

# Materials Innovation and Recycling Authority

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Materials Innovation and Recycling Authority

Regular Board of Directors

## **Supplemental Information**

May 26, 2016

### I. Finance

Informational Reports (Period ending March 31, 2016 (Attachment A).

CSWS Financials	MIRA Cash Flow
CSWS Electricity	CSWS Improvement Fund
CSWS Solid Waste Summary	Southeast Project
CSWS Recycling Summaries	Authority Budget
Property Division Financials	

### II. Summary of Project Activities

1. An update is provided on each project's monthly operations for the period ending April 30, 2016 (Attachment B).
2. An update is provided on waste deliveries to all the projects for the period ending April 30, 2016 (Attachment C).

### III. Communications

1. Legal Expenditure Report FY'16 (Attachment D).
2. March/April 2016 Education Center Report (Attachment E).
3. Final Activity Report for the MIRA Connecticut Solid Waste System Facility (Attachment F).

## **TAB A**

**TAB B**

# MATERIALS INNOVATION AND RECYCLING AUTHORITY

## April 2016 Monthly Operational Summary

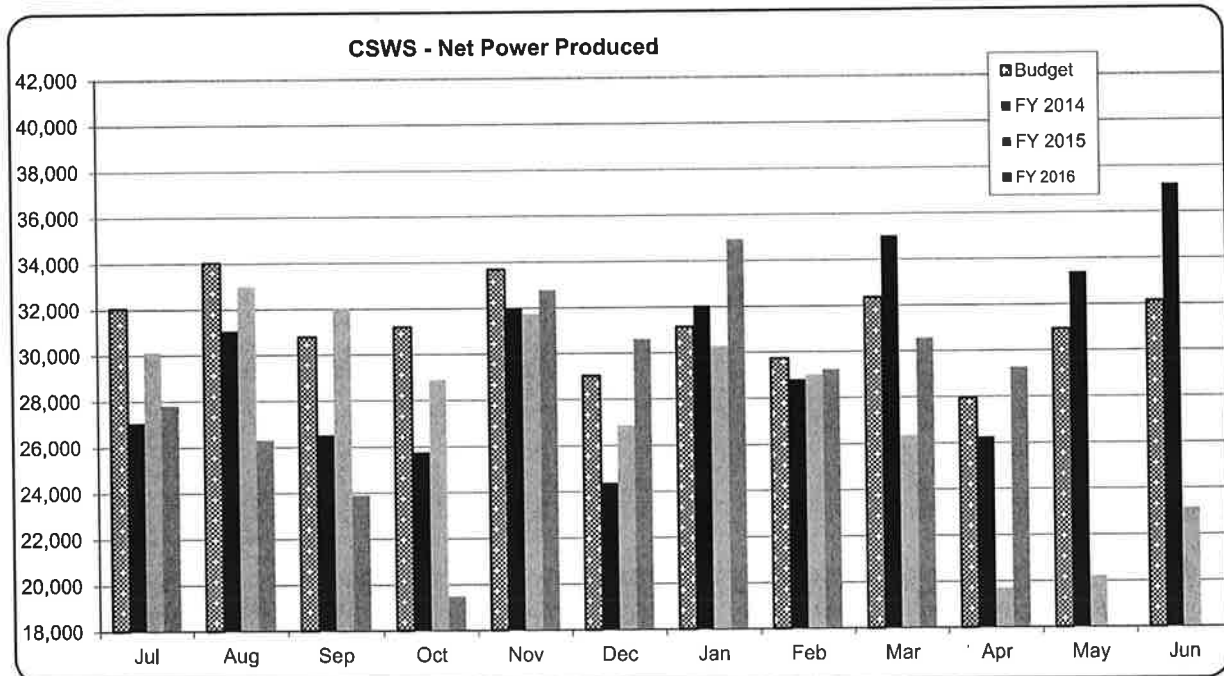
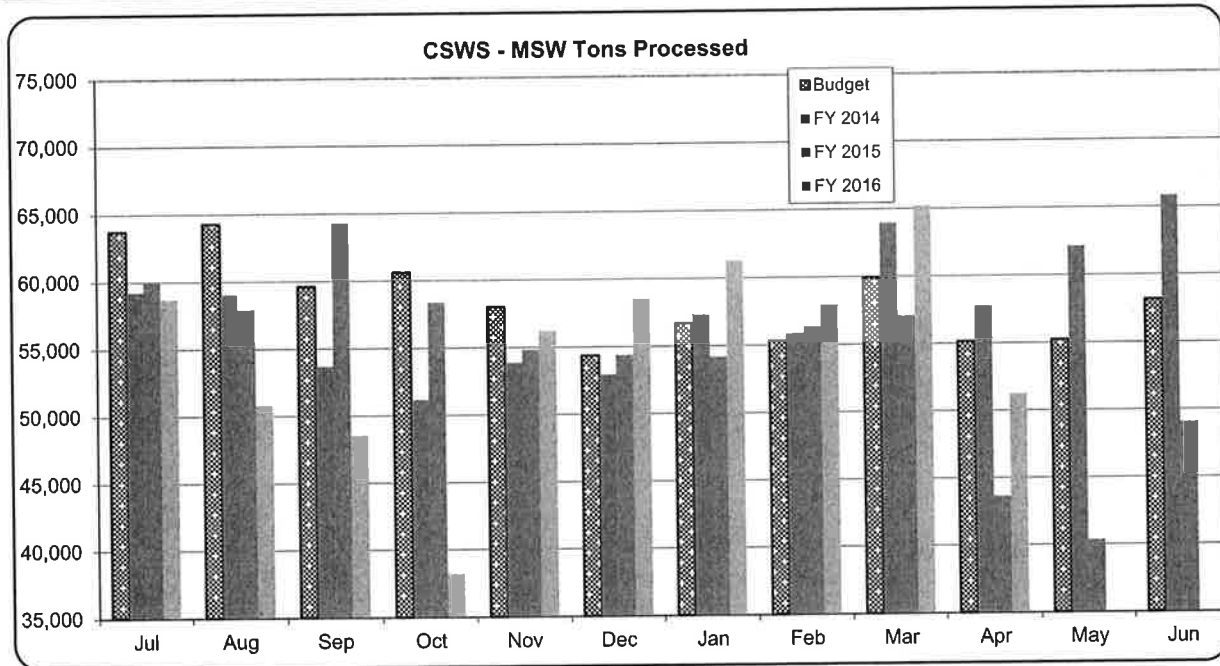
This report provides information on the operations of the two waste-to energy projects for the period ending April 30, 2016. Attached are individual, detailed reports on each of the two projects. The following table provides a summary of key operating parameters for each of the projects and the South Meadow Station's jet turbines.

Project/ Item	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Change	2015	2016	Change	Apr 15	Apr 16	Change
<b>CSWS</b>									
Tons MSW Processed	692,809	650,642	(6.1%)	561,201	546,687	(2.6%)	43,652	51,221	17.3%
Steam (klbs)	4,357,895	4,125,108	(5.3%)	3,560,940	3,579,331	0.5%	248,191	366,390	47.6%
(% MCR)	71.8%	68.0%		70.4%	70.6%		49.7%	73.4%	
Power Net MWhr)	359,579	331,356	(7.8%)	288,021	284,928	(1.1%)	19,704	29,280	48.6%
<b>Southeast</b>									
Tons MSW Processed	262,761	261,748	(0.4%)	217,590	228,473	5.0%	24,407	23,473	(3.8%)
Steam (klbs)	1,546,830	1,605,649	3.8%	1,214,639	1,271,389	4.7%	130,249	135,114	3.7%
(% MCR)	96.3%	99.9%		90.8%	95.0%		98.6%	102.3%	
Power Net MWhr)	132,757	124,778	(6.0%)	101,665	112,375	10.5%	11,686	11,974	2.5%
<b>South Meadow Jets</b>									
Net MWH	3,706	1,837	(50.4%)	1,052	1,613	53.4%	0	99	-

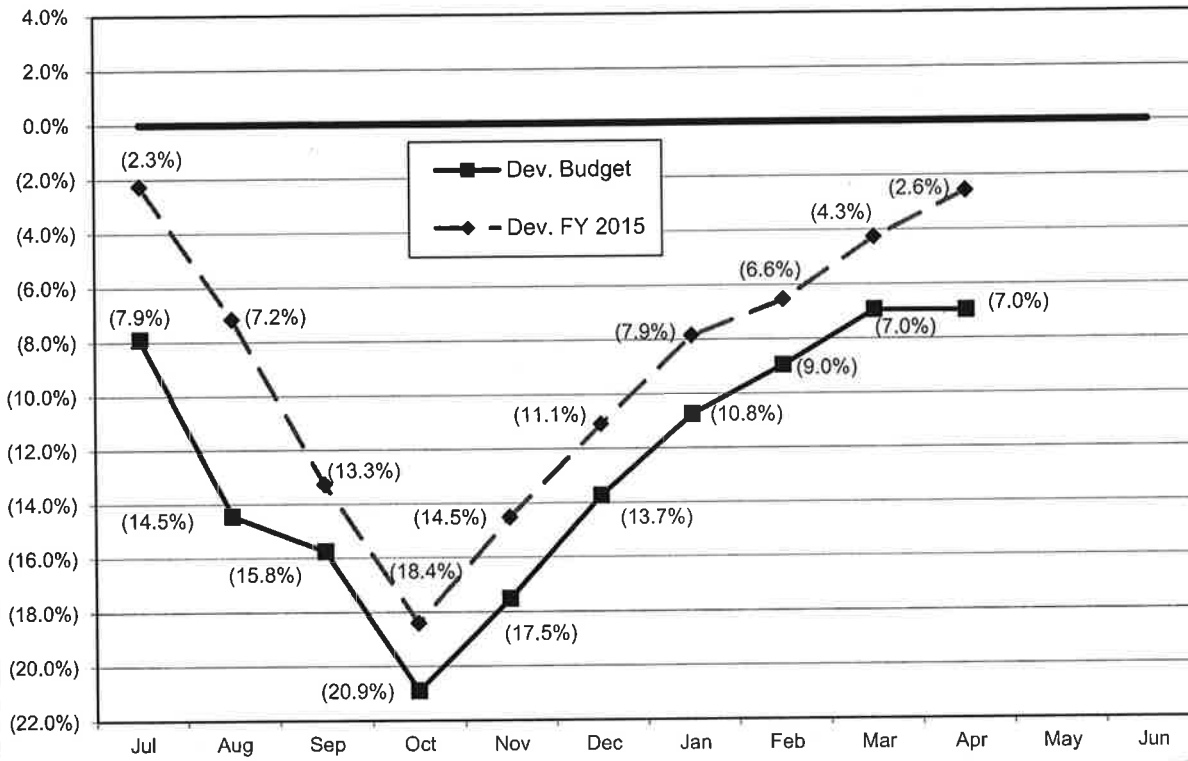
# CSWS

## April 2016 Monthly Operational Summary

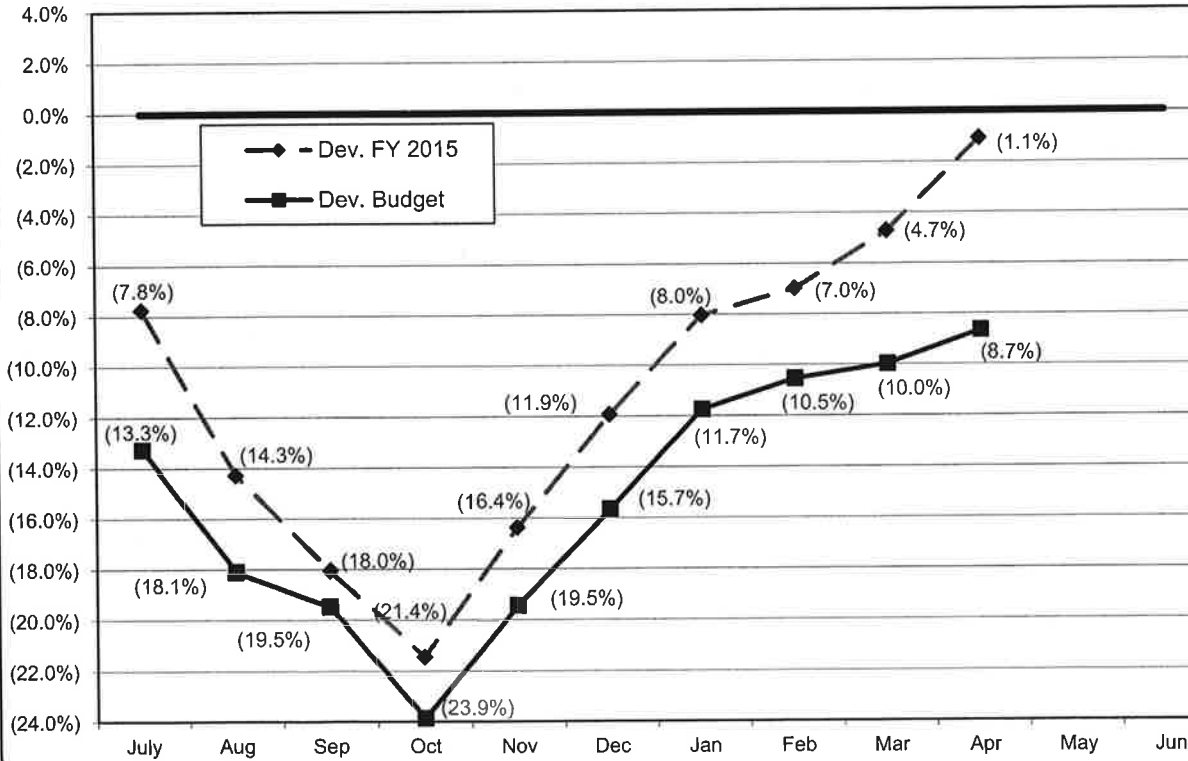
Item	Fiscal Year-To-Date			Monthly		
	2015	2016	Change	Apr 15	Apr 16	Change
Tons MSW Processed	561,201	546,687	(2.6%)	43,652	51,221	17.3%
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(% MCR)	70.4%	70.6%		49.7%	73.4%	
Power Net MWhr)	288,021	284,928	(1.1%)	19,704	29,280	48.6%



CSWS - Tons Processed - Deviation from Budget and Prior Year



Power Sold - Deviation from Budget and Prior Year



## Unit Capacity Factors

Month	Boiler 11	Boiler 12	Boiler 13
Jul 15	70%	74%	62%
Aug 15	71%	71%	57%
Sep 15	66%	68%	54%
Oct 15	83%	51%	15%
Nov 15	73%	73%	92%
Dec 15	75%	59%	83%
Jan 16	77%	84%	89%
Feb 16	72%	76%	80%
Mar 16	74%	83%	67%
Apr 16	58%	78%	85%
May 16			
Jun 16			

## Unscheduled Downtime

Date Began	Date Ended	Boiler	Duration (Hrs.)	Reason
07/02/15	07/05/15	13	79.27	Grate chain repair, Superheater leak
07/10/15	07/11/15	12	26.97	Air heater fouled
07/17/15	07/19/15	13	40.06	Clinker jam on grate
07/19/15	07/22/15	13	75.31	Superheater and Waterwall leak
07/22/15	07/23/15	13	15.64	Failed gasket on blow down tank
07/24/15	07/24/15	13	7.38	Only one turbine on-line
07/24/15	07/24/15	12	9.65	Only one turbine on-line
07/29/15	07/31/15	12	38.95	Clinker jam on grate
07/30/15	07/30/15	13	7.80	Fuel cut out relay failed
08/07/15	08/09/15	13	58.55	Plugged distribution spout, tube leak
08/11/15	08/14/15	12	72.04	Broken grate chain
08/15/15	08/17/15	13	70.83	Tube leak
08/21/15	08/25/15	13	84.15	Tube leak
08/31/15	08/31/15	11	24.00	Screw repair and tube leak
09/01/15	09/03/15	11	50.83	Screw repair and tube leak
09/02/15	09/05/15	13	68.05	Tube leak
09/13/15	09/16/15	13	71.18	Tube leak
09/20/15	09/23/15	13	79.06	Tube leak
09/21/15	09/22/15	11	29.07	Tube leak
09/21/15	09/22/15	12	44.73	Tube leak
10/04/15	10/08/15	13	96.36	Tube leak
10/05/15	10/06/15	12	33.97	Tube leak
10/11/15	10/12/15	13	46.94	Tube leak
10/13/15	10/14/15	11	26.43	Tube leak
10/19/15	10/30/15	12	264.60	ID Fan failure
10/28/15	10/31/15	13	96.00	Scheduled outage, air heater overall not complete
11/01/15	11/03/15	13	48.21	Scheduled outage, air heater overall not complete
11/02/15	11/03/15	11	43.95	SSC derail
11/13/15	11/14/15	11	23.58	Airheater plug clean
12/03/15	12/03/15	11	3.48	WPF lost control power to RDF feed
12/03/15	12/03/15	13	8.93	WPF lost control power to RDF feed, ID fan would not restart
12/09/15	12/09/15	11	16.05	Bottom ash failure/PLC hung up overloading SSC
01/13/16	01/14/16	13	30.05	Pollution control system atomizer OOC
01/17/16	01/18/16	12	17.00	Large clinker
01/18/16	01/19/16	13	24.04	Instrument air system fault

### Unscheduled Downtime Continued

Date Began	Date Ended	Boiler	Duration (Hrs.)	Reason
02/05/16	02/09/16	13	83.34	Scrubber pluggage
02/07/16	02/07/16	12	0.39	FD Fan trip
02/15/16	02/16/16	13	7.83	Low Drum Relay
02/18/16	02/20/16	11	62.17	Waterwall leak
02/26/16	02/28/16	11	35.97	Superheater and Waterwall leak
03/09/16	03/09/16	12	4.32	Furnace Draft Interlock
03/11/16	03/11/16	12	1.83	PLC Comm Error
03/15/16	03/15/16	12	1.65	Pan Air Lines
03/23/16	03/24/16	11	36.00	Change out FW valve #11 Boiler
03/23/16	03/24/16	12	22.68	Change out FW valve #11 Boiler
04/01/16	04/03/16	11	53.70	Feedwater control valve gasket failure.
04/14/16	04/15/16	11	23.15	Waterwall leak
04/19/16	04/20/16	13	36.76	Waterwall leak
04/24/16	04/24/16	13	0.33	Spout plug
04/28/16	04/30/16	13	41.68	ID fan isolation damper repair

### Scheduled Downtime

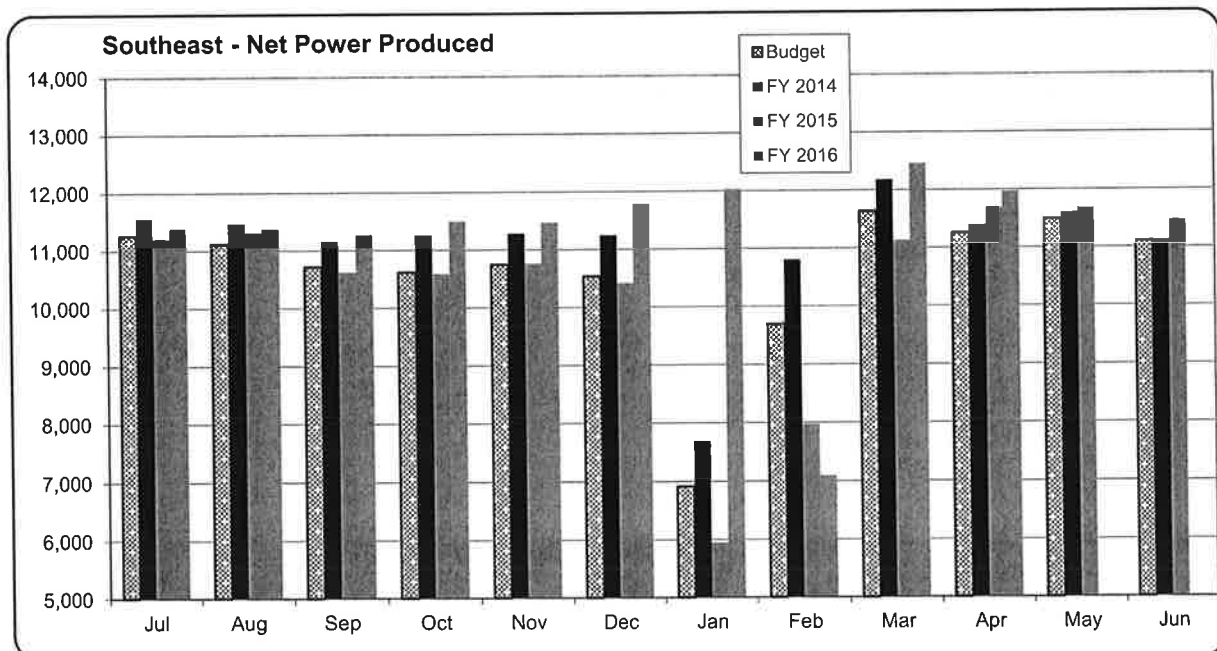
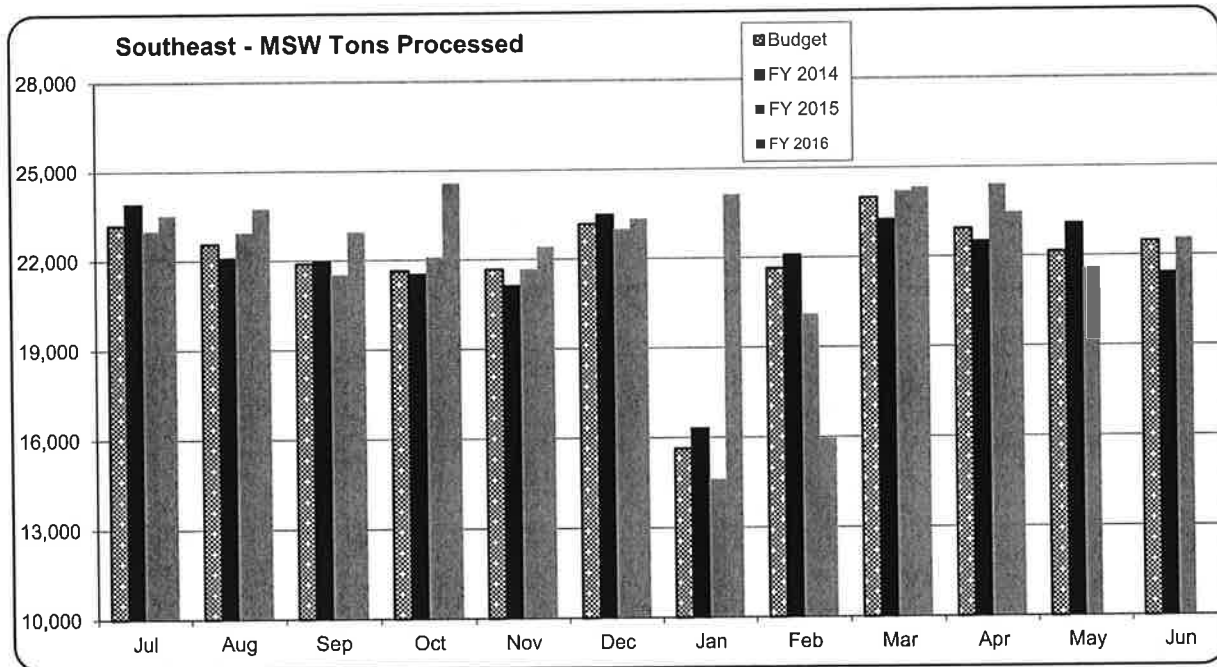
Date Began	Date Ended	Boiler	Duration (Hrs.)	Work Performed
07/13/15	07/16/15	11	71.67	Cleaning outage
08/10/15	08/13/15	13	78.38	Cleaning outage
09/13/15	09/17/15	12	62.17	Cleaning outage
09/28/15	09/30/15	11	68.96	Cleaning outage
10/01/15	10/01/15	11	2.75	Cleaning outage
10/13/15	10/27/15	13	360.00	Cleaning outage
12/01/15	12/12/15	12	264.15	Cleaning outage
01/07/16	01/10/16	11	95.80	Cleaning outage
03/16/16	03/18/16	11	62.30	Cleaning outage
03/22/16	03/27/16	13	121.32	Cleaning outage
04/11/16	04/12/16	12	47.16	Cleaning outage
04/25/16	04/30/16	11	143.92	Cleaning outage



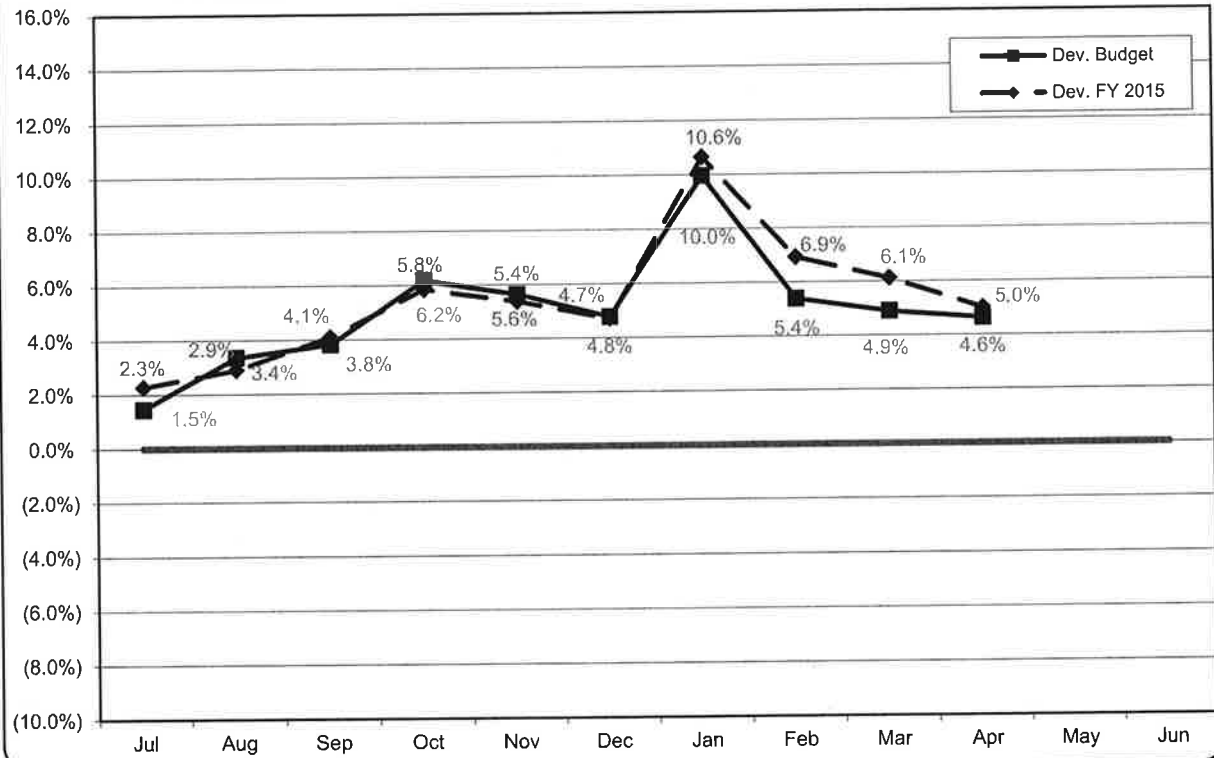
# SOUTHEAST (PRESTON) PROJECT

## April 2016 Monthly Operational Summary

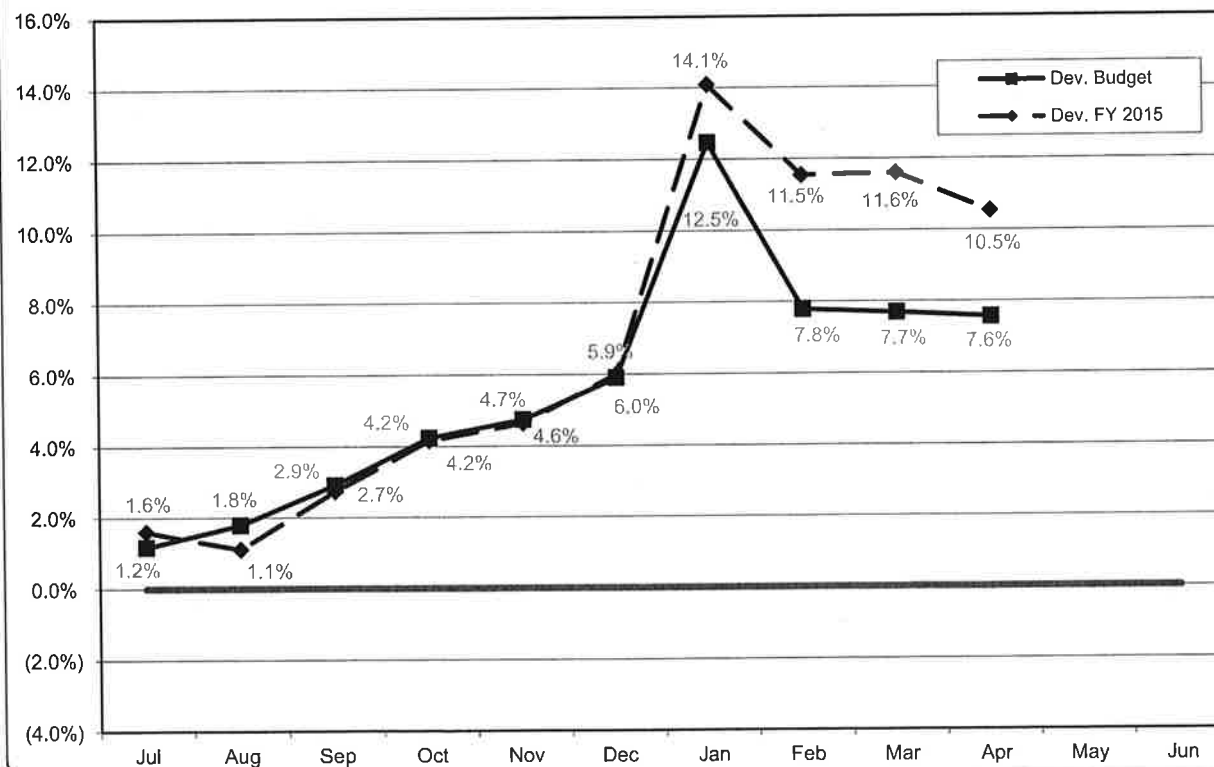
Item	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Change	2015	2016	Change	Apr 15	Apr 16	Change
Tons MSW Processed	262,761	261,748	(0.4%)	217,590	228,473	5.0%	24,407	23,473	(3.8%)
Steam (klbs)	1,546,830	1,605,649	3.8%	1,214,639	1,271,389	4.7%	130,249	135,114	3.7%
(% MCR)	96.3%	99.9%		90.8%	95.0%		98.6%	102.3%	
Power Net MWhr)	132,757	124,778	(6.0%)	101,665	112,375	10.5%	11,686	11,974	2.5%



**Southeast - Tons Processed - Deviation from Budget and Prior Year**



**Southeast - Power Sold - Deviation from Budget and Prior Year**



### Unit Capacity Factors

Month	Boiler 1	Boiler 2
Jul 15	98%	100%
Aug 15	103%	96%
Sep 15	101%	101%
Oct 15	100%	98%
Nov 15	95%	103%
Dec 15	96%	101%
Jan 16	56%	101%
Feb 16	65%	68%
Mar 16	104%	101%
Apr 16	103%	101%
May 16		
Jun 16		

### Unscheduled Downtime

Date Began	Date Ended	Boiler	Duration (Hrs.)	Reason
07/22/15	07/22/15	2	1.23	Deslag
07/28/15	07/29/15	1	32.73	Superheater failure
07/31/15	07/31/15	2	7.23	Feed chute repair
08/10/15	08/11/15	2	41.35	Tube Leak
09/04/15	09/04/15	1	6.20	Ash extractor jam
09/21/15	09/21/15	1	2.77	Deslag
09/25/15	09/25/15	2	3.50	Deslag
09/29/15	09/29/15	2	0.67	Deslag
10/11/15	10/11/15	1	1.25	Deslag
10/17/15	10/17/15	2	1.10	Deslag
10/19/15	10/21/15	2	32.60	ID Fan bearing failure and tube leak
10/24/15	10/24/15	1	15.27	ID Fan bearing failure
11/03/15	11/03/15	1	1.45	Deslag
11/04/15	11/06/15	1	52.08	Tube Leak
11/09/15	11/09/15	2	1.13	Deslag
11/19/15	11/19/15	2	1.20	Deslag
12/05/15	12/05/15	1	1.37	Deslag
12/09/15	12/09/15	2	3.28	Deslag
12/21/15	12/22/15	1	43.28	Tube Leak
01/08/16	01/09/16	2	3.37	Deslag
02/03/16	02/03/16	2	1.50	Deslag
02/16/16	02/16/16	1	1.98	ID Fan Trip
03/13/16	03/14/16	2	7.65	Failed Primary Air Fan bearing
04/23/16	04/23/16	2	3.12	Deslag

### Scheduled Downtime

Date Began	Date Ended	Boiler	Duration (Hrs.)	Work Performed
02/03/16	02/13/16	1	245.04	Cleaning outage
02/09/16	02/17/16	2	201.60	Cleaning outage

**SOUTH MEADOWS JETS**  
**April 2016 Monthly Operational Summary**

Date	Net Generation (MWH)	Comment
07/20/15	6.16	Summer CCA testing
07/28/15	106.25	Summer CCA testing
07/29/15	50.33	Summer CCA testing
08/06/15	150.23	Dispatched by ISO-NE
08/15/15	45.78	Dispatched by ISO-NE
08/24/15	31.82	Dispatched by ISO-NE
09/04/15	127.33	Dispatched by ISO-NE
09/07/15	121.01	Dispatched by ISO-NE
09/08/15	97.03	Dispatched by ISO-NE
09/09/15	257.99	Dispatched by ISO-NE
09/17/15	42.75	Dispatched by ISO-NE
10/08/15	47.79	Dispatched by ISO-NE
11/10/15	45.97	Dispatched by ISO-NE
11/11/15	121.22	Dispatched by ISO-NE
12/29/15	56.34	Dispatched by ISO-NE
04/12/16	98.59	VARs testing

**TAB C**

# MATERIALS INNOVATION AND RECYCLING AUTHORITY

## April 2016 Monthly Customer MSW and Recyclables Deliveries

This report provides information on deliveries of materials for the three MIRA projects/divisions for the period ending April 30, 2016. Attached are individual, detailed reports on each of the projects/divisions. The following table provides a summary of materials deliveries to each project/division.

### Monthly Customer Delivery Report

Project/Contract	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
<b>CSWS MSW</b>									
Tier 1	349,915	337,844	(3%)	286,432	286,213	(0%)	30,456	27,078	(11%)
Tier 2, 3 & 4	28,259	40,371	43%	12,682	12,861	1%	1,402	2,408	72%
Hauler Contract	256,371	255,136	(0%)	224,247	210,559	(6%)	15,357	19,672	28%
Contract	4,367	5,531	27%	4,531	5,153	14%	491	534	9%
In-State Spot	47,794	24,533	(49%)	24,533	15,432	(37%)	0	1,490	-
Out-of-State Spot	1,506	1,669	11%	1,669	477	(71%)	0	0	-
<b>MSW TOTAL</b>	<b>688,212</b>	<b>665,084</b>	<b>(3%)</b>	<b>554,094</b>	<b>530,695</b>	<b>(4%)</b>	<b>47,706</b>	<b>51,183</b>	<b>7%</b>
<b>CSWS Recyclables</b>									
Tier 1	41,805	43,193	3%	35,697	37,079	4%	3,757	3,436	(9%)
Tier 3 & 4	442	561	27%	463	513	11%	49	329	565%
Hauler Contract	11,881	8,033	(32%)	6,543	8,050	23%	716	692	(3%)
Contractor Sourced	8,441	12,506	48%	10,313	12,460	21%	1,055	1,255	19%
In-State Spot	823	0	(100%)	0	0	-	0	0	-
Out-of-State Spot	822	0	(100%)	0	0	-	0	0	-
<b>RECYC. TOTAL</b>	<b>64,213</b>	<b>64,293</b>	<b>0%</b>	<b>53,015</b>	<b>58,102</b>	<b>10%</b>	<b>5,578</b>	<b>5,712</b>	<b>2%</b>
<b>Southeast MSW</b>									
Member Towns	135,911	129,442	(5%)	106,208	110,417	4%	11,283	10,747	(5%)
In-State Spot	1,929	9,266	380%	2,283	5,344	134%	875	156	(82%)
Company Spot	158,214	122,971	(22%)	109,713	112,722	3%	13,477	12,419	(8%)
<b>MSW TOTAL</b>	<b>296,054</b>	<b>261,678</b>	<b>(12%)</b>	<b>218,204</b>	<b>228,483</b>	<b>5%</b>	<b>25,634</b>	<b>23,322</b>	<b>(9%)</b>

**Connecticut Solid Waste System**  
**April 2016 Monthly Customer MSW Deliveries**  
**CSWS Tier 1 Participating Municipality MSW**

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Avon	11,038	11,120	1%	9,110	9,278	2%	989	821	(17%)
Beacon Falls	3,233	3,024	(6%)	2,563	2,141	(16%)	270	244	(10%)
Bethlehem	1,519	1,551	2%	1,282	1,263	(2%)	127	110	(13%)
Bloomfield	16,497	14,795	(10%)	11,857	13,143	11%	1,171	1,090	(7%)
Canaan	468	430	(8%)	356	364	2%	42	32	(25%)
Canton	4,462	4,481	0%	3,675	3,829	4%	367	378	3%
Clinton	5,365	4,790	(11%)	3,969	4,037	2%	466	367	(21%)
Colebrook	604	622	3%	510	498	(2%)	50	42	(16%)
Cornwall	495	493	(0%)	411	417	2%	48	33	(31%)
Deep River	3,882	3,639	(6%)	2,964	2,921	(1%)	298	253	(15%)
Durham/Middlefield	3,611	5,751	59%	4,747	5,092	7%	509	498	(2%)
East Granby	2,968	3,129	5%	2,626	2,361	(10%)	312	219	(30%)
East Hampton	6,074	6,122	1%	5,047	5,004	(1%)	544	502	(8%)
Ellington	5,382	5,253	(2%)	4,352	4,215	(3%)	477	406	(15%)
Essex	3,756	3,062	(18%)	2,576	2,481	(4%)	255	195	(23%)
Farmington	15,179	14,329	(6%)	11,860	12,043	2%	1,194	1,206	1%
Glastonbury	18,980	18,836	(1%)	15,548	15,910	2%	1,598	1,495	(6%)
Goshen	1,318	1,307	(1%)	1,078	1,105	3%	115	92	(21%)
Granby	5,596	5,413	(3%)	4,580	4,020	(12%)	400	344	(14%)
Haddam	2,953	3,193	8%	2,620	2,796	7%	310	284	(8%)
Hartford	88,690	85,433	(4%)	70,521	69,847	(1%)	7,699	6,843	(11%)
Harwinton	2,015	1,904	(6%)	1,571	1,678	7%	175	146	(17%)
Killingworth	2,091	1,912	(9%)	1,575	1,593	1%	170	164	(3%)
Litchfield*	5,396	5,201	(4%)	4,277	3,997	(7%)	426	372	(13%)
Lyme	760	751	(1%)	620	620	0%	60	54	(10%)
Marlborough	2,622	2,431	(7%)	1,984	1,901	(4%)	189	164	(13%)
Middlebury	2,548	2,611	2%	2,218	1,953	(12%)	201	193	(4%)
Naugatuck	15,259	14,993	(2%)	12,336	12,381	0%	1,297	1,259	(3%)
Norfolk	796	762	(4%)	621	602	(3%)	60	45	(25%)
North Canaan	2,412	2,241	(7%)	1,830	1,877	3%	188	159	(15%)
Old Lyme	3,516	3,275	(7%)	2,657	2,669	0%	262	220	(16%)
Old Saybrook	9,397	9,744	4%	8,023	8,166	2%	777	762	(2%)
Oxford	7,384	7,730	5%	6,262	5,489	(12%)	630	300	(52%)
Portland	3,842	3,619	(6%)	3,003	2,933	(2%)	337	280	(17%)
Rocky Hill	11,981	11,671	(3%)	9,578	9,504	(1%)	1,043	985	(6%)
Roxbury	740	710	(4%)	592	584	(1%)	62	49	(21%)
RRDD#1	11,366	10,878	(4%)	8,814	9,033	2%	960	832	(13%)
Salisbury/Sharon	3,231	3,224	(0%)	2,631	2,723	4%	297	258	(13%)
Simsbury	14,530	14,348	(1%)	11,866	11,364	(4%)	1,283	1,062	(17%)
Torrington	24,219	24,005	(1%)	19,780	19,675	(1%)	2,145	1,861	(13%)
Watertown	10,609	10,816	2%	8,882	9,225	4%	1,007	917	(9%)
Wethersfield	14,032	14,025	(0%)	11,285	11,711	4%	1,277	1,201	(6%)
Woodbury	4,497	4,624	3%	3,775	3,770	(0%)	370	339	(8%)
<b>TOTAL TIER 1 PARTICIPATING MUNICIPALITIES</b>	<b>349,915</b>	<b>343,044</b>	<b>(2%)</b>	<b>286,432</b>	<b>286,213</b>	<b>(0%)</b>	<b>30,456</b>	<b>27,078</b>	<b>(11%)</b>

\*Litchfield became a Tier 1 Municipality 7/1/2015, FY14 & FY15 tonnages reflect Tier 2 deliveries.

CSWS Tier 2 Participating Municipality MSW									
Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Litchfield*	5,396	5,201	(4%)						
Manchester	13,002	12,955	(0%)	10,621	10,869	2%	1,174	1,051	(11%)
South Windsor*	7,338	7,267	(1%)						
<b>TOTAL TIER 2 PARTICIPATING MUNICIPALITIES</b>	<b>25,736</b>	<b>25,423</b>	<b>(1%)</b>	<b>10,621</b>	<b>10,869</b>	<b>2%</b>	<b>1,174</b>	<b>1,051</b>	<b>(11%)</b>

\*No longer Tier 2 Municipalities, only historical information is provided.

CSWS Tier 3 Participating Municipality MSW									
Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Chester	18	19	4%	16	11	(32%)	2	1	(58%)
Thomaston	2,506	2,462	(2%)	2,045	1,981	(3%)	226	192	(15%)
<b>TOTAL TIER 3 PARTICIPATING MUNICIPALITIES</b>	<b>2,524</b>	<b>2,481</b>	<b>(2%)</b>	<b>2,062</b>	<b>1,992</b>	<b>(3%)</b>	<b>228</b>	<b>193</b>	<b>(15%)</b>

CSWS Tier 4 Participating Municipality MSW									
Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
East Hartford			-		6,777	-	0	1,165	-
<b>TOTAL TIER 4 PARTICIPATING MUNICIPALITIES</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>0</b>	<b>6,777</b>	<b>-</b>	<b>0</b>	<b>1,165</b>	<b>-</b>

CSWS Non-Processible MSW									
Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
East Hartford			-		470	-	0	130	-
Farmington	254	484	90%	479	319	(33%)	166	126	(24%)
Hartford	47	48	1%	41	40	(2%)	0	1	-
RRDD#1	127	122	(4%)	97	105	7%	12	11	(11%)
Wethersfield	40	46	14%	34	39	14%	5	3	(23%)
<b>TOTAL NON-PROCESSIBLE MSW</b>	<b>468</b>	<b>700</b>	<b>49%</b>	<b>651</b>	<b>974</b>	<b>50%</b>	<b>183</b>	<b>271</b>	<b>48%</b>

CSWS MSW Received under Hauler Contract*									
	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
<b>TOTAL HAULER CONTRACT</b>	<b>256,371</b>	<b>255,136</b>	<b>(0%)</b>	<b>224,247</b>	<b>210,559</b>	<b>(6%)</b>	<b>15,357</b>	<b>19,672</b>	<b>28%</b>

\*Includes ICW



CSWS Contract Deliveries									
	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
TOTAL CONTRACT TONS	4,367	5,531	27%	4,531	5,153	14%	491	534	9%

CSWS In-State Spot MSW									
Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
TOTAL IN-STATE SPOT	47,794	24,533	(49%)	24,533	15,432	(37%)	0	1,490	-

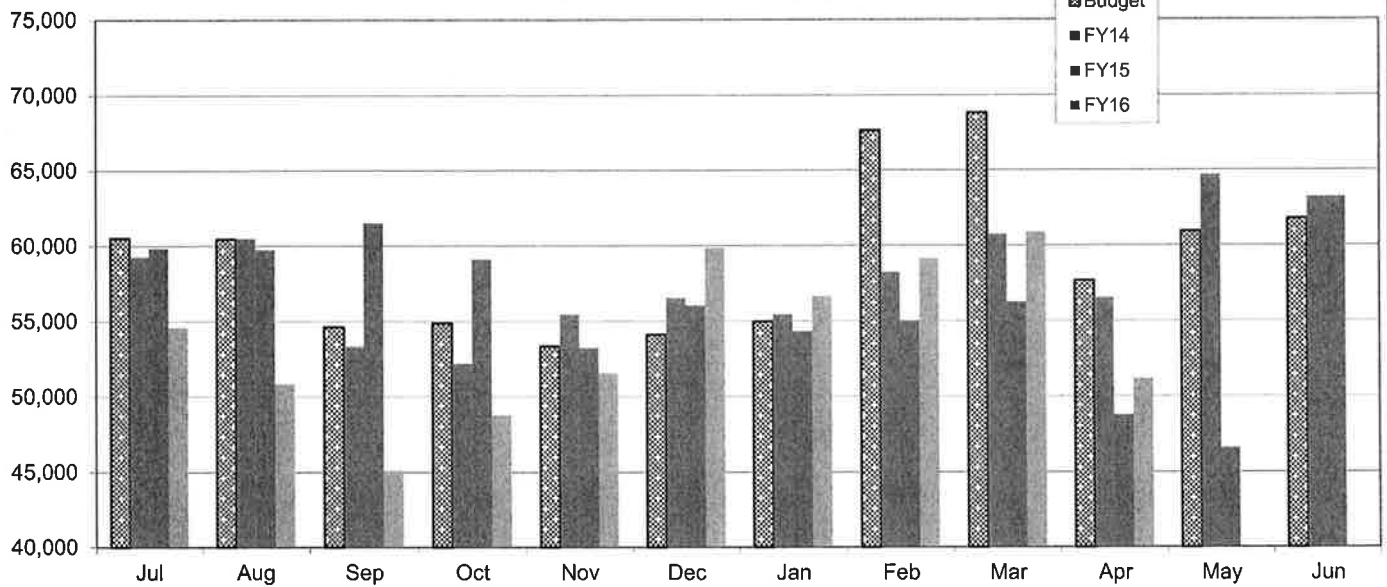
CSWS Out-Of-State Spot MSW									
State	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
TOTAL OUT-OF- STATE SPOT	1,506	1,669	11%	1,669	477	(71%)	0	0	-

CSWS Total MSW Deliveries									
Source	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Tier 1 Contracts	349,915	343,044	(2%)	286,432	286,213	(0%)	30,456	27,078	(11%)
Tier 2 Contracts	25,736	25,423	(1%)	10,621	10,869	2%	1,174	1,051	(11%)
Tier 3 Contracts	2,524	2,481	(2%)	2,062	1,992	(3%)	228	193	(15%)
Tier 4 Contracts	0	0	-	0	6,777	-	0	1,165	-
Non-Processible MSW	468	700	49%	651	974	50%	183	271	48%
Hauler Contracts	256,371	255,136	(0%)	224,247	210,559	(6%)	15,357	19,672	28%
Contract Deliveries	4,367	5,531	27%	4,531	5,153	14%	491	534	9%
In State Spot	47,794	24,533	(49%)	24,533	15,432	(37%)	0	1,490	-
Out-of-State Spot	1,506	1,669	11%	1,669	477	(71%)	0	0	-
TOTAL TONNAGE	688,680	658,517	(4%)	554,745	538,446	(3%)	47,888	51,454	7%

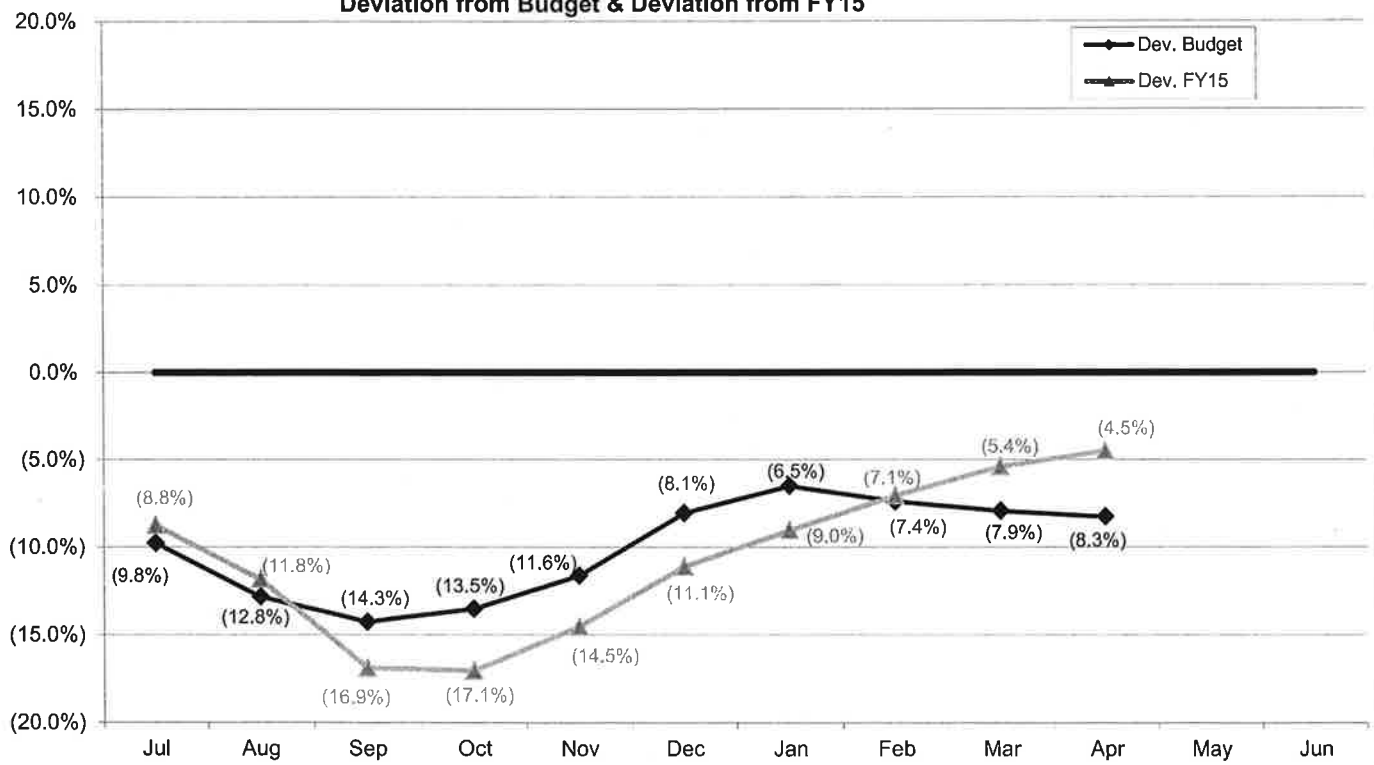
CSWS MSW Diversions And Exports									
Type	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
TS Diversions	0	0	-	0	0	-	0	0	-
TS Exports	0	7,697	-	1,532	3,612	136%	924	0	(100%)
WPF Diversions	0	0	-	0	0	-	0	0	-
WPF Exports	0	2,061	-	850	1,334	57%	323	0	(100%)
TOTAL TONNAGE	0	9,758	-	2,382	4,947	108%	1,247	0	(100%)

## CSWS MSW Trends

CSWS Monthly Member MSW Tonnage



CSWS Cumulative Member MSW Tonnage -  
Deviation from Budget & Deviation from FY15



**Connecticut Solid Waste System**  
**April 2016 Monthly Customer Recyclables Deliveries**  
**CSWS Tier 1 Participating Municipality Recycling**

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Avon	2,036	2,096	3%	1,708	1,746	2%	185	168	(9%)
Beacon Falls	335	321	(4%)	265	311	17%	30	29	(5%)
Bethlehem	336	330	(2%)	279	287	3%	28	23	(18%)
Bloomfield	1,813	1,717	(5%)	1,427	1,430	0%	141	134	(5%)
Canaan	103	90	(13%)	72	76	5%	7	6	(11%)
Canton	979	971	(1%)	808	820	1%	95	76	(21%)
Clinton	998	1,148	15%	944	985	4%	91	97	6%
Colebrook	190	188	(1%)	157	147	(6%)	18	15	(17%)
Cornwall	145	147	2%	128	126	(2%)	14	6	(56%)
Deep River	429	425	(1%)	357	433	21%	35	44	25%
East Granby	482	442	(8%)	378	390	3%	39	30	(22%)
East Hampton	919	948	3%	786	846	8%	89	89	(0%)
Ellington	1,400	1,415	1%	1,167	1,169	0%	112	106	(6%)
Essex	718	658	(8%)	549	607	10%	62	52	(17%)
Farmington	2,444	2,281	(7%)	1,886	2,232	18%	216	218	1%
Glastonbury	3,617	3,687	2%	3,078	3,051	(1%)	313	280	(11%)
Goshen	315	320	2%	268	273	2%	25	22	(9%)
Granby	1,484	1,461	(2%)	1,215	1,228	1%	137	117	(15%)
Haddam	586	645	10%	530	565	7%	55	51	(7%)
Hartford	4,962	5,373	8%	4,376	4,597	5%	499	443	(11%)
Harwinton	530	515	(3%)	430	416	(3%)	44	38	(12%)
Killingworth	527	464	(12%)	381	384	1%	47	34	(27%)
Litchfield	0	0	-	0	672	-	0	69	-
Marlborough	713	684	(4%)	558	557	(0%)	56	45	(19%)
Middlebury	855	873	2%	725	689	(5%)	77	61	(21%)
Norfolk	168	168	0%	140	136	(3%)	15	13	(18%)
North Canaan	206	231	12%	188	193	3%	21	19	(10%)
Old Saybrook	1,119	1,105	(1%)	903	875	(3%)	87	78	(10%)
Oxford	794	780	(2%)	658	552	(16%)	69	49	(29%)
Portland	571	610	7%	516	473	(8%)	44	43	(3%)
Rocky Hill	1,637	1,656	1%	1,348	1,400	4%	143	130	(9%)
Roxbury	203	184	(10%)	158	153	(3%)	18	15	(14%)
RRDD#1	1,798	1,799	0%	1,500	1,504	0%	150	122	(19%)
Salisbury-Sharon	0	1,079	-	889	873	(2%)	80	87	10%
Torrington	2,942	3,004	2%	2,468	2,455	(1%)	271	220	(19%)
Watertown	1,827	1,758	(4%)	1,448	1,435	(1%)	140	132	(6%)
Wethersfield	2,804	2,710	(3%)	2,243	2,300	3%	239	219	(8%)
Woodbury	818	901	10%	757	690	(9%)	66	58	(12%)
<b>TOTAL TIER 1 MUNICIPALITIES</b>	<b>41,805</b>	<b>43,193</b>	<b>3%</b>	<b>35,697</b>	<b>37,079</b>	<b>4%</b>	<b>3,757</b>	<b>3,436</b>	<b>(9%)</b>

### CSWS Tier 3 Participating Municipality Recycling

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
Thomaston	442	561	27%	463	513	11%	49	53	8%
TOTAL TIER 3 MUNICIPALITIES	442	561	27%	463	513	11%	49	53	8%

### CSWS Tier 4 Participating Municipality Recycling

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
East Hartford	0	0	-	0	1,733	-	0	276	-
TOTAL TIER 4 MUNICIPALITIES	0	0	-	0	1,733	-	0	276	-

### CSWS Hauler Contract Recycling

	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
TOTAL HAULER CONTRACT	11,881	8,033	(32%)	6,543	8,050	23%	716	692	(3%)

### CSWS Contractor Sourced Recycling

	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
TOTAL CONTRACTOR SOURCED	8,441	12,506	48%	10,313	12,460	21%	1,055	1,255	19%

### CSWS In-State Spot Recycling

State	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
TOTAL IN-STATE SPOT	823	0	(100%)	0	0	-	0	0	-

### CSWS Out-Of-State Spot Recycling

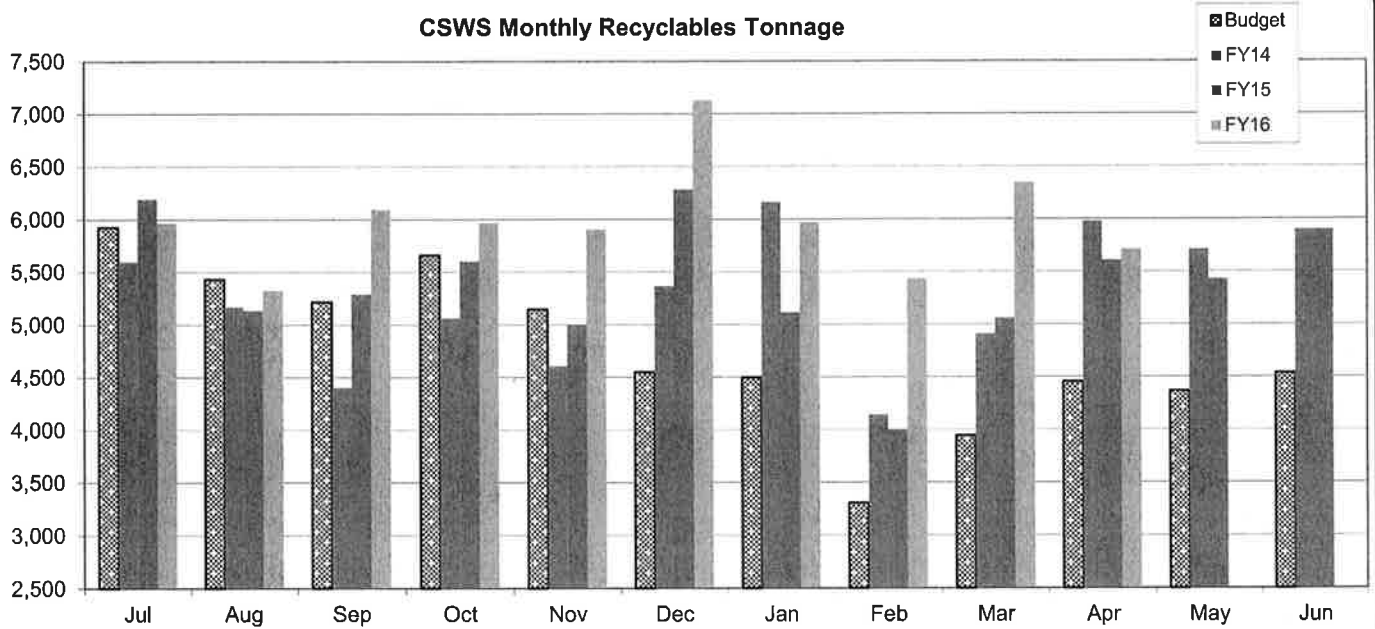
State	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
TOTAL OUT-OF- STATE SPOT	822	0	(100%)	0	0	-	0	0	-

### CSWS Total Recycling Deliveries

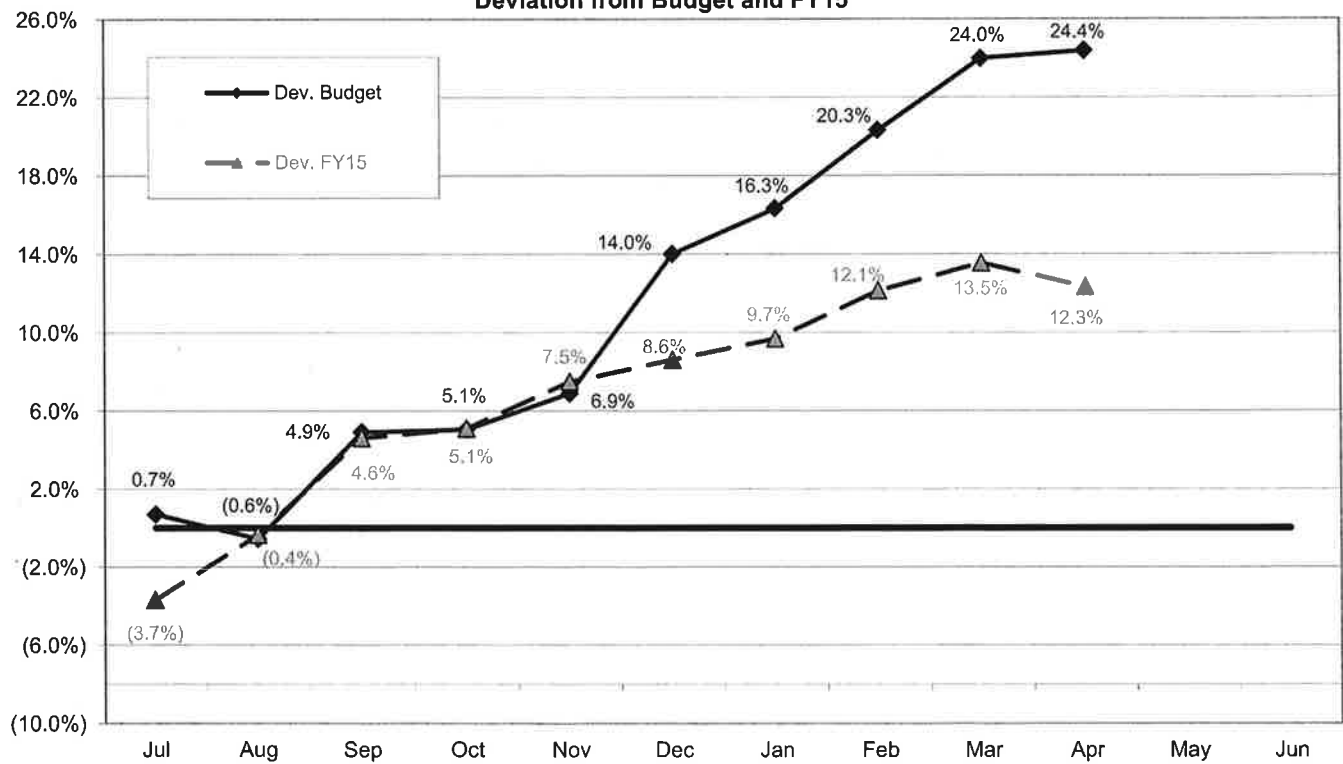
Source	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Change	Apr 15	Apr 16	Change
Participating	42,247	43,754	4%	36,160	37,591	4%	3,807	3,765	(1%)
Hauler Contract	11,881	8,033	(32%)	6,543	8,050	23%	716	692	(3%)
Contractor Sourced	8,441	12,506	48%	10,313	12,460	21%	1,055	1,255	19%
In-State Spot	823	0	(100%)	0	0	-	0	0	-
Out-of-State Spot	822	0	(100%)	0	0	-	0	0	-
TOTAL TONNAGE	64,213	64,293	0%	53,015	58,102	10%	5,578	5,712	2%

## CSWS Recyclables Trends

CSWS Monthly Recyclables Tonnage



CSWS Cumulative Recyclables Tonnage - Deviation from Budget and FY15



**SOUTHEAST PROJECT**  
**April 2016 Monthly Customer MSW Deliveries**  
**Southeast Project Member Towns MSW**

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
East Lyme									
Town	9,989	10,045	1%	8,208	8,211	0%	860	718	(17%)
Prison	561	567	1%	492	483	(2%)	47	46	(1%)
East Lyme Total	10,550	10,611	1%	8,700	8,694	(0%)	907	764	(16%)
Griswold	4,361	4,002	(8%)	3,359	3,236	(4%)	357	308	(14%)
Groton	27,041	25,285	(6%)	20,681	21,960	6%	2,161	2,120	(2%)
Ledyard	5,976	5,898	(1%)	4,829	5,072	5%	538	478	(11%)
Montville			-			-			
Town	7,960	7,609	(4%)	6,217	6,558	5%	648	718	11%
Prison	611	697	14%	593	517	(13%)	54	52	(4%)
Mohegan Sun	7,587	6,656	(12%)	5,560	5,613	1%	539	561	4%
Montville Total	16,157	14,961	(7%)	12,371	12,688	3%	1,241	1,331	7%
New London	20,786	19,423	(7%)	16,056	16,250	1%	1,824	1,581	(13%)
N. Stonington	2,634	2,830	7%	2,230	2,520	13%	249	250	0%
Norwich	23,846	21,912	(8%)	18,108	18,009	(1%)	1,900	1,684	(11%)
Sprague	952	989	4%	806	872	8%	85	100	18%
Stonington	11,870	11,905	0%	9,640	10,371	8%	1,050	1,028	(2%)
Waterford	11,450	11,348	(1%)	9,200	10,503	14%	959	1,091	14%
Fisher Island	287	277	(3%)	228	242	6%	11	12	9%
<b>TOTAL MEMBER TOWN</b>	<b>135,911</b>	<b>129,442</b>	<b>(5%)</b>	<b>106,208</b>	<b>110,417</b>	<b>4%</b>	<b>11,283</b>	<b>10,747</b>	<b>(5%)</b>

**Southeast Project In-State Spot MSW**

Town	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
CRRA	0	7,351	-	693	3,771	444%	693	0	(100%)
Preston	1,929	1,915	(1%)	1,590	1,574	(1%)	182	156	(14%)
<b>TOTAL IN-STATE SPOT</b>	<b>1,929</b>	<b>9,266</b>	<b>380%</b>	<b>2,283</b>	<b>5,344</b>	<b>134%</b>	<b>875</b>	<b>156</b>	<b>(82%)</b>

**Southeast Project Member Towns And In-State Spot MSW**

Source	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Member Towns	135,911	129,442	(5%)	106,208	110,417	4%	11,283	10,747	(5%)
In-State Spot	1,929	9,266	380%	2,283	5,344	134%	875	156	(82%)
<b>TOTAL MEMBER &amp; IN-STATE SPOT</b>	<b>137,840</b>	<b>138,707</b>	<b>1%</b>	<b>108,491</b>	<b>115,761</b>	<b>7%</b>	<b>12,157</b>	<b>10,903</b>	<b>(10%)</b>

### Southeast Project Company MSW Deliveries

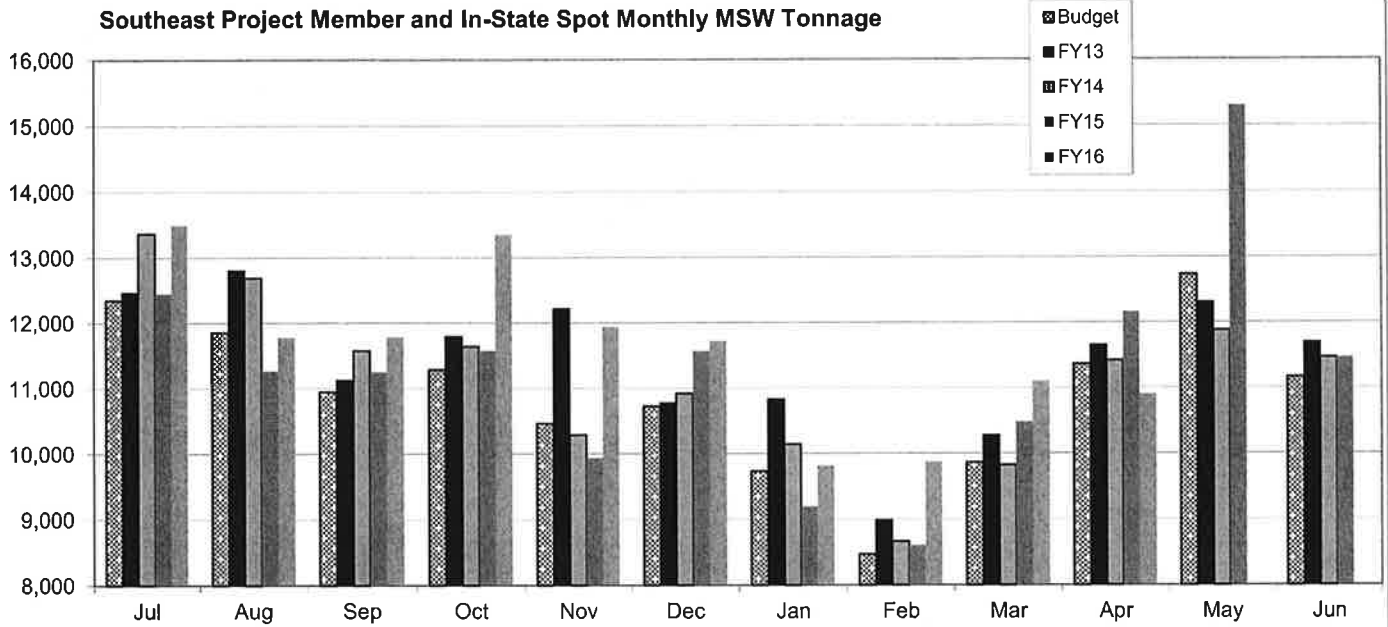
Source	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Various	158,214	122,971	(22%)	109,713	112,722	3%	13,477	12,419	(8%)
<b>TOTAL COMPANY</b>	<b>158,214</b>	<b>122,971</b>	<b>(22%)</b>	<b>109,713</b>	<b>112,722</b>	<b>3%</b>	<b>13,477</b>	<b>12,419</b>	<b>(8%)</b>

### Southeast Project Total MSW Deliveries

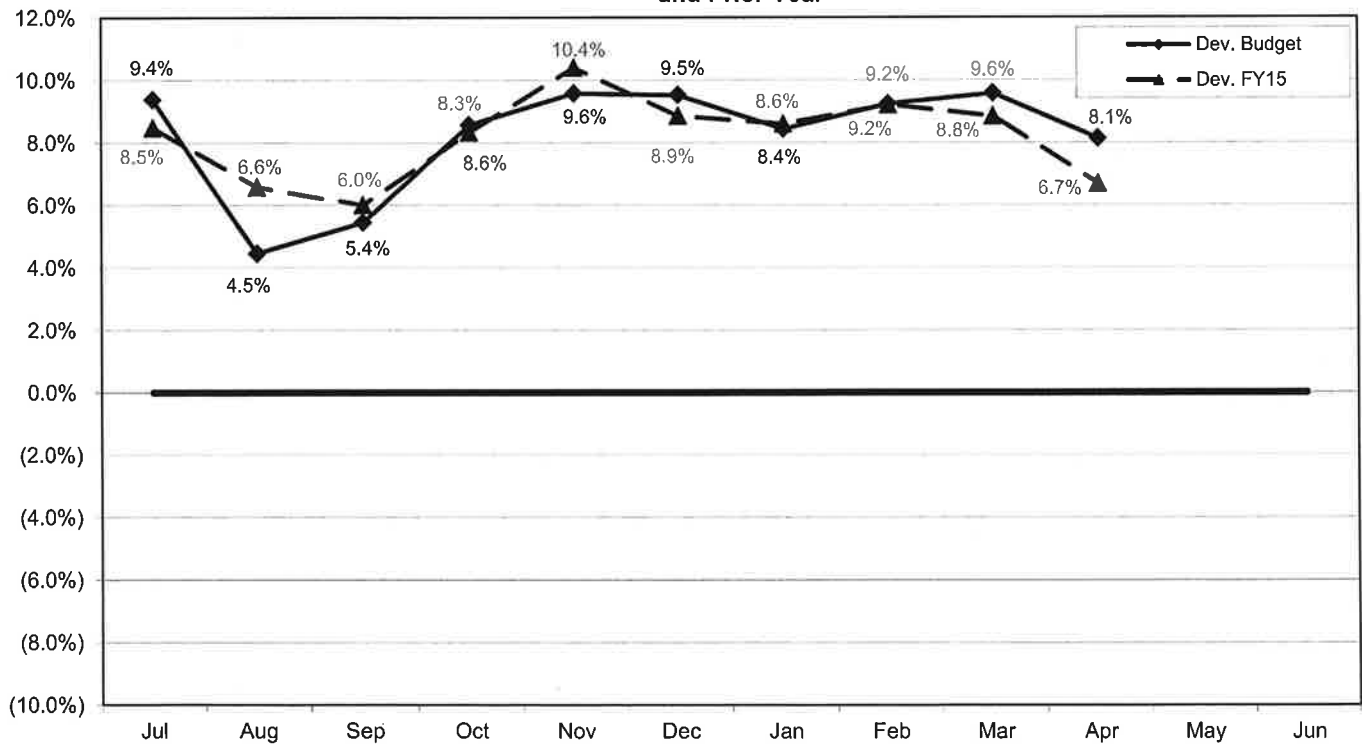
Source	Fiscal Year			Fiscal Year-To-Date			Monthly		
	2014	2015	Growth	2015	2016	Growth	Apr 15	Apr 16	Growth
Member Towns	135,911	129,442	(5%)	106,208	110,417	4%	11,283	10,747	(5%)
In-State Spot	1,929	9,266	380%	2,283	5,344	134%	875	156	(82%)
Company Deliveries	158,214	122,971	(22%)	109,713	112,722	3%	13,477	12,419	(8%)
<b>TOTAL TONNAGE</b>	<b>296,054</b>	<b>261,678</b>	<b>(12%)</b>	<b>218,204</b>	<b>228,483</b>	<b>5%</b>	<b>25,634</b>	<b>23,322</b>	<b>(9%)</b>

## Southeast Project MSW Trends

**Southeast Project Member and In-State Spot Monthly MSW Tonnage**



**Southeast Project Member and In-State Spot Cumulative MSW Tonnage - Deviation from Budget and Prior Year**





## **Moira Kenney**

---

**From:** Peter Egan  
**Sent:** Friday, May 20, 2016 11:35 AM  
**To:** Moira Kenney; Deepa Krishna  
**Cc:** Peter Egan  
**Subject:** Hours Worked - Pay period ending May 20 2016

Moira, Deepa -

I used 7.5 hours of leave time (vacation leave) during the pay period ending **May 20, 2016**.

I believe I had submitted a leave request form, but the executive leave request form has not been working correctly all the time, and it may be that you didn't get a copy.

Please use this email if you don't have a copy.

Peter

Peter W. Egan  
Director of Operations & Environmental Affairs  
Materials Innovation & Recycling Authority  
200 Corporate Place, Suite 202  
Rocky Hill, CT 06067  
Tel: 860-757-7725  
[pegan@ctmira.org](mailto:pegan@ctmira.org)  
*MIRA has relocated – note our new address*

 Please consider the environment before printing this e-mail.

## **TAB D**

# FISCAL YEAR 2016 LEGAL REQUESTS FOR SERVICES

<u>FIRM/BOARD APPROVAL</u>	<u>Matter</u>	<u>RFS Amount</u>	<u>Amount Incurred July - Feb. for FY'16</u>	<u>Status O (Ongoing) C (Concluded) A (Anticipated)</u>
<b>Brown Rudnick</b>	Compliance Matters	\$ 10,000	\$ -	A
\$25,000.00		\$ 10,000	\$ -	
<b>Cohn Birnbaum &amp; Shea</b>	South Meadows Exit Strategy	\$ 95,000	\$ 57,247	O
\$155,000.00		\$ 95,000	\$ 57,247	
<b>Day Pitney</b>	NPDES Permitting Support	\$ -	\$ -	A
\$20,000.00		\$ -	\$ -	
<b>Halloran &amp; Sage</b>	GC - Authority Budget	\$ 200,000	\$ 13,725	O
\$1,025,000.00	Property Division	\$ 10,000	\$ 3,685	O
	MDC Arbitration	\$ 250,000	\$ 155,677	O
	CSWS	\$ 50,000	\$ 13,653	O
	Hartford Landfill Solar Array	\$ 75,000	\$ 48,637	C
	FOIA Complaint	\$ 30,000	\$ 14,359	O
	Mid-CT Ongoing	\$ 1,750	\$ 1,733	C
	Southeast Project	\$ 50,000	\$ 20,515	O
		\$ 666,750	\$ 271,983	
<b>Kainen, Escalera &amp; McHale</b>	Employment	\$ 25,000	\$ 1,680	O
\$475,000.00	MDC Arbitration	\$ 200,000	\$ 75,297	O
		\$ 225,000	\$ 76,977	
<b>Pullman &amp; Comley</b>	Bond Counsel - General Counsel	\$ 10,000	\$ -	O
\$85,000.00	Bond Counsel - Southeast	\$ 55,000	\$ 51,595	C
		\$ 65,000	\$ 51,595	
<b>TOTALS:</b>		\$ 1,061,750	\$ 457,801	
<b>\$1,785,000.00</b>				

Status\*

O = Ongoing

C = Concluded

A = Anticipated

## **TAB E**



## **MIRA Education Report – March/April 2016**

**Group Visits - 1,845**

**Walk-in public - 610**

**Outreach - 54**

**Total – 2,509**

### **Ongoing Staff Activities**

**March 2 – SM attended Connecticut Recyclers Coalition (CRC) meeting to discuss potential staffing**

**March 3 – developed closing of TM Work Plan**

**March 16 – SM attended CRC board of Directors meeting**

**March 29 – CREC meeting in boardroom, 24 attendees**

**March – SM, PG and RA identified items in TM to organize and discard**

**April 12-15 Museum expanded spring vacation hours**

**April 12 – SM attended CRC meeting regarding legislative issues**

**April 12 – SM attended GreenLeaf meeting, Hartford**

**April 18 – TG and SM participated in plant tour/interview with Matt Pilon, Hartford Business Journal**

**April 24 - RA participated in Barkhamsted Earth Day event, 54 participants**

**April - PG and RA contacted artists who displayed sculptures in Museum to return**

### **Request for participation**

**May 13 – Avon Sustainability event, High School – PG will exhibit**

**MIRA TRASH MUSEUM REQUESTS 09/25/2015-04/30/2016 – Total participants not scheduled – 9,944  
= \$39,776 uncollected revenue**

<b>TOWN</b>	<b>GRADE/AGE</b>	<b>NUMBER OF PARTICIPANTS</b>
Avon	6-8 <sup>th</sup>	7
Avon	PK	55
Avon	3 <sup>rd</sup> -5 <sup>th</sup>	11
Bethlehem	PK-8 <sup>th</sup>	100
Bloomfield	K	108
Bloomfield	3 <sup>rd</sup>	140
Branford	11 <sup>th</sup> , 12 <sup>th</sup>	25
Bristol	PK	16
Bristol	1 <sup>st</sup> -3 <sup>rd</sup>	26
Bristol	3 <sup>rd</sup>	100
Cheshire	3 <sup>rd</sup>	69
Colchester	3 <sup>rd</sup>	12
Colchester	3 <sup>rd</sup> -5 <sup>th</sup>	32
Colebrook	2 <sup>nd</sup> & 4 <sup>th</sup>	20
Cromwell	3 <sup>rd</sup>	175
Cromwell	Adults	6
Danbury	K-1 <sup>st</sup>	42
Danielson	9 <sup>th</sup>	100
Deep River	PK-5 <sup>th</sup>	25
Deep River	3 <sup>rd</sup>	50
East Granby	Adults	25
East Haddam	3 <sup>rd</sup>	20
East Hampton	K-8 <sup>th</sup>	50
East Hampton	3 <sup>rd</sup>	40
East Hartford	PK-5 <sup>th</sup>	300
East Hartford	3 <sup>rd</sup>	84
East Windsor	Adult	15
Ellington	3 <sup>rd</sup>	38
Fairfield	7-12 year-olds	90
Farmington	K & 1 <sup>st</sup>	29
Farmington	Seniors	8
Glastonbury	3 <sup>rd</sup>	166
Glastonbury	PK	30
Glastonbury	K	53
Glastonbury	seniors	20
Glastonbury	1 <sup>st</sup> -5 <sup>th</sup>	102
Glastonbury	PK-9 <sup>th</sup>	40
Granby	3 <sup>rd</sup>	125
Guilford	3 <sup>rd</sup>	339
Hamden	PK	250
Hamden	9 <sup>th</sup> -12 <sup>th</sup>	12
Hampton	3 <sup>rd</sup>	40
Hartford	PK-K	30
Hartford	K-5 <sup>th</sup>	124
Hartford	3 <sup>rd</sup>	558
Hartford	5 <sup>th</sup> -7 <sup>th</sup>	10
Hartford	4 <sup>th</sup> -5 <sup>th</sup>	30
Hartford	2 <sup>nd</sup>	33

Hartford	Adult	61
Hartford	9 <sup>th</sup> -12 <sup>th</sup>	59
Hebron	3 <sup>rd</sup>	80
Kensington	PK	40
Killingworth	2 <sup>nd</sup>	20
Killingworth	9 <sup>th</sup> -12 <sup>th</sup>	10
Lebanon	PK-K	20
MA	K	100
MA	K-1 <sup>st</sup>	8
MA	1 <sup>st</sup>	30
MA	1 <sup>st</sup> -6 <sup>th</sup>	70
MA	seniors	56
MA	PK-HS	35
Manchester	K	35
Manchester	1 <sup>st</sup>	45
Manchester	PK-6 <sup>th</sup>	30
Manchester	3 <sup>rd</sup>	90
Manchester	Seniors	14
Meriden	K-5 <sup>th</sup>	70
Middletown	3 <sup>rd</sup> - 4 <sup>th</sup>	60
Monroe	8 <sup>th</sup>	180
Moodus	PK	20
New Britain	PK	54
New Britain	K-12 <sup>th</sup>	50
New Britain	1 <sup>st</sup>	100
New Britain	1 <sup>st</sup> -2 <sup>nd</sup>	30
New Britain	4 <sup>th</sup>	81
New Britain	18-21 year olds	20
New Britain	College	60
New Haven	PK	35
New Haven	K	75
New Haven	K-6 <sup>th</sup>	515
New Milford	2 <sup>nd</sup>	390
New Milford	6 <sup>th</sup> -8 <sup>th</sup>	30
NY	K-5 <sup>th</sup>	100
Newington	3 <sup>rd</sup>	170
Newington	PK	30
Newington	K-4 <sup>th</sup>	60
Newington	9 <sup>th</sup> -12 <sup>th</sup>	21
Norwich	8 <sup>th</sup>	132
Orange	Families	50
Plainville	PK-5 <sup>th</sup>	85
Plainville	4 <sup>th</sup> -6 <sup>th</sup>	17
Putnum	K-5 <sup>th</sup>	22
Sherman	3 <sup>rd</sup>	35
Simsbury	High School	12
Southington	2 <sup>nd</sup>	64
Southington	3 <sup>rd</sup>	54
South Windsor	PK	30
South Windsor	K	60
Stafford Springs	3 <sup>rd</sup>	105

Suffield	3 <sup>rd</sup>	80
Tolland	6 <sup>th</sup> -8 <sup>th</sup>	270
Tolland	PK	50
Torrington	PK-3 <sup>rd</sup>	50
Vernon	1 <sup>st</sup>	55
Vernon	PK	30
Wallingford	9 <sup>th</sup> -12 <sup>th</sup>	100
Wallingford	5 <sup>th</sup> -7 <sup>th</sup>	100
Watertown	2 <sup>nd</sup> -3 <sup>rd</sup>	20
West Hartford	3 <sup>rd</sup> -5 <sup>th</sup>	60
West Hartford	PK	52
West Hartford	1 <sup>st</sup>	65
West Hartford	3 <sup>rd</sup>	391
West Hartford	9 <sup>th</sup> -12 <sup>th</sup>	60
West Haven	K-6 <sup>th</sup>	50
West Haven	3 <sup>rd</sup>	100
Westbrook	3 <sup>rd</sup>	45
Wethersfield	1 <sup>st</sup> & 4 <sup>th</sup>	200
Wethersfield	3 <sup>rd</sup>	254
Wethersfield	2 <sup>nd</sup> -3 <sup>rd</sup>	105
Willimantic	PK-8 <sup>th</sup>	63
Windsor	PK	50
Windsor	K-8 <sup>th</sup>	75
Windsor Locks	3 <sup>rd</sup>	90
Winsted	Special needs	15
Wolcott	3 <sup>rd</sup>	94
Woodbury	6 <sup>th</sup> -8 <sup>th</sup>	20
<b>TOTAL</b>		<b>9,944</b>



## **TAB F**

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

**Final Report  
May 2016**

*Submitted by:  
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## **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, 2015 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. However, woodchuck damage management is currently a minor part of Wildlife Services activities.

## **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 did not need to utilize propane cannons to harass wildlife due to overall lower bird numbers. WS installed 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.

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 (herring gulls). House sparrows and rock pigeons also occur in smaller 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 12.96% of known species bird-aircraft strikes and 21.16% of damaging strikes with known species in the United States resulting in \$57,053,422 in damage from 1990 to 2014 (Dolbeer et al. 2015). Gulls are the most commonly struck species group reported to the National Wildlife Strike Database, and when struck they are ranked 10<sup>th</sup> 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 2015. Low numbers of gulls continued into 2016. However there was an increase of 28.8%, from 444 herring gulls observed during 2014-15 to 571 herring gulls and one great black-backed gull observed during 2015-16. The highest recorded single day observations were 71 gulls on February 10, 2016, 56 gulls January 26, 2016 and 45 gulls on January 28, 2016. Observations of 20 or more gulls occurred on ten other occasions. Gulls were observed on 33 of 62 visits from May 1, 2015 to April 29, 2016. The average and median number of gulls surveyed daily, during the 33 days when gulls were observed, was 17.3 and 11 respectively. This is a slight increase from last year when an average of 14.8 gulls were observed per visit. However, this is the second year in a row with increasing 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 and therefore, can account for continuing the significant decline in gull numbers.

### **Blackbirds:**

**Description:** The blackbird guild at MIRA consisted solely of European starlings again during 2015-16. 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 a 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 2<sup>nd</sup> out of the 21 wildlife species most often reported struck by aircraft and 19<sup>th</sup> of 21 species causing damage when reported struck by aircraft (Dolbeer et al. 2000). European starlings are the fourth most commonly struck species and were responsible for \$7,068,897 in damage between 1990 and 2014 (Dolbeer et al. 2015). 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 in 2015-16 reduced 87.3% from 2014-15, down to 16,832 from 131,993. Starlings were observed on 53 of 62 visits from April 1, 2015 to April 29, 2016.

WS used a combination of harassment and trapping to manage starling numbers at the facility. Other contributing factors to the decrease in starling numbers could be the change in management at the facility in keeping the doors closed to later in the day. There were 460 starlings lethally removed using the decoy trap.

## **Corvids:**

**Description:** The corvid guild at CRRA 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 on Monday through Saturday during the open season from July 1<sup>st</sup> through March 1<sup>st</sup> and October 18<sup>th</sup> through December 31<sup>st</sup>; 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 424 American crow strikes responsible for \$1,833,405 in damage to civil aircraft between 1990 and 2014 (Dolbeer et. al 2015). Crows and ravens rank 14<sup>th</sup> out of the 21 most struck species groups and rank 18<sup>th</sup> 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 in 2015-16 decreased 8.1% from 2014-15, to 1,913 from 2,082. Crows were observed on 43 of 62 visits from April 16, 2015 to April 29, 2016. 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. WS observed that crows had a tendency to arrive at the facility very early in the morning, often before WS was on site.

## **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 7<sup>th</sup> most commonly struck species and has accounted for \$12,010,191 in damage between 1990 and 2014 (Dolbeer et al. 2015). Pigeons ranked 11<sup>th</sup> out of the top 21 species resulting in major damage to aircraft (Dolbeer et al. 2000).

**Observations:** WS observed and non-lethally dispersed 72 rock pigeons at the Connecticut Solid Waste System Facility during the duration of the operational control program. Although recent observations have been low, 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 pigeons. 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 197 strikes resulting in \$2,226.00 worth of damages from 1990 to 2014 (Dolbeer et al. 2015).

**Observations:** Similar to rock pigeons, WS did not observe large numbers of house sparrows that required harassment during the duration of the operational control program. However, 29 house sparrows were removed from the starling decoy trap.

## **Mammals:**

On May 27, 2015, WS removed and humanely euthanized a raccoon trapped by MIRA staff.

## **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 one American crow, two herring gulls, 29 house sparrow, 460 starlings, and one raccoon 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 American crow and two herring gulls were taken with air rifle during 2015-16. This is a 66.6% decrease in the number of crows and the first herring gulls taken in two years.

WS experienced success with the decoy trap and removed 29 house sparrow and 460 starlings. However, this was a 29.3% decrease in house sparrow take and a 66.1% decrease in starling take from 2014-15 to 2015-16. As previously discussed; WS euthanized one raccoon trapped on the facility. No raccoons were taken during 2014-15.

In total, WS used a total of 154 pyrotechnics to disperse 19,273 birds and vehicle harassment to disperse 114 birds 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 2016-17. 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

 <p>DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE Migratory Bird Permit Office P.O. Box 779 - Haddam, MA 01035-0779 Tel: 413-253-8643 Fax: 413-253-8424 Email: permitsR5MB@fws.gov</p>		COPY	
<p><b>FEDERAL FISH AND WILDLIFE PERMIT</b></p> <p>1. PERMITTEE</p> <p>CONNECTICUT RESOURCES RECOVERY AUTHORITY 100 CONSTITUTION PLAZA - 6TH FLOOR HARTFORD, CT 06103</p>		<p>2. AUTHORITY-STATUTES 16 USC 703-712</p> <p>REGULATIONS 50 CFR Part 13 50 CFR 21.41</p>	
<p>3. NAME AND TITLE OF PRINCIPAL OFFICER (if not a business)</p> <p>PETER W. EGAN DIRECTOR OF ENVIRONMENTAL SERVICES</p>		<p>4. RENEWABLE</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>5. MAY COPY</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>	
<p>6. EFFECTIVE</p> <p>10/01/2015</p>		<p>7. EXPIRES</p> <p>09/30/2016</p>	
<p>8. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED</p> <p style="text-align: center;"><b>Connecticut Solid Waste System Facility, 300 Maxim Road, Hartford, CT</b></p>			
<p>11. CONDITIONS AND AUTHORIZATIONS:</p> <p>A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK 42 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.</p> <p>B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FEDERAL, STATE, LOCAL, TRIBAL, OR OTHER FEDERAL LAW.</p> <p>C. VALID FOR USE BY PERMITTEE NAMED ABOVE.</p> <p>D. Authorized to kill by means of shotgun, rifle, or air rifle, using non-toxic shot, no more than TWO-HUNDRED (200) Herring, Great Black-backed, Glaucous, Ring-billed, Icelandic, Laughing, or Lesser Black-backed gulls in any species combination and MUST bury or incinerate, cannot be consumed. 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.</p> <p>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.</p> <p>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.</p> <p>G. A "No Feeding Policy" must be in place.</p> <p>For suspected illegal activity, immediately contact USFWS Law Enforcement at: Tolland, CT 860-871-8348</p>			
<p><input checked="" type="checkbox"/> ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY</p>			
<p>12. REPORTING REQUIREMENTS</p> <p style="text-align: center;"><b>ANNUAL REPORT IS DUE WITH NEXT RENEWAL</b></p> <p>REPORT FORMS CAN BE FOUND AT: <a href="http://www.fws.gov/migratorybirds/mbpermits.html">www.fws.gov/migratorybirds/mbpermits.html</a></p>			
<p>ISSUED BY</p> <p><i>[Signature]</i></p>		<p>TITLE</p> <p>CHIEF, MIGRATORY BIRD PERMIT OFFICE - REGION 5</p>	
<p>DATE</p> <p>09/09/2015</p>		<p>DATE</p> <p>09/09/2015</p>	



### 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/mhpermits.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](http://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/endangered>.

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.

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}