


Worksession

**M E M O R A N D U M**

March 2, 2018

TO: County Council

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **FY19-24 Capital Improvements Program – Solid Waste – Sanitation:** Gude Landfill Remediation

**Summary**

- Gude Landfill Remediation
  - Ongoing project to implement the recommendations included in the Assessment of Corrective Measures (ACM) Report approved by the Maryland Department of the Environment in July 2016 as part of a 2013 Consent Order
  - Total Project Cost is unchanged: \$28.7 million
  - Construction to begin in FY20 and be completed in FY22
  - Funded with Solid Waste Disposal Fund Current Revenue previously allocated and factored into the Fund's fiscal plan and the FY18 Operating Budget
  - Design contract recently awarded
  - Project scope includes: capping the top of the landfill (toupee cap) and evaluating a variety of potential future land-use activities (including passive recreation and a solar PV array) and DEP/DOT operations (such as yard trim and DOT material and salt storage)

**Committee Recommendation: Approve as recommended by the County Executive**

**Meeting Participants**

- Patty Bubar, Acting Director, Department of Environmental Protection (DEP)
- Don Birnesser, Central Operations Section Chief, DSWS, DEP
- Trevor Lobaugh, Fiscal and Policy Analyst, Office of Management and Budget

**Attachments to this Memorandum**

- Excerpt from the County Executive's FY19-24 Recommended Budget Capital Improvements Program – Solid Waste Management – Sanitation Category (©1-4)
- Letter of June 28, 2017 from the County Executive to the Council President Regarding "Gude Landfill Remediation and Reuse (©5-12)
- Presentation Slides from Community Meeting of June 15, 2017 (©13-34)

Gude Landfill Remediation Expenditure Schedule (PDF on ©3-4)

	Total Cost	Six-Year Cost	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
<b>FY17-22 Latest Approved</b>	<b>28,700</b>	<b>28,700</b>		<b>1,000</b>	<b>10,500</b>	<b>10,500</b>	<b>6,700</b>			
<b>FY19-24 CE Recommended</b>	<b>28,700</b>	<b>27,700</b>		<b>1,000</b>	<b>500</b>	<b>8,400</b>	<b>12,300</b>	<b>6,500</b>		
change from approved	-	(1,000)			(10,000)	(2,100)	5,600	6,500		
percent change from approved	0.0%	-3.5%			-95.2%	-20.0%	83.6%	n/a		

Last May, the Council approved an amendment to the FY17-22 CIP for the new project, Gude Landfill Remediation, with an FY18 appropriation of \$1.0 million to begin design.

This project provides for the planning and construction of a toupee cap (capping the top area) at the closed Gude Landfill. The recommended total project cost is \$28.7 million (the same as approved), with the source of funds being Solid Waste Disposal Fund current revenue.<sup>1</sup>

While the total project cost is unchanged, there have been some changes in the year-to-year expenditure schedule.

- FY18 costs were split (\$500k each) between planning/design/supervision and site improvements to: improve the existing site conditions (e.g., grading, stormwater, landfill gas, and utilities, etc.) and reduce the cost of the overall remediation project (e.g., the acceptance and stockpiling of soil).
- FY19 through FY22 costs were shifted to reflect estimated changes between the design engineer contract and the construction contract schedules and duration.

Project Background

The Gude Landfill site encompasses 162 acres, of which approximately 140 acres were used for waste disposal. The landfill operated from 1964 to 1982. Since its closure, DEP has worked on a number of post-closure activities. In 2008, the Maryland Department of the Environment (MDE) directed DEP to investigate groundwater contamination. The County and MDE entered into a consent order in May 2013 involving landfill assessment and remediation.

The County has worked on a number of studies related to site remediation, including: a Nature and Extent study (2010), an Assessment of Corrective Measures (ACM) report (2014 and revised in 2016), and continued sampling and other tests. This work was done in coordination with MDE. DEP's initial Assessment of Corrective Measures report recommended bioremediation as DEP's preferred approach. This remediation work would address widespread low level Volatile Organic Compound (VOC) contamination in groundwater, gas migration, and leachate seeps into surface water runoff.

However, based on feedback from MDE (that the proposed corrective measures also address limited metals exceedances in addition to VOC exceedances), MDE encouraged DEP to consider a solution of capping the top of the landfill (a toupee cap), which would substantially reduce rainwater infiltration and the generation of leachate and help reduce all types of contamination. DEP reviewed this

<sup>1</sup> Several years ago, DEP reserved these dollars within the Disposal Fund when the County began its planning work on future potential corrective measures at the Gude Landfill. Therefore, the fiscal impact of this project has already been built into the Solid Waste Disposal Fund's fiscal plan and the Approved FY18 Operating Budget.

approach and amended its ACM report<sup>2</sup> to support a toupee cap solution. MDE approved the ACM report in July 2016.

For more background on the project and the scope and schedule, please see presentation slides DEP prepared for a community meeting last June (©13-34).

### Community Outreach and Potential Reuses of the Site

On June 28, 2017, the County Executive forwarded comments received from the GLCC with regard to potential future reuses for the site (see ©5-12). The GLCC's recommendations support light and passive reuses such as: natural vegetation and habitat, community garden plots, a dog park, model airplane area, a hiker/biker trail system, play areas and fields (for light use), and a solar panel array.

DEP has noted that there will be no community use of the site during construction, for safety and liability reasons. DEP has noted that, *"We are using the site in the interim for soil/fill dirt storage from the Purple Line project; this soil will lessen the need to acquire soil from other sites to complete the toupee cap."*

DEP has met regularly with the Gude Landfill Concerned Citizens (GLCC) group, most recently on February 15 to review the Purple Line/Gude Landfill soil stockpile project and other issues.

The Northeast Maryland Waste Disposal Authority (on behalf of the County) recently awarded the design services contract for this project to EA Engineering. DEP noted that the contract includes the following language regarding reuse activities for the site:

*The Design Engineer shall evaluate a variety of potential land use activities for the closed Gude Landfill site. The Design Engineer shall evaluate the land use activities from feasibility through constructability at the landfill site and develop a ranking system along with a comparative analysis of the activities. The Design Engineer shall perform land use and permitting research to identify any potential barriers or conflicts that may impact the land use activities, which shall be documented and presented as part of the comparative analysis. A list of potential land use activities is provided below (not included in any specific order or preference):*

- *Passive Recreational – Natural Vegetation and Habitat, Community Garden Plots or Greenhouses, Dog Park, Model Airplane Area, Walking/Hiking/Biking Trail System, and Playground Areas and Fields;*
- *Renewable Energy – Solar Panel Array; and*
- *Operational – Emergency Debris Storage and Staging as well as the relocation of Yard Waste Processing (leaves, grasses, branches, logs, trunks, etc.) and DOT Material Processing (soil, concrete, asphalt) operations from the Shady Grove Processing Facility and Transfer Station; and DOT salt storage operations from other sites within the County.*

The consultant met with the GLCC in January as the first of an ongoing set of meetings to (as DEP notes) *"obtain input and to provide updates as the design phase progresses."*

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<sup>2</sup> The latest Assessment of Corrective Measures report, along with many other documents related to the Gude Landfill Remediation effort, is available at: <http://www.montgomerycountymd.gov/sws/facilities/gude/>.

DEP has cautioned that the requested CIP funding level for the Gude project is for implementation of the MDE-approved remediation work. The budget does not contain additional funding for other land uses. DEP notes that *“the ability to implement other land uses for the Gude Landfill site will be dependent on total costs to implement the CMA (corrective measures alternative), and the costs associated with other potential land uses determined to be feasible for the site.”*

**Council Staff recommends approval of this ongoing project as recommended by the County Executive. The T&E Committee concurs.**

#### **Attachments**

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# Solid Waste Management

## PROGRAM DESCRIPTION AND OBJECTIVES

The principal objectives of Montgomery County's Solid Waste Management program are to: ensure that the solid waste generated in the County is managed in a safe, environmentally sound manner; encourage the reduction of waste generated by residents and businesses in the County; recycle as much as feasible of the resources contained in, and extractable from, solid waste; and minimize the use of landfilling. The major elements in the management of solid waste are to:

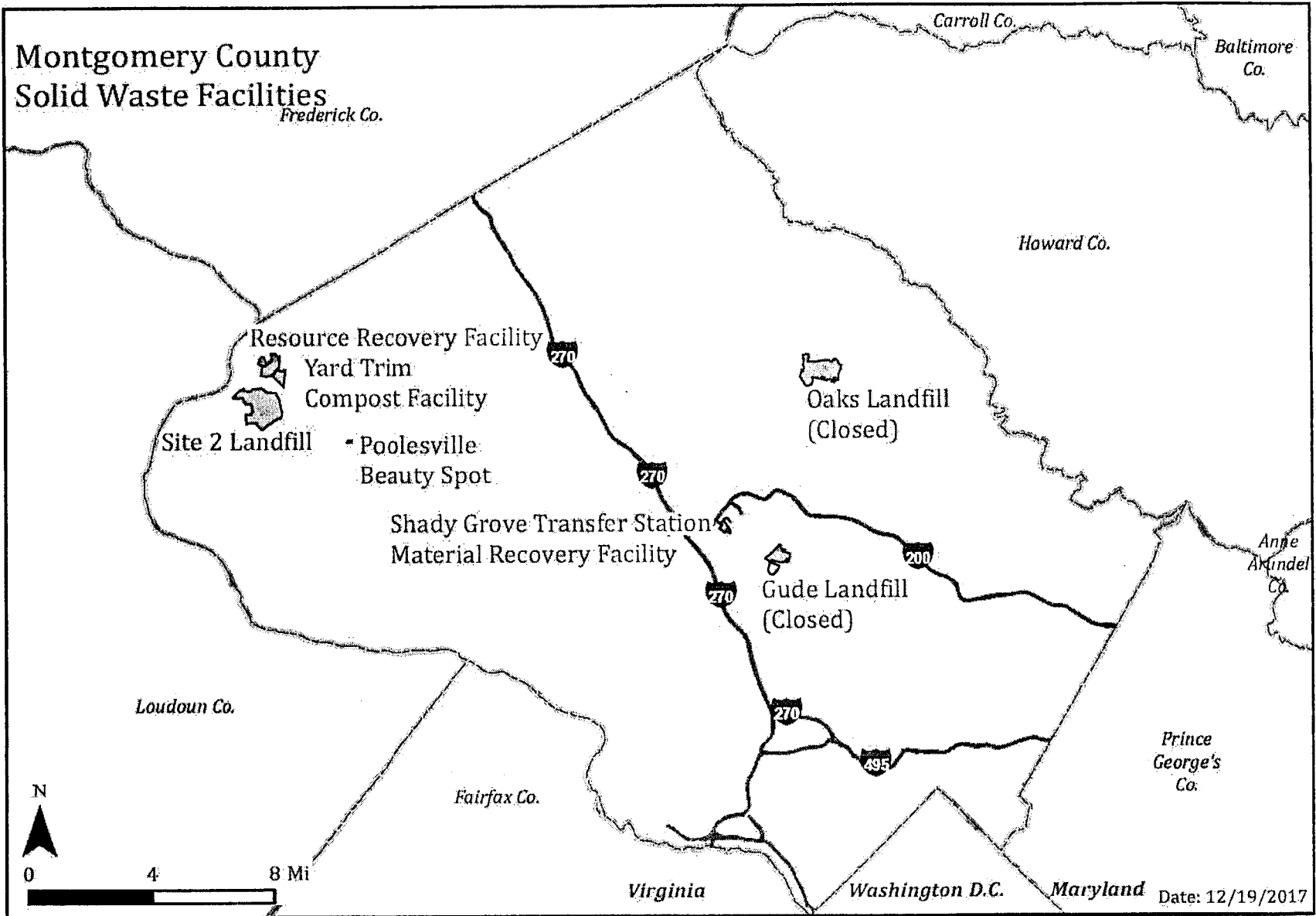
- Reduce and recycle 70 percent of waste generated by 2020;
- Continue implementation of the ban on all recyclable materials at all waste disposal facilities and encourage greater on-site management of yard trim by homeowners;
- Operate the mass burn, Resource Recovery Facility (RRF) located in Dickerson;
- Provide rail transport of solid waste from the Solid Waste Transfer Station to the RRF; and
- Beneficially reuse or recycle RRF ash and rubble delivered to the Transfer Station at private facilities, transport any non-processible waste, and bypass waste for disposal to a private out-of-County landfill.

## PROGRAM CONTACTS

Contact Anthony Skinner of the Department of Environmental Protection at 240.777.6438 or Trevor Lobaugh of the Office of Management and Budget at 240.777.2763 for more information regarding this department's capital budget.

## CAPITAL PROGRAM REVIEW

The FY19-24 Capital Program for Solid Waste Management contains one ongoing project, Gude Landfill Remediation, totaling \$27.7 million over six years. This represents a decrease of \$1.0 million from the amended approved FY17-22 program since \$1.0 million of the project work will be completed prior to FY19.





# Gude Landfill Remediation (P801801)

<b>Category</b>	Solid Waste-Sanitation	<b>Date Last Modified</b>	01/04/18
<b>SubCategory</b>	Solid Waste Management	<b>Administering Agency</b>	Environmental Protection
<b>Planning Area</b>	Rockville	<b>Status</b>	Ongoing

## EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY17	Est FY18	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Beyond 6 Years
Planning, Design and Supervision	1,900	-	500	1,400	500	400	300	200	-	-	-
Site Improvements and Utilities	500	-	500	-	-	-	-	-	-	-	-
Construction	26,300	-	-	26,300	-	8,000	12,000	6,300	-	-	-
<b>TOTAL EXPENDITURES</b>	<b>28,700</b>	<b>-</b>	<b>1,000</b>	<b>27,700</b>	<b>500</b>	<b>8,400</b>	<b>12,300</b>	<b>6,500</b>	<b>-</b>	<b>-</b>	<b>-</b>

## FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY17	Est FY18	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Beyond 6 Years
Current Revenue: Solid Waste Disposal	28,700	-	1,000	27,700	500	8,400	12,300	6,500	-	-	-
<b>TOTAL FUNDING SOURCES</b>	<b>28,700</b>	<b>-</b>	<b>1,000</b>	<b>27,700</b>	<b>500</b>	<b>8,400</b>	<b>12,300</b>	<b>6,500</b>	<b>-</b>	<b>-</b>	<b>-</b>

## OPERATING BUDGET IMPACT (\$000s)

Impact Type	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Maintenance	125	-	-	-	25	50	50
<b>NET IMPACT</b>	<b>125</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>50</b>	<b>50</b>

## APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 19 Request	500	Year First Appropriation	FY18
Appropriation FY 20 Request	8,400	Last FY's Cost Estimate	28,700
Cumulative Appropriation	1,000		
Expenditure / Encumbrances	-		
Unencumbered Balance	1,000		

## Project Description

This project provides for the remediation of low-level environmental contamination at the Gude Landfill. The Maryland Department of the Environment (MDE) approved an Assessment of Corrective Measures (ACM) report for Gude Landfill in July 2016 which specifically outlines the approved remediation method. Remediation of the Gude Landfill will include toupée capping (regrading and capping the top of the landfill and selected slope areas with a synthetic liner and two feet of soil) and increased gas collection through the installation of additional gas extraction wells. These remediation measures will reduce

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infiltration of rainwater into the landfill resulting in the generation of less leachate, fewer leachate seeps, and better control of landfill gas migration.

## **Location**

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600 E. Gude Drive, Rockville, MD

## **Estimated Schedule**

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The Gude Landfill Remediation project construction will begin in FY20 and be completed in FY22.

## **Project Justification**

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The County and MDE entered a consent order in May 2013 which outlined requirements for assessing low-level groundwater contamination, gas migration, and other problems at the Gude Landfill. The Consent Order included provisions requiring a Work Plan and schedule to be established for assessing potential risks to human health and the environment, and development of an Assessment of Corrective Measures (ACM) report and implementation schedule. After consultation with industry experts, community groups, MDE, and County government leadership, the Department of Environmental Protection's (DEP) initial proposal to MDE in 2014 addressed the low-level groundwater contamination at the site with installation of bioremediation wells on the property. MDE's assessment of this bioremediation corrective measure in April 2015 determined that additional corrective measures would need to be included in the bioremediation approach to address all MDE's requirements. A revised ACM report was submitted to MDE in April 2016 addressing all MDE's comments and selecting corrective measures consisting of a toupee cap, additional landfill gas collection, and stormwater drainage improvements. The County has been mandated to perform work outlined in the consent order. Moving forward with the remediation of Gude Landfill, as required by MDE, will also address concerns raised by the adjacent community and allow planning for potential future uses of the property.

## **Coordination**

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Maryland Department of the Environment (MDE), Department of Permitting Services, the Maryland-National Capital Park and Planning Commission, the U.S. Army Corps of Engineers, the Gude Landfill Concerned Citizens (GLCC), County social service agencies, and adjacent property owners.



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OFFICE OF THE COUNTY EXECUTIVE  
ROCKVILLE, MARYLAND 20850

Isiah Leggett  
County Executive

MEMORANDUM

June 28, 2017

TO: Roger Berliner, President  
Montgomery County Council

FROM: Isiah Leggett, County Executive 

SUBJECT: Gude Landfill Remediation and Reuse

I am forwarding to you, consistent with the Consent Order entered into in May 2013 by the County and the Maryland Department of the Environment regarding the Gude Landfill, the recommendations submitted by the Gude Landfill Concerned Citizens (GLCC) concerning potential reuse of the Landfill that the GLCC believes would be acceptable to the Derwood Station community. The GLCC recommendations are attached.

The Department of Environmental Protection (DEP) is committed to ensuring the GLCC recommendations are considered in the design process for the Gude Landfill Remediation project. Specifically, the GLCC recommendations will be provided to the design contractor, once the contractor is selected, for their incorporation, to the extent feasible, into the final design for the landfill remediation.

If you have questions or need additional information, please contact Bill Broglie, Acting Chief of the Division of Solid Waste Services, DEP, at (240) 777-8883.

IL:wb

Attachment

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RECEIVED  
MONTGOMERY COUNTY

## ATTACHMENT

TO: Lisa Feldt, Director  
Department of Environmental Protection  
255 Rockville Pike, Suite 120  
Rockville, MD 20850

FROM: Gude Landfill Concerned Citizens Committee (GLCC)

CC: Dan Locke, Director, DEP, Division of Solid Waste Services  
Don Birnesser, Chief, DEP, Division of Solid Waste Services  
Rao Malladi, DEP/DSWS, Senior Engineer  
Dan Rogers, DSWS Engineer I  
Mark Gutberlet, P.E. – Project Manager, EA Engineering  
Derwood Station HOA President Dave Peterson  
Derwood Station 2 HOA President Laszlo Harsanyi  
Derwood Station South President Charlie Regan  
GLCC Members

DATE: December 1, 2016

SUBJECT: Gude Landfill Remediation and Reuse

The GLCC wishes to thank the County for its agreement to fully engage with our community in the planning, design and development of effective remediation and corrective measures at the Gude Landfill that incorporates community desires and considerations for reuse.

We agree strongly with the advice provided in a comprehensive resource regarding community reuse of landfills<sup>1</sup>: "The expenditure of some additional resources up front to make a facility more compatible with local residents and businesses could pay off later years in the creation of a facility that provides more benefit to the entire community."

We look forward to creating a shared vision for the future of Gude Landfill, developing a plan that will allow our community of 500 households to see the landfill as an advantage, rather than a disamenity.

This memorandum sets forth GLCC views on potential reuse of the landfill that we believe would be acceptable to the Derwood Station community. We are, of course, not experts, and the eventual reuse design and development will bear additional study by appropriate experts and incorporate the views of County officials and stakeholders.

### **The Gude Landfill and Derwood Station – GLCC vision for Reuse**

We believe that the reuse of the landfill should recognize and be guided by the overall location of the Gude Landfill within the County. The landfill is surrounded by park land, industrial and commercial operations along Southlawn and Gude Drive, and a single residential community – Derwood Station.

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<sup>1</sup> Closed Waste Sites as Community Assets: A Guide for Municipalities, Landfill Owners, and Regulators; Waste Management Branch, Land Remediation and Pollution Control Division, National Risk Management Research Laboratory, Office of Research and Development (Cincinnati, OH) (hereafter, "Community Assets Report.")

A distinct GLCC concern is that the Gude Landfill is located directly adjacent and very close to our community's back yards; a distance of only 75 yards; well under the 1000 yards considered permissible under current landfill regulations. Not only is our neighborhood closely proximate to the landfill, but over the past years the Derwood Station community has experienced a saturation of commercial enterprises surrounding our neighborhood. The FEDEX facility is a primary example of a shipping enterprise that operates 24/7 and was permitted to develop its facility directly adjacent to our neighborhood. The County's Men Shelter was also placed adjacent to our neighborhood, and has impacted our community.

We understand that it is the intention of the County to develop Gude Drive as an industrial/commercial zone. While this intent is understandable, it has had a disproportionate, adverse effect upon our community.

Given that Gude Landfill is adjacent to current park land, industrial areas, and but one residential community, it seems a proper general conclusion that the reuse of the landfill should reflect a strong connection to the nearby park land and serve to reduce the impact of industrial and commercial growth along the Derwood Station residential perimeter; most importantly, the landfill should not be used for additional active commercial use whatsoever.

Another factor impacting reuse, is that the landfill continues to settle, and will likely continue to do so for 30-50 years, or more. Regular landfill grading and maintenance will likely be required, constant inspection and monitoring of methane exceedances will be necessary, and future significant remediation efforts may arise.

These considerations tend towards the general conclusion that reuse should be focused upon light, passive, non-commercial, non-permanent reuse options.

Because of these considerations, GLCC's overall vision for the Gude Landfill is an area that is quiet, remote, natural, prairie-like, and provides light and low impact uses by the community; while expanding the County's environmental and recreational offerings by offering stronger connections to the Needwood and Rock Creek trail systems. Also, we envision the landfill providing a benefit to the County residents at large, by installing a meaningful array of solar panels to generate electricity; which should prove economical given the current electricity generation facility at the site. Accordingly, and most broadly, we conceive approximately 1/2 of the site devoted to community activities, 1/2 dedicated to solar panel/electricity and open, natural vegetation/habitat.

Finally, we would suggest that long-term engagement with the community and maintenance issues need to be part of the planning. It is important that planning and budgeting for reuse incorporate necessary upkeep and maintenance of any facilities.

Again, thank you for engaging the GLCC and the Derwood Station community. We look forward to working with County and State staff on the multiple issues that will arise. We are especially interested in learning, in the near future, of the County's intentions for reuse.

## **GLCC PREFERRED REUSE ALTERNATIVES**

### **1. Natural vegetation and habitat**

Area: Throughout landfill, all undeveloped space, occupying space between trails and improved areas.

Elements:

- Natural vegetation and habitat conservation environments
- Wildlife and/or bird watching platforms.

As set forth in the Community Assets Report, "The establishment of wildlife habitat areas provides several benefits when compared to the standard closure practice of planting a monoculture of grass on top of the landfill. This practice entails using a variety of vegetation and landscaping features that meet the objectives of the final cover system (minimize infiltration of liquids into the waste and properly controlling storm water), and in addition provide a more natural setting for wildlife and recreational enjoyment. With the selection of vegetation appropriate to the local climate, including native and/or drought-resistant species, this approach offers potential operational cost savings related to vegetation maintenance. Wildlife habitats created to have a natural appearance should have limited mowing needs in comparison to the grass mowing required with closed landfills only covered in grass. The reduced fertilizer needs of wildlife areas additionally may also result in cost savings (Simmons 1999). Some maintenance controls such as weeding, and inspection and removal of invasive plant species may be necessary to maintain natural habitats. To successfully launch habitat creation, a pre-development survey should be conducted. These surveys are intended to identify existing species in the area and to characterize the natural prevailing conditions necessary for the habitat. Once the survey has been performed, restoration of the landfill site will normally follow one of three paths (Simmons 1999). In some cases, the natural regeneration of the habitat takes place with little to no human interference. Alternatively, the basic habitat requirements can be first created, including the establishment of vegetation and related landscape features, and then minimal interference takes place during natural development. Lastly, the habitat features can be established and maintained over time to meet desired outcomes."

We believe input from local naturalists, MDE and DEP environmental experts would prove beneficial to identify appropriate habitat and vegetation.

### **2. Community Garden Plots**

Area: 5 acres

Elements:

- Fenced/protection from deer/animals
- Water
- Distinct/necessary quality top soil
- Shade

- Benches
- Signage
- Controlled Access
- Enhanced protection from methane extraction/water exfiltration

### 3. Dog Park

A dog park provides many community benefits, such as:

- enabling dogs to legally run off-leash
- socializing and exercising dogs in a safe environment
- promoting responsible pet ownership
- providing a place for owners to meet and make new friends
- providing a place for the elderly and disabled to exercise their dogs
- promoting public health and safety

Area: 2 acres

Elements:

- Two adjacent areas (one for small, one for large dogs)
- Fenced (with required minimum fence height) with double gated entry. Gate design is important. Gate location along the side works best as they don't have a "corner effect". Dogs entering on the side have 180 degrees to travel vs. 90 degrees in a corner entrance. A double gate is a must. If the entrance vestibule of the double gate was out-side the park it would be less prominent and work better.
- Ground cover adequate for dogs, i.e. not grass but other appropriate material such as areas of mulch (needs refreshing, but the County has a large production capacity) and other areas of decomposed granite (this is very durable, but can get hot and dusty in the sun.)
- Signage that specifies hours and rules. There are good examples of posted rules and information at Dog Parks around Montgomery County (Cabin John Park, Black Hills Regional Park, King Farm) Water supply, fountains for people and pets
- Benches – L and U shaped
- Shade provided by shelter, gazebos or tarpaulin structures distributed across the park to provide multiple locations and reduce crowding
- Cleaning supplies to include a pooper scooper bag supply and sturdy refuse containers with good covers (Similar to cleaning and waste supplies at other Montgomery County locations)
- Access controlled – discuss/consider fee access to support waste removal service (Only Montgomery County example is King Farm Dog Park which is limited to Rockville residents.)
- Dog play structures such as ramps, tunnels, jumps, weave poles. Durable construction using stone, masonry, and resin based boards.

### 4. Model Airplane Area

The Capital Area Soaring Association has conducted activities at the Gude site since 1993. The club currently has 137 members from ages 9 through 88 and only operates aircraft with either electric motors or gliders with no motors. A previous flying club used the Gude site from 1975 to 1985. The club collects dues in order to support mowing and insurance costs. Additionally, members are required to have an individual AMA membership which provides additional insurance. Several members are pilots of regular aircraft and the Association ensures compliance with regulations and local airport activity.

Area: 5-10 acres

Elements:

- Vehicle access, parking [currently there is gravel road access and parking area]
- Gate to control access [to ensure safety and restrict access to qualified, insured members]
- Fence to define flying area [separate flying from spectating]
- Shade [currently have a gazebo, recently re-roofed by the flying club]
- Benches
- Shed/storage [we currently have a storage container, mower, club supplies]
- Electric or solar
- Water or porta potty

##### 5. Walking/Hiking/Biking Trail Systems

Area: Throughout landfill, connecting to Needwood and Rock Creek Trail Systems

Elements:

- Gravel
- Benches
- Biking/jogging trail connection to Needwood and Rock Creek Trail System/ benches
- Signage, to/from Needwood and Rock Creek Trail System
- Adequate width to share the trails for walking/hiking and biking trails
- Consider fitness course along trails

We believe close coordination and incorporating the views of the Maryland National Capital Park and Planning Commission and relevant park land stakeholders would be important.

##### 6. Play Areas and Fields

Area: 5 acres

Elements:

- Open areas
- Child play facilities

- Signage
- Shade
- Water
- Not intended for soccer/baseball/court sports (given likely settling)
- Consider Frisbee golf

## 7. Solar Panel Array

Area: 30 acres, eastern side, away from community

Elements:

- Electricity production: solar array attached to grid/employing methane station production and connection to grid; establish to benefit County residents' electricity expenses.

## 6. Other Considerations

- Ingress/Egress from Derwood Station, should allow for walking/biking access from Derwood Station (via Dubuque Court); protect neighboring household privacy.
- Explore other ingress/egress, i.e. from Needwood Park and Rock Creek trail systems.
- Public access and parking: explore modest public access from Southlawn using Incinerator Lane (i.e. for use by plane club, and access point to RCT system); small and much needed parking area.
- Address the need for facilities in community areas (restrooms, water, and shade).
- Establish - early on in the remediation effort - effective screening of the Derwood Station adjoining households from the landfill (i.e., screening trees or plants to mitigate unsightly views from adjacent homes of both the remediation construction efforts and the final, elevated and capped landfill 'mountain').
- Enhance and seek environmental benefit to Rock Creek watershed; employing Maryland DEP Stream Restoration guidelines.
- Enhance and seek environmental benefit to Rock Creek watershed by employing Green Streets principles; increased tree cover, vegetation, avoid 'hot' run-off water and beneficial cooling by establishing increased tree canopy within Derwood Station.
- Consider establishing a Rock Creek Conservation and Rehabilitation Fund.
- Full engagement with Maryland National Capital Park and Planning Commission experts and County environmentalists.
- Consider how to address deer population (presently un-controlled) and potential damage to reuse facilities that are installed; consider need for fencing.
- Consider relationship with County Men's Shelter and Electricity Generation Plant.
- Continued active monitoring of leachate and methane migration into the neighborhood and Rock Creek is anticipated.

- Establish communication protocol to advise community regarding landfill remediation initiatives and progress, start/stop dates of construction, etc. Use of postcards; public mail for routine notices.

7. **Recommendations of 'No' Use**

- No lighting – day use only
- No commercial use
- No commercial yard waste processing
- No hard courts (tennis, basketball)
- No ball/playing fields
- No camping or overnight stay
- No fire pits or barbeques



# **Gude Landfill Remediation Project Corrective Measures Implementation**

**Montgomery County DEP - Division of Solid Waste Services**

**Northeast Maryland Waste Disposal Authority**

**June 2017**

**Final  
06/15/17**

## Background

- The Gude Landfill (Landfill) is located at 600 East Gude Drive, Rockville, MD. The Landfill was used for the disposal of MSW and incinerator residues from 1964 to 1982.
- The Landfill property encompasses approximately one hundred sixty-two (162) acres and approximately one hundred forty (140) acres were used for waste disposal.
- The County currently maintains an active landfill gas collection system including: enclosed flares, landfill gas extraction wells, and horizontal gas conveyance piping. The current gas-to-energy facility was shut down on June 1, 2017.
- A network of on-site and off-site groundwater monitoring wells; a network of on-site landfill gas monitoring wells; stormwater management infrastructure across the site; and environmental monitoring programs for groundwater, surface water, landfill gas and stormwater.

## Background

► The adjacent land uses to the Landfill site include:

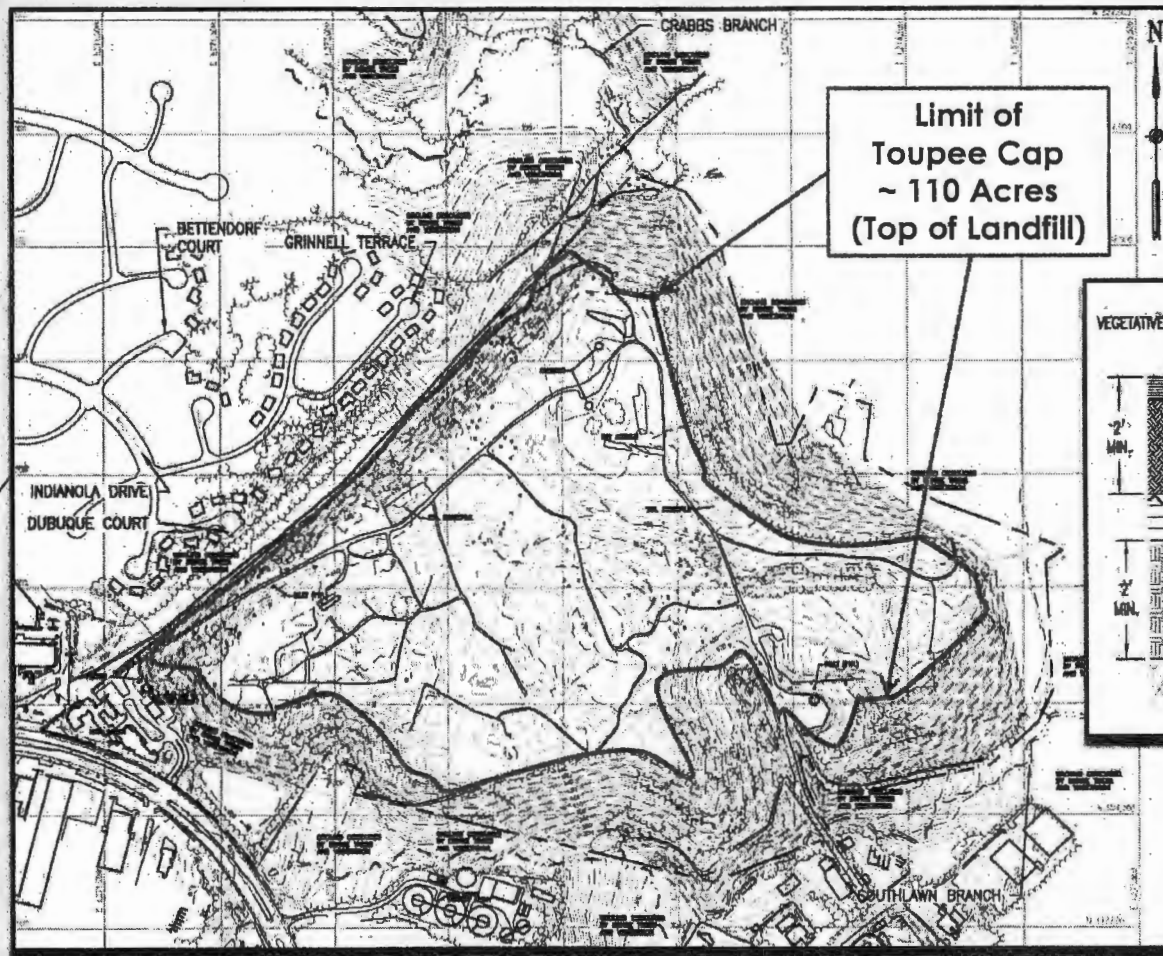
1. M-NCPPC land and Crabbs Branch Stream;
2. Asphalt and cement production facilities, equipment storage yards, scrap metal recycling facilities, and Southlawn Lane;
3. East Gude Drive, Washington Suburban Sanitary Commission (WSSC) property and Southlawn Branch Stream;
4. Transcontinental (Williams Gas)/Columbia Gas natural gas pipeline right-of-way and the community of Derwood Station residential development; and
5. Chase Partnership House/Men's Shelter.



## Regulatory Compliance

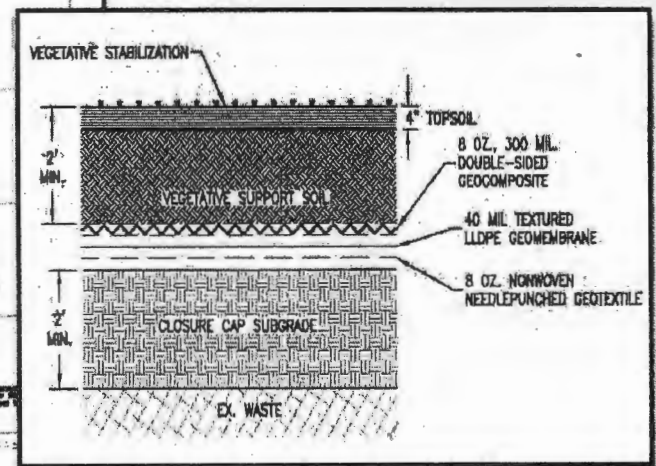
- 2009 – 2012, DEP completed the following activities:
  - ❖ Updated Groundwater and Landfill Gas Monitoring Plans. Semi-Annual and Quarterly Reporting.
  - ❖ Updated Stormwater Pollution Prevention Plan. Quarterly Site Inspections and Annual Updates.
  - ❖ Aerial and Field Site Survey, and Waste Delineation Study.
  - ❖ Nature and Extent Study and Amendment No.1 to address MDE comments.
  - ❖ Remediation Feasibility Memorandum.
- May 2013: DEP and MDE entered into a Consent Order Agreement that stipulated site investigations, compliance measures, and timelines for remediation efforts.
- October 2014: DEP and M-NCPPC completed a Land Exchange.
- January 2014/April 2016: DEP submitted the Initial Assessment of Corrective Measures (ACM) Report to MDE and the revised ACM, respectively.
- July 2016: MDE approved the revised ACM Report and the recommended Corrective Measure of "Toupee Capping and Additional Landfill Gas Collection."

# Remediation Activities per ACM - Capping



Limit of  
Toupee Cap  
~ 110 Acres  
(Top of Landfill)

Phased Construction  
of the Toupee Cap  
will be implemented.

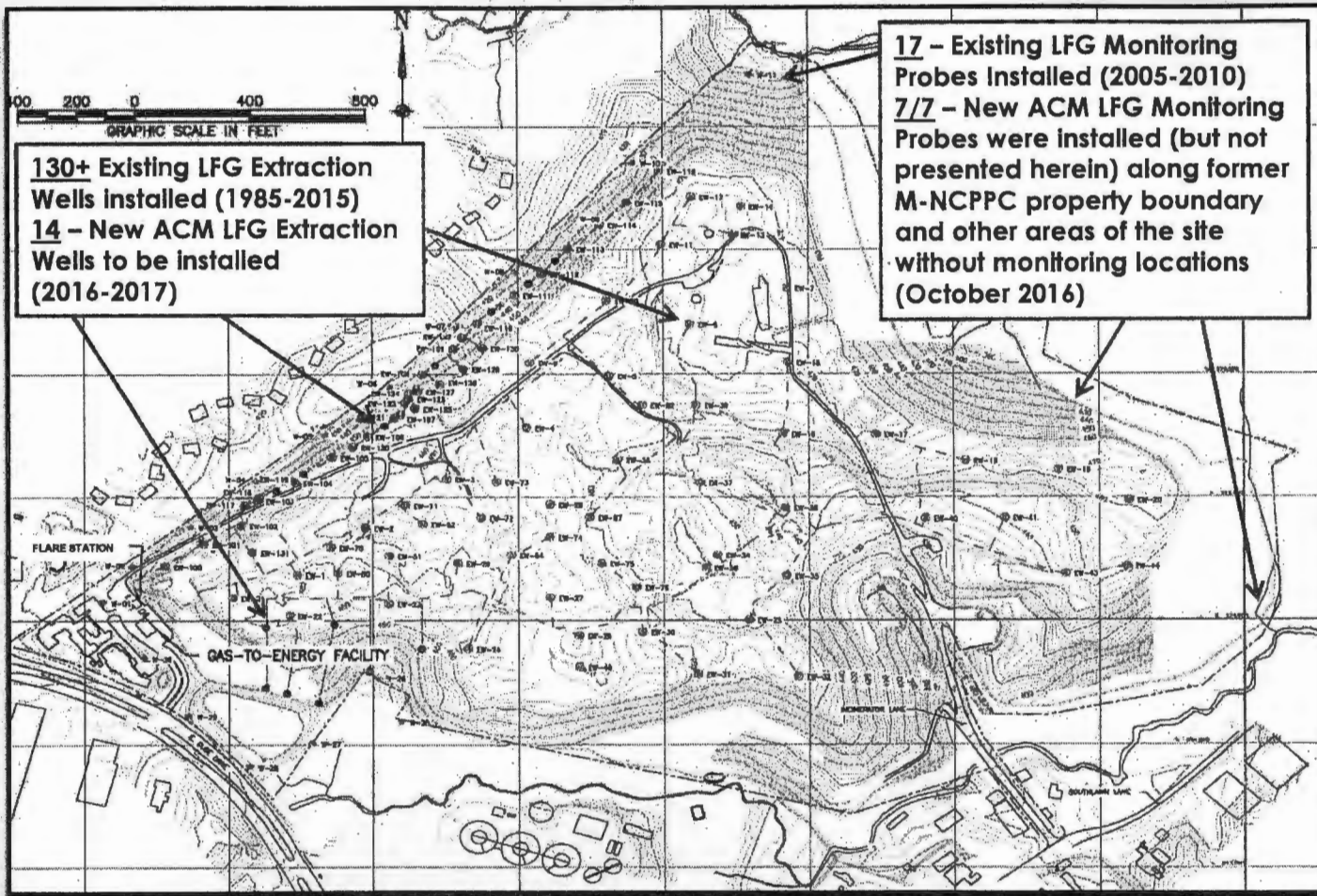




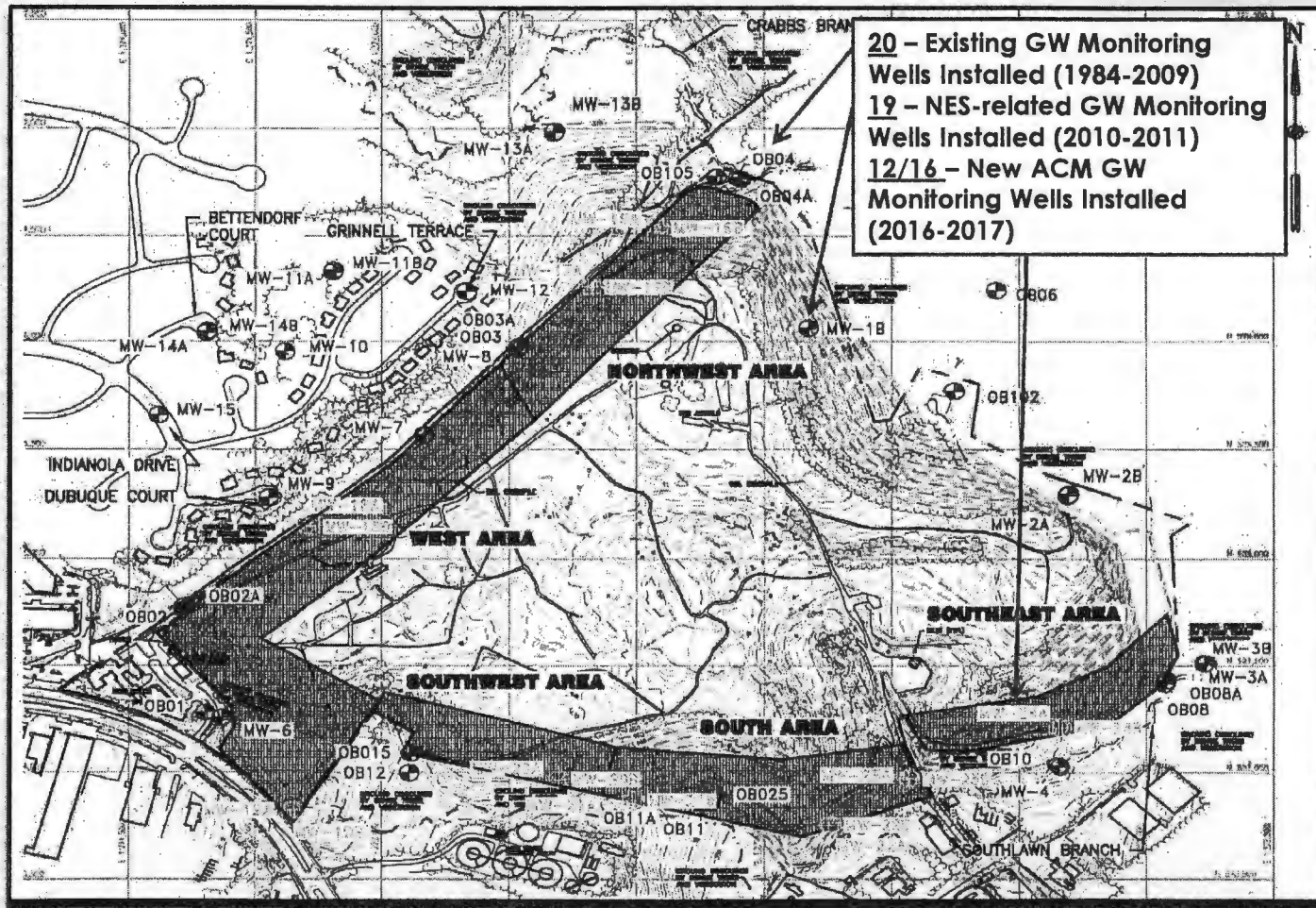
# Remediation Activities per ACM – Landfill Gas

6

Phased Construction  
of the LFG System  
will be  
implemented.



# Remediation Activities per ACM - Groundwater



# Project Development and Roles

## Design Engineer / Construction Manager / Construction Contractor

- Contract 1: Design Engineer (RFP Issuance: July 14, 2017, Award: January 2018)
  - ❖ Project Management, Pre-Design, Design, Permitting and Right-of-Entry Services; Bidding, Stakeholder Engagement and Conceptual Land Use responsibilities per SOW.
  - ❖ Schedule Progress Meetings and Conference Calls during the design phase.
  - ❖ Wide-Range of Deliverables, Permits, and Schedule adherence throughout the project.
- Contract 2: Construction Manager (RFP Issuance: February 2018, Award: June 2018)
  - ❖ Constructability Reviews (e.g., conformance with approved design, pricing estimates, etc.).
  - ❖ Construction Management and Inspection responsibilities during construction activities.
  - ❖ Schedule Progress Meetings and Conference Calls during the construction phase.
- Contract 3: Construction Contractor (RFP Issuance: June 2019, Award: September 2019)
  - ❖ Perform the construction of the Remediation Project per the Design / Permitting requirements and within the allocated Budget and Schedule.
  - ❖ The Landfill site must maintain regulatory compliance for groundwater, landfill gas, leachate seeps, stormwater, E&S, and nuisance issues for dust, odors, noise, etc. must be minimized.



# Project Management and Coordination

## ■ County and Authority Tasks and Roles

- ❖ County – Manager Duties: NMWDA Task Order contract management, Budget, SOW, Permitting, and Schedule, etc.
- ❖ NMWDA – Administrator Duties: DE, CM, CC contract administration, Budget, SOW, Permitting, and Schedule, etc.

## ■ Project Management (DEP-DSWS PM and SC, and Authority PM)

- ❖ Weekly Progress E-mails from DE/CM.
- ❖ Monthly Progress Meetings and Conference Calls with DE/CM.
- ❖ Progress Meetings and Conference Calls will alternate every 2 weeks.
- ❖ Monthly Progress Reports from DE/CM.

## ■ Project Coordination (PMs, DEP-DSWS SC and DC, Director and Deputy Director, DE or CM, and Authority ED).

- ❖ Quarterly Review Meetings.

CC – Construction Contractor  
DE – Design Engineer  
ED – Executive Director  
SC – Section Chief

CM – Construction Manager  
DC – Division Chief  
PM – Project Manager  
SOW – Scope of Work

## Corrective Measures Design Progress Updates

- Kick-off Meetings for Stakeholders.
- NMWDA/County Approvals required to move onto the next design stage.
- Other County Stakeholders include: DGS, DOT, DPS, etc.

	Project Team	GLCC	Other County	M-NCPPC	MDE
Kickoff Meeting	●	●	●	●	●
30% Design	●	●	●	●	
60% Design	●	●	●	●	
90% Design	●	●	●	●	●

# Potential Land Uses under Consideration

- Design Engineer will work with the County / NMWDA / Stakeholders.
  - ❖ Land Use Comparative Analysis of potential land uses.
    - Initiate at 30% Corrective Measure Design.
    - Three (3) Review Meetings.
  - ❖ Land Use Conceptual Design for selected land uses.
    - Initiate at 60% Corrective Measure Design.
    - Two (2) Review Meetings.
    - Additional Engineering, Permitting, Stakeholder Engagement to be required for Land Uses.

Primary Land Use Considerations					
	Environmental Compliance	Passive Recreational	Renewable Energy	Non Industrial	Operational
GLCC	●	●	●	●	
County	●		●		●

## Potential Reuse and Acquisition of Soils / Fill

- Material reuse or acquisition prior to or during the Corrective Measures Construction.
- General Suitable for Soils and Fill:
  - ❖ Stockpile and Reuse of materials already on-site.
  - ❖ Materials generated from the Purple Line Construction (project on-hold).
  - ❖ Material generated from other potential projects in the County.
- Specification Standards for material type, consistency, testing, stockpiling, screening, QA/QC and certification as "clean fill" will need to be developed.
- Erosion and Sediment Control, Stormwater Management, and other engineering, permitting, and on-site maintenance requirements will need to be developed.
- Traffic Control and Management requirements will also need to be developed. A Traffic Study may also be required depending on the volume of vehicles.
- As the Purple Line project is on hold, a definitive decision date is needed for use of soil/fill materials.

## Budget Overview

- Design Budget  
(Corrective Measures and Conceptual Land Use)
- Construction Management and Inspection  
(Design Review and CM for Corrective Measures)
- Construction  
(Corrective Measures)
- Total Budget

**\$ 28.7 million**

Note 1 – The Total Budget presented above is allocated for the implementation of the Corrective Measures, which shall be performed in accordance with the MDE Approved ACM and Consent Order for the Gude Landfill.

Note 2 – The Total Budget presented above does not include the implementation of the Potential Land Uses under consideration for the Gude Landfill. The design package for the Corrective Measures is considered the base contract. Additional land uses will be scoped as options and included if CIP funding is available following receipt of the base bid price for the corrective measures construction.

Note 3 – The Gude Landfill operations budget will need to be reviewed and updated after the complete construction of the Corrective Measures to reflect a 30-year Post-Closure Care Period (i.e. 2023 to 2052).

## Project Schedule

■ Issuance of RFP	July 14, 2017
■ Pre-Proposal Meeting and Site Visit	August 4, 2017
■ Offeror Written Questions Due	August 21, 2017
■ Offeror Proposals Due	September 9, 2017
■ Proposal Evaluation/Negotiation/Award	October 2017 – December 2017
■ Engineering Design/Permitting	January 2018 – June 2019
■ Construction Management	July 2018 – September 2022
■ Bidding Services	June 2019 – September 2019
■ Construction	September 2019 – September 2022



# Community / Stakeholder Engagement

- Monthly DEP-DSWS Meetings with the Gude Landfill Concerned Citizens (GLCC).
  - ❖ 43 Monthly Meetings have been held from 2009 – 2017.
  - ❖ Meetings will continue throughout the Remediation Project.
- Remediation Project Kick-off Meeting for GLCC and all Stakeholders.
- Design Progress Updates.
  - ❖ Updates to GLCC with Meetings for 30%, 60%, and 90% Design Stages.
  - ❖ Updates to Other Stakeholders with Meetings for 30% and 60% Design Stages.
- Conceptual Land Use Design Progress Updates.
  - ❖ Updates to GLCC / Stakeholders with Meetings for Draft and Final Comparative Analysis.
  - ❖ Updates to GLCC / Stakeholders with Meetings for Draft and Final Conceptual Designs.
  - ❖ Additional Engineering, Permitting, and Stakeholder Engagement will be required for Land Uses.

## M-NCPPC Involvement

- M-NCPPC Planning Dept. oversees a Mandatory Referral Process within the County.
  - ❖ Requires all federal, state, and local governments and public utilities to submit proposed projects (typically major land developments) for a Mandatory Referral review and approval by the Commission. The review may provide advisory comments.
- M-NCPPC may require Construction Permits if park land needs to be accessed.
- DEP-DSWS representatives to meet with M-NCPPC staff in early June 2017.
  - ❖ DEP-DSWS to provide an overview of the Remediation Project.
  - ❖ M-NCPPC to provide guidance on the Mandatory Referral Process.
  - ❖ M-NCPPC Parks Dept. to offer their historical and current position on Gude Landfill as a park.
- M-NCPPC may potentially be able to assist DEP-DSWS under future land use scenarios that involve plantings, reforestation, trails, and maintenance efforts.



# Corrective Measure Permitting

- MDE Land Management will perform a courtesy review of the 90% Design Documents and issue a letter noting compliance with the ACM prior to construction.
  - ❖ Request MDE attendance at the Kick-Off Meeting, and provide progress updates for the 30% and 60% Designs to receive preliminary feedback ("Progressive MDE Involvement").
  - ❖ MDE will attend Public Information Meetings / Hearings, if invited and available.
  - ❖ MDE will actively inspect the Project during Construction.
- MDE Water Management will perform a formal review of the Design Documents prior to permit issuance.
  - ❖ Most Corrective Measure activities will be covered under the existing 12-SW Permit.
  - ❖ Other potential activities, such as the addition of impervious surfaces or activities outside the cap will require a separate NOI and discharge permit associated with industrial activities.

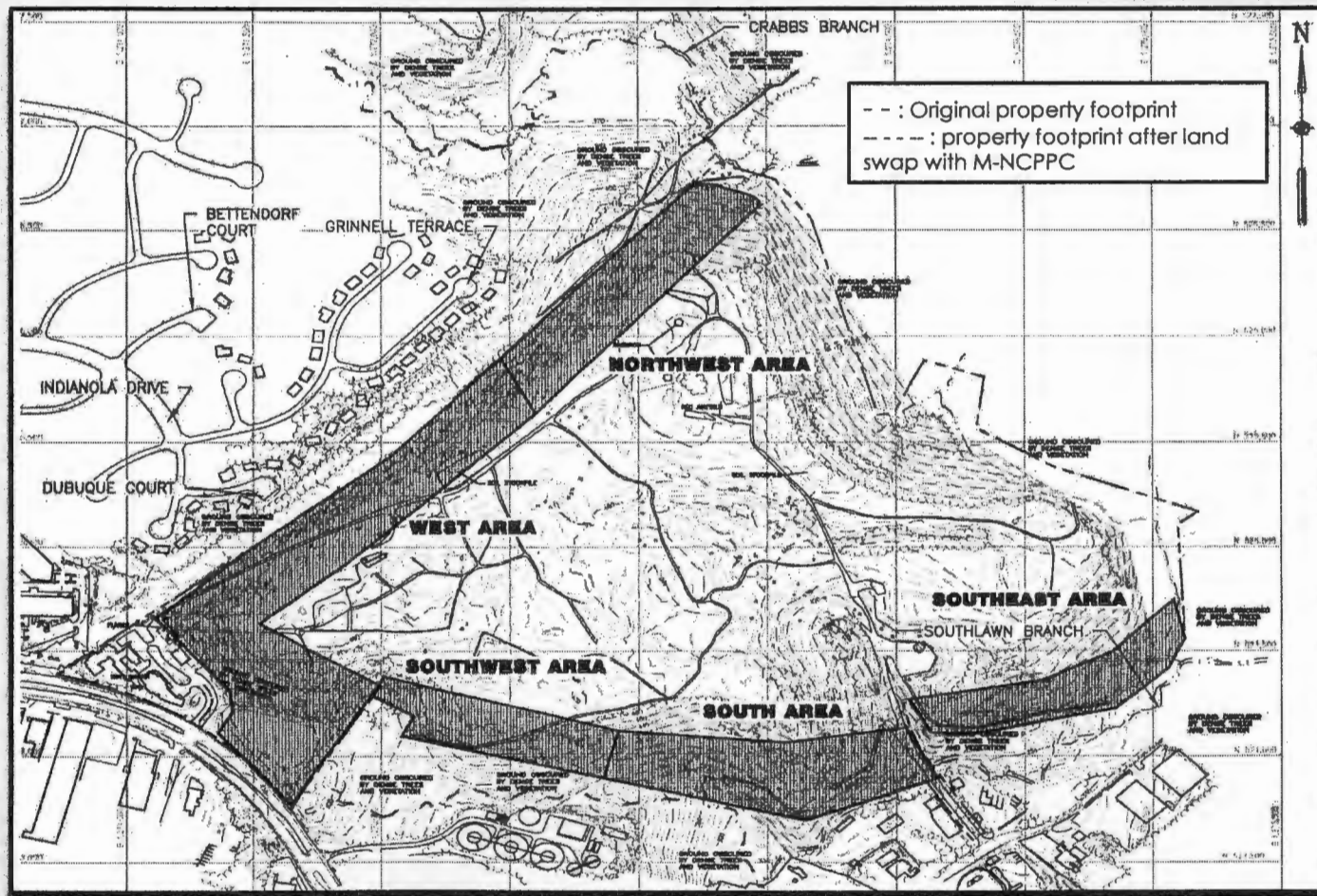
# Corrective Measure Permitting

- County DPS will review the project and issue permits related to construction activities.
  - ❖ Erosion and Sediment Control.
  - ❖ Stormwater.
  - ❖ Reforestation.
- Gas Pipeline Companies may require Right-of-Way Access Permits.
- Future Land Uses may trigger additional permitting (solar, structure upgrades, etc.)
  - ❖ MDE approval for solar installations.
  - ❖ DPS approval for construction and electrical for new buildings.
  - ❖ WSSC closed wastewater treatment plant

# Questions and Discussion

# M-NCPPC Land Exchange Boundary

20



# Historical Aerial Photos and Limit of Waste Placement



1979



2009



# Land Exchange Parcels

## "TOP" Parcel

(No Waste Placement on  
Montgomery County Land)

## "MIDDLE" Parcel

(Waste Placement on  
M-NCPPC Land)

## "BOTTOM" Parcel

(No Waste Placement on  
Montgomery County Land)

