

# State of Connecticut Department of Environmental Protection

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## OFFICE COMPOSTING PILOT PROJECT

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### Summary of Results



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# **ABSTRACT**

In November 4, 1996 the DEP Waste Bureau undertook a six month pilot office composting project for the purposes of determining whether there was willingness by employees to separate their organics, estimating the weight of organics generated, and to test the appropriateness of using a retail home composting bin for recycling our organics. Depending on the results of the pilot, recommendations would be made to either cancel the pilot or expand the program to the entire building.

The pilot project results indicate a potential to further reduce the waste generated at DEP headquarters if the pilot is expanded to include the entire building. Based on records kept over the duration of the pilot it is apparent that staff are more than willing to participate as demonstrated by a diversion of 996.6 pounds of organics from our waste stream. As for the retail home composting bin, it functioned, but it was simply too small for all the organics generated by our enthusiastic employees.

## **THE PILOT**

### **DESCRIPTION**

Appropriate organic materials such as coffee grounds and filters, fruits and vegetables, cut flowers, etc. were deposited by employees in a 5-gallon collection bucket labeled "COMPOST" located in the 4th floor break room. Twenty DEP volunteers, nick-named "Organic Mechanics" were recruited to help manage the project. Their job was to take turns each day weighing the collection bucket, emptying the contents into the compost bin, rinsing it clean, and returning it to its location. Training for these volunteers took place on October 29, 1996 followed by a brown bag lunch training for general employees on November 1, 1996. A fact sheet was distributed to each employee via hard copy and e-mail which explained the project, what could and couldn't go into the collection bucket, what the benefits of composting at 79 Elm Street were and who they could call with questions. Staff was kept up to date through weekly e-mail messages telling them how many pounds of organics they diverted from the waste stream and any other pertinent information or instructions.

Management of the compost bin was accomplished by the project coordinator who called on the Organic Mechanics periodically for assistance. Additional carbon materials were occasionally added to the bin. Leaves were supplied by staff and some sawdust was supplied by the DAS wood working shop on Buckingham street. The materials in the bin (leaves, sawdust and food scraps) were agitated at least once per week with either a pitch fork or special aeration tool. Temperatures were periodically taken inside the composting mix. The "Earth Machine" compost bin was donated by EPS Corporation, a distributor of the product.

### **DISCUSSION AND RESULTS**

Staff participation was better than anticipated. The Organic Mechanics made a commitment and stuck with it. They never complained about having to handle food scraps and were a valuable asset to the project coordinator. The rest of the Waste Bureau employees couldn't have been more cooperative or enthusiastic. Source separation was excellent. Except for only one reported "mistake", only the appropriate food scraps were put in the collection bucket. Staff were eager to participate, and did it well. Without the daily input from the volunteers and staff, this project would not have been possible.

The weight of food scraps collected in the bucket was recorded daily. At first, we averaged about 25 pounds per week, but this steadily increased to about 40 pounds per week. The lowest was 24.5 lbs/wk, and the highest was 50.25 lbs/wk. Daily averages by week started out at 4.9 lbs/day, but seem to have leveled off around 8 or 9 lbs/day. The record daily average by week was 10.4 lbs/day, with an individual day high at 13 lbs. Approximately 8 hefty bags of leaves and 4 lbs of sawdust were used as a carbon source and bulking agent. The following is a table of the food scrap weight data:

<b>Week of</b>	<b>Daily Average (lbs)</b>	<b>Total Weight (lbs)</b>
11/4	4.9	24.5
11/11	6.6	26.5
11/18	7.2	36.0
11/25	7.4	29.75
12/1	7.9	39.5
12/8	7.1	35.5
12/15	7.2	36.2
12/22	6.2	26.5
12/29	6.6	26.5
1/5	7.75	38.75
1/13	9.0	45.0
1/20	10.1	40.5
1/27	9.5	47.5
2/2	9.3	46.5
2/9	10.4	41.5
2/16	9.28	37.1
2/23	10.05	50.25
3/2	8.69	43.45
3/9	7.8	39.0
3/16	8.8	44.0
3/23	8.9	35.6
3/30	8.1	40.5
4/6	8.4	42.0
4/13	9.5	47.5
4/20	9.7	48.5
4/28 - 4/30	9.5	28.5
<b>6 MONTH TOTAL</b>	<b>8.37</b>	<b>996.6</b>

The winter temperatures made it difficult for microbes to break down the organics and to sustain hot enough temperatures in the compost mix to accelerate the decomposition process. Because decomposition wasn't happening as fast as we were adding materials, the bin became full faster than expected and needed to be partially emptied about every 6 to 8 weeks. This job was done by the volunteers and the partially decomposed organics were transported to the project coordinator's yard where they are being further composted. This finding is important, as it indicates a larger, insulated compost bin is needed to satisfy the needs of not only the fourth floor, but certainly the entire building.

## CONCLUSIONS

Based on the results of the six month pilot, we can conclude that: 1) staff is willing to source separate their organics for recycling; 2) diversion of between 4.9 and 10.4 pounds of food scraps per day from our waste stream has been attained; and 3) the compost bin needs to be larger and insulated for continued use by the fourth floor and for expansion to the rest of 79 Elm Street.

## FOR MORE INFORMATION

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