

Environment – Compiled Big Ideas

May 2, 2019



In fall 2018, PDR collected big ideas related to environment (natural resources, utilities, and sustainability/resiliency) to potentially include in the new city-wide Master Plan from three groups:

1. The general public via Community Consultation #1, which included 1,030 participants online and in person.
2. The Richmond 300 Advisory Council, the sub-committee of the City Planning Commission charged with overseeing the creation of the Master Plan.
3. The Richmond 300 Technical Team, which is comprised of city departments and quasi-city entities.

The big ideas from the three groups are summarized below. Please note, these summaries are what PDR heard – that does not mean that all of these ideas are appropriate for inclusion in the city-wide Master Plan because some ideas are more operational/management focused, and not land use management focused.

Community Consultation #1 - Big Ideas Summary | Environment

Big Ideas Summary | Sustainability & Resiliency

PDR staff received **477 big ideas** related to Sustainability & Resiliency.

- **Renewable Energy: 71 big ideas** are related to this topic:
 - **Carbon neutrality:** Achieve carbon neutrality by switching to renewable sources of energy.
 - **Solar power generation:** Add solar panels to parking decks and other public buildings. Incentivize property owners to install solar panels on buildings, i.e. no permit fee for solar installation and tax abatement for such improvements, tax rebates/credits. Require corporations and other large businesses to use solar power. Work with Dominion Energy to incentivize solar power. Have streetlights powered by solar energy.
 - **Energy back to the grid:** Work with Dominion Energy to allow power generated from renewable sources to be returned to the electric power grid.
- **Waste Management: 59 big ideas** are related to this topic area:
 - **Recycling:** Expand the recycling program, including to larger multi-family developments. Create a bottle refund program.
 - **City-wide composting:** Create a city-wide composting program.
 - **Dog waste composting:** Create a city-wide dog waste composting program with stations around the city.
 - **Litter:** Reduce the amount of litter in the city by installing more garbage and recycling receptacles.
 - **Yard waste:** More integrated and sustainable management of yard waste.
 - **Plastic:** Ban plastic bags and other single-use plastics in the city.

- **Green Buildings: 47 big ideas** are related to this topic area:
 - **Green roofs:** Require or incentivize the creation of green roofs for new or existing buildings.
 - **LEED standards:** Require all City buildings to be LEED certified.
 - **Density bonuses:** Provide a density bonus for new project if green practices are incorporated.
 - **Energy efficiency:** Provide incentives, tax credits, etc. for making older buildings more energy efficient.
- **Built Environment: 82 big ideas** are related to this topic area:
 - **Plant more trees:** Plant more trees, whether on-street, in parking areas, or in neighborhoods. Incentivize private property owners to plant trees and require public property owners to plant more.
 - **Urban heat island effect:** Reduce the urban heat island effect by reducing paved surfaces, lightening the color of pavement/roofs, and planting trees.
 - **EV charging stations:** Install and promote EV charging stations.
 - **Access to parks:** Ensure for the equitable distribution of parks and open space.
 - **Green infrastructure:** Install more green infrastructure such as bioswales, permeable pavement, green alleys, etc.
- **Climate Change & Adaptation: 33 big ideas** are related to this topic area:
 - **Reduce emissions:** Reduce emissions from vehicles and other sources to help mitigate the effects of climate change.
 - **Resiliency:** New buildings and public projects built with resiliency to future climate, such as more rainfall and flooding.
 - **Carbon tax:** Tax carbon emissions.
 - **Climate refugees:** Prepare for the influx of people living in the highly-populated, low-lying coastal areas when sea-level rise forces the temporary evacuation or permanent relocation of large populations.
- **Stormwater & Wastewater Management: 15 big ideas** are related to this topic area:
 - **Green infrastructure:** Enhance green infrastructure to improve stormwater management and reduce flooding.
 - **Gray water:** Encourage gray water use for irrigation, vehicle washing, etc.
 - **RVA Clean Water Plan:** Implement the RVA Clean Water Plan.
 - **Reduce stormwater volume:** Reduce the volume of stormwater, and therefore the number of overflow events, by treating stormwater on-site and reducing the amount of impervious surface.
- **Multi-Modal Transportation: 33 big ideas** are related to this topic area:
 - **Bike infrastructure:** Provide more bicycle infrastructure, such as bike lanes, to encourage this mode of transport instead of autos.
 - **Commit funding:** Provide more funding for non-auto transportation infrastructure.
 - **Walkability:** Focus on improving walkability throughout the city.
 - **Less parking:** Less land devoted to parking, especially in the city's core. Reduce or eliminate minimum parking zoning requirements.
 - **Public transit:** Increase the amount of public transit with more bus routes, BRT's, etc.
- **Other Related Big Ideas:**
 - **Urban agriculture:** Promote urban agriculture through community gardens, vertical farms, and other innovative techniques.

- **Education:** Educate citizens on the importance of sustainability and on small actions that can make a big difference.
- **Environmental regulation:** Increase the amount of regulation regarding the environment and strengthen enforcement of existing regulations.
- **Sustainability lens:** Filter all planning decisions through a sustainability lens.
- **Staff capacity:** Hire more City employees related to sustainability to be able to more effectively achieve related goals.
- **Reduce use of fertilizers/pesticides:** Use natural pest control methods and ingredients.

Big Ideas Summary | Utilities

PDR staff received **397 big ideas** related to Sustainability & Resiliency.

- **Fee Structure/Lower costs: 76 comments** related to lowering cost, restricting the fee system, and providing cost relief to low-income customers.
- **Online payment: 3 comments** about improving the online/mobile payment process
- **Renewable energy: 54 big ideas** related to renewable energy
 - Incorporate solar in government buildings, busses, streetlights, private residents, etc; tax credits for solar companies
 - Create incentives for developing renewable energy
 - Install a solar array on the East End Landfill
- **Bury Power Lines: 40 ideas** asking to bury power lines
- **Maintenance/Upgrading: 34 comments** related to this topic
 - Create a systemic plan for upgrading infrastructure
 - Concerns about lead in the old pipes, replace those pipes
 - Modernize infrastructure
 - Survey existing utilities
 - Eliminate water and methane leaks
 - Invest in new pressurized tank zone from Bellemeade to city limits along Route 1
- **Green infrastructure/stormwater: 31 comments** related to this topic
 - Green roofs on public buildings
 - Do not allow Dominion to “greenwash,” don’t allow corporate polluters to fund green infrastructure
 - Publicize the stormwater credit program more
 - Utilize permeable pavers on public parking lots
- **Streetlights: 24 big ideas** about streetlights – mainly focused on adding more streetlights throughout the city and switching all of them over to LEDs
- **Light pollution:** Several comments about reducing light pollution and using hooded streetlights
- **Potholes and Sidewalks:** A few comments about fixing potholes and improving sidewalks
- **Alleys:** Maintain alleys, keep clear of trees that could fall during a storm
- **Trash/Recycling:** improve trash removal (including bulk trash), require multifamily buildings to have recycling
- **Composting:** Start a city-wide composting program
- **Customer Service:** a few comments on customer service being great and a couple saying it’s not easy to reach DPU
- **Public Education:** A few comments about having more public education, awareness, events, conferences about stormwater and utilities in general

- **Staffing:** Add more staff at DPU and retain and attract staff
- **Dominion: 14 comments** specifically mention Dominion – related to keeping Dominion’s “money out of the system,” controlling their pollution, and requiring Dominion to buy back solar power generated by sites
- **Energy Efficiency:** update building codes to require more energy efficiency
- **Fulton Gas Works:** assess, remediate, and redevelop Fulton Gas Works
- **Gas:** Several comments related to gas – ranging from sell the gas utility to expand the gas system to the South Side
- **Gray water: 5 ideas** related to legalizing gray water systems
- **Incentives/token-ization:** Use token-ization (sort of like cryptocurrency) to incentivize behaviors. E.g. giving rewards for certain behaviors (biking, walking, etc....)
- **Telecommunications: 12 big ideas** related to the telecommunications network – more broadband/fiber options, upgrade to 5G, free public wifi in public areas
- **Trees:** Improve the tree canopy
- **Water fountains:** add more public water fountains throughout the city

Big Ideas Summary | Natural Resources

PDR staff received **291 big ideas** related to Natural Resources

- **Stewardship & Conservation: 160 big ideas** are related to this topic area:
 - **Clean and maintain:** Maintain and improve the quality of the James River and surrounding waterways through a number of initiatives, such as partnering with non-profits, creating more conservation areas, cleaning up waste and litter, and implementing the RVA Clean Water Plan.
 - **Stormwater:** Improve the stormwater system to reduce the number of sewer overflow events into the James River.
 - **Erosion control:** Increase efforts to prevent erosion along the riverbanks of the James River.
 - **Pollution:** Increase regulation and enforcement of pollution laws, including the Chesapeake Bay Act.
 - **Funding:** Provide increased funding to the James River Park System (JRPS) to be able to hire additional staff and perform more services to keep up with increasing visitation to the park system.
 - **Invasive species:** Create a stronger initiative to remove invasive species from the JRPS and increase the planting of native species.
 - **Private development and views:** Restrict private development along the James River in order to maintain access and views.
 - **Trails:** Maintain and expand the trails network in the JRPS.
- **Improvement Projects: 8 big ideas** are related to this topic area:
 - **Daylight streams:** Daylight all streams and re-integrate them into the ecosystem to improve ecological functioning.
 - **Expansion of JRPS:** Expand the JRPS west of the Powhite Parkway, as well as on Mayo Island.
 - **Riverside improvements:** Continue with improvement projects along the Riverside, such as the Potterfield Bridge, to attract more visitors.
- **River Access: 19 big ideas** are related to this topic:

- **Increase access:** Continue to improve access to the James River for all users. Increase access specifically from Manchester. Favor public access over private access.
- **Improve signage:** Improve wayfinding and directional signage to the riverfront.
- **Promotion & Education:** 11 big ideas are related to this topic area:
 - **Education of youth:** Educate youth on the priceless qualities of our natural ecosystems, both in the classroom and in the field.
 - **Volunteer stewardship:** Integrate stewardship and environmental education, including active volunteerism, in Richmond schools and public programming.
 - **Public participation:** Find ways to encourage city residents to get outside and involved in the environment so they are more likely to take care of it.
 - **Promotion:** More promotion and highlighting of the natural resources that the city has.
 - **Marketing and tourism:** Market the James River to attract tourists and visitors to the riverfront and the city.
- **Tree Canopy: 48 big ideas** are related to this topic area:
 - **Plant more trees:** Plant more trees throughout the city, whether by incentivizing private property owners or requiring public property owners to do so.
 - **Maintain tree canopy:** Maintain existing trees and promptly replant trees if they must be cut down.
 - **City arborists:** Hire additional City arborists/foresters to achieve goals relating to maintaining and improving the tree canopy.

Advisory Council - Big Ideas Summary | Environment

- Recycling in multi-family
- Encourage composting
 - Create a city composting facility and programs
- Public access to the waterfront
 - Preserve land next to the river for both access and address flooding issues
- Incentivize the creation of community gardens with tax incentives
- Incentivize property owners to use vacant land and roof tops as community gardens
- Map food access in the city
- Find partners to aid in food distribution
- Encourage urban farming as it improves water quality
- Partner with schools to provide education on environmental stewardship
- Create a bike trail system throughout the city
- Include amenities at parks including skate parks
- Create sports facilities in the city for city residents to use
- Create horse trails in the city and educate people about horses
- Coordinate with RVA Green 2050 and the goal of 80% reduction in carbon by 2030
- Integrate park and ride hubs
- Encourage and incentivize green building design and energy efficiency
- Set limits on the amount of impervious surfaces allowed
 - Incrementally step incentives for stormwater best management practices
- Encourage community solar agreements
- Address light pollution
- Provide adequate trash cans at busy corridors

- Identify brownfields for redevelopment
 - Incentivize with abatements, credits, etc.
- Reduce urban heat islands
 - Green infrastructure
 - Tree canopy
- Environmental justice/equity in access to quality open space
- Volunteer/stewardship of environmental resources
- Reference to other plans
 - E.g. RVA Green2050, RVA Clean Water Plan, JRPS Master Plan
 - Consider land use implications of and be consistent with these plans
- Incentivize native plantings
 - Tax credits
 - VA Conservation Assistance Program – have Richmond participate
- Density bonus incentive for actual open space
- Payment in lieu of stormwater, open space or other requirements
- Density bonus for green building practices
 - How to promote use of density bonus rather than SUP process
- Reduce auto dependency and promote non-motorized transport
- Land bank for open space
- Identify vulnerable environment areas that may not be good for development
- Green energy transformation – production and storage
- Improve the stormwater system such as CSS and number of “overflow” events and/or better ground filtration.
- Bury overhead utilities, work with the private sector
- Explore green programs run by Dominion power

Technical Team - Big Ideas Summary | Environment

- Create a plan for making sure all Richmonders are within a 10-min walk of a quality park
- Evaluate park quality
- Develop a Parks Master Plan that aligns with community growth and provides amenities that the communities seek (including trails and community gardens)
- Evaluate demographics and upgrade parks that serve communities that serve traditionally under-served populations
- More parks, green space, tree canopy in South Side
- Improve ranking in the TPL rating standings
- Network of trails and greenways connecting parks and continue efforts to align with DPU to incarnate green infrastructure improve
- Education campaign on trail network
- Strategy to maintaining green space on city-owned land when it transfers to private hands
- Consider amendments to zoning ordinance, POD process, and SUP process requiring green space (not just open space), preservation of mature trees
- Develop JRPS Master Plan – trails on south bank to connect to Appamatox Greenway
- Implement the Riverfront Plan
- Establish conservation goals – increasing acreage of conserved green space
- Increase biodiversity – focus on stream corridors
- Implement the RVA Clean Water Plan – 10 strategies

- Incorporate stormwater retention in park areas
- Develop green infrastructure plan for Gilies, Manchester, and Shockoe/Canon's Branch
- Implement the Water Supply Plan
- Continue to update the water lines, gas lines, lead pipes per planning documents
- Continue public education campaigns for utility
- Continue cost relief programs for utilities
- Flood plain management plan – map streams and develop flood plain program, change the recurrence frequencies (not 1% chance)
- When revising the zoning ordinance, break up the parcels so that the areas in the flood zones are zoned for Open Space
- Increase renewable energy and energy efficiency
- Require multifamily and commercial to provide recycling onsite
- Explore composting program – see Arlington example (expand staffing)
- Learn more about telecommunications, broadband, wireless infrastructure and how cities manage it
- Develop and implement RVA Green 2050
- Increase tree canopy – focus on areas that have most impact of heat island
- Expand network of streetlights and LED streetlights in general
- Methane capture at old landfills
- Advocate for state-level changes related to sustainability
- Incorporate sustainable practices into city-owned facilities – look for opportunities to meet LEED Silver Design.