Summary

Project:	Arlington County Biosolids
Subject:	Biosolids Advisory Panel
Date:	Thursday, May 15, 2025
Location:	Teams
Attendees:	Sandra Borden, Crystal City Civic Association John Bloom, C2E2 Energy Committee Steve Young, Paul Guttridge, Aurora Highlands Civic Association Joan McIntyre, Eco Action Arlington Alex Rough, C2E2 Energy Subcommittee Mary Strawn, Arlington County Water Pollution Control Plant Lisa Racey, Arlington County Water Pollution Control Plant Fasil Haile, Arlington County Water Pollution Control Plant Brian Balchunas, HDR Stephanie Spalding, HDR Emily Tuttle, HDR Tucker Cotter, HDR Dan Stromberg, PC Construction Laura Simmers, PC Construction Joe Uglevich, Stantec

Agenda

1. Introductions
2. Overall Program Updates
3. Schedule Updates and Upcoming Site Activities
4. Site Plan and Architectural Updates
5. PFAS Risk Assessment
6. Communications Update
7. Open Discussion

Welcome and Introductions (Mary Strawn and Emily Tuttle)

Mary Strawn welcomed and thanked everyone for attending the meeting.

Emily Tuttle shared how to use the Teams virtual meeting platform. She also reviewed the meeting agenda.

Emily led introductions, including Alex Rough, a new panel member from the C2E2/Energy Subcommittee. In addition to Advisory Panel members, meeting attendees included staff from the Water Pollution Control Plant, HDR, PC Construction, and Stantec. Emily Tuttle shared that she will be assuming the coordination role for this panel previously held by Melanie Deggins.

Emily reminded the group of the purpose and expectations for panel participation.

Overall Project Updates (Mary Strawn)

Mary Strawn reviewed program roles and responsibilities for Arlington County, HDR, PC, and Stantec.

Mary reviewed the overall scope of the program. Mary explained thermal hydrolysis and anaerobic digestion, which will produce a higher quality biosolids product and a renewable energy source for Arlington County. Mary explained additional program benefits, including reduced odors.

Mary shared an aerial map of the existing facility with the project area highlighted.

Mary provided an update on program management, gravity thickeners, the program's early work package, and the program's main work package. Mary explained that the design of the early work package is approximately 95% complete and the main work package is past 30% completion.

Mary explained that a value engineering study in early 2025 resulted in 94 ideas, which have reduced program costs by ~$15 million. Mary explained that early work package construction is set to begin as early as Fall 2025.

Mary explained that the new Capital Improvement Plan has been submitted and approved, and an Inflation Reduction Act Tax Credit was investigated but not secured due to strict timing requirements. Mary explained the County's efforts to study market impacts and to cost estimate the project.

Schedule Updates and Site Activities (Brian Balchunas)

Brian Balchunas gave an overview of the anticipated program timeline, explaining that major construction will begin in 2026 and continue for five years, though the schedule will continue to be optimized.

Brian gave an update on the status of the early work package, explaining that permitting is currently underway, design is being finalized, and price will be reviewed and negotiated this summer. Construction is expected to start in the fall. Brian shared the scope of the early work package, including demolition of the decommissioned bio-building. Brian shared that Steve Young's recommendation to complete a wildlife survey of the empty building was completed with the County Naturalist, and no animals of concern were found to be present.

Brian provided an update on the status of the main work package. Revisions from value engineering are currently being incorporated, and permitting, pricing, and final design will continue through 2026 with a goal of Board approval late this year.

Site Plan and Architectural Updates (Brian Balchunas)

Brian gave the group an update on the site plan layout, comparing the old layout and the current proposed layout. Brian showed on the updated layout where the digesters and waste gas flare

will be located and explained why the new location will be more successful from a process and safety perspective.

Brian explained that the program is proceeding with steel tanks for digesters and that they will significantly reduce the amount of concrete needed for construction, which is beneficial from a sustainability perspective.

Brian gave an update on the architectural elements of design. Brian explained that adjacent architecture and aesthetics have been reviewed and considered so the new facilities fit into the context of the existing facility and the neighborhood. Brian explained that the next steps are to finalize the concepts with the architect and schedule presentations to share this information with nearby civic associations. Information will also be provided via stakeholder channels like civic association newsletters. Mary explained that key stakeholders for these conversations are Aurora Highlands and Crystal City since these stakeholders are adjacent to the site.

PFAS Risk Assessment (Stephanie Spalding, Mary Strawn, and Brian Balchunas)

Stephanie Spalding gave an overview of the PFAS, a class of fluorinated chemicals in use since the 1940s, persistent in the environment, and known to have some adverse health effects to humans. Stephanie explained that wastewater treatment plants receive PFAS in their influent – i.e. they are “receivers" not “generators."

Stephanie reviewed the Draft Sewage Sludge Risk Assessment for PFOA and PFAS, released in January by the Environmental Protection Agency. Stephanie explained the risks that were and weren’t quantified in the assessment and that a risk assessment is not a regulation, proposed guidelines, or a risk prevention plan. Stephanie noted that there have been many comments submitted on the Draft Risk Assessment.

Stephanie explained that a range of policy approaches are being explored at the state level around the country. Stephanie explained that PFAS is not regulated in biosolids, but Arlington County tested in 2022 and found levels on the lower end of what would be expected. Stephanie explained that the industry supports finalization of the Risk Assessment only after stakeholder comments are addressed.

Stephanie explained that the best way to remove PFAS from wastewater will be working to remove PFAS from our daily lives through the products we use. Mary Strawn added that Arlington County is interested in emerging technologies to remove PFAS from the water system and will continue to research exploratory programs. Mary noted that new samples will be taken and she expects levels will continue to be low.

Community Engagement Update (Mary Strawn)

Mary Strawn asked the panel to continue to share ways that the program can communicate and engage with the community. Mary reminded the panel of civic association meetings that are already scheduled, and that an open house is being planned closer to the start of construction

this fall. Mary and HDR are also crafting a newsletter blurb for Crystal City, which can be used by others if interested.

Questions and Responses

Question	Response
Paul Guttridge: Thanks for making the layout less industrial looking by making adjustments to the pipes. Is there a way that some of the "open" equipment (example: biogas upgrading equipment) can be surrounded with screens?	**Mary Strawn:** We are looking at visual concepts for screening, including featuring vegetation that may soften the view particularly in the gas handling area.
Sandra Borden: Will the new layout impact the recycling facilities?	**Mary Strawn:** Yes, the household hazardous materials recycling currently inside the old incinerator building will be moved across 31st Street.
Sandra Borden: The presentation is very understandable to a layperson, especially if you were to bring it to a civic association. One comment: you may want to explain what the Capital Improvement Plan is. One question: the new process has so many more steps. Thermal hydrolysis seems to have a big increase in operating cost. Can you explain how that will work?	**Mary Strawn:** Yes, thermal hydrolysis does require more energy to operate. We're offsetting that because reducing the amount of solids means we pay about $1 million less in hauling per year, which is a significant reduction in operating costs. We will also generate revenue by selling biogas. **Brian Balchunas:** The energy in the biogas produced is higher than the energy required to operate the new process (energy positive).
Sandra Borden: Will the renewable natural gas be able to be used onsite?	**Mary Strawn:** We can, but there are financial advantages to selling it. If Washington Gas cannot accept the gas, then we can use it internally.
Sandra Borden: If there are funding challenges that stop the project halfway through, is the project modular in a way that the first amount of work will stand alone and still provide a benefit?	**Mary Strawn:** That is a great question, and we will have to consider more carefully if the improvements can be incorporated in a modular way.
John Bloom: To clarify about Washington Gas, we have the RINs credits and the RNG. The RNG goes into the gas grid. The credits seem more interesting in the ways they could be used. You mentioned in the presentation and past discussion that it seemed like the RNG commodity value is limited, but I'm wondering what the plan is for the RINs and credits?	**Brian Balchunas:** We're looking to identify a broker and end users through a Request for Proposals process. We also hope that when we solicit for assistance we get interest from outside of the RINs market, potentially from stakeholders who want to publicly demonstrate support or have a need to promote their environmental policies.

	We have recently met with the Arlington AIRE team to review previous discussions and accounting of greenhouse gas.
John Bloom: When you say the physical gas will go to an end user, do you mean the credits? The Arlington environmental community will be interested in the final end use for the physical gas.	**Brian Balchunas:** It goes into the grid, so it's like buying into a solar electric program that is physically located somewhere else. We can't say the physical particles go to a certain place, but we can make agreements with a partner like ART or WMATA.
Paul Guttridge: What was the reason for enclosing the thermal hydrolysis process?	**Mary Strawn:** The main reason is that we heard about potential intermittent odor concerns from thermal hydrolysis when the system is being maintained. In addition, WSSC Water in Prince George's County (across the Potomac River) recently installed thermal hydrolysis and has experienced freezing issues. So, we have multiple reasons to build it as an enclosed structure.
Paul Guttridge: Will you hire more people to run the new facilities?	**Mary Strawn:** Yes, probably around eight staff members for operating and maintaining the new facilities. Staffing requirements are still being finalized.
Joan McIntyre: When you plan to take down two buildings, do you look to deconstruct them so they can be reused and recycled?	**Dan Stromberg:** Yes, though I can't say the exact percentage. We've been able to recycle concrete material for subgrade in the past. This is also something that is part of our Envision considerations for the project.
John Bloom: A significant amount of your emissions still come from trucking. Have there been discussion about using electric trucks for hauling biosolids?	**Mary Strawn:** I'd need to find out more about the implications. We know the trucks are heavy and travel a far distance, potentially up to 4 hours. We'll check with the Equipment Bureau about the possibilities.
Paul Guttridge: Do Class A biosolids have more local buyers than Class B?	**Mary Strawn:** We're hoping to be able to give some portion of it away to residents and other users in Arlington.
John Bloom: Could a use or way be identified to sequester the carbon dioxide from gas upgrading? I know it would be costly but would reduce a lot over a 30-year period.	**Stephanie Spalding:** The carbon capture technology is really in its infancy. There are industries in northern Virginia, but based on our studies, the amount we'll be capturing will be small and there will not likely be buyers interested at that scale. We evaluated and have decided to hold for now as the technology continues to mature. It's not precluded, but not currently part of the project.

Paul Guttridge: Is the existing odor control structure being demolished?	**Brian Balchunas:** Yes. The new odor control facility will be tucked between the Solids Processing Building and the digesters.
Paul Guttridge: Will regulations in Virginia become more restrictive to the application of biosolids by lowering allowed PFAS levels?	**Mary Strawn**: We are aware that legislation was unsuccessfully introduced in Maryland earlier this year. We could expect new legislation to be introduced in both Maryland and Virginia next year. We encourage our regulators and legislators to let the EPA risk assessment process be finalized before enacting broad regulations that might not be suitable for all utilities or end users.
Joan McIntyre: Will the Class A solids have a higher concentration of PFAS, since the solids themselves are reduced?	**Mary Strawn:** We'll have to follow up with our colleagues at DC Water and HRSD. **Stephanie Spalding:** This is something that is still being studied. We don't have an answer yet about how PFAS concentrates in biosolids. It is possible that the concentration will go up some because of the reduced quantity of solids, or through transformations occurring in THP or digestion, which is difficult to predict. **Brian Balchunas:** You'll see the standards are much lower for biosolids than drinking water, which is mainly because it is much harder for PFAS in biosolids to enter our bodies.
John McIntyre: A communication campaign about PFAS and how to avoid it would be very appreciated by the public.	**Mary Strawn:** We're working on communications materials right now and would be happy to run the drafts by this panel for input.
Joan McIntyre: What are you doing about the broader issue of microplastics?	**Mary Strawn:** Microplastics are an emerging issue. It's similarly challenging for wastewater treatment plants to remove things that get caught in filters and then end up in solids. It's something we'll continue to review and work to include in future messaging and outreach.
Steve Young: I want to second the microplastics concern and would encourage messaging about it, understanding there's no easy answer. I want to add that I think site security features should be considered for any Arlington facilities.	**Mary Strawn:** Security is something we're considering, including appropriate screening and review of the plant fencing.

Paul Guttridge: I've also noticed some specific odor issues lately near the plant; can you share anything about that?	**Mary Strawn:** We've had some challenges with dewatering odor control system lately, but I will check with the operations team about your question. We also just replaced an odor control chemical feed pump and piping and will continue to make improvements to the current facilities until the new ones are in operation.