# Greening Your House of Worship

Brought to you by RAISE, Roanoke Area Interfaith Stewards of the Earth

An Affiliate of Virginia Interfaith Power and Light



#### Greetings from RAISE!

We are Roanoke Area Interfaith Stewards of the Earth, and we'd like to help your congregation "go green"!

The following is a checklist that we have developed, to help congregations think through the possibilities as they consider their commitment to care for creation and enact environmental justice.

Before going through the checklist, we recommend **spending a moment in prayer or contemplation** to recall the motivations for engaging this process. Why do we care for creation? Why do we want to enact environmental justice? Motivations may be both practical and spiritual in nature.

We also recommend **considering the congregation's capacity** before examining the checklist. How much money do you have to devote to this? (Even if it's zero, that doesn't mean there's nothing to be done - many of these are low cost or cost saving measures.) How much time is available to go into this task? What skills and gifts exist within the congregation? (Perhaps you have contractors, landscapers, etc. among you - use them!)

With motivations aligned and capacity assessed, we suggest going through the checklist with leaders in your congregation who are likely to have knowledge of the relevant systems listed here. Not every item will be relevant to every congregation. The checklist items vary widely in levels of cost, impact, and difficulty.

This list can help you determine what you're doing already, what changes are within reach, and what to add to your "wish list" for later. No one expects you to fulfill them all right away! But this list can be a kind of road map to see how far your congregation could go, with time and effort, along the journey toward lighter environmental impacts and greater alignment between values and practices.

We are here to answer questions if you have them! Contact <u>roanokeaise@gmail.com</u>.

We wish you well on your "green" journey!

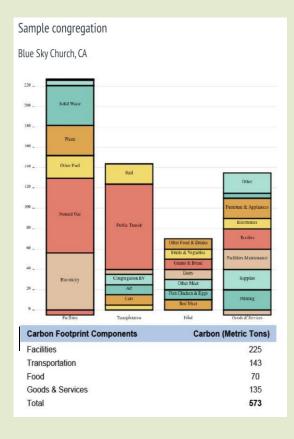




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## Suggestions for your governing body (board, elders, etc.)

- 1. Create a **green team** or other committee that regularly monitors and improves environmental impacts
  - RAISE is here to support your green team!



2. Create a sustainability plan for the congregation, perhaps as part of your annual planning process. It's a good idea to

How Cool Is Your Congregation?
FOR CONGREGATIONS

Measure your carbon footprint, find ways to reduce, get certified!

#### We measure:

- Facility: The amount of fuel used to heat, cool, and power your buildings, plus water, waste and recycling
- Transportation: The staff work-related miles and travel by congregants to worship
- Food: The frequency various types of animal products, grain, produce, and drinks are served at congregational meals each week
- Procurement: The dollars spent on printing, supplies, maintenance, and everything else you purchase

calculate a basic energy and emissions inventory annually.

• The calculator from Interfaith Power and Light is accessed here:

https://www.coolcongregations.org/

- Also, RAISE can connect you with people who calculate carbon footprints, just ask!
- 3. **Regularly publicize** your congregation's environmental practices and accomplishments in congregational documents.
  - These measures can be a part of **annual reports**, reviewed in board meetings, touted in the newsletter or bulletin, etc. Members should know about these efforts, and may be **inspired to do similar** things at home!

lo	Item	Description	Rating (Watt)	Efficiency (%)	Final Rating (Watt)	Notes
	Television - Samsung	50"	150.00	100%	150.00	110.100
	Television - Sony	40"	125.00	20070	125.00	
	Air Conditioner - Panasonic	1 PK	600.00	80%	480.00	
4	Air Conditioner - Panasonic 2	3/4 PK	500.00	80%	400.00	
	Air Conditioner - Daikin		800.00	80%	640.00	
6	WIFI Modem		10.00		10.00	
7	Cable TV Setup Box		25.00		25.00	
	Internet Modem		10.00		10.00	
9	Refrigerator		150.00	70%	105.00	
	Water Heater		1,000.00		1,000.00	
11	Microwave		600.00		600.00	
12	Dispenser		600.00		600.00	
13	Dishwasher		1,200.00		1,200.00	
14	LED Light Bulb - 7	7W	7.00		7.00	
15	LED Light Bulb - 9	9W	9.00		9.00	
16	Incandescent Light Bulb - 60	60W	60.00		60.00	
17	Incandescent Light Bulb - 80	80W	80.00		80.00	
18	Washing Machine		500.00		500.00	
19	Vaccum Cleaner		200.00		200.00	
20	Electric Iron		400.00		400.00	
21	Rice Cooker		400.00		400.00	
22	Toaster		600.00		600.00	1
23	Laptop		50.00		50.00	
24	Printer		20.00		20.00	
25	Scanner		10.00		10.00	
	Desktop Computer - Apple		100.00		100.00	
	Mobile Phone Charger - Samsun	g	3.00		3.00	
28	Mobile Phone Charger - Iphone	~	3.00		3.00	
29	Water Pump		400.00		400.00	
	Electric Saver		15.00		15.00	
	Lawn Mower		1,000.00		1,000.00	
	Food Blender		300.00		300.00	
	Hair Dryer		400.00		400.00	
	Coffee Maker		600.00		600.00	
35						

- 4. Establish a **formal tracking and reporting system** of energy/utility/waste/water usage to identify trends and unusual fluctuations in usage.
- Transfer information from utility bills (Electricity kWh, therms of natural gas, gallons of water) directly to a spreadsheet for tracking.
- This way, when you make improvements, it will be obvious

how much money and energy you've saved!

- 5. Minimize unnecessary travel by encouraging online options:
  - Offer **online services** to those who can't physically come to your building.
  - Allow employees to **telecommute** when applicable.



- 6. Provide **financial support** (donations) to local or regional environmental groups or projects.
  - There are many worthy causes locally. Choose something that suits your congregation, but we do especially like:



- o <a href="https://cleanvalley.org/">https://cleanvalley.org/</a>
- o https://thehumblehustle.org/all-programs/humble-hikes
- o <a href="https://www.blueridgelandconservancy.org/">https://www.blueridgelandconservancy.org/</a>
- o <a href="https://leapforlocalfood.org">https://leapforlocalfood.org</a>
- o <a href="https://www.appleridge.org/">https://www.appleridge.org/</a>
- o <a href="https://treesroanoke.org">https://treesroanoke.org</a>
- 7. **Prohibit smoking** in all indoor areas and all outdoor work areas. Outdoor smoking areas should be clearly marked and located at least 25 feet from building entrances, air intakes, and entry routes.
  - And make sure there is a place for smokers to put their cigarette butts.



# Suggestions for your leaders (priest, pastor, rabbi, imam) and teachers

- 8. When your congregation undertakes service, include actions for creation care and environmental justice.
  - Consider adopting a street and picking up litter (<a href="http://cleanvalley.org/adopt-a-street/">http://cleanvalley.org/adopt-a-street/</a>); contact RAISE for even more ideas!



- 9. Can you increase your attention to creation care in your **preaching**, **teaching**, **and rituals**?
  - For ideas about bringing creation care into your preaching, teaching, and rituals, contact RAISE!
- 10. Every measure you take in the list below can potentially be turned into **an opportunity** to learn about your faith's commitment to creation care. **Involve young people** and teach them your values as you implement these measures.

# Suggestions for your building committee or a general-purpose handyman

#### 11. Use energy efficient light bulbs.

- Remember interior and exterior, everyday lighting and special lighting. Also, this can include exit signs.
- These bulbs and fixtures are readily available at hardware stores. They cost more than incandescent light but **last quite a bit longer** definitely worth the cost.



- 12. Set up work spaces, conference rooms, and other common areas so that you can **turn on only the number of lights you truly need**.
  - LED Bulbs can be used with dimmer switches to provide different light levels. When possible, have multiple switches in large rooms to control lights separately.
- 13. When the building is not in use, **minimize light use** only what's needed for safety/security.
  - Putting lights on **timers** is another good way to manage this.
  - VAIPL has **light switch covers** that remind people to conserve electricity ask RAISE for these!

- 14. Consider **motion detectors** or other devices to turn off lights automatically in unoccupied areas
  - Motion detector light switches can be fairly expensive, though there are a few models that can be purchased for less than \$25 each. Top Greener brand has inexpensive switches that are highly rated.
  - If you want to save money, first go for the LED lights in #11. Motion detector light switches are a second step, because they do require more investment. They're useful in places like bathrooms, where lights might stay on without need.
  - Motion sensor light switches are also useful when one switch controls multiple bulbs.

#### 15. Set up your exterior lighting so that lights **only switch on when** it's dark

• Exterior lights that respond to light levels and motion are available

at most hardware stores.

16. Check doors and windows for drafts; install or refresh weather stripping and caulk as needed.



- 17. Are your windows leaky or thin? Even if you can't replace them, there are things you can do. Storm windows, window films, blinds, thermal drapes, or other techniques can **minimize heat gain/loss** 
  - Here are some ideas to improve windows, short of replacing them: <a href="https://www.energy.gov/energysaver/energy-efficient-window-attachments">https://www.energy.gov/energysaver/energy-efficient-window-attachments</a>



18. Check your plumbing system components regularly for leaks.

## You might need a professional to help with these

- 19. We highly recommend you get a **professional energy audit** done, and you implement the recommendations.
  - Congregations that are customers of Appalachian Power can get an energy audit, with a few minor upgrades for free, from their Small Business program:

https://takechargeva.com/business/small-business-direct.aspx

 More detailed energy audits and building evaluations available locally from Better Building Works -

https://betterbuildingworks.com

- 20. Install **programmable thermostats** and consider building automation systems to **optimize HVAC and energy systems**.
  - Your HVAC technician can advise a good programmable thermostat.
     These pay for themselves in less than a year, according to



https://www.greenandsave.com/master-roi-table

- 21. Make sure your HVAC systems are **serviced annually and filters are exchanged** on a schedule.
  - According to energy.gov, regularly replacing air filters can reduce energy consumption 5-15%.

https://www.energy.gov/articles/energy-saver-101-infographic-home-cooling

- **22.** Get your HVAC technician to **inspect forced air duct** work for leakage and ask them to **insulate** it where appropriate
  - According to energy.gov, air loss through ducts accounts for 30% of a system's energy consumption.

https://www.energy.gov/articles/energy-saver-101-infographic-home-cooling



Energy Saver 101: Everything You Need to Know About

### **Home Cooling**

6%

The percentage of the average household's energy use that goes to space cooling.



2/3 of all U.S. homes have air conditioners.

\$11B

The amount it costs homeowners every year to power their air conditioners.

- **23.** Get your building **insulation inspected periodically**. You want it to match code expectations for new buildings, at a minimum.
  - Insulation Basics https://www.energy.gov/energysaver/weatherize/insulation



- **24.** Do you have your property sprayed for insects or pests? Ask for **eco-friendly products**.
  - One example is the products from Eco Smart. <a href="https://ecosmart.com/">https://ecosmart.com/</a>
- **25.** If you have multiple zones in your building or multiple uses, what if you could install **separate metering or monitoring** for each section? That would allow analysis of the energy consumption of major systems.
  - Ask your electrician how to do this may or may not be feasible depending on your electrical wiring.

# Considering a renovation? Ready to think a little bigger?

#### **26.** How about some **solar** panels?

- Solar energy will clearly save money and benefit the planet. The only hiccup is the up-front investment.
- Some companies will install solar at no up-front cost, allowing you to pay it off



- over time as they own the panels and reap the tax benefits for a designated period. Talk to Main Street Solar <a href="http://mainstsolar.com/">http://mainstsolar.com/</a>, Baseline Solar <a href="https://baselinesolar.com">https://baselinesolar.com</a>, or Solar Connexion <a href="https://www.solarconnexion.com">http://www.solarconnexion.com</a>
- This also seems like a good model for getting solar on tax-exempt non-profits: <a href="https://re-volv.org/get-involved/apply/">https://re-volv.org/get-involved/apply/</a>
- Locally, Roanoke Catholic School got solar by working with Catholic Energies. <a href="https://www.catholicenergies.org/">https://www.catholicenergies.org/</a>
- (Not all sites are good for solar, of course; and you may need to re-do your roof before putting solar panels on top of it.)
- **27.** Flooring can have a big impact. Consider your options.
- Did you know that **carpet can be recycled**? Did you know that some tiles are more sustainable than others?
- Before you re-do another floor, read this:
   <a href="https://www.otitech.com/blog/the-best-green-flooring-options-for-leed-certified-building">https://www.otitech.com/blog/the-best-green-flooring-options-for-leed-certified-building</a> and this: <a href="https://www.greenamerica.org/green-living/eco-friendly-flooring">https://www.greenamerica.org/green-living/eco-friendly-flooring</a>

- **28.** When you install new plumbing fixtures, make them **low flow**. (Consider **retrofitting** the ones you have, if they use a lot of water!)
  - Look for "Water Sense" labeled faucets: information is here <a href="https://www.epa.gov/watersense/bathroom-faucets">https://www.epa.gov/watersense/bathroom-faucets</a> Self-closing faucets are not a bad idea, also. (Those fancy electric-sensor faucets do save water, but they use electricity, so that's a tradeoff.)
  - There are "Water Sense" labeled toilets, too: https://www.epa.gov/watersense/commercial-toilets
  - Consider waterless urinals like these:
     <a href="https://www.waterless.com/how-do-waterless-urinals-work">https://www.waterless.com/how-do-waterless-urinals-work</a>; or if you need to have them flush, go low-flow:
     <a href="https://www.epa.gov/watersense/urinals">https://www.epa.gov/watersense/urinals</a>



- **29.** Many drinking fountains or other water service units consume energy (pumps, refrigeration) When you replace yours, consider getting a **simpler, no-electricity model.**
- **30.** Make sure your construction or renovation projects have **environmental considerations** included. Consider LEED certification <a href="https://www.usgbc.org/leed">https://www.usgbc.org/leed</a> or similar

#### Things that involve purchasing

## (you could make these into purchasing policies for your congregation, perhaps)

- **31.**Purchasing electronics or appliances? Look for **Energy Star**.
  - Info about energy star appliances is here: <a href="https://www.energystar.gov/">https://www.energystar.gov/</a>
- 32. Purchasing a vehicle for the congregation?

  Maximize fuel economy or better yet, buy electric!
  - There are financial incentives available for electric vehicles - contact RAISE for more details



**33.** We encourage you to install an **electric vehicle charger** at your location as well. It is friendly to electric vehicle drivers and signals your interest in supporting fossil-free transportation.



- **34.** Buying a new HVAC system or equipment? Ask for something that has efficiency ratings higher than state/federal standards.
- **35.** You can make 100% of your electricity clean energy, even though local providers don't offer that, by **buying renewable energy credits**.
  - It usually doesn't cost much more than your current electricity bill. It's kind of a trick you still technically use local power, but **your bill goes to support wind energy or solar somewhere else**. Still, it may be a worthwhile way to express your values and support the transition to clean power, and you can officially declare that your **house of worship runs on wind and sun, not fossil fuels!** 
    - Arcadia Power is a prominent example of this. https://www.arcadia.com
- **36.** Food service items are a big deal. For many congregations this is the **main waste stream exiting the building**. Consider these measures.
  - Avoid disposable water bottles whenever possible. Set out a glass and a pitcher for that guest speaker. Ask the youth group to bring their own reusable water bottles.



 i. Bottled water is morally and environmentally troubling. Read more here: <a href="https://thewaterproject.org/bottled-">https://thewaterproject.org/bottled-</a> water/bottled\_water\_wasteful

- Use **real plates**, **glasses**, **cups**, **and cutlery** rather than disposable ones.
  - i. This also means looking at single serve foods do kids have juice boxes in their activities? Do you use small sugar packets for coffee hour? Consider how these could be altered so waste is minimized.
  - ii. Using **fewer disposables** means doing more dishes. There's no getting around that. We humbly suggest that you make sure it's not only women doing this work. It is an opportunity for fellowship among everyone!
- If you must use single-use food service items, **get something compostable** (see trash and recycling section, below)
- **37. Paper products**: whether it's toilet paper, paper towels, or copy paper, here are the criteria to prioritize:
- Post-consumer recycled content (highest possible content)
- Unbleached and/or chlorine-free
- Recycled means **fewer trees are chopped down**; unbleached and chlorine free are good because chlorine is tough on the ecosystem where the paper is made.
- Paper fitting this description can be found at most office supply stores, or on the internet.
- 38. Avoid cleaning/maintenance products containing VOCs, formaldehyde, and other chemical hazards.
  - More information about green cleaning products can be found here: <a href="https://www.epa.gov/greenerproducts/identifying-greener-cleaning-products">https://www.epa.gov/greenerproducts/identifying-greener-cleaning-products</a>

- **39.** Do you use flowers or other greenery? Some options are better than others, here.
  - Your standard commercial florist is probably a lovely person, but their industry is terrible for the environment.
     <a href="https://www.scientificamerican.com/article/environmental-price-of-flowers/">https://www.scientificamerican.com/article/environmental-price-of-flowers/</a>
  - You may have gardeners in your congregation who can supply you with blooms in spring, summer, and fall. For winter months, consider **dried** flowers or arrangements of greens that can be sourced locally.
  - If you want to buy locally grown flowers, try: <a href="https://www.sarahspetals.com/">https://www.sarahspetals.com/</a>, <a href="https://www.stonecropfarmers.com/">https://www.stonecropfarmers.com/</a>
  - Special note for Christian churches: consider **ethically sourced palms** for Palm Sunday. See <a href="https://lwr.org/blog/2015/why-eco-palms-are-better-choice-palm-sunday">https://ecopalms.org/</a>
    better-choice-palm-sunday and <a href="https://ecopalms.org/">https://ecopalms.org/</a>



**40.** How about a **purchasing policy** that **prioritizes local purchasing** wherever possible? Think food, paper products, furniture... Buying locally helps our area, and minimizes the environmental impacts of shipping.

### **Energy Saving Behaviors**

- **41.**Can you creatively **use fans and open windows** instead of overworking the HVAC systems when the weather is appropriate?
  - This depends on the architecture of your building, but any time you can **open windows instead of working the heating or cooling** system, you save energy!
- **42. Set your thermostats** to 70 (or cooler) in winter and 76 (or warmer) during summer seasons.

• If these settings are uncomfortable for certain members of your congregation, are there ways to **make them comfortable** without using the HVAC system?

 For example, can you make blankets and quilts available for those who shiver, or distribute fans for those who feel hot?



- 43. Ask your employees to conserve energy in their computer use.
  - They can shut down personal computers at the end of each work period, and set their computers to go on standby after 30 minutes of inactivity.
  - You can **adjust standby times and automatic shutoffs** in the "settings" component of your computers.

- 44. For work stations with multiple devices, use power strips and turn them off at the end of the work day.
  - According to energy.gov, standby power accounts for 5-10% of residential energy use, and it may be similar for congregations. Power strips can help you easily cut standby power.
  - 45. Use signage to remind members, visitors, and employees to avoid wasteful practices.
  - If you want light switch covers with "lights off" reminders, contact RAISE.
     We recommend other signage as well to encourage good habit.



- **46.** Use signage to discourage idling for delivery vehicles and for passenger pickup/dropoff.
  - This really helps with air quality. The City of Roanoke observes an anti-idling policy with their vehicles:

https://www.roanokeva.gov/395/Engine-Equipment-Idling-Policy

- **47.** Where can you **minimize your use of paper**?
  - In an electronic age, there is something reassuring about paper contact. Use paper if you need to. However, think **creatively about ways to minimize waste and re-use** what can be re-used.
  - For example, do you have a weekly bulletin that is passed out for services? Is there some component that is repeated each time? Perhaps that part could be printed on durable cardstock that stays in the pews rather than reprinted each week.
  - **48.** Make **double-sided printing** the default for printers and photocopiers, to **save paper.**



#### Saving Energy in the Kitchen

- **49. Don't overwork your fridge and freezer:** set your refrigerator to 40 F, freezer to 10 F (or warmer), except when otherwise required by code.
  - In addition to these adjustments, **ask how much refrigeration do you need?** Assess your actual needs, and get rid of older refrigerators
    you might not need. Unplug those that are rarely used, and only plug
    them in as needed.
- 50. Only use coffee makers and other appliances when you need them, not continuously.
  - **51.** Make sure to run your dishwasher only when full, using ecocycles to minimize heat and water use.
    - And of course, when you need to replace kitchen appliances, get energy efficient "Energy Star" appliances.



- **52.** Adjust water heater thermostat to 120 degrees; **install timer** or programmable thermostat to reduce use
- How much hot water do you need at all? Could you only turn on the water heater once a week when the building is most in use?

#### **Managing Your Waste**

**53.**Can you **recycle everything possible**? And how well do you keep your bins free of contamination?

• If you use the city's recycling services, **info about what can be** recycled is here: <a href="https://www.roanokeva.gov/1863/Single-Stream-">https://www.roanokeva.gov/1863/Single-Stream-</a>

<u>Recycling-Information</u> . Otherwise, consult your waste management company.

 It is worthwhile to do a trash audit for your congregation.
 Before taking out the trash, open the bag and sort through it: what could have been recycled?
 Composted? An eye-opening activity for youth to lead.



### **54. Look into composting**. Can you compost your organic wastes?

- Composting is a beautiful way to "starve" the landfill and **embrace** the cycles of death and rebirth that are intrinsic to God's good creation.
- Some congregations send coffee grounds, apple cores, etc. home with their members who garden, to make compost; others have a compost bin on site. Want help? try <a href="https://www.makesoil.org/map">https://www.makesoil.org/map</a> P.S. Did you know paper towels from the bathroom are compostable?

### Transportation

- **55.** What percentage of your congregation drives to your site? 100%? How can we reduce that, in the name of creation care?
  - In terms of employees, how about a bus pass as part of the benefits package?
  - Carpools are a great idea. Contact https://ridesolutions.org
     for local
     help on setting up carpools within
     your congregation



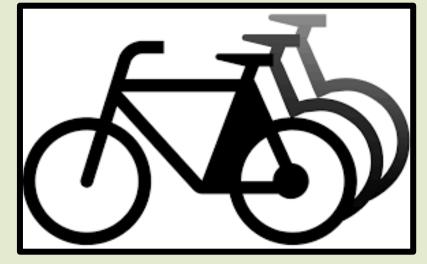
- 56. Make sure that any parking lots have been "right-sized" to reflect actual use
  - We encourage you to reflect on the **aesthetic and environmental impact** of your empty parking lot on the neighborhood. Be realistic. How much parking do you need?
  - Encouraging members to carpool or bike can reduce the need for parking. That space could serve another good, as green space, a playground, housing...
- 57. Welcome pedestrians.
  - Make sure your "walking entrance" (maybe not facing the parking lot) is welcoming to pedestrians.
  - Keep relevant sidewalks clear, and advocate for crosswalks and other pedestrian infrastructure in your neighborhood.

#### **58.** Welcome **bicyclists**.

- Is it **socially acceptable to ride a bicycle** to your events and services? This may involve re-thinking your dress code expectations and providing adequate restroom facilities for freshening up.
- Broaden your welcome by installing a bike rack. Ride Solutions has advice (<a href="https://www.ridesolutions.org">https://www.ridesolutions.org</a> ) and for some locations can

install a bike rack for free;

- Add "biking directions" and "bus directions" to your website's visitor information page.
- You can take this even further. Some congregations bless bikes once a year; some host bike rodeos (skills training for kids) in their



parking lots; some go on neighborhood bike rides as outreach. There is a vibrant cycling community in Roanoke, but do any **congregations proactively connect their faith with cycling?** Opportunities abound here.

- **59.** Does your congregation own a vehicle? If so, **maintain them in accordance with manufacturers' specifications** including tire pressure checks
  - Maintaining a vehicle for **fuel efficiency does make a difference**. More info here: <a href="https://www.fueleconomy.gov/feg/maintain.jsp">https://www.fueleconomy.gov/feg/maintain.jsp</a>

## Suggestions for your landscaper or grounds committee

- **60.** Your **building is a part of the neighborhood**. Why not make the landscaping as beautiful and sustainable as possible? We recommend at least **80% tree canopy on available land**.
- The city's strategic plan includes increasing our **tree cover to 60%**, with an emphasis on **native trees**. You can help by planting trees on your property! See <a href="http://planroanoke.org/wp-content/uploads/2020/12/City-Plan-2040-Adopted-12.21.20.pdf">http://planroanoke.org/wp-content/uploads/2020/12/City-Plan-2040-Adopted-12.21.20.pdf</a> p. 63-64.
- We especially recommend trees to shade parking and other pavement to mitigate the heat island effect. (Pavement heats in the sun; urban areas are hotter than green areas; and heat waves can severely affect people's health. Love your neighbor and reduce your pavement, or at least shade it with trees!)



• The shade of trees can also save you money if strategically planted to shield sun-exposed windows.

You can also try awnings for windows like this, of course. Awnings can cost a few hundred dollars but may be worthwhile for certain

windows; trees or shrubs have an added benefit of greenery!

• For tree planting resources, contact Trees Roanoke, https://www.treesroanoke.org

- **61.** We recommend using **native plants**. This tends to foster native insects (butterfly gardens!) and birds. Wouldn't you like your site to welcome people *and* God's creatures?
  - <u>Sustainable Landscaping Guide</u> https://www.buildium.com/resource/sustainable-landscaping-guide/
  - Choose plants that don't require much irrigation, and if you do water your plants, do so sparingly
    - i. Only when they really need it
    - ii. Better to water in evenings or



early mornings, rather than during the day when the water evaporates more readily

- Avoid synthetic chemical fertilizers and pesticides (or at least reduce their use).
  - i. Synthetic fertilizers wash into local waterways, causing damage. More information:

https://cleanvalley.org/resources/stormwater/

62. Gasoline-powered lawn mowers and other gas powered landscaping tools are not our favorite things. They pollute a lot more than you might expect. Can you use electric equipment and manual labor, or reduce the need by changing lawn to shrubbery, trees or ground cover?

• Electric landscaping equipment is now readily available. If your

landscaper does not have access to electric tools, consider switching landscapers or facilitating an upgrade for your present landscaper.

# **flow**. Do you have storm water channels, ponds or other water bodies? Where does your parking lot runoff flow to?

• If you have a **storm drain opening** on or
near your property, **adopt it**: check it regularly to keep it free from litter, debris, and soil.

- Plant a riparian buffer or a rain garden between pavement and bodies of water.
- Leigh Anne Weitzenfeld, who works for the city of Roanoke stormwater division, would love to talk with you about how the water flows on your property and how you can steward it well. https://www.roanokeva.gov/500/Stormwater

#### 64. Rain water can be captured for re-use and to reduce runoff

• If you are interested in rain barrels, contact Clean Valley Council (<a href="https://cleanvalley.org/workshops/">https://cleanvalley.org/workshops/</a>); you can also capture rain in a rain garden. DIY Rain Barrel Instructions - <a href="https://www.instructables.com/How-to-make-a-rain-barrel-1/">https://www.instructables.com/How-to-make-a-rain-barrel-1/</a>

## **65.** How about a **community garden** or other green features **that serve the neighborhood?**

 For garden advice, we recommend contacting Our Lady of Nazareth, whose Giving Garden right next to their parking lot has been very successful:

https://www.olnparish.com/parish-outreachministries

The Roanoke Community
 Garden Association is also a

good contact: <a href="https://roanokecommunitygarden.org/">https://roanokecommunitygarden.org/</a>



# Other stewardship of your grounds

- **66.** It's nice to have a trash container at your building entrance, particularly as a receptacle for cigarette butts.
  - Exterior trash containers can be a service to the neighborhood as well. Just make sure they don't fall over in the wind and scatter trash around the area!
- **67.** You probably need some exterior lighting for safety. But can you make sure it is shielded so as not to create light pollution?
  - The international dark sky association certifies certain lighting as avoiding light pollution:

https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/fsa-products/



## Thank you

- Thank you for reading our guide to greening your house of worship!
- If you have any questions, please don't hesitate to get in touch.
- RAISE (Roanoke Area Interfaith Stewards of the Earth): <a href="mailto:roanokeaise@gmail.com">roanokeaise@gmail.com</a>.