

Climate Action Plan





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I. Executive Summary

In 2006, Lane Community College (LCC) became one of the first signatories of the American College and University President's Climate Commitment (ACUPCC), whereby LCC agreed to systematically reduce greenhouse gas emissions and achieve carbon neutrality as a long term goal. Sustainability is a core value for the College, thus carbon neutrality is a relevant and worthy goal and one that we willingly commit to work towards. Subsequently, in 2011 Lane Community College (LCC) released a Climate Action Plan detailing a roadmap to comply with the Climate Commitment and become carbon neutral by 2050. In 2015, the Lane Community College President furthered the College's commitment by signing the Climate Commitment, which integrates carbon neutrality with climate resilience.

The American College & University Presidents' Climate Commitment (ACUPCC) is a high-visibility effort to transform campuses into sustainable ones and positively contribute to climate change by reducing greenhouse gas emissions. The commitment includes research and educational efforts toward carbon neutrality in higher education to educate the local community and to work collaboratively to create solutions for a more resilient future.

The 2017 Climate Action Plan 2.0 update represents the accomplishments and lessons learned in the six years since the first plan was published. The 2017 CAP 2.0 details time lines for completing initiatives, keeping in mind that technologies, attitudes, and availability of resources will change over time. This document will be updated every two years, and is meant to serve as a guideline as the College continues to progress toward climate neutrality.

Carbon neutrality is a monumental goal, one that will require significant commitments. The College administration will need to be committed to this goal by defining strategies for the allocation of College resources. The entire College community needs to be committed to this goal, as a collaborative effort and an ongoing learning experience between faculty, staff and students.

The term climate neutrality, under the terms of the ACUPCC, refers to eliminating or neutralizing greenhouse gas (GHG) emissions included in the following scopes:

Scope 1: Direct emissions from sources owned and controlled by LCC

Scope 2: Indirect emissions from the generation of purchased electricity

Scope 3: Emissions from regular commuting to and from campus by students, staff and faculty and for air travel paid for by or through LCC



Participants

The Institute for Sustainable Practices has led the creation of this document. However, the involvement of several other departments within the College has been fundamental in its preparation.

Listed below are some of the people who had significant roles in this effort:

Zhasmene Bowles, Lane Community College

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Paul Ruscher, Lane Community College

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Michael Sims, Lane Community College

Becky Thill, Lane Community College

Mary Spilde, Lane Community College

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Diego Llewelyn-Jones, Lane Community College

Sustainability Committee, Lane Community College

Facilities Council, Lane Community College

Design & Media Center, Lane Community College



August 30, 2018

At Lane Community College, sustainability is not just a goal; it is a way of life. From our practices to our policies, Lane displays a high level of dedication to sustaining Earth's resources. So much so, in fact, that sustainability was adopted as one of the college's core values in 2007.

Over the past decade, Lane has expanded efforts toward sustainability education with programs such as energy management, water conservation, and a sustainability coordinator degree. Sustainable practices in college operations range from culinary services offering organic and local foods, composting kitchen and cafeteria waste, sustainable facilities management and more.

Lane's new Mary Spilde Center in downtown Eugene received LEED platinum certification, highest level of certification a LEED building can obtain. This building is designed to also function as an educational laboratory for the energy management program.

Lane is committed to becoming carbon neutral, and to educating the next generation of leaders about the importance of reducing greenhouse gases. As a signatory of the American College and University Presidents' Climate Commitment, the college conducts and reports yearly comprehensive greenhouse gas emission inventories.

To reach our carbon neutrality goal, we'll focus on six greenhouse gas mitigation strategies:

1. Energy Use Reduction
2. Renewable Energy
3. Waste & Purchasing
4. Transportation
5. Agriculture and Land Use
6. Adaptation / Habituation / Education

The enclosed Climate Action Plan details the steps we will take in each of these areas to achieve carbon neutrality by 2050.

Sincerely,

A handwritten signature in black ink that reads "Margaret Hamilton".

Margaret Hamilton, Ph.D.
President



II. Introduction

We are now presented with an unprecedented challenge as concentrations of GHG continue to rise in our atmosphere. As a consequence of unlimited growth, the world's resources are showing clear evidence of decline and scarcity. Higher education institutions are uniquely qualified to lead the way with effective actions that create tangible and replicable solutions to reverse climate change. Lane Community College embraces the responsibility of educating our future generations of leaders, with a mindset of sustainability as a thought process. The magnitude of the challenge provides opportunities for innovative thinking that can be applied in a range of disciplines. In order for us to be successful in this endeavor, participation of the entire College community is required. Now is the time to think and act, focus on our similarities instead of our differences and rely on our collective wisdom to work on solutions. This is the second version of LCC's Climate Action Plan. We are committed to maintaining this plan as a living document with periodic updates as we continue to adapt to changing circumstances.

Institutional Structures

- The Institute for Sustainable Practices (ISP): The Institute works toward realizing Lane's sustainability core value and improving sustainability in educational and operational practices.
- Lane Community College (LCC) Sustainability Committee: The Sustainability Committee works collaboratively on implementing campus-wide sustainability initiatives and activities which contribute to our carbon neutral goal. The committee has representatives from different College departments, including staff, students and faculty.
- The College has appointed the Sustainability Coordinator as the implementation liaison for the commitment; this is a full-time position.
- Lane Community College's Science Division is led by Dr. Paul Ruscher, an atmospheric scientist and fellow of the American Meteorological Society. He has created several public outreach events to educate the public on the science behind climate change, and continues to work with faculty, staff, and students in sharing accurate and science-based evidence for human impacts on climate change.

Lane Community College Strategic Directions:

- Commitment to Student Learning and Success
- A Culture of Teaching, Learning and Innovation
- Access, Equity, and Inclusion through Social Justice
- Strengthened Community
- Financial and Environmental Stewardship



Lane Community College Sustainability Core Values include:

- Provide an interdisciplinary learning environment that builds understanding of sustainable ecological, social, and economic systems, concern for environmental justice, and the competence to act on such knowledge.
- Equip and encourage all students and staff to participate actively in building a socially diverse, just and sustainable society, while cultivating connections to local, regional, and global communities.
- Lane Community College is committed to financial and environmental sustainability principles and practices as part of our strategic direction. As part of this commitment, the Institute for Sustainable Practices (ISP) has designed and implemented the following Sustainability Initiatives, Policies and Procedures since first signing the Climate Commitment, with positive outcomes.

Policies and Procedures

- Sustainability: Energy Conservation
(<https://www.lanecc.edu/copps/documents/sustainability-energy-conservation>)
- Sustainability: Energy Conservation
(<https://www.lanecc.edu/copps/documents/sustainability-energy-conservation>)
- Sustainability: Recycling
(<https://www.lanecc.edu/copps/documents/sustainability-recycling>)
- Purchases: Recycled Paper
(<https://www.lanecc.edu/copps/documents/purchases-recycled-paper>)

III. Greenhouse Gas Emissions Inventory

The College's greenhouse gas inventory for fiscal year 2017 was prepared with data from utility bills, a 2014 campus commuting survey and other College records and information from the office of Institutional Research and Planning.

The data-gathering process followed ACUPCC guidelines, including direct emissions from Scope 1 and indirect emissions from Scope 2 and 3. The emissions calculated from air travel and commuting are estimated; Lane Community College does not yet actively collect data from College air travel. The unit of metric used throughout this plan is metric tons of carbon dioxide equivalent (MTCO_{2e}), which accounts for the collective global warming potential of the six greenhouse gases (water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrofluorocarbons).

Emissions by Source FY 2017

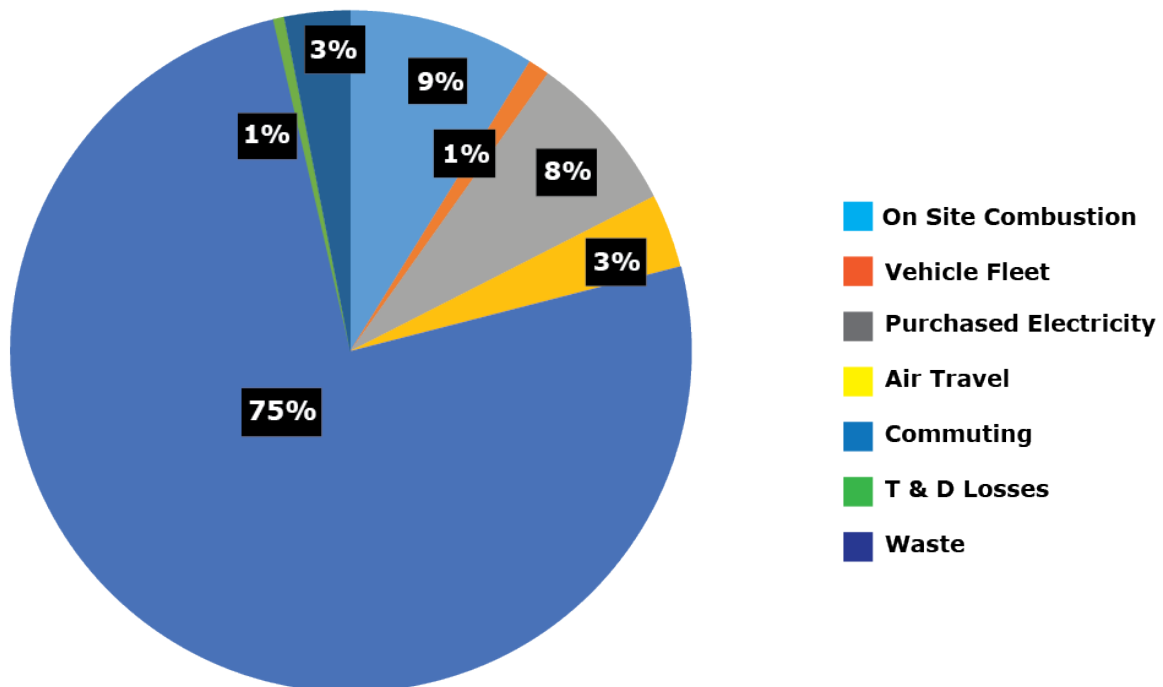
Scope	Emissions Source	MTCO_{2e}
Scope #1	Stationary Combustion	2,572.93
	Mobile Combustion	295.33
	Refrigerants & Chemicals	32.84
	Agriculture (Fertilizers)	0.13
Total Scope #1		2,901.23
Scope #2	Purchased Electricity	2,229.15
Total Scope #2		2,229.15
Scope #3	Commuting Faculty & Staff	1,032.00
	Commuting Students	20,927.53
	Directly Financed Travel (Air & Ground)	1,021.77
	Solid Waste	908.30
	T & D Losses	254.72
Total Scope #3		24,042.20
Total Emissions for all Scopes		29,173.61
Offsets	On-Site Forest Sequestration	-1,086.0
	Purchase of Renewable Energy Certificates (REC's)	-561.0
Net Emissions		27,526.61

Data Collection Methodology

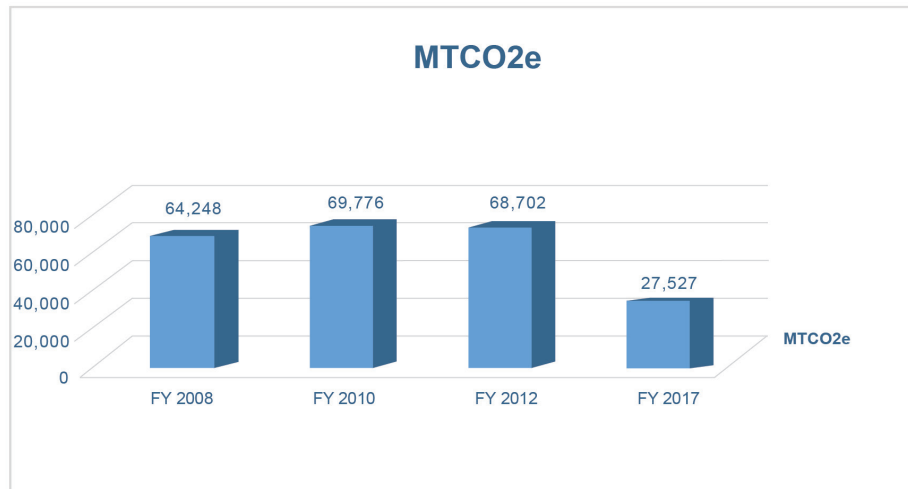
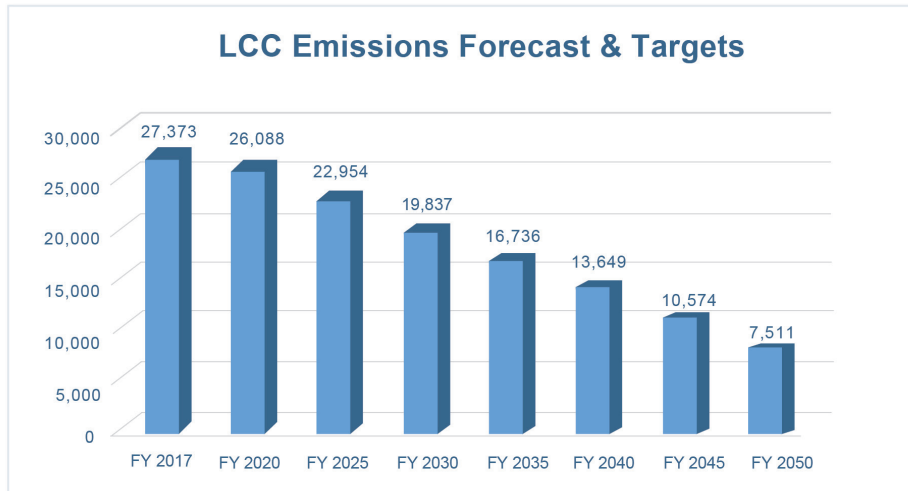
2008 was the first year that Lane Community College developed a comprehensive GHG inventory. Our data and collection methods were still under development and will continue to be throughout this entire process. Our GHG inventory reflects significant changes, as we continue to discover new data sources and collection methodologies as an evolving learning experience.

Something to consider in our GHG inventory when comparing between FY 17 and FY 08 is that enrollment decreased by 43% between that time period. The reductions in GHG emissions for commuting are in part attributable to the enrollment decrease that the College has experienced.

The tool used for calculating LCC's GHG emissions for FY 17 was SIMAP (Sustainability Indicator Management and Analysis Platform, <https://unhsimap.org/home>). This tool replaced the Excel-based Campus Carbon Calculator and is the tool recommended by the Second Nature organization.



Historic GHG Data at LCC



Greenhouse Gas Emissions Forecast

The College has set a goal to reduce all greenhouse gases associated with college operations by two to three percent per year, until the year 2050. Remaining GHG emissions after these significant reductions will be offset with on-site forest sequestration and with the purchase of carbon offsets and/or renewable energy certificates.

IV. Education, Research, and Community Outreach

The Institute for Sustainable Practices at Lane Community College is committed to sustainability in education and in operations. Lane Community College has integrated four sustainability programs into the college curriculum. The sustainability courses are designed to prepare individuals with critical thinking and skills on sustainability as a thought process. Lane Community College provides sustainability education through an affordable and accessible lens.

Lane Community College offers the following sustainability-focused degrees:

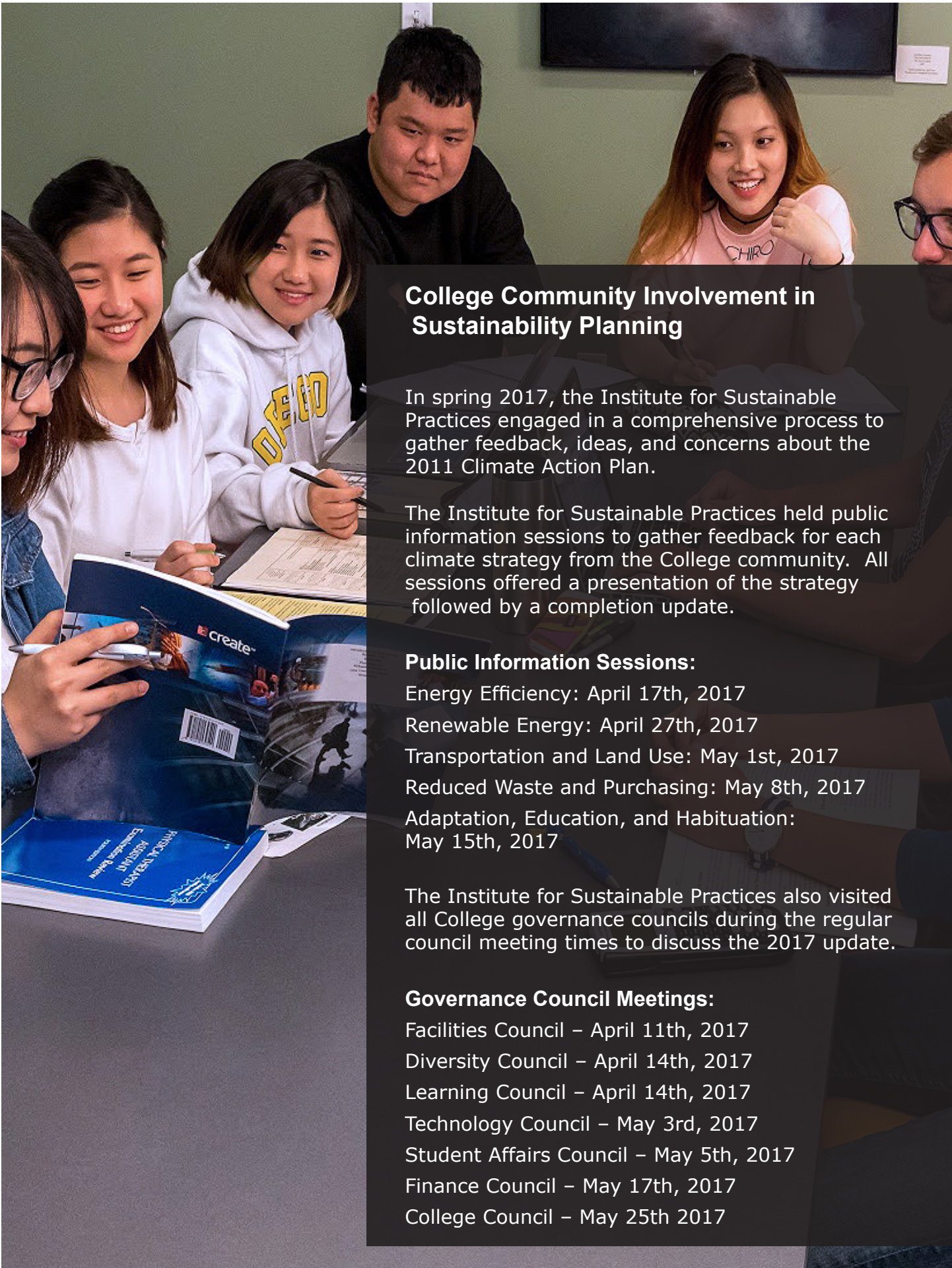
- Sustainability Coordinator
- Energy Management Technician (online)
- Building Controls Technician Option
- Water Conservation Technician

In addition, several of our college transfer courses offered by the Earth & Environmental Sciences group carry sustainability designations. We are also in the process of creating a degree articulation with Oregon State University on its dual-BS degree in sustainability, and it will be implemented beginning in fall 2019.

Education and sustainability projects include working with faculty across the College to infuse sustainability in the curriculum and offering workshops, trainings, and conferences for students, employees, and the local community.

Operational functions performed by the Institute for Sustainable Practices include:

- Administering the Recycling Education Center and the Learning Garden.
- Developing proposals and implementing resource conservation projects, such as energy and water conservation, renewable energy installations, solid waste reductions, sustainable transportation initiatives and more.
- Providing and analyzing data about energy, water, solid waste, and transportation and green- house gas emissions.
- Responding to Indoor Environmental Quality (IEQ) concerns; assisting with solution and prevention recommendations.
- Coordinating hands-on student projects that benefit operational and educational sustainability.
- Supporting the Sustainability Committee and implementing Committee recommendations.
- Creating, updating and implementing campus plans such as the Climate Action Plan and the Sustainability Strategic Direction Implementation Plan.
- The Science Division supports this work on the academic side of the College through curriculum and management of the Energy, Water, and Sustainability programs



College Community Involvement in Sustainability Planning

In spring 2017, the Institute for Sustainable Practices engaged in a comprehensive process to gather feedback, ideas, and concerns about the 2011 Climate Action Plan.

The Institute for Sustainable Practices held public information sessions to gather feedback for each climate strategy from the College community. All sessions offered a presentation of the strategy followed by a completion update.

Public Information Sessions:

- Energy Efficiency: April 17th, 2017
- Renewable Energy: April 27th, 2017
- Transportation and Land Use: May 1st, 2017
- Reduced Waste and Purchasing: May 8th, 2017
- Adaptation, Education, and Habituation: May 15th, 2017

The Institute for Sustainable Practices also visited all College governance councils during the regular council meeting times to discuss the 2017 update.

Governance Council Meetings:

- Facilities Council – April 11th, 2017
- Diversity Council – April 14th, 2017
- Learning Council – April 14th, 2017
- Technology Council – May 3rd, 2017
- Student Affairs Council – May 5th, 2017
- Finance Council – May 17th, 2017
- College Council – May 25th 2017

V. Mitigation Strategies

LCC's carbon mitigation strategies are the outcome of evaluations by the College's major stakeholders, including: the Institute for Sustainable Practices, Sustainability Committee, Facilities Management and Planning, and Facilities Council. The adopted strategies have a systems approach with college-wide understanding and commitment. Our goal with this plan is to attain carbon neutrality. For this reason, we have selected and prioritized our strategies by the most significant social, economic, and environmental benefit for the College. Mitigation strategies for Lane Community College are included in the following six categories.

GHG Emission Mitigation Strategies

1.0 Energy Use Reduction

- 1.1 Education & Awareness
- 1.2 Energy Efficiency of Building Systems
- 1.3 Recommissioning and Retro-commissioning
- 1.4 Policies and Plans

2.0 Renewable Energy

- 2.1 Solar Electricity
- 2.2 Solar Thermal
- 2.3 Carbon Neutral Energy Purchased from Utility Providers

3.0 Waste & Purchasing

- 3.1 Reduction
- 3.2 Diversion
- 3.3 Purchasing

4.0 Transportation

- 4.1 Behavioral Engagement and Outreach Campaigns
- 4.2 Access to Sustainable Commuting Options
- 4.3 College Owned Vehicles
- 4.4 Commuting Data Collection Methodology
- 4.5 Financing and Policies

5.0 Agriculture and Land Use

- 5.1 Learning Garden
- 5.2 Develop Wetlands and Forest as Education Centers

6.0 Adaptation / Habituation / Education

- 6.1 Events & Marketing
- 6.2 Sustainability Education
- 6.3 Increased Collaboration with College Departments and Groups

1.0 Energy Use Reduction

Under the original Climate Action Plan, the Energy Use Reduction section was titled "Energy Efficiency." The Institute for Sustainable Practices has changed the title to "Energy Use Reduction" as a way to reflect the desired outcome of the actions outlined here. Greenhouse gas emissions from energy consumption in buildings represent roughly 20% of the College total GHG inventory. These emissions are under the operational control of the College; hence, significant efforts will be done to reduce building energy use. Lane has set a goal to decrease energy use by 2 percent per year, using FY 2005 as the base line year. This is one of the most important components of our targeted goal of GHG reduction by 2-3% per year.

1.1 Education & Awareness

LCC is engaged in continuous on-going training, outreach efforts and campaigns. The habits and behaviors of building occupants play a significant role in the energy performance of a building. Therefore, educating building occupants to live within the boundaries of building systems and properly operate building interfaces is primary to achieve the College's energy goals.

Training maintenance staff and contractors about proper maintenance and troubleshooting of building systems is key to protecting the asset, extending the life of the system, and achieving energy use reduction goals. As part of this effort, the College and the ISP work on developing and communicating standards of energy conservation for occupants and maintenance staff to use as guidelines for best practices. Energy Conservation seeks to leverage people to change behaviors in their spaces and improve maintenance practices through on-going monitoring and scheduling.

Plan to complete:

2018-2019: Complete Lane's Energy Conservation Master Plan, a new and comprehensive plan to address occupant and maintenance staff behavior. The Energy Conservation Master Plan addresses four areas:

- Behavior change education for building occupants and building operators
- Optimization of building scheduling with building use
- Indoor temperature guidelines
- Building energy monitoring

2019-2021: Complete biannual comfort survey of building occupants

2018-2022: Conduct either one behavior campaign for building occupants or one training opportunity for maintenance staff per term.

1.2 Energy Efficiency of Building Systems

The College is committed to increase energy efficiency in buildings for all of its facilities, in order to save natural and economic resources and thus increase the College's economic resilience. Building retrofits not only save resources but also increase occupant comfort; hence, student occupied spaces are set as a priority for College retrofits.

The College has adopted an aggressive energy management program in order to achieve its

energy reduction goals. The program strategy focuses first on the largest areas of energy consumption:

- Heating
- Cooling
- Ventilation
- Lighting

Central Plant

The Colleges owns and operates a central plant for district heating and cooling. The central plant is the main energy consuming system on campus. For this reason, a significant upgrade to the central plant was completed in 2016, including:

- Installation of high- efficiency condensing boilers
- Installation of high-efficiency cooling towers
- Installation of high-efficiency magnetic levitation chillers
- Construction of a new chiller building configured to accommodate a future ground source heat pump system
- Installation of variable frequency drives on all pumps
- Controls replacement and extensive sub-metering

The performance of the central plant after the upgrades has yielded significant reductions in energy use, as well as increased comfort levels in the College's indoor spaces.

Plan to complete:

2018-2020: Develop a plan to fund the implementation of a ground source heat pump system to further improve the performance of the central plant.

Heating Ventilation and Air Conditioning Mechanical Systems

Upgrades to Lane's heating ventilation and air conditioning mechanical systems were implemented with major remodels of buildings 10, 11, 15, 18 and Center. The upgrades were funded by a bond levy and included variable air volume conversion, multi-zone heating, ventilation, and air conditioning unit rebuilds. The College had a Facilities Assessment Report performed during the fall term of 2017. Inherently, the assessment report identified Heating Ventilation and Air Conditioning (HVAC) systems as the most important building component for the College to focus its retrofit upgrades.

Plan to complete:

2018-2020: Begin integration of the College's building scheduling system with buildings control systems.

2018-2022: Develop and implement a plan based on the Facilities Assessment Report findings and Facilities 10 year renewal plan to systematically retrofit HVAC equipment on each building, prioritizing classroom buildings, energy savings and equipment condition. Some of the upgrades include:

- Multi-zone air handler units refurbishment or replacement
- Controls upgrades
- Variable air volume terminals
- Variable frequency drives
- Ductwork replacements or comprehensive repairs

Lighting and Lighting Control Systems

Lighting systems at the College provide significant opportunities for cost-effective upgrades. The College continues to implement campus-wide lighting retrofits and reducing electricity consumption while at the same time maintaining or surpassing minimum lighting level standards. Efficient lighting systems can improve student and staff productivity as well enhanced safety. The College is committed to maintaining healthy Indoor Environmental Quality for all of its spaces, therefore energy efficient daylight controls are considered in every lighting retrofit performed at LCC facilities.

Plan to complete:

2019-2020: Upgrade of the interior lighting automation systems in Buildings 1 and 16 to enable more efficient scheduling and daylight use.

2019-2020: Complete the interior and exterior lighting control panel upgrades at Buildings 6, 19, and 24 to interface with a campus lighting control network.

2018-2022: Continue to systematically replace lighting fixtures in all buildings with more efficient technologies as existing fixtures approach its useful life.

Building Envelope

The College performs on-going repairs and improvements to its buildings envelope, as part of an existing preventive maintenance plan. Building components that are directly exposed to the outside environment, include:

- Outside doors & walls
- Windows
- Roofs

The main focus for the College, regarding building envelope, will be roofs. This is where the greatest need is, as well as where a good return on the investment has been identified. For this reason, the College has established a roof replacement program, which includes the replacement of existing pitched roofs with metal roofing with increased insulation as a standard for subsequent reductions in heating and cooling requirements. The new roofs also have an extend life and lower maintenance cost.

Plan to complete:

2018-2019: Complete replacement of the East roof in building 16 (completed summer 2018)

2018-2019: Major refurbishment of the roof in building 1

2018-2020: Upgrades to walls and windows will be evaluated early in every retrofit and remodel project.

Building Level Sub-Metering

Lane Community College has made significant progress in the installation of building-level utility sub-meters for the buildings on campus. The utility meters report real time utility data to a web-based building automation system graphical interface. This information allows staff to monitor and troubleshoot buildings as well as to modify parameters and track performance. This information helps support behavioral engagement campaigns on buildings for wise energy use and maximize the efficiency of space utilization by tracking performance.

Plan to complete:

2018-2022: The College has set as a standard practice evaluating the installation of sub-meters in every retrofit or remodel project.

1.3 Recommissioning and Retro-commissioning

Recommissioning and retro-commissioning are both excellent ways to improve a building's performance. The College has identified this as an opportunity and has developed recommissioning as a standard practice. To assist in the development of this goal, the College has hired a full-time engineer with extensive commissioning experience as part of the Facilities Management and Planning (FMP) staff. This is an on-going initiative.

Plan to complete:

2018-2019: Complete the recommissioning of all central plant systems at Mary Spilde Center, building 61.

2018-2019: Develop a retro-commissioning plan for the college

2019-2022: Implement the retro-commissioning plan

1.4 Policies & Plans

The College plans to implement in the short term the following plans and policies:

- Design and Construction Policy
- Energy Efficiency Master Plan
- Energy Conservation Master Plan

Design and Construction Policy

The College adopted a Design and Construction Policy in 2007. Since the adoption of the policy, the College has set a higher standard for construction and renovation of its spaces, and has constructed four LEED® Certified buildings.

Plan to complete:

2018-2019: Update the existing Design and Construction Policy with the following elements:

- All construction or renovation should meet or exceed LEED® Silver rating.
- Integrate LCC's Green Standards Checklist, a guide for facilities construction and renovation to ensure minimum sustainability requirements are met.
- Improve front-end construction documents for standardization, adherence to sustainability and efficiency measures, and design guidelines.

2018-2019: Present the updated policy to Facilities Council for review, revision, and approval.

2019-2022: Finalized plan will inform all remodels, new construction, and major maintenance.

Energy Efficiency Master Plan

The Energy Efficiency Master Plan seeks to implement campus-wide energy savings by focusing in technology and equipment in the following areas:

- HVAC retrofits or replacements
- Lighting system upgrades and replacements
- Plug load controls
- Improved insulation of roofs, walls, windows, and door systems

Plan to complete:

2018-2019: Work with Facilities Management and Planning to refine the plan.

2019-2020: Submit the plan to Facilities Council for review and discussion.

2019-2020: Finalized plan will inform all remodels, new constructions and major maintenance.

Energy Conservation Master Plan

The Energy Conservation Master Plan seeks to leverage people to change behaviors in their spaces and improve maintenance practices through monitoring and scheduling.

Plan to complete:

2018-2019: Work with Facilities Management and Planning to refine the plan.

2019-2020: Submit the plan to Facilities Council for review and discussion.

2019-2020: Finalized plan will provide a guideline for best management practices for maintenance and operations of systems in all College facilities.

2.0 Renewable Energy

Historically, Lane Community College has been a leader in adopting renewable energy as a path toward crafting solutions to its own and the world's environmental challenges. Examples of the College's strategies to fulfill its Climate Commitment include:

- Purchase of 10% of offsite renewable energy.
- Offset electricity use with 1% on-site renewable energy generation.
- Institute a revolving loan fund for energy conservation and renewable energy projects.
- Develop a strategy for becoming carbon neutral.
- Allocated \$830,000 for an on-site renewable energy from a 2008 \$83 million capital project bond.

Oregon state requires under law ORS 279C.527 that public entities spend 1.5% of public building construction costs on green energy technologies. Lane has complied and has surpassed the minimum requirement in every building construction project initiated after the adoption of the law. Having already invested \$1,590,135 in green energy technologies.

The College uses about 3 megawatts of renewable energy annually from a combination of on-site and off-site generation resources. The College has drafted a new set of renewable energy goals with assistance from the National Renewable Energy Lab (NREL). Lane's initial success with renewable energy goals can be attributed in part to completion of a major wind power purchase in 2006 and construction of a series of solar electric projects from FY 2005 thru FY 2013. Lane Community College, through the Climate Action Plan, seeks to offset 45% of Lane's energy use by 2050 with renewable energy credits and renewable energy generation.

An annual review of renewable energy resources is conducted by the College, and adjustments are made to green power purchases to support the College's commitments.

One significant benefit of Lane's commitment to green power has been student and faculty involvement in construction of solar electric generation resources like the 36 KW Solar Station (2009), three 1.8 KW arrays at the Lane's Child and Family Center (2008-2011), a 11.8 KW learning lab at the Mary Spilde Center (2012), and connection of a 1.1 KW roof top array to the science building (2017).

2.1 Solar Electricity

Currently, LCC has 54.3 kW of total on-site solar electric generation installed. These are a combination of systems that the College has been able to install using its own funds. LCC owns both the electrical and environmental attributes of these projects. Lane Community College will continue with precisely selected solar installations that are funded either by Lane's revolving loan fund or capital budget. The College is also exploring financial mechanisms to install larger systems; however, these are medium to long-term projects, as perhaps the College would not receive the electrical or environmental benefits until the end of the contract with the third-party provider.

Plan to complete:

2018-2022: Continue with yearly small installations of rooftop photovoltaic systems. Buildings considered for installation during this period are buildings 5, 6, 9, 10, 12, 16, 30, 50 & Center.

2.2 Solar Thermal

The College currently has two operating solar thermal heating installations, on two of its newest LEED® Certified buildings. Building 30 the Health and Wellness building, a LEED® Gold building with 36 flat panel collectors of 300,000 Btu/hr, and Building 61a the Mary Spilde Downtown Center, a LEED® Platinum building with 250 evacuated tubes of 280,000 Btu/hr. These solar thermal heating systems provide domestic hot water for building occupants.

Plan to complete:

2018-2022: Currently, the College doesn't have a need to increase the generation of solar thermal heating. New projects will be evaluated as the need arises.

2.3 Carbon Neutral Energy Purchased from Utility Providers

By realizing more and more savings on electricity and natural gas through energy conservation and on-site renewable energy projects, the College will be able to invest more into purchasing renewable energy certificates from our electricity and natural gas providers. Lane County is fortunate to have electric utility providers with substantially climate-friendly resource portfolios. Lane's Climate Action Plan calls for the purchase of more electricity and natural gas from climate neutral sources. Specific goals in this area include:

Plan to complete:

2018-2019: Develop a strategy to purchase third party certified Renewable Energy Certificates (REC's) for 25% of the College's electricity use

2018-2019: Develop a strategy to fund the purchase of third party certified Carbon Offsets equivalent to the emissions related to 10% of the College's natural gas use.

3.0 Waste & Purchasing

Perhaps the most significant development in this section was the completion of the Recycling Education Center in 2011. This integrated waste management and diversion center allows the systemization and streamlining of all outgoing material from Lane Community College: mixed compacted non-recyclable material bound for the landfill, recyclables, and surplus property. Since 2011, Lane decreased its landfilled waste by 30%. However, it is worth noting that over the same period of time the College has experienced an enrollment decrease of 43%.

For the past seven years, Lane Community College has achieved an average diversion rate of approximately 48%, preventing 1,717 tons of material from entering the landfill and 301 metric tons of CO_{2e} from entering the atmosphere (calculated using Clean Air - Cool Planet v.6.6).

Key performance indicators for reduced waste & purchasing:

- Amount of material sent to landfill
Fiscal Year 2017: 293 short tons; 265 metric tons
Fiscal Year 2022 Goal: 220 short tons; 199 metric tons
- Amount of material recycled or composted
Fiscal Year 2017: 268 short tons; 243 metric tons
Fiscal Year 2022 Goal: 240 short tons; 270 metric tons

3.1 Reduction

Plastic Bottles

In 2012, Lane adopted a bottled water-free campus plan. There is no bottled water sold in any vending machine or any campus food service or bookstore location. At the same time, drinking fountains with water bottle filling functions are required in all new construction or remodels, and standard drinking fountains are being replaced with drinking fountains with water bottle filling functions as budget allows. Water bottle filling stations are in 30% of campus buildings. All remodels and new construction are required to have water bottle filling stations on each floor. Existing buildings will be retrofitted as budget and staff resources allow. This will require cooperation with Facilities Management and Planning.

Plan to complete:

2018-2022: Install water bottle filling stations for 75% of all floors of every building at every campus.

Desktop Printers

Since 2011, Lane has increasingly moved from decentralized printers and copiers, managed by individual departments, to a more centralized system managed by Lane Printing and Graphics department. The action has resulted in reductions in purchasing and maintenance (toner and paper). This shift has also led to better tracking of printers and paper use, and has motivated a change from personal desktop printers to shared multifunction network printer/copiers within offices and departments. Many departments have also moved to reduced paper use by scanning archived and current paper files, using network printers and scanners, and shared document storage.

Plan to complete:

2019-2022: Install centralized printers and copiers managed by Printing and Graphics for 100% of users.

3.2 Diversion

Surplus Property

Through public online auctions, Lane has significantly improved its revenue from surplus property. Surplus property revenue has risen 260% since 2011 (\$12,063 in FY11; \$43,450 in FY 17). This has improved revenue for the Recycling Program, which funnels those funds into waste diversion systems improvements.

Plan to complete:

2018-2022: Maintain a revenue increase for Surplus Property of 5% per year.

Reusable Office Supply Exchange (ROSE)

With the completion of the Recycling Education Center in 2011, the ROSE room was moved to a space created and designed for reusable office supplies in Building 10, room 232. It is unlocked and open during regular College business hours, an improvement over the old space, which shared an office with a staff member. Since opening in its new location, ROSE room use is up 60%.

Plan to complete:

2018-2022: Maintain an increase in ROSE room use of 5% per year.

Composting Collection Stations

The Recycling Program instituted a self-service composting program for department break rooms in 2012. Currently 10 departments use the program; the plan is to recruit six new departments per year, until all departments adopt composting. The Recycling Program would like to add composting facilities to other locations on campus, such as student study areas and selected outdoor areas. Past and recent waste audits show that compostable material comprises approximately 33% of the waste the College directs to the landfill.

Plan to complete:

2018-2020: Recruit six new department to use self-service composting break rooms.

2018-2020: Place more public composting locations in high use buildings, study areas and outdoor locations.

2020-2022: Full integration of composting into recycling operations – 100% of department break rooms and all publicly accessible locations where food is consumed.

Outdoor Waste Collection

The College outdoor waste collection system was designed and built in the 1960's and consists of concrete drainage pipes stood on end and topped with dome trashcan lids. Recycling receptacles are plastic outdoor trashcans with holes in the lids to accept beverage containers. At this time, there are approximately 180 individual outdoor trashcans on campus, a number that persists from a time when landfilling material took precedence over diversion. Due to the large number of trashcans, recycling has only approximately 50% of trashcans paired with recycling containers. The old trashcans are unsafe to service due to poor ergonomics, are aesthetically unattractive, and reinforce a generations-old way of handling waste. As there are few diversion options available outdoors, over 50% of the outdoor trash collection is recyclable, with 30% of that being compostable material.

Plan to complete:

2018-2019: Reduce the number of outdoor trashcans by 50%.

2019-2022: Replace remaining outdoor trashcans with modern, front-servicing containers that feature recycling and composting options.

Indoor waste collection

With the construction of the Health and Wellness Building in 2012, Lane began updating its indoor collection system by removing individual trashcans from classrooms. Built-in waste diversion stations were placed in central locations, resulting in approximately one third less waste generated and one third more recycling generated in those locations. To date, half of Lane's buildings have been updated with the new system.

Plan to complete:

2018-2019: Update buildings 19, 18 and the fourth floor of Center building with the new system of built-in waste diversion stations.

2018-2022: Update the remainder of the College's buildings with the new system of built-in waste diversion stations.

3.3 Purchasing

Sustainable Purchasing Practices

Aside from the purchasing of green housekeeping chemicals, this effort has lacked traction since 2011. Purchasing is largely decentralized at Lane. Most materials and services are purchased directly by departments, making it difficult to track sustainable purchases. The ISP has managed to set up auto-substitutions with the official College office supply vendor, which automatically substitutes more environmentally friendly products with standard ones where possible.

Plan to complete:

2018-2019: Target educational campaigns toward department administrators and coordinators who regularly purchase such common items to inform them of lower-impact supplies and ROSE room availability.

2018-2019: Review and update purchasing policies and research other schools that are doing this well.

2018-2019: The science division has adopted as a standard practice to only purchase whiteboard markers that are refillable and non-disposable. The plan is to increase the adoption of this practice to all of the college purchases of whiteboard markers.

2019-2020: Move toward centralized purchasing for common items such as office supplies and high-footprint items such as desktop printers, air filters, and small office appliances. Purchase items in bulk at reduced prices, require environmentally friendly products, and distribute to departments as requested. Surplus items could be rerouted to centralized location for purchase by other offices or departments. Departments could still purchase task-specific items as needed.

Education and outreach

During Climate Action Plan information sessions, participant feedback indicated an issue with the somewhat confusing nature of modern waste diversion. The College community requested updated and timely information about what is recyclable, where items can be recycled, and how they are recycled. Recycling can reduce the amount of waste directed to the landfill, but waste prevention comes at a lower cost and is often a more environmentally beneficial option. In addition to recycling information, the Recycling Program plans to provide education and information about ways that students, faculty, and staff can prevent and minimize their waste generation. Educating the College community about how to properly interface with waste management systems can lead to greater diversion of material from the landfill. Science Division's GLOBE outreach program (<http://www.lanec.edu/science/globe-program/>) will also provide community members information about our Climate Action Plan and information on waste management, recycling, and energy conservation.

Plan to complete:

2018-2019: Present recycling and waste reduction training to four College departments or divisions.

2018-2019: Institute quarterly updates to the College recycling website, and direct employees and students to the site for answers to frequently asked questions.

2018-2019: Deliver at least one presentation at either the fall or spring in-service.

4.0 Transportation

Emissions from daily student and employee commuting continue to represent the largest contributor to Lane's greenhouse gas inventory, and have proven to be the most difficult to mitigate. The College is working on its own internal transportation efforts, but is bound by regional and state transportation priorities to realize a low-carbon means to get students to the 30th Avenue campus. The main campus is a commuter location with very limited nearby housing. Primary campus access is via a four-lane highway over a hill with a 500' elevation gain and freeway, making commuting by biking or walking difficult.

In 2013, Lane Community College opened its new Downtown Center, now known as the Mary Spilde Center, with student housing adjacent to the Lane Transit District Eugene Station. Strategies to leverage this location will be discussed below.

Another significant development was the creation of Bike Lane, a bicycle loan program in 2010. This program has seen robust participation and currently consists of a fleet of 50 bicycles, complete with lights, locks, and helmets, which students may borrow free of charge for up to a full academic term. In 2017, the College opened the Lane Bike Rack, a fully secure and covered bicycle parking facility on the main campus for bicycle commuters that includes a small maintenance shop for the bicycle loan program.

In years past, the College's approach to the varied and multiple transportation challenges entailed various committees and individuals studying transportation. After over ten years, it is clear that a comprehensive strategy is needed to confront this many-layered issue. It will require not only significant infrastructure investment, but also behavior change and cooperation among many different stakeholders. As transportation is a major College issue, affecting students, staff, and visitors, this plan recommends the creation of a College-wide Transportation Study Group (TSG). The TSG will be a subcommittee of the Facilities Council and will draw from a cross-section of the College community as well as the cities of Eugene and Springfield, Lane Transit District, Lane County and the Lane Council of Governments. Currently Facilities Management and Planning is working on a Facilities Master Plan, which will include transportation, and is scheduled to be complete in summer 2019. This Climate Action Plan update will recommend the creation of a TSG for the 2019 Facilities Council work plan after the master planning process is complete. The primary outcome for the TSG will be an updated College Transportation Plan, which will be a product of collaboration across College governance councils and community stakeholders. The desire is to have a completed plan with actionable strategies by the end of the 2019 academic year.

4.1 Behavioral Engagement and Outreach Campaigns

Expand Outreach, Marketing and Education about Climate-Friendly Transportation Alternatives

The College had the grand opening of the Lane Bike Rack in the fall of 2017. It is a fully enclosed and secure bicycle parking facility, and serves as an opportunity to promote the bicycling, the bicycle loan program and about using the bus and bicycle network to get to campus. The ISP is committed to continue to provide education and promotion for climate-friendly transportation, as well as continuously updating the webpage and social media presence. The proposed TSG will place these items on their work plan for recommendations and actions, including a comprehensive and cohesive marketing strategy.

Plan to complete:

2018-2019: While hosting the annual Welcome Week table each fall, use the opportunity to register participants in the bicycle loan program and inform them of other transportation options.

4.2 Access to Sustainable Commuting Options

Improve Access for Lower-Emitting Vehicles

Motorcycle parking has improved significantly since 2011, when the College provided priority parking for motorcycles close to campus. Team Oregon motorcycle training uses Lane's north parking lots on the weekends to train motorcyclists. The College will continue to increase priority parking for motorcycles close to campus.

In 2011, Lane completed the Solar Electric Vehicle Charging Station, with 19 level 1 and level 2 charging stations. During the academic year, this charging station is full. Several staff and faculty report they have purchased electric vehicles due to the presence of the charging station. The College will continue to provide information about electric vehicle charging opportunities and how to obtain an electric car.

Plan to complete:

2019-2020: Complete the College Transportation Plan update.

2019-2020: Creation of a transportation study group (TSG) as a sub-committee of the Facilities Council

2018-2019: Increase motorcycle parking close to campus by 10%

2019-2022: Install 4-6 electric vehicle charging stations in the North, South and East parking lots as close as possible to the buildings

Improve Access for Bicyclists

With the opening of a fully secure and covered bicycle parking garage, the Institute for Sustainable Practices, in cooperation with the Facilities Council, will create a bicycle route map to funnel bicycle commuters to the bicycle garage and other prominent outdoor bicycle parking locations. This will include a map and wayfinding at campus entrances. Lane has increased covered, secure bike parking with the goal of providing bike parking for 10% of students and employees. As part of this effort, the College has removed traffic control grooves from bike lanes and implemented a simple procedure to request bike racks in specific spots.

Lane is regularly improving campus roads and parking lots for bicycle safety, painting bike lanes and maintaining them with regular sweeping and repair. As the main campus access roads are county roads, the College has little direct responsibility for Gonyea Road and Eldon Schafer Drive. Gonyea, as the main road into campus, has a painted bike lane that is swept and maintained on an as-needed, on-call basis. Schafer Drive is a narrow road with no bike lanes and little county maintenance. The proposed TSG will be tasked with creating a plan to cooperate with Lane County government to address these issues.

The College will continue to advocate for improved bike paths from Eugene and Springfield to Lane and for more secure bike parking at LTD stations or at bus stops. Also, promote and provide incentives for the use of folding bikes that can be carried into an LTD bus. Lane Transit District is a special use district that operates under an independent Board of Directors, so issues

regarding stations, stops, or buses will require discussion and collaboration between the College and LTD. This will be a task of the proposed Transportation Study Group.

Plan to complete:

2018-2019: Create a bicycle route map to funnel bicycle commuters to the bicycle garage and other bicycle parking locations 2018

2018-2019: Install wayfinding route maps at campus entrances 2018

2019-2020: Creation of a plan by the TSG to increase cooperation with Lane County in painting, sweeping and repairing bike lanes in Eldon Schafer Drive and Gonyea Road

Accessibility, Convenience, and Sustainability of Public Transit

Lane has done a good job of advocating for the accessibility, convenience and sustainability of public transportation using professional networks and one-to-one conversations with city and county officials and staff. LTD now has hybrid buses that run to Lane. The City of Eugene has just resurfaced and restriped the 30th Avenue approach to campus with wider shoulders to accommodate cyclists and pedestrians, and has created a new auto traffic lane layout to improve sightlines and slow traffic. However, to engage this topic fully, the College must coordinate with the local, regional, and state entities that develop, fund, and manage many of these projects. The proposed Transportation Study Group will work to formally engage these stakeholders. Lane plans to complete the following actions and gather specific data as part of the transportation baseline to improve the accuracy of transportation emissions data.

- Expand bus service as needed. Request that LTD analyze overload reports to help determine needs.
- Expand LTD group bus pass program to include employees.
- Advocate for a dedicated bus rapid transit route to Lane.
- Advocate for buses that run on more climate-friendly fuels.
- Advocate for additional and expanded Park & Ride options.
- Begin long-term planning for a light rail. Work with local governments to establish easements or right-of-way. Work with local governments to develop a Glenwood-to-LCC corridor for a light rail and bike path.
- Promote bus transportation to campus events.
- Turn over data to TSG for study and proposed action.

Plan to complete:

2019-2022: Begin planning for a light rail. Work with local governments to establish easements or right-of-way. Work with local governments to develop a Glenwood-to-LCC corridor for a light rail and bike path.

Carpool

Despite multiple attempts with various carpool services, carpooling is not an active form of transportation to Lane Community College. Carpooling is as much of a behavior change project as a logistical project. The Institute for Sustainable Practices will first approach the problem with a behavior change methodology before creating logistical and facilities-based recommendations.

Plan to complete:

2018-2019: Meet with the Director of Institutional Research and Planning to create a survey of transportation habits and tolerance to alternatives.

2018-2019: Perform case studies of other higher education-based carpooling services to include interviews with primary stakeholders.

2019-2022: Create recommendations to include two to three carpooling service structures (internal or external). This may require a financial investment of an unknown amount.

2020-2021: Launch an aggressive campaign in support of carpooling. Include rewards and priority parking.

2020-2021: Have a carpool presence on the Lane home page and myLane ("Carpool Lane").

2020-2021: Provide a ride share board (poster or electronic).

2020-2021: Designate carpool-only spaces in priority parking spots.

2019-2020: Seek opportunities to fund incentives for carpooling. Funding source could be parking fee.

2020-2021: Launch new carpooling service.

Improve Utilization of the Downtown Center

In 2013, Lane Community College opened the Mary Spilde Downtown Center. The center is directly adjacent to the Lane Transit District downtown Eugene Station. To fully realize the downtown Eugene investment and opportunity, more classes must be scheduled at the Mary Spilde Center. Greater utilization would allow students to avoid the commute to the 30th Avenue campus. Students and faculty could take the bus or bicycle to the center, which has a secure bicycle room capable of holding 50 bicycles.

The following barriers would have to be considered:

- Scheduling classes in a manner that would not require students to travel excessively from main campus to downtown.
- Faculty are not currently included in the group bus pass agreement, unless they register for a class. Faculty who teach downtown could be provided with a bus pass for the term.

Plan to complete:

2017-2019: Lane Academic and Student Affairs (ASA) is working towards identifying classes that can fulfill these sustainability goals, including offering a full transfer degree option available at the downtown campus.

2019-2020: Using scheduling data, open conversation with Facilities Council and the Executive Committee about possibilities and barriers.

Increase the offering of online classes

These classes have less impact on waste and transportation on campus (and are thus helpful to our mission here), but demand increased support structures on main campus. The creation of an online course fee was designed to cover these costs, but assessment should be done at some point in the future to examine its impact on overall sustainability goals.

Plan to complete:

2017-2019: In response to student demand and instructor/program flexibility, online class offerings were increased, and this increase is built into the 2018-19 schedule across the School of Arts and Sciences, in particular.

4.3 College Owned Vehicles

Greening the Fleet

Lane will continue replacing College-owned vehicles with more climate-friendly ones, including hybrid and electric vehicles. The current fleet of gasoline-electric hybrids is getting to the end of its life; the College will replace these vehicles with plug-in electric hybrids. Electric vehicles must have the range needed for all college transportation. The College is currently exploring options with community-wide car share programs as an alternative to reduce the fleet of College owned vehicles.

Plan to complete:

2018-2019: Develop a green fleet purchasing policy.

2019-2021: Replace gasoline-electric motor pool vehicles with electric plug in hybrids.

2018-2019: Explore community wide car share options.

2019-2020: Replace remaining golf carts and small campus-only vehicles with plug in electric carts.

4.4 Commuting Data Collection Methodology

Measuring Emissions from Transportation

Data collection methodologies continue to evolve for Lane as an on-going learning experience. The College reviews methodologies from other colleges and universities to develop improved processes for Lane. The College plans to implement the following data collection methodologies in the short term to enhance calculations for transportation related emissions:

Plan to complete:

2018-2019: Implement data collection of LTD bus ridership to Lane Community College per term.

2019-2020: Conduct car counts into Lane (Gonyea Road and Schafer Drive) – the College can work with Lane Council of Governments (LCOG) to have pneumatic car counters installed on these roads in fall, winter, and spring terms.

2019-2020: Conduct manual counts of available parking spots at peak times in fall, winter, and spring terms.

2018-2019: Collect data of the number of bicycles on campus (based on bike rack counts and pneumatic bike counters in bike lanes on Gonyea Road).

2019-2020: Turn over baseline data to the proposed Transportation Study Group.

College-Financed Air Travel

This item should be relatively easy to complete with the addition of a field on the travel form to include air miles travelled. This information is easily available from all the airline carriers and from third party sites on the web, and can be used to track carbon emissions from air travel. Tracking air travel may also have a positive economic impact, which could be especially helpful in light of recent College travel budget reductions. A similar tracking method is employed at the College for printer paper use, and has been quite effective. The use of web-based trainings is increasing, as is the quality of delivery and content. The ISP will work with the Vice President of College Services to make the necessary changes to the travel form to include air miles. This will be a voluntary field and the ISP will work with departments to complete this field. The college could also encourage the use of Amtrak daily train service for meetings in the northwest, and participating in regional meetings involving multiple staff by carpooling using new electric fleet vehicles could be incentivized over air travel.

Plan to complete:

2019-2020: Develop a system to track miles of air travel funded by the College.

2019-2020: Promote the use of web-based conferencing and training to reduce the use of air travel to in-person meetings, or alternate transportation modes.

2019-2020: Conduct a survey of departments' use of web-based conferencing and training in lieu of travel.

4.5 Financing & Policies

Parking Fee/Financing of Climate-Friendly Transportation

For the past two years, the College has applied for a transportation grant from the state to perform traffic and engineering studies on 30th Avenue to make the corridor friendlier to bicycles and pedestrians. So far, Lane has been unsuccessful in these efforts. Every year for the past several years, the topic of a fee-based parking is discussed by a small group of people, but without action due to the cascade of consequences that require a more cohesive strategy with college-wide participation and buy in.

The College will continue to seek opportunities for federal and state funding for transportation alternatives. This could include proposing a parking fee system that optimizes accessibility and climate-friendly transportation using research on best transportation demand management (TDM) practices at colleges and universities.

The proposed Transportation Study Group (TSG) and Facilities Council will examine any recommendations or findings regarding parking and parking infrastructure.

Integrate the Climate Action Plan with Other College Plans and Policies

Facilities Management and Planning and project managers for the Facilities Master Plan are familiar with the goals of the Climate Action Plan. Once the Facilities Master Plan process is complete, the TSG will examine any recommendations or findings in relation to the Climate Action Plan.

Plan to complete:

2020-2021: Update Lane's 2006 Transportation Plan.

2019-2020: Incorporate the Climate Action Plan 2.0 with the College's Facilities Master Plan that is currently being developed

2019-2020: Increase offerings of online and hybrid classes. Develop a system to monitor how these classes contribute to a smaller carbon footprint.

2018-2020: Increase the use of satellite centers to reduce commuting distances for residents.

2019-2020: Adopt a "no idling" policy.

5.0 Agriculture & Land Use

5.1 Learning Garden

The Learning Garden is a student-funded organic garden that works to educate students about local and regional food cultivation and farm-to-table eating, and also supplies fresh produce to the Culinary Arts Program for use in classes and in the Renaissance Room restaurant. The garden also supplies fresh produce for the Center for Meeting and Learning, Lane's catering department. In response to changing growing climate in the Willamette Valley, the Learning Garden has recently begun to experiment with growing out-of-zone crops. Student contact hours in the garden have increased yearly, and now average about 2,500 hours per academic year. The garden is located behind the childcare center at the southwest corner of campus and can be hard to find for some. This plan seeks to increase the knowledge and visibility of the garden, with an eye toward expansion and possible rentable space for events.

Plan to Complete:

2017-2018: The Learning Garden coordinator will visit two classes each term and table in the cafeteria four times per term to advertise and promote the Learning Garden.

2018-2020: Earth Day events will be held in the garden.

2018-2019: The garden will supply student plots and tools for students and staff who wish to grow their own food. Students having the priority to use the beds.

2019-2020: Planning for a Learning Garden pavilion in a gravel lot above and to the west of the garden will continue. The pavilion would be suitable for classes and campus gatherings, with rentable space for events.

2019-2020: Draft a comprehensive ten-year vision for the garden.

2019-2020: The Institute for Sustainable Practices will attempt to bring the FTE of the Learning Garden Coordinator to 1.0 to reflect the increase in student contact hours. Goal for student contact hours: 2,750.

2018-2019: The Learning Garden will expand the fence line and gates to encompass the greenhouse, resulting in an expansion of approximately 2,500 square feet. The expansion will allow more space for experimental crops, student plots, and possible coursework study plots.

2020-2021: The completed Learning Garden Pavilion will be available for Learning Garden workshops, Continuing Education classes, and Center for Meeting and Learning events for College departments and community members.

2020-2022: Some previously landscaped areas and turf areas are replaced with vegetable crops and native edibles.

5.2 Develop Wetlands and Forest as Education Centers

The College owns 108 acres of forest to the south of campus and 36 acres of wetlands to the north of campus. The College should care for and use these areas as education centers for the campus and Eugene and Springfield communities. In 2016, the Whole Earth Nature School began operating their K-5th grade summer nature camps in the forestland south of campus. This has resulted in new users and visitors to the College, as well as removal of invasive species and development of trails and outdoor classrooms for educational purposes. In 2016-2017, the City of Eugene initiated discussions with the College about the access of community members to the Suzanne Arlie City Park through Lane's campus.

Plan to complete:

2017-2018: Begin discussions with Paul Ruscher, Division Dean of Science, to discuss a vision for the forest and wetland. Dr. Ruscher arrived at Lane after the college purchased the wetland property, but has been a chief proponent of utilizing it for its environmental and educational values. Dr. Ruscher is also a member of the Facilities Council and Sustainability Committee. His students also created a test plot in which a forested area shared by LCC and private property was assessed for its carbon storage potential, and found numbers that were different than were used in the first action plan.

2018-2019: Create and submit a draft vision to the Executive Committee, the Facilities Council, and Facilities Management and Planning for feedback. This visioning plan could include information on how these learning centers are developed, and how academic campus programs could utilize them as well to develop better understanding of their ecosystem functionality. Plans for working with other agencies to enable creation of stewardship, monitoring, and management plans for the wetland, meadows, and forestlands scoped out over time.

2019-2022: Work towards assessing multiple forested and wetland plots for their carbon storage offset potential and coming up with a net campus assessment of carbon storage that is realistic for the next update. Such an effort could potentially involve Science Division, Flight Technology (drone overflights), Social Science (land cover analysis with remote sensing and GIS), Graphic Arts (use of imagery to tell stories), and Mathematics and Computer Information Technology (data science) programs, as well as cooperative work experiences and internships.

6.0 Adaptation / Education / Habituation

The intent of this section is to widen the gaze of sustainability as a fully mature program, capable of working to improve the social fabric of the College while maintaining and developing the operational excellence achieved over the past fifteen years. Most of the actions detailed below work to intertwine sustainability into instruction, diversity, student government, professional and organizational development, and the student experience. By demonstrating the fundamental relationship between sustainability and the social and human experience, we can work to address the structural behaviors, attitudes, and habits that are the source of both the problems and solutions of living well on the planet we share.

6.1 Events and Marketing

In 2013, Lane Community College hosted the Oregon Higher Education Sustainability Conference, which brought together over 300 participants from five states. Hosting the regional conference allowed Lane to highlight its achievements and welcome students, faculty, staff, and executives from over 20 colleges and universities from as far away as Montana. Numerous community members from Eugene and Springfield volunteered or participated in the three days of workshops, breakout sessions, and activities.

Online Presence

The College sustainability website and Facebook page continue to be updated with current events and activities. The Institute for Sustainable Practices would like to redesign the webpage for ease of navigation, opportunities to convey conduits of action, and visual appeal.

Plan to complete:

2018-2019: Update out-of-date information on the sustainability website. Make sure all links are working and information is updated. Meet with College webmaster and Marketing Director to determine options to redesign website.

2018-2019: Use Facebook, LinkedIn, Twitter and sustainability website to drive interest in sustainability at Lane.

2019-2020: Work on complete redesign of the Institute for Sustainable Practices website. Work to create portals of information for faculty instruction, staff operations, student involvement, and community information and involvement.

2019-2020: Create conduits of action through polls, surveys, and ways for the College community to influence decision makers. Create staff bios on website. Create a LinkedIn page and Twitter presence.

Events

The ISP has an array of events and marketing opportunities that will propel it into the future. The ISP plans to offer and participate in the following yearly events:

Plan to complete:

2018-2019: Host two to four events per year that are open to students, employees, and the community.

2019-2020: Hold a one-day conference for Lane employees focused on implementing Lane's sustainability strategic direction and Climate Action Plan.

2019-2020: Seek to have staff present at conferences and webinars as regional experts on higher education sustainability.

2019-2020: Be a constant presence at College in-service and programs.

6.2 Sustainability Education

Campus Learning Laboratory

In 2013, Lane Community College opened the Mary Spilde Downtown Center, a LEED® Platinum building in the heart of downtown Eugene. The building houses the Northwest Water and Energy Education Institute, among other programs, and enables students to interact with the building as an experiential laboratory. A solar training laboratory was included in the last bond, but was removed as a project and will be revisited at a later date as demand requires.

Plan to complete:

2018-2019: Improve building automation systems and provide access to instructors to use in class. This access was provided previously, but was not actively used by instructors. The ISP will work with instructors to determine whether the available data is useful to instruction and if not, how to assist instructors in integrating it into classes.

2019-2020: Revisit the need for a solar training lab and continue to support instructors using available building system information, as well as to seek other instructors who may find the information useful on an instructional or at an academic level.

2019-2022: Improve the Outdoor Classroom and its utilization potential, and work towards a true wetlands education center that could incorporate not only science but also arts, and help develop a partnership with area neighbors in the Russel Creek Watershed, the Coast Fork Willamette Watershed Council, and strengthen partnerships with the city of Eugene's Parks and Recreation programs, particularly for Arlie Park, which is adjacent to campus.

Infusion of Sustainability across the Curriculum

Develop methods for promoting sustainability professional development opportunities for College employees to access using existing professional development funds, including methods for rewarding and tracking employees who participate.

Develop methods for encouraging faculty who participate in sustainability professional development to modify courses to include sustainability content, or intentionally built them to incorporate sustainability principles. Develop methods to encourage academic divisions to apply for curriculum development funds for sustainability infusion in annual unit plans. Apply for grants and seek other opportunities to fund sustainability curriculum development.

Sustainability-Focused Courses

The College has identified some classes as sustainability-focused. Students can select courses that have the sustainability designation. The available sustainability-focuses classes are:

BI 103M	General Biology: Biodiversity & Sustainability
CST 201	Sustainable Building Practices
ENSC 181	Terrestrial Environment
ENSC 182	Atmospheric Environment and Climate Change
ENSC 183	Aquatic Environments
HE 255	Global Health and Sustainability
PS 297	Environmental Politics
REL 243	Nature, Religion & Ecology
SOIL 205	Introduction to Soil Science
SUST 101	Introduction to Sustainability
WATR 202	Fostering Sustainable Practices

Plan to complete:

2018-2020: Increase the number of sustainability-focused courses and develop methods for encouraging faculty to submit applications for sustainability course status.

2018-2019: Improve visibility of courses and designate sustainability-focused courses in print and online catalogs.

Sustainability Education in Targeted Areas

After a strong start on these items due mainly to hands-on management by the Sustainability Coordinator, the infusion of sustainability into the curriculum began to slow. Retirements by core faculty and the pressure of meeting a number of learning objectives are barriers to achieving these items. Recently, when performing information sessions concerning the Climate Action Plan, students reported that sustainability is rarely, if ever discussed by instructors. One student reported that the only time sustainability is discussed in class is when a student asks a question or raises the topic. One faculty member said that she would be willing to teach concepts of sustainability in her physical therapy assistant class, but she had no idea how to do that on a practical level. The ISP intends to refresh and restart the infusion of sustainability into the curriculum. The plan requires modification of instruction, so a core group of faculty will be recruited to participate. The Sustainability Committee could also place this on their work plan.

The ISP plans to develop methods to increase the number of sustainability-infused and sustainability-focused courses in the following specific areas:

- Economic sustainability
- Social sustainability
- Permaculture/sustainable agriculture
- Climate change impacts
- Activism

Plan to complete:

2018-2019: Survey and meet with faculty and deans about attitudes, barriers, and possible opportunities with regard to infusing sustainability into course work. Identify leaders in sustainability teaching in the classroom.

2019-2020: Based on information gathered on the previous surveys, work to create a variety of paths for faculty to engage sustainability in their classes and course work. Some possible outcomes could be: sustainability teaching modules for individual disciplines, structured and scheduled lessons and presentations by the Institute for Sustainable Practices staff, dedicated fall in-service sessions on the general principles of teaching sustainability, or direct interaction with faculty on a one-to-one level. Offer fall in-service session about the general principles of sustainability teaching.

2019-2020: Introduce two or three pathways for faculty to engage sustainability in their classes. Actively recruit faculty to participate. Continue in-service presentations.

2020-2022: Create dedicated page and space in the ISP work plan for developing faculty. Consider presenting ideas to regional and national conferences.

6.3 Increased Collaboration with College Departments & Groups

Access, Equity, and Inclusion

The Institute for Sustainable Practices plans to increase collaboration with Access, Equity and Inclusion staff to form links between diversity and sustainability. One of the key takeaways from information sessions is the need to fold cultural awareness into sustainability at Lane through imagery, language, and driving philosophy.

Plan to complete:

2018-2019: Collaborate with the Associate Vice President of Equity and Inclusion on a project or speaker series about the links between access, equity, inclusion, and sustainability. Identify funding sources. Begin conversations with the ASLCC Multicultural Program Coordinator and the ASLCC Gender and Sexual Diversity Advocate to identify links between sustainability and cultural, gender, and sexual diversity. Request additional guest appearances at Diversity Council to discuss links, actions, and takeaways.

2019-2020: Develop a Speaker series or project about the links between access, equity, and inclusion and sustainability kickoffs, targeting all members of the College and Lane County communities. Perform follow-up survey or interviews about effectiveness of speakers and content. Seek to have Sustainability Coordinator become a member of the Diversity Council. Invite Diversity Council members and ASLCC Diversity Team to sustainability events, such as Earth Day and Welcome Week.

2019-2020: With the assistance of the Diversity Council; the Access, Equity, and Inclusion staff; and ASLCC Diversity Team, begin to develop information, campaigns, and presentations that deepen the links between sustainability and diversity.

Professional and Organizational Development

Much of the content in emotional intelligence, growth mindset, and appreciative inquiry professional development offerings features direct links to sustainability. The ISP could also use the Professional and Organizational Development (POD) department to craft and deliver specific courses and trainings about sustainability aimed at developing faculty and staff competencies and growth.

Plan to complete:

2018-2019: Leverage existing trainings offered by POD. Increase involvement in Aspiring Leaders Program, training future College leaders to develop styles of leadership that promote and practice the awareness necessary to lead through uncertainty and develop habits that exhibit leadership that embodies social sustainability. Continue to offer presentations about change management and leadership that have direct connections to sustainability.

2019-2020: Begin to develop content-specific trainings on sustainability. Use training in emotional intelligence, appreciative inquiry, growth mindset, and institutional coaching to develop a framework to train leaders in sustainability at the staff, faculty, managerial, and executive levels. Offer two trainings internally and present concept or training at one national conference.

2019-2022: Improve content-specific trainings. Offer two to three internal trainings per year. Consider offering trainings to other colleges and universities.

Student Sustainability Cohorts

Faculty are not the only means of communicating sustainability in courses. Faculty demands require they move deliberately through content to achieve learning outcomes. A classroom is a community. The student sustainability cohort action seeks to educate and empower students to be active participants in the classroom community.

Plan to complete:

2018-2019: Recruit a cohort of six students. Provide training and coaching on how to properly interact with classes and instructors to ask probing questions about the relationship of the course content and a related aspect of sustainability. The goal will be to engender conversations to explore sustainability in the learning environment. Follow up at mid-term and finals week to debrief and evaluate the experience. Contact instructors who had students in their classes for feedback.

2019-2020: Modify cohort program based on feedback from students and instructors. Recruit cohort of ten to twelve students. Create program structure for future cohorts.

2019-2022: Continue to improve and expand program. Improve evaluation instruments. Seek to enroll up to 25 students per year. Consider developing program into a credit offering. Present concept to regional and national conferences.

Associated Students of Lane Community College (ASLCC) and Council of Clubs

Engaging student groups and clubs is essential to achieve our sustainability goals. In 2016, a new club, Students for Environmental Advocacy, was formed to provide students with a channel to engage the College on sustainability issues. The ASLCC Student Sustainability Coordinator is a permanent part of the student government.

Plan to complete:

2018-2019: Work with ASLCC Sustainability Coordinator to improve student involvement in sustainability programs and offerings on campus, such as the Sustainability Committee, Learning Garden, sustainability student cohort, and transportation activities. Engage with other student clubs, such as the Green Chemistry Club or those clubs which support students of underrepresented communities, to facilitate increasing outreach on common goals.

2019-2021: Continue to work with ASLCC to attract students to sustainability offerings on campus, especially the student sustainability cohort Program and Sustainability Committee.

2018-2022: ASLCC and the ISP work together to cohost one to two events a year, such as Earth Day and Walk and Bike to School Day.

Sustainability Committee

The Sustainability Committee was formed in 2004 and is responsible for much advancement in sustainability at the College. Officially a subcommittee of the Facilities Council, the population of the committee waxes and wanes and student involvement in particular has been scant. As the College's sustainability efforts have matured, the Sustainability Committee needs to be refreshed to support the work and be a part of the Institute for Sustainable Practices.

Plan to complete:

2018-2019: With the ASLCC Sustainability Coordinator and the Sustainability Committee Co-chair, begin to recruit new members for the committee from staff, faculty, and students. Invite the ASLCC Multicultural Program Coordinator and the ASLCC Gender and Sexual Diversity Advocate. Focus for the year will be visiting different sites and buildings for tours and discussions. Consider revising the Sustainability Committee charter.

2018-2020: With a revised charter, continue to develop the committee. New students will need to be recruited every year. Create a defined work plan for the committee and report to the Facilities Council. Complete two to three small or medium-sized projects supporting the Institute for Sustainable Practices work plan, such as improving infusion of sustainability across the curriculum.

2019-2021: Refreshed committee continues to work with the ISP to support activities. Consider the possibility of having one joint Diversity/Sustainability Committee meeting, program, or project.

Green Office Certification Program

The Green Office Program was created in 2013. Currently, seven offices have earned Green Office certification. The program works to help departments take small actions to improve their environmental footprint. There is an incentive program in place to motivate departments to enroll in the program. The program has been successful in providing education and actions to raise sustainability awareness at the departmental level. The Institute for Sustainable Practices

wishes to update the program to align it with the Climate Action Plan, Energy Conservation Plan, Transportation Plan, and other ISP programs and initiatives. One purpose is to provide more consistent data gathering, expanded education, and targeted follow-up with departments who are Green Office certified.

Plan to complete:

2018-2019: Complete certification of departments currently in the program. Ask others in the queue if they wish to complete certification in the existing program structure or if they wish to be in the pilot group for the revised program. Revised program will launch as a pilot in 2018.

2018-2019: Begin redesign of program to include a yearlong process of baseline data gathering, operations and behavior change improvements, and performance periods. The ISP will perform follow up data gathering and education for one year after the certification period. An email list for all Green Office certified offices will be created to maintain better contact and share information. Seek two offices to pilot new program.

2019-2020: Make any necessary changes based on feedback from pilot group. Seek two to three offices to become Green Office certified. Perform follow up with pilot group.

2020-2022: Continue to recruit offices to become Green Office certified. The five year goal for the program is to have 50% of all Lane departments certified.



VI. Conclusion

Establishing goals, forming strategies, and measuring greenhouse gases form an important part of our work at Lane. The next and crucial step is the implementation of the mitigation strategies outlined in this report. This will require administration, faculty, staff and students to make sacrifices and accept the challenges outlined in this document. Working together, the family of Lane Community College can make a powerful impact on the future of our institution, our children and the planet we all share.

This document will continue to live, grow, adapt and change over the years. Technologies, policies, and our relationship with the environment will change. This is a living document that will be improved by current and future members of our College community. New visions will emerge with new ideas and energy. We welcome the challenge and encourage others to join us in our journey to 2050.

The College will finance the previously listed strategies using financing mechanisms such as capital funds, bonds, revolving funds and operational budgets. Each investment will be prioritized based on its impact on student success, environmental impact and cost savings.

