

CITY OF HIGH POINT

AGENDA ITEM



Title: SP-15-0010
WI High Point Landfill, LLC

From: Lee Burnette, Planning & Development
Director

Meeting Date: November 02, 2015

Public Hearing: No

Advertising Date: NA

Advertised By: NA

Attachments: A. Staff Report
B. Applicant's Findings

PURPOSE:

A request by WI High Point Landfill, LLC for a major watershed variance to disturb an existing perennial and intermittent stream buffer as classified by the Department of Natural Resources Division of Water Quality. The buffer disturbance exceeds five percent (5%) of the stream; therefore, local and state (Environmental Management Commission) review is required. The site is located at 5830 Riverdale Road, which is lying along the west side of Riverdale Drive approximately 1/4 mile south of E. Kivett Drive. The site is also known as Guilford County Tax Parcel ID 0213048.

BACKGROUND:

Staff report and the Applicant's proposal is enclosed.

BUDGET IMPACT:

There is no budget impact.

RECOMMENDATION / ACTION REQUESTED:

- A. On October 7, 2015, the Technical Review Committee had a favorable recommendation for the proposed Major Watershed Variance.
- B. Staff recommends **approval** of the Watershed Variance Case SP-15-0010 as outlined in the attached staff report.

CITY OF HIGH POINT
DEPARTMENT OF PLANNING AND DEVELOPMENT

STAFF REPORT (Case # SP-15-0010)
MAJOR WATERSHED VARIANCE
November 2, 2015

Applicant: Waste Industries High Point Landfill, LLC	Owner: WI High Point Landfill, LLC	
Request: A major watershed variance is being requested for proposed disturbance of an existing perennial and intermittent stream buffer as classified by the Department of Natural Resources Division of Water Quality.		
Site Information		
Location	5830 Riverdale Drive located on the west side of Riverdale Drive between E. Kivett Drive and I-85. Guilford County Tax Parcel 0213048.	
Site Acreage	Approximately 153.8 acres	
Current Land Use	Construction Debris Landfill	
Land Use Plan Designation	Heavy Industrial and Rural Development	
Overlay Districts	Randleman Lake Watershed Critical Area (WCA) Tiers 2 and 3	
Site Access & Street Classification		
Street Name	Classification	Approximate Frontage
Riverdale Drive	Minor Thoroughfare	¼ Mile

Background:

The overall project site (approximately 81 acres) includes a scale house and office, a recycling center, maintenance building and parking/storage area, the existing construction and debris landfill, and the future cell areas that are currently pasture, scrub, and forest. The remainder of the site (approximately 73 acres) is reserved for stormwater basins, minor grading, and a recorded easement for a future City relocation of Kersey Valley Road.

The site was rezoned to Conditional Use Agriculture (CU AG Case #01-09) in 2001 to allow a construction and debris landfill. A Solid Waste Permit from the State was obtained to allow a construction and debris landfill with a design capacity of up to 4.7 million cubic yards.

Following the purchase of the landfill by the current owner additional environmental assessments were conducted. Two drainages areas with wetlands and a stream were identified. The stream is a jurisdictional stream for which riparian buffers must be preserved in accordance with the City's Development Ordinance (approved by NCDNER). The riparian buffer disturbance exceeds 5 percent of the stream buffer area; therefore, local and state (Environmental Management Commission) review is required.

Description of Request:

In order to retain their original approved design capacities for the Construction and Debris (C&D) Landfill the applicant is seeking a major watershed variance to disturb approximately 39,886 square feet of riparian stream buffer (23,718 sq. ft. in Zone 1 and 16,168 sq. ft. in Zone 2). The applicant considered several scenarios to avoid direct impact to the stream and riparian buffers. Please see Page 3, Table 2 of their request for documentation of the landfill expansion alternatives. After assessing all the alternatives the applicant believes that avoidance of the stream, although only reducing the C&D Landfill capacity by 600,000 cubic yards (19% of capacity), would have long term adverse impacts to the preserved stream.

Required Findings of Fact:

To approve a major variance to the standards and restrictions of Chapter 7, Article A (Watershed Protection Overlay Districts) of the City Development Ordinance, City Council is required to make the following findings of fact: 1) There are practical difficulties or unnecessary hardships that would prevent compliance with this Ordinance; 2) The variance is in general harmony with the general purpose and intent of this Ordinance and preserves its spirit; and 3) Public safety and welfare is assured and the granting of the variance will do substantial justice.

The applicant's submittal addresses the above finding in detail on pages 5 through 10 in their request documentation. The findings are summarized below:

(1) There are practical difficulties or unnecessary hardships that would prevent compliance with the watershed regulations. There are several practical difficulties and unnecessary hardships that result from the strict application of the Rule, as follows:

a) The hardship results from application of this title to the property rather than from other factors such as deed restrictions or other hardships. There are no other restrictions on the proposed landfill that would restrict its desired expansion.

b) The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with the provisions of this title would not allow reasonable use of the property. The physical nature of this site is the key constraint limiting landfill expansion alternatives and preventing reasonable use of the property. The 35 acre watershed of the subject stream is contained almost entirely on the site. Practical landfill configurations that avoid the stream and buffer drastically alters the drainage on site and would likely reduce or eliminate flow in the upper reach of stream over the long term, eliminating its jurisdictional classification. Based on historical monitoring data collected for the hydrologic and geotechnical investigation of this site for solid waste permitting, groundwater regularly intersects the subject stream at a point near the impact limit of the proposed project. Therefore, the remaining stream channel would likely retain hydrology and be considered jurisdictional in the future after the drainage pattern on the site has changed.

c) The applicant did not cause the hardship by knowingly or unknowingly violating this title. The Site is currently in compliance with the Rule. The Site was developed as a C&D landfill facility by DH Griffin, and was transferred to WCA Waste Corporation prior to being acquired by the current applicant, Waste Industries (WI). WI's due diligence review and purchase of the site included prior permits and documents such as the CUP (Appendix 2) and NCDENR Solid Waste

Permit (Appendix 3). The subject stream was shown as part of the proposed landfill footprint in all these documents, which were already approved by the corresponding authorities. Potential expansion volumes used in the analysis of the purchase of the site included this airspace as it was approved in the DH Griffin and WCA plans. Future permitting of streams and wetlands is a common occurrence for landfills, as the three dimensional aspect of these sites require filling of low areas and drainages.

d) The hardship is rare or unique to the applicant's property. The property contains an existing C&D landfill, which is in itself relatively rare. As seen in Figure 3, only 10 alternative C&D disposal sites are currently present within a 50-mile radius of the site, which is where a majority of the waste stream for the Site is produced. Due to the need for stable side slopes and the three dimensional aspect of landfills, avoidance of the stream and buffer is more difficult.

e) If the applicant complies with the provisions of this title, the applicant can secure no reasonable return from, nor make reasonable use of, the applicant's property. The original landfill is nearing capacity and is constrained to the west by a perennial stream, to the south by the critical area of Randleman Reservoir, and to the north by a recycling facility and Riverdale Drive. Expansion to the east is the only alternative available to make use of the remaining property. The reasonable and efficient expansion of the existing C&D facility per the approved CUP is preferred to a new facility in a new location that would likely result in similar impacts and increased fragmentation of landfills.

(2) The variance is in harmony with the general purpose and intent of this title and preserves its spirit. The proposed project would have minimal effect on water quality, the protection of which is the primary purpose and intent of the Watershed Regulations. The amount of impervious area associated with this project is minimal (less than 4%). If the stream and buffer are avoided, stormwater management and rerouting of drainage on the site would eliminate most of the discharge going through the stream buffer which is the buffers intended function. The applicant is prepared to provide compensatory mitigation for the current resources on site, which would provide water quality benefits in the local area, in order to gain certainty in the design, construction, and management of the site.

(3) The granting of the variance assures the public safety and welfare and does substantial justice. The proposed facility design and operation, as well as the history of the existing facility, provide ample evidence that public safety and welfare have been considered and ensured for the future. The need for the landfill to provide reasonably close disposal options for new residential and commercial development has been discussed earlier. Public welfare would be ensured by the granting of this variance. The C&D landfill waste stream is complimentary to the existing Kersey Valley MSW landfill. The capacity provided by this project would save valuable MSW landfill volume and allow the City's facility to serve the public for a longer period of time. BMPs such as extended dry detention basins, grass swales, and level spreaders would be implemented as shown on the attached plans. A more detailed plan would be developed during the final design of the facility and submitted to the City and NCDWR to review during the City's final site plan review and 404/401 permitting process.

Watershed Review Committee Recommendation:

The City's Watershed Review Committee (WRC) met with the applicant in late August, 2015 to discuss the permitting history and proposed findings outlined above. The formal proposal was reviewed in late September, 2015. The WRC supports the arguments and evidence presented by the applicant to allow the disturbance of the stream buffers for a length of 394

linear feet resulting in buffer disturbance areas as outlined in Table 2 (attached documentation).

Staff's findings are based on the belief that the applicant's proposal is the best option to allow design capacity of the C&D landfill while adequately treating storm water runoff from the landfill prior to re-introducing the surface water flow back into the undisturbed stream channel south of the landfill.

Staff recommends approval subject to the following conditions:

1. A Site Plan (including the Watershed Control Plan component) is approved by the Technical Review Committee (TRC) prior to disturbance within the buffer area.
2. Issuance of the applicable 404/401 permits.
3. High Point reserves the right to approve the compensatory mitigation method. Details of the compensatory mitigation requirements would be evaluated and determined during the CWA 404/401 permitting process. Mitigation will be one or a combination of the following: in-lieu fee payment (local stream restoration project), mitigation bank payment (tagged for local projects), on-site preservation of streams and buffers, and increased stormwater control and treatment.



**CAROLINA
ECOSYSTEMS**

3040 NC 42 West; Clayton, NC 27520
P: (919)-606-1065 F:(919)-585-5570

September 2015



0 150 300 Feet

Property Boundary
Wetlands

Photo Approximate Locations
Zone 1 Buffers
Zone 2 Buffers
Streams

Photo Locations

**High Point Landfill, LLC
High Point C&D Landfill
Guilford County, NC**



Photo 1: Stormwater detention pond outfall.



Photo 2: Below stormwater pond outfall.



Photo 3: Entering upper wetland area.



Photo 4: Between wetland areas.



Photo 5: Short segment with evidence of concentrated flow.



Photo 6: Above second wetland area.



Photo 7: Drainage from old pond bed.



Photo 8: Within second wetland area.



Photo 9: Lower end of second wetland area.



Photo 10: Above intermittent stream origin.



Photo 11: Intermittent stream origin.



Photo 12: Below stream origin.



Photo 13: Within impact area.



Photo 14: Lower impact area.



Photo 15: Entering lower wetland area, below impact area.



Photo 16: Within lower wetland area.



Photo 17: Drainage pattern in lower wetland area.



Photo 18: Beginning to concentrate in lower wetland area.



Photo 19: Beginning to reform below wetland.



Photo 20: Saturated soils below lower wetland area.

September 25, 2015

City of High Point
Technical Review Committee
211 South Hamilton Street
High Point, NC 27260

**RE: TRC Watershed Plan Application & Major Variance Request
High Point C&D Landfill
Jamestown, North Carolina**

Dear Technical Review Committee:

The purpose of this letter and application is to request the City of High Point's (City) review, favorable recommendation, and forwarding of a Major Variance to the NC Environmental Management Commission as described in City ordinance Section 9-9-11 (Ordinance). The proposed project varies from the Randleman Lake Water Supply Watershed: Protection and Maintenance of Existing Riparian Buffers rule (15A NCAC 02B .0250) (Rule).

Application of the Rule and Ordinance as currently required on the High Point Construction and Demolition (C&D) Landfill Property would restrict both the capacity and lifespan of the solid waste facility. The required buffers on this property, due to its size, configuration, and proximity to the critical area of Randleman Lake, present unnecessary hardship and practical difficulties to its intended use as a C&D landfill.

This letter describes the project and the justification for this variance request, as required by the Rule and Ordinance. Also enclosed are supporting documents for the request including site maps, engineering plans, site photographs, and preliminary stormwater design. We respectfully request your consideration of this information during your evaluation of this project.

Background Information

The High Point C&D Landfill (Site) is located at 5822 Riverdale Drive, Jamestown NC, in southwestern Guilford County (**Figure 1**). It lies within the Deep River watershed of the Cape Fear River (8-digit HUC 03030003). Stream and wetland resources on the site drain to an unnamed tributary of Richland Creek (17-7-(4)), which carries a NC Division of Water Resources (NCDWR) classification of WS-IV.

The Site (Guilford County PIN 0213048) is a 153.8 acre tract. Existing development on the property includes a scale house and office, a recycling center, maintenance building and parking/storage area, the existing C&D landfill, and the future landfill cell areas that are currently pasture, scrub, and forest (**Figure 2**). The remainder of the property is within the Randleman Lake critical area, and is reserved for stormwater basins, minor grading, and a recorded easement for a future City relocation of Kersey Valley Road, per the Conditional

Use Permit (CUP) and in compliance with water supply watershed requirements. This reserved area takes up approximately 73 acres or 47% of the entire site.

The proposed landfill expansion area contains two drainages with wetlands and a stream under the jurisdiction of the Clean Water Act (CWA). The stream would also be under the jurisdiction of the Rule/Ordinance. The depiction of CWA jurisdictional resources shown in **Figure 2** and **Engineering Figure 1** have been verified in the field by Mr. David Bailey of the US Army Corps of Engineers (USACE) on 8/26/2014. Stream buffers shown are based on a NC Division of Water Resources (NCDWR) determination by Ms. Sue Homewood on 12/11/2014 after an appeal of the City determination (see **Appendix 1**).

Project Purpose and Need

The purpose of the Waste Industries High Point C&D Landfill Expansion is to provide construction and demolition waste capacity to serve the growth and development over the next 20 or more years in High Point and the Triad area. The project goal is to realize the previously planned and permitted waste capacity of the landfill as approved in the facility's CUP and Solid Waste Permit, while avoiding the designated water supply critical area on the site.

Due to the rapid growth in the Triad area, there is a continuous demand for C&D disposal. As can be seen in **Figure 3**, there are a limited number of C&D facilities in the area. Ten C&D landfills occur within 50-miles of the Site. The permitted capacities of each of these landfills are shown in **Table 1**. Only three of the ten alternative existing disposal locations are private facilities, while the remainder are public and take waste primarily from their local area. The total available capacity of all these sites does not meet the future demand for C&D disposal over the next several decades. It should be noted that many of those capacities do not represent actual available capacity, but rather maximum site capacity that may not be realized. For example, the Site is shown on NC Department of Environment and Natural Resources (NCDENR) records to have 4.7 million cubic yards (MCY) of capacity, while the full build out capacity proposed for this site is 3.3 MCY.

TABLE 1: Permitted C&D Landfills

Figure 3 Location ID	Permit Name	Public/ Private	Gross Capacity (cy)	Remaining Airspace (cy)	Remaining Life (yrs)
P0792	Albemarle, City Of, CDLF	Public	2,390,900	1,757,527	10.4
P0796	Cabarrus County CDLF	Public	535,284	165,055	0.6
P1019	Gold Hill Road C&D Debris Landfill	Private	1,114,400	566,170	15.9
P1051	Davidson County CDLF	Public	308,752	107,932	4.1
P0563	Austin Quarter C&D Unit	Public	338,897	115,601	12.9
P0879	Cobles C&D Landfill	Private	6,935,903	6,089,192	45.9
P1067	High Point C&D Debris Landfill	Private	4,773,968	4,700,995	21.9
P1170	Orange County C&D Landfill	Public	790,000	652,900	12.0
P0970	A-1 Sandrock C&D Landfill	Private	2,231,848	1,930,228	12.8
P0708	Old Salisbury Road CDLF	Public	4,030,000	1,282,746	3.8
P0801	Greensboro, City Of	Public	2,525,443	1,202,343	25.1

- Gross capacity determined from most recent Permit to Construct or Permit to Operate.
- Remaining airspace determined from 2012-2013 Annual Facility Report
- Remaining Life calculated assuming LF receives waste in the amount equal to permitted limit each year and two years subtracted.

Project Alternatives

Alternative site designs were evaluated that encompassed complete avoidance of all resources to multiple minimization alternatives. Each of these is presented in **Table 2**, along with the attached engineering exhibits, and evaluated below. Intermediate alternatives between these options were considered, but not included as they did not provide significant or practical differences from the options below.

TABLE 2: High Point C&D Landfill Expansion Alternatives

Alternative (see attached plans)	Waste Area (ac)	Capacity (mcy)	Impacts		
			Wetland (ac)	Stream (lf)	Buffers (sq.ft.) Zone 1 / Zone 2
No Impact	33.4	1.0	0 ac	0	0 / 0
Minimization Impact I	41.3	2.0	0.55	0	0 / 0
Minimization Impact II	44.0	2.7	0.59	0	0 / 0
Proposed Project	46.0	3.3	0.59	394	23,718 / 16,168

ac = acres; mcy= million cubic yards; lf = linear feet

No Impact Option (Engineering Figure 2)

The avoidance of all jurisdictional features (buffers, streams, and wetlands) was evaluated but deemed not practical as it creates fragmented cells. The areas remaining for landfill with this option yield approximately 0.98 MCY of capacity, which

is a 70% loss compared to the proposed project. Due to the cost and difficulty of permitting, constructing, and maintaining three mostly isolated cell units, this option was not determined to be feasible.

Minimization of Impact Option 1 (Engineering Figure 3)

This option avoids the primary drainage on the site including the existing stormwater BMP and wetlands above the subject buffered stream. This landfill configuration would involve wetland impacts that would require issuance of an Individual Permit from the USACE. The option results in two distinct landfill cells that yield approximately 1.8 MCY of capacity, which is about a 45% loss compared to the proposed project. The watershed of the subject drainage would be altered by this configuration, resulting in a change from 35 acres to 6.5 acres. Stormwater runoff from the remaining acreage would be discharged in a similar location to the Proposed Project. Due to the significant loss of landfill volume, in combination with the change in site hydrology and potential long-term drainage of the upper portion of the stream channel (see Finding of Fact Item 1b), this option was determined not practical. In addition, to retain maximum drainage into the stream channel, a BMP would be required in jurisdictional wetlands, which is often difficult to permit through the CWA.

Minimization of Impact Option 2 (Engineering Figure 4)

This option would avoid all stream and buffer impacts and not require a variance from either the City or State. This landfill configuration involves similar wetland impacts as Minimization Option 1 and the Proposed Project, and would require a CWA permit. This option results in a landfill capacity of 2.675 MCY, which is a 19% loss versus the proposed project. While this is a much greater landfill volume than the No Impact and Minimization Option 1, the drainage to the subject stream would be radically altered. Less than an acre of landfill berm slopes would drain to the stream, and runoff from the remaining 35-acre watershed would be rerouted and captured in on-site BMPs before discharging at a similar point to that of the Proposed Project. This loss of hydrologic input to the upper reach of stream would likely reduce or eliminate function down to a point where groundwater flow significantly contributes to the stream (regular intersection of the stream channel and water table). Based on site hydrogeologic data, this point is near the limit of impact of the Proposed Project as described below. This option is not deemed preferable due to the loss of approximately 20% capacity, associated with a similar long-term stream impact as the Proposed Project.

Proposed Project (Engineering Figure 5)

The proposed project involves building the full allowable capacity of the landfill anticipated under the existing CUP and Solid Waste Permit. Impacts to wetlands would be similar to other options, but there would also be impacts to both stream and riparian buffers. Since the avoidance of the stream would likely cause similar long-

term effects as described above, the Proposed Project was deemed the most practical alternative. Building Minimization Option 2 and waiting a number of years to evaluate the condition of the subject stream was considered, as this would avoid the need for a variance or any compensatory stream and buffer mitigation. Due to the uncertainty of the exact location where the stream characteristics would be retained, and the difficulty of constructing and maintaining a “bowl” around the stream, it was determined to be better to accept the proposed impact and provide compensatory mitigation to offset this loss.

Based on the change between pre and post-construction drainage, there would be a significant loss of drainage contributing to the subject stream’s upper reaches with all practical landfill options (Minimization Option 2 and Proposed Project). This would have a long term effect on the hydrology of the subject stream to such an extent that it might no longer be jurisdictional in the future. Similar situations on other solid waste sites have shown this to be a valid concern, due to the reconfiguration of on-site drainage associated with these facilities. This, in addition to the large loss of landfill capacity, resulted in the Proposed Project being chosen.

Findings of Fact

Per City Ordinance Section 9-9-11, the following findings of fact are provided for your consideration. Each City ordinance item is provided below in *italics*.

(1) *There are practical difficulties or unnecessary hardships that would prevent compliance with this title.*

There are several practical difficulties and unnecessary hardships that result from the strict application of the Rule, as follows:

- a) *The hardship results from application of this title to the property rather than from other factors such as deed restrictions or other hardships.*

There are no other restrictions on the proposed landfill that would restrict its eastward expansion, beside the Rule and CWA permitting. Expansion plans showing the proposed project have been approved under a City CUP (**Appendix 2**) and a NCDENR Solid Waste Permit (**Appendix 3**). The CWA Individual Permit would be applied for upon conclusion of the variance process, and coordination with the USACE and NCDWR has been initiated. The only deed restriction on the site is a road right-of-way dedicated for the City’s future realignment of Kersey Valley Road to allow for expansion of the City’s MSW landfill. Watershed restrictions apply to the southern portion of the site, preventing landfill cells within approximately 47% of the site (**Figure 2**).

- b) *The hardship is due to the physical nature of the applicant’s property, such as its size, shape, or topography, such that compliance with the provisions of this title would not allow reasonable use of the property.*

The physical nature of this site is the key constraint limiting landfill expansion alternatives and preventing reasonable use of the property. Expansion to the south is not possible due to compliance with the Water Supply Watershed critical area for the Randleman Reservoir. Expansion to the west is not possible due to a perennial stream and the City of High Point's Municipal Solid Waste (MSW) Landfill. Expansion to the north is not possible because of an existing road and established recycling facility, which is a requirement of the CUP.

The 35 acre watershed of the subject stream is contained almost entirely on the site. The retention and discharge of stormwater from a BMP south of the existing scale house, as well as drainage from the eastern portion of the site, significantly contributes to the stream flow in the upper reach. Practical landfill configurations that avoid the stream and buffer, described above, drastically alter the drainage on site and would likely reduce or eliminate flow in the upper reach of stream over the long term, eliminating its jurisdiction under the CWA and Rule. Based on historical monitoring data collected for the hydrologic and geotechnical investigation of this site for solid waste permitting, groundwater regularly intersects the subject stream at a point near the impact limit of the proposed project. Therefore, the remaining stream channel would likely retain hydrology and be considered jurisdictional in the future after the drainage pattern on the site has changed.

- c/ *The applicant did not cause the hardship by knowingly or unknowingly violating this title.*

The Site is currently in compliance with the Rule. The Site was developed as a C&D landfill facility by DH Griffin, and was transferred to WCA Waste Corporation prior to being acquired by the current applicant, Waste Industries (WI). WI's due diligence review and purchase of the site included prior permits and documents such as the CUP (**Appendix 2**) and NCDENR Solid Waste Permit (**Appendix 3**). The subject stream was shown as part of the proposed landfill footprint in all these documents, which were already approved by the corresponding authorities. Potential expansion volumes used in the analysis of the purchase of the site included this airspace as it was approved in the DH Griffin and WCA plans.

Future permitting of streams and wetlands is a common occurrence for landfills, as the three dimensional aspect of these sites require filling of low areas and drainages. Therefore, assuming future permitting of the cells is a typical approach in a pre-purchase review of a solid waste site. In addition, the current City stream buffer ordinance seems to have stricken out the language related to buffer applicability based on on-site evidence of a stream (**Appendix 4**). On the surface, this language suggests that only USGS and NRCS mapping can be used to determine buffer applicability in the City's

jurisdiction of the Randleman watershed. These maps (**Figures 4 and 5**) do not show the subject stream. While this has since been addressed by the City through clarification provided by the Planning Department (**Appendix 4**), under initial due diligence review the ordinance does not seem to apply to the subject stream. In fact, WI still respectfully contends that the ordinance, as written, should not apply to the site, but is foregoing any legal avenues, accepting the City's clarification, and requesting this variance.

d) The hardship is rare or unique to the applicant's property.

The property contains an existing C&D landfill, which is in itself relatively rare. As seen in **Figure 3**, only 10 alternative C&D disposal sites are currently present within a 50-mile radius of the site, which is where a majority of the waste stream for the Site is produced. Of these alternative sites, only three are private facilities and the other seven are public and likely take waste from a more limited service area. New C&D sites are extremely difficult to locate and permit due to restrictive siting requirements (**Appendix 5**) that do not apply to existing sites.

Due to the need for stable side slopes and the three dimensional aspect of landfills, avoidance of the stream and buffer is magnified to a much greater extent than avoidance for a typical "two dimensional" development, which can develop up to the edge of the buffer without being impeded.

The location of this property adjacent to the Kersey Valley MSW landfill is also unique. The C&D disposal capacity available at the Site compliments the City's MSW site by saving their valuable MSW capacity and lengthening the lifespan of that facility.

e) If the applicant complies with the provisions of this title, the applicant can secure no reasonable return from, nor make reasonable use of, the applicant's property.

The constraints of the site described above already severely limit use of this site, even without application of this rule. Compliance with the Randleman watershed critical area restricts approximately 47% of the site to minor uses such as grading and stormwater.

The original landfill is nearing capacity and is constrained to the west by a perennial stream, to the south by the critical area of Randleman Reservoir, and to the north by a recycling facility and Riverdale Drive. Expansion to the east is the only alternative available to make use of the remaining property. The location of the Randleman Lake protected tiers (**Figure 2**) render significant portions of the site unusable. The reasonable and efficient expansion of the existing C&D facility per the approved CUP is preferred to a

new facility in a new location that would likely result in similar impacts and increased fragmentation of landfills.

(2) The variance is in harmony with the general purpose and intent of this title and preserves its spirit.

The proposed project would have minimal effect on water quality, the protection of which is the primary purpose and intent of the Rule. The amount of impervious area associated with this project is minimal (less than 4%). This is well below any regulatory thresholds for stormwater BMPs and also below NCDENR recommended limitations for the protection of sensitive aquatic environments. The closed landfill cap would be a vegetated cover that allows infiltration of precipitation before it is collected and drained to a BMP. The cap (see **Engineering Figure 7**) would serve to provide detention and some treatment prior to the BMP. In fact, during the typical water quality storm of concern (2-year), there would be minimal discharge from the BMPs. Rigorous maintenance and monitoring requirements would be implemented to protect water quality as described below.

The long-term effects of other alternatives, including practical alternatives that do not require a variance, would be similar to the proposed project, as discussed above. If the stream and buffer are avoided, stormwater management and rerouting of drainage on the site would eliminate most of the discharge going to the stream buffer, which would therefore not provide its intended function.

WI has evaluated the option of avoiding the stream and buffer, and re-evaluating it at a later date after the surface runoff has been rerouted to the proposed BMPs. While this option would greatly reduce the cost of the project by potentially avoiding this variance, CWA permitting, and compensatory mitigation, it would create some uncertainty as to the eventual location of stream and buffer jurisdiction and increase costs and difficulty of design and construction of the "bowl" area that would need to be filled in later. The NCDENR Solid Waste Section has stated that, assuming all appropriate approvals are granted, they would prefer to see a lateral expansion of a landfill rather than filling back in a "bowl" later.

Therefore, WI is prepared to provide compensatory mitigation for the current resources on site, which would provide water quality benefits in the local area, in order to gain certainty in the design, construction, and management of the site. Compensatory mitigation would be one or a combination of in-lieu fee payment, mitigation bank payment, on-site preservation of streams and buffers, and increased stormwater control and treatment. Details of the compensatory mitigation requirements would be evaluated and determined during the CWA 404/401 permitting process.

(3) The granting of the variance assures the public safety and welfare and does substantial justice.

The proposed facility design and operation, as well as the history of the existing facility, provide ample evidence that public safety and welfare have been considered and ensured for the future. The need for the landfill to provide reasonably close disposal options for new

residential and commercial development has been discussed earlier. The proximity of the landfill to ongoing development in Guilford County and surrounding areas would not only reduce hauling costs, but also reduce the amount of truck traffic that would otherwise have to travel to alternative sites along public roads. This reduction in truck traffic reduces emissions and increases public safety.

Public welfare would be ensured by the granting of this variance. The C&D landfill waste stream is complimentary to the existing Kersey Valley MSW landfill. The capacity provided by this project would save valuable MSW landfill volume and allow the City's facility to serve the public for a longer period of time. Use of an alternate disposal site would increase costs due to haul distances, and these costs would be passed on to the public through developers and contractors.

Significant environmental protections are already in place, and would be increased with the proposed project. A detailed Water Quality Monitoring Plan, which includes ground and surface water, would be developed and approved by the State. This plan would be implemented, as it is currently for the existing facility, and would continue for, at minimum, 30 years post-closure of the landfill, or approximately 2065. The monitoring plan would include at least 20 inorganic constituents and 48 organics (see **Appendix 6**), which would be monitored on a semi-annual basis. If any significant difference occurs from background concentrations, a step-wise increase in protection would be initiated including increasing the number of constituents monitored, providing an assessment of corrective measures, and if required a corrective action plan. The landfill cap, slopes, and BMPs would also be monitored and maintained for at least 30 years after closure. This would ensure the proper function of the drainage system and stormwater measures. The post closure monitoring and maintenance is required by State law, and proof of financial assurance for these activities must be provided.

The potential for water quality degradation to occur as a result of this project is minimal due to the inert nature of the facility. Waste accepted at this facility is only construction and demolition, and other inert debris as shown in **Appendix 7**. More active waste including MSW, contaminated soils, and yard waste, are not allowed in this facility. In addition, the site is required by the CUP to maintain the recycling center on the site to reduce the waste stream and provide beneficial use of any recoverable materials.

BMPs such as extended dry detention basins, grass swales, and level spreaders would be implemented as shown on the attached plans. A more detailed plan would be developed during the final design of the facility and submitted to the City and NCDWR to review during the City's final site plan review and 404/401 permitting process.

Additionally, NCDENR regulations require more conservative design standards in comparison to the Rule. For instance, their minimum required design storm is the 25 year-24 hour event, which results in extended dry detention basins with no outflow during the 1-inch 24-hour storm required by NCDENR criteria. This would provide 100% settling efficiency and the highest possible water quality protection.

Substantial justice would result from the granting of this variance, as the City's Kersey Valley Landfill, adjacent to this Site, was granted a similar variance.

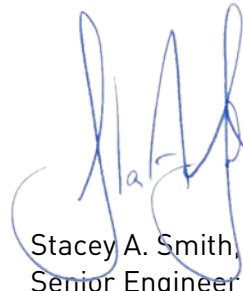
Conclusion

We would appreciate your consideration of this information during the review of this variance request, and look forward to your favorable review of this project. Please contact me at your convenience if you have any questions or require further information.

Sincerely,
SMITH GARDNER, INC.



Phil May,
Carolina Ecosystems, Inc.
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SAS/PM/swh

Attachment

cc: David Pepper, Waste Industries
Seth Heath, Waste Industries
File