered hazardous to aviation because of the large flocks they form and their relatively dense body (Seaman et al. 1995). Blackbirds and European starlings rank 2nd out of the 21 wildlife species most often reported struck by aircraft and 19th of 21 species causing damage when reported struck by aircraft (Dolbeer et al. 2000). European starlings are the fifth most commonly struck species and were responsible for \$7,127,433 in damage between 1990 and 2015 (Dolbeer et al. 2016). In October of 1960, a Lockheed Electra turbo-prop aircraft ingested European starlings into all engines during takeoff at Logan Airport and crashed resulting in 62 human fatalities.

Observations: The number of European starlings harassed or removed in 2018-19 increased 74.8% from 2017-18, up to 49,366 from 28,459. Starlings were observed on 63 of 64 visits from April 1, 2018 to May 1, 2019. WS used a combination of harassment and trapping to manage starling numbers at the facility. There were 760 starlings lethally removed using the decoy trap.

Corvids:

Description: The corvid guild at MIRA consists entirely of American crows. American crows are large sized passerine birds of the family Corvidae. The Corvidae family includes American and fish crows, blue jays and common ravens. All are considered highly intelligent and social. American crows are omnivores and capable of consuming a wide range of food types including: fruits, grains, seeds, nuts, small vertebrates, insects and other invertebrates, refuse and carrion. Studies show that crows consume over 600 different food items. Crows commonly feed in open areas, especially when there is dense cover nearby such as trees or heavy brush.

Legal Status: American crows are protected by the Migratory Bird Treaty Act, but certain species may be taken under the Federal Crow and Blackbird Depredation Order. American and fish crows are included in the blackbird depredation order and "may be taken when causing or about to commit damage to...or when concentrated in numbers or in a manner as to constitute a health hazard or nuisance". As with other blackbirds, there is now a reporting requirement under the blackbird depredation order which will be handled by Wildlife Services. American crows may be hunted with a valid Connecticut state hunting license during the 2018 open seasons from January 13th through March 24th Monday through Saturday, August 11th through October 13th and October 20th through December 1st on Wednesday, Friday, and Saturday, ½ hour before sunrise to ½ hour after sunset. These regulations may vary each year, so be sure to check each year for changes.

Control Measures: The most effective method to prevent crows from using an area is habitat modification. This method includes allowing the grass to grow taller than 7 inches, removing trees used

for roosting and structures used for perching. If crows continue to use the facility, they should be dispersed with pyrotechnics and reinforced with an air rifle.

Damage Threat to Aircraft: Crows can inflict severe damage to aircraft. Fortunately, most crows are somewhat adept when it comes to avoiding aircraft, and are generally not considered a great threat to aviation. However, this does not mean they can be dismissed as a hazard altogether. They are known to form large flocks, especially during the fall and winter which increases the potential for damaging strikes. There were 442 American crow strikes responsible for \$1,833,405 in damage to civil aircraft between 1990 and 2015 (Dolbeer et al 2016). Crows and ravens rank 14th out of the 21 most struck species groups and rank 18th out of 21 species based on the number of strikes resulting in major damages (Dolbeer et al. 2000).

Observations: The number of American crows harassed or taken in 2018-19 increased 27.5% from 2016-17, to 3,832 from 3,005. Crows were observed on 47 of 64 visits from April 1, 2018 to May 1, 2019. American crows tend to gather at the facility starting late in October and disperse by late March. American crows congregate in large numbers during winter months as they travel to and from winter roosting sites. There were 68 American crows lethally removed using an air rifle.

Other Wildlife of Concern:

Rock pigeons:

Description: Feral pigeons, commonly referred to as rock pigeons or rock doves, are familiar birds that are abundant in cities and farms throughout Connecticut. Pigeons are powerful fliers with robust bodies, small heads, and short beaks. Feral pigeons tend to fly at higher altitude, descending to their destination in a rapid circling pattern with their wings spread back. Although both species are primarily granivorous, they will occasionally consume protein rich animal matter such as insect larvae. Pigeons are known for readily accepting handouts from humans.

Legal Status: Rock pigeons, like European starling, are an introduced species and are not protected by federal law and are minimally protected by Connecticut law. They may be killed at any time of year without a permit when concentrated in a manner that constitutes a threat to human health and safety.

Control Measures: Exclusion by closing roll-up bay doors to prevent access to the interior of the facility and lethal control using an air rifle are the primary methods available for controlling pigeons. Trapping can be effective, but is best when conducted on a rooftop or similar structure near feeding or roosting sites.

Damage Threat to Aircraft: Although pigeons are not as large-bodied as many species considered dangerous to air safety, they are still a concern because of their flocking behavior, which increases the risk of collision with aircraft. Nationally this species is the 7th most commonly struck species and has accounted for \$12,036,517 in damage between 1990 and 2015 (Dolbeer et al. 2016). Pigeons ranked 11th out of the top 21 species resulting in major damage to aircraft (Dolbeer et al. 2000).

Observations: WS did not observe rock pigeons in sufficient numbers to require recording numbers at the Connecticut Solid Waste System Facility during the duration of the operational control program. Although there have been no significant observations, this species could return in larger numbers at any time due to the large population in the Hartford area.

House Sparrows

Description: House sparrows are small brown granivorous (seed-eating) birds with thick, heavy bills for opening seed husks that form loose flocks, especially during the winter months. Males have a distinct black facial mask and females are uniformly streaked brown.

Legal Status: House sparrows, like both European starlings and rock pigeons, are an introduced species and are not protected by federal law and are minimally protected by Connecticut law. They may be killed at any time of year without a permit when concentrated in a manner that constitutes a threat to human health and safety.

Control Measures: Exclusion by closing roll-up bay doors to prevent access to the interior of the facility and lethal control using an air rifle are the primary methods available for controlling house sparrows. Trapping can be effective, but is best when conducted on a rooftop or similar structure near feeding or roosting sites. House sparrows are cavity nesters; they build straw and grass nests in holes and confined spaces, commonly in buildings and other structures. These nests can result in clogged rooftop drains or result in fires when nests are made in electrical devices such as lights or circuit boxes. These nests should be removed, along with any eggs or chicks, and excluded whenever possible.

Damage Threat to Aircraft: Due to their small size and loose flocking behavior, house sparrows are not a significant threat to aviation safety. House sparrows have been identified in 236 strikes resulting in \$2,226.00 worth of damages from 1990 to 2015 (Dolbeer et al. 2016).

Observations: WS observe a significant numbers of house sparrows on one day during 2018-19. There were 875 house sparrows non-lethally dispersed on 3 December 2018. No house sparrows were captured in the starling decoy trap or lethally taken by other means.

Mammals:

WS did not receive any requests for assistance from MIRA staff to deal with mammals at the Connecticut Solid Waste System Facility during the 2018-19 period. However, in past years WS has assisted with live capture and removal of free ranging domestic cats, raccoons, and striped skunks.

Summary

WS used a variety of methods to manage wildlife at the Connecticut Solid Waste System Facility including trapping to reduce overall bird populations. This harassment was combined with alternative methods to reduce the overall starling and other bird populations.

In total, WS removed a total of 16 herring gulls, three (3) great black-backed gulls, 760 European starlings, and 68 American crows as reinforcement to harassment and/or to reduce property damage and threats to human health and safety and aviation safety at neighboring Hartford-Brainard Airport.

The herring gulls, great black-backed gulls, and American crows were all taken with air rifle during 2018-19. All European starlings were captured with the decoy trap. This was a 60.7% increase in starling take from 2017-18 to 2018-19. As previously discussed, no house sparrows, rock pigeons, or other bird species were taken.

In total, WS used a total of 228 pyrotechnics, 84 bird bombs and 144 whistler/screamers to disperse 53,691 birds (3,764 American crows, 31 great black-backed gulls, 210 herring gulls, 875 house sparrows, and 48,606 European starlings) and harassment shooting to disperse one (1) herring gull from the Connecticut Solid Waste System Facility.

Recommendations

WS recommends a continuation of a proactive wildlife management program at the Connecticut Solid Waste System Facility to reduce the threat to human health and safety caused by birds and their droppings. Proactive management of wildlife at the facility shows a due-diligence and can reduce or

eliminate liabilities if a damaging bird strike were to occur at Hartford-Brainard Airport. Furthermore, direct communication with Hartford-Brainard Airport must occur when conducting operational control at the facility to reduce further threats to aviation.

Recommendations at this time would be to ensure that personnel loading residue material in trailers continue to cover the trailers while they sit awaiting transport. Birds feed from the trailers regardless of the time of year. Covering trailers prevents easy access of birds to the residue material. This will help to prevent a habituation of birds to the site and reduce bird numbers overall. To date, most trailers get covered, but more trailers have been left uncovered while awaiting transport as the bird numbers have declined.

WS recommends the installation of a pigeon trap to reduce the numbers of pigeons using the power generation portion of the facility if this becomes an issue of concern during 2019-20. WS believes the pigeons roost and nest at the power generation side of the plant. In past years these birds have been observed flying over and feeding on the waste processing side of the facility. Accumulations of pigeon droppings are known to harbor diseases that can be transferred to humans. Furthermore, pigeon droppings are corrosive and can lead to damage to the facilities.

WS recommends keeping roll-up doors closed as much as possible or installing barriers which will help prevent birds from entering the facility. WS observed high numbers of starlings flying into all open bay doors to access the interior of the facility. The most widely used doors are East and West RDF and doors facing the west side of the facility.

WS recommends continued live trapping of raccoons, opossums, skunks, and other medium and small mammals that occur within the facility as the need arises. These mammal species can carry a variety of diseases that are transmittable to humans. WS recommends that MIRA either hire a private nuisance wildlife control operator or pest control operator to manage woodchucks and other rodents. Alternatively, WS can provide technical assistance so MIRA staff can manage woodchucks and other rodents without outside assistance.

WS would like to thank MIRA and NAES for allowing WS to conduct operational control at the Connecticut Solid Waste System Facility. WS looks forward to working with MIRA in the future to reduce wildlife conflicts and development of more effective management techniques.

Appendix 1



Permit Number: MB826758-0
Effective: 01/01/2019 Expires: 12/31/2019

COPY

Issuing Office:

Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Migratory Bird Permit Office
300 Westgate Center Drive
Hadley, MA 01035-0779
Tel: 413-253-8643 Fax: 413-253-8424

Randy Dettmers
Acting
CHIEF, MIGRATORY BIRD PERMIT OFFICE - REGION 5

Permittee:

MATERIAL INNOVATION AND RECYCLING AUTHORITY
200 CORPORATE PLACE
SUITE 202
ROCKY HILL, CT 06067
U.S.A.

Name and Title of Principal Officer:

PETER W. EGAN - DIRECTOR OF ENVIRONMENTAL SERVICES

Authority: Statutes and Regulations: 16 USC 703-712; 50 CFR Part 13, 50 CFR 21.41.

Location where authorized activity may be conducted:

Connecticut Solid Waste System Facility, 300 Maxim Road, Hartford, CT and Regional Recycling Center, 211 Murphy Road, Hartford, CT

Reporting requirements:

ANNUAL REPORT DUE WITH NEXT RENEWAL or IF NOT RENEWING 30 days after permit expiration even if you had no activity. Forms at: <http://www.fws.gov/forms/3-202-9.pdf>

Authorizations and Conditions:

- A. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.
- B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local tribal, or other federal law.
- C. Valid for use by permittee named above
- D. Authorized to kill by means of shotgun, rifle, or air rifle, using non-toxic shot, or live capture followed by euthanasia*, up to:
 - (a) TWENTY (20) EACH: Herring gulls, Great black-backed gulls, Ring-billed gulls;
 - (b) FIVE (5) EACH: Glaucous gulls, Icelandic gulls, Laughing gulls, or Lesser black-backed gulls;and MUST destroy carcasses. Lethal take is not to be the primary means of control. Active hazing, harassment or other non-lethal techniques must continue in conjunction with any lethal take of migratory birds.

State Restrictions: No species may be taken which is State listed as Endangered, Threatened or Special Concern without prior authorization from the Connecticut Department of Environmental Protection Commissioner Tel: (860) 424-3011. Included on the State list, among other species, are Peregrine falcon, Short-eared owl, Northern harrier, Upland sandpiper and Grasshopper sparrow.

- E. The following subpermittees are authorized: Employees of Connecticut Resources Recovery Authority and employees of USDA/APHIS Wildlife Services. In addition, any other person who is (1) employed by or under contract to you for the activities specified in this permit, or (2) otherwise designated a subpermittee by you in writing to the Federal permit issuing office, may exercise the authority of this permit.



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F. You and any subpermittees must comply with the attached Standard Conditions for Migratory Bird Depredation Permits. **These standard conditions are a continuation of your permit conditions and must remain with your permit.**

G. A "No Feeding Policy" must be in place.

For suspected illegal activity, immediately contact USFWS Law Enforcement at: Tolland, CT 860-871-8348

*Euthanasia procedures must follow the American Veterinary Medical Association Guidelines
<<https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>>



Standard Conditions Migratory Bird Depredation Permits 50 CFR 21.41

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR part 21.41 are conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit. The standard conditions below are a continuation of your permit conditions and must remain with your permit. If you have questions regarding these conditions, refer to the regulations or, if necessary, contact your migratory bird permit issuing office. For copies of the regulations and forms, or to obtain contact information for your issuing office, visit: <http://www.fws.gov/migratorybirds/mbpermits.html>.

1. To minimize the lethal take of migratory birds, you are required to continually apply non-lethal methods of harassment in conjunction with lethal control.
[Note: Explosive Pest Control Devices (EPCDs) are regulated by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). If you plan to use EPCDs, you require a Federal explosives permit, unless you are exempt under 27 CFR 555.141. Information and contacts may be found at www.atf.gov/explosives/how-to-become-an-fel.htm.]
2. Shotguns used to take migratory birds can be no larger than 10-gauge and must be fired from the shoulder. You must use nontoxic shot listed in 50 CFR 20.21(j).
3. You may not use blinds, pits, or other means of concealment, decoys, duck calls, or other devices to lure or entice migratory birds into gun range.
4. You are not authorized to take, capture, harass, or disturb bald eagles or golden eagles, or species listed as threatened or endangered under the Endangered Species Act found in 50 CFR 17, without additional authorization.

For a list of threatened and endangered species in your state, visit the U.S. Fish and Wildlife Service's Threatened and Endangered Species System (TESS) at: <http://www.fws.gov/angered>.
5. If you encounter a migratory bird with a Federal band issued by the U.S. Geological Survey Bird Banding Laboratory, Laurel, MD, report the band number to 1-800-327-BAND (2263) or <http://www.reportband.gov>.
6. This permit does not authorize take or release of any migratory birds, nests, or eggs on Federal lands without additional prior written authorization from the applicable Federal agency, or on State lands or other public or private property without prior written permission or permits from the landowner or custodian.
7. Unless otherwise specified on the face of the permit, migratory birds, nests, or eggs taken under this permit must be:
 - (a) turned over to the U.S. Department of Agriculture for official purposes, or
 - (b) donated to a public educational or scientific institution as defined by 50 CFR 10, or
 - (c) completely destroyed by burial or incineration, or
 - (d) with prior approval from the permit issuing office, donated to persons authorized by permit or regulation to possess them.

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8. A subpermittee is an individual to whom you have provided written authorization to conduct some or all of the permitted activities in your absence. Subpermittees must be at least 18 years of age. As the permittee, you are legally responsible for ensuring that your subpermittees are adequately trained and adhere to the terms of your permit. You are responsible for maintaining current records of who you have designated as a subpermittee, including copies of designation letters you have provided.
9. You and any subpermittees must carry a legible copy of this permit, *including these Standard Conditions*, and display it upon request whenever you are exercising its authority.
10. You must maintain records as required in 50 CFR 13.46 and 50 CFR 21.41. All records relating to the permitted activities must be kept at the location indicated in writing by you to the migratory bird permit issuing office.
11. Acceptance of this permit authorizes the U.S. Fish and Wildlife Service to inspect any wildlife held, and to audit or copy any permits, books, or records required to be kept by the permit and governing regulations.
12. You may not conduct the activities authorized by this permit if doing so would violate the laws of the applicable State, county, municipal or tribal government or any other applicable law.

(DPRD - 12/3/2011)

TAB 6

RECOMMENDED RESOLUTION FOR MIRA BOARD OF DIRECTORS

RESOLUTION REGARDING MARKET DRIVEN PURCHASE FOR EXCHANGE OF MUNICIPAL SOLID WASTE DISPOSAL CAPACITY

RESOLVED: that the President is authorized to enter into market driven purchase of disposal capacity, and transportation services appurtenant thereto, out of the Torrington Transfer Station, which costs were offset by an increase in revenue from the commensurate delivery of non-participating MSW into the Watertown Transfer Station, substantially as discussed and presented at this meeting.

Materials Innovation & Recycling Authority

Summary for Market Driven Purchase For Exchange Of Municipal Solid Waste Disposal Capacity

Presented to the MIRA Board on: May 23, 2019

Vendor/ Contractor(s): Babylon Recycling, USA Hauling and Recycling, USA Waste and Recycling (collectively for this summary "Hauler")

Effective date: January 19, 2019

Contract Type/Subject matter: Market Driven Purchase of Municipal Solid Waste (MSW) disposal capacity and appurtenant transportation as part of exchange of disposal capacity.

Facilities Affected: Torrington and Watertown Transfer Stations

Term: February 1, 2019 through March 11, 2019

Gross Purchase Dollar Value: \$296,480.12 (sum of Table 1). Offset by equivalent revenue as explained in Summary

Amendment(s): Not applicable

Term Extensions: Not applicable

Scope of Services: Exchange of MSW Disposal Capacity. See Destination Location column in Table 1 for summary of services and destination facilities for each requisition

Other Pertinent Provisions: This is a "Market Driven Purchase" in accordance with Section 5.11 (Market Driven Purchases and Sales) of MIRA's Procurement Policies and Procedures

Materials Innovation & Recycling Authority

Summary for Market Driven Purchase For Exchange Of Municipal Solid Waste Disposal Capacity

Policies and Procurement Committee

May 8, 2019

Summary

At the end of January 2019, MIRA management agreed to an exchange of MSW disposal capacity in accordance with Section 5.11 (Market Driven Purchases and Sales) of MIRA's Procurement Policies and Procedures.

Via this exchange, Hauler delivered MSW into the Watertown Transfer Station for \$76/ton in exchange for transferring and disposing a commensurate amount of MSW from the Torrington Transfer Station to an alternate disposal facility, which included Babylon, Covanta Springfield, and Covanta Pittsfield. MIRA was billed a rate of \$76/ton for disposal at and appurtenant transportation to the alternate disposal facilities.

In accordance with these policies and procedures, MIRA staff is seeking Board of Directors approval for these Market Driven Purchases.

The net impact of this MSW capacity exchange on the CSWS budget was designed to be \$0. Gross costs of transportation and disposal from the from the Torrington Transfer Station were paid out of the CSWS Operating Budget as amended by MIRA's Board of Directors at recent meetings, and were offset by an increase in revenue from the delivery of MSW into the Watertown Transfer Station.

Table 1 shows the purchase requisitions associated with this exchange of municipal solid waste disposal capacity in February and March 2019 which require board approval in accordance with Section 5.11 of MIRA's Procurement Policies and Procedures. The requisition amounts are based on invoices received as of April 15, 2019. Board approval of these expenditures will be reconciled to expenditure information in MIRA's purchasing system.

Table 1: Tons delivered from Torrington Transfer Station to destination location other than CSWS RRF

Service Period	Destination Location	Price per ton (T&D from Torrington)	Gross Cost to MIRA (not including offsetting revenue)
2/5/19 – 2/8/19	Babylon Recycling	\$76.00	\$21,175.12
2/1/19 – 2/28/19	Covanta, Agawam MA, Covanta Pittsfield MA	\$76.00	\$240,096.16
3/1/19 – 3/11/19	Covanta, Agawam MA, Covanta Pittsfield MA	\$76.00	\$35,308.84
Total			\$296,480.12

TAB 7

BOARD RESOLUTION REGARDING ADDITIONAL PROJECTED LEGAL EXPENDITURES

WHEREAS, MIRA has entered into Legal Service Agreements with various law firms to perform legal services; and

WHEREAS, MIRA obtained Board authorization to pay FY '19 projected legal fees and expenses from appropriate budgets and reserves in June, 2018; and

WHEREAS, MIRA has incurred greater than anticipated legal expenses in connection with matters related to the November 2018 CSWS catastrophic turbine failure, CSWS recycling contractor's disputed obligations, and 2019 proposed legislation;

NOW THEREFORE, it is RESOLVED: That the following additional amount be authorized for payment of legal fees and costs to be incurred through June 30, 2019:

Firm:

Amount:

Halloran Sage

\$75,000