

DC Office of Zoning (DCOZ)
441 4th St NW #200
Washington, DC 20001

DC Zoning Officials:

I'm here asking the Zoning Commission to reject or delay a ruling on the zoning application from Vision McMillan Partners, LLC & DC Deputy Mayor for Planning & Economic Development, case number 13-14. I believe there are grounds to have the applicants reconsider development plans due to environmental health and community impact reasons. If proceeding with the current development plans, I respectfully request that either a full Environmental Impact Statement (EIS) or updated Environmental Assessment (EA) and Health Impact Assessment (HIA) are needed and warranted before a zoning decision is made. Currently I do not see this development plan as being consistent with the Comprehensive Plan.

I attended two May 2014 DC Zoning hearings regarding development plans for McMillan Reservoir. I appreciated the opportunity to share with the Zoning Commission my concerns about possible negative community and environmental impacts including health concerns associated with air pollution, noise pollution and loss of green/park space. I recently read about the D.C. Court of Appeals judgement issued on Dec. 8, 2016¹ which agreed with Friends of McMillan Park (FOMP) that the "Commission has a clear responsibility under the applicable statutes and regulations to assess environmental impacts when deciding whether to grant a PUD application." This includes environmental impact assessments of increased air and water pollution, noise, waste, emissions, and use of water, electricity, and gas. I do not believe many of these impacts are included or properly assessed in the District Department of the Environment's "ENVIRONMENTAL ASSESSMENT For McMillan Reservoir project" report (May 2016), written before the D.C. Court of Appeals ruling. Based on the publicly available case documents available on the IZIS site, I do not agree with Melinda Bolling, Director, Government of the District of Columbia, Department of Consumer and Regulatory Affairs decision "that the proposed action is not likely to have substantial negative impact on the environment" documented in her August 29, 2016 letter, a decision written before the D.C. Court of Appeals ruling.

I'd like to request that the Zoning Commission give community members and the public more time to evaluate all the materials recently added to the application for Case 13-14. Much of these materials were only loaded to the case exhibits last week, March 13, 2017. I and others in my community would appreciate more time to review recently added exhibits. I specifically would like more time to read and understand *all* of the District of Columbia's environmental assessment materials many of which are referenced in the May 2016 report but not included in the publically available case exhibits. Please make readily available to those following this case (#13-14) materials referenced in the March 13, 2017 documents including but not limited to:

- In-house reference materials listed in Section C on the May 2016 Environmental Assessment (EA)
- The applicant's responses to the EISF which is references heavily in the May 2016 EA
- The Air Quality Analysis (AQA) by Applied Environmental, Inc., Dec. 22, 2015
- The Air Quality Analysis (AQA) by ECS Mid-Atlantic, LLC, May 19, 2016
- Vehicle, transit, and traffic details not readily found in the publicly available Transportation Impact Study (TIS), e.g. miles traveled by specific engine, vehicle type, model year, fuel type.

¹ <http://www.dccourts.gov/internet/documents/15-AA-0493plus.pdf> last accessed March 21, 2017

A more complete Environmental Assessment (EA) or an Environmental Impact Statement (EIS) is needed and required for this project for numerous reasons including the following:

Inadequate DDOT assessment: A new/updated transportation impact study is needed and there need to be signed agreements that the traffic mitigation plans (e.g. placement of signals and turn lanes, parking limitations to encourage the use of non-automobile modes of travel) are not just recommended but required *before* any development plans are approved. DDOT needs to properly reassess not only how this project meets all DDOT standards (list of standards and how the VMP plan meets those standard is not included in the Sam Zimbabwe, Associate Director, District Department of Transportation (DDOT), letter from August 19, 2016 - review of 15-00632 – 2501 First Street NW (McMillan Reservoir)) and how the increases in traffic impacts safety and transportation emissions in the region. Earlier DDOT testimony to the Zoning Commission recognized that traffic congestion and safety mitigation efforts were required given significant increased traffic impacts from this project (e.g. May 1, 2014 testimony from Mr. Shiesel with Gorove/Slade Associates).

Incomplete and Inadequate Environmental Assessment (EA): The D.C. Court of Appeals in their December 2016 ruling stated that FOMP “contends that the Commission has a clear responsibility under the applicable statutes and regulations to assess environmental impacts when deciding whether to grant a PUD application. For the reasons already stated, we agree.” The most recent May 2016 DDOE “ENVIRONMENTAL ASSESSMENT For McMillan Reservoir project” is only 24 pages long and does not include essential supporting documents and information, e.g. from the AQAs on carbon monoxide. The Environmental Assessment (EA) also does not include important components we’d expect to see in an EA, e.g. noise pollution. The EA and related letters/memos do not explain what criteria and reasons were used to recommend to the Dept. of Consumer and Regulatory Affairs that the project does not require the preparation of an environmental impact statement (EIS). While a full EIS may not be needed, I cannot find proper documentation on codifying that decision against the relevant statues and regulations set by the District of Columbia and the federal government. All sections of this DDOE EA need more analysis but I’ll focus on the areas where I have some background and expertise:

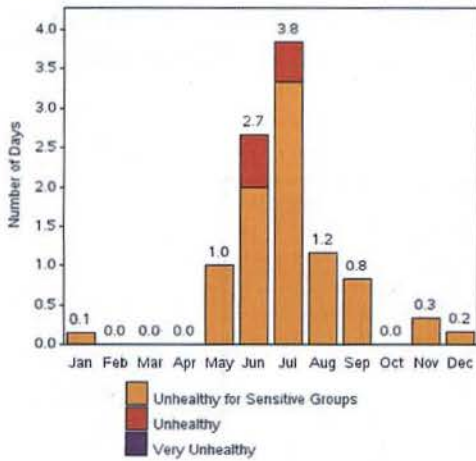
Noise pollution: The EA does not include a section on evaluation and abatement of noise pollution. Noise pollution should be assessed for all phases of construction and the future growth scenario. The project should demonstrate compliance with the Clean Air Act Title IV Noise Pollution section, the Noise Control Act of 1972, and the Quiet Communities Act of 1978 along with any relevant D.C. noise laws. stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity. Noise can produce a large range of negative health impacts beyond Noise Induced Hearing Loss (NIHL) including stress related illnesses, high blood pressure, speech interference, sleep disruption, and lost productivity.²

Air pollution: It is difficult for me to properly assess the conclusions in the EA provided (the 24-page document) given my inability to find essential referenced materials in the May 2016 DDOE EA, e.g. the Dec. 22, 2015 Air Quality Analysis (AQA) completed by Applied Environmental, Inc., the applicant’s responses to the Environmental Impact Screening Form (EISF). I disagree with the DDOE Air Quality Division (AQD)’s decision to not modeling key National Ambient Air Quality Standard (NAAQS) criteria air pollutants specifically ozone, nitrogen dioxide (NO₂), and fine particulate matter (PM_{2.5}). The DC region is currently in non-attainment for ozone and barely in attainment for PM_{2.5}. While the AQD claims that since ozone is a regional problem and project-specific analysis is not needed, that is not proper or helpful

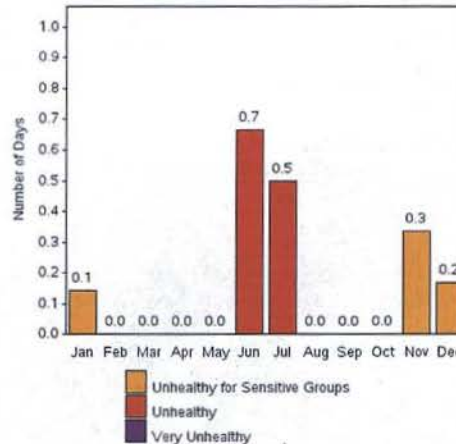
² [Noise and Its Effects](#), by Dr. Alice H. Suter, Administrative Conference of the United States, November 1991

to achieving attainment. Any State Implementation Plan (SIP) the DC-MD-VA area should address how they will work region-wide to reduce ozone including development plans with increased transportation emission, transit hubs, etc. that are part of the VMP plan. The SIP has to include Transportation Control Measures (TCM) along with other ozone control measures and saying this project can't help with the SIP is negligent on the part of DC's DDEO. Our regions also experience numerous days where the Air Quality Index (AQI) is not healthy for many vulnerable populations, e.g. elderly, children, asthmatics. These are two recent graphics showing the monthly average number of unhealthy AQI days for asthma or other lung diseases (often tied to more ozone and mobile source pollution) and for heart disease (typically tied to more PM2.5 and stationary and diesel mobile source pollution).³

Monthly Average Number of Unhealthy Days in District of Columbia, DC for Asthma or Other Lung Disease



Monthly Average Number of Unhealthy Days in District of Columbia, DC for Heart Disease



For on-road emissions, again, I would like more time and access to materials I couldn't find in the Transportation Impact Study (TIS). I'm also interested in why the AQA modelers used CAL3QHCR and not EPA's MOBILE6.2 for the carbon monoxide estimates. I do appreciate them modeling CO emissions but would also like analysis on how hot spots of CO emissions, e.g. at the bus stops/stations, inside the garage, affect indoor air based on where it intake air vents are for the VMP development buildings, air exchange rates during peak heat and A/C conditions. Importantly, diesel is a known carcinogen and PM2.5 is known to cause cardiovascular and pulmonary health problems and decreased life expectancy. PM2.5 should be modeled for both mobile source and point-sources associated with this project, e.g. generators.

I also noted that the AQA did not include information about air pollution created during construction. Heavy-duty, non-road diesel equipment can be a major source of dangerous air pollution. VMP also needs to provide emission estimates on the equipment used on-site during *all* construction phases, not just post-construction, e.g. non-road equipment, boilers, generators, etc. AQD needs to evaluate and model these emission sources, specifically the diesel and PM2.5. Off-road diesel emissions are some of the worst local sources of air pollution to neighborhoods yet this was not included in the EA. I would like AQA to use the National Emissions Inventory (NEI) to evaluate all sectors generating air pollution and EPA's MOBILE6.2 and NONROAD models to estimate air pollution emissions from those sectors. PLEASE do not allow any dirty diesel equipment on-site to protect our community health. I've worked with several construction sites to ensure contractors use the cleanest diesel engines or retrofit options, e.g. diesel particulate filters. Analyzing the impacts from on-road and off-road vehicle and point-source emissions is essential to evaluating the health impacts from increased air pollution.

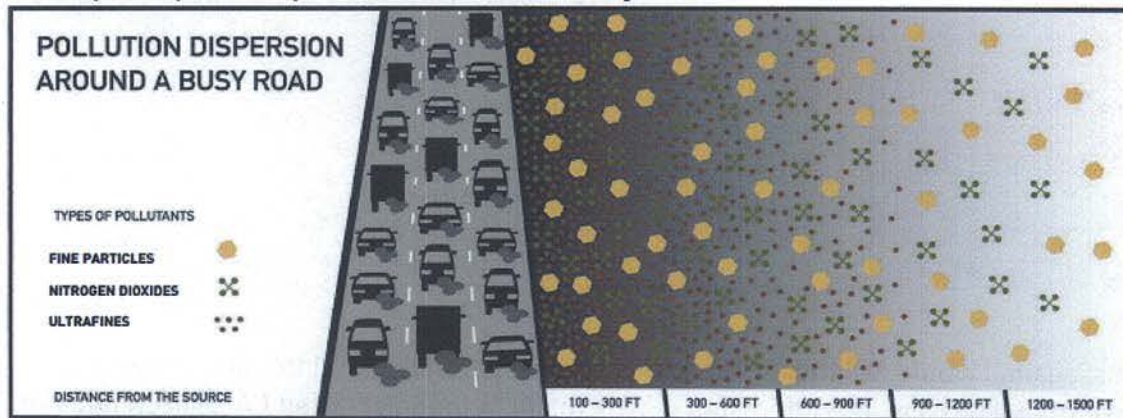
³ Environmental Protection Agency, [AirNow data and website](#), last accessed March 22, 2017.

Hotspots of air pollution: The EA, by using the NAAQS attainment as reasons to dismiss air pollution as an environmental health concern for this project, ignores the actual site conditions and related risks. Ambient air monitoring stations only capture the area pollution, what birds are breathing, not the pollution as we breath it in our neighborhoods, walking our sidewalks, closer to the tailpipes and sources. Saying that the DC metropolitan area as a whole is in compliance with NAAQS is not an acceptable reason to not model and include PM2.5, NO2 and other NAAQS pollution in the air quality analysis (AQA) for this project. And our environmental health compromised by this development project both during construction and after.

Hotspots of local air pollutants exist particularly around construction sites and traffic corridors. This graphic shows how certain air pollutants, including fine particles (PM2.5) and nitrogen dioxides (NO2) which are NAAQS pollutants, will be higher and in greater concentrations along the increased traffic corridors⁴ around this development project.

FIGURE 1

Traffic spreads pollution up to 1500 feet from the roadway



Tailpipe pollution can travel 1500 feet or farther from the roadway. Three pollutant types and their impact range are depicted.

The environmental assessment (EA) air quality analysis (AQA) should miss the very real and important health effects known to occur on a short-term timeline by not modeling ozone and PM2.5 at a minimum. Table 2.3.1.1 is from EPA's last Integrated Science Assessment (ISA) conducted in 2009 reflecting the best scientific knowledge on public health effects associated with exposure to particulate matter air pollution⁵. Long-term effects of exposure to fine (PM2.5) and ultrafine particulate matter (PM1.0) are also significant and summarized in the last EPA review of the research in Table 2.3.1.2. There is growing evidence that neurological effects⁶ including Alzheimer's disease⁷ and dementia⁸ can be attributed to exposures to particulate air pollution. Ultrafine particles can travel up the olfactory nerve pathway and deposit directly into the brain.⁹

⁴ Environmental Defense Fund, *All Choked Up: Heavy Traffic, Dirty Air and the Risk to New Yorkers*, March 2007.

⁵ U.S. EPA, *2009 Final Report: Integrated Science Assessment for Particulate Matter*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009.

⁶ American Psychological Association, "[Smog in our brains: Researchers are identifying startling connections between air pollution and decreased cognition and well-being](#)" Kirsten Weir July/August 2012, Vol 43, No. 7 Print version: page 32

⁷ Maher BA, Ahmed IAM, Karloukovski V, et al. [Magnetite pollution nanoparticles in the human brain](#). PNAS. Published online September 6 2016

⁸ Nature, "[Particulate air pollutants, APOE alleles and their contributions to cognitive impairment in older women and to amyloidogenesis in experimental models](#)." *Translational Psychiatry* (2017) 7, e1022; doi:10.1038/tp.2016.280, Published online 31 January 2017

⁹ [Translocation of Inhaled Ultrafine Particles to the Brain](#), G. Oberdörster, Z. Sharp, V. Atudorei, A. Elder, R. Gelein, W. Kreyling, and C. Cox *Inhalation Toxicology* Vol. 16, Iss. 6-7, 2004

2.3.1.1. Effects of Short-Term Exposure to PM_{2.5}

Table 2-1. Summary of causal determinations for short-term exposure to PM_{2.5}.

Size Fraction	Outcome	Causality Determination
PM _{2.5}	Cardiovascular Effects	Causal
	Respiratory Effects	Likely to be causal
	Mortality	Causal

2.3.1.2. Effects of Long-Term Exposure to PM_{2.5}

Table 2-2. Summary of causal determinations for long-term exposure to PM_{2.5}.

Size Fraction	Outcome	Causality Determination
PM _{2.5}	Cardiovascular Effects	Causal
	Respiratory Effects	Likely to be causal
	Mortality	Causal
	Reproductive and Developmental	Suggestive
	Cancer, Mutagenicity, and Genotoxicity	Suggestive

Environmental Justice (EJ): Hot spots of air pollution happen most frequently around areas with lower socioeconomic (SES) conditions and community barriers to affecting decisions in their neighborhood. The EA only took a precursory look at EJ issues running EPA’s EJ Screen tool. I disagree with their EJ Screen assessment and also recommend going beyond that simplistic “check-off” approach to concluding EJ issues had been appropriately addressed for the EA – they have not. The lack of transparency throughout this development proposal project showcases those problematic EJ issues.

Greenspace Assessment: The EA fails to address the environmental and health benefits or losses associated with this plan. There are significant studies in both the U.S. and the U.K showing that people living in greener urban areas experience better health, independent of socio-demographic characteristics.¹⁰ Green space within the local neighborhood has been shown to be associated with reduced rates of self-reported poor health¹¹ and mortality¹², respiratory disease and cardiovascular disease (CVD).¹³ “Observational, individual and ecological studies have additionally found people living in greener urban areas to experience better health, independent of socio-demographic

¹⁰ Maas J, Verheij RA, Groenewegen PP, de Vries S, Spreeuwenberg P. Green space, urbanity, and health: How strong is the relation? *J Epidemiol Community Health*. 2006;60: 587–592. pmid:16790830

¹¹ Mitchell R, Popham F. Greenspace, urbanity and health: relationships in England. *J Epidemiol Community Health*. 2007;61: 681–683. pmid:17630365

¹² Mitchell R, Popham F. Effect of exposure to natural environment on health inequalities: an observational population study. *Lancet*. 2008;372: 1655–1660. doi: 10.1016/S0140-6736(08)61689-X. pmid:18994663

¹³ Richardson EA, Mitchell R. Gender differences in relationships between urban green space and health in the United Kingdom. *Soc Sci Med*. 2010;71: 568–575. doi: 10.1016/j.socscimed.2010.04.015. pmid:20621750

characteristics.¹⁴ Unfortunately, studies in the U.S.¹⁵ and the U.K.¹⁶ show that neighborhood health benefits are lost when scaling up assessments to the city-level. This is possibly due to EJ and loss-of-greenspace buffers creating more hot spots of pollution in certain areas. Moving development to zones already permitted for building helps achieve sustainability goals while preserving and protecting greenspace that provide numerous benefits to health and the community.

Health Assessment: Ideally, I'd like to see a full Health Impact Assessment for the development project. "Health impact assessment (HIA) is used to evaluate the public health consequences of proposed decisions in non-health sectors. HIA is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and whether the health effects are distributed evenly within the population. HIAs provide practical recommendations for how to minimize negative health effects and maximize beneficial health effects."¹⁷ At a minimum, I'd like to see the District of Columbia or the developer use BenMap to calculate the number and economic value of air pollution-related deaths and illnesses associated with the air pollution from the project. Air pollution around busy streets has been linked to heart attacks, asthma attacks, loss of IQ points in children and many other detrimental health effects.¹⁸

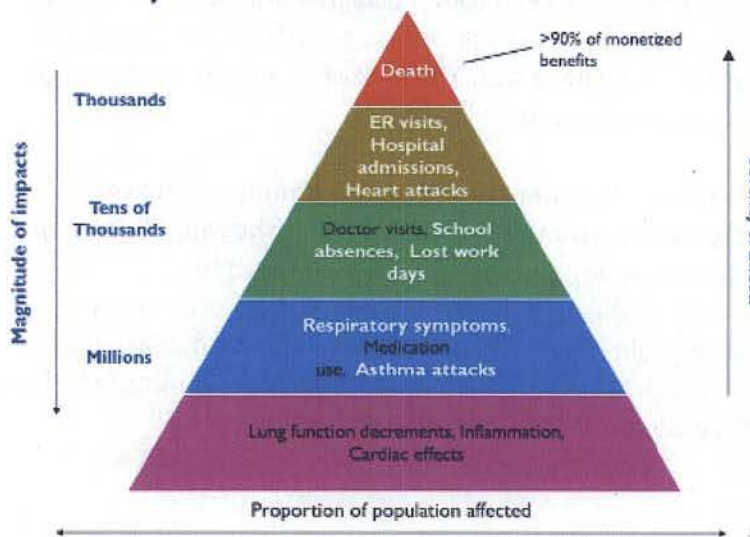
"The BenMAP-CE tool estimates the number and economic value of health impacts resulting from changes in air quality - specifically, ground-level ozone and fine particles.

Fine particles can enter deep into the lungs and enter the blood stream." Some of the health impacts from particles include premature death, non-fatal heart attacks, aggravated asthma, stroke, and other

pulmonary and cardiovascular problems. Ground-level ozone is an oxidant that can irritate airways in the lungs. Some of the health impacts from ozone include premature death, aggravated asthma, lost days of school, and other respiratory problems. The pyramid shown describes how the incidence, and severity, of fine particle and ozone-related health impacts are related.¹⁹

A proper assessment of air pollution and resulting health impacts is needed for this project before allowing it to proceed.

A "Pyramid of Effects" from Air Pollution



¹⁴ Maas J, Verheij RA, Groenewegen PP, de Vries S, Spreeuwenberg P. Green space, urbanity, and health: How strong is the relation? *J Epidemiol Community Health*. 2006;60: 587–592. pmid:16790830

¹⁵ Richardson EA, Mitchell R, Hartig T, de Vries S, Astell-Burt T, Frumkin H. Green cities and health: a question of scale? *J Epidemiol Community Health*. 2012;66: 160–165. doi: 10.1136/jech.2011.137240. pmid:22003083

¹⁶ Bixby H, Hodgson S, Fortunato L, Hansell A, Fecht D (2015) Associations between Green Space and Health in English Cities: An Ecological, Cross-Sectional Study. *PLoS ONE* 10(3): e0119495. doi:10.1371/journal.pone.0119495

¹⁷ Improving Health in the United States: The Role of Health Impact Assessment (2011), National Academies Press

¹⁸ HEI Panel on the Health Effects of Traffic-Related Air Pollution. (2010). Traffic-related air pollution: a critical review of the literature on emissions, exposure, and health effects – Special Report 17. Health Effects Institute, Boston, MA.

¹⁹ Environmental Protection Agency, Benefits Mapping and Analysis Program (BenMAP) website, last accessed March 22, 2017

Better solutions and collaborative development approaches are available.

Please, do not review or approve any zoning requests until these issues, along with others presented tonight, are properly addressed. I am very concerned about the 1) lack of transparency in the decision-making and criteria used in both development plan approvals and environmental assessment decisions, 2) the lack of access to all relevant documents associated and referenced in the publicly accessible zoning case items, 3) the lack of honest communication with the community, and 4) the lack of respect and adherence to D.C.'s Comprehensive Plan. Let's work together for a better McMillan development approach. Key suggestions include:

- **Open up development plan options:** This is the opportune time to reopen the competition and design options for development of this parcel.
- **Use Transfer Development Rights (TDRs):**²⁰ Preventing pollution is key. TDRs would allow developers to building more density where needed, allow the property owner, in this case the District of Columbia, to gain financially from selling development rights while still protecting the original land and site, and provide more tax revenue based on the increased development rights given to the more appropriate site location – it's a win/win/win.
- **Use a Community Benefits Agreement:**²¹ Working with the local community, including urban sustainable gardens, would provide more input into development plans, e.g. more balanced and beneficial development plans that are accepted by the community.
- **Use a public-private partnership:** The community, city and economy would grow 10-100 times with a visionary plan that preserves and develops McMillan as a destination public space. There are numerous park-city examples of success, e.g. New York City's High-Line. which both used public-private partnership agreement variations. The benefits from these unique spaces has been shown to improve development in the surround zones including increased tax revenues and property values.

PLEASE think visionary. Develop the McMillan into a strong public space that protects and benefits the environment, community and public health. Working together with community members can help development grow sustainably in harmony with the protection and preservation of our water, air, and environment. Reject this VMP plan or delay a decision until proper assessments are conducted. Let's develop smartly, together, with community and District collaboration.

Respectfully,



Mel Peffers

Environmental Health Scientist

Bloomingdale neighbor and DC homeowner

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²⁰ [Transfer of Development Rights](http://conservationtools.org/guides/12-transfer-of-development-rights), Conservation Tools via Pennsylvania Land Trust Association, John Theilacker original author; <http://conservationtools.org/guides/12-transfer-of-development-rights> last accessed March 17, 2017.

²¹ https://en.wikipedia.org/wiki/Community_Benefits_Agreement