

Arlington Water Pollution Control Plant

Solids Master Planning Concerns

Civic Associations submitting this statement:

Aurora Highlands, Arlington Ridge, and Long Branch Creek

Residential neighborhoods comprising three Arlington civic associations—Aurora Highlands, Arlington Ridge, and Long Branch Creek—adjoin the Arlington Water Pollution Control Plant. This statement is a joint request by the three civic associations to the Arlington County Board to postpone the implementation of the Solids Master Plan for 2 years (until the next CIP). The postponement will ensure that the decision is truly informed about both the economics and the health risks to the surrounding neighborhood of purchasing a platinum version of new replacement equipment.

The Arlington Water Pollution Control Plant has been working on a Solids Master Plan with community input since December 2015, an effort that is almost complete. The preferred alternative proposed by staff for treating solids at the plant into the future involves a process that would digest the residual sludge, creating a final product that could be used as a fertilizer. A byproduct of this process is methane gas, which could either be burned to generate electricity on site or be used as fuel for the WMATA and ART bus fleets across South Eads St.

Although the project has green credentials there are serious concerns regarding detrimental air quality for the local neighborhood and a high capital cost that need to be addressed before the project can be allowed to go ahead.

A regional solution creating a partnership with DC Water Blue Plains Advanced Waste Water Treatment Plant in South East DC or other regional partner to treat the residual solids would mitigate the high capital cost and eliminate the local residents' air quality concerns.

Cost:

The Arlington CIP as currently submitted includes a line item of \$139 million for the Solids Master Plan upgrades. The treatment process proposed does not appear to be cost effective for a facility on such a small scale as the Arlington Water Pollution Control Plant. This was the conclusion of the Washington Suburban Sanitary Commission, which serves nearly 9 times more people in Prince George's and Montgomery Counties. The WSSC rejected plans to build treatment facilities at each of their wastewater treatment plants in lieu of the more cost-effective regional solution, which involves trucking of solids from all its facilities to a single new treatment facility.

The Arlington County Board should ask Staff for a cost-effectiveness analysis of the proposed plan as compared to a regional partnership. Under a regional partnership the capital cost for Arlington would be insignificant, the operating costs in terms of personnel could be reduced vs the costs for hauling solids in 7 or 8 trucks per day, and the processing fee. To put the capital

outlay in context: \$139 million represents a debt service of approximately \$11 million per year for 20 years.

This has been a difficult year for the Capital Improvement Plan for Arlington and delaying this expensive project would alleviate some of the pressures currently being experienced.

Emissions:

Under the proposed solids master plan the methane gas produced would be used to fuel the new process; excess methane would either be burned to generate electricity or piped as fuel to the ART and WMATA bus fleets across South Eads St. Nonetheless, all of these scenarios involve burning of methane at the plant; in addition, gas combustion flares would to be installed and used during plant maintenance and outages.

Poor air quality is already a concern for the neighborhoods of Aurora Highlands, Arlington Ridge, and Long Branch Creek, bounded as they are by Route 1 and I-395 and next door to Ronald Reagan National Airport.

An emissions study as part of the Solids Master Plan has now been performed in response to pressure from stakeholders from the local civic associations. Preliminary results of the study were presented by staff in March 2018. Emissions from the flaring and combustion of biogas include constituents that are harmful to health such as NO₂, SO₂, CO, Inhalable PM₁₀, and Fine Particulate Matter. The preliminary study results show that all of the alternatives would contribute to worsening air quality outside the plant. Residents from all three Civic Associations live directly across the road and on the hill above the plant and they would be directly affected by the worsening air quality.

Staff's recommended options in the SMP will result in the release of [higher levels of airborne pollutants](#) than under current plant operations. This increase will require that pollution control devices be added to the combined heat and power (CHP) system to keep pollution levels from exceeding EPA's health and safety thresholds.

These pollution control devices would reduce, but not eliminate, just two pollutants: nitrogen dioxide (NO₂) and particulate matter (PM_{2.5}). The emissions at the facility's fence line for NO₂ would still be only 20% lower than the emissions limit. And in three of the five scenarios, the fence-line PM_{2.5} (annual) emission levels reach the threshold emissions limit. So even with pollution control devices in place, there is little room for error or increase in these emission levels over the long term. Two of the increased emissions, *nitrogen oxides* (NO_x) and *volatile organic compounds* (VOCs), are precursors for ground-level ozone (O₃). When combined with heat and sunlight, NO_x and VOCs react to create ground-level ozone. The American Lung Association already gives Arlington's air quality [an "F" for ozone \(O₃\) pollution](#).

Even exposure to [relatively low levels of O₃ endangers public health](#), which prompted the federal government's [recent reduction in ozone limits to just 70 parts per billion](#) (ppb) over eight hours. The nearby [Aurora Hills' EPA air-quality monitoring station](#) frequently records O₃ levels above 70 ppb.

[Children and babies are especially at risk](#) and studies indicate that each 20-ppb increase of ozone is associated with a 63-percent increase in the rate of school absence for illness and a [0.5 percent increase in adult mortality](#).

Even though [Arlington already fails to meet the federal 70-ppb limit for ozone](#), projections of the plant's post-upgrade emissions don't estimate the plant operations' impact on ozone pollution. We simply don't know how much higher local ground-level ozone concentrations may go once the proposed equipment is online.

Before we invest another \$139 million, the public needs additional independent data clarifying the risks that the various upgrade options would pose to the health and safety of residents living near the plant.

Regional Solution:

Rather than building an expensive capital project at the AWPCP, an alternative solution would be to transport the residual solids to DC Water Blue Plains Advanced Waste Water Treatment Plant in southeast DC, where it would be treated in a state-of-the-art facility that currently has excess capacity. Other regional partners may be available. The DC Water plant uses a process similar to the proposed process for Arlington and it already produces renewable energy and a final product that is being used as a fertilizer. DC Water Blue Plains is located on the edge of the Potomac River where emissions readily disperse without affecting the local population. The scale of the Blue Plains plant (10 times the size of Arlington's plant) makes DC Water's treatment process cost effective.

The staff at DC Water are willing and eager to discuss the possibility of receiving Arlington's residual solids but time is needed for the conversations to take place and to allow for any necessary minor plant alterations.

Summary:

The high capital cost (\$139 million) and the detrimental effect on the local air quality of the proposed Solids Master Plan alternatives necessitate a careful evaluation of the economics of purchasing a platinum version of new replacement equipment and a commitment that the new facility will not pose serious health risks to the surrounding residential neighborhoods. It seems clear that more time is needed to arrive at a truly informed decision. The civic associations of Aurora Highlands, Arlington Ridge, and Long Branch, which all adjoin the Water Pollution Control Plant, strongly request that the Capital project be delayed for 2 years to allow a regional solution to be fully fleshed out and vetted for cost effectiveness.

Arlington should not approve any plan or project that could worsen local air quality for residents living next to Arlington's Water Pollution Control Plant. We hope that the Arlington County Board agrees with this view and will do everything in its power to ensure that neither the Solids Master Plan nor the option ultimately selected will worsen local air quality or sacrifice local public health.