

**City of Greensboro Waste Management and Recycling Task Force**  
**Interim Report for presentation to City Council**

*July 17, 2012*

A Council resolution of February 21, 2012, reads in part:

1. That the City Council hereby supports the formation of a citizen-driven task force to review the City of Greensboro's current and long-term waste management, waste reduction, and recycling practices.
2. That the City Council hereby supports the formation, selection, and impaneling of said task force by no later than March 1, 2012. The task force should hold its first meeting no later than April 1<sup>st</sup>, 2012. The task force will provide the City Council with an interim report on its progress prior to June 30, 2012. The task force will provide a written report along with a verbal presentation on long-term sustainable waste management, waste reduction, and recycling options with recommendations to the City Council no later than October 31, 2012. The task force's waste management, waste reduction, and recycling reports will be posted on the City of Greensboro's website.

Because of the press of other Council business, the task force was asked to delay its interim report until the July 17 Council meeting.

The task force currently consists of the following people, listed with the council members who appointed them:

1. Kay Brandon (by Yvonne Johnson)
2. Alyson Best (by Nancy Vaughan)
3. Dr. Bob Davis (by Jim Kee)
4. Vic Nussbaum (by Nancy Hoffman)
5. Jim Lewis (by Zack Matheny)
6. Bob Mays (by Trudy Wade)
7. Tony Davies (by Marikay Abuzuaite)
8. Luther Falls (by T. Dianne Bellamy-Small)
9. Mark Taylor (by Mayor Robbie Perkins)

Council Liaisons to the Task Force: T. Dianne Bellamy-Small and Nancy Vaughan

At its first meeting, the task force elected Bob Davis as chair and Kay Brandon as vice-chair; also, Alyson Best and Tony Davies as task force liaisons to the Council.

The task force meets the first and third Tuesday of each month at 3pm in the Melvin Building. Its schedule, with minutes and agenda, is available on the city website at

<http://www.greensboro-nc.gov/index.aspx?page=3577>

One of the task force's first actions was to divide itself into three subcommittees, to address three aspects of the charge as they saw it. These subcommittees meet as needed to get their work done, and each presents a report at the fortnightly meeting of the entire group.

Recycling Subcommittee:

Ms. Best  
Chair Davis  
Mr. Falls

Waste-to-Energy Subcommittee:

Mr. Mays  
Mr. Nussbaum  
Mr. Davies

Waste Disposal:

Ms. Brandon  
Mr. Lewis  
Mr. Taylor

Task force members had the opportunity to take two local field trips. On May 7, the mattress reclamation and recycling company Mattress Go Round gave a tour of its operation at 1601 Yanceyville Street. On May 23, the city's Field Operations department gave a tour of the White Street landfill, the transfer station, and the recycling facility managed by ReCommunity.

Also on May 16, the Waste-to-Energy subcommittee and Field Operations staff visited the methane-to-electricity facility run by Methane Power, Inc., at the Wayne County landfill (near Goldsboro).

The three subcommittee interim reports follow.

## **Recycling Subcommittee: Interim Report**

*July 10, 2012*

Staff assigned to the Task Force's Recycling subcommittee (Mr. Sheldon Smith) supplied information on best practices for local government recycling programs as requested by the subcommittee along with information from a recent conference. The subcommittee reviewed the best practices and recommends the following:

- (1) Expand the types of materials that can be accepted and processed. A best practices program works with their processors to collect the broadest array of materials possible while working to minimize residue and maximize the efficiency of the way those materials are handled.
- (2) Ensure that multi-family units are incorporated into the city's curbside recycling routes wherever possible. Additionally, make sure that public housing units are included in curbside recycling.
- (3) Implement a pilot program using routing and Radio Frequency Identification Technology (RFID) to optimize route efficiency, measure program performance and to track program participation.
- (4) Encourage and promote the concept of back-yard composting. A best practices program is aware that organics in general and food waste in particular is a large part of the waste stream,
- (5) Encourage/large commercial generators of food waste (restaurants, grocery stores, cafeterias, and even public schools) to divert their organic materials from the waste stream, either through public service or through policies that incentivize them to do so,
- (6) Support proposals/programs that offer services for recycling of mattresses and other special wastes.

## **Waste-to-Energy Subcommittee Interim Report**

*July 10, 2012*

The household garbage in the White Street landfill produces a large quantity of methane gas as it decays. Methane, if left to escape into the atmosphere, is a much more dangerous greenhouse gas than is carbon dioxide. At the White Street facility, as at any responsibly managed landfill, the methane is systematically vented and burned off, unless it can be diverted to some productive use.

Some 40% of the White Street methane is already piped to ITG (formerly Cone Mills) to burn and generate electricity for the plant's use. This transfer is made free of charge and as an economic incentive to ITG. The transfer agreement expires at the end of 2012.

Methane from a landfill is thus a valuable resource. The Task Force's Waste-to-Energy Subcommittee (Tony Davies, Bob Mays, and Vic Nussbaum, with support from Gail Hay, Compliance Manager, City Field Operations) has had as its main focus to research ways in which White Street's methane could safely become a profit center for the city, without adversely impacting the surrounding neighborhood. White Street is apparently the largest source of methane in North Carolina that is not generating revenue.

Activity so far has included research into what other communities are doing to make money from their waste methane. The subcommittee and some city staff made one road-trip – to visit a methane-to-electricity generation plant at the Wayne County (Goldsboro) landfill. The impression gained from this visit is that the appropriate technology is fully developed, very clean, and ready to be installed in a production mode in Greensboro. Such an installation would have a small footprint, and would be quiet and odorless.

Another idea that has come forward, and needs to be investigated, is whether landfill methane could be economically used to power the Osborne Waste Water Treatment Plant.

Going forward, the subcommittee plans to do further research on methane as it is used around the country. It expects to be a resource to the city in developing a request for proposals for full, clean, and profitable use of Greensboro's landfill gas. The subcommittee also anticipates working more closely with the Waste Disposal subcommittee, as the two groups' work seems to be converging somewhat.

## Disposal Subcommittee Progress Report

July 17, 2012

### Current & Next Generation Methods of Disposal

We have chosen to focus on a paradigm *shift* in long-term planning for waste disposal. The shift is away from the search for a “silver bullet” and toward a strategy that emphasizes progress in the current political environment, sustainability of purpose, and positioning for the evolution of MSW waste management into the post-landfill era.

Given the sense of urgency brought about by the ongoing burden to the City’s taxpayers of the current MSW transfer disposal strategy, we have focused on strategies to, 1) reduce the cost of MSW disposal to the City, 2) encourage regional cooperation, and 3) pursue a reduction in reliance on landfilling, especially landfilling of bulk, unprocessed municipal solid waste, both within the 10-year planning window. We believe that certain guiding principles should be followed in the pursuit of progress toward these goals:

1. Regional “partners” will only work together if there are clear advantages to doing so, i.e., when there is a Win-Win outcome, with no real or perceived “losers”.
2. Never be the first public entity in the U.S. to employ new technology at an operational scale; let others be “guinea pigs” and work out the kinks. Pilot projects with shared risk may be OK.
3. When new (or even old) technology is employed, do so in a “modular” fashion. This means to commit only a portion of the waste stream to any one method of treatment or disposal. (Most “black box” technologies are modular, where a single unit is designed to process a fixed “design throughput”, say 100 or 200 tons per day.) This is a technical way of saying “don’t put all your eggs in one basket”. This way, capital expenditures can be limited and, depending on successes and failures in practice and evolving regulations and cost variables, adjustments can be made to increase or reduce reliance on any one disposal method. The result is a spreading of risk over multiple solutions, thus reducing the overall risk of failure.
4. Any technology pursued seriously should be subjected to intense scrutiny by solid waste professionals. In evaluating various technologies, serious consideration should be given to environmental and human impacts.

*Strategy 1:* Explore the future development of a MSW facility owned and operated by the City of Greensboro that will process MSW for volume reduction, and perhaps other benefits, and that will be so advantageous as to attract neighboring communities to utilize it in trade for final disposal of residue at their MSW landfill.

*Strategy 2:* Explore the feasibility of waste transport by rail as an alternative to trucking, assuming that the current MSW transfer strategy endures for the next 20+ years.

### Best Practices in North Carolina

We are exploring best practices for waste disposal used or experimented with in surrounding and/or industry-leading NC counties, including Catawba, Mecklenburg, and Orange. Several pilot projects for waste conversion are reported to be in progress but are not yet being used on a large scale.

*Strategy 3:* Determine what advancements or alternative strategies and technologies in MSW disposal have been tried by other local governments in NC and categorize as either, 1) unsuccessful and/or shows little promise, 2) still in evaluation stage, or 3) shows great promise to offer one or more tangible benefits.

### Regional Opportunities & Formation of a Waste Management Authority

A more strategic (long term) component of the exploration of solid waste disposal options is to research the feasibility of regional (Piedmont) synergies and the development of various possible scenarios with the goal of implementation by 2030. The ensuing process for the City will likely include engaging in research to validate the need for and benefit of a regional concept and collaborating with regional partners to gain consensus.

*Strategy 4:* Explore the feasibility of regional (Piedmont) collaborative scenarios in solid waste disposal considering, among other things, potential mandated environmental and health regulations, advanced technology, required infrastructure, and fiscal parameters.

*Strategy 5:* Explore the benefits of a regional administrative structure in the form of a waste management authority (e.g., Piedmont Solid Waste Authority) to serve all interested Piedmont counties as the managing body for future disposal of solid waste.