

**Arlington County Solids Master Plan  
Option Stakeholders Meeting  
May 25, 2017  
7:00 pm To 8:30 pm**

**Attendees (citizens):**

John Seymour  
Sandra Borden  
Jesse Boeding  
Suzanne Sundberg  
Paul Guttridge  
Scott Miles  
Sarah McKinley

**Staff and Consultants:**

Mary Strawn  
Tom Broderick  
Lisa Racey  
Sarah Pettitt  
Patti Psaris  
Samantha Villegas

**Meeting Overview**

Tom welcomed the group and provided an overview of the meeting. He stated the purpose of meeting was to make sure we adequately answer all questions that have been asked, as well as any follow-ups that may arise as we answer them.

Mary provided a general project review, explaining the drivers for the project, the goals, the ranking of technologies, etc. She indicated that based on the ranking of technologies and the fact that the County wants a Class A biosolid, staff made the recommendation to the County Manager that they implement the Thermal Hydrolysis/anaerobic digestion (THP/AD) solution.

Mary said that they found the external stakeholder feedback valuable and shared how it had been incorporated into the decision-making process. She also said they will continue to reach out to stakeholders throughout the processes of design and construction, to take place over the next 10 years.

The three topics on the agenda for the night included the flare and its emissions; the financials, and the status of the regional option.

The meeting concluded with staff indicating they would send a meeting summary (this document) and a save-the-date to the larger group of stakeholders for the final meeting of the Master Plan project, later in June.

**Flare and Emissions Discussion**

Mary explained the flare is a requirement, but it would rarely be used. There will be on-site emissions, the amount of which will be dependent on whether the gas is used to create Combined Heat and Power (CHP) or Compressed Natural Gas (CNG). Gas use also determines what requirements of gas cleaning equipment and gas storage are needed.

Mary also explained that the plant already has an air quality permit and emissions from the new equipment would come under that permit. Therefore, any gas usage would be designed to comply with

any air quality standards in the existing permit. Based upon our current understanding of the quality of emissions from biogas usage, the plant should have no problem complying with the existing permit.

- A tour of the plant for E2C2 was requested to increase project understanding and make the technologies discussed less abstract.
  - Staff will also offer a tour to the stakeholder group as well.
- A citizen noted that even for a final gas use of CNG, there would be constant biogas burning to heat the solids as part of the THP process.
  - Staff confirmed this. Note: After this meeting, staff obtained new information that using commercial natural gas to heat the THP process would result in maximizing biogas production to generate RIN credits (offsetting costs).
- Is gas typically stored at other treatment plants?
  - Yes, and the storage would most likely be for uncompressed gas, which has a low pressure/PSI. It's a very safe technology used for many years in many industries. Note: After this meeting, staff obtained new information that gas may be stored compressed or uncompressed on the Plant site depending on final disposition of the gas. Either way the gas will be handled safely and appropriately for Arlington's environment.
- Is there a difference in safety between compressed and non-compressed gas storage?
  - Gas is compressed only prior to use in CNG vehicles, and would most likely be off-site at the point of use and not needed for storage.
- Have you determined the air quality of the emissions yet? The citizen reminded staff he posed this question six months ago. While THP/AD would result in fewer emissions from truck traffic, benefitting the entire County, there would be an increase in emissions in close proximity to the WPCB. What are these emissions and how could they impact the surrounding homes?
  - Staff explained they could not commission a detailed analysis of the emissions until a technology was selected that could frame the study. Now that a technology has been selected, it's the right time to analyze the emissions. Staff has set up a scope of work with the consultant to conduct this analysis over the next few months, to fully investigate the quality and any areas impacted by the emissions under the THP/AD process. Part of the study will be to model the dispersion patterns and how the location of the flare impacts emissions. The study will also model different gas uses – CHP and CNG.
- A citizen mentioned that burning methane (natural gas) is much cleaner than burning gasoline, and car emissions are worse than burning natural gas. Natural gas is considered a clean fuel.
- If staff found at the conclusion of the study that the emissions were a problem or dangerous for neighborhood would staff stop or change the process?

- Another citizen responded by saying that most likely, if staff found issues, they would likely seek out technology to mitigate the impacts of emissions. This might add costs but would address any problems. She said in her opinion, taking trucks off the road would be a significant benefit to kids' health – and she would rather see a flare than thousands of diesel trucks on Arlington streets.
- Staff confirmed that mitigation techniques will be examined.
- Is the air emission study part of the Solids Master Plan? Will it affect the schedule of the Solids Master Plan? Will staff consider the new high-rise buildings being built across the street that don't exist today in the air dispersion?
  - The air emission study will be an addendum to the Master Plan document. Staff will finish the Master Plan with the consultant, and then attach the addendum to the Master Plan along with any other studies or work that may be completed before initiating implementation of the project. Staff will consider new buildings. The group was reminded that the new facilities and equipment we are discussing will not be operational until approximately 10 years from now.

## **Financial Discussion**

Mary distributed handouts showing estimated costs for all alternatives and CIP numbers.

- Is the cost of gas storage included in financials?
  - The storage costs have not been included. The cost of gas storage does not really impact the relative costs of the alternatives – in other words, in moving toward a decision between digester related alternatives, the cost of gas storage would be similar in these alternatives. Estimates are +50% to -30% accurate. This assumes there are some miscellaneous costs not itemized at this level of study.
- Could staff quantify for people how this project will impact resident's bills?
  - It's too early to do so accurately. The Master Plan recommendations are only a portion of the rate increase shown in the CIP. Included in the current CIP are other water and sewer utility costs. There is also a proposed Water Treatment Plant upgrades at the Washington Aqueduct – where Arlington gets its drinking water – that is not reflected in the current CIP, but will be added to future CIPs, if approved.
- Will the current equipment hold for 10 years?
  - Work is proceeding on the equipment that needs to be replaced right now and is already included in the CIP. The current plan is to start design in 3 to 5 years with construction to follow approximately 3 years after that. Staff is looking at appropriate ways to fund the project such as re-examining the availability fee for new customers to ensure new customers are adequately charged for their share of the projects.

- What happens if the studies staff completes have results that are unpalatable for citizens?
  - Staff will stay engaged with stakeholders throughout the process, so they are aware of and can weigh-in on new information as it's learned. Staff will always be checking the pulse of the options and be open to changes like a regional opportunity. The Master plan is like a roadmap but should be flexible and is not cast in stone. The plan will include appropriate language to allow for flexibility and change.
- A citizen added she thought it sounded premature to give out cost figures related to utility bills. The rate increase envelope presented of 1.5% to 3.0% really tracks with current inflation rate of 2%, so she doesn't see much of an impact. It is not fair to say the cost of things won't rise.
  - Staff said more work would need to be done to determine exactly what portion of the impact on the rate is due solely to the Master Plan. A decision on the Washington Aqueduct project should be made in the next year or so, and the projected rate impact of all the projects proposed under the Utility Fund will be re-evaluated at that time. The project team is tasked with identifying other potential funding sources for this project, such as state loans and public-private partnerships.

### **Regional Option**

Mary indicated there had been two potential regional options: Fairfax County and DC Water. Fairfax has taken their option off the table as they have decided to move in a different direction based on recent decisions on their Master Plan. DC Water has expressed interest and has stated they have excess capacity to take Arlington solids.

However, nearly all of costs shown for Alternative 1 (lime stabilization) plus costs for screening would need to be expended as currently dewatered cake is preferred material to be transported. Also, a receiving facility needs to be constructed at DC Water, which would most likely be paid by Arlington as well as a tipping fee for each shipment of solids for treatment and disposal (reuse). Any energy recovery derived by the treatment of the Arlington biosolids would most likely not come back to Arlington, meaning that greenhouse gas reductions would not decrease through the implementation of these upgrades. Hauling unstabilized dewatered residuals is a risk that Arlington would also have to manage.

This would mean that approximately 2,000 trucks per year with dewatered cake would leave the plant, similar to what is happening currently. Bottom line is that the regional option is not without costs, risks, and neighborhood impacts (air, noise, etc.).

- Why not haul liquid to reduce the costs for dewatering and constructing a receiving facility at DC Water?
  - Hauling thickened, liquid sludge is currently not Arlington's preferred option due to both the significant increase in truck traffic, maybe 4 or 5 times as many trucks, and the increased potential safety hazard of transporting untreated solids. More research and discussions are needed to determine the feasibility of a regional option. This evaluation is an iterative process that would happen in parallel the Master Plan. We would look at the solids transport and processing options – liquid or cake and the costs. A regional

option is more difficult to evaluate since it involves multiple jurisdictions and government entities that will require business, legal, and technical input. It will require several meetings and a significant amount of time to not only put a concept together, but to get buy in from all agencies involved.

- A citizen said she is not sure she likes the idea of working with another agency. What if something happens and they cannot accept Arlington's solids? At least if you transport dewatered cake, you can do other things with it. Transporting liquid ties us to one solution. She indicated that she thinks Arlington would want to be master of their own destiny.
  - Staff confirmed this is some of their concern.
- Could the regional solution be used as a temporary way to push the project schedule out?
  - Yes, that is an option.
- A citizen commented that he thought the Master Plan is not really a Master Plan without a regional solution and said the regional solution should be considered before the plan is final.
  - Staff will continue to follow up with DC Water, but Arlington still needs to move forward with its Solids Master Plan. Staff is comfortable with the Solids Master Plan having a recommended Arlington County on-site option while preserving the regional option (with a similar end product) as an alternative that could be enacted if future conditions warrant. The County Manager has instructed staff to keep the regional option on the table.

#### **Items Discussed Not on the Agenda**

- A citizen commented that she believed Class A is not necessarily pathogen free and land application is banned in some countries in Europe.
  - Staff confirmed that yes, land application has been banned in some countries in Europe, where agricultural land is limited, but it is in use in most European countries. It is not anticipated that land application will be banned in the U.S. as it is widely used and supported by a large portion of the agricultural industry.
- How do you "clean" the gas for CNG?
  - Note: After the meeting staff researched this question. The raw gas is typically cooled to reduce the amount of moisture present then filtered to remove contaminants. Alternative processes could include chemicals to remove contaminants and technology to concentrate the gas.
- What impact will the SMP (long-term plans) have on household wastewater rate?
  - A wastewater rate increase would fund not only this project, but other projects needed to maintain service. Note: After the meeting, staff analyzed the current 10-Year CIP (FY 2017 to FY 2026). The portion of rate increase attributable to the Solids Master Plan is

approximately 35%. If approved, this portion associated with the long-term plan would likely go down based on the upgrades to the drinking water treatment plant that have not been finalized yet.