



RAPPAHANNOCK GROUP
SIERRA CLUB

Rappahannock Group of the Sierra Club

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Newsletter

January-March 2021

Memo from the Chair, Bill Johnson

There's Hope; But Action is Needed

I believe our country has turned a corner, moving away from denialism to an enlightened, science-based approach to our future. This is critical for the planet, and its inhabitants. The current administration recognizes the existence of a climate crisis and is taking steps towards addressing the issues. We rejoined the Paris Climate Accords on January 20, 2021, to get back to working with world leaders to stop the damage that the climate crisis will cause. There is reason for hope that we can take the steps necessary to reverse the world's course and make the future a place that will allow humans and creatures everywhere to continue to live. To exist. Species are going extinct at an alarming rate. We need to think of our grandchildren, and their grandchildren, and all the creatures on this earth. If we don't reverse the damage, there may not be much of a future for them, or us.

The Trump administration's attack on all of us can be seen in multiple articles by the New York Times and The Washington Post. The New York Times published an article titled: "*The Trump Administration Rolled Back More Than 100 Environmental Rules.*"

<https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks.html>

The Washington Post published another, titled: "*Trump rolled back more than 125 environmental safeguards.*" <https://www.washingtonpost.com/graphics/2020/climate-environment/trump-climate-environment-protections/>

One of our interns, Ms. Kayli Ottomanelli, analyzed the data in the New York Times, and wrote an article from a different slant. She analyzed the number of deaths that the rollbacks would

cause: “over 79,700 premature deaths annually and put another 73.6 million Americans at risk of serious injury or illness.” <https://img.vasierra.club/summer.sierran.2020.pdf>

We need to begin to heal our planet. And we need to do it soon.

North Anna Nuclear Plant License renewal: Dominion wants to extend the operating period another 20 years, from 2038 to 2058 and 2040 to 2060. Why has Dominion requested another 20-year extension, almost *20 years early*? Because they can: (1) bill customers for the most expensive form of electricity, (2) ignore the likely impacts to Central Virginia when (not if) very long-term nuclear waste is required to be stored **locally**, and (3) act before another earthquake complicates matters for them.

The 40-year-old plants do not have a current Environmental Impact Statement (EIS). Dominion is relying on the EIS that was developed long ago. That EIS does not mention the 2011 earthquake, because it hadn't happened yet. No one has looked at the safety risks of continuing to operate 60-year-old, much less 80-year-old plants that sit on earthquake fault lines.

North Anna is the only US nuclear power plant sitting atop an earthquake fault line, and is ranked the third most dangerous nuclear plant in the US. The fault line runs under the plants, and, in 2011, a 5.8 Richter scale earthquake was centered 12 miles away from the plants. That earthquake exceeded the plants' 5.6 design specs.

Dominion wants to extend their license another 20 years, *and are doing so 20 years early*, **without a current EIS** that inspects wiring, cement, pipes, the dam, the plant's housing structure, evacuation routes for citizens, emergency pre-siting of medication, and all the other things that ensure they can operate safely. The dam holding the lake waters used to cool the reactors, is old. There is no study to assess risks and damage another similar-sized or larger earthquake could cause. To leave these issues unstudied, considering the August 2011 earthquake, seems careless, stupid, and uncaring, even criminal. The counties surrounding the plants deserve to know what they are living with. There have been almost **80** small earthquakes in the region since the 2011 occurrence.

Here's a good story that discusses the current status of the license renewal, quoting John Cruickshank of the Piedmont Group:

https://www.thecentralvirginian.com/news/north-anna-quake-safety-questioned/article_8d395d46-76e1-11eb-8c14-131e6f287293.html?utm_medium=social&utm_so

See these 4 articles at the Free Lance-Star for a discussion of the region's earthquakes:

https://fredericksburg.com/news/local/small-earthquake-rumbles-through-louisa-and-surrounding-areas/article_1f40e1e9-e3c5-55c2-9641-1e2b367e7127.html;

https://fredericksburg.com/usgs-small-earthquake-detected-in-louisa/article_d79a032d-f534-5eb2-8ee0-44986427d067.html?utm_source=WhatCountsEmail&utm_medium=Daily%20HeadlinesActive%20Subscribers&utm_campaign=Daily%20Headlines;

https://fredericksburg.com/news/virginia/minor-earthquakes-reported-in-virginia-in-days-including-louisa/article_91405052-1e68-11e5-b763-e37caed8e97c.html; and

https://fredericksburg.com/opinion/editorials/editorial-deep-beneath-our-feet/article_118e436d-3d55-5726-94ec-c64c49fc0216.html.

Here's a quote from the last article:

“More worrisome, researchers with the University of North Carolina report that what caused the Louisa quake will likely shake things up again. Geologists had long thought the southeastern United States, seismically, was a quiet place. It is in the interior of our globe's North American Plate, far from tectonic-plate boundaries where earthquakes usually occur.

But the magnitude-5.8 earthquake centered in Louisa County may have been the most widely-felt one in U.S. history, the U.S. Geological Survey found. It was the largest temblor in the eastern United States in more than a century—since an 1886 quake in South Carolina. The quake cracked the monument, fractured the National Cathedral, shut down the North Anna nuclear power plant, drained Prince William County's Lake Jackson and did \$32 million in damage to 10-plus Virginia localities, particularly damaging historic buildings in Fredericksburg, Culpeper and Alexandria.”

There are closed nuclear power plants that can be analyzed posthumously to see how they held up to 40 years of nuclear wear-and-tear. Why not analyze them and see? What potential problems could we identify, then prevent?

On top of that, there is no national or local actionable plan for long-term nuclear waste storage. The waste needs to be entombed somewhere, forever. There is a YouTube video about Finland attempting to safely bury nuclear waste for 100,000 years – it's an eye-opener. The movie asks, is it possible to ensure that, 100,000 years in the future, everyone alive then knows not to mess with that doom hole?

What about the next 40 years? Do we continue to accumulate nuclear waste, knowing there is no safe way to store it? No way to keep it secure from a terrorist attack. The Capital attack on January 6th shows that a determined group of citizens can wreak havoc on our country. What if terrorists want to make a statement? We couldn't stop them.

Google how many nuclear plants there are in the US, and then ask yourself – where will that waste be stored? Then think about whether Dominion should be allowed to extend the plants' lives, so that they operate until they are 80 years old.

Fracking Over the Taylorsville Basin

The Taylorsville Basin stretches from just to the southeast of Richmond, up across the Chesapeake Bay into Maryland. It is mostly rural, home to many farms and small towns. It sits atop the Potomac Aquifer, the only source of groundwater for many Virginians. Over 88,000 acres of land was leased for fracking in King George, Caroline, and Westmoreland Counties. So far, none have begun operation.

David Spears, State Geologist, of the Virginia Department of Mines, Minerals and Energy (DMME) published a presentation about gas drilling in the Taylorsville Basin. You can find it here: http://www.essex-virginia.org/UserFiles/Servers/Server_62876/File/News/Taylorsville_PotentialGasDrilling20140528.pdf

Next time someone wants to lease their land for fracking, think about this:

- **Orphan wells:** The number of abandoned fracking wells continues to increase significantly, as companies abandon wells, leaving them vulnerable to leaching chemicals and gas into land, air, and water. Taxpayers are stuck with the cleanup bill, as many companies simply declare bankruptcy and forfeit their nominal bond, rather than pay the costs of cleanup.
- **Health problems:** Many studies have shown a significant increase in fracking-caused health problems for nearby residents, from asthma to pregnancy to cancers;
- **Eminent Domain:** An unwilling landowner's property can be taken for use in building pipelines. If the ultimate destination for the gas crosses state lines, FERC sets the rules, and they have a reputation for approving all pipeline applications, denying only 2 in over 40 years. All fracking wells are hooked together via pipelines, as shipping natural gas via trucks or trains have had explosive results. Even if you refuse to allow fracking on your land, it can be taken to dig a gas pipeline through your land and streams.
- **Ecological disasters:** We should not move forward with an industry that can poison our air, water and land, by extracting, shipping via pipelines, and burning gases that cause climate change. Fracking chemicals are toxic and must be dumped somewhere, whether in exposed local pools where it eventually drains into the land and water or is shipped to a central location through local populations. In almost every case, local health officials and first responders do not know the actual chemicals used in fracking, as they are declared proprietary trade secrets, free from disclosure. They cannot prepare for a disaster until it occurs, assuming that the well operator is in business to tell them what chemicals are involved and what to do. Virginia has *no* water treatment plant that can clean fracking wastewater, so it has to be injected into the ground. Fracking and injection wells both have been shown to increase the number and severity of earthquakes (remember the nuclear power plants nearby?). The entire lifecycle, from

extraction through transportation to ultimate burning, releases Green House Gases (GHGs) methane and CO2, and other toxins into the atmosphere.

- **Exorbitant costs:** The cost to extract, ship, and build plants to burn fracking-based gas and oil, without even considering health impacts from the air, land, and water pollution, far exceeds the ever-lowering cost to produce cleaner energy. So who will pay for these significantly increased prices, in a territory controlled by a utility monopoly? Users, for sure, not shareholders. In contrast, clean energy doesn't exacerbate the GHG problem, nor have the deleterious health issues. Recycling can take care of end-of-life equipment issues. In its worst environmental disaster scenario, the entire clean energy industry could never have the disastrous ecological impact of a Fukushima or Chernobyl. But switching to it could stop causing a worsening climate.

So, the counties where fracking was proposed have dodged a bullet. King George, Caroline, and Westmoreland Counties need to ensure that the industry doesn't resurface.

2021 Virginia General Assembly 2021 and Upcoming Virginia Election Year 2021

by Linda Muller, Vice Chair RGSC

We have long understood that elections have consequences, and over the past two years, the Virginia General Assembly (VGA) has passed significant pro-environmental and pro-environmental justice legislation. This year's session was only 30 days, but Governor Northam called a special session starting February 10, 2021 to conclude legislative actions. The session was described as "fast and furious" with the majority of meetings conducted virtually. The VA Chapter Sierra Club's new Legislative Director Connor Kish and VA Chapter Legislative Chair Bob Shippee were on hand during the session with great news on the environmental legislative front.

A sampling of some significant environmental "wins" in 2021

Clean Car Standards: A significant victory in tackling the massive pollution and emissions problem from personal use automobiles in Virginia. More electric vehicles will be on their way to Virginia, clearing our air, and reducing dependence on fossil fuels thanks to this landmark legislation.

Reform to Building Codes Processes: For the first time, Virginia's Board of Housing and Community Development will be required to consider standards through the lens of benefit to the resident over the long term, not just the builder at the start, when updating Virginia's building codes.

A ban on polystyrene containers (styrofoam): A phased-in ban on styrofoam containers, beginning with chain restaurants and then moving to all establishments by 2025.

Fund a two-year, \$500,000 study of all Transit modernization and equity needs in Virginia conducted by the Department of Rails and Public Transportation

Pipeline Accountability and reforms to stop-work orders: requires companies applying to DEQ for any future pipeline project, including re-applicants, to submit complete erosion and sediment control and stormwater management plans to DEQ at the same time in order for their application to be complete.

"More Work To Be Done"

Despite the many environmental successes, there were some disappointments.

"Advanced Recycling", (AR) heavily promoted by the American Chemistry Council and the Manufacturers Association passed. The bill redefines melting and chemical treatment of plastics (think pyrolysis) as "AR" and as a manufacturing process (not as a Solid Waste treatment). Proponents of AR claim that melting or chemically treating fossil fuel derived waste like plastics results in an end product that can be re-used as fuel or other products. Many questions remain unanswered to these "manufacturing" solutions to plastic waste:

- Who regulates and *how* is this manufacturing process regulated? State? EPA?
- Do these facilities require a license to operate?
- How much greenhouse gases and toxic emissions/waste are produced from the processes?
- How will toxic ash/ effluents be handled?
- Where will the feedstock come from and what will the feedstock consist of?
- Where will these facilities be sited?

Apparently, the plastics industry has long sold the idea that plastic products were easily recyclable. They even assigned special "recyclable" numbers to different plastics. But, the industry understood it was nearly impossible to create a robust product recycling market. So their supported solution is: melt and burn. It is a plastics perpetuation plan. Virginia is the 10th state to adopt an AR bill.

ELECTIONS 2021 and VA Chapter Sierra Club Legislative Scorecard

In Virginia, every year is an election year. This year, statewide elections will be held for Governor, Lt. Governor, and Attorney General. Additionally, all House of Delegates and many local Board of Supervisors positions are up for re-election. Elections matter, especially at the local level.

The VA Chapter of the Sierra Club will issue its Climate, Energy, and Justice Score Card 2021 in the near future. Additionally, the VA Chapter will consider candidate endorsements for Statewide Candidates and House of Delegates.

If you would like get involved in the political and/or legislative process with the Virginia Chapter Sierra Club and Rappahannock Group please email Linda Muller: lcmuller[at]mindspring.com.

Helpful Links:

Article PBS/NPR Investigation, "**How Big Oil Misled The Public Into Believing Plastic Would Be Recycled**"

<https://www.npr.org/2020/09/11/897692090/how-big-oil-misled-the-public-into-believing-plastic-would-be-recycled>

"**All Talk and No Recycling**" an Investigation into "Advanced Recycling" Global Alliance to Incineration Alternatives

<https://www.no-burn.org/chemical-recycling-us/>

VA Chapter Sierra Club's " Climate, Energy and Justice Legislative Scorecard"

<https://www.sierraclub.org/virginia/legislative-scorecard>

Conservation Report, Linda Muller

Our Group has been active, despite the restrictions imposed by the pandemic. Here are some of the things we have been busy with this year:

Date	Activity
January 14, 2021	Annual Rappahannock Group SC Executive Committee Strategy and Planning Meeting (gotomeeting)
January 17, 2021	RGSC Open Planning Meeting with Invited volunteers (gotomeeting)
January 26, 2021	Legislative Action via VA Chapter Sierra Club Action Alert: Oppose SB1164 (Advanced Recycling Bill a.k.a. melt plastics bill) this bill was sent back to committee
February 2, 2021	Legislative Action via VA Chapter Sierra Club Action Alert: Oppose SB1164 (Advanced Recycling Bill a.k.a. melt plastics bill)
February 12-15 2021	Promotion of Audubon annual backyard bird count (via Facebook)
February 15, 2021	Legislative Action: (via the Action Network Chesapeake Waterkeepers) vote no on "Advanced Recycling" SB1164
February 22, 2021	Promoted attendance: "Rethinking Resources for Reusing, Repurposing, and Recycling" presented by the Fredericksburg Food Cooperative
February 25, 2021	RGSC Executive Committee meeting/ Introduction of new RGSC Outings Leader Geoff Johnson, plans for Earth Day 2021 in Fredericksburg. (gotomeeting)
March 17, 2021	Promoted "A Year of Walking", a presentation by JeanMarie, hosted by Aikido in Fredericksburg, a non-profit educational corporation, in

Programs Report, Paula Chow

A WONDERFUL REUSE PROGRAM

So many people take medications, vitamins or other products that all come in similar sturdy plastic bottles. If you don’t already know about this program, you will be very glad to know about it now. Stafford Lions Club has an ongoing program to collect medication and vitamin bottles that are CLEAN with LABELS THOROUGHLY REMOVED.

For developing nations, the hospitals and medical clinics do not have the funding to dispense medications in plastic pill bottles. The patients are given their medications wrapped in paper or newspaper. Heat and humidity degrade the medications if they are not protected in a plastic bottle. With this program, your used donated pill bottles are now reused over and over and over. With the larger bulk vitamin bottles, they are used as water bottles or to carry products like sugar, salt or flour.

Instead of just collecting the bottles within your household, organize a larger collection from your neighbors, friends, workplace and others with whom you have contact. Often, with single stream recycling here, the loads are contaminated so the pill bottles end up in the landfill. Imagine the impact of helping those in need simply by donating a reusable item and keeping it out of the landfill as well.

Sharon Gaylord heads this project and has set up a drop box collection site at her church, St. Luke’s Anglican Church, 65 Warrenton Road, Fredericksburg. She emphasizes the need for the bottles to be thoroughly cleaned of the adhesive from the label. She has had to painstakingly remove many labels so they can be shipped. With the pandemic, the funds for the shipping costs have dried up so Ms. Gaylord has absorbed the costs. While she is not asking for financial donations she would really like people to clean the bottles of the label thoroughly if they plan to donate them.

Earth Day 2021 . . . Pandemic Style

This year as the pandemic continues there will be a week of activities without an in-person festival.

Participate in the Virtual BioBlitz Sunday, April 11 – Saturday, April 17. The BioBlitz is focused on finding and identifying as many species as possible in a specific area and during a specific time period. It is run through a free app, iNaturalist. Prizes can be won for the most observations recorded and the most identifications for Motts Run Reservoir, Alum Springs Park, Old Mill Park, Dixon Park and the City of Fredericksburg.

Show off your artistic talent at the Chalk and Talk Art Contest April 15 – April 17. Create Earth Day themed chalk art on the trails. Prizes will be awarded.

Then join us at Old Mill Park for Concert night on April 16 with Cat's Meow and Darcy Dawn at 7:30pm. Gates open at 6pm. RGSC will present its annual Living Green Award at 7pm.

Lastly, Saturday Movie night, April 17, featuring "The Lorax." Gates open at 6pm.

Come visit us at our booth (masks, please). We will be at Old Mill Park on Friday and Saturday evenings.

For information and details on how to participate go to www.earthdayfred.com. Parks and Recreation also has a Facebook page. Sign up for Fred Alerts with the City of Fredericksburg to be alerted of any last-minute changes due to weather.

Explore, Enjoy and Protect!

EARTH DAY MONTH! CELEBRATE AND TAKE ACTION FOR MOTHER EARTH! Check RGSC's daily postings on Facebook during the month of APRIL.

UPDATE ON NORTH ANNA NUCLEAR POWER PLANTS SAFETY ISSUES

Beyond Nuclear, the Sierra Club and the Alliance for a Progressive Virginia, represented by Diane Curran, Esq., filed a formal hearing before an Atomic Safety and Licensing Board panel (who serve under the Nuclear Regulatory Commission - NRC) which was heard on Feb. 4, 2021. The basis for the filing is the premise that because a new reactor at North Anna (NA) would have to meet a higher standard, if built, for withstanding an earthquake, an upgrade might be warranted for the two existing units also.

The licenses for North Anna Units 1 and 2 expire in 2038 and 2040, at which time they will be 60 years old. Dominion would like to continue operating them for an additional 20 years. Nuclear power plants are typically built to last 40 years. North Anna Plants 1 & 2 are located above a geologic fault line which shut down temporarily after a 2011 earthquake measuring 5.8 on the Richter scale.

North Anna produces 21 percent of the electricity in Virginia. The goal for this filing is not to shut it down but to answer the question, "Can it run safely for 80 years?"

Only one other nuclear facility in the United States has received a second 20-year extension from the NRC, and that plant is not in a known fault zone. The last environmental impact study was in 1996 when VEPCO (Dominion) applied for the first extension. That work did not take into account the earthquake of 2011.

Union of Concerned Scientists and others have voiced alerts on the lack of safety assurances of many power plants across the country. In particular, NA is considered the third most vulnerable

in the U.S. Read the blog of Dr. Edwin Lyman, Director of Nuclear Safety and Security at Union of Concerned Scientists (table lists North Anna): <https://blog.ucsusa.org/edwin-lyman/earthquakes-and-h-b-robinson-plant>.

Dominion Energy officials insist that NA 1 & 2 can continue to operate safely. Sierra Club and its partners question the specter of the NA pipes and other components weakening over time. There have not been up-to-date studies and analysis of its current status. Hence, the cause for heightened concern.

We urge the Nuclear Regulatory Commission to do due diligence and do its job. The safety of Virginians is at stake. The pandemic would be considered a drop in the bucket compared to a meltdown of North Anna. The Atomic Safety and Licensing Board has 45 days from the hearing date of Feb. 4th to decide if the case can move forward.

ACTION: RGSC has partnered with Piedmont, Fall of the James, Blue Ridge Groups to educate and advocate people to be active in pursuing North Anna's safety. Depending upon the decision of the Atomic Safety and Licensing Board, Sierra Club is poised to flood legislators with letters. **A more effective strategy would be to insist on town hall meetings with all legislators at all levels to alert them of the issue to take action with NRC.** After all, all our legislators live in Virginia and would be affected no differently than us. Spread the word.

Outings Report, Suzanne & Richard Eggeling - Farewell and Introducing Geoff Johnson

Dear Outings participants,

It is very hard to sit down and write this. After forty wonderful years in Virginia, fifteen of which were in the Fredericksburg area, we are moving to Leland (a suburb of Wilmington, NC). Although we leave you, our friends, with a heavy heart, we are thrilled that Geoff Johnson has volunteered (without any arm-twisting!) to be your 'new' RGSC Outings Chair. Many of you are already familiar with Geoff as he participated in several of the outings we organized in those other-worldly, relaxed, pre-pandemic days.

Geoff's interest in local environmental issues, knowledge of Fredericksburg where he has resided for thirty years, diverse background and easy-going personality, will have a positive impact on RGSC ExCom and Outings - as soon SC national provides clearance for 'in-person' gatherings to resume. At the time of writing, Geoff has already completed part of his 'Outings' leadership training; read this newsletter for his bio. Go get 'em Geoff!

Our times as volunteers with the Rappahannock Group Sierra Club have been very special and rewarding: tabling at events like Earth Day at Old Mill Park, participating in clean ups, and organizing hikes and tours in Culpeper, Richmond, and King George County. Your enthusiasm and request for more of these events motivated and inspired us. We thoroughly enjoyed getting to know those of you who became regular participants. Likewise, we had lots of fun

with our Green Drinks program at Tapa Rio a year ago; unfortunately, cut short by the pandemic. Thank you to all those who support the concept of collaboration between individuals and organizations to take a stand to protect the environment, now and in the future. We think particularly of our good friends working to promote a Fossil Free Fredericksburg, we will miss you.

Over the past several years the friendships that have grown while working and planning with fellow RGSC ExCom members are especially precious. A great group of impassioned folks, trying to enjoy and conserve the environment while embracing social and environmental justice to make this earth a better place for all of us.

If you, dear reader, have any spare time in your schedule to offer assistance, please contact any of our ExComm members on our web page; your input will be most welcome. We know firsthand how fulfilling it is to be involved in RGSC activities. We can assure you that you will be richly rewarded for your efforts (OK, not financially!). So, our parting wish to all of you: Keep on walking, moving, living. Remember you will be most welcome to 'drop in for tea' whenever you visit Wilmington. We look forward to sharing news of the local Sierra Club activities once we have settled in.

So, without further ado, let us introduce Geoff Johnson, our new Outings Chair:

My name is Geoff Johnson and I recently volunteered to become the provisional Outing's Chair for the Rappahannock Group Sierra Club. I got involved with the local SC through Outings that were planned by Rich and Sue Eggeling and advertised in the local newspaper, The Free Lance Star. I wanted to see more of the outdoor venues around the northern VA area and this was a great opportunity to do just that. I joined RGSC soon after my first outing and am glad to be part of this great organization. I volunteered as a way to help with environmental issues and give something back to the community. Maybe my kids and grandkids will have a little better life because of the work we do. Previously, I've done volunteer work for the Navy Marine Corp Relief Society and a bit of work with the local Micah House.

I am a retired physicist and worked for the Department of the Navy for many years. I have lived in the Fredericksburg area for more than 30 years and presently reside in Falmouth, VA. I have been a member of the SC for a year and a half. I look forward to serving the RGSC and planning future outings as soon as they can be safely conducted.

Diana Johnson - Chickens

Raising chickens has been very helpful to me this last year. I go up to the coop probably 3-4 times a day, to let them out, collect eggs, feed them, and then lock them up for their safety at night. It gets me out of the house. Sometimes it clears my head; other times it just breaks up the day.

I've learned a lot about chickens, while realizing that many people don't know anything about them, other than eating the eggs or the chickens themselves.

For instance, do you know that it takes between 24 and 26 hours to create an egg, including building the shell? And that chickens lay more eggs during sunny summer days than in winter? Or that they lay fewer eggs as they age? Some people will put lights in the henhouse so they will lay more eggs, but it's not natural and will shorten the life of the chicken. Chickens need a rest just like we do. It's also much harder for a hen to keep baby chicks alive in freezing temperatures.

At night chickens rest on roost bars in the henhouse, snuggling down on top of their feet to keep warm. They will also snuggle next to other birds for warmth, although their two layers of feathers work well. The underlayer of feathers is a down and the top layer is regularly covered with an oil to keep them dry and warm.

Their version of bathing involves regular dust baths. I call it their spa time. They find a soft spot of soil or sand, make a depression, lay in it, and kick up sand or soil to clean their feathers. It's interesting to watch. They also love to lay in the sun, so if they can do both at the same time it's a bonus. The rooster keeps an eye open for birds of prey, or other predators, sounding the alarm if needed. He'll also crow loudly whenever he finds food or just feels like it.

If you don't have chickens you can save your washed eggshells, crush them and put them out for the birds, giving them needed calcium. You can grind the shells in the blender and put them in your plants or garden soil for added calcium. Or just smash them to relieve some aggression.

When you eat the meat of chickens you can save all your bones. Even if you have eaten off of them, boiling the bones to make a broth will kill any germs that might be there. Put them in the freezer until you are ready to make soup or bone broth. Put them in a large pot of water with onions, carrots and celery and boil them for about as long as you can. I usually try for 24 to 48 hours with the flame turned off when I'm not near the kitchen or sleeping. When ready, strain the broth and put it in the refrigerator overnight. The next day take the broth out and carefully spoon off the harden fat. Now you have lovely chicken bone broth better than the box you get at the store. You can freeze it, can it, or use it right away. Enjoy.

RGSC EXECUTIVE COMMITTEE (EXCOM)	
Chair: Bill Johnson, billatthelake [at] comcast.net	Webmaster & ExCom Member: Doug Ferguson, dougferg [at] verizon.net
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Program Chair: Paula Chow, paulachow132 [at] gmail.com	Newsletter Editor: Bill Johnson, billatthelake [at] comcast.net
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External Links:	
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Virginia Conservation Network	www.vcnva.org
Virginia League of Conservation Voters	www.valcv.org
Southern Environmental Law Center	www.southernenvironment.org
Friends of the Rappahannock	www.riverfriends.org
Tree Fredericksburg	www.treefredericksburg.org