



Ann Arbor Public Schools Environmental Sustainability Framework

Report to the Board of Education
November 30, 2022

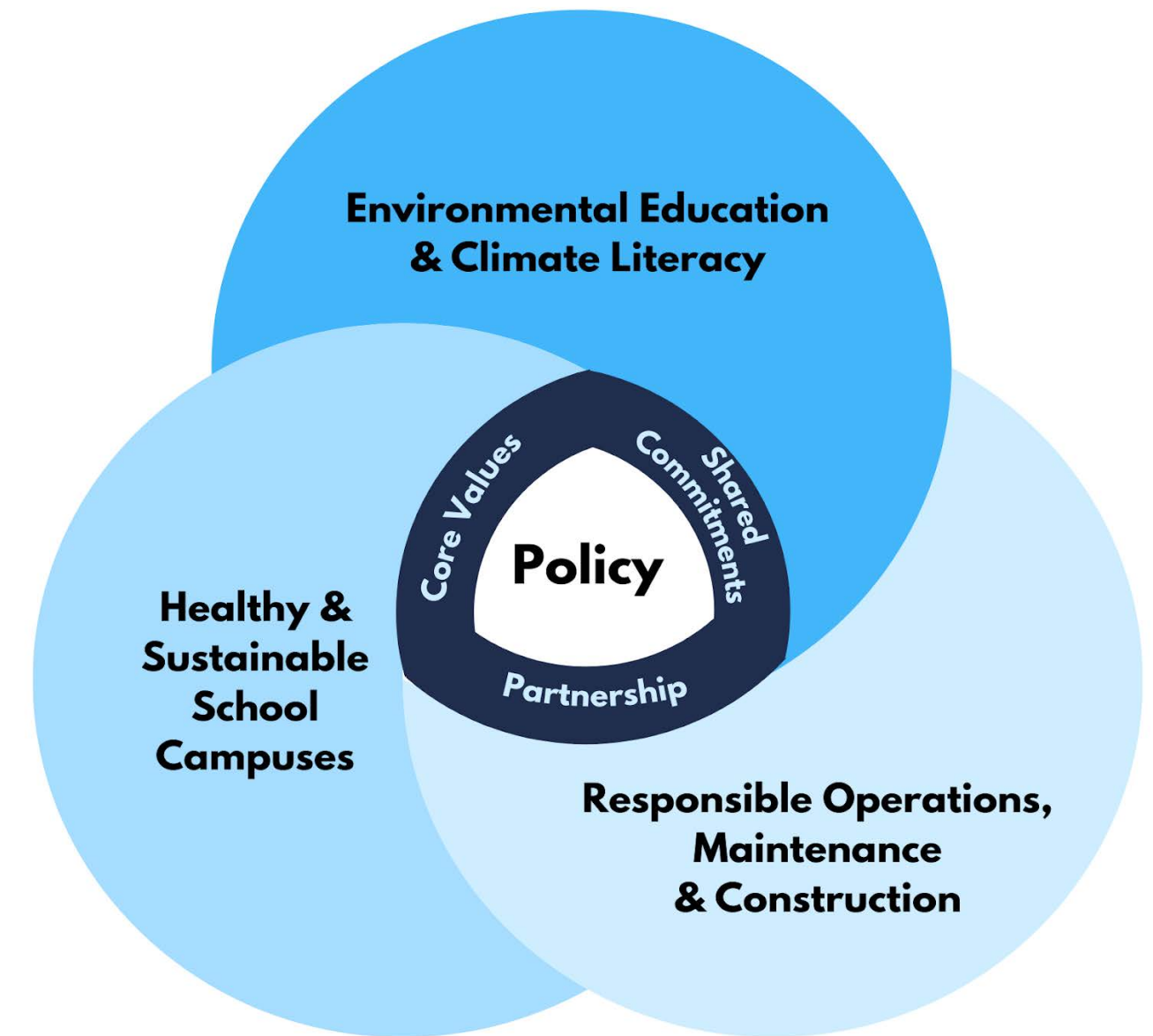
Emile Lauzzana
Executive Director, Environmental Sustainability



Presentation Summary

- AAPS Overview
- Vision and Mission – Environmental Sustainability at the AAPS
- Background + Supporting Work
 - Board Policy 8000: Environmental Sustainability
 - 2019 Bond and Environmental Sustainability
 - Environmental Sustainability Taskforce
 - **Research** – *Sustainability plans of other school districts and local institutions*
- Environmental Sustainability Framework
 - Core Values
 - Shared Commitments
 - ES Framework organizational structure
 - **3 Sections**
 - Responsible Operations, Maintenance and Construction
 - Environmental Education and Climate Literacy
 - Healthy School Campuses
 - **11 Areas for Action**
 - **Immediate Actions** – *Taking action now* – Styrofoam, Composting, School Gardens, Outdoor Learning, Teacher Champions, Teacher Mini-Grants, Aligned Curriculum, District Leadership, and Environmental Sustainability Advisory Committee
- Public feedback - **ThoughtExchange**

Environmental Sustainability Framework



AAPS Overview

- Serves 17,000 children with 2,000 staff
- Covers 125 square miles
- Responsible for 35 buildings
- 3.5 million square feet
- 723 acres of land
- Serves the City of Ann Arbor and parts of 8 surrounding townships



Mission and Vision – Environmental Sustainability

Mission:

The AAPS is committed to care for the environment, to model and achieve an environmentally sustainable existence, with every decision and in every area of the organization.

Vision:

In all decisions we embody and live the value of care for our earth and the environment. Individual, team and district decisions are consistent with care for the earth.



Background – Environmental Sustainability Framework

- *In December 2018, the AAPS recognized the urgency of the climate crisis and adopted **Policy 8000: Environmental Sustainability (Appendix A)**, with the intention of institutionalizing a commitment to environmental sustainability as a fundamental value in the AAPS. This policy directly supports many of the initiatives included in this framework document.*
- *In November 2019, the Ann Arbor Public Schools community passed a **historic bond referendum** that provides resources critical to implementing many of the elements of the AAPS ES Framework.*
- *In November 2021, the AAPS Board of Education formed the **Environmental Sustainability (ES) Taskforce (Appendix B)** composed of local environmental leaders, AAPS staff, students and others. The ES Taskforce was charged with advising the district administration in developing the ES Framework presented in this document.*
- *The Environmental Sustainability (ES) Framework is further informed by the **work of school districts around the country** that have made environmental sustainability commitments and the **plans of our local institutional partners**, including the University of Michigan, City of Ann Arbor and Washtenaw County (Appendix C).*

AAPS Board Policy 8000: Environmental Sustainability (Appendix A)

Adopted 12/12/2018

The Ann Arbor Public Schools recognizes that:

- Climate change is real, increasing, and caused by human activity; and
- the Ann Arbor community is committed to practices that support a healthy environment for present and future generations; and
- the District has a responsibility to help prepare current and future generations to respond to climate change through the reduction of harmful human activities, the promotion of human activities that restore the environment, and the development of strategies to adapt to climate change.

The District will support the prioritization of:

- Environmental sustainability education that prepares present and future generations to become thoughtful stewards of the environment; and
- developing student leaders prepared to succeed in an uncertain climate change future; and
- maintaining and operating district buildings and grounds that reduce the environmental impact of human activities, promote the restoration of the environment, and adapt to climate change; and
- building and enhancing partnerships that support the Ann Arbor community's environmental principles.

The Superintendent and/or designee(s) will report annually to the Board of Education on activities related to this policy.

AAPS Bond

2019 BOND PREPARING FOR THE FUTURE



Thank You, Ann Arbor Community!

AAPS Bond Environmental Sustainability Details

GOAL	SUSTAINABLE & ENVIRONMENTALLY RESPONSIBLE INFRASTRUCTURE <i>Create Resilient Schools for Climate Change</i>
KEY THEMES	<ul style="list-style-type: none"> • Create optimized learning environments based on best practice and research to utilize natural and artificial light, ensure fresh air free from pollutants, maintain classroom temperature, and optimize acoustics for maximum cognitive function and productivity. • Prepare our schools to adapt to climate change and act as centers of neighborhood resiliency and to maintain critical life-support conditions in the event of extended power loss, heating fuel or water • Chart a course for carbon neutrality • Create a culture that supports recycling and composting • Promote bio-diversity and healthy sites • Utilize interior and exterior finishes that are long-lasting and require minimal maintenance and replacement • Utilize the Freeman Environmental Education Center for demonstration of sustainable grounds practices that tie to Environmental Education programming
SUPPORTING INFRASTRUCTURE	<ul style="list-style-type: none"> <input type="checkbox"/> Renovate all classrooms with modern systems that provide human-centric lighting, thermal, and acoustic environments with user/teacher control <input type="checkbox"/> Design building systems for disaster resilience and passive survivability including provisions for backup power <input type="checkbox"/> Install solar energy systems <input type="checkbox"/> Utilize more efficient electric heating and cooling systems including geothermal/ground-source heat pumps and variable refrigerant flow <input type="checkbox"/> Install dimmable LED lighting <input type="checkbox"/> Upgrade bus fleet with more fuel-efficient vehicles as new technology advancements allow <input type="checkbox"/> Create spaces in schools for the collection of recyclables and compost materials and exterior collection points for service providers <input type="checkbox"/> Create bio-diverse ecologies on school grounds that support local ecosystems and manage storm water <input type="checkbox"/> Specify durable long life-cycle materials, equipment and finishes with low to no toxicity <input type="checkbox"/> Install water management systems, gardens, and other grounds projects at the Freeman Environmental Education Center

Environmental Sustainability Taskforce (Appendix B)

Charge and Membership

Charge:

The focus of the AAPS Environmental Sustainability Taskforce is to advise the AAPS Board of Education on a formal sustainability plan that will support achieving the goal of environmental sustainability, guide adjustments in operations, and advise on AAPS capital improvement planning, and other district endeavors related to sustainability.

MEMBERS	
Coert Ambrosino	AAPS HS Science Teacher
Emily Canosa	University of Michigan; College for Creative Studies
Jan Culbertson	AA 2030 District - Scio Township Planning Commission
Dan Ezekiel	Retired AAPS Teacher
Steven Giardini	University of Michigan - Michigan Dining
Virginia He	AAPS HS Student
Kimberly Hill-Edwards	Washtenaw Community College
Courtney Kiley	AAPS Environmental Education Teacher
Khaled Mahmood	Tetra Tech - Environmental Consulting Company
Kate McCabe	Self-employed small business owner
Derrick Miller	Community Action Network
Michael Mychaliska	AAPS HS Student
David Szczygiel	AAPS Environmental Education Teacher
Jenni Wilkening	AAPS Teacher - Pioneer HS
Fang Wu	City of Ann Arbor - OSI
Ha Young Kwon	Psychiatrist and Social Worker
SCHOOL BOARD REPRESENTATIVES	
Bryan Johnson	Trustee, Performance Committee Chair
Ernesto Querijero	Trustee, Finance Committee Chair
ADMINISTRATIVE LIAISONS	
Jason Bing	Director, Capital Programs
Emile Lauzzana	Exec. Dir., Environmental Sustainability
Jill Minnick	Assistant Superintendent, Finance and Operations
Jeanice Swift	Superintendent

Environmental Sustainability Taskforce

- A summary of the work of the ES Taskforce up to April 2022 was presented to the Board of Education on April 27, 2022, and is available at this link and begins at minute 43:
 - <https://www.youtube.com/watch?v=RRoNDIyJwF8>
- The Taskforce subsequently met monthly in May, June, September, October and November of 2022. In June, July and August, Working Group meetings were held on specific subject areas.
- The Working Groups developed SMARTIE Goals for many areas that informed the development of the ES Framework. SMARTIE Goals are **Specific, Measurable, Attainable, Relevant, Time-Based, Inclusive and Equitable.**

Environmental Sustainability Taskforce


Case Studies - Analysis

Case Studies were also conducted of other school district sustainability plans.

INPUTS	ACTIVITIES	OUTPUTS	GOALS	VISION
Resources	Ongoing	Annual	Short/Mid Term	Long Term

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Environmental Sustainability Management Plan - Case Study Review																
MODEL			INPUTS / Resources to support plan development and implementation							ACTIVITIES					MODEL	
Group	School/District	Approximate Scale Compared to AAPS	Staffing	Student	Consultant(s)	Financial	Governing Board	Non-Profit / Institutional	Other Resources	Categories - Areas of Focus	Curriculum Integration	Operations	School Level Integration	Other Activities	School/District	Energy
4	Seattle Public Schools (WA)	Three times larger (3x)	Resource Conservation team currently in place; staff has recommended the addition of a Chief Sustainability Director and Chief Environmental Justice Director	Create network of Green Teams; encourage team communication across schools; program as possible academic credit	Contracted McLennan Group to catalog current/past sustainability efforts, and to develop/capture aspirations and goals for the future	Capital program commitments - BEX	Resolution 2006/2007 - 18 The Climate Change resolution; Resolution 2012/2013 - 12 The Green Resolution; Policy No 6806 - 2012 Drinking Water Quality and Access; Policy No 6810 - 2017 Natural Resource Conservation; Superintendent Procedure 6810 SP - Natural Resource Conservation		2019-24 Seattle Public Schools Strategic Plan	Policy; Staffing; Education; Equity; Measurement; Buildings + Site	Efforts to integrate sustainability into curriculum; provide ongoing sustainability training; draft a comprehensive sustainability plan notes this resource https://www.energizeschools.org/	Efforts in energy, water and waste reduction on an ongoing basis	Green Teams, operations programs	Green schoolyard program	Seattle Public Schools (WA)	Carbon Footprint 2040
2	St. Paul Public Schools (MN)	Two times larger (2x)	No full-time employees hired to implement the work; Building operation and maintenance crew also conduct energy efficiency improvements with the support from local utilities.		A consulting firm was hired to develop the implementation plan to reach zero hunger and zero waste by 2029.	Revolving Energy Efficiency Fund	1 district COO, 1 principal, 1 teacher, 5 facilities members, 1 parent, 1 MN Green Corps members, Xcel energy and 2 Community Facilitators	Xcel Energy		Waste Recycling and Organics: trash, recyclables and food waste. Energy action plan: energy conservation, efficiency, and education.	Lesson plans for 5th graders and a Club Kit for Environmental Clubs		Energy audits, student competitions with results on district website		St. Paul Public Schools (MN)	Reduce emissions by 2030
		.5x in terms of enrollment	Full-time Sustainability Program Coordinator; Maintenance Manager heavily involved; Sustainability Teacher Leaders at each site (Small group of teachers)	2018 Summer internship program for HS students to research aspects of SMP; School-based "Green Teams" (parent led)	A consultant was hired to lead the Sustainability Plan working group, conduct stakeholder meetings and focus groups.	"Shared Savings" program (Savings from energy and waste reduction go back to sustainability programs after paying back the General Fund)	Board resolutions pertaining		Waste reduction grants; Funding for garden programming through city "Soda Tax"; "Parcel Tax" provides ongoing funding for	Green Buildings & Materials;	Every student gets gardening and cooking instruction. District passed a Climate Literacy Resolution in November to develop a climate change curriculum for the district over the next 18 months. Also have	Highly advanced nutrition services throughout district--all meals are made from scratch with no pre-packaged meals (local & organic as possible). Have dedicated maintenance on staff. Note: City has no chemicals in the ground.	Focus has been on waste reduction, particularly in the cafeteria. For example, starting reusable pilot program with stainless steel. Networks of teachers & students at every site to help implement, including Green Teams, Environmental Leaders	A lot of coordination with local environmental non-profits that share similar goals. Are		Achieve


+ ≡ SMP_Case_Study_Analysis_Matrix ▾  Explore

Environmental Sustainability Taskforce

Case Studies - Evaluation

CASE STUDY ANALYSIS MATRIX - HIGHLIGHTS
 Which Items identified in our breakouts should be elevated?
 Which of these items are gaps needing to be addressed at AAPS?

Please take a colored "Dot" or star from below and highlight those items



Place stars on ideas of others that resonate with you!

INPUTS/RESOURCES


- School Green Teams ★ ★ ★ ★ ★
- Sustainability Director and Environmental Justice Director ★ ★ ★
- Utilizing consultants to support plan development
- Community Involvement ★ ★ ★
- Green Revolving Fund/Designated ES Funds ★ ★ ★
- Teacher compensation/support for ES initiatives
- City/External Funding – diversity of funding sources
- Use of State/Federal (centralized) resources

ACTIVITIES

- Robust Curriculum integration ★ ★ ★ ★ ★

CASE STUDY ANALYSIS MATRIX - HIGHLIGHTS
 Which Items identified in our breakouts should be elevated?
 Which of these items are gaps needing to be addressed at AAPS?

Please take a colored "Dot" or star from below and highlight those items



Place stars on ideas of others that resonate with you!

INPUTS/RESOURCES

- School Green Teams ★ ★ ★ ★ ★
- Sustainability Director and Environmental Justice Director ★ ★ ★
- Utilizing consultants to support plan development
- Community Involvement ★ ★ ★
- Green Revolving Fund/Designated ES Funds ★ ★ ★
- Teacher compensation/support for ES initiatives
- City/External Funding – diversity of funding sources
- Use of State/Federal (centralized) resources

ACTIVITIES

- Robust Curriculum integration ★ ★ ★ ★ ★
- Environmental Justice Initiatives ★ ★
- Transportation/multi-modal plan ★
- School/District based Competitions
- Eat Local; Nutrition connections to ES ★ ★
- Students take lessons home ★ ★
- Annual instruction on recycling/composting ★ ★ ★
- Electrification of Grounds/Maintenance
- Water conservation initiatives
- Support Next Gen science standards
- Outdoor Learning Environments – campus as living learning lab ★ ★ ★ ★ ★
- Building on Strengths, Focus on low-hanging fruit ★
- CTE Connections ★ ★
- Communicating Success
- Solar My Schools

OUTPUTS/REPORTING

- High performance building standards ★ ★
- Visibility of Key Projects
- Frequent/Regular Reporting requirements - accountability ★ ★ ★ ★
- Clear Metrics and Monitoring/Measurement ★ ★ ★
- Clear Roadmap
- Benchmarking/Monitoring Tools for curriculum integration
- Use web sites for tracking, resources, reporting ★

RESULTS/GOALS

- "Backcasting" to develop carbon goals ★ ★
- Environmental Sustainability Management Plan Adoption (becomes policy) ★ ★
- Modest Goals into Ambitious Goals
- Local Alignment – City, County, State GOALS ★ ★ ★ ★
- No Kid Hungry ★ ★

ASPIRATIONS/RESULTS

- Local Alignment – City, County, State
- Focus on Institutional Change

Environmental Sustainability Taskforce

Case Studies – Focus Areas Ranking

Items receiving more than 2 dots include:

Inputs/Resources

- [School Green Teams \(5\)](#)
- Sustainability Director and Environmental Justice Director (3)
- Community Involvement (3)
- Green Revolving Fund/Designated ES Funds (3)

Activities

- [Robust Curriculum Integration \(11\)](#)
- [Outdoor Learning Environments – campus as living learning lab \(5\)](#)
- Annual instruction on recycling/composting (4)
- Environmental Justice Initiatives (2)
- Transportation/multi-modal plan (2)
- Eat Local; Nutrition connections to ES (2)
- Students take lessons home (2)
- CTE connections (2)

Outputs/Reporting

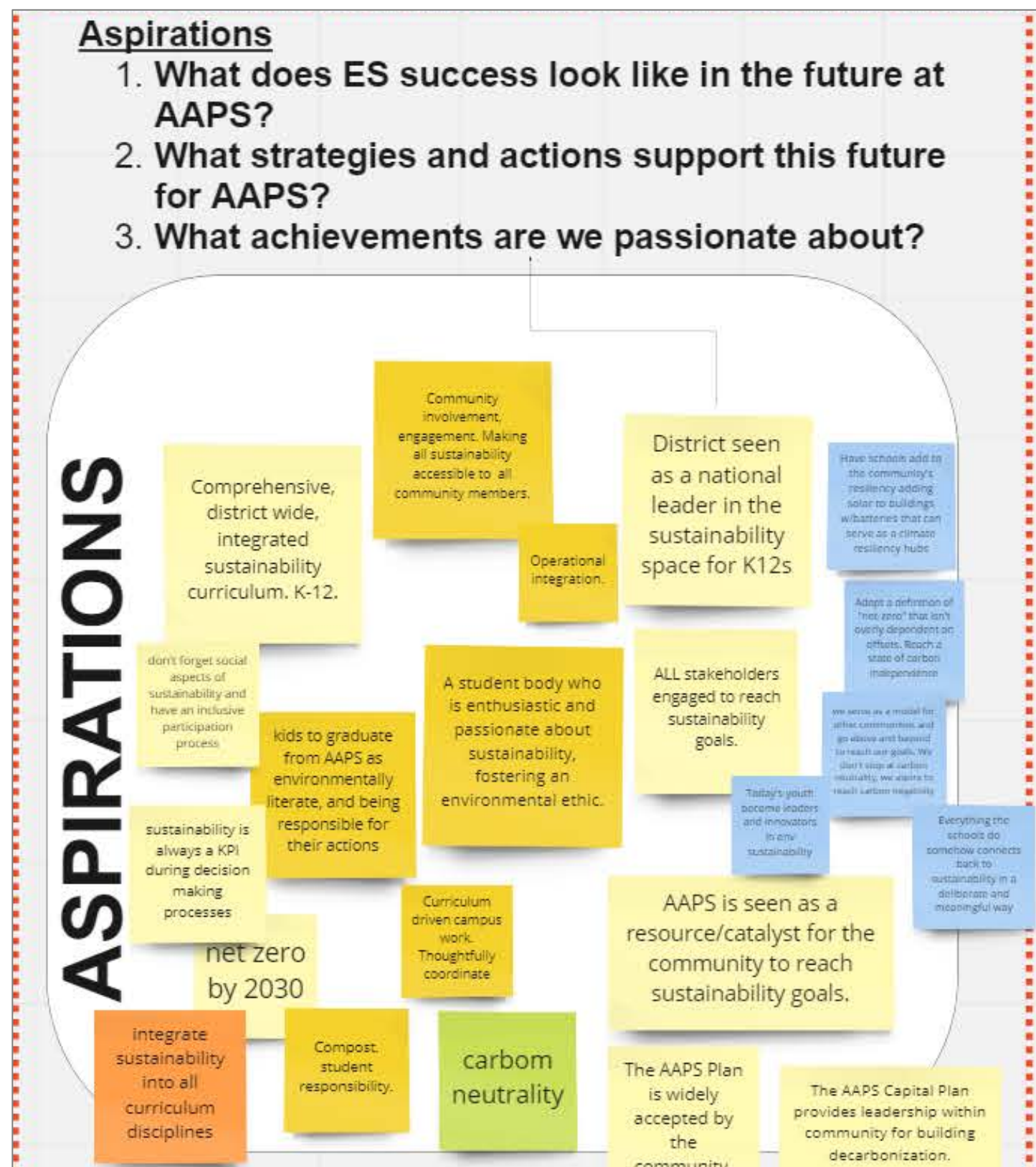
- [Frequent/Regular Reporting requirements – accountability \(5\)](#)
- Clear Metrics and Monitoring/Measurement (4)
- High performance building standards (2)

Results/Goals

- Local Alignment – City, County, State Goals (4)
- Environmental Sustainability Management Plan Adoption (becomes policy) (3)
- No Kid Hungry (2)
- “Backcasting” to develop carbon goals (2)

Environmental Sustainability Taskforce

Aspirations and Results (SWOT and SOAR Activities)



- Taskforce meeting notes

Environmental Sustainability Taskforce

Working Groups



- Taskforce meeting notes



Research on Other School Districts and Local Institutions (Appendix 3)

Baltimore City Public Schools, MD:

<https://www.baltimorecityschools.org/sites/default/files/2019-05/sustainability-sustainabilityplan-2019.pdf>

[https://go.boarddocs.com/mabe/bcpss/Board.nsf/files/CFR2VC03FFB8/\\$file/Board%20Policy%20ADG%20%20\(revised%205-24-2022\).pdf](https://go.boarddocs.com/mabe/bcpss/Board.nsf/files/CFR2VC03FFB8/$file/Board%20Policy%20ADG%20%20(revised%205-24-2022).pdf)

Boston Public Schools, MA:

<https://bostongreenschools.org/>

Berkeley Unified School District, CA:

<https://www.berkeleyschools.net/sustainability/>

Chicago Public Schools, IL:

<https://www.cps.edu/globalassets/cps-pages/initiatives/energy-and-sustainability/cps-climate-action-plan-english-.pdf>

New York City Department of Education, NY:

<https://www.schools.nyc.gov/school-life/space-and-facilities/sustainability>

Poudre Public Schools, CO:

https://www.psdschools.org/sites/default/files/PSD/facility_services/Sustainability/SustainabilityManagementPlan2017Final.pdf

Los Angeles Unified School District, CA:

<https://learninggreen.laschools.org/>

San Francisco Unified School District, CA:

<https://www.sfusd.edu/departments/sustainability#:~:text=We%20are%20working%20to%20eliminate,connect%20with%20nature%20every%20day>

St. Paul Public Schools, MN:

<https://www.spps.org/sustainability>

Seattle Public Schools, WA:

<https://www.seattleschools.org/wp-content/uploads/2021/07/sustainability-vision-goals-ADA.pdf>

City of Ann Arbor

https://www.a2gov.org/departments/sustainability/Documents/A2Zero%20Climate%20Action%20Plan%20_4.0.pdf

Washtenaw County (draft)

<https://www.resilientwashtenaw.org/>

University of Michigan

<https://planetblue.umich.edu/campus/goals/carbonneutrality/>

Research on Other School Districts and Local Institutions (Appendix 3)

Appendix C								
Survey of Other School Districts' and Local Institutions' Sustainability Plans								
School District / Organization	Carbon and Energy Goals	Waste Goals	Water Goals	Trans. + Busing Goals	Curriculum and Education Goals	Enviro. Justice Included?	Garden Program ?	Sustainable Design Guidelines?
Baltimore	NA – in development	NA – focus on implementing recycling	NA - Focus on Water Quality (Lead)	NA	Integrate sustainability in core curriculum across disciplines	Yes	Yes	Yes
Boston	Carbon Neutral by 2050	80% Diversion by 2030	NA - Focus on Water Quality (Lead)	Focus on propane buses	Some curriculum supported by the district	Yes	Yes	NA
Berkeley	NA – track and report w/ Portfolio Manager, but no goals	NA – active program but no goals	NA - Focus on Water Quality (Lead)	~25% electric (8 buses)	Teacher Leader Stipends – climate literacy goal	No	Yes	NA
Chicago	45% GHG reduction by 2030 and Carbon Neutral by 2050 (2010 baseline)	80% Diversion by 2030	Strategies, but no targets	Strategies, but no targets	Curriculum Networks	No	Yes	Yes
New York	80% GHG emissions reduction by 2050	100% Diversion by 2030	5% reduction (timeframe unclear)	100% electric by 2035 (state mandate)	School mini grants available – no mention of curriculum	Yes	Yes – goals 50% of schools	Yes
Los Angeles	50% GHG reduction by 2030	70% diversion by 2020 (2005 goal) – actual 2022 25% diversion	20% reduction by 2030	Going electric – no published targets	Climate literacy board resolution and Taskforce (2022)	Yes	Yes	Yes
San Francisco	Reduce energy use by 50% and eliminate NG by 2040 and generate 100% of the district's power by 2050	85% diversion by 2025 - LINK to metrics (city supported collection of compost)	50% water use reduction and 25% stormwater reduction by 2030	Zero emission fleet by 2030 plus solo car trip reduction goals	Climate literacy and social/environmental justice focus in science	Yes	Yes	Yes

Research on Other School Districts and Local Institutions (Appendix 3)

St. Paul	45% GHG reduction by 2030	60% diversion rate by 2020 (2015 goal – no updates available)	NA - Focus on Water Quality (Lead)	Looking to pilot electric with new federal funds	Yes, with partner orgs at some schools – environmental literacy focus	No	Yes	NA
Seattle	Carbon Positive by 2040 – 100% clean electricity by 2027	Zero waste by 2030	50% for new buildings and 30% for existing by 2040 (2020 baseline)	100% electric by 2040	Integrate sustainability in core curriculum across disciplines	Yes	Yes	Yes
City of Ann Arbor	Carbon Neutral by 2030 w/ purchased offsets as needed (projected at 13%). By 2030 100% of city buildings, 30% of single family homes and 25% of rentals will be all electric.	6,000 ton reduction (goal to move towards circular economy and update Scope 3 emissions calculations)	10% business sector reduction by 2025. No other reduction targets	By 2030, 100% of buses and 50% of all vehicles miles traveled are in electric vehicles. Also includes land-use strategies to promote walking, biking, and transit.	No explicit goal but including as intent for programs such as A2ZERO Ambassadors, home decarbonization, and green business challenge, among others	Low-income weatherization program and each of the 44 actions includes an equity evaluation	Support for stormwater retention and local food generation but no explicit mention of local gardens	Building Codes and regulations
Washtenaw County	Carbon neutral County operations by 2030, county-wide by 2035	45% diversion of waste by 2030 and 60% by 2050	No reduction targets	Electrify Light-duty Vehicles by 2030. Track and Explore Opportunities to Electrify Heavy-Duty Vehicles by 2035	NA	Low-income weatherization programs	NA	Building Codes and regulations
University of Michigan	By 2025 — eliminate emissions from purchased power (Scope 2). By 2040 — eliminate direct emissions (Scope 1). By 2025, establish goals for indirect emission. (Scope 3).	Current diversion rate: 42%. Goal - reduce waste to landfill by 40% by 2025, currently at 13% reduction from 2006 baseline.	No Stated reduction goals, included in the construction program.	Goal - 30% reduction in vehicle emissions by 2025	Significant, too detailed to summarize here	Significant, too detailed to summarize here	20% local food purchasing by 2025. Currently at 19%.	Yes
School District / Organization	Carbon and Energy Goals	Waste Goals	Water Goals	Trans. + Busing Goals	Curriculum and Education Goals	Enviro. Justice Included?	Garden Program ?	Sustainable Design Guidelines?
NA = Specific goal or initiative Not Available or published, but strategies may be included								

Organizing Structure – Environmental Sustainability Framework

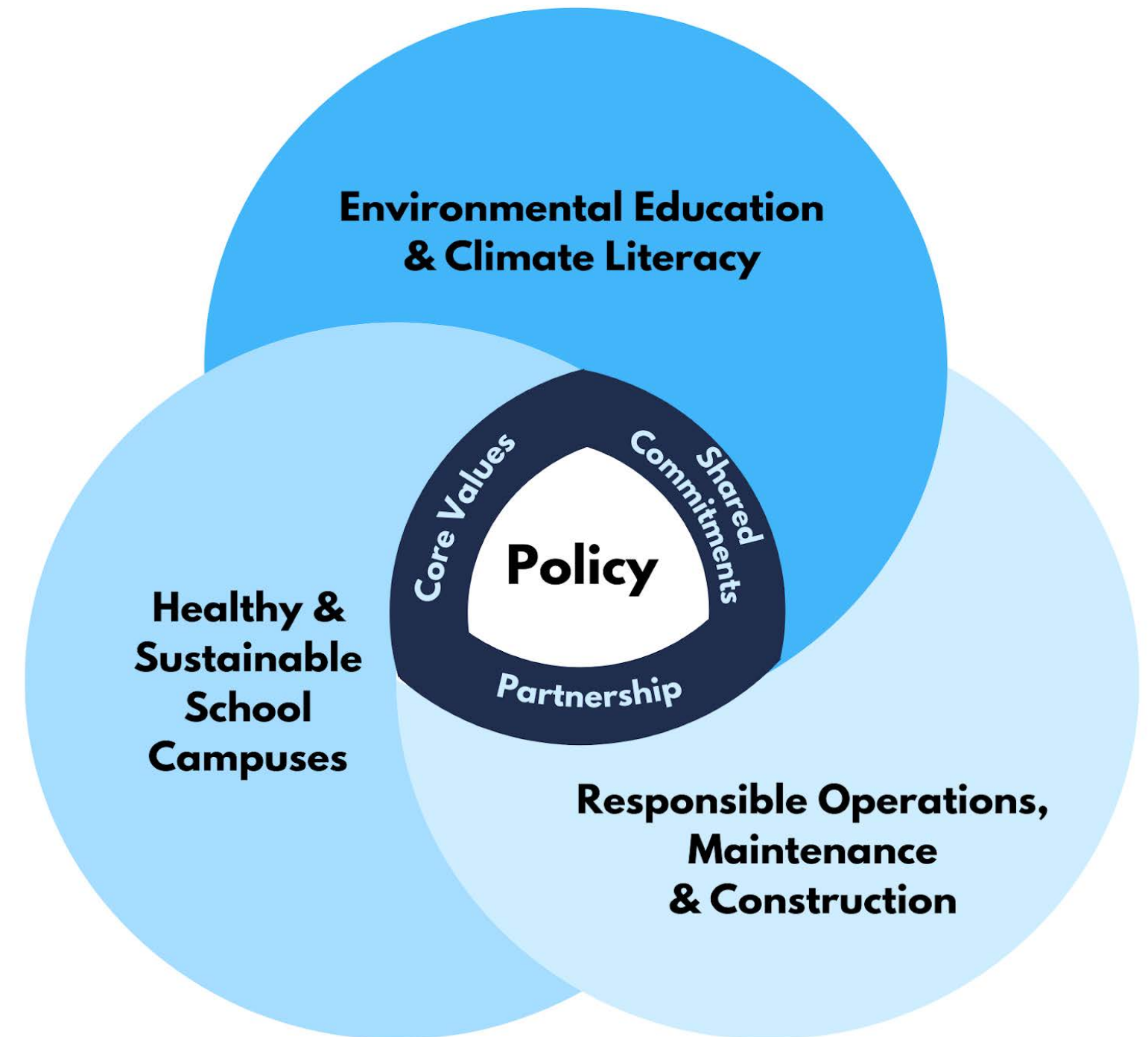
Environmental Sustainability Framework

The AAPS Environmental Sustainability Framework is organized in three sections:

- 1) **Responsible Operations, Maintenance and Construction**
- 2) **Environmental Education and Climate Literacy**
- 3) **Healthy School Campuses**

Guided by overarching policy, these three sections are connected by foundational understandings in the AAPS:

- **Core Values**
- **Shared Commitments**
- **Community Partnerships**



Core Values

1. The **climate change emergency** is real, increasing and caused by human activity
2. AAPS has a **responsibility** to act urgently as a district, on school campuses and as individuals, in response to the complex challenges of climate change through the **mitigation of harmful human activities and the promotion of human activities that restore the environment**
3. **The critical mission of AAPS is teaching and learning.** The district has a responsibility to lead and educate in our community in the development of environmental and climate literacy in our students with core academic offerings and enrichment learning opportunities to ensure our community is prepared for an uncertain climate change future
4. AAPS will continue to **enhance and support healthy and sustainable school campuses** by improving air quality, water quality, sustainable food systems, sustainable sites and grounds, waste management and building renovation and construction projects
5. AAPS recognizes that the **negative impacts of environmental degradation and climate change disproportionately impact marginalized and vulnerable populations** and will continue to implement strategies to address these historic inequities

Shared Commitments

AAPS affirms support for the following shared personal and organizational commitments:

- *Reduce the use of disposable plastics, recycle at school and compost whenever possible*
- *Be conscious of food waste*
- *Never litter*
- *Be mindful of energy waste including turning off lights and other devices when not in use*
- *Walk, bike and take public transportation when possible*
- *Conserve water*
- *Be respectful of the outdoor environment*



- United Nations Sustainable Development Goals (SDG)

Community Partnerships

The Ann Arbor Public Schools (AAPS) serves a central role in the education of generations of students in our community. As the Ann Arbor community faces the opportunities and challenges of the climate crisis, AAPS fully embraces its responsibility in the community and joins our many partners in working towards shared environmental sustainability goals.



It is the next generation - in our schools today - that will face the increasing impacts of climate change. By empowering them with a climate informed education, AAPS will help create the foundation for their success, and ultimately the success of our community, in rising to meet an uncertain climate change future.

11 Areas for Action – Environmental Sustainability Framework

Areas for Action

The three Sections are further subdivided into 11 Areas of Action, including:

Responsible Operations, Maintenance and Construction

- Energy (four subsections)
- Water (three subsections)
- Waste
- Transportation
- Scope 3 Indirect Emissions
- New Construction and Renovation

Environmental Education and Climate Literacy

- Core Academics (three subsections)
- Enrichment Learning (two sub-sections)

Healthy & Sustainable School Campuses

- Indoor Environments
- Outdoor Environments
- Food Systems

11 Areas for Action – Environmental Sustainability Framework

Each of the 11 areas for action and subsections is further detailed in the following categories:

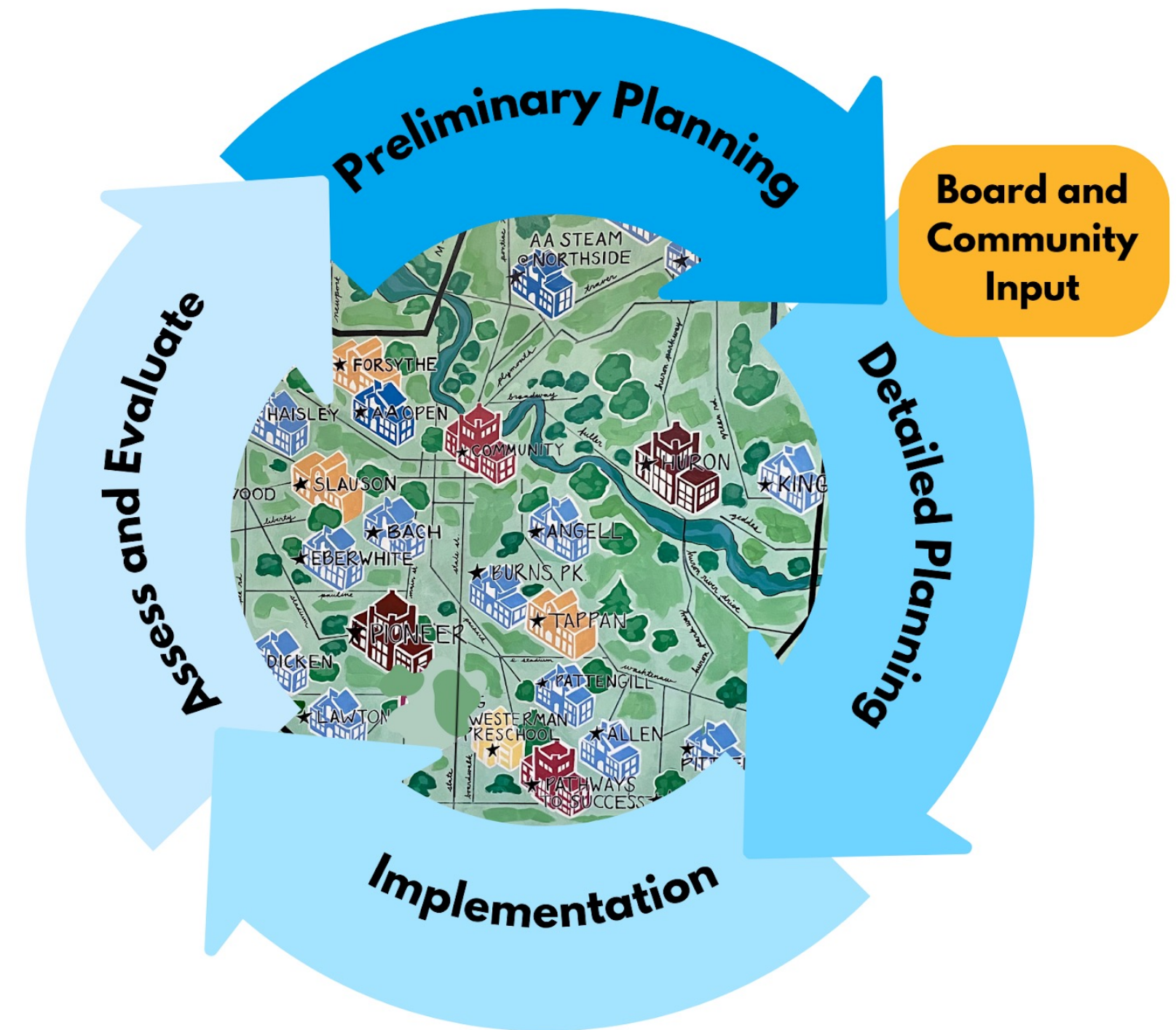
- **Progress**
- **Opportunities and Challenges**
- **Next Steps**
- **Reporting and Metrics**
- **Responsible Departments**
- **Collaborators**

<i>Progress:</i> What work has been completed or is ongoing in this area?	<i>Opportunities and Challenges:</i> What are the opportunities for additional progress, and what are the constraints?	<i>Next Steps:</i> What will we do next, including baseline assessments, planning, target setting and action?
<i>Reporting and Metrics:</i> How do we know we are making progress and how do we update our community?	<i>Responsible Department(s):</i> Which department(s) at AAPS are responsible for this area, and which departments will need to support the work?	<i>Collaborators:</i> Who else can help, such as students, staff, local institutions, non-profits, community groups, etc.?

Next Steps Process – Environmental Sustainability Framework

Next Steps Process

AAPS will use an iterative process in the implementation of initiatives in each of the 11 Areas for Action. It is important to start the work now, but also plan for adjustments over time, informed by input from the Board of Education, students, staff, and community.



Immediate Actions – Environmental Sustainability Framework

- **Styrofoam - Eliminate the use of Styrofoam in cafeterias**

Beginning in January 2023, the AAPS will eliminate the use of Styrofoam lunch trays at all elementary schools; and complete the elimination of all Styrofoam materials in cafeteria/food and nutrition services across all locations in the AAPS by the start of the 2023/24 school year.

- **Composting - Implement Composting beginning with a Composting Pilot**

AAPS will pilot full cafeteria composting at three elementary schools during the 2023-2024 school year. The pilot will allow for the gathering of information regarding the educational, staff, and financial resources needed to expand the program across the district. During spring 2024, a plan will be brought forward to continue the implementation of composting district-wide.

- **School Gardens - Expand to ensure active neighborhood school gardens at all elementary/P8 campuses**

AAPS will conduct an evaluation of existing school gardens at AAPS elementary/P8 campuses to better understand existing conditions including garden locations, access to water, appropriate tool storage locations, teacher and volunteer support, curriculum connection, and other features. A plan will be developed to ensure all AAPS elementary/P8 have active school gardens with needed supports to ensure long-term viability and the enhancement of a culture of belonging at the AAPS through hands-on active learning.

- **Outdoor Learning - Outdoor Learning Evaluation and Plan for Continued Enhancements**

In the spring of 2023 and fall of 2024, the AAPS will conduct an inventory and evaluation of all outdoor learning environments at AAPS campuses to inform enhancements to formal and informal outdoor learning opportunities and sustainable land management practices. The evaluation process will include natural areas and trails, opportunities for tree plantings, expansion of no-mow practices, quantifying carbon sequestration, and others.



Immediate Actions – Environmental Sustainability Framework

- **Environmental Sustainability Teacher Champions**

AAPS will invite Teacher Champions to serve as leaders in their schools to ensure the building of organizational capacity for environmental sustainability work across the district at every school campus. Teacher Champions will lead and mobilize support for school-based sustainability efforts and enable the work of student Green Teams at each AAPS campus.

- **School Sustainability Mini-Grants**

In partnership with the City of Ann Arbor, Office of Sustainability and Innovations, applications will be available in January 2023 for mini-grants to implement sustainability projects at schools during spring 2023 and the 2023-2024 school year.

- **Aligned Curriculum - Ensure an Aligned Learning Experience and Environmental Sustainability Curricula P-12**

Beginning with the 2023-2024 school year, a comprehensive curriculum mapping process will be initiated, including an analysis of existing environmental sustainability lessons and curricula across all disciplines. The information gathered will inform a strategic planning process to map current environmental sustainability curricula and to clarify, align and strengthen environmental education and climate literacy in the AAPS.

- **Environmental Sustainability Advisory Committee**

As the Environmental Sustainability Framework moves from planning to implementation, an Environmental Sustainability Advisory Committee will be formed in keeping with Board Policy 2420: Parent, Students and Community Advisory Committees.

From Policy 2420: The Board recognizes that the district benefits from parent, student and community participation on advisory committees to help build strong relationships, shape understanding and provide an additional avenue for input and feedback on the operations and improvement of the district.

Individuals representing local institutions, nonprofits and the business community will be encouraged to apply. Meetings are expected to occur quarterly and serve to strengthen the implementation of the Environmental Sustainability Framework, deepening connections and action through community partnerships.



Environmental Sustainability Framework

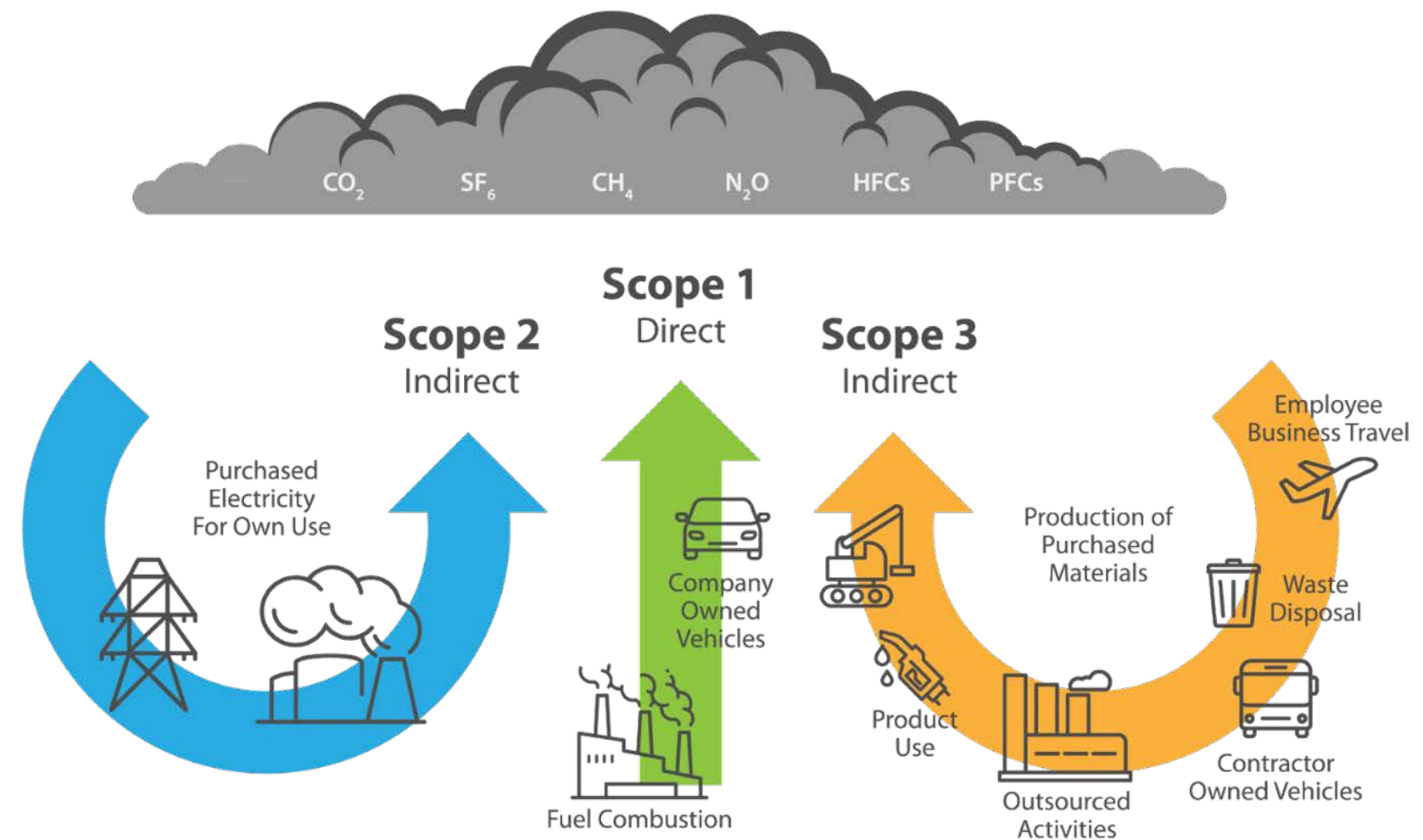
Greenhouse Gas Emissions (GHG) - Overview

AAPS accounts for less than 1% of our community's greenhouse gas (GHG) emissions. Though this is a small amount of the total emissions in Washtenaw County, the district is committed to doing what it can to be part of a carbon-neutral future.

AAPS Environmental Sustainability Framework includes important steps to reduce the district's GHG footprint. These actions are organized based on the three scopes of emissions utilized by the [Intergovernmental Panel on Climate Change](#) (IPCC) of the United Nations, major corporations, countries, and municipalities worldwide, including in the United States.

[The IPCC defines](#) Scope 1, 2 and 3 emissions as:

‘Scope 1’ indicates direct greenhouse gas (GHG) emissions that are from sources owned or controlled by the reporting entity. ‘Scope 2’ indicates indirect GHG emissions associated with the production of electricity, heat, or steam purchased by the reporting entity. ‘Scope 3’ indicates all other indirect emissions, i.e., emissions associated with the extraction and production of purchased materials, fuels, and services, including transport in vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc. (WBCSD and WRI, 2004).



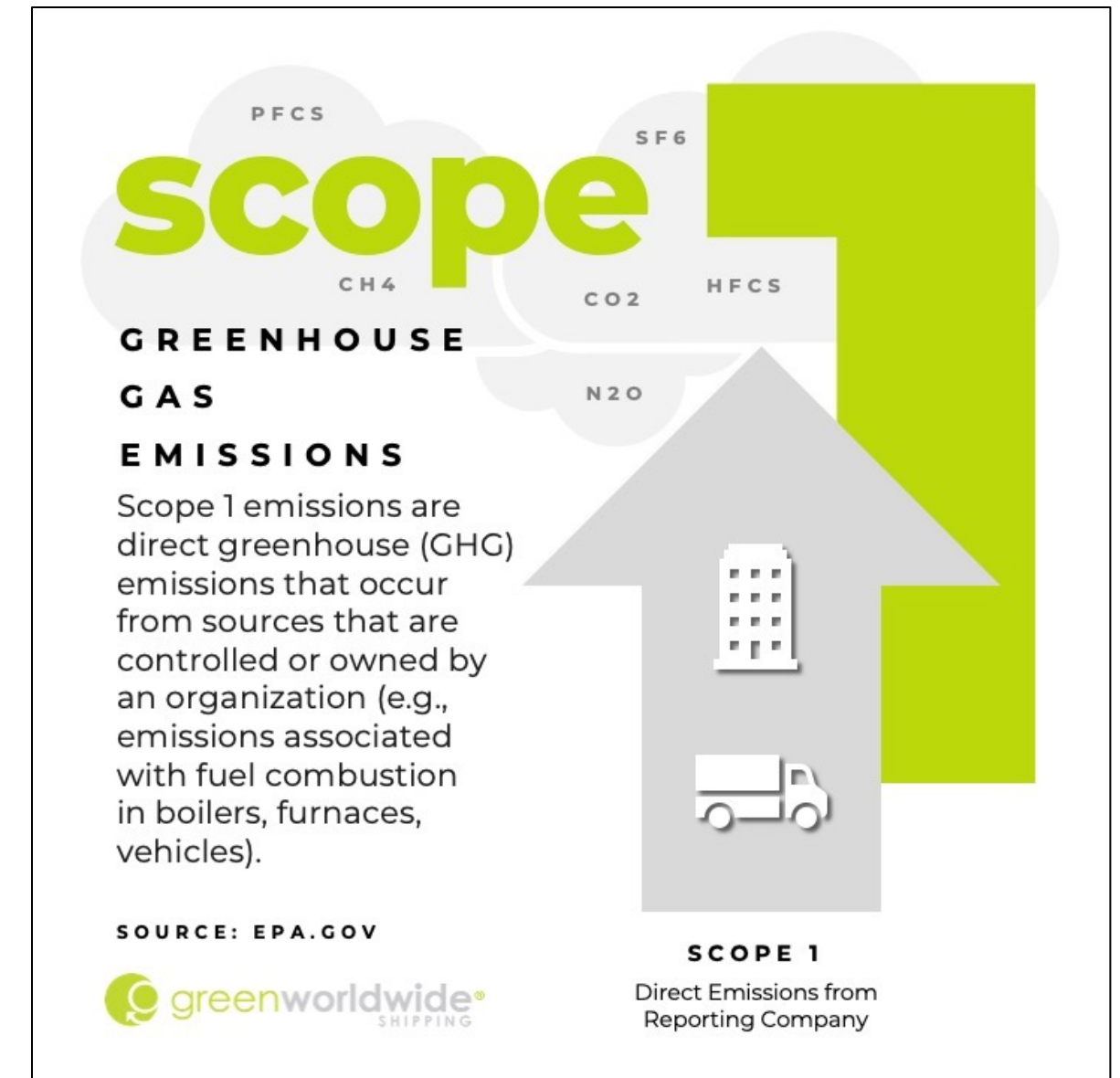
Environmental Sustainability Framework

Scope 1 GHG Emissions

- Scope 1 emissions are atmospheric GHG emissions directly generated by AAPS.
- The majority of Scope 1 emissions at AAPS come from the burning of natural gas for space and water heating, as well as diesel and unleaded gasoline for buses and fleet vehicles.
- A plan to outline, detail and confirm interim targets will be developed. Electrification of buildings and vehicles will be central elements of the plan.

GOAL:

The AAPS will eliminate Scope 1 emissions by 2035.



Environmental Sustainability Framework

Scope 2 GHG Emissions

Scope 2 emissions are atmospheric GHG emissions attributed to purchased utilities.

At AAPS, these are the emissions associated with purchased grid electricity. Currently AAPS uses approximately 30,000 megawatt hours of electricity annually. By combining on-site solar production, the Michigan Renewable Portfolio Standard, and utility-scale renewable energy from DTE Energy, AAPS will eliminate Scope 2 emissions by 2024.

- In the last three years, AAPS has been installing 8 large rooftop solar arrays that when fully operational in 2023, will generate approximately 6% of the District's electricity, or 1800 megawatt hours annually.
- In addition, the State of Michigan's Renewable Portfolio Standard (RPS) required all utilities to provide 15% of their electricity from renewable sources by 2021. This accounts for 4500 megawatt hours annually at AAPS.
- To quickly secure an additional 80% Scope 2 emissions reduction, AAPS entered a 20-year contract with DTE Energy and the MIGreen Power program to supply 24,000 megawatt hours annually to AAPS from newly constructed utility-scale wind and solar projects built in Michigan by 2024.

GOAL:
The AAPS will eliminate Scope 2 emissions by 2024.



Environmental Sustainability Framework

Scope 3 GHG Emissions

Scope 3 emissions are atmospheric GHG emissions attributed to a wide range of other activities, including purchased goods and services, construction materials, waste, commuting and financial investments. For many institutions and businesses, Scope 3 emissions are the largest of the three scopes of GHG emissions.

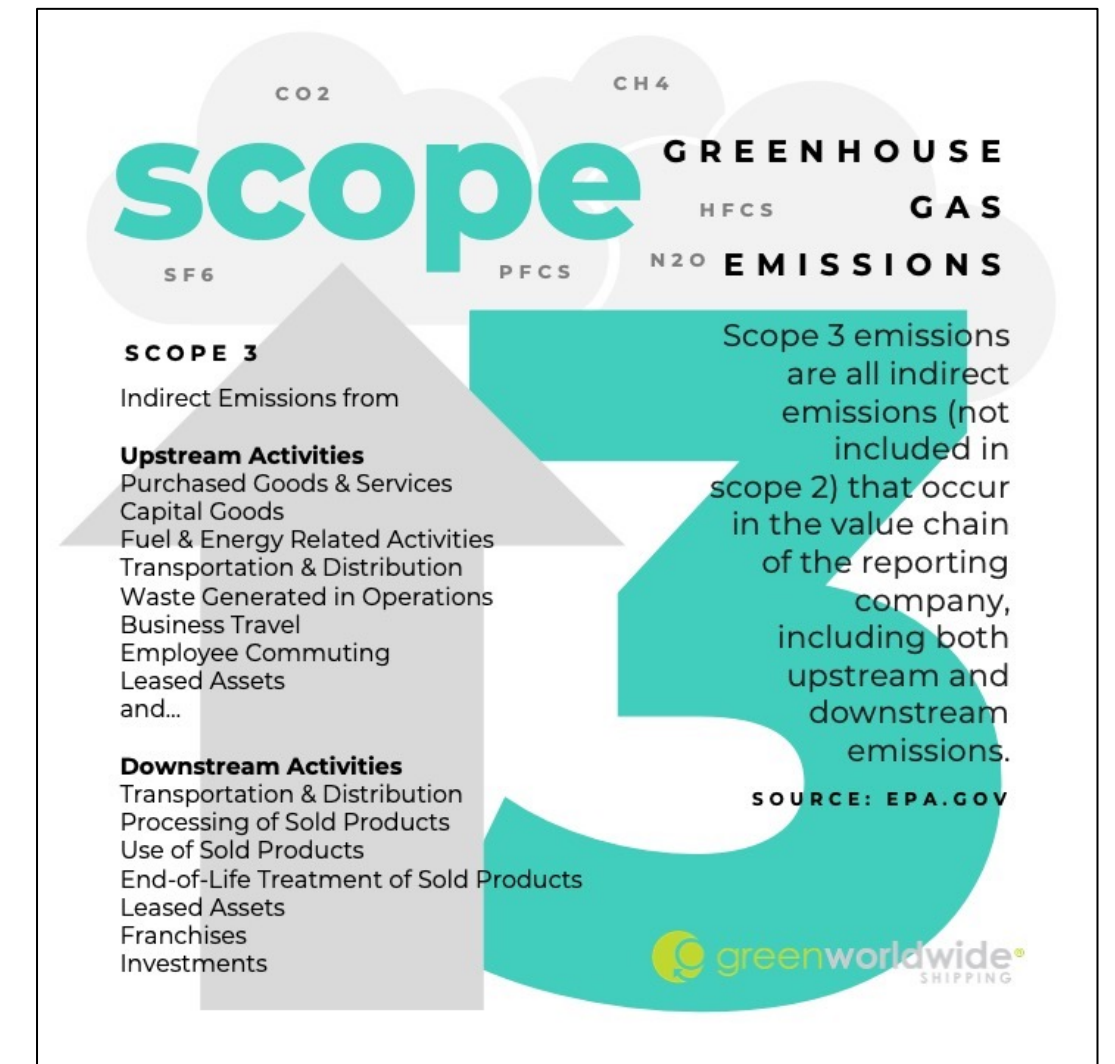
At AAPS, many of the Scope 3 emissions are associated with purchased items such as laptops and other technology, books, paper, construction materials and other supplies - as well as contracted services such as lawn maintenance and snow removal, custodial and food services and other services.

Measuring Scope 3 emissions is challenging and requires an accounting of both Upstream carbon emissions (mining, logging, manufacturing, packaging, transportation, etc.) and Downstream carbon emissions (product use, disposal, etc.).

While the global community is developing methods for calculating and reporting Scope 3 emissions, it is impossible at this time to accurately calculate the District's Scope 3 emissions for all areas.

Community partnerships will be critical in reducing Scope 3 emissions as many of the solutions are beyond the District's control and will require transforming the marketplace for goods and services to carbon neutrality. This effort will require creative strategies working at scale across our city, county, region, nation and world.

AAPS will continue to collaborate with local partner institutions to better measure, track and reduce Scope 3 emissions.



GOAL:

In the 2023-2024 school year, develop purchasing and construction guidelines that reflect the district's commitments to reducing Scope 3 emissions and begin piloting the new guidelines in 2024.

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1.12 On-Site Renewable Electricity Generation

1.13 On-Site Natural Gas Combustion

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1.2 Water

1.21 Water Quality

1.22 Water Conservation

1.23 Stormwater Management

1.3 Waste Reduction, Reuse, Recycling, and Composting

1.4 Transportation

1.5 Scope 3 Emissions

1.6 New Construction and Renovation

2) Environmental Education and Climate Literacy

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2.11 Environmental Sustainability Curriculum

2.12 Social and Environmental Justice

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2.2 Enrichment Learning

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3) Healthy & Sustainable School Campuses

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3.2 Outdoor Environment

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ANN ARBOR PUBLIC SCHOOLS
LEAD. CARE. INSPIRE.



Ann Arbor Public Schools Environmental Sustainability Framework

November 30, 2022



Environmental Sustainability Framework – Public Feedback

To view entire AAPS Environmental Sustainability (ES) Framework,
Please follow this link:

<http://go.boarddocs.com/mi/aaps/Board.nsf/goto?open&id=CLDPHZ64143C>

To inform and strengthen the AAPS ES Framework, the District will receive feedback from our community from November 30th – December 11th via the online tool ThoughtExchange.

To provide comments and feedback on the AAPS ES Framework, please follow this link to join the conversation on ThoughtExchange:

<https://tejoin.com/scroll/349197746>





Ann Arbor Public Schools Environmental Sustainability Framework

Report to the Board of Education
November 30, 2022

Emile Lauzzana
Executive Director, Environmental Sustainability

