

SOLIDS MASTER PLAN BRIEFING TO EXTERNAL STAKEHOLDER GROUP

27-Oct-16

WPCP - TRAINING ROOM; 7:00PM

ATTENDEES:

Guests:

Michael Battaglini (CCCA)
Peter Robertson, FAAC
Jesse Boeding, CivFed, Exec Comm

Sarah McKinley, (Neighborhood Advisory Committee)
John Seymour, E2C2
Sandra Borden (CCCA)
Paul Guttridge, AHCA
Charlie Hughes, ARCA

County:

Tom Broderick, Bureau Chief, WPCB
Mary Strawn, Project Engineer, WPCB
Mike Collins, DES Chief, Arlington County

Katie O'Brien, Communications, Arlington County
Krista Abele, DES Finance, Arlington County

Consultants, CDM Smith Team:
Samantha Villegas, External Affairs
Patti Psaris, Engineering

ATTACHMENTS:

Slide Presentation 10/27/16

NOTES:

Samantha welcomed everyone and re-introduced the team for newcomers and reviewed the Stakeholder group role, which is to serve as a sounding board for the plan; to report to their representative groups and to provide input into the process. Samantha is the community point of contact during the Master Plan project, and her email is samantha@savipr.com. Mary began with a review of the schedule - we've just completed the Development of Alternatives, and are headed into the development of the Final Report. The team completed a preliminary evaluation of alternative technologies, and will finalize it in the next few months after applying some sensitivity analysis to the current results. The County is pilot testing the digestion of Arlington County solids, which will extend the study phase a little further into 2017.

Mary then reviewed each of the four alternatives under consideration: the baseline lime stabilization (produces Class B); Mesophilic Anaerobic Digestion (produces a Class B); Mesophilic Anaerobic Digestion preceded by Thermo Hydrolysis Pretreatment (produces Class A); and Mesophilic Anaerobic Digestion followed by Thermal Drying (produces Class A) and spent some time outlining the key points of Anaerobic digestion which includes the opportunity for fuel/energy generation through biogas production, and the opportunity for nutrient recovery.

Patti described the energy recovery and side stream issues in more detail, noting the composition of emissions of raw biogas and the combustion of biogas.

Patti then shared results of a market analysis, which showed some of the current uses for the products in the Mid-Atlantic, concluding with a summary of county opportunities, which included: the possibility of providing an urban soil amendment product, energy recovery, and a biogas derived fuel for the ART bus fleet.

Next, Mary reviewed the scoring framework, beginning with the criteria ranking results. She showed how weighting was applied to each alternative to create a final score based on the criteria rank times the weight. Then she shared how each of the four alternatives scored for each of the four categories of evaluation (Operations, Social Acceptance, Economic, and In summary, the alternatives ranked overall very closely in the preliminary analysis, with MAD first, THP/MAD second, MAD/DRY third and Lime stabilized last. Mary then shared the individual scores for each alternative against each of the four main criteria. MAD scored highest for economics, second for ops and environmental, and third for social. THP/MAD scored second for economics, last for operational and first for both environmental and social. MAD/DRY scored third for economics, operational, and environmental, and last for social. And finally, Krista Abele then reviewed the budgeting and financial process. She explained that the utility fund includes other items, such as water, and is a self-sustaining enterprise fund. She shared the 10-year CIP budget, and debt service, explaining that the debt to be incurred for this project is taken on at the same time much of the debt from the Phase I Master Plan rolls off. She completed her talk with a review of the CIP process, noting that staff is in the process of executing the first year of the FY2017-2026 CIP and formulating their FY 2018 operating budget. Mary concluded by saying in the next three months the team will complete a sensitivity analysis, site visits, and continued conversations internally, to develop a final recommendation. They will come back to the stakeholder group at that time (Late Q1) to share that information. It was suggested that plant staff consider presenting to individual stakeholder groups in that Some of the stakeholders made some recommendations about messaging. All agreed keeping it simple is important, but that Arlingtonians can handle slightly more sophisticated Mike Collins said he was looking for a letter of support from this group with respect to process and selected alternative.

The following chart captures the question and answer exchanges made during the meeting.

Question	Response
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Who is conducting your peer review?	There are representatives from the Water Environment and Reuse Foundation conducting that, as well as members of our Technical Advisory Committee (TAC). The TAC includes experts from academia, other utilities, and consultants.
Why is the regional solution no longer being considered as a long-term solution?	At this time the regional alternatives do not offer the best balance between sustainability and reduced solids volume. When transporting unprocessed solids off the plant site the County takes on a lot of risk. The regional alternatives involve a lot more than just the hauling costs – most facilities would also require costs for capital and operational costs (fees) as well. The final report will indicate what conditions (fiscal or otherwise) or triggers might make regionalization or off-site options attractive to Arlington County.
Does the level of NOX and SOX depend on what kind of biogas product is created?	Yes. The level of NOX and SOX depends on the specific biogas that is generated, as well as whether that gas is cleaned and use to fuel an engine or cleaned and reused as vehicle fuel.
Have you completed a cost assessment for the development of CNG?	Yes, it's about \$10 million for equipment to clean the gas for use as CNG fuel. Also included were the operation and maintenance costs of approximately \$200,000 per year (2016 dollars). There is an additional minimal cost for gas storage that may or may not be located at the treatment plant.
How can you truly assess the value of the CNG production without a clear assessment of the income potential vs the cost to make it?	The analysis includes the quantity of gas produced, the value of that gas (if it is used to generate electricity or used as fuel for vehicles), the cost of the equipment to treat the gas to reuse quality, and a federal incentive fee for reuse as a renewable fuel.
In MAD vs THP/MAD, how much more biogas is produced, and does the sale value offset the increased cost?	THP/MAD provides approximately 20% more gas production. The purpose of the life cycle costs is to evaluate and compare all the alternatives, which also takes into account any biogas reuse opportunities.
What is the big difference in labor costs affecting the economic scoring?	The operational and maintenance costs are composed of costs for labor, hauling, power, natural gas and chemicals. The labor takes into account the staffing requirements associated with each alternative. The slide provided at the meeting shows an incorrect calculation of labor costs and has been corrected and provided as a separate attachment. With this correction, the LIME alternative continues to have a higher operations and maintenance cost because it is a labor and hauling intensive process compared to the other newer technologies.
Do citizens get to vote on the budget for this?	Yes, this will all go to the voters through a bond referendum prior to the County issuing debt. There will also be a chance for citizen input on the overall plan when the Solids Master Plan goes to the County Board for adoption in the Spring/Summer 2017.
Are you running all the old equipment during the same time you will be installing the new equipment?	Yes, that's why this is such a complicated undertaking. There will be a need to carefully coordinate and phase the construction elements so that needed processes continue to operate until their process replacement is finished.

How much of the Phase I project debt is remaining?

Remaining debt (principal) from MP01 (Liquids Master Plan 2001 projects) was approximately \$300 million at June 30, 2016. By FY2022, the amount is projected to be less than \$135 million.

Is the debt service on the plant \$10-20 Million/year?

Current debt service for Utilities is \$32.5 million annually. The portion of this attributable to MP01 is about \$29 million annually. New debt service for Phase 3 Solids Master Plan projects based on the information included in the FY2017-2026 CIP would be about \$12 million annually (conservatively), depending on how much we finance, what our interest rates are, Interjurisdictional partner contributions, and how long we finance the projects over.

Isn't WSSC using a regional solution?

WSSC owns and operates 6 wastewater treatment plants. They are using a solution where they will transport raw solids from some of their smaller plants to a single larger plant where the solids will be processed. So, yes they are using a solution that is geographically regional because it covers all their facilities, but the regional solution is all within WSSC's system and does not involve any other utilities. They are hauling raw solids in quantities smaller than those that would be produced from the Arlington plant. WSSC has decided that the raw solids hauling for their situation is an acceptable risk for them.

Why not take a bigger a chunk out of debt earlier?

Paying older debt off sooner (e.g. at a level more than is currently budgeted or scheduled) would unnecessarily increase the Water-Sewer Rate and burden current ratepayers disproportionately based on the lifespan of the assets and how is receiving benefits from the projects. The debt was issued to correspond to the life of the assets so that the cost is spread out amongst all of the ratepayers who benefit over the life of the asset. Each increase in expenditures of \$75,000 equates to approximately 1 penny on the Water-Sewer Rate. For example, if we were to pre-pay \$1 million in debt principal, this would increase the Water-Sewer Rate by approximately \$0.13, or 1%.

How will the bond issuance impact rates?

It is anticipated that this project will increase rates approximately 1.5-3% annually over the next 10 years (based on the FY2017-2026 CIP). By staging the projects to later in the 10 year CIP, this allows some of the current debt to roll-off and creates the debt capacity to issue new debt for these projects. Basically as debt is retired, we are issuing replacement debt in its place. Additionally, staging the projects also creates more rate affordability and is consistent with the County Board adopted Utilities' policy that the Water-Sewer rate increases gradually, instead of rate spikes (when possible). One of the benefits of issuing long term debt for projects is that all who benefit from these long term improvements and facilities will pay for them through the rate over the life of the assets.

Crystal City is still growing, will the system handle the growth?

Yes, the plant's capacity is designed to meet projected growth out 20 years and this is evaluated regularly then planned for as appropriate.

What is the end product for Alt 3, (THP/MAD)?

It is a Class A product that is dark, crumbly, and soil-like.

Isn't there a risk in continuing with Lime Stabilization for Class B biosolids going forward. Will this option always be available in the future?

Yes, this is a risk that needs to be considered going forward. If the Virginia regulations change, there could be competition for fewer sites or there could be a lower allowable application rate on fields, causing the costs to increase. Reducing the amount of residuals to be dealt with would reduce the risk. The Virginia Department of Environmental Quality has committed to making land application of Class B biosolids a safe and viable option through regulation based upon sound science. There are, however, opponents to this practice may affect its long term viability.

Who makes the final decision about what option is selected?

As the subject matter experts, it is incumbent upon plant staff to provide a recommendation to the County Manager for his approval through the chain of executive leadership. Practically, this means that there will be an internal vetting process that may modify the plant staff's final recommendation or require additional information.

The WPCP's solids master plan does not require approval of the County Board, however all funding for the capital expenditures associated with the recommended option would require Board approval. Therefore, staff will present the master plan recommendation to the County Board, and will seek appropriate Board action (e.g. acknowledgment and general agreement) for the Solids Master Plan final recommendation.

Action Items

Samantha to distribute meeting summary, revise if needed, and post to website.

Team to respond to a series of questions that were posed by CivFed members following the meeting

Team to respond to Paul's request for review of Regional Solution

Staff to schedule presentation at Neighborhood Coalition, CivFed, and combo of Civic Associations prior to next stakeholder meeting.