

# **Cultivating a Sustainable Community: University of Denver Just and Sustainable Future Initiative**

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**February 15, 2015**



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## I. Introduction

As the University has initiated the strategic planning process, we have considered several related questions:

- What more can we offer to engage our students, our faculty, our staff, and the broader community?
- What can we do to differentiate ourselves in higher education?
- What can we do to further social justice on campus and in our broader community?

We propose that one answer to these questions is to articulate a commitment to a just and sustainable future, especially within our urban context. This transformative idea directly reinforces our University mission and values, enhances our brand, and emphasizes concepts embraced by the millennial generation. By explicitly integrating a commitment to a just and sustainable future into all aspects of University operations – from curriculum to athletics to facilities to recruiting – DU can become a true leader, for other universities, for the regional community, and for communities around the world.

Urban sustainability – more than half the people on our planet now live in cities – can never be about isolated self-reliance; it must be sought through mutually beneficial partnerships. The City of Denver has long been a leader in urban sustainability. Denver contains an extremely high density of both for-profit and nonprofit entities committed to a broad range of sustainability related goals. The University of Denver would be well-served to commit to building networks of community partners to address the complex challenges our region faces in pursuing a just society and a healthy environment. In doing so, we would greatly expand opportunities for our students to engage in real-world, meaningful problem solving; we would build a more inclusive campus community; and we would provide a model for integrating University teaching, scholarship, and outreach within networks of partnerships that are committed to the well-being of our broader community and the health of our planet.

A growing number of colleges and universities in the United States and elsewhere, including all major institutions of higher learning in Colorado, have adopted *environmental* sustainability as a guiding principle. Like other Colorado universities, our campus community generally identifies sustainability with “being green.” From its roots in international development thinking, however, sustainability has always embraced the interconnectedness of economic viability, environmental quality, and social justice. A truly sustainable society requires that these three goals be sought together. Recently, sustainability-related programs at institutions of higher education have skewed in favor of environmental quality, largely neglecting the other two components.<sup>1</sup> By emphasizing that sustainability must embrace more than environmental quality, by committing to a “just and sustainable future,” we would differentiate ourselves amongst our peers in higher education.

As a private research university located in a city known for sustainability and for attracting a growing population of millennials, in a region with a strong commitment to outdoor activities and the natural environment, we are uniquely situated to collaborate with the growing wave of stakeholders from innovative organizations across the region. Several sustainability-related partnerships are at the initial stages of development, as various public and private entities

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<sup>1</sup> Newport, D., Campus Sustainability: It's About People, The Chronicle of Higher Education (April 1, 2012).

envision a better future for our region and collaborate on creative solutions to complex challenges (see Section II below). This is a critical moment for the University of Denver to assume a role as a strategic academic partner in urban sustainability efforts. Our commitment to the public good, our practice of engaged scholarship, and our academic strengths position us to take an active role in these initiatives.

Additionally, for a University that purchases every kilowatt hour of energy, every cubic meter of natural gas, almost every gallon of water, and every ream of paper, the effort to reduce our ecological impact saves money. Energy conservation efforts at the University of Denver over the past seven years have contributed to the overall reduction of our carbon footprint by roughly 27% and at the same time have saved the University over \$2.5 million. Our continued emphasis on alternative modes of transportation can reduce employee and student costs, as well as the need for additional parking, saving the university the enormous expense of building a new multi-story parking structure. As more students, faculty, and staff travel by mass transit, by bicycle, and on foot, we enhance our relations with local neighborhoods and increase the opportunities for local businesses.

Finally, sustainability offers an unparalleled foundation for innovative, interdisciplinary, experiential education. Innovation will be the cornerstone of our effort to transform the way we interact with each other and with our environment. Sustainability is not only interdisciplinary in the sense that it requires the integration of disciplines from many traditional departments; it also integrates the operation of the University and the community around it into the educational process. Indeed, an integrated education around a just and sustainable future can provide meaning and context for the educational experiences of our students, helping them grow into global citizens and creative leaders.

We have divided our recommendations into three sections. First, we describe examples of “transformation in context” – a range of proposals that embody the transformative idea of committing to a just and sustainable future. Each of these ideas would actively engage our campus community and build strong regional networks of partnerships. Each idea would build on initiatives and/or discussions that are already underway in the broader Denver community. Next, we list readily achievable priorities (as set forth in the 2014-2017 Sustainability Plan), with achievable timelines and measurable benchmarks for success; many of these goals are already in progress. Finally, we propose an operational structure for implementation of the Sustainability Plan and several options for financing future initiatives. While these proposals are not exhaustive, each would integrate advancement of environmental stewardship, conscious promotion of social justice, and outstanding educational opportunities for our students.

## **II. Transformation in Context: Addressing Access, Equity and Justice**

Below we describe cross-cutting initiatives in the form of pilot projects that could be easily initiated within the next 6-12 months and that model this commitment to a just and sustainable future. These initiatives would link academic and operational units across campus, would establish meaningful ties with agencies and communities within Denver and across the Front Range, would serve as a platform for rigorous, interdisciplinary scholarship and teaching that engages students with real-world problems, and would cultivate a sustainable campus community that provides a place for all members to thrive. In these ways, the projects proposed below build community and embody the vision of the University. Many of these initiatives

would also result in cost-savings for the University, and/or provide opportunities for extramural funding from various sources. Initial conversations with potential partners are already in progress around each of these ideas, presenting a key opportunity for DU to assume a primary role as a university partner. **Appendix 1** summarizes anticipated timelines and resources needed to successfully launch each of these pilot projects.

### **A. DU Partnership in Metropolitan Greenspaces Alliance**

Over the past two years, the Rocky Mountain Land Use Institute at the Sturm College of Law has been a pioneering partner in developing a Metropolitan Greenspaces Alliance (MGA) for Greater Denver. Drawing on similar efforts in Los Angeles, Portland, and Chicago<sup>2</sup>, among others, key Denver MGA partners aim to build a collaborative, community network, developing an ambitious plan to provide every resident of the Denver region – no matter their socio-economic status – with ready access to vibrant, usable, and enriched open space. The MGA partners imagine a system of connected green spaces and interpretive hubs across the metropolitan area that would enhance the connectivity of all citizens to the richness of the Colorado environment. The project would explicitly address equity issues in the greater metro area, promote wellness in our communities, conserve biodiversity, and develop environmental stewardship. Connecting the area’s residents with the greenspaces network will require active, community-based education and interpretation programs. Planning for early phases of the project is explicitly focusing on youth engagement. Among the currently participating partners are the Trust for Public Land, the Denver Museum of Nature and Science, and Great Outdoors Colorado. Many other public and private entities in the Denver area have also expressed an interest in the concept, and the initial phase is expected to launch in summer 2015.

The University of Denver could become a full partner in the process, designing curriculum around the green space efforts and related educational, ecological, and social justice issues, providing a key interpretive green space hub for Denver communities, and collaborating with less-privileged urban communities to extend the qualities of life that bring so many people to Colorado’s Front Range. This initiative could integrate into existing curriculum in disciplines as diverse as education, anthropology, biology, geography, social work, and law, to name a few, and would build on current conversations between DU Athletics, South High School, Denver Public Schools, Denver Community Planning & Development, and Denver Parks and Recreation about revitalizing community use of the Veteran’s Park open space, directly north of campus. This project would improve equity and access to the University from across the metro area, enhance the University Arboretum, and potentially augment neighborhood relations by integrating the Historic Buchtel Boulevard Trail and the Harvard Gulch Trail. An additional benefit would be the opportunity to complement current wellness programming at DU by incorporating programming for physical activity and mental wellbeing.

### **B. Multimodal Transportation Hub**

As the population of the Denver metro region continues to grow, creative transportation solutions are required to reduce congestion, improve air quality, enhance the reputation and attractiveness of the city, and continue to position the region as a leader in sustainability. Regional transportation planning can enhance connectivity between neighborhoods and schools, improve access to the city for all citizens, and provide positive health and wellness benefits associated

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<sup>2</sup><http://www.chicagowilderness.org/who-we-are/metropolitan-greenspaces-alliance/>

with improved air quality and increased physical activity, such as bicycling and walking. Transportation planning is a critical theme in student and staff recruitment and University budgeting, as millennials embrace the shared economy and car-free lifestyles and multimodal opportunities reduce parking needs and both student and University operational costs.

For these reasons, DU could become a founding partner in designing and coordinating a strong multimodal transportation hub at the University Regional Transportation District (RTD) light rail station. Other potential partners in this initiative include nonprofits such as The Bike Depot, BikeDenver, WalkDenver, and Transportation Solutions; local developers; Denver Community Planning & Development; and K-12 education partners, including South High School and the Waldorf School. The transit hub could provide infrastructure, such as showers and lockers, secure bike parking, mechanic services; a community gathering space focused around a coffee cart; and applied educational opportunities around themes such as transportation planning, real estate and marketing, health and wellness, community development, and issues of equity and access. This hub could also directly support the Metropolitan Greenspaces Alliance network discussed above (Section II.A).

This initiative would expand transportation services to the broader community and demonstrate University leadership in modeling solutions for the region. The project would build on efforts of the DU Center for Sustainability and well@du, provide opportunities for student employment and engagement, and embody just and sustainable transportation. This hub could showcase healthy lifestyles of employees who commute by public transit and bicycle, and contribute to the campus wellness goal of increasing employee activity, thereby lowering health risks, health care costs, and absenteeism, while increasing productivity and reducing stress. Finally, many sources of potential funding could be explored, including grants for transportation alternatives, air quality improvements, healthy neighborhoods, and innovative entrepreneurship, minimizing the direct cost to the University. Timing is critical – the project could enhance current plans and strengthen the University’s bid for the space, one year before the light rail service to the airport opens, making the station the front door to the University. Expanding our relationship with the nonprofit Bike Depot is also time sensitive, as they are currently looking for additional space.

### **C. Solar Partnerships and Energy Fund Revitalization**

Campus solar energy production would significantly reduce our carbon footprint, publicly broadcast our commitment to sustainability, provide a distinct marketing tool, and serve as a safe investment with a guaranteed rate of return. DU could partner with other large entities in Denver such as Denver Public Schools, Aurora Public Schools, and the City of Denver with the aim of negotiating solar projects on favorable terms, ensuring that we receive the best rates on power per KWH, as well as minimizing our liability. Coordinating such a partnership network would establish the University of Denver as a leader in renewable energy and sustainability in the city and would set an example for other urban universities. Interdisciplinary curriculum could build on current courses in education, law, business, and the STEM disciplines, using campus as a living, learning laboratory for the solution of real-world problems and making our campus a home to energy demonstration projects and education efforts.

While focused on energy alternatives, this project also carries a strong social aspect. Working with public schools creates cost savings for all, increasing the total funding available for education of all students. These partnerships could improve educational access for K-12 students to connect to university resources, information, and research. Clean alternative energy also

results in direct benefits of improved air quality, reduced pollution from power plants, and slowed climate change, issues which all disproportionately impact the economically disadvantaged in our region and around the world.

Savings generated by renewable energy production could be returned to the restored revolving fund (see Section IV below), providing continued funding for future energy saving projects, need-based scholarships, and funds for curricular development related to sustainability. This project could result in substantial savings for the University and provide donor investment opportunities, while providing many additional benefits in marketing and recruitment – opportunities to more broadly share the mission of the University with a clear vision for the future, while celebrating our past successes in energy sustainability. Again, timing is critical, as it is unclear how long Xcel Energy will continue their Solar Rewards Program, which would subsidize this project.

#### **D. DU Farm to Table Initiative**

Food is a theme that cuts across all disciplinary boundaries and all spatial scales – from the intensely personal to the global. Food production and distribution are intricately connected to many of the complex issues of our time, including growing wealth inequality, social justice, and climate change. In recent years, students (and their parents) at the University of Denver have shown great passion regarding the type of food they eat and where it comes from. Recently, the University and Sodexo have entered into the Real Food Challenge, committing to offer its students 20% “real food” by 2020 (i.e., local and sustainably certified). Yet, concern for food is much broader than ecological sustainability, community, and health; food systems are tightly linked to racial, economic, and environmental justice<sup>3</sup>, and addressing the issues surrounding food requires the ability to navigate tensions between different perspectives. Thus, *food* provides a plethora of opportunities to challenge our students in the context of real-world complexities that defy simple solutions.

With this in mind, the initial efforts of the Real Food Challenge could be broadened to provide a truly extraordinary urban food initiative at the University of Denver, one that would provide community collaboration and development, in addition to a wide array of opportunities for experiential learning. Working with a variety of established community partners, we could facilitate the development of local food production and distribution networks, engage our students in learning around just and sustainable food systems, provide our community with excellent locally sourced food, and provide genuine opportunities to collaborate with underserved communities in the Denver Metropolitan area. Given the many viable partners who engage in various aspects of building just, culturally relevant food systems in the region, the DU initiative could be effective and impactful without large developmental requirements. Partners could include non-profits such as Re:Vision, GrowHaus, Green Leaf, as well as private growers in the region. In the curriculum, this project could build on existing courses and service-learning opportunities, centralizing and broadening the scope of this work. Local experiences with food systems could be linked to international experiences to give students an in-depth, comparative understanding of food systems and environmental and social justice. This project would thereby enhance the curriculum, the University brand, and recruiting efforts.

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<sup>3</sup> Alkon, A. H. and Agyeman, J. 2011, *Cultivating Food Justice: Race, Class, and Sustainability*. The MIT Press: Cambridge, p.4.

Again, the timing for joining as a key academic partner in this initiative is at a critical juncture. The city of Denver has a Sustainable Food Policy Council working group on City Land, City Food, which is currently working with a variety of community partners to develop public policy for land trusts dedicated to food production. The University of Colorado Denver is currently involved in the design process, but the group seeks an active academic partner by fall of 2015, with food production beginning at several pilot locations in the spring of 2016.

### **E. Sustainability Master's Degree**

The extraordinary opportunities for engaged, experiential education generated by these initiatives should be presented to our students as an organized degree program. Enhancing the currently successful sustainability minor for undergraduate students could contribute to this function. In addition, we propose an interdisciplinary sustainability master's degree, initially designed primarily as a dual degree for graduate students across many departments in the University. The success of the sustainability minor demonstrates the interest in a truly interdisciplinary degree or certification program. Sustainability provides an ideal platform to bring together students from across disciplines to focus on applied research in systems thinking, creativity, and authentic problem solving in real world settings. This platform would also provide an opportunity to develop a new model of interdisciplinary education at our University: one that overcomes previously identified hurdles in funding, compensation, and faculty time, by providing the institutional framework to support collaboration amongst faculty from different departments and divisions across campus. This new program would attract additional students to the University, as well as enhancing enrollment in associated programs. A free-standing certificate program could offer sustainability education to university faculty and staff, additionally increasing their benefit from University employment.

To ensure that as many graduate students as possible could enroll in this degree, introductory sustainability courses could be offered online with interdisciplinary problem-based work built into the curriculum to begin to develop the skills essential to working across disciplines. The experiential component of the degree could then be woven into the elective portion of each student's degree program. Accordingly, for a very modest additional investment of tuition dollars, students could obtain an important additional credential and a set of skills of great value in their subsequent careers.

### **III. Immediately Achievable Goals from the 2014-2017 Sustainability Plan**

The 2014-2017 Sustainability Plan was drafted with input from stakeholders across the University, with the underlying goal of producing measurable, achievable, consensus-based objectives to be accomplished within three years. Because we designed the plan to focus on implementation, not inspiration, the recommended action items represent relatively "low-hanging fruit." Indeed, many of these action items are already in progress thanks to efforts of the Sustainability Council, the Center for Sustainability, and various operational groups across campus. Based on discussions with and feedback from the Sustainability Council, we identify high impact priorities from the Sustainability Plan that can be accomplished in a relatively short timeframe at relatively low cost, summarized in **Appendix 2**. In particular, the "Organizational" and "Curricular" priorities have the greatest potential to transform the way we practice sustainability on campus by integrating the Sustainability Center into the organizational and reporting structure of the University, by building networks of campus partners, and by enhancing



curriculum. We also list recommendations from the Sustainability Plan that are currently in progress in **Appendix 3**. Accomplishing a majority the recommended action items in the Sustainability Plan will enhance the profile of the University, motivate the University community to achieve more ambitious goals, and engage all stakeholders in an on-going planning and action process.

#### **IV. Administration**

Implementation of sustainability goals can be challenging because it requires crossing the boundaries of many university “silos.” The University has an extraordinary asset in its long-standing Sustainability Council. When it was established in 2008, the Council was designed as an open, representative entity to coordinate and facilitate sustainability efforts across the University. The Sustainability Council includes faculty, student, and staff representatives, as well as representatives of University administration. During the past six years, the Council has developed a strong culture of inclusiveness, cooperation, and a strong volunteer ethic. The Council also provides a clear means to engage additional key campus and community partners on these transformative ideas, such as student groups working on sustainability-related issues, the Center for Community Engagement & Service Learning (CCESL), and the Center for Multicultural Excellence (CME). During the past two years, the Council has developed a strong working relationship with the new Center for Sustainability. We propose that the Sustainability Council continue to lead in bringing together groups from across campus, to engage volunteers from across the university, and to be the creative and inspiring force that seeks innovative and cross-cutting solutions to sustainability challenges.

The Center for Sustainability should continue to grow as the operational arm, building community through active student engagement, expanding and managing programs, providing a link to the broader community beyond our campus, and clearly reporting on these activities. The Center has already demonstrated a strong track record of engaging the campus community. During its second year of operation (AY 2013-14), the Center coordinated 25 student employees, 15 interns, 80 students in classes, and 540 volunteers in sustainability projects across campus, with 46% of the non-appointed budget going to student employees (see **Appendix 4**). The Center is currently well-positioned to collaborate with a broad coalition of campus partners – including CCESL, CME, the Living and Learning Communities, the Honors Program – to grow opportunities for community engagement and experiential learning, with the goals of enhancing the student experience, improving student learning, and contributing to the public good.

The pilot initiatives outlined in this proposal could be managed through the Center for Sustainability. However, to ensure the success of these programs, additional staff would allow the maintenance of current operations and the development and implementation of new initiatives. At a minimum, this would include a support staff member (ideally a recent graduate of DU), as well as on-going funding for several graduate students per project (who would be housed and advised in various departments across campus), thereby enhancing the educational potential of these endeavors. Additional strategies for continued success and establishment of these programs include strengthening administrative connections and communication to the Center for Sustainability, and developing a directorship structure in the Center for Sustainability. In this way, these proposals would grow with a continued focus on students gaining experiential

learning in management, entrepreneurship, innovation, and community and institutional sustainability practices.

To successfully achieve the goals outlined in the 2014-2017 Sustainability Plan, we recommend: (i) clearly defining the position of the Center for Sustainability within the broader organizational structure of the University, (ii) enhancing the role of sustainability in decision making processes across the University, (iii) adding representation from the Center for Sustainability at the Administrative Council level, and (iv) adding a support staff member to expand sustainability efforts, decrease the time needed to meet our sustainability goals, and further engage the community.

## **V. Finance**

While funding interdisciplinary, cross-cutting projects is often challenging, many sustainability efforts have the potential for significant cost savings to the University. Several models exist to creatively leverage these savings and initiatives for the greatest impact. Our energy conservation fund once led the way nationally in modeling how these savings could be realized and grown<sup>4</sup>. This structure has been adopted by many schools in the Billion Dollar Green Challenge via revolving energy funds. Savings due to energy retrofits or generation projects can then be realized over time. As the fund savings grows, we propose a transparent disbursement of these funds, where 50% would pay for additional energy projects, 25% would be committed to need-based scholarships for students from traditionally underrepresented groups, and 25% would be used to pay for academic programs related to sustainability. In this way, sustainability projects would be self-funded through realized savings, returning DU as a leader in the use of energy funds.

This energy conservation fund could stimulate student, alumni, employee, and community engagement. By providing this clear benefit model, individual offsets and donations that advance sustainability would grow the fund. The fund could be used as a challenge for donor matches, engaging alumni, as well as a broader suite of potential donors. We also advocate the creation of additional revolving funds that would reflect other savings related to campus sustainability efforts, such as water and transportation infrastructure savings. This would allow us to track benefits to the University as we encourage campus projects that reduce water use and encourage community members to utilize alternative means of transportation. These funds, once established, could be allocated in a manner similar to the energy conservation fund.

A number of universities across the country are developing innovative structures to finance sustainability investments and track sustainability savings. Oberlin College established the community-based Oberlin Project, as a separate non-for profit entity.<sup>5</sup> UCLA has initiated a bond-funded energy conservation project.<sup>6</sup> Whether DU should establish a series of interrelated revolving funds within the University budget, or a separate nonprofit entity to invest in sustainability and reap the returns for the community, depends on factors beyond the scope of this report.

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<sup>4</sup> <http://greenbillion.org/wp-content/uploads/2012/11/Greening-the-Bottom-Line-2012.pdf>  
See reference to University of Denver on pages 19, 29, and 52.

<sup>5</sup> <http://www.oberlinproject.org/>

<sup>6</sup> <http://www.sustain.ucla.edu/our-initiatives/climate-and-energy/>

## **VI. Conclusion**

In conclusion, we have prioritized work towards successful implementation of the sustainability plan, work that is already underway. In order to provide clear differentiation among our peers, we propose a transformative approach to community building, where the University articulates a commitment to a just and sustainable future, especially within our urban context. This foundational concept could be embodied in multiple ways; based on current developments on campus and across the region, we propose several pilot initiatives as examples of this inclusive, engaging approach. Each of these projects is currently in the development stages, and a timely response would allow the University to take a major leadership role in the community. This truly transformative expansion of our commitment to a just and sustainable future would distinguish the University and strengthen our role as a great private University dedicated to the public good.

**Appendix 1. Summary of timelines and resource needs to initiate proposed pilot projects.**

| <b>Initiative</b>                 | <b>Campus &amp; Community Impact</b> | <b>Cost</b> | <b>Project Initiation Timeline (months)</b> | <b>Commitment Deadline*</b> | <b>Project Initiation Date</b> | <b>Potential community partners</b>  |
|-----------------------------------|--------------------------------------|-------------|---|-----------------------------|--------------------------------|--|
| Metropolitan Greenspaces Alliance | High                                 | Low         | 6   | March 2015                  | Summer 2015                    | Denver Museum of Nature & Science, Denver Botanic Gardens, Denver Zoo, The Nature Conservancy, Denver Community Planning & Development |
| Multimodal Transportation Hub     | High                                 | Low         | 6   | March 2015                  | Summer 2015                    | The Bike Depot, RTD, Transportation Solutions, South High School, Denver Waldorf School, Denver Community Planning & Development       |
| Solar                             | Moderate                             | Savings     | 12  | August 2015                 | Summer 2016                    | Denver Public Schools, Aurora Public Schools   |
| DU Farm to Table Initiative       | High                                 | Medium      | 18  | July 2015                   | July 2015                      | Re:Vision, The GrowHaus, Sodexo, Denver Sustainable Food Policy Council  |
| Sustainability Master's Program   | High                                 | Medium      | 24  | <i>open-ended</i>           | Fall 2017                      | Many opportunities exist for growing a regional network of partners  |

\*All projects would require University commitment, permission and/or mechanism to negotiate with community and campus partners, allocation of staff time for initial seed grant applications, on-going support staff for project management, and funding for match grants and/or feasibility studies.

**Appendix 2. High priority, high impact, short timeline recommendations from the University of Denver 2014-2017 Sustainability Plan (page 1 of 2).**

| Objective  | Plan Section   | Need                                       | Cost | Timeframe (months) |
|--|----------------|--|------|--------------------|
| <b>Organizational</b>  |                |  |      |                    |
| Forge a reporting link between the Center and University administration at the highest level.  | Administration | Administrative commitment                  | Low  | 3                  |
| Identify and map a broad coalition of campus partners with complimentary objectives, focused on growing community engagement and experiential learning as a method of enhancing the student experience, improving student learning, and contributing to the public good. | *              | Staff & Faculty resources                  | Low  | 3                  |
| Engage this coalition in strategic planning to expand the reach and impact of DU in the community.   | *              | Staff & Faculty resources                  | Low  | 6                  |
| Develop the University of Denver Sustainability Inventory to include past, present, and potential projects, classes, and internships that engage sustainability on campus and in the community.  | Engagement     | Staff resources                            | Low  | 3                  |
| Develop a mechanism through the Center for Sustainability to facilitate community partnerships, grant funding, and campus opportunities for authentic, project-based experiential learning.  | Engagement     | Administrative commitment, Staff resources | Low  | 6                  |
| Create an external funding mechanism for University gifts and donations to support the actions items in this plan.   | Engagement     | Administrative commitment                  | Low  | 3                  |

\*Recommendations emerged from Task Force discussions, not included in the 2014-2017 Sustainability Plan.

**Appendix 2 (page 2 of 2).**

| Objective  | Plan Section | Need   | Cost                               | Timeframe (months) |
|--|--------------|--|------------------------------------|--------------------|
| <b>Curricular</b>  |              |  |                                    |                    |
| Identify clear learning objectives for sustainability that are applicable across disciplines at the undergraduate level by developing Curriculum and Sustainability Framework guidelines by 2015.  | Curriculum   | Faculty resources                            | Low                                | 12                 |
| Develop a proposal for one new interdisciplinary program in sustainability, e.g., a major at the undergraduate level or certificate at the graduate level, which has an emphasis on sustainability.  | Curriculum   | Administrative commitment, Faculty resources | Medium                             | 24                 |
| Develop annual faculty training workshops, in conjunction with the Office of Teaching & Learning, to build multi-disciplinary faculty collaborations focused on integrating sustainability issues into the classroom.                            | Curriculum   | Faculty & Staff resources                    | Low                                | 6                  |
| <b>Operational</b>   |              |  |                                    |                    |
| Implement a plan to increase planting of multiple species of trees and shrubs in groupings to reduce maintenance and water needs and to provide a long-term template for planting that can thrive without irrigation after they are established. | Grounds      | Administrative commitment, Budget            | Medium up-front, savings long-term | 18                 |
| Convert peripheral grass zones that are left dormant in summer months to xeriscaping show-casings.   | Grounds      | Administrative commitment, Budget            | Medium up-front, savings long-term | 18                 |
| Develop visible University of Denver Sustainability Procurement Standards that employ life-cycle analysis for socially and environmentally responsible vendors and products.   | Purchasing   | Administrative commitment                    | Low                                | 12                 |
| Integrate a University of Denver Sustainability Purchasing Guide into existing training modules required for student groups, faculty, and staff.   | Purchasing   | Administrative commitment                    | Low                                | 12                 |
| Consolidate bidding and centralized purchasing for common products and processes such as paper and drink services through on-campus warehousing and timely delivery.   | Purchasing   | Administrative commitment                    | Low up-front, savings long-term    | 12                 |

**Appendix 3. *Currently in progress* recommendations from the University of Denver 2014-2017 Sustainability Plan (page 1 of 2).**

| <b>In Progress</b>   |                |
|--|----------------|
| Establish quarterly meetings with the Provost or Chancellor in order for the Center Director to make the University aware of sustainability initiatives in a way most likely to benefit the University.  | Administration |
| Clearly position the Center's role in advising administrative units at DU regarding sustainability.  | Administration |
| Repurpose the Sustainability Council as a working body for faculty, staff, and student leaders focused on idea generation, information gathering, policy formulation, and ongoing planning.  | Administration |
| Develop communications, data, and reporting strategies to leverage AASHE STARS, the Sustainability Plan, and future publications/reports.  | Administration |
| Increase enrollment in the Sustainability Minor program for students pursuing any undergraduate degree by broadening opportunities in cross-disciplinary education.  | Curriculum     |
| Offer at least one course focused on or related to sustainability in every undergraduate major and graduate-level department on campus.  | Curriculum     |
| Achieve on average Silver LEED standards on all new buildings (in alignment with the Board of Trustees directive).   | Buildings      |
| Certify one architecture and planning, facilities, and/or sustainability staff as a LEED professional.   | Buildings      |
| Utilize building and event scheduling to limit and centralize building use in non-business hours.  | Buildings      |
| Enhance behavioral changes through training of University of Denver Facilities Staff and Aramark Housekeeping Staff.   | Buildings      |
| Leverage rebate gains from utility providers for infrastructure improvements.  | Buildings      |
| Continue evaluation and installation of LED lighting infrastructure in parking garages and building lighting applications, with goal of achieving an additional 2900 MTCDE in reductions by 2020 through Utility Reserve Fund investment in lighting, mechanical and controls efficiency upgrades. | Energy         |
| Increase use of occupancy sensors to reduce lighting and equipment runtime.  | Energy         |
| Engage utility rebate programs that support renewable energy grid integration.   | Energy         |
| Implement real-time monitoring and dashboard deployment to 20 main academic buildings.   | Energy         |
| Progress toward a 24% reduction in greenhouse gas emissions by 2020 from institutional baseline, recognizing the future increase in emissions from current construction projects.  | Energy         |

**Appendix 3 (page 2 of 2).**

|  |                |
|--|----------------|
| Pilot the University of Denver Forum on Sustainability as a means for faculty, staff, and students to exchange research and experiences of multidisciplinary projects that directly address sustainability challenges.   | Engagement     |
| Increase the purchase of food that is either locally grown or produced (within 250 miles) and/or third-party certified to be ecologically sound, fair and/or humane, by 3% per year to achieve 10% of total purchases by 2017 (excluding products from Concentrated Animal Feeding Operations, of minimal nutritional value, or processed food with non-local or non-sustainably certified ingredients). | Food           |
| Identify two new local products per year to emphasize in food service, with a focus on Colorado's agricultural strengths in livestock, dairy, poultry, potatoes, onions, and apples.   | Food           |
| Use food produced in campus gardens in campus food operations.   | Food           |
| Develop guidelines for distributing excess food to third-party vendors.  | Food           |
| Reduce square footage of non-permeable pavements on campus.  | Grounds        |
| Dedicate 5% of current landscaping to areas for harvestable and garden managed vegetation.   | Grounds        |
| Decrease campus area characterized by bluegrass lawns by 10%.  | Grounds        |
| Increase bike commuting by 15%, transit use by 15%, carpooling by 10%, multiple modes by 10%, and walking by 5%.   | Transportation |
| Provide flexible parking to incentivize use of alternative modes by parking pass holders.  | Transportation |
| No net increase in parking spaces on campus.   | Transportation |
| Educate all incoming students about alternative modes of transportation.   | Transportation |
| Implement a voluntary offset program and carbon sequestration projects for University-financed travel by 2015.   | Transportation |
| Enroll 30% of study abroad participants and University-funded air travel in the voluntary offset program.  | Transportation |
| Obtain a Silver Rating for the Bicycle Friendly University Award.  | Transportation |
| Increase overall campus waste diversion rates to 30% in 2015, 35% in 2016, and 40% in 2017.  | Waste          |
| Provide orientation training to all students and all new employees.  | Waste          |
| Implement complete recycling and landfill can parity in 10 buildings on campus, while decreasing the total number of trashcans slated for landfill waste disposal.   | Waste          |
| Ensure all new construction includes the most water efficient fixtures.  | Water          |
| Maintain a 40% reduction (for the 2014-2017 average) for all irrigation and external water use over a 2011 baseline.   | Water          |



**Appendix 4. Center for Sustainability, FY2014 Annual Report Summary.**

***Community Building, Engagement, and Education***

Building and inspiring community around sustainability, bridging the curriculum, the physical campus, and the surrounding community.

| <b>Event</b>                               | <b>Community Reach</b>                  |
|--|---|
| 9 class and club presentations             | 167 DU students                         |
| 6 class presentations, K-12                | 85 students                             |
| 5 classes involved sustainability projects | 80 DU students                          |
|  | 15 internships                          |
|  | 25 students employed, 6,331 total hours |
| 11 brown bag lunch discussions             | 26 DU students and employees            |
| 6 staff meeting presentations,             | 81 employees                            |
| 3 Bike mechanics classes (6 week series)   | 15 students and employees               |
| 3 orientations                             | 325 students                            |
| <b>43 events</b>                           | <b>819 participants</b>                 |

***Programming and Volunteering***

Major events and volunteer opportunities included: Mt. Trashmore, Fall Festivus, Garden Week, Bike-to-Work Days, Farmers' Markets, and Earth Hour

| <b>Event</b>              | <b>Community Impact</b>           |
|---------------------------|-----------------------------------|
| 5 events/event series     | 545 estimated attendance          |
| 3 volunteer opportunities | 540 volunteers, over 2 hours each |
| <b>8 programs</b>         | <b>1,086 participants</b>         |

***Action Research and Value Added Programs***

Students and a broad representation of university faculty and staff were engaged in a number of applied research projects on campus contributing to the public good.

| <b>Program</b>  | <b>Results</b>  |
|---|---|
| 4 waste minimization programs   | 38% decrease in contamination; diverted 1,395 lbs. compost; diverted 3,191 lbs. from landfill |
| 330+ bike services in bike shop                                       | estimated value of \$26,000+  |
| 46% percentage of non-appointed budget to student part time employees | 25 part-time student employees  |
| Campus Sustainability Planning  | updated sustainability plan   |
| Transportation Safety Planning  | task force recommendations  |
| Garden community building and planning                                | garden network proposal   |