

Resources (General)
R 1-6

Siting Criteria

From *EPA: Waste Transfer Stations: A Manual for Decision-Making*

<http://www.epa.gov/epawaste/nonhaz/municipal/transfer.htm>

Central location to collection routes: Proximity to collection routes. Placement best near population centers and source of trash.

Access to major transportation routes. Should have **direct access to truck routes, major arteries, and highways** (or rail and barge). It is preferable to avoid routing traffic through residential areas.

Site size requirements. Depends on waste. Ability for expansion. Buffer space if near view.

Access to utilities: Transfer stations generally require electricity to operate equipment... , water for facility cleaning, restrooms, and drinking; and sanitary sewer systems for wastewater disposal. Some smaller transfer stations use wells for water supply, and some, especially in more rural settings, use septic systems or truck their wastewater (leachate) for offsite treatment.

Environmental and social justice. Site placement should not target poor or minority communities. Avoid clustering or cumulative impacts on one region.

Environmental impact. Siting a waste transfer station, or any type of facility, in areas with preclusive siting criteria is often prohibited by federal, state, or local laws or regulations, or requires facilities to incorporate special engineering design and construction techniques. Even when siting in excluded zones is allowed, the added engineering designs or strong public opposition can significantly increase construction costs. In general, it is best to avoid siting in these areas. **Exclusionary criteria might include areas such as:**

- Wetlands and floodplains.
- Endangered and protected flora and fauna habitats.
- Protected sites of historical, archeological, or cultural significance.
- Prime agricultural land.
- Parks and preserves.
- Impact on air quality

Zoning requirements – generally in areas zoned industrial

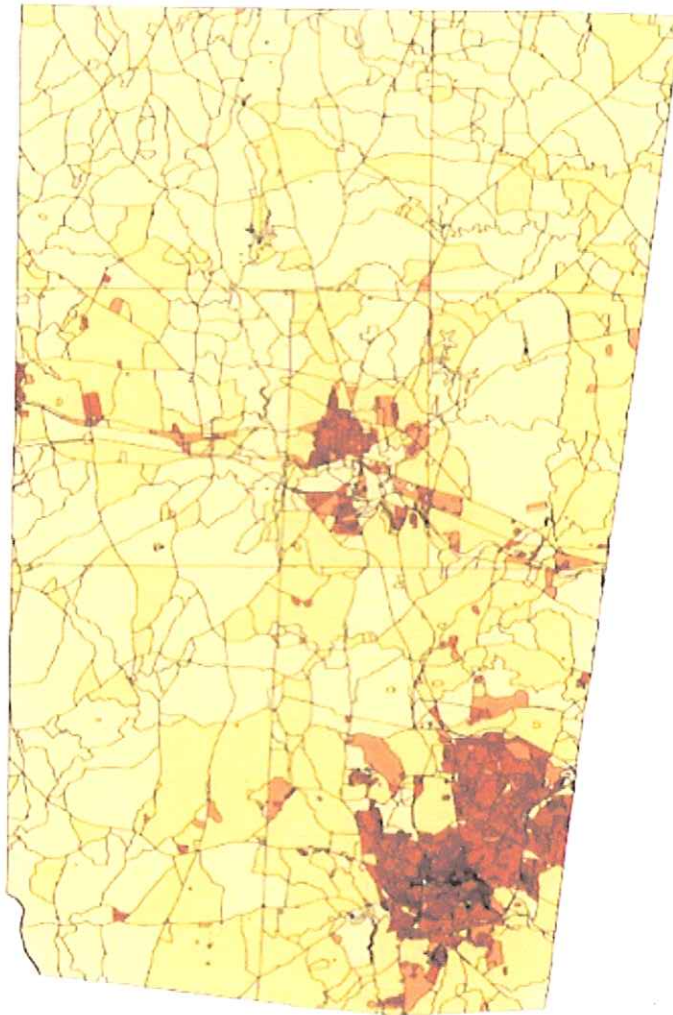
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Cost considerations: Brown sites cost less to develop; WTS can be built within several months. Green sites require time, money spent with environmental studies, purchasing processes, clearing, additional costs for hauling leachate and clean water.

Community Specific Criteria:

- Number of residences affected
- Impacts on existing businesses
- Traffic compatibility
- Impact on historic or cultural features
- Impact on neighborhood character
- Adjacent land uses, including other environmental stressors
- Proximity to schools, churches recreation sites and residences

ORANGE COUNTY POPULATION CONCENTRATION



Persons per Square Mile -- Census Blocks



Created by Bettina Brinkley
Orange County Planning
April, 2002

DATE: October 3, 2008

TO: Orange County Board of Commissioners
200 South Cameron Street
PO Box 8181
Hillsborough, NC 27278

FROM: Orange County Residents

RE: Petition Regarding Proposed Waste Transfer Station Siting.

As Orange County residents, we present the following significant factors that must be considered in the site selection process for the Orange County Waste Transfer Station. We are highlighting these issues because it appears that there are considerations, processes steps, and potential sites that are not consistent with the stated goals of Orange County and its citizens.

1. **Economic Impacts:** Any proposed site will result in additional cost to taxpayers. We request that a full economic impact analysis addressing the following concerns be provided to all citizens prior to a final decision that include but is not limited to the following:
 - Quantify the reasoning and impacts to allow intrusion into a major Economic Development District, specifically sites located at I-40 and Old 86.
 - Quantify long-term impacts to Orange County tourism and Town of Hillsborough tourism by the acquisition of land directly in the defined "Gateway to Hillsborough". Include impacts to the corridor plan that has been prepared with significant public input.
 - The individual tax increase has not been identified. Perform a cost/benefit analysis, and show impacts on a per resident or per property rate basis.
 - Provide an evaluation of cost considerations if utilizing existing publicly-owned or quasi-publicly owned land rather than obtaining privately owned land.
 - Quantify the long-term (30+ year) negative tax implications due to loss of business taxable land.
 - Quantify due to loss of land and livelihood by property owners.
 - Provide a clear cost for all new infrastructure that will be required. This must include at least the following: all County roadway improvement leading to the potential site(s), installation of new water, sewer, electric, intersection upgrades, road usage and maintenance impacts, land acquisition costs at proper expected rates, fuel increases, additional manpower requirements, inefficiencies due to increased distance from the new County Solid Waste administration buildings being constructed.
 - Provide a solid evaluation study that identifies reuse of other publicly-owned land to reduce capital and long-term economic impacts.

2. **Environmental Impacts:** There are numerous and substantial environmental impacts associated with highly ranked potential sites. No environmental impact analysis has been performed. We request the following:
 - Provide a solid evaluation study that analyzes reuse of other publicly-owned or quasi-publicly land, as a means to reduce long-term environmental impacts and permanent locking of land resources.

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- ❑ Present a written environmentally justifiable case demonstrating why increased use of resources is acceptable to the Orange County Board of Commissioners. At a minimum utilization of the following resources should be addressed: land, fuel, water, infrastructure, roadways.
- ❑ Provide written environmentally justifiable rationale demonstrating why siting of the Waste Transfer Station would have no Significant Environmental Impacts to a Scenic By-way (Old 86).
- ❑ Provide written environmentally justifiable rationale demonstrating why the acquisition of private land is the most reasonable and best environmentally necessary option for siting of a new Waste Transfer Station. Additionally, provide justification for a decision to use or not use land that is already owned by a public or quasi-public agency.
- ❑ Provide a clear environmental engineering design showing the minimum land requirements required to place the proposed Waste Transfer Station. If the Orange County Board of Commissioners is requesting usage of additional land resources simply for this Waste Transfer Station, provide environmentally justifiable rationale to demonstrate why associated environmental impacts are acceptable.
- ❑ Provide a hydrology report or equivalent demonstrating that there will never be surface water runoff from the potential Waste Transfer Station that reaches and contaminates nearby water resources. Specifically this report and analysis must address the commercial fish ponds operated on adjacent land to the potential sites located at I-40 and Old 86.
- ❑ Provide a full evaluation with conclusions regarding the potential flooding concerns raised by the Cornwallis Hill neighborhood.

3. **Selection Process Concerns:** There are many apparent questions, biases, and/or flaws in the Selection Process that have come to our attention. We request a significant readjustment or restarting of the selection process, due to concerns that include but are not limited to the following:

- ❑ Selection Methodology and Objectivity is unclear, questionable.
- ❑ Community-Specific Input Form is confusing and difficult to find. It has not been available at the County Offices for people without printing capability, and is layered beneath multiple links on the internet.
- ❑ Communication to entire County is fatally lacking. For instance, the Town of Hillsborough and residents on Rt 54 were unaware that their property was even under consideration until a few days before the Sep. 16, 2008 Orange County Commissioners meeting.
- ❑ Conflicting statements have been made regarding full usage intent of large parcels. We request written clarification and disclosure of the full intent for property at which the Waste Transfer Station will be built. This report must clearly state and provide commitments regarding potential co-location of all types of solid waste management activities and/or facilities.
- ❑ Methodology for Technical Scoring is not traceable, and appears significantly flawed.
- ❑ Application of Exclusionary Criteria is inconsistent and non-comprehensive.



<http://www.thinkvisiam.com/benefits.shtml>

ENERGY ANSWERS INTERNATIONAL

<http://www.energyanswers.com/>



<http://www.wastemanagement.com/wm/services/waste-to-energy.asp>



<http://www.naanovo.com/wte#>



<http://www.wte.org/aoes.shtml>

Summary of Applicable Recommendations of Solid Waste Advisory Board On Waste to Energy

From Minutes – Regular Meeting Solid Waste Advisory Board September 4, 2008:

“Smith states that he is recommending to the Town of Hillsborough that **they consider a consortium for mass burning with the surrounding counties, starting with Orange County.** Orange, Durham, and Chatham will need this future process for years. ... Burning it is the only way with the strict clean air provisions regulations we have. I'm in favor of investigating it with some other help. **Hillsborough cannot afford it, Orange County can't afford it, but maybe Orange, Durham, Chatham and Wake could afford it.**”

Norwood: “... a lot of people are making the comment about not wanting to dump our garbage on someone else but we don't have the land or the garbage to do it. We would have to seriously look at what type of offer to make to chip in. You'd have to start by stating how much garbage you have, how much would you supplement the building of it, who would want to build it? **They would need to start now to make any real impact.**”

Sassaman: “...costs per ton for operating and maintenance for Mass Burn and RDF run \$50 –\$60 ton. The real cost is the capital cost for the installed unit. **The facilities are expensive but there should be other factors that drive what we do in Orange County other than cost.** One of the best things to do with garbage is to use it for something else. One of the things to use it for is to generate electricity. The ash at the end of the incineration process is quenched in water and is typically a sludge that has a water permeability that is less than concrete, when it sets up in a landfill it does nothing. The bag house dust that comes out at the end can be treated in such a way that it sets up like concrete. **It is not a dangerous thing to have.**”

Pollock notes that **the transfer station may be needed even if we're transferring to an incinerator.**

Wilson states **[we need] to focus on short-term priorities now while at the same time pursuing any opportunities that may come up in the meantime and perhaps initiate some preliminary discussions with the University to examine any potential.**

Outsourcing in case of need or desire to plan for WTE

From: "Dodd, Chip (Jean)" cdodd@wm.com
Date: November 17, 2008 10:42:33 AM EST

Waste Management would love to work with Orange County on any type of solid waste disposal program. In addition to our transfer station in Morrisville, we have a transfer station in Siler City. Both have capacity to take 202 tons per day. We could design a disposal program by rail (similar to the one involving California and Oregon) or we could design a waste-to-energy program, which we believe viable in light of the fact that no landfills being sited in NC means the SW disposal cost will rise to an estimated \$80 per ton. Just let us know if you would like to discuss any of this more. For now, the addresses of our transfer stations follow.

Waste Management Transfer Station
0411 Globe Road Morrisville, NC 2750
\$43.20 per ton (plus fuel surcharge and environmental fee)

Waste Management Transfer Station
361 Waste Treatment Plant Road Siler City, NC
\$49.73 per ton (plus fuel surcharge and environmental fee)

Again, we would be delighted to partner with Orange County on solid waste disposal. Thanks for contacting us!

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Subject: contact list & waste info summary

Date: Wednesday, November 19, 2008 12:07 PM

From: orange_county_waste_site_concerned_citizens <orangecountywastesiteconcerns@gmail.com>

To: Orcountyvoice@aol.com

Cc: kiva4@mindspring.com, nathanr@embarqmail.com, seasw@mindspring.com, mtadd@earthlink.net, More...

Hey folks -- here's a contact list and rough summary of findings so far -- year end projects I've fallen behind on in the last few weeks are on the verge of eating me alive and will limit how much I can dig into all this right now, but will try to do what I can -- in the meantime:

1. Waste Industries -- Durham transfer station contact is Byron Hurtado at 536-3824 -- not sure of precise surplus capacity but it's a lot he believes -- present tipping fee is \$42.50 per ton
2. Waste Management (not to be confused with the competitor listed above) -- NC contact is Greg Peverall at 336-723-3551 -- local contact for Morrisville and Siler City transfer stations and related new business development / public sector marketing is "Chip" (Jean) Dodd at 919-405-1496 -- confirms that either facility could take in excess of 202 tons per day but did not indicate tipping fee -- Chip has some ability to help with WTE proposals also, would tie into WMI's Wheelabrator division noted below -- Chip may be the more relevant contact than Jack Ristau below
3. Duke Energy Generation Services -- Charlie Beacom (manager of business origination for unregulated generation) at 800-398-5917 or charles.beacom@duke-energy.com -- but the seemingly more relevant NC contact is Owen Smith (whose group at Duke Energy is in renewable energy and carbon strategy for regulated utility operations) at 704-382-1595 or oasmith@duke-energy.com -- Owen seemed lukewarm on WTE due to cost feasibility yet also seemed interested in having talks
4. Wheelabrator Technologies (the WTE division of Waste Management) -- Jack Ristau in business development office at 800-682-0026 or 603-929-3455 -- says the company has visited Moore County NC and met with officials there who are considering WTE, and that Wilmington NC is also in talks with Wheelabrator
5. Durham City Waste Transfer Station -- Josephine Valencia (solid waste disposal manager) 560-4186, department director Donald Long also at 560-4186 -- political hot potato but they confirm surplus capacity is available -- may have to hire extra workers to handle a significant intake from OC, present tipping fee in \$40 per ton range but would be higher if extra workers needed
6. Alamance County Landfill -- Greg Thomas at landfill 336-376-0411, county manager David Smith at 336-228-1312 -- they as matter of policy won't take out of county waste -- have 67 years remaining in 530 acre landfill with 90 acres presently permitted by NC with 30 acres of that in use now -- cost was \$6M in 1994 to bring facility online

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On Nov 19, 2008, at 9:46 AM, Orcountyvoice@aol.com wrote: