Preserving the Health of Upper Marlboro Communities

Initial Research Findings
Comparison of the Sites Considered in the M-NCPPC Planning Report

With Respect to Variables Critical to the Health of Upper Marlboro Communities
This following comparison begins with aerial maps of the four sites presented in the Planning Study. Eight slides then follow. Each slide shows a different layer from Maryland's Environmental Resources & Land Information Network (MERLIN) website. For example, on slide four you'll see images from MERLIN showing the extent of wetlands and streams on Sites 7, 8, 9, and 10. A red-dashed line defines the area of each site. Note that the images of the four sites are bounded by either green, yellow, orange or red. These colors are used to flag each site from best to worst with respect to each MERLIN data layer. Green indicates the best site followed by yellow, then orange with red for the worst site with respect to each MERLIN layer.

A table appears at the end comparing all four sites with respect to all eight MERLIN layers. The best site (green) with respect to each variable was assigned a score of “1”. The worst site (red) got a score of “4”. Note that when totaled the best location for the transfer station is Site 7, followed by Site 10, then Site 9, with the worst being Site 8.

The best site with respect to proximity to homes is 10, followed by Site 8, then 9 with Site 7 being the worst.
Aerial Photos from Planning Report & Proximity to Homes
Wetlands & Streams

7

8

9

10
Wetlands of Special State Concern
Sensitive Species Project Review

Area

7

8

9

10
Chesapeake Bay Critical Area
Floodplain
Green infrastructure
Historic & Cultural Resources
Priority Funding Area
Water & Sewer Available
<table>
<thead>
<tr>
<th>MERLIN Variable</th>
<th>SITE 7</th>
<th>SITE 8</th>
<th>SITE 9</th>
<th>SITE 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to homes</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Wetland &amp; Streams</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Wetland Spec. State Concern</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sensitive Species Rev. Area</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Critical Area</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Floodplain</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Greeninfrastructure</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Historic-Cultural Resources</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Water &amp; Sewer Available</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total (higher = poorer site)</strong></td>
<td><strong>15</strong></td>
<td><strong>28</strong></td>
<td><strong>21</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
Our Arguments

✓ Browns Station ruled out because that community suffered landfill for years.
✓ Our community should also be ruled out because we suffered a sewage treatment plant and yard waste facility.
✓ The site selection study was severely biased and an unbiased study would exclude the site.
Environmental Justice

Exhibit 1 from MNCPPC planning study

Distance of the transfer station to other undesirable land uses such as incarceration facilities, power plants, waste treatment facilities, etc.

<table>
<thead>
<tr>
<th>Criterion 4: COMMUNITY IMPACT</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity of Residential Areas</td>
<td>Number of residences within a given distance from the transfer station. (For example, a 200-home community within 1000 feet)</td>
<td></td>
</tr>
<tr>
<td>Setback</td>
<td>Distance between the transfer station operating area and the site property border.</td>
<td></td>
</tr>
<tr>
<td>Screening</td>
<td>Existing vegetation or topography (hills) between the operational area and the site border. (Note that vegetation, berms or walls can be installed to screen the site operational area.)</td>
<td></td>
</tr>
<tr>
<td>Proximity to Sensitive Receptors</td>
<td>Distance of the transfer station and main access route to schools, medical facilities, churches, recreation sites, day care facilities, retirement communities, etc.</td>
<td></td>
</tr>
<tr>
<td>Historical &amp; Cultural Sites</td>
<td>Distance of the transfer station to historical and cultural sites.</td>
<td></td>
</tr>
<tr>
<td>Environmental Justice</td>
<td>Distance of the transfer station to other undesirable land uses such as incarceration facilities, power plants, waste treatment facilities, etc.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion 5: SITE AVAILABILITY</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Ownership</td>
<td>Land owned by local, regional, state or federal government</td>
<td></td>
</tr>
<tr>
<td>Willing Seller</td>
<td>Land owner receptive to selling their property.</td>
<td></td>
</tr>
<tr>
<td>Condemnation</td>
<td>Required when there is an unwilling seller.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion 6: TRANSPORTATION</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Transportation Routes</td>
<td>Distance to major arterial roads and highways.</td>
<td></td>
</tr>
<tr>
<td>New Roads &amp; Road Improvements</td>
<td>Length of new roads or road improvements to safely accommodate vehicles at the transfer station.</td>
<td></td>
</tr>
<tr>
<td>Rail Access</td>
<td>Distance and accessibility to rail lines to permit export of waste from the transfer station and minimize the use of tractor trailer transport.</td>
<td></td>
</tr>
<tr>
<td>Inbound &amp; Outbound Truck Routes</td>
<td>Ability to avoid truck traffic through residential areas and minimize traffic congestion, pedestrian risk, air emissions, noise, road wear and litter.</td>
<td></td>
</tr>
<tr>
<td>Distance to Population Center</td>
<td>Closeness to the population center minimizes vehicle air emissions and fuel consumption.</td>
<td></td>
</tr>
</tbody>
</table>
Existing Environmental Justice Uses

Site 8: 6500 SE Crain Hwy

AERIAL MAP

Legend
- Site Boundary
- Property

Imagery from Spring 2005

1 inch equals 1,000 feet

The Maryland National Capital Park and Planning Commission
Courtesy: Crystal Plotting Services
# Where Did Environmental Justice Go?

## Table 1. Summary of Site Ranking and Rationale

<table>
<thead>
<tr>
<th>Criteria</th>
<th>SITE 7 Rank</th>
<th>Comments</th>
<th>SITE 8 Rank</th>
<th>Comments</th>
<th>SITE 9 Rank</th>
<th>Comments</th>
<th>SITE 10 Rank</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - LAND AREA</td>
<td>4</td>
<td>Smaller site, limited buffering due to topography</td>
<td>2</td>
<td>Large site with large open area that is well buffered on two sides</td>
<td>1</td>
<td>Largest site, provides for the best buffering ability</td>
<td>3</td>
<td>Smallest site, but well buffered by trees</td>
</tr>
<tr>
<td>2 - ENVIRONMENTAL IMPACT</td>
<td>2</td>
<td>No known resources on the property, partially cleared by current site operations</td>
<td>1</td>
<td>Significant area already cleared by current site operations</td>
<td>4</td>
<td>High amount of impact to streams, wetlands and vegetation</td>
<td>3</td>
<td>High amount of vegetation loss, potential wetland impact</td>
</tr>
<tr>
<td>3 - LAND USE</td>
<td>3</td>
<td>Currently unused, residential adjacent</td>
<td>1</td>
<td>Currently used by composting facility, no adjacent residential</td>
<td>4</td>
<td>Previous sludge disposal area, surrounded by residential</td>
<td>2</td>
<td>Currently unused, zoned industrial</td>
</tr>
<tr>
<td>4 - COMMUNITY IMPACT</td>
<td>2</td>
<td>Good buffering to residential by trees</td>
<td>1</td>
<td>Similar adjacent uses, no residential</td>
<td>4</td>
<td>Surrounded by residential, can potentially be buffered</td>
<td>3</td>
<td>Some adjacent residential, can be buffered</td>
</tr>
<tr>
<td>5 - SITE AVAILABILITY</td>
<td>4</td>
<td>Site reportedly unavailable</td>
<td>1</td>
<td>Site owned by County</td>
<td>2</td>
<td>Site assumed to be available from MES</td>
<td>3</td>
<td>Site potentially available</td>
</tr>
<tr>
<td>6 - TRANSPORTATION</td>
<td>2</td>
<td>Excellent proximity to Capital Beltway, likely intersection modifications needed</td>
<td>1</td>
<td>Close proximity to major arterial roads, site access road suitable</td>
<td>4</td>
<td>Poor transportation route through residential area with no area for road expansion</td>
<td>3</td>
<td>Road potentially suitable to handle traffic types, primarily through residential areas</td>
</tr>
<tr>
<td>7 - ENGINEERING CONSIDERATIONS</td>
<td>3</td>
<td>No Marlboro Clay, significant topography changes</td>
<td>1</td>
<td>Presence of Marlboro Clay along site perimeter, gentle topographic changes</td>
<td>4</td>
<td>Presence of Marlboro Clay, significant topographic differences</td>
<td>2</td>
<td>No Marlboro Clay, usable topography</td>
</tr>
<tr>
<td>8 - ECONOMIC CONSIDERATIONS</td>
<td>4</td>
<td>Likely high land cost, significant development costs due to topography</td>
<td>1</td>
<td>No land purchase cost, site already partially developed</td>
<td>3</td>
<td>Need to purchase land, high permitting costs due to confirmed wetlands and streams, high development costs due to topography and tree clearing</td>
<td>2</td>
<td>Need to purchase land, likely high permitting costs due to potential wetlands and regulated streams, high development costs for tree clearing</td>
</tr>
</tbody>
</table>
Environmental Justice Facilities Pose Health Threat

**Abstract**

Landfill disposal and waste-to-energy (WTE) incineration remain the two principal options for managing municipal solid waste (MSW). One critical dimension of the acceptability of these options is the public health risk concerns. In this analysis, relying on published data and expert judgment, we have performed health risk assessments for landfill disposal versus WTE incineration, the two main pathways for MSW management in New York State. These analyses are based on the recently updated waste management network (WMN) of New York State, which incorporates the transfers of about 250 million kg of MSW each year. WTE facilities in New York State pose health risks to those who live nearby, although risk from landfill disposal is significantly higher. This study shows the health risk associated with landfill disposal is significantly higher than that from WTE facilities. In this investigation, individual cancers and respiratory health risks for both options were estimated separately, and the results show that the former is considerably higher than the latter. These results are consistent with previous findings on this issue.

**Potential Health Hazards from Microbial Aerosols in Densely Populated Urban Regions**

Aerosolized bacteria were recovered up to 990 m downwind of three sewage treatment plants in Jefferson County, Ky. This distance includes homes in the proximity of several hundred such plants in that county. Bacterial counts were elevated on foliage near activated sludge tanks; although these counts decreased rapidly, at 48 h after exposure they were significantly higher than the counts on unexposed leaves. The 50% lethal dose of aerosolized *Klebsiella pneumoniae* was comparable to the 50% lethal dose of a virulent clinical isolate, and enteric bacteria were recovered from the respiratory organs of mice after forced inhalation adjacent to an aerated sludge tank. The coliform density in the effluents of the plants tested was inversely related to the airborne bacterial load at these plants. This relationship was attributed to the relationship between effluent quality and the extent of aeration in activated sludge. Wind direction and distance influenced the airborne counts, but the extreme variation in counts indicates that it is not possible to predict emission rates accurately in an open ecosystem. Airborne enteric bacteria also were isolated near a decorative fountain used by humans for bathing. The discovery of these aerosolized microorganisms from polluted waters in densely populated areas suggests that a potential health hazard may be created by the increased probability of inhaling and ingesting microorganisms of fecal origin.
Cumulative Effect of Multiple Environmental Justice Facilities Unknown

Site 8: 6500 SE Crain Hwy

**AERIAL MAP**

- **Legend**
  - Site Boundary
  - Property

Imagery from Spring 2005

1 inch equals 1,000 feet

- State Highway Shop
- Surplus Vehicle Storage
- Sewage Treatment Plant
- Sewage Sludge Disposal Areas
- Yard Waste Facility

The Maryland Natural Capital Park and Planning Commission

Courtesy of Spatial Planning Section
No Safe Transfer Station Location at Site 8

Either too close to homes or too close to threatened endangered species wetland.
Strategy Options

✓ Transfer Station Alternatives
✓ Referendum
✓ State legislation
✓ Permit & other approvals
  • Permitted use on R-O-S
  • Special exception
  • MDE plan action + permits
  • Other county permits-approvals
✓ Impact reduction
Transfer Station Alternatives
Questions Not Answered by Planning Study

- Economics of locating station where most county waste is generated
- Pros-cons of satellite transfer stations
- Value of a multicounty transfer station
- Options to further reduce waste needing transfer
- Public health effects of candidate sites
- Why are environmental justice facilities concentrated in the Upper Marlboro area
Section 319. Referendum.

Any law which becomes law pursuant to this Charter may be petitioned to referendum, except a law: (1) imposing a tax; (2) appropriating funds for current expenses of the County government; (3) establishing Councilmanic districts; (4) amending a zoning map; or (5) granting a special exception to zoning regulations. Upon the adoption of the Capital Budget any new project not previously contained in the Capital Budget and any additions constituting an enlargement of a project shall be subject to referendum. Once a project has been approved by referendum, that portion of a subsequent Bond Enabling Act or Bond Issue Authorization Ordinance relating to the project shall not be subject to referendum, and if a bond enabling bill including the project and identifying it is approved by referendum that portion of any subsequent bond issue authorization ordinance relating to the project shall not be subject to referendum. A law shall be submitted to a referendum of the voters upon petition of ten thousand (10,000) qualified voters of the County. Such petition shall be filed with the Board of Supervisors of Elections of Prince George's County within forty-five calendar days from the date the bill becomes law. If more than one-third but less than the full number of signatures required to complete any referendum petition against such law be filed within forty-five calendar days from the date the bill becomes law, the effective date of the law, and the time for filing the remainder of signatures to complete the petition shall be extended for an

REFERENDUM

1. Applies to resolutions?
2. Better to focus on capital budget measure?
3. Need 10,000 signatures of registered voters.
4. Must get signatures within 45 to 90 days.
5. Clock may begin with County Executives signature.
6. Once on the ballot winning the referendum is the hard part.
Unofficial Copy
M3

HOUSE BILL 1154

2001 Regular Session
HR0457

By: Prince George's County Delegation
Introduced and read first time: February 9, 2001
Assigned to: Environmental Matters

Committee Report: Favorable with amendments
House action: Adopted with floor amendments
Read second time: March 24, 2001

CHAPTER

1 AN ACT concerning
2 Prince George's County - Waste Transfer Stations - Distance from Schools
3 Bowie State University
4 PG 410-01
5 FOR the purpose of prohibiting a person from constructing or operating a waste
6 transfer station within a certain distance of an institution of higher education in
7 Prince George's County Bowie State University providing for certain
8 exceptions; and generally relating to the construction or operation of a waste
9 transfer station in Prince George's County.
10 BY repealing and reenacting, with amendments,
11 Article - Environment
12 Section 9-204
13 Annotated Code of Maryland
14 (1996 Replacement Volume and 2000 Supplement)
15 SECTION I. BE IT ENACTED BY THE GENERAL ASSEMBLY OF
16 MARYLAND, That the Laws of Maryland read as follows:
17 Article - Environment
18 9-204.
19 (a) This section applies to any water supply system, sewerage system, refuse
20 disposal system that is for public use, or any refuse disposal system that is a solid
21 waste acceptance facility as defined in § 9-501(n) of this title if the solid waste
22 acceptance facility is installed, altered, or extended after July 1, 1988.
Site 8 Zoned R-O-S
County Code Says Transfer Station Not Allowed in R-O-S Zone

- County claims that transfer stations are a public use and the following definition allows public uses in the R-O-S zone: Public Buildings and Uses - Any land, "Building," or "Structure" used for public purposes by any agency, department, or branch of County, State, Municipal, or Federal Government; but not including any vehicle or trailer parking, storage, or marshalling use which does not serve a public building or use in the County.

- Zoning regulation §27-441(4) states that "Public buildings and uses, except as otherwise provided" are permitted by right in the R-O-S zone.

- But transfer stations are “otherwise provided” for in the zoning regulations.

- Zoning regulation §27-473(2)(F) states that transfer stations are only permitted in the I-2 zone and a special exception is required.
Special Exception Considerations

- Needed according to planning study
- Zoning regulations says only permitted in I-2 zone with special exception
- CR-74-2008 + staff says not needed
- Council might rezone Site 8 to I-2
- To deny special exception must prove extraordinary impact
- County council hears appeal; would likely issue special exception
Maryland Department of the Environment

- Must approve solid waste plan amendment
- Must issue refuse disposal permit & transfer station permit
- May require MDE wetland permit
- Highly likely permits will be issued
- Extremely unlikely permit issuance can be reversed
County Permits

- Building permit
- Grading permit:
  - Erosion-sediment control
  - Stormwater management
  - Floodplain-wetland encroachment
- Right to appeal uncertain
Impact Reduction

- Best protection = No transfer station
- What if we can’t stop the project?
- Impact reduction options:
  1. Maximize separation distance
  2. Maximize noise-odor controls
  3. Limit hours-days of operation
  4. Tractor-trailers vs. garbage trucks
  5. Limit duration in years.
  6. Community impact fee.
Recommended Next Steps

A. Meet with Senator Mike Miller about a Bowie-University type bill based on unusual concentration of Environmental Justice facilities.
B. Seek legal ruling on I-2 question.
C. Determine if transfer station funding will be a bond issue which will be on the ballot anyway.
   ▪ If not, then verify that a Council resolution is subject to a referendum and, if so, determine when 45-day clock begins.
   ▪ Determine if it makes more sense to take the transfer station capital budget measure to referendum.
   ▪ Draft a strategy for securing the 10,000 signatures.
D. Research transfer station alternatives.
E. Meet with MDE staff to argue against approval of solid waste plan amendment.
F. Survey those living in the Upper Marlboro area for impacts due to existing sewage plant and yard waste facility.
G. Visit similar existing transfer stations to assess impacts.
H. Survey those living near similar transfer stations for impacts.
I. Review MNCPPC planning study file for other irregularities.
J. Monitor for application submissions to the County & MDE.