



## City of Biddeford, Maine

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### October 9, 2018: Update - Curbside Recycling Contamination

This update is provided in order to keep the City Council informed about Public Works' response to the international issue of recycling contamination. China, the major worldwide buyer of recycled raw materials, banned 24 types of solid waste, including various plastics and unsorted mixed paper, and set tough standards for contamination levels under the country's "National Sword" policy. There is some speculation that China will close its doors to all recycled materials by 2020.

China's policy is having a significant impact on international recycling markets. Here in the U.S., municipalities are facing so-called contamination fees in response to the inability of recycling facilities to sell recycled materials due to contamination. The contamination is a combination well-meaning citizens attempting to recycle as much as possible and purposeful avoidance of waste limits and pay-as-you-throw or overflow bag purchases.

The City of Biddeford has not been made aware of what the impact of continued high contamination levels will be if not corrected. Instead, the City is working to educate citizens in order to avoid financial penalties. Regionally, Eco-Maine is charging its municipalities a contamination fee based on the estimated level of contamination. It is assumed that a similar surcharge will be applied as an industry standard in response to this issue.

The Public Works staff has been actively engaged in a number of efforts to get ahead of this issue in consultation with Casella. More detail on actions taken and/or that are in progress are identified at the end of this update.

#### **Findings to date.**

During the process of tagging all available recycling bins by wards, it was observed that the multi-family dwellings appeared to have a lot more contamination than the single-family residential properties. This observation was validated during trips to Westbrook to monitor the relative success of the educational initiatives performed the prior week per ward.

#### **Options to Consider**

Whereas the greatest amount of contamination appears to be coming from multi-family dwelling units, options to consider have been identified that focus on this segment of the curbside program.

1. **Enforcement.** Once the educational efforts are finished, one option would be to implement an enforcement initiative. The first violation would result in a written warning. The second offense would be loss of the recycling container with no opportunity for reinstatement. Such a program would be labor-intensive requiring personnel to scan and check each container, flagging the violations, and tracking each over an extended time period.
  - a. **Equipment costs entail the purchase of a hand-held scanner to efficiently read and record recycling container RFID numbers that are found to be contaminated.** The container numbers are keyed to a specific address. Labor costs include the time needed to

assign an employee(s) to inspect recycling containers ahead of the curbside recycling vehicle and the time involved in recording, tracking, and issuing notices to violators. The cost is estimated to be approximately \$27,300 (scanner/software \$6,500, labor \$20,800)

- b. **Pay surcharge.** If the education and enforcement activity are not successful, it is likely the City will be faced with a contamination fee.
  - i. Grandfathered Six-unit and Greater Dwellings. Using the EcoMaine contamination surcharge as an approximation of the potential penalty, the added cost for the grandfathered units may be \$1,180/yr.
  - ii. Potential Surcharge for all Multi-family Units of Three or Greater. Using the EcoMaine contamination surcharge as an approximation of the potential penalty, the added cost for multi-family dwellings of three-units or greater may be as much as \$9,610.
2. **Eliminate Collection for all Multi-family Dwelling of Three Units or Greater.** Multi-family dwellings are essentially commercial enterprises. Addressing contamination at these facilities places the impact of unsuccessful education and/or enforcement activity on taxpayers. This can be shifted to the property owner and tenants by eliminating collection, MSW and recycling, at these facilities.
  - a. Eliminating the collection of recycling avoids the recycling surcharge but does not reduce the recycling fee since the recycling program is not based on the number or users. Users may still bring recyclables to the transfer station.
  - b. Eliminating all MSW collection at these facilities may result in a savings to the taxpayers of approximately \$100,500/year.
3. **Ban Plastic Bags.** One of the most identifiable contaminants in the recycling waste stream is plastic bags. These bags are reportedly responsible for a significant amount of contamination and processing issues; mainly clogging conveyors and pulleys and causing fires as the bags heat up due to the clogs.
  - a. **A no-cost recommendation is to enact a ban on plastic bags.** If enacted, Biddeford would join York, Freeport, Kennebunk, Brunswick, Topsham, Cape Elizabeth, Bath, Rockland, and Saco. Portland and South Portland adopted fees for single-use plastic bags but such a fee does not prevent the disposal of such bags.
  - b. **Another option would be to increase education in an attempt to encourage compliance.** Most major retail establishments that offer plastic bags also accept returned bags for recycling. Educating users to return the bags rather than disposing of them will be a challenge.

### **Activities that have occurred to date.**

The following actions/activities have been completed in response to the initial notification of the recycling contamination issue.

- Meeting with city manager, chief operating officer, public works director and Casella Staff on July, 17, 2018 at city hall.
- Educational meeting with Casella on July 24, 2018 at the Solid Waste Management Commission meeting to discuss planning steps.
- Public works and code enforcement staff took three trips to Westbrook to evaluate the issue first-hand to acquire an understanding of the level of recycling contamination. The estimated contamination level was estimated at approximately 45%.
- In an attempt to learn from other communities and launch an effective education campaign, staff spoke with City of Auburn representatives and Casella about ways other communities are attempting

to address the contamination issue. The identified goal is reducing contamination to approximately 5%. Auburn indicated they were at about their 5<sup>th</sup> week of education in one zone of their city. They reported a 10% reducing in contamination levels from about 45 +/- percent prior to educational flyers to approximately 35 +/- percent.

- Total spent to date on educational efforts: \$2,860
  - Labor for tagging every recycling container with educational flyers and 5 trips to Westbrook for 2 employees to monitor the success of educational efforts = \$2,260.00
  - Printing of 10,000 flyers = \$375.00
  - Printing of 9,000 orange stickers = \$225.00
- Posted educational video on the public access Channel for 2 weeks.
- Published the educational flyer in the City's weekly *Beat* several times.
- Published the educational flyer on the city's web site.
- Included educational flyer in the take home package to parents on the opening day of school for all K-4 students.
- Handed out educational flyer at the hazardous waste day event held at the public works department.

**The current recycling target is a contamination rate of 5% or less. The latest contamination assessment indicates a contamination level of approximately 20%.**