

MINUTES
TRANSYLVANIA COUNTY BOARD OF COMMISSIONERS
September 2, 2020 – SPECIAL MEETING

The Board of Commissioners of Transylvania County met in special session on Wednesday, September 2, 2020 at 4:00 p.m. for the purpose of receiving a presentation from Transylvania County Solid Waste Director Kenn Webb on the status of the County landfill and to discuss the future of solid waste management. The Board met in Commissioners Chambers at the County Administration Building, located at 101 S. Broad St., Brevard, NC.

Commissioners present were Jason Chappell, Jake Dalton, David Guice, Chairman Mike Hawkins, and Vice-Chairwoman Page Lemel. Also present was County Manager Jaime Laughter. Interim Budget and Management Analyst Kate Hayes attended on behalf of the Clerk to the Board Trisha Hogan who was on vacation.

There were approximately five people in the audience.

Media: *The Transylvania Times* – Derek McKissock participated remotely.

CALL TO ORDER

Chairman Hawkins presiding declared a quorum was present and called the meeting to order at 4:00 p.m.

WELCOME

Chairman Hawkins welcomed everyone to the meeting and introduced Commissioners and staff in attendance. He explained that the Board did not intend to take action today. Instead, the Board intended to receive information regarding this topic for future action.

PRESENTATION

The Manager reminded the Board that each year they receive information on the current life of the landfill. The information presented today will build on the information provided in January 2020 and highlight the options available to the County in providing solid waste services to the community in the future. Each option has an associated timeframe for completion, so it is imperative the Board make a decision in the very near future that will direct staff on next steps to comply with the associated timeframes.

Solid Waste Director Kenn Webb reported that he provided each Commissioner with a large binder that contains a tremendous amount of information related to current conditions and potential options for providing solid waste management for the next 30 years.

Mr. Webb reviewed the reference materials provided in the binder:

1. Copy of Power Point slides with notes section
2. Landfill
 - a. Current landfill lifespan estimate as of June 1, 2020
 - b. Master plan update with Technical Fatal Flaw Analysis
 - c. NCNHP review
3. NCDEQ
 - a. Chart of landfill receipts FY 1993- FY 2020

- b. NCDEQ – Public and Private MSW Fees FY 2019
- c. NCDEQ – Public and Private MSW Landfills including receipts from FY 2015 – FF 2020
- 4. Options
 - a. NCDEQ Transfer Stations (WNC facilities highlighted)
 - b. Cost comparison LF vs TS
 - c. Other technologies
 - i. Anaerobic digestion
 - ii. Composting
 - iii. Landfill mining
 - iv. Waste to energy/incineration
- 5. LF vs TS
 - a. La Bella (formerly Joyce Engineering) Cost Comparison of LF Expansion to Transfer Station for period through 2052
- 6. Western Expansion LF – Endangered Species/Wetlands Reports
- 7. Eastern Expansion LF – Endangered Species/Wetlands Reports
- 8. Summary
 - a. Comparison of western and eastern site expansions, capacity, advantages, and disadvantages
 - b. Figures and drawings

Key Acronyms

- MSW = Municipal Solid Waste
- LCID = Land Clearing and Inert Debris
- C&D = Construction and Demolition (Debris)
- NCDEQ = NC Department of Environmental Quality
- LF = Landfill, Sub-Title D Landfill
- TS = Transfer Station
- T&D = Transportation and Disposal
- NCNHP = NC Natural Heritage Program

This is a summary of the presentation followed by a condensed version of the Board’s discussion/questions into a Q&A format.

How Long Do We Have in the Current Landfill?

Date	Estimated Years	Estimated Lifespan
June 2020	7 years	May 2027
July 2019	8.7 years	February 2028
November 2018	8.7 years	August 2027
July 2018	9.3 years	October 2027
June 2017	10.3 years	September 2027

- Landfill lifespan affected by several factors: primarily compaction and landfill receipts
- NCDEQ requires an annual capacity report
- Since 2019, 0.7 years’ capacity lost
 - Filled a large slope area with cover, but interpreted as capacity
 - Impacts lifespan
- Lifespan of current facility is through May 2027
- Permitting process takes 5 ½ to 6 years
- Staff recommends future of solid waste management decision to be made by December 1

What is Technical Fatal Flaw Analysis?

- Part of the master plan for a landfill
- Analysis determines major faults to expansion, including, but not limited to:
 - Seismic faults
 - Watersheds
 - Flood Plain
 - Archaeological or historically significant resources
 - Rare species (NCNHP)
- Report showed no findings

Expansion Area

- La Bella engineering firm identified areas for expansion
- Expansion would give County well over 50 years of capacity in addition to the 7 years remaining in the current cell
- Expansion would contain contiguous elements; otherwise, if separated, would require unique infrastructure (roads, leachate lines to connect to pipelines or storage tanks, etc.)
 - Piggybacking creates synergies and economy of scale

The Trend

- Slight trend upwards
- COVID-19 effect unknown
- Major impact on lifespan
- Average 2% increase since FY 2011
- Have not returned to pre-recession volumes
 - FY 2008 = 28,912 tons
- Average volume over recorded period is 22,363 tons/year of MSW
- Overall, solid waste is a lagging indicator of the economy

Period	Waste Placed on Liner (tons)
FY 2020	23,160
FY 2019	25,770
FY 2018	25,196
FY 2017	21,793
FY 2016	23,738
FY 2015	21,739

What Are the Options?

- Landfilling remains an option with expansion adjacent to Woodruff Landfill on current County property
 - Economics of small landfill <500 tons/day is challenging due to high capital cost of labor and equipment necessary
 - Woodruff Landfill currently receives approximately 75 tons/day
- Transfer Station provides an option for shipment of solid waste from Transylvania County to another landfill
 - Typically, this utilizes private landfills in a competitive marketplace
- Both the landfill and transfer station options must include some provision for collection of LCID (wood waste)

Note: State is reviewing new potential regulations for solid waste facilities that could affect how collection centers are identified. Transylvania County currently has four collection centers, including one at the landfill. If the legislation passes, the new regulations will require collection centers to essentially become transfer stations which are permitted very similarly to landfills. Staff will make this information available to the Board for reference.

Note: NCDEQ section of Board's notebook included listing of the different types of facilities being operated across the State, as well as the amount of tipping fees being charged. There are 42 facilities considered landfills, including 11 outside of North Carolina.

What Are the Other Options/Technologies?

- **Anerobic Digestion (organics)**
 - Convert methane gas to natural gas
 - Works with organics, including wood waste
 - Need customer for natural gas or turbine to convert
 - Proximity to natural gas pipeline a plus
 - Byproducts are high grade compost and liquid fertilizer
 - Also works with WWTP sludge and cow manure
 - Budgets vary from \$5 million to \$50 million+
 - Sometimes interchangeable with word "biomass"
- **Composting (organics)**
 - Break down of organics into topsail
 - Organics – food scraps, no oils, no fats, no meats
 - Not as forgiving as anaerobic digestion
 - Byproduct is good cover soil for landfill closure
 - Requires public to separate suitable organics
 - Collection and transport of organics can be challenging
 - Recognizable technology
 - Typically, not the only solid waste technology
 - Capacity increases substantially
- **Landfill Mining (combine with combustion)**
 - Excavate, sieve, sort
 - Organics disposal via combustion
 - Except for metals, recycle market currently not an option
 - Soil can be recovered (assuming okayed by DEQ)
 - Space is recovered for further landfilling
 - Maintain current landfill cell
 - Not a recognizable technology in North America
 - Typically, not the only solid waste technology
- **Waste to Energy (incineration)**
 - Incinerate trash to produce energy
 - Organics reduction via combustion
 - Inorganics remain in ash (requires landfilling)
 - Highly technical facilities
 - Shutdowns for 1-2 weeks x 2 times/year typical
 - Breakdowns are common
 - Large capital expense and large ongoing cost to run
 - Would need backup plan when shut down
- **Zero waste**
 - Idea of creating less waste

- No single-use plastics
- Landfill diversion into recycling or composting reduces overall volume and increases life of landfill

Note: These options have not been scaled to a facility of our size. They are also used as mostly supplemental to other operations.

Note: Mr. Webb noted if the goal is to reduce our carbon footprint, transferring long distances defeats the purpose and does not reduce the impact to global warming. A better method of disposal is when the material is closer to the point source.

Landfill Expansion Option

- An Options Evaluation has been provided with further details in the Board's information book
 - Equipment to run a landfill is more than equipment needed to run a transfer station
 - Requires more labor to run a landfill than a transfer station
 - Analysis kept the current structure of collection centers consistent
 - Based on current volume, capacity at current site is nearly 200 years if all built out
 - Landfill could attract industry to area if industry requires capacity for waste; not the same benefit with having transfer station
- La Bella specializes in solid waste engineering and consulting and has been working with the County since the 2000's
- Timeline for decision on this option is critical due to permit requirements and to ensure construction is completed prior to reaching current cell capacity
- Permitting with NCDEQ must start in FY 2022 to allow for construction completed by end of 2026 to allow for no interruption in services
- Timeline predicated on no changes in capacity through 2027; annual capacity review to determine if timelines should change
- Two areas of potential expansion at current site
- Relatively long period remains for expansion (92 acres) if two expansion sites combined, current footprint is 20 acres
- This option keeps County in better control of costs
- Sensitive land acquisition for solid waste facility is avoided by not going with transfer station option
 - Issue with land availability
 - Public perception
- Piggybacking onto existing landfill greatly benefits capacity of expansion
- Engineer estimated \$10 million savings 25 years by expanding landfill compared to construction of transfer station; however, cost adjusted to \$7 million after wetlands review for western landfill expansion
- Long term decision for County Solid Waste

Transfer Station Option

- Land acquisition would be required in this option by FY 2025 suitable for construction of such a facility with proximity to US Hwy 64 and located centrally in the County
 - Current landfill location is not conducive to this option due to terrain
 - Doubtful any acreage available outside of the floodplain that is flat and near a major highway
- Timeline would require permitting to start in FY 2025 to allow for completion of construction by the end of 2026

- Timeline is not quite as critical due to permitting being less extensive than landfill permitting
- Preferred site should have a change in the elevation to allow for tipping floor to drop into walking floor trailer
- Site should be large enough for wood waste and wood grinding with mulch sale or removal
- Likely inclusion of “super center” collection facility for recycling and household bags (e.g. bag stickers)
- Additional room for expansion into organics (trending nationwide) such as compost requiring 10-20 acres
- Typical construction costs range from \$1.5 to \$2 million (Buncombe County recent built one at a cost of \$15 million)
- Engineer estimated \$7 million in additional costs versus landfill expansion
- Still responsible for closed landfills (Woodruff and Calvert)
 - Environmental monitoring
 - If necessary, remediation
 - Slope repairs, erosion control
 - General maintenance (mowing, etc.)
- For comparison to landfill option
 - \$21/ton hauling fee to out-of-county landfill
 - \$20/ton disposal fee at out-of-county landfill
 - Fuel prices may fluctuate
- Often local and state governments that host landfills add taxes to the above fees to generate revenue and/or discourage out-of-county waste from entering
- Several transfer stations in WNC, but that does not mean they do not also have a landfill
- Visit to Henderson County Transfer Station
 - Current volume is 300-600 tons/day
 - Cost basis for T&D is \$40/ton with current tipping fee at \$60/per ton, leaving \$20/ton for Solid Waste operations
 - $\$20/\text{ton} \times 115,000 \text{ tons/year} = \2.3 million to run the program
 - One collection center on same property as the Transfer Station
 - Compare to volume from Transylvania County Solid Waste at 30,000 ton/year or \$600,000 to run program (assuming deal on T&D)

Recommendation for Landfill Expansion

- Cost control
- Cheapest alternative
- Acreage and volume capacity
- Proven technology
- Long-term capacity can become County asset

Q&A

- Q.** Regarding the expansion option and using the piggyback method, would the liners be connected?
- A.** The liners would not necessarily be connected at depth levels, but they would be connected in a way in which they would eventually be one complete cell. This would be part of the permitting process.

Q. How has the landfill impacted the neighbors over the years?

A. The County has a great relationship with neighboring citizens. Staff was unaware of any issues. If the landfill expands into a certain area, the site will gain new neighbors who are not accustomed to MSW being placed next to them. It is important to the County and staff to continue those great relationships.

Q. Are there testing wells in various locations to determine if seeping is occurring?

A. Yes. The State requires landfills to have gas monitoring wells to monitor any potential movement of landfill gases that might be escaping from the liner. The wells are monitored quarterly. Additionally, both the County and State monitor groundwater migration for potential contaminants that could get into groundwater and verify that the landfill is intact.

Q. Does the average annual tonnage include construction debris?

A. Yes, the figure includes total waste coming into the facility. It is not clear whether everyone in Transylvania County uses our facility. Staff has not calculated how much waste is being transported out of county.

Q. Is the amount of waste going out of the County important to know for planning purposes?

A. It is cheaper to haul debris to South Carolina because they have private landfills that can negotiate for larger volumes and lower tipping fees. It could be important to know what the County is losing, especially when considering raising rates to create revenue to cover operating costs. The objective for private landfills is to sell airspace. Local governments are seeking to provide capacity to serve its residents.

Q. Did the debris from the demolition of DuPont and Ecusta come to the County's landfill?

A. It is possible that the general building debris from those demolitions were hauled to the County's landfill. Both businesses also had landfill capacity on their own sites. Specifically, for the Ecusta demolition, there was an agreement in place that Renova was required to haul the deconstructed materials elsewhere, but staff was unaware of the location.

Q. Is it possible to calculate the true cost of the options other than the pure financial costs, specifically for transferring waste out of the county.

A. Yes.

Q. Where do transfer facilities in our region send their waste to?

A. Mostly South Carolina and Tennessee.

Q. Why are South Carolina facilities named on the list of landfills in North Carolina?

A. The list is generated by NCDEQ. They track where North Carolina's waste goes. There are 11 facilities on the list of MSW landfills that are out of state.

Q. Are there any concerns about being permitted for landfill expansion?

A. No. Transylvania County's history of solid waste operations has not been stellar, but the department has worked through the challenges and has become an example for other jurisdictions to emulate. Landfill expansion is a process and staff understand the timeline before them.

Q. Due to the length of the permit process and our desire to build small cells, is it appropriate to apply for a permit for the entire site with a phased plan for constructing the cells?

A. Yes. Transylvania County could permit for the entire 200-year capacity if the Board so desired. The same approach was used to permit the current landfill and it was constructed as a 6-phased approach.

Q. Does the Board's decision on an option first require a public hearing?

A. There is no statutory requirement for a public hearing. The Board should be transparent with the options available to them and invite public input, but a public hearing is not required.

Q. Is it possible to transfer waste out of the County for a period of years (10 years, for example) and return to landfilling if the County decides the transfer option is not viable?

A. During that gap in time, the landfill must be closed per State requirements. The decision to go with a transfer station would trigger the closing of the landfill.

NEXT STEPS

The Board should review and digest the information presented at this workshop, as well as the extensive information provided in the Board's supplemental notebook. To meet the goal of deciding by December 1, Mr. Webb will present a summary of this workshop for the Board on October 26, with a subsequent decision by the Board on November 9.

Commissioners thanked Mr. Webb and staff for their detailed presentation and for their service to the citizens of Transylvania County.

ADJOURNMENT

Commissioner Guice moved to adjourn the meeting at 6:15 p.m., seconded by Commissioner Lemel and unanimously carried.

Mike Hawkins, Chair
Transylvania County Board of Commissioners

ATTEST:

Trisha M. Hogan, Clerk to the Board