As an institution, Chapman offers ample opportunities to receive a rich education. From the esteemed business courses to the world-renowned film program, the university forms first-year students into global citizens. Due to the everyday impact of climate change, this education cannot come without an emphasis on sustainability.

It is important for students to learn how to care for the world around them and make better choices when it comes to sustainability, consumption, and education. We propose that Chapman supplements current academic resources through implementing several educational, sustainable engagement opportunities, including academic greenspaces, an orientation sustainability module, and a sustainable food certification.
INTRODUCTION

Chapman’s landscape offers a diverse range of both recreational and academic areas. These include fountains scattered across campus, ivory buildings surrounding Memorial Lawn, and various plants encompassing campus walkways. These attractive areas have resulted in the university being regarded as one of the most beautiful schools in the nation, which it was officially recognized for in 2012 (1). In the SSS, 82% of respondents stated the landscape and/or aesthetic of the university influenced their decision to attend Chapman while only 18% of respondents said it did not. Thus, maintaining the university, continuously improving its spaces, and offering ample opportunities for student engagement with campus should be deemed crucial initiatives for Chapman administrators. Research has even suggested that increased accessibility and use of outdoor campus spaces can increase the retention rate among first-year students (2).

The university’s vision and mission statement incorporate several central commitments, including creating "stimulating learning environments for a diverse population" (3). This goal can only be fully achieved with the inclusion of inviting outdoor spaces as, given the Southern California climate, Chapman students often spend their time outdoors. This chapter will identify areas of campus that have the potential to improve this central commitment through sustainable beautification of outdoor areas. This chapter will also identify areas of Chapman that can implement sustainable components to foster environmental awareness and engagement, enhance physical and mental well-being, and improve education.

THE PSYCHOLOGY OF SPENDING TIME OUTDOORS

In several research studies it has been shown that time spent outdoors positively correlates with improvement in psychological and physical factors of health. In a study published in Frontiers in Psychology it was found that as little as 10 minutes of time spent sitting or walking outdoors has beneficial impacts for college students (4). These include significant improvements in heart rate, cortisol levels, and blood pressure (4). Another study published in the Journal of Environmental Psychology found that as little as 40 seconds gazing at a green roof...
in the middle of completing an academic task resulted in students making fewer errors (5).

Greenspaces have direct, positive impact on physical and mental well-being, while exposure to urban landscapes is often detrimental to aspects of physical health that are important for college students, such as attention span (6). Feelings of connectedness to the outdoors foster similar psychological benefits (6).

**ACADEMIC GREENSPACES**

A 2021 study conducted by Julia Foellmer and colleagues found significant evidence that spending time in “academic greenspaces” can improve various aspects of students’ personal lives and academic progress (7). The study analyzed the Hofgarten at the University of Bonn in Germany — a vast greenspace central to the school. Most students surveyed stated that greenspaces are fundamental aspects to university image, identifying the Hofgarten as an essential element to the student experience. The study concluded that many students consider greenspaces crucial to university landscapes and identified with the statements that they could concentrate better after spending time in the area (7). Overall, the Hofgarten proved beneficial in reducing mental stress for both students and staff, supporting indicators of mental and physical well-being and setting precedent for global sustainable campus landscaping. This data is corroborated by others, namely an article published in the Journal of Studies and Research in Human Geography where researchers found that attractive greenspaces correlate with student opinion on the overall aesthetic of a university (8). This research by Speake et al. highlights the need for several forms of greenspace to accommodate for diverse academic needs on campus.

**University of California, Los Angeles**

In a report completed by the University of California, Los Angeles (UCLA) 2016 Green Buildings Team, a sustainability research team analyzed green planning on campus looking for ways to improve resource waste efficiency (9). UCLA is located in Los Angeles County, neighboring Chapman’s home of Orange County, California. As part of the project the team proposed an initiative to improve “neglected areas,” or underutilized areas, by incorporating functional, sustainable components. The team highlighted several components that provide increased resource waste efficiency and offer students a sustainable way to engage with the environment, including outdoor classrooms, gardens, hammocks, and meditation spaces (9). Research suggested that a hammock rental system would offer flexible and enjoyable outdoor access and that vertical gardens with native plants peaked student interest and exposed students’ lack of education toward Southern California plant species. Benefits of these attributes include group interaction with the outdoors,
increased flora knowledge available to students, and improvement of mental health through the addition of natural elements to functional spaces (9).

At Chapman

Chapman is home to a variety of outdoor areas that can be used for recreation, education, and studying. Sitting centered on North Glassell Street is Chapman’s signifying outdoor recreational area, Memorial Lawn. This is one of the most prominent greenspaces at Chapman, with students actively engaging with this area every day. Other prominent outdoor areas at the university include the fountains scattered around campus, outdoor patio seating areas at the Keck Center for Science and Engineering, the leveled stairs and grass area in the Attallah Piazza, the Argyros Forum deck, and several benches situated across campus. According to Chapman’s first sustainability audit in 2013, the university hosts 44 different plant species, 3 of which are native to the Southern California area (10). An updated flora database is in progress, according to university faculty.

While 95% of students in the SSS agreed that the Keck Center for Science and Engineering building is aesthetically pleasing, 81.5% of students in the same survey disagreed that Hashinger Science Center was aesthetically pleasing. This, as well as the lack of native plants on campus, exposes a prime opportunity for improvement of spaces surrounding the Hashinger Science Center to increase student approval and simultaneously encourage outdoor activity.

SUSTAINABLE IMPROVEMENTS

In addition to the physical and mental benefits that greenspaces offer students, they also promote sustainability and improve surrounding environments. A 2020 research study surveying over 24,000 people in England found a significant positive relationship between recreational time spent outdoors and beneficial environmental behaviors. These results were significant regardless of gender or socioeconomic status, suggesting that increased access to the outdoors improves one’s tendencies to practice sustainable living i.e., biking, recycling, and environmental volunteering (11).

Incorporation of native plants on campus is also environmentally beneficial. Southern California has a wide variety of native plants that are well-acclimated to surviving the dry conditions. Native plants are sustainable as they require little to no maintenance or irrigation, with exceptions during extreme or out of the ordinary conditions. DisneyLand Resort in Anaheim, California has incorporated native plants into their landscape planning (12). These plants are deemed “water-savvy” and resilient to dry conditions in the area. Additionally, to promote sustainable awareness the resort provides maps allowing visitors to engage with outdoor areas (13), adding an immersive experience and encouraging visitors’ appreciation of greenspaces. Native plants also foster
sustainability by providing a habitat for local, native insects and small animals, such as bees, ladybugs, and hummingbirds (14).

RECOMMENDATIONS

Outside of the right side of Argyros Forum there is a small walkway with trees, plants, shrubbery, and stairs (Figure 1). Most of this area is concrete with little lighting. There is a staircase located on the left side that leads up to the higher levels of Argyros Forum — this area is dimly lit with fluorescent lighting. The space is in between Argyros Forum and Hashinger Science Center, with the same building style as the science center. Most students in the SSS did not agree that Hashinger was an aesthetically pleasing environment.

This area sits directly across from Hashinger classrooms, the location of many different science courses that house students every semester. Facilities Management at Chapman has stated that this area gets little to no use other than as a means for students to access their classes (Ruben Medina, Facilities Management). Despite one bike rack, that Facilities Management mentioned students rarely utilize, there is no incentive for students to spend time in this area, leaving it as an underutilized area on campus.

To improve this environment, and other neglected or underutilized outdoor areas around campus, Chapman should implement various sustainable elements, creating more greenspaces that encourage students to engage with the environment.

Areas 1 and 2 as seen in Figure 1 are characterized by brick wall space. These areas are at least 6 ft. 10 in. tall and 7 ft. 1 in. wide. Area 3 is a rectangle of pavement 12 ft. 11 in. wide and 24 ft. 6 in. long that leads to the staircase. Area 4 is a small patch of red mulch with a planter that is not in use — this area is 7 ft. 2 in. wide and around 2 ft. 6 in. long. Area 5 has a few trees and plants that Facilities Management oversees in conjunction with Brightview Commercial Landscaping. Plants like these would not need to be removed from greenspaces as they are already drought-resistant (Medina).
Areas 1 and 2 can be covered by a vertical garden containing plants native to Southern California (Figure 2). Native plants support the surrounding insect environment and require less maintenance than non-native plants (14). The California Native Plant Society offers webtools with basic landscaping designs for native plants, as well as a search bar to find appropriate flora based on location.

See Figure 2. Area 3 can contain an upcycled wooden bench and a solar charging station. Area 4 can also contain a wooden bench and solar charging station, with the addition of stepping stones placed close together leading up to Area 5, and a Little Free Library in the corner of these areas. Situated in Area 5 are solar-powered string lights and a removable hammock.

**IMPLEMENTATION OF RECOMMENDATIONS**

The wooden benches should be sourced sustainably, ideally from Street Tree Revival — a wood recycling initiative that works with the California Department of Forestry and Fire Protection to not only repurpose dead or damaged trees, but replant and maintain California forests (15). Made
from sustainably-sourced Deodar Cedar wood, these benches have been provided to over 20 Los Angeles schools for use outdoors (Christine McCarthy, Street Tree Revival). To ensure durability of the cedar, a cement block should be placed under the bench in Area 4, reducing the likelihood of the wood rotting underneath (Medina). The USB solar chargers can be sourced from SolarSynthesis, which provides durable solar charging stations fit for powering both phones and laptops (16).

To adhere to Fire and Life Safety codes, vertical gardens are situated on walls where students will not be walking by, so the planters can protrude off the wall (Bart Sapeta, Campus Planning and Design) — see Figure 3. To ensure durability, the vertical planters should be commercial-grade, reducing the likelihood of them needing to be replaced (Sapeta).

Little Free Library is a non-profit organization that has a variety of programs, one of which allows individuals or groups to purchase a small library and register it in a location (17). Individuals can then take and replace used books from this library free-of-charge — this component reduces resource waste by efficiently sharing books. Hammocks can be offered using a rental system to avoid vandalism, or installed permanently with sleeves to protect the trees. Hammocks will allow students a comfortable place to relax before and after class, or to read a book from the Little Free Library.

Facilities Management should work with the Office of Sustainability to regularly check greenspaces and ensure they are being maintained. To implement these recreational components Chapman should consult with Civic Engagement, as they currently oversee the community garden located in Davis Hall at the Chapman dorms. However, these areas should be maintained by Facilities Management so that they can work in conjunction with Brightview Commercial Landscaping to ensure the landscaping and aesthetics are up to par. University greenspaces must also be created with supervision from the Office of Sustainability, Fire and Life Safety, and Campus Planning and Design.
CONCLUSION

Spending time outdoors has immense benefits for college students, including the improvement of their physical and psychological well-being. Not only can students benefit from engagement with the environment, but the environment can also benefit from human interaction. Through effective use of sustainable tactics, such as the ones mentioned in this study, students can find increased appreciation for the outdoors and become more likely to take care of it by being environmentally conscious.

This study analyzes several tactics that can be used to encourage engagement with the outdoor environment. The sustainable elements mentioned include solar charging stations, outdoor hammocks (preferably used in a rental system), repurposed wood furniture, solar string lights, vertical garden walls, educational signage, and small outdoor libraries. The space outlined in Figure 1 has been underutilized and has the potential to incorporate all these elements in an efficient manner, according to Facilities Management representatives. Additionally, several campus departments have agreed that the area receives heavy foot traffic due to students entering and leaving local classroom spaces, so this space would be easily accessible to a large population at Chapman. With these components Chapman can improve this space and other underutilized areas across campus, ensuring the upkeep of the landscape and encouraging students to partake in sustainable practices.

While the space between Argyros Forum and the Hashinger Science Center serves as a model for the incorporation of all these elements, there are several other spaces on campus that can benefit from these sustainable engagement elements. Further research on this subject should include outdoor areas that are already aesthetically pleasing, but could be improved to encourage students to spend more time engaging with them. For example, hammocks, solar charging stations, and outdoor furniture can be implemented in the corners of Memorial Lawn to encourage students to spend time outside on the lawn. Plants around campus can be switched to not only drought-resistant species, but species that are native to Southern California. Signage can surround these plants, educating students on the importance of supporting local flora populations and instilling an appreciation for the surrounding environment, which in turn can lead to increased environmentally friendly actions. Other greenspaces around Chapman that can incorporate these tactics include the Attallah Piazza, Musco Lawn, the Argyros Forum deck, and the Global Citizen’s Plaza.

This report was put together with information from several members of Chapman’s departments. With the assistance of Fire & Life Safety, Campus Planning and Design, Facilities Management, and the Office of Sustainability, these recommendations have been retrofitted to be safely implemented on campus in an efficient manner.
INTRODUCTION

Every year the student population at Chapman grows as students accumulate internationally. Each brings with them their own understanding of the environment and their own interactions with it through activities like recycling, composting, and consumption. Chapman University has dedicated itself to providing a “campus culture that promotes a sustainable future” as well as educating students to become global citizens. But how can it accomplish these goals without ensuring that each student is presented with information and resources in order for them to learn and protect the very place they live?

A mandatory sustainability module (or section of an online class) within the required online Canvas Orientation Course would ensure that all students, before the end of their education at Chapman, have basic knowledge about their personal environmental impacts, waste sorting, campus sustainability resources, intersectional environmentalism and the role of identity in environmentalism, and some next steps in their sustainability education journey. This module will set Chapman apart from similar universities, that do not provide such a resource, bringing it to new heights as students compare it to other competing options. Additionally, the module would bring the Chapman community closer together; according to their application of the Theory of Planned Behavior, Fielding and Macdonald found that environmental activism created a significant strong sense of community among first-year students and participants of a sustainability conference (1). The National Union of Students has found that two-thirds of students want to learn more about sustainability (2). Locally, approximately 48% of Chapman students strongly agree that it is important for their university to be sustainable (Figure 2). As this project documents how the module aligns with Chapman’s goals, surveys the student population, researches programs at similar institutions, details empirical findings on the importance of sustainable orientations, and collects coursework, the only thing left to do is to implement the module.

CURRENT STATUS

Chapman’s Commitment to Sustainability Through Global Citizenship
Through its mission statements, values, and policies, Chapman has dedicated part of its educational process to sustainability in order to promote global citizenship. According to its Sustainability Policy, enacted in the Fall of 2014, “Chapman University is committed to a campus culture that promotes a sustainable future. This commitment is instrumental to Chapman’s mission to educate ethical and informed global citizens. As such, it calls upon all constituencies of the University to carefully evaluate short- and long-term social, economic, and environmental impacts of decisions before acting. The University demonstrates this commitment through sustainable practices in strategic planning and ongoing operations as well as sustainability-focused educational programs, research, and community engagement.” (3)

Chapman has set a foundation for the importance of implementing a sustainability orientation through its commitment to Global Citizenship, shown even on campus through the Global Citizens Plaza (Figure 1). This curriculum would serve as a means of guiding students towards becoming engaged for positive good in the community as well as allow them with tools to follow the Global Citizenship Institutional Learning Theme guiding principles:

• "Contribute knowledge and skills to strengthen local and global communities

• Actively participate in organized action for social justice and social change

• Serve and advocate for others, communities, and efforts with a focus on the common good” (5)

While Chapman follows through with the promise to support sustainability-focused educational programs (several of which are listed in the next section), it falls short in ensuring that all students take part in some sections of this education. Although Chapman has a developed Environmental Science program as well as plentiful multidisciplinary courses with environmental themes, the fact that students must elect to take these classes means that they can be easily lost in the mix of other opportunities at Chapman. In order to ensure that all students are provided with an introduction to environmental themes, it is imperative for a mandatory sustainability orientation module to be implemented.
Chapman's First Year Experience

So far, sustainability has been integrated into the first-year experience primarily through event planning from Chapman's Office of Sustainability, like tabling in the Piazza with educational campaigns during resource fairs (often during the week of orientation). Additionally, first-years are exposed to the ideas of sustainability through attending programs brought to them by their Resident Advisors, enrolling in relevant classes (like those within the Environmental Science and Policy curriculum as well as several First-Year Foundational courses), and engaging in on-campus clubs (like Mission Environment and Orange County Association of Environmental Professionals). However, all of these opportunities for sustainability engagement are optional and often difficult for students to seek out when there are many other events and resources advertised to them during their first year. The following section documents the resources students are aware of and indicates that students are not exposed to all that Chapman has to offer.

As stated before, there are several classes that teach about sustainability. These include classes taught in several disciples that include but are not limited to the following:

- ENV 350 - Corporate Sustainability Management
- HON 376 - Sustainability in an Unsustainably Structured World
- PHIL 303 - Environmental Ethics
- ENG 374 - Environmental Rhetoric
- POSC 378A - The Politics of Climate Change

Some years there are even sections of the First Year Foundations required course themed under sustainability. However, as previously mentioned, unless actively sought out, students will not come across this curriculum. And upon closer examination one can see that these sustainability-themed courses are not lower divisions, so they will be off-limits to first-year students as well as some transfer students.

Since the Pandemic, Chapman's Orientation Coordinating Office has included a required canvas module to be completed during orientation. While at first, this module was necessary to implement online orientation while the University was not offering in-person activities, it has now continued to offer the following modules and sub-fields:
Welcome Panthers - a brief welcome to the University and an explanation of the module

Campus Resources
- Academic Resources - videos and links to University pages of the following resources
  - Academic Calendar
  - Academic Advising
  - Career and Professional Development
  - Center for Global Education
  - Center for Undergraduate Excellence
  - Office for First-Generation Students
  - Tutoring and Learning Center
- Leatherby Libraries - a video and resources to contact the librarians
- Student Business Services Information - helpful links, contact information, hours of operation, and resource forms
- Student Wellness Services - videos and links to the following resources
  - Student Health and Wellness Services
  - The Wellness Project
  - Student Health Services
  - Psychological Services
- Disability Services
- Veterans Affairs - links to the veteran's resource center, financial benefits, and campus resources as well as contact information
- Supplementary Resources
  - Writing Center
  - Registrar
  - Student Employment Services
- IS&T and Canvas Resources
  - Information System & Technology (IS&T) - videos and links to the Service Desk
  - Navigating Canvas - tutorials, guides, and links for students transitioning onto the platform
- Chapman Involvement
  - Fish Interfaith Center - video and upcoming program schedule
  - Getting Involved with Student Engagement
    - Agyros Forum Student Union
    - Civic Engagement Initiatives
    - Cross-Cultural Center
    - Fitness & Recreation Services
    - Fraternity & Sorority Life
    - Student Organizations
    - Student Government Association
    - University Program Board
    - Involvement Consultation
While the section is quite comprehensive, it excludes any information on the sustainability resources available to students. Students need to be made aware of all that they can take advantage of at Chapman, especially when it comes to sustainability, otherwise, students will not be able to live as sustainably as they could with such resources. Through the Student Sustainability Survey (SSS) conducted for this evaluation, we were able to determine the extent to which students were aware of the different resources. As shown in the next section within figure _ students were differently aware of several different programs on campus; on average, approximately 27% of respondents knew about all the programs, the top programs that were known about by 82% of students was the water refill stations and recycling programs, and the lowest known program by about 3% of students was Regalia Reuse in which students can donate and borrow graduation gowns.

As there is already infrastructure set up for a sustainability orientation module as well as the SSS has shown how students are in need of exposure to this information, it appears that the students of Chapman University could greatly benefit from a sustainability orientation module.

Student Sustainability Survey

In order to gauge the current campus feelings and knowledge about sustainability, a survey was conducted and the following statistics were calculated using responses from 161 Chapman students from a variety of years and a range of programs.

The first question in the survey asked respondents to define environmental sustainability. In order to best reflect submissions, Figure 1, a word cloud, was created using WordCloud Generator from WordClouds.com (7). From Figure 1 we can see that the most frequently used words were environment (85 times), resources (35 times), waste (20 times), environmental sustainability (11 times), natural resources (11 times), future generation (9 times), and carbon footprint (7 times). This allowed us to acknowledge that a majority of students...
into Chapman with some idea of environmental sustainability, however, there was a handful of responses that made it clear that the respondent was unclear about a definition. Additionally, as the questions continued, the gaps in the student’s knowledge become more clear. Question 2 of section 8 asked students about how important they ranked environmental sustainability on a scale of 1 to 5 (Figure 4). Students mostly responded with fours (about 44%), that sustainability was somewhat important to them, personally. The following question expanded upon this idea, asking students how important it was that their university is sustainable on a scale of 1 to 5 (Figure 4).

Students this time mostly reported five (about 48%) that it was very important for their university to be sustainable. From these responses, we gathered that even though a majority of students did not recognize sustainability as being important to them personally, the majority cared that their university is sustainable.

As shown in Figure 5, a majority of students responded that the greatest barrier to making more sustainable choices in their everyday lives was convenience as approximately 69% (111 individual responses) of responses included this choice. The next highest was financial cost with approximately 57% of responses, followed by education/awareness with approximately 50%, and lack of motivation with approximately 33% of responses. Students were also given the choice to fill in their personal reasons and we received the following responses:

- “Efforts are wasted when 70% of recycled material is outsourced to China which then dumps it into the ocean.”
- “When each professor prints out 100s of papers a year you don't feel like anything you do will have a positive effect.”
These sentiments show that students really do care about environmental sustainability and that they, as well as those around them, could greatly benefit from learning how to become more sustainable. The module could help students learn solutions to these problems as well as challenge them to think about the greater environmental issues that lie beyond recycling and plastics, like environmental racism. Additionally, it could allow students to channel this frustration into actions and solutions through the power of creating spaces of education and through inspiring dialogue for collaboration.

### Figure 5. Survey responses from SSS section 8, question 8.

<table>
<thead>
<tr>
<th>Response</th>
<th>Convenience</th>
<th>Financial Cost</th>
<th>Education/ awareness</th>
<th>Lack of motivation</th>
<th>Filled in Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>68.94%</td>
<td>57.14%</td>
<td>49.69%</td>
<td>32.92%</td>
<td>4.35%</td>
</tr>
</tbody>
</table>

Further analysis was initiated by discovering the resources that students were actually aware of as well. This analysis could show which programs had adequate advertisements and the ones which did not. For this question, students were prompted to select all the resources from a prompted list that they were aware of. As described previously and as shown in Figure 6, respondents mostly knew about programs dedicated to recycling and water refill stations and few knew about the regalia reuse program. These results show that a majority of the programs are not advertised enough and that there needs to be a better way for students to find out about these sustainability resources. However, the Office of Sustainability has worked well so far to promote these initiatives. Only one respondent responded that they were not aware of any of the programs. In order to stop students like that from slipping through the cracks without sustainability knowledge, the module is necessary.
### Comparative Status

**International Survey Data & Articles**

Several recent surveys have shown that there is an increased concern among students about climate change and a reflection of this concern in their wants to see this information be covered in their education. A 2020 global survey of 7000 responses from students in higher education found that 92% agree that sustainable development should be actively incorporated and promoted in all universities, 40% reported low or no coverage of sustainable development concepts in their course curriculum, 90% said they were willing to accept salary sacrifices in order to work in companies with good environmental and social records, and 75% said they were worried when asked to identify their feelings about climate change and the future. Several articles have been published pertaining to the successful outcomes of students and workers exposed to some sort of sustainability orientation. An empirical study of SMEs (small and medium-sized businesses) in Ghana revealed that firms can be better off financially when implementing ESOs (environmental sustainability orientations).

**Sustainability Orientation Programs at Other Institutions**

Several other comparable institutions have their own versions of a sustainability orientation that they have successfully implemented into the first-year experience.

---

<table>
<thead>
<tr>
<th>Resource</th>
<th>Sustainability Newsletter</th>
<th>Weigh the Waste</th>
<th>Paws for the Planet</th>
<th>Morlan Food Pantry</th>
<th>Recycling</th>
<th>Green Department Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>43</td>
<td>36</td>
<td>6</td>
<td>56</td>
<td>132</td>
<td>8</td>
</tr>
<tr>
<td>Percentage</td>
<td><strong>26.71%</strong></td>
<td><strong>22.36%</strong></td>
<td><strong>3.73%</strong></td>
<td><strong>34.78%</strong></td>
<td><strong>81.99%</strong></td>
<td><strong>4.97%</strong></td>
</tr>
<tr>
<td>Resource</td>
<td>Water Refill Stations</td>
<td>Bike and Train Vouchers</td>
<td>Composting</td>
<td>Volunteering Opportunities</td>
<td>Regalia Reuse</td>
<td>OCAEP Student Club</td>
</tr>
<tr>
<td>Responses</td>
<td>132</td>
<td>11</td>
<td>79</td>
<td>36</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Percentage</td>
<td><strong>81.99%</strong></td>
<td><strong>6.83%</strong></td>
<td><strong>49.07%</strong></td>
<td><strong>22.36%</strong></td>
<td><strong>3.11%</strong></td>
<td><strong>14.29%</strong></td>
</tr>
<tr>
<td>Resource</td>
<td>Sustainability Pledge</td>
<td>Community Garden</td>
<td>Plant-Based Diet Guides</td>
<td>Mission Environment Student Club</td>
<td>Tabling, Rafling, and Giveaways</td>
<td>None of the above</td>
</tr>
<tr>
<td>Responses</td>
<td>15</td>
<td>49</td>
<td>27</td>
<td>23</td>
<td>53</td>
<td>1</td>
</tr>
<tr>
<td>Percentage</td>
<td><strong>9.32%</strong></td>
<td><strong>30.43%</strong></td>
<td><strong>16.77%</strong></td>
<td><strong>14.29%</strong></td>
<td><strong>32.92%</strong></td>
<td><strong>0.62%</strong></td>
</tr>
</tbody>
</table>

**Figure 6.** Survey responses from SSS section 8, question 9.
UC Berkeley has its Golden Bear Orientation with a sustainability learning module that highlights campus sustainability and ways to get involved (10).

At Harvard University, there is sustainability welcome back events and activities as well as individualized sustainability training for proctors and RAs (Resident Advisors) (12).

During student orientation at UCI, there is a student-led information booth as well as handouts via email for a green move-in process (14).

In 2020, Cornell University added a sustainability and climate literacy module for first-year orientation (16).

University of Miami's "Green U" survey and "Sustainability at the U" module act as a part of new student orientation (18).

Fresno State conducts a campus sustainability module through a publicly available PowerPoint presentation (20) which is presented to all students as a part of their orientation process. The presentation covers the following topics:

- What is sustainability?
- Fresno State’s sustainability website
- Fresno State’s Strategic Plan - which includes sustainability (3rd priority)
- Upcoming Policy Changes for CSU Campuses
- What you can do as a student to become more sustainable: using water refill stations, alternative transportation, correct waste disposal
- Resource links
**RECOMMENDATION**

Mandatory Student Canvas Course

A mandatory canvas course (created for free by the 2022 Environmental Capstone course students) could be implemented to ensure all students learn about sustainability efforts at the university while educating themselves on how to be more sustainable while at Chapman. In order to make a personal connection and get students to care, calculations of their personal effect on the earth will be created and data will be shared about comparable averages. A small game and several guides will be created as well as resources will be shared in order for students to learn where to put their waste. A resource guide with all the Office of Sustainability has to offer will be shared along with a running checklist of previous audit accomplishments as well as future goals for the university. No environmental educational piece would be complete without the consideration of climate change’s disproportionate effects on people of color and all the other factors that tie into being environmentally conscious. Here we will touch on the topic without diving in too deeply. A concluding survey/quiz would ensure that students take the module seriously and make sure they retain information from the module.

**Future Research and Development**

In order to understand the efficacy of this sustainability module, a survey should be conducted prior to the completion of the module as well as before students graduate from Chapman University. The entire project can serve as a case study to gauge the impacts of a sustainability orientation and understand the ways in which student views were impacted through the process.

Once the module can be implemented into the undergraduate orientation program, it can be further adapted in order to serve as a resource for onboarding staff and faculty. While many professionals may understand the basics of sustainability, part of their onboarding process should include a refresher course on waste diversion and disposal as well as a guide to all the resources the university has to offer.

Figure #. QR code that links to the prototype sustainability orientation module within Canvas.
BACKGROUND

Sustainable food procurement is the process of purchasing food at low or zero total cost to the environment (1). Rather than only considering the cost of the food as listed on the barcode at the grocery store, sustainable food purchasing considers how the food was produced, transported, packaged, and sold. When considering the overall effect of food consumption on the environment, total cost can be lowered by investing in a greater quantity of plant-based options while eliminating purchasing food that will go to waste.

As the population and Chapman community continues to grow, food shortages are becoming a food crisis. Furthermore, people who report that they eat more sustainably are also overall healthier both mentally and physically (2). Currently meat procurement costs are up 25% for Sodexo U.S. — hospitality company and Chapman’s food provider — and choosing alternatives that are more local and low emissions from Freshpoint, Sodexo’s main local produce distributor, could lower costs (2). The transportation costs only continue to rise with the increasing costs associated with critical nonrenewable energy sources such as oil, coal, and natural gas. In a study done by Sanchez et al., 4,449 university studies on the behaviors related to sustainable food consumption. Students followed a trend towards deciding to consume food that displayed characteristics of health and sustainability (2).

In the SSS, 83.75% of students reported that they actively make decisions about what they consume based on the nutritional value of the food (3). When people have the autonomy to make healthy decisions, they in turn can eat sustainably when given the resources to do so (4). Additionally, 83.8% of the students surveyed reported that their biggest barrier to sustainability was convenience (3). Therefore, if Chapman Sodexo communicates their sustainability efforts with students they will be more equipped to understand the key sustainable work streams that food procurement effects.

The Potential for ASHEE Certification

ASHEE Stars is a self-reporting framework that can be used to inform sustainable planning and development
while receiving international recognition for efforts. Institutions can report their sustainability measures to acquire points (5). Depending on the number of points the institution receives, they can gain a multi-tier rating based on the efficiency of their sustainability measures. ASHEE ranks food procurement sustainability measures on how ethical, local, and overall sustainably produced individual products are.

Since Chapman Sodexo answers to a larger regulatory body than Chapman, they are able to engage in certifications that are different from what the university might seek out (6). Chapman Sodexo already implements local and sustainable procurement policies and could use ASHEE STARS benchmarking tools to compare their sustainability strategies to institutions that have similar demographics and contracting organizations. To be considered to have 'sustainable food procurement' practices by AASHE, the provider must determine if each product is verified by a third party organization. If the product is not explicitly verified by a third party it may be evaluated based on ownership, size, and distance criteria of the original producer of the product. Schools such as Cornell University and Westmont College, who also are contracted with Sodexo as their main food provider, also use AASHE and have seen profitable improvements within food procurement (7).

Cornell is located in Ithaca, New York and has an attendance of 15,503 undergraduate students. Similar to Chapman, Cornell's main food provider is Sodexo. However, Cornell participates in AASHE's self-reporting sustainability program. Cornell has reported their sustainability measures for food procurement every year since 2012 and has achieved a platinum rating since 2020. Based on AASHE's food procurement criteria, from 2020-2021 Cornell’s Food Procurement score rose by 50%, just two years after the university started reporting food procurement data. This increase in expenditure in a short amount of time led to Cornell Sodexo's plant-based expenditure to be 34.4% of their annual budget. While Cornell does not have catering services or franchise brands like Chapman, they do have convenience stores, concessions, and provide food within the dining halls (6).

Similar to Chapman, Westmont’s main food provider is Sodexo, while also participating in AASHE’s self-reporting sustainability program (8). Using AASHE’s framework they have developed a system where they host a farmers market for the community each week (5). The market is where the food provider gets local and fresh produce and baked goods for the week.

**HISTORY OF FOOD SUSTAINABILITY AT CHAPMAN SODEXO**

*Better Tomorrow 2025* is a set of goals designed by Sodexo — a worldwide food provider, catering company, and building manager — that align with the United Nations’ Sustainable Development Goals. These goals include ensuring every staff member is trained...
on sustainable practices, reducing overall emissions by 34%, and a commitment to reducing food waste by 50% (6). Each year, Better Tomorrow 2025 is audited by Sodexo’s headquarters to determine in what areas they are meeting their goals, and in what areas they can improve. In 2020 Sodexo reported that 98.3% of Sodexo supporting institutions have an environmental expert present, 77.7% of fish and seafood are from sustainable sources, and 90.7% of Sodexo supporting institutions are trying to reduce their food waste (6). Current Sodexo sustainable food purchasing policies are limited to ‘cage free eggs, local suppliers, sustainable fish and seafood, and the Aspargetto coffee Fair Trade partnership (6). Upon entering Randall Dining Commons (RDC), students are greeted by infographics displaying Sodexo’s Better Tomorrow 2025 goals communicating the overarching purposes of the campaign (6).

Potential Strategic Communication Strategies for Food Sustainability

As of March 22, 2022, Chapman Sodexo implemented a new plant-based meal logo to be labeled on meal items that are sustainably and ethically produced. This logo is being progressively implemented into the meal distribution service. When Steven Anderson, one of Sodexo’s Operations Coordinators, established this logo the goal was to, upon entry to RDC, have label each meal that qualifies as plant-based, labeled as plant-based. Therefore students have the autonomy to choose if they would like to consume a plant-based or animal-based meal.

The Just Ask Policy

The Just Ask policy encourages students to ask for changes to their food prior to plating to avoid the waste of food they otherwise would have not eaten due to preference. Alternatively, students can use this policy to ask for any changes they would like to their food such as requesting no meat, dairy, or eggs (9).

Dietary Restriction Guidelines

Dietary Restriction Guidelines are listed above each meal on tv’s. All allergens are listed and students can clearly see what is in their food. This in turn, makes it easier for students to ask for alternatives or substitutions to the menu items.

Figure 1. Images displayed in the entrance of RDC of the Better Tomorrow 2025 goals. While meeting with the Operations Coordinator they said that they would like to improve these images to actually apply to how they are implementing the goals (9).
Stations

Stations are used to create a variety of foods, all from different backgrounds, for people to choose from. This allows students to eat what they feel comfortable with and allows them to try new types of foods in the process. There are 11 stations: Euro, Wok, Vegan, Simple-Serving, Pasta, Pizza, Burger, Sandwich, Salad/Soup, Sushi, and Mindful Offerings.

Chapman Sodexo’s Operations Coordinator is currently coordinating all of the sustainability efforts for RDC. As displayed on Sodexo’s website, they are said to have an environmental representative at 94% of their institutions, including universities (10).

UNDERSTANDING THE IMPACT OF FOOD PROCUREMENT AT CHAPMAN SODEXO

Overarching Questions

- What percentage of Chapman's food procurement comes from sustainable sources?
- What percentage of each menu item is 100% sustainably-sourced?
- How can each menu item be adapted to be plant-based?

Sodexo sources the majority of their food from food distributors, such as Sysco, who own several micro-companies that are considered local suppliers to Chapman. These micro-companies include Freshpoint, Newport Meat Market, and Laguna Seafood. All of the produce that Sodexo uses comes from Freshpoint — a local food distributor connected to 17 farms within 150 miles of Chapman (Operations Coordinator). However, to conceptualize the true amount of emissions within Chapman's current Food Procurement, it is important to evaluate the emissions of food at every stage of its transport.

Food Transport and Emissions:

A Life Cycle analysis was performed on two menu items to compare the total environmental cost of a plant-based meal and an animal-based meal through a typical week of operations within Randall Dining Commons. Furthermore, an additional life cycle analysis was performed to determine current overall emissions of one plant-based burger and quarter-pound beef burger. Transportation locations are based on distributor locations of Freshpoint (Los Angeles, CA) and Newport Meat Company (Newport Beach, CA).
Figure 2. Freshpoint is Sodexo’s main source for produce, cage-free eggs, dairy, and fruit. There are 39 farms Sodexo works within a 250 mile radius of Chapman University and the Los Angeles Freshpoint Distributor (11,12).

Newport Meat Company Transportation Case Study

Figure 3 and Figure 4. ArcGIS Online maps displaying the distance from NMC’s main distributor and farms that they source their meat from (13). The transportation route is highlighted to gain insight on the average distance traveled from the origin of the product. There are six main farms supporting NMC which are, on average, 516.5 miles from Chapman.
Figure 5. Average distance traveled of one Freshpoint plant-based burger and one NMC beef-based burger. Location data calculated based on average distance from Suppliers to NMC/Freshpoint to Chapman (516.492 miles/226.16 miles). Calculations done assuming plant-based alternatives have a 90% lower environmental impact than beef (14,15).

Figure 6. Average water consumption of one Freshpoint plant-based burger and one NMC beef-based burger. Calculations done assuming one animal-based hamburger uses 462 gallons of H2O, and plant-based alternatives have a 90% lower environmental impact than beef (14,15).

Figure 7. Average CO2 emissions of one Freshpoint plant-based burger and one NMC beef-based burger. Calculations done assuming one animal-based hamburger produces 3.325lbs of CO2 and plant-based alternatives have a 90% lower environmental impact than beef (14,15).

Beef-Based Hamburgers sourced by NMC when compared to plant-based hamburgers sourced by FreshPoint have significantly higher emissions related to transportation, farm operations, and water consumption.
Food Type/Quantity

The average amount of plant-based meals versus animal-based meals served per morning meal service were calculated to determine the amount of meals with possible plant-based substitutions. Additionally, this data outlines the difference in the amount of current plant-based meal options versus animal-based meal options.

Randall Dining Commons serves one truly ‘vegan’ or ‘plant-based’ meal per meal service. On average, one to two other plated meals can be altered using the Just Ask Policy to be plant-based. Additionally, Randall Dining Commons serves one plant-based soup a day and has plant-based options such as hummus and pita in the pre-prepared bar. For the purpose of this study, all ingredients sourced for plant-based meals are from local farmers, with regulated soil sustainability measures by the distributor, Freshpoint by Sysco. Freshpoint is committed to overseeing their partnered growers using Integrated Pest Management to reduce chemical infiltration into the soil. Additionally, they utilize cover cropping and crop rotation to ensure the health of the land (12).

Table 1 Amount of Plant-Based Opportunities per menu service:

One calendar week was analyzed based on a 2019 menu outlining 14 days full AM meal service (Brunch, Lunch, and Breakfast), in addition to catering services, running the after hours convenience store on campus, and daily operations of contracted regional restaurants. The amount of current fully plant based meals and potential meals that could be fully plant-based given one to two adjustments were calculated based on plant-based requirements and averaged based on the week.

<table>
<thead>
<tr>
<th>Day</th>
<th>Plant-Based menu items</th>
<th>Potential to substitute (with alternative milk, protein, eggs) and make menu items Plant-Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Tuesday</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Wednesday</td>
<td>1</td>
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<tr>
<td>Thursday</td>
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<tr>
<td>Saturday</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sunday</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>1.57 meals/day</td>
<td>2 meals/day</td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

Easy & short-term, cost-reducing initiatives

Reform of Just Ask Policy:
While currently students have the ability to ‘just ask’ the kitchen staff for subtractions or substitutions to their meal items, switch to an operation where plates are pre-plated with sides and consumers may ask for a meat option. Have a plant-based low emissions alternative at each station. This will reduce the amount of consumption of meat products while familiarizing the community with more plant-based alternatives.

Customer Communication:
Update current marketing materials to post within Randall Dining Commons and within the entrance to Randall Dining Commons. Refocus the message of the marketing to what you are actually doing to meet the Better Tomorrow 2025 goals. Include information on the adapted ‘Just Ask’ Policy and the use of local food procurement. Additionally, strategically place infographics on menu/recipe tv’s that display the emissions impact of choosing that particular plant-based menu item.

Incorporation of Alternatives:
Incorporate two or more optional plant-based meals per day. Randall Dining commons has an adaptable plant-based salad and sandwich bar during lunch, dinner, and brunch. Each meal can also strategically be planned by staff to be easily adaptable to plant-based eating. For example, in the ‘Creamy pesto and roasted vegetable pasta bowl’, instead of using cream, use oat creamer. Since oat milk meets the same dietary requirements as regular milk, with less saturated fat and cholesterol, it can be used as a plant-based alternative with less overall emissions to the environment. Additionally, at the omelet station on the weekends, tofu can be added as an option so students can have the autonomy to choose tofu over the egg option.

Protein Complementation:
There are many ways to implement plant-based protein into a variety of menu items. Following nutritional protein complementation guidelines, unprocessed and lightly processed plant-based proteins can have equivalent to more protein than animal-based proteins. Furthermore, following protein complementation and consuming an adequate portion of each ingredient, there is less saturated fat and cholesterol per meal while still consuming all nine essential amino acids (12).

Moderate & long-term investments

AASHE STARS:
Chapman Sodexo is on the forefront of sustainability out of institutions who are contracted with Sodexo. While Sodexo’s
current sustainability measures have proved effective with an overall reduction of pre-consumer waste, food procurement is a cost and carbon intensive sector that has a large amount of potential growth. Sodexo would benefit from ASHEE Stars, a peer-to-peer self reporting framework that creates baseline data that can be compared to future sustainable efforts. Additionally, STARS offers a hub to work with to pinpoint unsustainable practices and how to reform them. All an institution has to do to report on ASHHEE STARS is to register (requires the reporter to include a campus executive reference (Dean, Provost, President), become a member, and report the campus’ data (18).

Food Purchasing and Sustainable Dining is one of the areas of the report and can offer transparency within student dining so students have the autonomy to make more educated food decisions. AASHE does this by giving participating schools a rating on their current sustainability efforts offering more credibility to the institution while promoting incentive to gain a higher sustainability rating. Furthermore, STARS identifies areas of growth within sustainable purchasing while giving access to sustainability plans of other similar institutions (5).

While there is a $975 registration fee and $550 renewal fee, the University gains access to use of a benchmarking tool to track sustainability efforts. Additionally, with each renewal, members can submit an official report of their campus’ data (18).

Cool Food Meals: The Cool Food Meals Logo has been implemented by Panera and is sponsored by the World Resources Institute5. The Cool Food Meal logo is based on a calculator that estimates how much Carbon people would need to eat per meal item to work to curb climate change by having 20% carbon emissions for breakfast and 30% for Lunch and Dinner (17). The easy-to-use calculator is an excel file that takes into account the type of food purchased, the quantity of food purchased, and the amount of emissions per ingredient (17). When following this framework emissions per menu item can be calculated. Therefore, Sodexo would be able to display low emissions food to the public, allowing them to make better informed decisions about their sustainability efforts. Alternatively, the ‘plant-based’ meal logo can be marketed, following this model, to display plant-based and low-emissions food (22).

All one needs to do is input the food purchases for the year, the quantity purchased, and the main form of distribution. This is a system that can be applied to Randall Dining Commons in particular or Sodexo food services at Chapman as a whole.
Sources - Greenspace Implementation


10. Landscaping, Chapman University, Orange, California, 2013, Environmental Audit.


Sources - Sustainability Orientation


Sources - Sustainable Food Communication & Certification

Eda Spaletta (Green Events Guide)

Eda completed her environmental science studies with an emphasis in policy and a minor in entrepreneurship. She is originally from Sonoma County, California where her love for being outside transcended into devotion for protecting the earth. During her time at Chapman, she appreciated learning the crucial ways to educate others and implement environmental projects. It became inherently clear that she has a large passion for sustainable initiatives. She hopes to work in a corporate sustainability position in the beauty industry post-grad, where she can culminate all aspects of her Chapman education.

Maya Cheav (Waste Management in Dorms)

Maya is a first-generation Cambodian-American from Long Beach, California, an environmental justice community impacted by food apartheid as well as pollution, a product of the Port of Long Beach and the many freeways required to transport goods to said port. Seeing their own community impacted heavily by environmental hazards, she seeks to work in environmental justice. In their free time, she likes writing poetry, screenplays, playing jazz piano, and making clay art. After graduation, Maya will be working at a local nonprofit, Orange County Environmental Justice, as their Community Science Organizer.

Hannah Waldorf (Food Waste in Randall Dining Commons)

Hannah emphasized in policy and had a second major in political science. She grew up in Los Angeles, California and has always had a passion for the environment. Hannah has a strong interest in environmental justice, sustainability, and intersectionality. She was able to grow these interests through her work with Heal the Bay, as a Marine Protected Area intern, and her individual research on climate change fear for her senior political science thesis. After she graduates, Hannah plans to use her degree to safeguard the planet and its people through the intersection of law, science, and social justice. She hopes to do this through working at an environmental non-profit.
Becca Morrison (Eco Gyms)

Becca grew up in San Diego, California and enjoys rock climbing and hiking in her free time. She completed her undergraduate career with an emphasis in policy and a minor in sociology. Becca is very passionate about environmental justice and communication of science. During her time at Chapman, she worked on campus at the Doti Struppa Rock Wall and off campus as a Data Analyst for the SDSU Research Foundation. After graduating, Becca hopes to pursue a career in environmental research using geographic information systems. She hopes to use spatial representation of data to identify communities with environmental health risks and inform policies to mitigate them.

Michael Ortiz (Modernization of Campus Laundry Equipment)

Michael came to Chapman from San Clemente, California, and completed his Bachelor of Science with an emphasis in policy. He has enjoyed the career discovery and development experienced at Chapman University, and it has led him to pursue a path of environmental consulting. After graduation, Michael went to work in a consulting position at a small firm in Huntington Beach. His career goals are centered around him creating lasting environmental change for himself and his future children. In his spare time, he enjoys watching sports, going to car shows, and streaming on Twitch.

Micaela Wilcox (Decreasing Cars on Campus)

Micaela is from Marin County, California and graduated with an emphasis in earth systems and a themed inquiry in business and economics. While in college, she was on the equestrian team, was a member of the Orange County Association of Environmental Professionals club, and interned at IQAir as an air quality scientist. Micaela found her passion for the environment working on a sustainable agriculture farm and spending time in the Golden Gate National Recreation Area. She hopes to continue to research using remote sensing and data analytics to better understand the environment.
Cindy Rivas (Transportation Emissions)

Cindy had an emphasis in policy and also double majored in economics, with a minor in philosophy. She is passionate about environmental education and plant conservation. During her time at Chapman, she discovered a passion for environmental ethics. She also participated in the Summer Scholars program, which taught her the importance of interdisciplinary work in academia. After graduation, she plans to pursue a Ph.D. in environmental economics, so that she may empirically demonstrate the economic and social benefits of protecting.

Larissa Atkins (Sustainable Energy Consumption)

Larissa graduated with a degree in International Business Administration and in Environmental Science and Policy. Her passion for sustainable solutions and environmental justice stemmed from her upbringings in Brazil. During her time at Chapman, she was a member of Kappa Alpha Theta, where she served as New Member Director and was on the Diversity, Equity, and Inclusion board. She was also in Latinx club, worked as a Tour Guide, a Research Assistant for Dr. Fudge, an Orientation Leader for two years, and an Orientation Coordinator. After graduation, she intends to pursue corporate sustainability and amplify marginalized voices in the environmental movement.

Jessica Almos (Implementation of Solar Panels)

Jessica graduated with an emphasis in policy and a double degree in theatre studies. She is passionate about environmental justice and eco-communication. During her time at Chapman, she worked within the PR & Marketing team at the Office of Student Engagement. After graduation, she is going to build a Sustainability Management position at Deelux, a Buy-Sell-Trade store in Old Towne Orange. After taking some time to rest, she hopes to move back up to Monterey Bay, California. There, she wants to live walking distance to the ocean and have a long career inspiring conservation of the ocean at the Monterey Bay Aquarium.
Mimi Fhima (Greenspace Implementation)

Mimi completed her undergraduate education with an emphasis in policy and a minor in Documentary Filmmaking. The lakes and forests of her hometown, Minneapolis, Minnesota, sparked her love for wildlife and the outdoors. During her time at Chapman, Mimi worked for The Panther newspaper as well as Minneapolis-based sustainable clothing line and advocacy group, Citizen-T. This fall Mimi is moving to San Francisco to pursue a Juris Doctor at University of California, Hastings College of Law. She intends to emphasize in international law and focus on climate change policy worldwide.

Eva Stanton (Sustainability Orientation)

Eva was a policy emphasis, with a second major in anthropology, and minors in political science and data analytics. While at Chapman, she worked as a student Office of Sustainability assistant, an orientation leader, an undergraduate research assistant in Dr. Jason Douglas' and Dr. Waldrop's labs, and a peer advisor for the ES&P major. She plans to continue her passions of intersectional environmental justice through sustainability management or demographic environmental health research through statistical analysis and GIS that informs policy after taking a year to work and decide on a graduate program.

Emma Licko (Sustainable Food Communication and Certification)

Emma emphasized in policy with a minor in nutrition. During her time at Chapman, Emma was involved as a Resident Advisor and held leadership positions in student organizations. Emma found her love for the environment, and caring for its resources, through exploring the countryside of Hungary and visiting her family’s self-sustaining farms. Throughout her undergraduate coursework, Emma worked as a Youth Development Program Coordinator for the City of San Carlos. She hopes to continue her work in public-policy post-grad, with a focus on youth development and sustainability. In her free time she enjoys graphic design and hiking with her dog, Cooper!
CHAPMAN SUSTAINABILITY ASSESSMENT

Jessica Almos, Larissa Atkins, Maya Cheav, Mimi Fhima, Emma Licko, Michael Ortiz, Becca Morrison, Eva Stanton, Hannah Waldorf, Micaela Wilcox

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