



Urban Forest NEWS

QUARTERLY JOURNAL OF URBAN FORESTRY



This Issue

| | |
|------------------------|--------|
| Zero Waste. | p. 1/3 |
| Fall Planting to Begin | p. 1 |
| Recycling isn't Enough | p. 2/4 |
| Tree Profile | p. 4 |

cle it, question whether or not you really NEED that product? Once you purchase it , do you consider what happens to it when you are finished with it, other than you may put it into the recycling bin and watch the truck pick it up? How resource intensive is that product/material to recycle, IS it recycled, can you substitute another product more durable, etc.

The reasoning for wanting to attain “zero waste” is fairly simple. If we all refuse or avoid buying products that are not sustainably produced, or are wastefully packaged, demand will eventually decline for those products. Single use plastics is probably the most widely talked about waste stream at this time. But even something as simple as cutting down a tree must be considered as far as potential waste produced. Up until a year or so ago, much of the wood from trees removed within the City was hauled to the R-Board landfill. Some of it may have been ground for mulch, but the larger pieces were more than likely landfilled.

Recently, we have put some pieces in place to be able to say that our Urban Forest tree program is virtually “zero waste”. We now send the large, usable trunk pieces to a local business that offers the wood to area woodworkers for use in creating new, durable products such as furniture, bowls, pens, sculptures, etc.



FALL PLANTINGS WILL SOON BEGIN



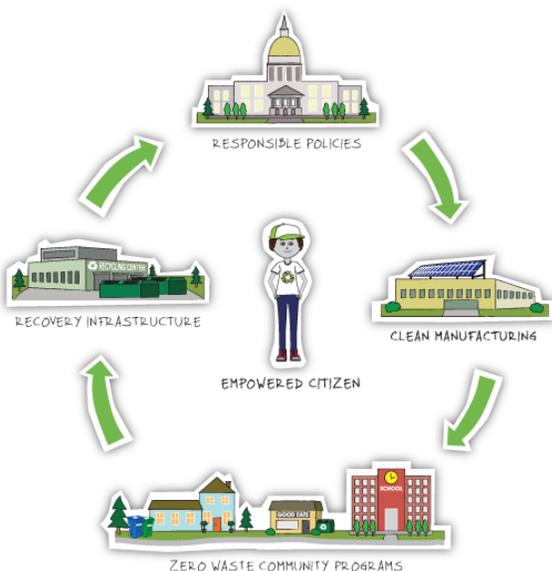
We have had a drought this summer, but recent rains have given us an optimistic outlook on the fall planting season!

Several areas will be planted this fall, to include the road-sides along Mary Washington Boulevard. Street tree replacements throughout the City will be the main focus this fall, along with a restoration planting along Sunken Road. This area was disturbed during the summer to allow for installation of a new sewer line. The area will be restored as a bird habitat.

ZERO WASTE WHAT IS IT?

For every can of garbage at the curb, there are 87 cans worth of materials that come from the extraction industries—such as timber, agricultural, mining and petroleum—that manufacture natural resources into finished products. *Source: World Resources Institute.*

Very often, when it comes to waste, and processes, we don't think holistically. What does that mean? Well, when you purchase groceries or any other commodity, do you pay attention to the packaging, think about the resources used to produce it or to recy-





RECYCLING IS NOT ENOUGH

ERIK NELSON

The average American generates around 4.4 pounds of solid waste per day. Some of that material is recycled, but much of it ends up buried in a landfill. In modern industrial societies, we traditionally consume resources and dispose of a great many types of waste. That ongoing sequence of events is not considered sustainable in the long term because we will simply run out of resources and overwhelm ourselves with waste. Responsible governing indicates we must take a leadership role to do more.

The City of Fredericksburg has worked toward a sustainable future by reducing the amount of solid waste being dumped in our regional landfill in Stafford County. The residential recycling program, for instance, is a way for individual households to collectively contribute to the community's waste reduction goals. The idea has been that we want to recycle certain materials as much as possible, and use the landfill for those materials that cannot be recycled or composted.

In practice, recyclable does not always mean recycled. Back when Coca-Cola came in glass bottles, the company refilled those durable containers ten times before recycling them. Today, soft drinks, many other types of drinks, and just plain water comes in thin plastic bottles. Those one-use containers are certainly recyclable, but that label is mostly a marketing gimmick. Six billion pounds of plastic bottles (just the empty bottles, without their liquid contents) are manufactured every year. No more than 30 percent, however, are actually recycled. Fully 70 percent of those bottles end up in landfills, in the ocean, or littered across the landscape.

Furthermore, the 30 percent of those plastic bottles that get recycled, get recycled only once. In the manufacture of more bottles, only ten percent of a batch can be old material. The cleaning process for the used containers breaks down the polymer chains that give a bottle its strength. As a consequence, 90 percent of a batch must be new material, which, as it turns out, is mostly petroleum. Most plastic bottles that actually get recycled end up as fibers in clothing and carpeting, where the breakdown of polymer chains is not an issue. No one, however, is recycling clothing or carpeting, and so the landfill also receives recycled waste.

The unexpected consequence of so much recyclable, but unrecycled material in the drink industry alone has been an increase in waste, rather than a decrease. For recycling to be part of a sustainable future, the recycled material must actually be useful. A case in point is aluminum. There is no waste associated with recycling aluminum and the cost of recycling aluminum is only 5 percent of the initial manufacturing cost. The real issue we face is not recycling as much as reducing waste overall. Making recycling effective sometimes appears elusive because the market for recyclables is changing. If recyclable material (such as plastic bottles) does not have value, it simply will not get recycled.

A developing concept for reducing solid waste is called Zero Waste. The idea is to eliminate waste disposal to the greatest extent possible. We do this by figuring out how to ensure discarded materials are seen as commodities. Under this regime, we first seek to prevent as much waste as possible, and then truly recycle that which is no longer needed. In the example of drink containers noted above, a profound difference could be made by avoiding the use of plastic bottles in the first place. Each waste stream will require similar analysis and common sense decisions.

When talking about recycling, the practice of composting also needs to be expanded significantly. Organic materials in a landfill take up huge amounts of space. Organics would not require disposal as waste at all if their natural rotting process were to be used to advantage. The end result of recycling and composting, after all, is to divert material away from the landfill entirely.



ZERO WASTE—WHAT IS IT? (CONT FROM PG 1)

The pre-chip limbs and debris are now taken to Norfleet, where they are ground into resalable mulch.

The debris that we chip using the City wood chipper is used as mulch for parks and schools projects.

When a stump is ground, so that new trees may be planted in that same area, the grindings are left in place so as to improve soil conditions.

Leaves that are collected by Public Works crews throughout the season will be taken to the R-Board landfill this year and used in a new composting program.

Public works will continue to pursue ways to reduce waste and promote true reuse.

Please consider these tips when you shop or when you are cleaning house:

- ◆ Carry reusable grocery and produce bags. Use them.
- ◆ Look for glass, paper & cardboard packaging instead of plastic.
- ◆ When cleaning out at home, consider “redistributing” items, not throwing them away. Give to thrift stores, homeless and animal shelters, consignment shops, etc. Gifting items you no longer have a use for is a cool, retro way to make sure your gifts are unique!
- ◆ Use a compostable toothbrush.



- ◆ Make a meal plan to minimize food waste.
- ◆ Use cloth napkins (Goodwill is a great source)
- ◆ Take your own reusable leftover containers to restaurants.
- ◆ Shop second hand stores for clothing. If you don't LOVE IT, don't buy it.
- ◆ Learn to compost onsite, and compost everything you can, including shredded paper and newspaper.

Keep in mind this 5R methodology in all you do:

**Refuse what you do not need,
Reduce what you do need,
Reuse what you consume,
Recycle what you cannot refuse,
Reduce, Reuse and Rot (compost) the rest.**



Backyard composting is a great way to reuse organic wastes. Composters can be built, such as this one from pallets. There are also premade composters available, such as the one shown. Composters come in all sizes and can be used to create great garden and potting soils for vegetables and beloved houseplants.

The City has a composting brochure available online.

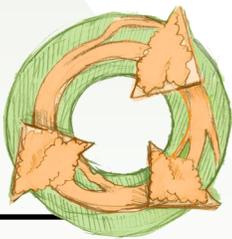
Check it out: <https://www.fredericksburgva.gov/DocumentCenter/View/16153/Composting-brochure-?bidId=>



RECYCLING IS NOT ENOUGH (cont. from p. 2)

Zero Waste is not an impossible goal. It already exists with aluminum. The challenge is to extend the concept to other types of materials, not all at once perhaps, but certainly systematically. As a powerful example, the City Public Works staff has achieved a Zero Waste standard in its tree program, as outlined further in this newsletter. The huge amounts of organic material associated with the tree program can be, and is reused to advantage.

An analysis of our landfill capacity indicates we have less than 50 years until that regional facility is full. Well before then, if we continue our present policies, the region's jurisdictions will need to identify and acquire a new site, with all of the attendant costs. The regional landfill has been recognized by the Virginia Department of Environmental Quality as an Exemplary Environmental Enterprise. The capacity issue, however, still looms over the horizon. One sure way to extend the landfill's useful life will be to substantially reduce the amount of solid waste it receives. We need to work toward Zero Waste and Public Works is leading the way with its own Urban Forest program.



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URBAN FOREST NEWS SEPTEMBER 2019

TREE PROFILE

TRIDENT MAPLE.
(*Acer buergerianum*)

HT: 25-35 ft.

W: 15-25-ft.

LEAVES: Opposite, simple, serrate margin, deciduous, 2-3"

FLOWERS: Yellow, showy. Spring flowering.

FRUIT: Called Samara. 1" long.

ORIGIN: China.



Trident maples are great street trees, as they are resistant to most pests, have a medium size and growth habit, and provide lovely fall color.

These trees also have a beautiful bark that gives great winter interest.

Tridents are on the City's approved street tree list, as they behave well in utility strips and are fairly tolerant of poor conditions.

They do require adequate pruning to manage the single trunk form that is desired as a street tree, and require some pruning to maintain proper growth.

