HELIX CHARTER HIGH SCHOOL

SUSTAINABILITY ACTION PLAN

A Greener Helix

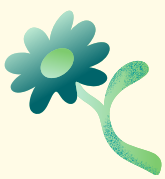
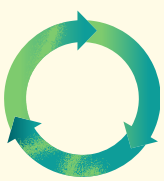
The Helix Sustainability Action Plan, directed by Board Resolution 2023-06 Sustainability, charts a course toward a healthier, greener learning environment and a more sustainable campus. It goes beyond simply minimizing our environmental impact; we aim to improve environmental health for all while also simultaneously increasing the rate of environmentally literate Helix graduates.

Embracing a whole school approach to sustainability is at the heart of this plan. This means integrating sustainable practices into everything we do, from curriculum to waste management and building operations. We believe that by creating a truly green learning environment, we can reduce not only our footprint but also empower our students to become responsible stewards of the Earth.

We invite you, the Helix community, to join us on this journey. By working together, we can create a vibrant, sustainable campus that creates healthier learning environments and empowers our students to become responsible stewards. This is an invitation to build a legacy of sustainable learning and operations at Helix.

A Greener Helix is a campus that refines **how we operate**, **how we teach and learn**, **how we power**, and **how we build**.

The Sustainability Action Plan is broken down into four sections:

I. Student Office of Sustainability (SOS)	II. Key Priorities & Emissions Inventory	III. SOS Team Recommendations	IV. Next Steps
			

I. Student Office of Sustainability

Leadership	Mindfulness	Community

Who We Are

The Student Office of Sustainability is committed to education, cooperation, and advocacy for sustainable changes within the Helix community. We are made up of smaller, student-led, committees who are dedicated to implementing and improving sustainability measures to create a greener school. Our objective is to elevate our campus to a standard of ecological alertness while simultaneously advancing environmental leadership among staff and students. We aim to refine our school's environmental policies, minimize our environmental footprint, and implement long-lasting solutions to ongoing environmental issues.

The Student Office of Sustainability is composed of the following teams:

Food & Compost Grace Ian	**Energy & Water Reduction** Serrayne Haley	**Media & Marketing** Mia Shawntel
Waste & Recycling Dasmine, Kyra, Kalani	**Urban Greening** Mustafa Lendia	**Green Classroom Operations** Daniel Sorren
Transportation Citrus Shukri	**Team Coordinator** Norah	**Faculty Support** Kevin Myron Christina Potter

What We Do

The **Student Office of Sustainability (SOS)** plays a central role in shaping this vision. This year we actively gathered data on campus, consulted local experts, and identified recommendations to improve Helix. We are gaining valuable green workforce experience and igniting a lifelong commitment to our planet. SOS will continue to be critical to carrying out this action plan while complementing Helix's mission of ensuring our graduates are college and career-ready for the emerging green jobs field.

II. Key Priorities & Emission Inventory

Helix has an opportunity to join leaders of the green schools movement, integrating environmental impacts, health, and learning into its campus vision. Further, Helix has the responsibility to leverage campus resources to mitigate its impact on the environment while creating healthier, greener learning environments across campus. This action plan lays out the key priorities in four areas: how we operate, how we teach and learn, how we power, and how we build.

Key Priorities

Helix Charter High School will pursue the following recommendations below as feasible (*first focus areas):

How we operate

- ***Indoor Air Quality (IAQ)**: join Healthy Green Schools & Colleges program & pursue facility certification; comprehensive IAQ management plan.
- ***Waste**: reduce waste generation and increase landfill diversion by standardizing access and signage for recycling, and campus organics; annual waste audits.
- **Food**: low-impact food distribution; apply for CA Farm to School Incubator Grant.
- **Transportation**: comply with AB 1346 for all new small equipment and off-road engines to be electric only; install level 2 EV chargers in staff parking lot
- ***Energy**: campus-wide energy reduction signage and expectations for staff; smart thermostats in portables; site energy reduction plan (see page 9)
- **Water**: water flow submeters; smart irrigation system controls; inventory usage of WaterSense products across campus.

How we teach and learn

- ***Environmental Literacy:** Increase courses with CA Environmental Principles & Concepts (EP&Cs) through pathway, add "Healthy Person & Environment" Student Learner Outcome
- **Engagement:** offer Sustainability Leadership course to support implementation and build green workforce skills; join yearly Renew Our Schools Energy Reduction Competition.
- **Training:** standardize campus orientations for students and new staff to include sustainability practices expected on our campus, offer Green Classroom Professional Certificate training, carpool and alternative fuel car incentives.
- ***Living Green Schoolyard/Greenhouse:** outdoor learning space for urban agricultural, sustainable practices, and nutrition education (pursue CA Farm to School Incubator Grant, award floor $200,000).

How we power

- ***Renewable Energy**: opt-up to Power100 with San Diego Community Power for 100% electricity through renewable energy credits on campus; publicize renewable electricity usage by campus with supporting data on emissions reductions.
- **Energy Reduction:** Bright Schools energy audit grant to identify reduction projects through CA Energy Commission (up to $20,000 grant); install real-time energy tracking devices; track and report usage

How we build

- **New Buildings**: draft board policy to require new campus buildings and retrofits to meet minimum California High-Performance Standards (CHPS) Criteria and future landscaping to incorporate native vegetation and xeriscaping practices.
- **Portable Classrooms**: Update spaces to meet green building criteria (natural lighting, air quality, temperature stable, etc.) to improve both health and learning outcomes.
- **Heating**: At the end of operational life, replace existing mechanical heating systems, natural gas-powered water heaters and other equipment with all-electric systems.

Inspired by Harvard's Sustainability Action Plan and the U.S. Department of Education Framework for a Sustainable School

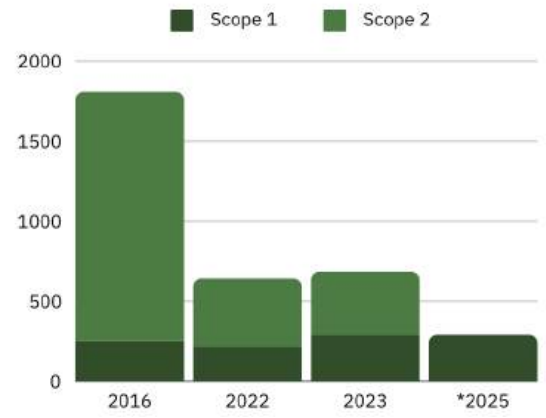
Emission Inventory & Campus Data

The campus data compiled below served as the basis for the plan's key priorities. Campus utility analysis and the graphics below were completed using Energy Star Portfolio Manager and Maalka from the Green Schools

Alliance. Additional data is listed within section III of SOS Team Recommendations.

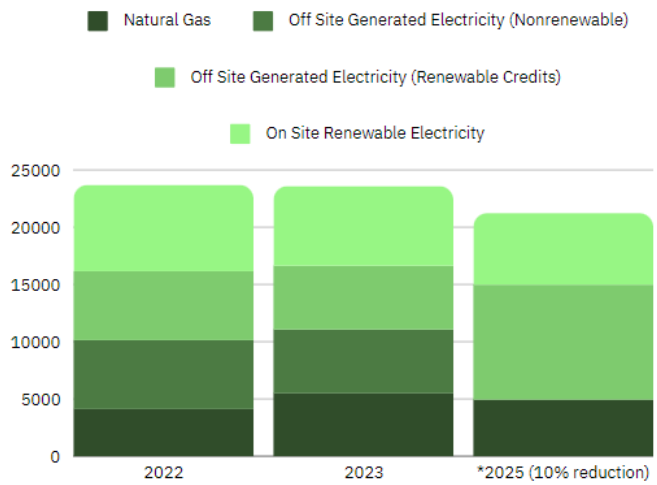
How We Power

Emissions in Metric Tons of CO2e (MTCO2e)



Scope 1: *natural gas usage on site*
Scope 2: *off-site electricity generation and usage*

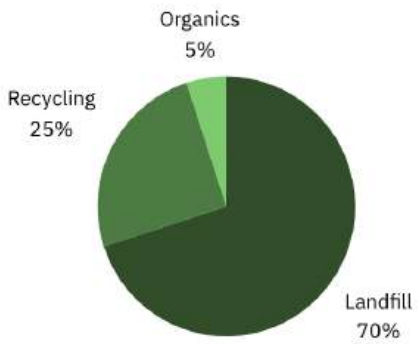
Site Energy Consumption in MBtu



**Opportunity to Reduce Scope 2 Emissions for 2025:* Helix can opt-up to Power100, from our current PowerOn (50%), for 100% renewable and carbon-free electricity credits through San Diego Community Power (SDCP)
Estimated Cost Difference PowerOn to Power100: Increase of $0.01/kWh (estimated increase in cost is $5,000/annually if energy consumption maintains); With our 10% site energy reduction plan (see Energy & Water Reduction on page 9), this cost would be negated.
Become a Power100 Champion: Gain publicity & co-branding with San Diego Community Power! Only one other school in San Diego County is at Power100, and SDUSD committed to Power100 by 2025 for all campuses

How We Operate

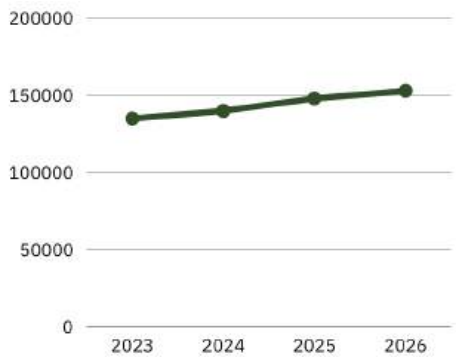
Current Helix Waste Disposal by Management



Estimated Helix Waste Generation Per Month*: 7 Metric Tons*

CA CalRecycle determined the top 3 waste categories schools generate to be 50% organics, 31% paper, & 12% plastics.

Projected Annual Water Cost in dollars



Baseline 2023 usage of 1043 units (155,000,000 gallons) *used to calculate projected cost based on proposed Helix Water District proposed charges. Let's reduce usage to reduce cost!*

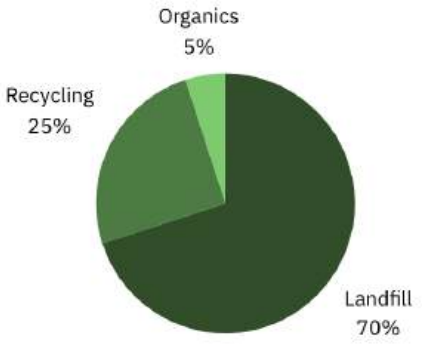
III. SOS Team Recommendations

The Student Office of Sustainability completed an action-research cycle focused on how Helix could improve its sustainability efforts across 6 key areas. Each team, composed of 2-3 students, shares why that area is critical to improving campus sustainability, data collected, key findings, and recommendations. Cost is estimated from $ (no cost-$500), $$ ($500-$5,000), and $$$ ($5,000+). Please find the detailed action plan below.

Key Areas of Sustainability	**Who's Responsible**
• Waste & Recycling • Food & Compost • Energy & Water Reduction • Urban Greening • Green Classroom & Office Operations • Transportation	• Sustainability Coordinator (SC) • Student Office of Sustainability (SOS) • School Facilities (SF) • Administration (ADMIN)

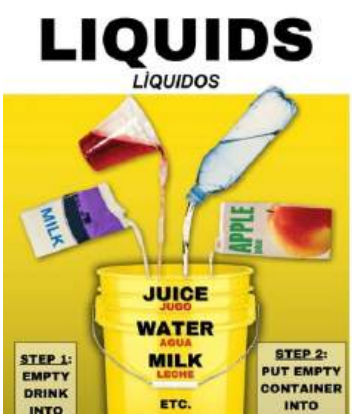
Waste & Recycling

Properly regulated waste and recycling systems are key factors in keeping our campus clean and sustainable. Many students are unsure how to proceed when introduced to topics such as reducing the excessive amount of waste they produce daily. We plan to educate and create an effective recycling system through curating activities for student engagement, workshops, and educational videos to help reshape evolving mindsets. By introducing consistent, campus waste disposal expectations, we will reduce improperly disposed waste on campus. In addition to reducing excessive amounts of waste, we will provide the foundational habits that will ensure Helix graduates do their part in reducing waste within their current and future communities.

Current Helix Waste Disposal by Management	By The Numbers
 ***Estimated Helix Waste Generation Per Month**: 7 Metric Tons* *CA CalRecycle determined the top 3 waste categories schools generate to be 50% organics, 31% paper, & 12% plastics.*	**Current Waste Receptables:** ● ***3 CUBIC YARD DUMPSTERS:** 5 landfill, 2 recycling, 1 organics* ● ***OUTDOORS**: 71 trash cans, 14 recycling cans, 7 organics cans* ● ***CLASSROOMS**: All classrooms but 4 contain recycling bins (55 classrooms sampled)*

GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How We Operate	Conduct annual waste audits with integrated team of students, facilities staff, campus partners, and community members to track campus waste diversion efforts	n/a	1 year	SF/SC/SOS
	Conduct training with facilities personnel to ensure proper disposal of waste and recycling is occurring campus wide; support identification of ways to improve campus processes	n/a	6 months	SF/SC
	Right-size EDCO waste dumpsters (reduce size or number of dumpsters), ensure all boxes are broken down prior to placement in dumpster	$	1 year	SF
	Establish 1:1 ratio of landfill and recycling cans across campus; ensure all landfill bins are placed next to recycling with proper signage	$	6 months	SF
How We Teach/Learn	Standardize campus orientations for staff (Helix Induction Program) and students (Scottie Pride Day/Helix First/Advisory) to educate on expected sustainable waste practices on campus	n/a	1 year	SC
How We Build	Invest in multi-bin waste storage structures campus wide that include landfill, recycling, and organics waste to increase access to bins	$$$	1 years	SF

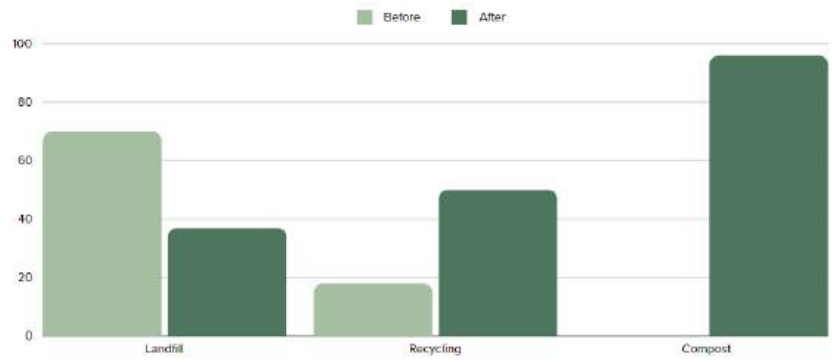
Food & Compost



The Food Waste and Composting team plays a pivotal role in advancing sustainability on our campus. Our mission is to monitor and mitigate food waste, reducing landfill contributions and associated greenhouse gas emissions. Currently, a significant portion of our waste is destined for landfills, posing environmental risks. To combat this, we supported I Love A Clean San Diego's implementation of waste sorting stations across campus. This not only minimizes landfill-bound waste but also offers potential financial benefits by reducing dumpster usage and waste collection frequency. Our main challenge lies in ensuring all students and staff understand and participate in proper waste sorting. We aim to address this through educational initiatives, interactive activities, and clear labeling at waste disposal stations.

Average Percent Accuracy in Waste Bins

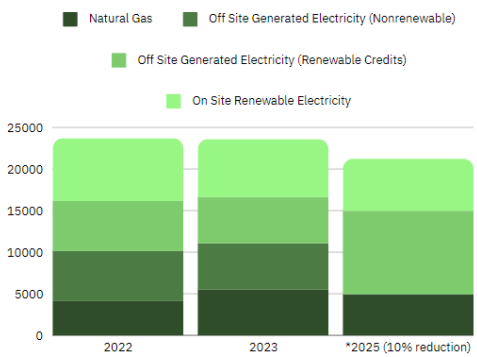
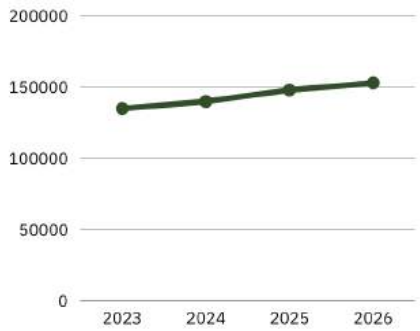
SOS conducted a waste audit before and after the implementation of the 7 waste sorting stations on campus by sampling two of the waste stations. An increase in accuracy was observed for recycling and compost bins but not landfill.



GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How We Operate	Conduct annual food waste audits with integrated teams of students, facilities staff, cafeteria staff, and community members to track food waste reduction efforts	n/a	1 year	SF/SC/SOS
	Implement compost bins in bathrooms across campus to divert the amount of waste going towards landfills.	$	6 months	SF/SOS
	Pursue CA Farm to School Grant focused on increasing local, sustainable agriculture procurement	n/a	1 year	SC/ADMIN
	Coordinate with cafeteria manager and GUHSD to increase vegetarian/vegan options and meatless Monday food offerings	$	1 year	SC
	Integrate uneaten food from the cafeteria into the food's class/diverting extra meals to shelters at the end of the week	n/a	1 year	SOS/ADMIN
How We Teach/Learn	Increase hands-on learning opportunities in urban agriculture and life sciences and engage knowledgeable community members.	$$$	2 years	SC
	Conduct training with facilities personnel to ensure organic waste separation is occurring campus-wide and in the new cafeteria	n/a	6 months	SF/SCOS
How We Build	Build outdoor learning greenhouse (funding through CA Farm to School Grant)	$$$	2 years	SF

Energy & Water Reduction

Maintaining water conservation and becoming more energy efficient at Helix is crucial for the sustainability of our campus. Our current water and energy consumption levels are unsatisfactory and can be addressed with practical and cost-effective solutions. Helix has already begun the first few steps towards a more environmentally friendly campus with dozens of solar panels and energy-efficient lighting; but that is only the beginning. Implementing the proposed strategies will aid Helix in striving towards a more sustainable campus by further educating our community and seeking more effective actions. Emphasizing energy and water reduction to meet the triple bottom line, which encompasses social, environmental, and financial aspects, will bolster sustainability efforts and enable the campus to recover significant funds through energy conservation.

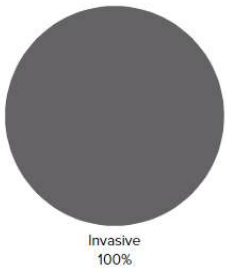
Site Energy Consumption in MBtu	Projected Annual Water Cost in dollars
	
2025 Goal: *Reduce campus site energy consumption by 10% through the recommendations below, saving an estimated ~$10,000 to the campus.*	***Baseline 2023 usage of 1043 units (155,000,000 gallons)*** *used to calculate projected cost based on proposed Helix Water District proposed charges. Let's reduce usage to reduce cost!*

GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How We Operate	All HVAC systems shall be turned off during break periods and campus is instructed to unplug all devices within classroom spaces (exclusions apply)	none	immediate	SF
	Install real-time tracking electricity monitoring devices (eGauge) allowing enrollment to Renew Our Schools	$$$	6 months	SF
	Facility/faculty expectation that all doors and windows remain closed during HVAC operation (exclusions apply)	none	immediate	SF/ADMIN
	Installation of variable frequency device on pool pump (reduce full load operation, reduce maintenance, reduce energy consumption)	$$$	1 year	SF
	Portable classroom smart thermostats connected to building management software (or other software) to ensure HVAC operation doesn't occur when unoccupied	$$	6 months	SF
	Standardize temperature settings campus wide at 66-70 for heating and 72-76 for cooling	none	immediate	SF
	Installation of smart water usage technology (smart irrigation controllers, water flowmeters) and audit usage of Water Sense appliances across campus (i.e. sprinklers, faucets)	$$	1 year	SF/SOS
How We Teach/Learn	Participate in yearly Renew Our Schools Energy Reduction Campaign (school vs. school nationwide competition to reduce energy consumption)	$	6 months	SC
	Educate teachers on benefits of dynamic lighting, increased natural lighting, and connections to triple bottom line through professional learning opportunities: summer institute, Green Classroom Professional training, student-led recorded trainings	$	1 year	SOS/SC
How We Power	Opt-up to Power100, from our current PowerOn (50%), for 100% renewable and carbon-free electricity credits through San Diego Community Power (SDCP)	$$	6 months	SF/ADMIN

Urban Greening

Helix's Urban Greening team is focused on planting practices. Our flora connects us to the surrounding environment, making it a critical consideration in our mission to become an environmentally friendly school. Urban Greening has developed favorable alternatives as potential replacements through analysis of present plants and trees. It will push regulation of future plantings to solely include native plants, with exceptions for sports fields, etc. Using this regulation method, Helix will gradually transform into a school that is integrated with

La Mesa's nature rather than trampling on it. Additionally, Urban Greening has recommended the institutional acceptance of a 2nd browsing option to Google: Ecosia. Functionally and aesthetically identical to Google, Ecosia plants a tree for ~40 searches done. Resulting in a potential 48,000 trees planted annually, if all students were to adopt the browser (numbers provided by Ecosia). It has been adopted by multiple American and European universities and hospitals, and Mr. Brian Kick has approved its technology for its use in Helix's system.

Percent of Non-Native Plants Cultivated at Helix	Common Non-Native Plants Identified
	• Indian Hawthorn • Redclaws • Chinese Elm • Star Jasmine • Knife-leaf

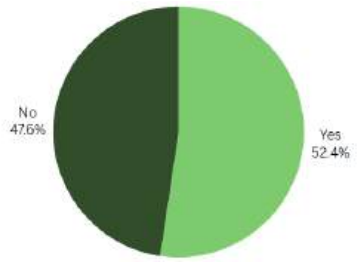
GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How we operate	Draft and institute facility/board policy of aesthetic plantings to only include local native varieties.	$$	1 year	SF
How we build	Draw on landscaper knowledge of native plants, to properly select varieties. Potentially, pursing Xeriscaping (drought tolerant planting practices).	$$	Indefinitely	SF
How we teach/learn	Annually collaborate with students in art/digital art classes to design posters, describing planted native varieties and the benefits of Xeriscaping.	$	Indefinitely	SF/SC

Green Classroom & Office Operations

Establishing sustainable and environmentally conscious classrooms and faculty offices at Helix is necessary for developing a conducive working and learning atmosphere while positioning our institution as a community leader in addressing the climate change crisis. Helix's current work-spaces lack the necessary regulations, leading to substantial waste production and heightened energy consumption. Developing a certification program for classrooms and offices to incorporate sustainable practices such as using recyclable materials, natural light, labeling trash bins, ensuring sustainable cleaning supplies are used, and much more will help tackle the issue. To

increase climate awareness at Helix, we propose organizing educational workshops and competitions that involve teachers and staff. Everyone must understand their role in shaping the future of our environment. Therefore, we should promote closer ties between Helix staff and students.

Percent of Faculty Who Would Like Their Classes/Offices to be "Green-Certified"



Survey sample includes 44 faculty members

<u>Green Classroom Certification:</u>

SOS leaders will support classrooms to be set-up and operate more sustainably through the following changes:

- Energy conservation reminder signage
- Waste and recycling bin set-up and signage
- Reduce indoor air pollutants and identify any ventilation issues in the space
- Test and recommend appropriate lighting levels

GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How We Operate	Standardize all classrooms across campus to have at minimum one recycling and one trash can with appropriate labels and colors located at the entrance of the room	$	6 months	SF
	Enroll in Healthy Green Schools & Colleges Program and pursue facility certification *(Healthy Green Schools & Colleges provides school facility leaders with resources to transform the health and sustainability of school and university environments without making major capital investments)*	$$	3 years	SF/SC
	Encourage usage of desk lamps by faculty during prep period when classrooms are unoccupied; provide low-cost, energy-efficient lamps as requested	$	1 year	SF
	Educate faculty and encourage usage of projector "ECO" mode to reduce power consumption year-round	n/a	3 months	SC
	Student-leaders begin the certification process for classrooms and offices to operate their spaces more sustainability (certification will address the following areas: waste reduction, energy efficiency, water usage, and indoor air quality)	$	1 year	SOS/SC
	Develop comprehensive Indoor Air Quality (IAQ) Management Plan with input from facilities, students, nurse, parents/families	$	1 year	SF/SC
How We Teach/Learn	Sustainability Coordinator to host summer professional development opportunities for faculty to become more educated on how to improve environmental health and sustainability in their classrooms	$	6 months	SC
	My Green Lab Ambassador Program offered to Science Teachers and interested students *(free training program focused on making sustainable changes within laboratory settings)*	$	1 year	SC

Transportation

Addressing transportation issues on our campus is a crucial component of our sustainability action plan. Our primary goal is to reduce the greenhouse gases generated by transportation activities. As a school community, we are committed to implementing effective solutions that minimize environmental harm. We aim to educate students and staff about the environmental impacts of transportation and work together to create a more sustainable campus. Key issues we plan to address include increasing the number of bike racks, reducing vehicle idling, and promoting carpooling and public transportation. By focusing on these areas, we hope to make a significant impact on reducing emissions. Additionally, through education and community involvement, we aspire to foster a culture of sustainability that extends beyond our campus.

GOAL ALIGNMENT	RECOMMENDATIONS	COST	TIMELINE	WHO
How We Operate	Add one additional bike rack near old administration building to increase access to safe storage for alternative transportation	$	6 months	SC
	Pilot usage of school carpool program using available online technology to streamline participation with students and families such as GoTogether or GoKid	$$	1 year	SC/ADMIN
	Installation of Level 2 charging ports on staff parking lot to increase access and encourage usage of alternative fuel vehicles	$$	1 year	SF/SC
	Designate alternative fuel vehicle and carpool parking spots in preferred spots to encourage sustainable transportation options	$	1 year	SF/SC
How We Teach/Learn	Conduct annual transportation survey for both students and staff to determine Scope 2 transportation greenhouse gas emission (recommendation is to distribute during advisory)	n/a	6 months	SC/ADMIN
	Include information on the Helix Charter website about how youth under 18 can get a free bus pass and show map of common student public transit pathways; provide incentives for students using alternative transportation	$	6 months	SC/SOS
	Host annual bike safety training and bike donation to increase usage of safe alternative transit to campus (recommendation to pursue partnerships with local government and service organizations)	$	1 year	SC/SOS

IV. Next Steps

In summary, the Helix Sustainability Action Plan, guided by Board Resolution 2023-06 Sustainability, aims to create a greener, healthier campus and cultivate environmentally literate graduates. By integrating sustainable practices into every aspect of our operations—from curriculum to waste management and building maintenance—we strive to minimize our ecological footprint and inspire students to become Earth stewards. We invite the entire Helix community to join us in this effort. **Together, we can build a vibrant, sustainable campus that promotes healthier learning environments and a legacy of responsible stewardship.**

Timeline Overview
June 2024: Present drafted action plan to Helix Charter Board and Administration
August 2024: Professional development for new student leaders and strategic planning
2024-2025: Implementation of first focus areas as noted in Key Priorities (page 3)
June 2025: SOS presents “State of Sustainability” for Helix Charter Board and updates action plan

Contact/Feedback

For feedback, partnerships, or further information, please feel free to contact Kevin Myron, Science Teacher, Sustainability Coordinator, and Student Office of Sustainability advisor at myron@helixcharter.net.

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