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April – June 2021 Newsletter

Memo from the Chair

By Bill Johnson

Methane emissions from O&G industry giants

An article in the New York Times shows how the very largest oil and gas companies are reducing their greenhouse gas emissions – by selling off the parts of their operations that emit much of those gases to smaller companies. Most of the sell-offs manage to escape public scrutiny.

“As the world’s oil and gas giants face increasing pressure to reduce their fossil fuel emissions, small, privately held drilling companies are becoming the country’s biggest emitters of greenhouse gases, often by buying up the industry’s high-polluting assets.

According to [a new analysis](#) of the latest emissions data disclosed to the Environmental Protection Agency, five of the industry’s top ten emitters of [methane, a particularly potent planet-warming gas](#), are little-known oil and gas producers, some backed by obscure investment firms, whose environmental footprints are wildly large relative to their production.”

Virginia Electric Power and Coal Ash

Virginia Electric Power, as subsidiary of Dominion Energy, intends to dig a landfill at its shuttered Bremono Coal Power Plant in Fluvanna County to move the coal ash stored there in open ponds into a landfill they will build at that site. The Piedmont Group is leading the attempt to require that the landfill be constructed in such a way that seepage and leaks do not occur at that site. They are also attempting to ensure that Dominion doesn’t try to truck all of its coal ash to that site.

Is Climate Change Real?

Ask South Floridians. Miami just received an U.S. Army Corps of Engineers proposal to deal with storm surge caused by climate change and sea level rise. The draft report states Florida should build a 20-foot high sea wall, 6 miles long, running parallel to the coast through neighborhoods. No wonder former Governor Rick Scott mandated that no Florida government communiques include references to climate change.

Ban styrofoam versus “advanced recycling”

In 2021, the Virginia legislature banned styrofoam products by 2024. These containers are usually used by the restaurant industry for take-out and will have to be replaced by 2024 with something more environmentally responsible. There was a tradeoff, however, that makes me wonder if the ban is worth it. “Advanced recycling” is a process where incinerators will be allowed to convert plastic into electricity or other plastic products, under completely new rules. The process, involving pyrolysis, has been reclassified as “manufacturing” instead of waste management. So it no longer comes under the strict environmental regulations that govern waste management practices. I worked hard to stop the Stafford incinerator in 2013-2015 and am afraid that incinerators will be resurrected because of this legislation. The politician most responsible for trying to secretly build a tire-burning incinerator in Stafford is running again for local office.

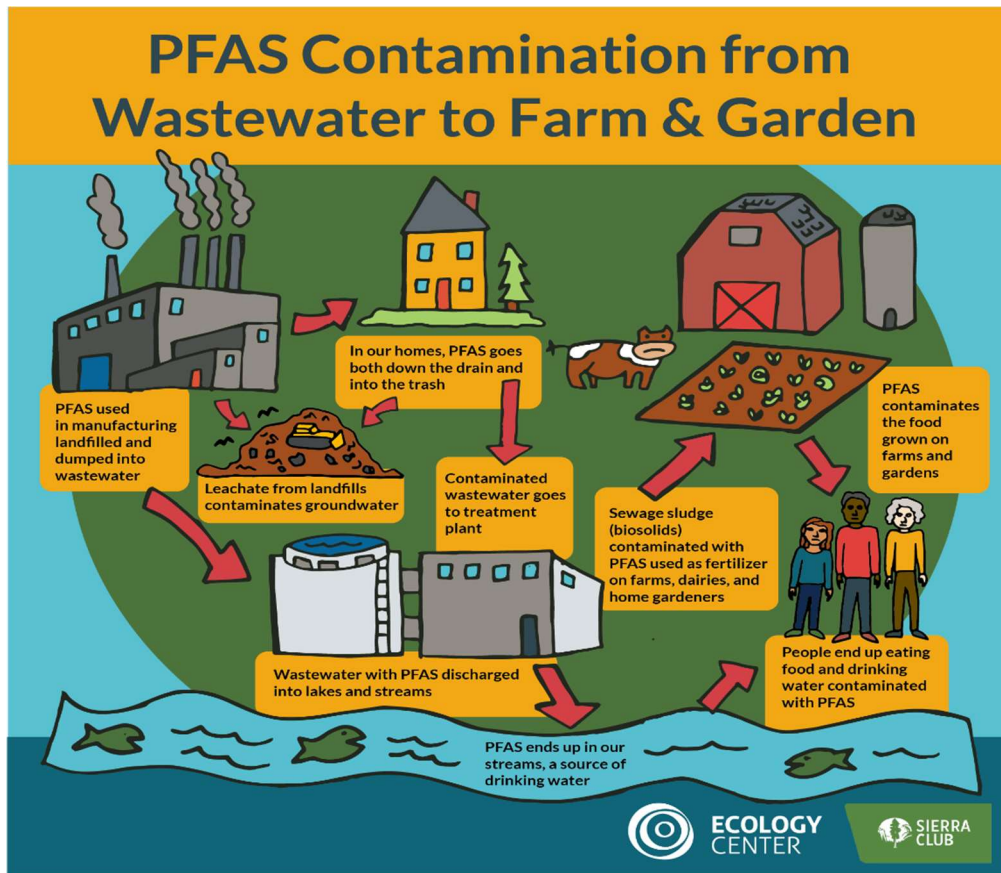
Pyrolysis is a 2-step process – melt the object, then burn the gas. Industry tries to pretend that pyrolysis isn’t an incinerator because it doesn’t burn the object, like tires and plastic, only the gases that result. But, for waste processes, both EPA and Virginia’s DEQ regulate it as an incinerator. Projections have been made that as many as 5 such plants will be built in Virginia. It is uncertain how they will be regulated, but it is certain that they will result in air pollution, huge amounts of toxic ash, and health problems for residents living near the plants.

Interesting Links:

- At the Massachusetts Institute of Technology (MIT), climate change is an institutional priority. To inform and empower the public with timely, science-based information about climate change, the Institute has created the MIT Climate Portal, climate.mit.edu. Whether you are new to climate change or ready for a deeper exploration, the MIT Climate Portal offers a virtual place to ground your knowledge and ask your questions of experts. It also highlights MIT’s latest climate change research and initiatives for action.
- The Climate Advocacy Lab, <https://climateadvocacylab.org/>, is a community of over 3,000 climate advocates, organizers, field and academic researchers, and data specialists. Originally incubated at the Skoll Global Threats Fund, the Climate Advocacy Lab is now an independent project supported by the Skoll Foundation, the McKnight Foundation, the William & Flora Hewlett Foundation, the George Gund Foundation, Barr Foundation and others. They send out a monthly email talking about what they are doing regarding the environment.

- From resource-recycling.com, an informative article on how the industry is tackling the issues with recycling old solar panels. It is a great article to read to understand the problems, including costs, associated with handling the toxic mixture of components in solar panels. <https://resource-recycling.com/recycling/2021/06/15/how-the-recycling-industry-is-preparing-to-tackle-solar-panels/>
- Last, the Climate Action Alliance of the Valley (CAAV), issues a weekly newsletter focused on environmental issues. It is perhaps the best, most informative summary I receive, grouping links to articles/studies under 5 headings (“Politics and Policy”, “Climate and Climate Science”, “Energy”, “Potpourri” and “Closing Thought”). Succinct, linked sentences lead the reader to lots of information on the subject. Here’s an example from the June 19th email: “The fundamental force driving climate change is the imbalance between the amount of energy entering Earth’s atmosphere and the amount leaving. NASA climate scientists used two independent techniques to examine the [energy imbalance](#), both of which showed that it approximately doubled between 2005 and 2019.” You can sign up by sending an email to contactcaav@gmail.com.

PFAS in Sludge



The Sierra Club issued a report on how PFAS, one of the highly-toxic forever chemicals, is going from sewage sludge into our food and drinking water. PFAS used in manufacturing is landfilled, which often leaches into groundwater. Wastewater is either discharged into

lakes and streams or sent to treatment plants. Those plants separate the mixture into wastewater and biosolids. The wastewater, still containing some PFAS, is discharged into

streams, rivers, and lakes, making its way into our bodies through drinking water. Biosolids (sewage sludge) are shipped to local farms to be used as fertilizer for our food, despite containing PFAS. Farmers that apply sludge cannot walk on the land for 30 days or graze animals on it. It clearly affects wildlife, like deer, because it is difficult to get deer to read the signs that stay off. Buy organic produce and meats to avoid these toxic additions in your food.

The Legacy of a Retired Coal Plant - Toxic Coal Ash.

By Bill Johnson, with Kirk Bowers

The Dominion coal-fired power plant in Bremo Bluff, Virginia, closed for good in 2019, after having been converted to natural gas in 2014. It now has approximately 6.2 million cubic feet of coal ash currently stored in an unlined ash pond, called a surface impoundment, near the plant. That is approximately 1/4th of the coal ash that Dominion has on hand in Virginia. 2019 legislation requires that Dominion either recycle the ash or move it into a lined landfill. The legislation also requires that Dominion monitor water quality of wells and household water supplies around the plant, testing them once a year for the first five years, then every five years for the next 30 years. It also requires Dominion to fix any water issues that arise.

If the coal ash is left where it is, toxic material and heavy metals can leach into the groundwater and the nearby James River. Given the ash pond's proximity to the James River, a very heavy storm or hurricane could cause a repeat of the Dan River disastrous coal ash spill in 2014, damaging the drinking water supply for millions of residents.

The Piedmont Group's Conservation Chair, Kirk Bowers, submitted consolidated comments for consideration by the Fluvanna County Board of Supervisors when they review the special use permit. That permit is required because the land is currently zoned agricultural, and it needs to be rezoned into waste.

Per Kirk's letter, "The Piedmont Group, Sierra Club supports relocation of the Bremo Bluff CCR to the adjacent Dominion Energy property. The existing CCR disposal site is next to the James River which puts surface and underground water quality at risk of contamination by toxic chemicals. The existing site is aged and may not meet current standards for protection of water quality from coal ash leachate."

We are asking that Dominion meet requirements for toxic waste landfills, including liners designed to hold toxic materials, strengthened storm water runoff measures, and geotechnical investigation of underlying soils and rock structure through multiple soil boring samples to determine the capacity of underlying soils to infiltrate leachate into underground aquifers.

Besides those requests, we are asking that Dominion be required to restore the land to its natural state with native soil, vegetation and trees instead of using synthetic turf. We also ask them to use bug-friendly lighting on the site; protect the health of residents by covering all trucks that move the coal ash; specify adhere to Section 404 Clean Water Act permit requirements for filling in existing streams, handling wetlands, and protecting downstream channels from degradation; and grading the site to provide visual screening of the landfill by increasing buffer widths and better landscaping.

According to ashtracker.org, <https://ashtracker.org/facility/233/bremo-power-station#!>, the “Bremo Power Station has 16 groundwater monitoring wells, 14 of which have been polluted above federal advisory levels based on samples collected between March 11, 2013 and February 03, 2015. Groundwater at this site contains unsafe levels of manganese, arsenic, molybdenum, sulfate, boron and lead.”

The Global Energy Monitor wiki ([https://www.gem.wiki/Bremo Bluff Power Station](https://www.gem.wiki/Bremo_Bluff_Power_Station)) has a description of the impact of that plant on nearby residents, including deaths and illnesses attributable to fine particulate matter being released into the air. It also has a table using EPA data showing the amount of toxins (like CO₂, nitrous oxide, barium, mercury, and lead) released by the plant into the environment.

It is critical that Dominion be held to the safest standards for all coal ash disposal by the Fluvanna County Supervisors. The license request stipulates that the landfill will only be used for coal ash generated at the Bremo plant, to prevent Dominion from moving all its coal ash there. But that means that Dominion must find a place to safely store another 18 million cubic feet of toxic coal ash, so the coal ash story is only just beginning.

North Anna License Renewal

By Bill Johnson

On June 1, 2021, Nuclear Regulatory Commission (NRC) denied 3 environmental organizations (Sierra Club, Beyond Nuclear, and Alliance for Progressive Virginia) a request for a hearing about the 20-year license renewal application for North Anna nuclear power plants. In 2020, Virginia Electric Power (VEPCO) got an extension to 2038 & 2040, and in 2021, they’re asking for an extension until 2058 & 2060. If NRC approves the license, it will enable the plants to operate for 80 years without examining whether the plants are safe from earthquakes that could exceed plant design specs. Despite the May 2011 earthquake exceeding North Anna design specs, no analysis has been done on the impact that another big, or bigger earthquake could have on the plants. An early study recommended that North Anna be built to withstand a 7.3R earthquake, but it was ignored. We want NRC to assess safety issues before granting the license extension, by conducting a new Environmental Impact Study (EIS), since the last one was done in 1997, before the design-exceeding earthquake occurred.

The environmental groups requested a hearing because NRC ignored NEPA's requirements, which requires that if something unexpected occurs, like an earthquake that exceeds the original design specs, then you need to study it again. NRC waived that requirement for VEPCO, so they didn't have to conduct a current EIS, despite the legal requirement to do so. They have been allowed to rely on the previous EIS, even though the last one conducted preceded the May 2011 design-exceeding earthquake. North Anna was built to 5.6R specs but was hit with a 5.8R-scale earthquake, and that earthquake's epicenter was 12 miles away from the plants. When VEP asked to build a third reactor at Lake Anna, they improved the design specs to accommodate larger earthquakes.

An EIS would look at such things as: Assessing the condition of the aging equipment at North Anna; harvesting and laboratory testing of aged materials from North Anna and parts from decommissioned reactors in the U.S.; assessing the safety of this aging plant during an earthquake; assessing the ability of the earthen dam at Lake Anna to withstand a catastrophic earthquake; evaluating the power plant's security and evacuation plan; and determining if North Anna has adequate facilities for the long term storage of nuclear waste.

It would also look at Lake Anna's dam structure (since its water is the only thing that cools the nuclear rods); evacuation plans for residents; earthquakes and fault lines and the plan to mitigate risks from larger occurrences; how nuclear waste will be stored, essentially forever, on a site sitting atop multiple geological fault lines that are prone to earthquakes; how age impacts the North Anna systems and infrastructure; and whether Fukushima recommendations need to be followed instead of NRC waiving them. Based on a story in the Free Lance-Star, there have been around 80 earthquakes in Louisa County since the 2011 earthquake, mostly small. The 2011 earthquake was felt as far away as New England, shut down the Washington monument, and broke a pipe from my house to the drain field.

It is likely we will have to go to court to fight NRC's intransigence in this, and we need as many environmental groups in this fight as possible to ensure that North Anna's safety is considered as part of their license renewal review. We are looking at this as a safety issue, not as an attempt to shut the plants down.

2021- A Redistricting Year: This Time Its Different in Virginia: Get Involved!

Linda C. Muller, RGSC Vice Chair, Political Chair

Year 2020 will go down in the history books as a challenging and tumultuous year. Living through a global pandemic upended whatever we considered "normal" on top of dealing with personal or family health crises. But we endured, we held elections, and yes, there was even a Census in 2020. And because 2020 was a Census year, and despite the delays, the data results will arrive sometime in August 2021. It will be time to start processing and crunching out new election redistricting maps.

But because Amendment I to the Virginia Constitution was passed in November 2020, this year's redistricting will be undertaken by an independent and bipartisan Redistricting Commission. The Virginia

Redistricting Commission (VRC) is composed of Citizen and Legislative Commissioners and will redraw Congressional and state legislative districts in 2021. In the past, Virginia's redistricting process was dominated and skewed by the majority party in Virginia's General Assembly, which often resulted in "districts of favor" to the majority party.

The VRC was formed in January 2021 and includes 8 Citizen Commissioners and 8 Virginia State Legislators (4 Democrats, 4 Republicans). The VRC holds regularly scheduled meetings and the public is encouraged to participate in the meetings via links from the VRC web page. (see resources at bottom of page)

Local Redistricting: Precincts & Wards: Who Draws?

While the VRC is working on Congressional and state legislative districts, who is in charge of local county and City precincts/wards? Redistricting of local County and city precincts and wards are handled at the local level through the local governing body. Each locality may set up a unique redistricting committee or work within a community planning commission. You need to check on the locality's governance site to see how your county or city is working through the redistricting process. If you cannot find it, call your local Council member/supervisor and ASK.

As an example, Stafford County established a Redistricting Commission composed of 3 County Supervisors and has set up a Stafford County Redistricting page for easy citizen access. Stafford County has experienced significant growth in the past 10 years and will mostly like add several new precincts and re-adjust boundaries to the county electoral map.

Citizens Need To Be Engaged and Involved!

I attended a redistricting educational session co-sponsored by the Virginia State NAACP and OneVirginia 2021 in which it was emphasized that redistricting **is not** gerrymandering. Gerrymandering is the purposeful abuse of the redistricting process in order to gain/maintain political power. You may see some neighborhoods split into multiple districts or have bizarre incongruent lines that appear to "carve out" certain neighborhoods; that's probably gerrymandering. Redistricting is a process to re-align voting boundaries based on population outcomes determined by the Census data. But there are important considerations to be made for example maintaining "Communities of Interest" which can be a group of any size whose members share cultural, economic, historic, and/or other shared interests. There are regulations and laws that apply to re-drawing districts and **it is important for citizens to be engaged** in the process both at the state level and the local level.

Resources

Amendment 1 Virginia Constitution (ballot question approved Nov 2020)

<https://www.elections.virginia.gov/proposed-constitutional-amendment-2020/>

Virginia Redistricting Commission

<https://virginiaredistricting.org/>

Virginia Division of Legislative Services (explains the redistricting process in PDF)

<http://dls.virginia.gov/pubs/redist/Redist2021.pdf>

OneVirginia2021 (not-for-profit advocates for fair redistricting in Virginia)

<https://www.onevirginia2021foundation.org>

Virginia NAACP Redistricting Information

<https://naacpva.org/redistricting2021/>

Example of Local County Redistricting Process: Stafford County

https://staffordcountyva.gov/government/elected_and_appointed_officials/board_of_supervisors/redistricting_process.php

Thoughts about Pollinators ... just venting

By Paula Chow, Program Chair

My native pollinator garden is prolific with colors of the rainbow and every hue in between. In spite of the low rainfall, the perennials persisted. Nature is magnificent, even left on its own to survive. But the pollinators have not returned. Where are they?

My neighborhood is old, dating back to before the Civil War years. The Rappahannock River flows across the street below the houses with the river view. Most houses in this neighborhood have manicured lawns and gardens. They are manicured meticulously with landscape and lawn service, no doubt with pesticides and herbicides. Mosquito spray service arrives weekly.

Everything is green and tidy. And butterflies and bees are nowhere to be found. Well, I can report one bumblebee and one small white butterfly, one appearance each week these past three weeks.

NRDC's lead full page article in their Summer 2021 issue is entitled "New Urgency Fuels Fight to Save Pollinators from Pesticides." NRDC reports that it is their Pollinator Initiative to defend bees, monarch butterflies and other pollinators from the torrent of agrochemicals unleashed by companies like Bayer and Corteva. But that hope has been tempered by an ever-growing sense of alarm. Dr. Sylvia Fallon, senior director of Wildlife at NRDC says, "Truly, we are in a race against the clock."

A friend reminded me that the mulch could also be a contributor to the demise of the pollinators. The dye in many mulch offerings is leached out with rain and humidity. Dyes may not be toxic, I don't know for sure, but they are definitely chemicals, not a beneficial product to our river and pollinators.

Because it's not enough to complain, I took action. I mentioned this problem at our local neighborhood association meeting 3 weeks ago. I said that I would follow up with concrete suggestions for environmentally friendly alternatives. I did so in a timely manner and submitted the suggestions to the president of the association to include in the minutes that would be sent out. To date, the minutes have not been sent out which would include my suggestions. That's as much as I can do for now, except write this article and hope a few folks will read it. But I will persist . . . because I want the pollinators to persist, too.

Take action: nrdc.org/savebees

Braehead Farms

By Paula Chow

Downtown Greens (DTG) is working on expanding their organization to acquire 56 acres pf property located within the City of Fredericksburg. They call the property Braehead Buffer. It is truly the last open space available in Fredericksburg proper that can remain an open space with the strong possibility of being conserved.

The DTG brochure excellently explains the plan and vision.

RGSC would like to support DTG's efforts. RGSC will work with DTG to discuss donations both large and small, options and how they plan to manage this property. We will keep the membership updated.

Contact Paula Chow - paulachow132 [at] gmail.com"

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External Links	
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Virginia Conservation Network	www.vcnva.org
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