

Beyond Incineration:

Best Waste Management Strategies
for Montgomery County, Maryland

Prioritizing:

- Cost-effectiveness
- Human health & safety
- Climate protection
- Continuous waste reduction

Prepared for:

County Executive Marc Elrich

By: Zero Waste Montgomery County

Underwritten by:

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Montgomery County, PA has a trash and construction & demolition waste incinerator, which is the county's #1 industrial air polluter.

This report was done at the request of County Executive Marc Elrich, and includes a comprehensive life cycle analysis (LCA) of incineration vs. landfilling for the county's waste.

Find the plan [here](#).

Results on the next two slides.

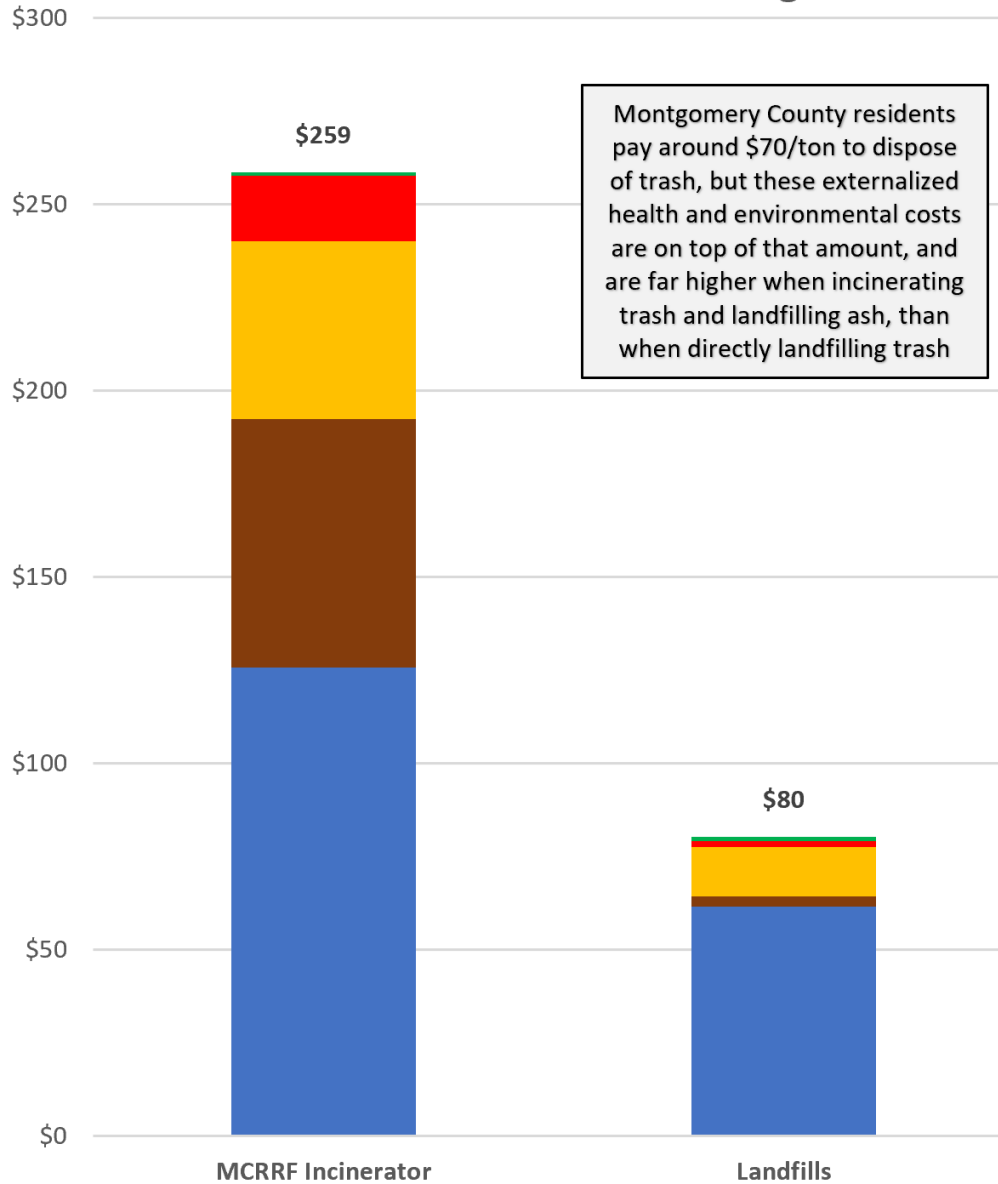
March 2021

www.energyjustice.net/md/beyond.pdf



Incineration vs. Landfilling

Health & Environmental Impacts per Ton of Waste Disposed at Montgomery County Trash Incinerator vs. Landfills in the Region



Montgomery County Resource Recovery Facility (MCRRF) trash incinerator is 3.2 times as harmful for health and environment as landfills in the region (a composite of 10 regional landfills in PA, VA & OH).

Source: Life Cycle Analysis (LCA) from 2021 report, "Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland"
www.energyjustice.net/md/moco

Similar results found in analyses of Covanta incinerators in Delaware County, PA, Fairfax County, VA, and Honolulu, HI

- Four other impacts (eutrophication, acidification, ecosystems toxicity, ozone depletion)
- Toxics (cancer, birth defects, learning disabilities...)
- Smog formation (asthma attacks & respiratory distress)
- Particulate Matter (heart attacks, stroke, COPD...)
- Greenhouse Gases (climate change)

Beyond Incineration:

Best Waste Management Strategies for Montgomery County, Maryland

- Principles:
- Cost-effectiveness
 - Human health & safety
 - Climate protection
 - Continuous waste reduction

Prepared for: County Executive Marc Elrich

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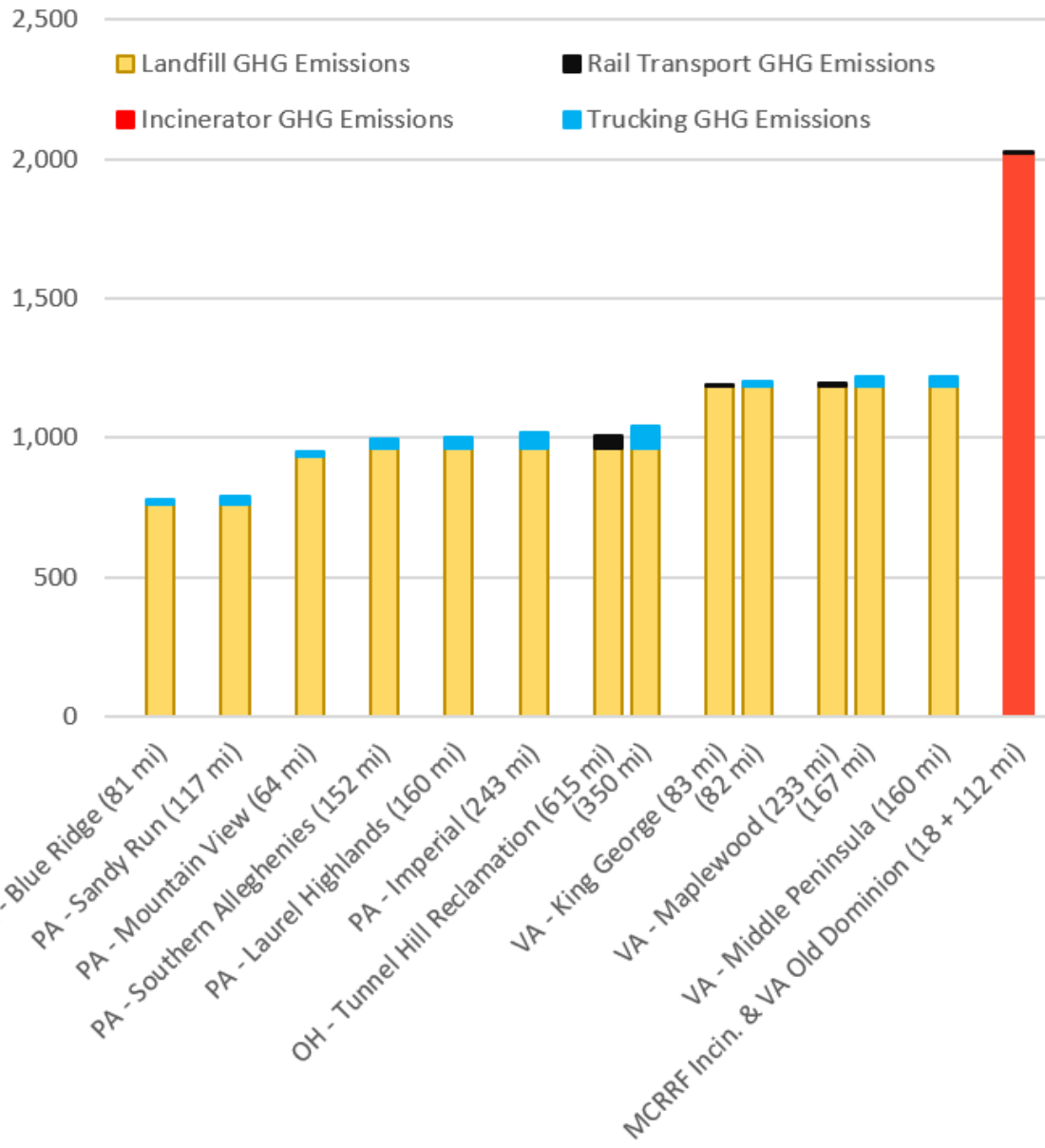
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 and others in the region

March 2021
www.energyjustice.net/beyond.pdf



Transportation Impacts Insignificant

20-year CO₂e (lbs/ton of waste disposed)



Transportation climate impacts (blue/black) are minor compared to incineration (red) or landfilling (yellow), and no realistic transportation distance can justify incinerating in-county over hauling waste to distant landfills.

Source: Life Cycle Analysis (LCA) from 2021 report, "Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland"
www.energyjustice.net/md/moco

Beyond Incineration:

Best Waste Management Strategies for Montgomery County, Maryland

Prepared for:

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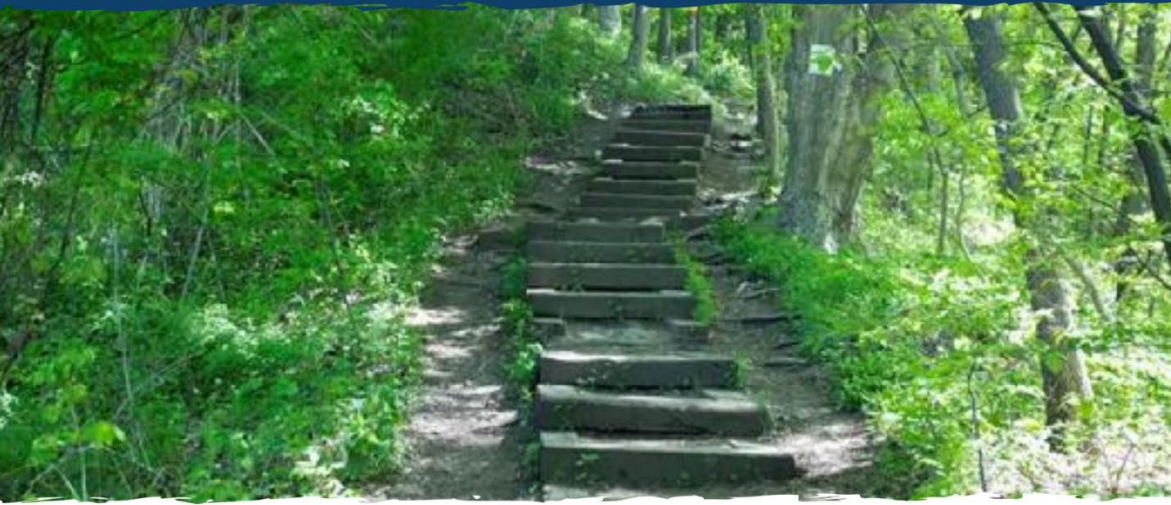
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Delaware County's Path Toward Zero Waste



NPS/Michael Cuff

Delaware County, Pennsylvania
Municipal Waste Management Plan 2023-2033
Non-Substantial Revision

Office of Sustainability
March 2024



Delaware County, PA is home to the nation's largest waste incinerator, in the City of Chester. It is the largest industrial air polluter in the county, and the county is now moving away from incineration.

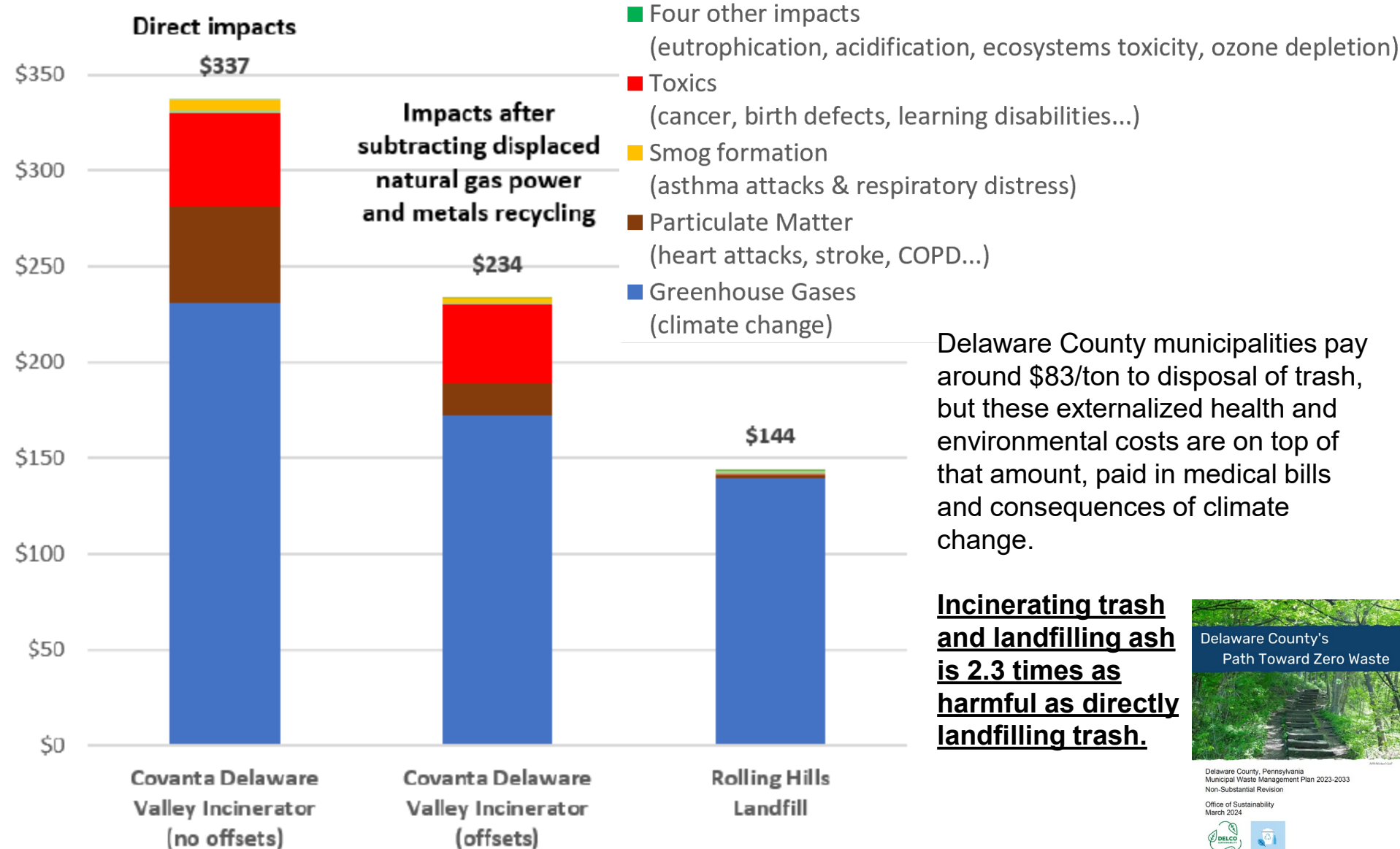
The county's Zero Waste Plan includes a comprehensive life cycle analysis (LCA) of incineration vs. landfilling vs. zero waste.

Find the draft plan [here](#) and the LCA summary and full writeup [here](#).

Results on the next few slides.

Incineration vs. Landfilling

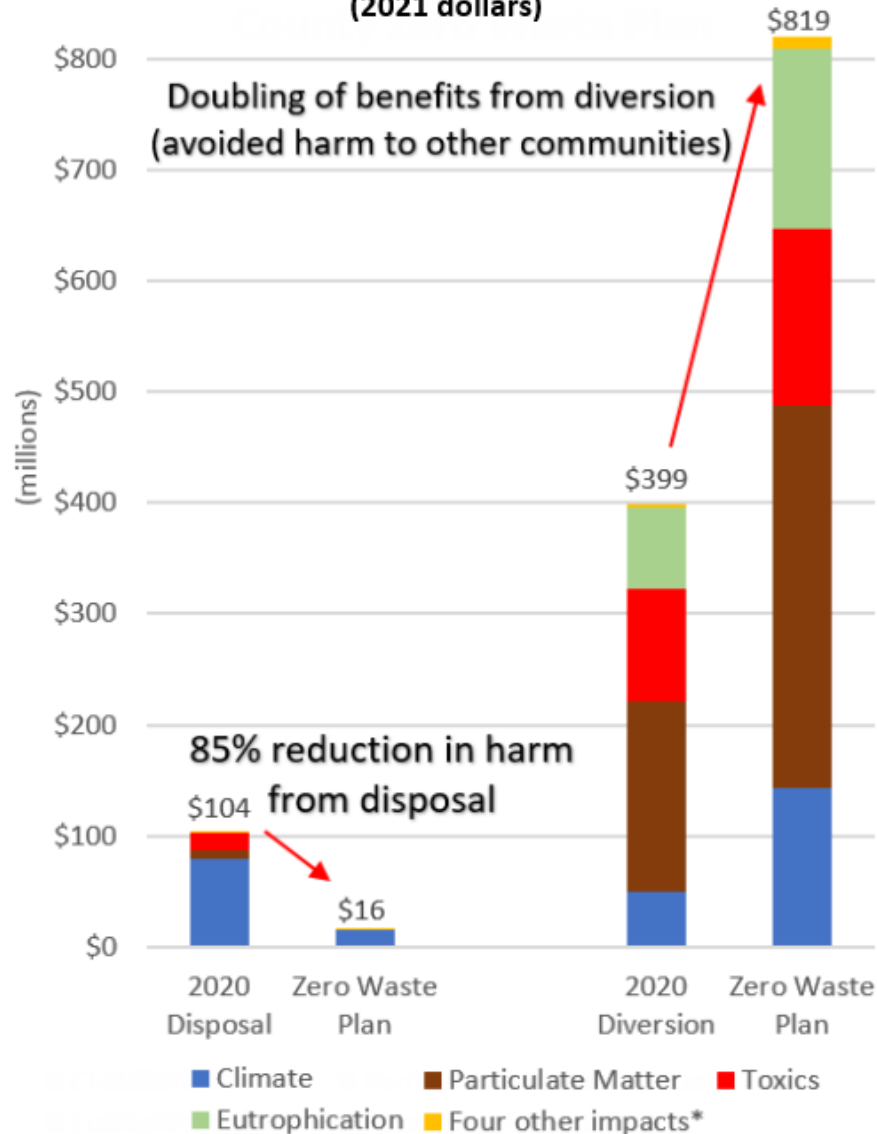
Health & Environmental Impacts per Ton
of Waste Disposed at Covanta Delaware Valley Incinerator vs.
Rolling Hills Landfill



Annual Health and Environmental Impacts of Implementing

Delaware County Zero Waste Plan

(2021 dollars)



* Acidification, ecosystems toxicity, ozone depletion, and smog formation

85% reduction of disposal impacts from a combination of diverting materials from disposal, and switching from incineration (and landfilling ash) to direct use of landfilling.

Note: This chart combines Figure S1 / Figure 1 and Figure S4 / Figure 5, but all expressed in positive dollars.

Table A1, A2, B1, and B2 provide the raw numbers behind this chart.

While the last chart looked at externalized health and environmental costs per ton, this looks at the entire impact of Delaware County's waste system (all tons in a year), showing \$104 million dollars of health and environmental costs per year.

Adopting the Zero Waste Plan (ending incineration and reducing waste) cuts those harms by 85%, while the benefits (avoided harms) that already happen from current recycling efforts (about \$400 million a year) would be doubled.

Examples of these avoided harms are not needing to log or mine new raw materials because we're now consuming less, reusing/repairing, recycling and composting.



Delaware County, Pennsylvania
Municipal Waste Management Plan 2023-2033
Non-Substantial Revision
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Transportation Impacts Insignificant

Yellow lines show difference between hauling from two transfer stations 3 and 13 miles from the incinerator (last bar) vs. trucking all trash to landfill 60 miles away (first 3 bars)

