



## Post-Secondary Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

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#### College or University Certifications

The signature of college or university President (or equivalent) on the next page certifies that each of the statements below concerning the institution’s eligibility and compliance with the following requirements is true and correct to the best of their knowledge.

1. The college or university has been evaluated and selected from among institutions within the Nominating Authority’s jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The college or university is providing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a compliance review.
3. OCR has not issued a violation letter of findings to the college or university concluding that the nominated college or university has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
4. The U.S. Department of Justice does not have a pending suit alleging that the college or university has violated one or more of the civil rights statutes or the Constitution’s equal protection clause.
5. There are no findings by Federal Student Aid of violations in respect to the administration of Title IV student aid funds.
6. The college or university is in good standing with its regional or national accreditor.
7. The college or university meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

### U.S. Department of Education Green Ribbon Schools Postsecondary 2015-2018

Public 4-Year     Public 2-Year     Private Non-Profit

Name of President/Chancellor: Dr. Anne E. Huot  
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official College or University Name: Keene State College  
(As it should appear on an award)

College or University Street  
Mailing Address: 229 Main Street, Keene, NH 03435  
(If address is P.O. Box, also include street address.)

County: Cheshire IPEDS Number\*: 183062  
Telephone: 603-358-2000 Fax: 603-358-2009  
Web site/URL: www.keene.edu E-mail: president@keene.edu

\*Integrated Postsecondary Education Data System

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Date: 1/30/17



(President's/Chancellor's Signature)

### Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the college or university's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The college or university has been evaluated and selected from among institutions within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The college or university meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: New Hampshire Department of Education

Name of Nominating Authority: Dr. Virginia M. Barry

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

A handwritten signature in black ink that reads "Virginia M. Barry". The signature is written in a cursive style.

Date: 1/30/31

(Nominating Authority's Signature)

### SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your college or university is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars and their underlying Elements. Then, include concrete examples for work in every Pillar and Element. Only institutions that document progress in every Pillar and Element can be considered for this award.

### SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to [green.ribbon.schools@ed.gov](mailto:green.ribbon.schools@ed.gov) according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

### Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send



comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email [ICDocketMgr@ed.gov](mailto:ICDocketMgr@ed.gov) and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

**Nominating Authority Application**

**KEENE STATE COLLEGE**

**College/University Name:** Keene State College  
**Street Address:** 229 Main Street  
**City:** Keene **State:** NH **Zip:** 03431  
**Website:** [www.keene.edu](http://www.keene.edu) **Facebook page:** <https://www.facebook.com/keenestatecollege/>  
**President/Chancellor Name:** Dr. Anne Huot  
**President/Chancellor Email Address:** [president@keene.edu](mailto:president@keene.edu) **Phone Number:** 603-358-2000  
**Lead Applicant Name** (if different): Dr. Cary Gaunt, Director of Campus Sustainability  
**Lead Applicant Email:** [cary.gaunt@keene.edu](mailto:cary.gaunt@keene.edu) Phone Number: 603-358-2417

Basic Carnegie Classification	<p>Basic: Master’s Colleges and Universities (Small Programs)          Undergraduate Instructional Program: Balanced Arts and Sciences/professions; some graduate co-existence          Graduate Instructional Program: Postbaccalaureate: Education-dominant, with Arts and Sciences          Enrollment Profile: Very high undergraduate          Undergraduate Profile: Four-year, full-time, selective, lower transfer-in          Size and setting: Four-year, medium, highly residential          Keene State College is not designated as a minority-serving institution.</p> <p>Keene State College received Carnegie Community Engagement Classification 2006, 2015</p>
Enrollment Profile	<p>Graduation rate (150% of normal time): 52.3%          Average Institutional Net Price: \$28,195 (represents average of in- and out-of-state tuition)</p>

**1. Is your college or university participating in a local, state or national program which asks you to benchmark progress in some fashion in any or all of the Pillars?**

( X ) Yes ( ) No Program(s) and level(s) achieved:

- AASHE (Association for the Advancement of Sustainability in Higher Education) STARS reporting (KSC achieved *Silver* rating, February 2015)
- American College and University President’s Climate Commitment (ACUPCC; now called Carbon Commitment): Prepared Greenhouse Gas Inventories and draft Climate Action Plan
- Carnegie Community Engagement Classification 2006, 2015

**2. Has your college or university received any awards for facilities, health or environment?**

( X ) Yes ( ) No Award(s) and year(s): LEED Certification: Silver (2008), Platinum (2013). EPA Food Recovery Challenge: 5 EPA awards—2015 award for exemplary Educational and Outreach Campaign; 2013, 2014, 2016 Demonstrated Commitment to Improving Sustainable Food Management Practices Awards, and 2012 (combined with 2011) Outstanding Achievement in Food Waste Prevention. Laurie Bryan Partnership Award from Harris Center for Conservation Education (2016); Princeton Review’s Green College list (multiple years); Granite State Quality Award to KSC Physical Plant Department (2008): Recognizing organizations in the pursuit of excellence and high performance.

**Cross-Cutting Question: Participation in Green Schools Programs and/or ACUPCC:**

In addition to programs listed above (AASHE STARS, Carbon Commitment, LEED, Architecture 2030, EPA Food Recovery Challenge), KSC participates in: Federal/state energy conservation/efficiency incentives and renewable fuels rebates; EnergyStar, EPA WaterSense, Green Seal, Recyclemania, Earth Day, World Water Day, Source-to-Sea Cleanup, Green Keene events, Epeat Green Electronics, TerraCycle, EPA WasteWise, among others

## SUMMARY NARRATIVE

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Keene State College (KSC) embraces a systems approach to environmental stewardship, sustainability, and community health and wellness that is demonstrated at every level and across all campus sectors. College-wide policies and plans guide campus activities and establish action goals that cross all three pillars of the Green Ribbon Schools program. KSC has correspondingly strong programs and projects that reduce environmental impacts and costs; improve the health and wellness of students, faculty, and staff; and provide exemplary environmental and sustainability education.

Our story is one of deepening commitment through demonstrable actions as we move toward strategic goals of attaining AASHE STARS Gold status by 2020, achieving carbon neutrality as expressed in the Carbon Commitment (formerly ACUPCC), and preparing our students to be civically engaged learners who care about their personal well-being and that of the larger world.

### **Building a Strong Foundation, Pillars I-III: 2000-2014**

- Established Sustainability Coordinator position, 2000
- Kicked off College Wellness Initiative, 2001
- Developed Green Bikes (free bike loaning) program, 2002
- Created Center for Health and Wellness and hired Director, 2004
- Signed Carbon Commitment (formerly ACUPCC), 2007
- Hired Coordinator of Wellness Education, 2007
- Published Sustainable Building Guidelines, 2008
- Added innovative Sustainable Product Design and Innovation (SPDI) major in 2008 and Environmental Studies (ENST) Department in 2009
- SPDI and ENST joined programs—Architecture (Sustainable Design focus), Dietetic Internship, Geography, Health Science, Physical Education and Athletic Training, and Safety and Occupational Applied Health Sciences—to create a robust environmental, sustainability, and well-being curriculum
- Emphasized progressively greener buildings with LEED Silver Rated Pondsides III Residence Hall, 2008 and TDS (Technology, Design, Safety) Educational Building, LEED Platinum rated, 2013
- Assembled President’s Council For a Sustainable Future, a campus-wide advisory stakeholder group, 2009

### **Cross-Cutting (Pillars I-III) Visionary College-Wide Leadership Policies and Plans: 2014-2016**

Early actions in environmental stewardship and sustainability practice, education and health and wellness were guided by good intentions, but few codified durable plans and policies. In 2014-2015 KSC took the bold step of developing visionary policies and plans to guide KSC into the future. Using whole-campus civic engagement processes with endorsement from campus leadership, these articulated a unique suite of integrative policies and plans that provide a campus-wide framework for environmental stewardship, sustainability, health and wellness.

- **College Mission Statement:** Core values of environmental stewardship, sustainability, social justice and equity
- **Keene State College Campus Master Plan<sup>i</sup>:** Emphasizes improved natural resources management, energy efficiency, and high performance buildings
- **College-Wide Learning Outcomes<sup>ii</sup>** identified outcomes on Civic Engagement and Well-Being
- **Keene State College Strategic Plan<sup>iii</sup>: Goals 4.4 and 4.5:** (4.4) Develop a campus-wide plan to address student wellness, and (4.5) Promote a culture and instill and communicate policies and practices that value and support environmental sustainability and improve the quality of life locally and globally.
- **Academic and Co-Curricular Plan<sup>iv</sup>** identified approaches to the Well-Being Learning Outcome.

### **Current Initiatives**

The Fall Issue of Keene State’s award-winning Alumni magazine, *Keene State Today*, focused on *Sustainability* and provides an excellent overview of current initiatives.<sup>v</sup> A recent video address by the College President’s underscores these commitments and actions.<sup>vi</sup> Selected accomplishments from academic year 2015-2016 to present are highlighted here, with details of these and more provided in the rest of this application. Most cut across all pillars because of KSC’s commitment to integrative curricular, co-curricular, and physical plant as living lab initiatives.

- **Innovative Carbon-Neutral Heating:** KSC became first in nation to replace polluting #6 heating oil with a carbon-neutral, renewable biofuel made from 100% purified used vegetable oils (currently comprises 36% annual need)
- **State-of-the-Art High Performance Building:** Opened a new residential living learning center designed to comply with the Architecture 2030 standard of carbon-neutral/fossil free buildings by 2030
- **Socially and Environmentally Responsible Investing:** Established a socially and environmentally responsible investment option for KSC Endowment Association
- **Ecovation Hub Education Research and Training Consortium:** Co-leading with community partners development of a regional higher education research and training consortium for green building and sustainable, resilience community development
- **BEST:** Developed Building Excellence in Science and Technology program to support STEM education
- **Food Waste Education Programs and On-Campus Composting:** Supports 30% diversion of waste through award-winning EPA Food Recovery Challenge programs
- **Civic Engagement:** Received Carnegie Community Engagement Classification through notable American Democracy Project, voter engagement, and community service programs.

### Planning for the Future

The Office of Sustainability and President’s Council for a Sustainable Future just launched “Green Keene: Campus-Wide Engagement and Action on Sustainability.” For the next 8-10 months we will use interviews, focus groups, surveys, and community events to determine sustainability priorities. A similar initiative is underway for health and wellness. The Directors and lead staff for both of these initiatives are working together to create a coherent suite of environmental, sustainability, and health and wellness indicators.

## DETAILED DOCUMENTATION

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### PILLAR I: REDUCE ENVIRONMENTAL IMPACT AND COSTS (30% total points)

*Keene State College Strategic Plan Goal 4.5* directs sustainability efforts: “Promote a culture and instill and communicate policies and practices that value and support environmental sustainability and improve the quality of life locally and globally.” Its imperative to “Develop and implement a plan to move Keene State College to the STARS Gold rating no later than 2020” and presents a clear road map for establishing priorities and action. The Office of Sustainability and the President’s Council for a Sustainable Future are responding to the Strategic Plan, and our Carbon Commitment (ACUPCC) goals by implementing a campus-wide engagement effort to identify sustainability priorities and actions, strengthen existing goals and quantify new ones, and develop an integrated sustainability, energy management, and climate action plan. Our deadline for completing this ambitious planning and goal-setting effort is December 2017. Vital to these efforts is taking our best practices which are engrained in our day-to-day way of doing business, and codifying them into policies, plans, and practices that will achieve SMART goals.

#### **ELEMENT 1A: REDUCED OR ELIMINATED GREENHOUSE GAS (GHG) EMISSIONS**

Keene State College is a charter signatory to the Carbon Commitment (formerly ACUPCC), which compels the College from the presidential level through all facets of campus life, to become carbon-neutral “as soon as possible.” More recently the College made a pledge to attain AASHE STARS Gold rating by 2020. Significant to achieving this is ambitious progress toward reducing and eventually eliminating greenhouse gas emissions.

Since making these commitments, Keene State has vigorously improved energy management, stepped up energy efficiency measures around the campus, demonstrated the commitment through increasingly rigorous high performance green standards for new buildings, and explored low-carbon/carbon-free ways to heat our campus. In 2015 KSC completed a baseline performance evaluation by completing the AASHE STARS assessment (resulting in a Silver rating) and a new baseline GHG inventory using Clean Air/Cool Planet’s Campus Carbon Calculator.

## Energy

**Carbon-Neutral Heating Fuel:** KSC received international acclaim<sup>vii</sup> this fall with our “first-in-the-nation” project to replace approximately 36% of our polluting #6 fuel oil with a low/no-carbon renewable option—a 100% purified used vegetable oil biofuel. Called LR-100, this sustainable heating fuel supports improved human and environmental health with its lower emissions and non-toxic composition. It also helps KSC take dramatic steps toward achieving our carbon neutrality goal as Second Nature, the organization that monitors the Carbon Commitment, considers LR-100 to be a carbon-neutral fuel source. This year represents an extended pilot test of the product and if performance holds up the College anticipates expanding its use of this truly innovative biofuel.

**Energy from Co-generation:** When the steam plant that has heated the campus for nearly 100 years needed an upgrade in 2009, the design team selected super-efficient new boilers that increase steam output with almost no waste and which turn a turbine that can generate up to 12% of the campus’s electricity.

**Energy Efficiency and Upgrades:** Working closely with its electric utility, Keene State is energized to leverage its energy-savings know-how with project incentives to continue funding future efficiency projects. Efficiency upgrades have contributed to a decrease in campus-wide energy usage in the last three years, with 2016 usage down 13% since 2013:

- Replacing and repairing 167 campus steam traps in campus buildings and underground manholes ensures that steam heat is transmitted evenly across campus during the heating season. Annual savings of over 4000 MMBtu for the steam trap upgrades earned the college incentives starting in 2014.
- Replacing 60 400-watt high-beam lamps in KSC’s “Rec Sports Gym” with low-watt, motion-sensor LED lamps. Reducing the output by 70,000 kWh each year saves KSC over \$8,500 annually in energy costs, and lowers CO<sub>2</sub> emissions by 80K pounds a year, according to Eversource utility calculations.
- Keene State’s electricians are vigilant in replacing old lighting technology with utility approved LED lights whenever possible. In FY 2015, Keene State installed 575 Design Light Consortium and/or Energy Star approved LED lights in 2015.
- With over 300 outdoor lights illuminating the campus at night, Keene State seized the chance to replace the old 275-watt metal halide lamp with 60 watt DLC replacement LEDs, the savings opportunities for this outdoor lighting project are significant as these lights are on over 3000 hours a year. 100 new replacements were installed in 2016, and the remainder will be completed in 2017.
- Keene State’s own electrical team installed seven commercial-grade capacitors in 2012 to help smooth current delivery and reduce false triggering in select campus locations. This low-cost installation has proven to be a long-lasting money saver for KSC, improving year-round power factor and saving the college over \$100K since its 2012 installation.
- Solar panels on Keene State’s Technology Design and Safety Center has generated 428,987 kWh since its installation in 2013 and is one of the largest solar PV arrays in Cheshire County.

Energy Savings Performance Contracting: Developing Request-for-Proposals (RFP) for spring 2017 with goal of selecting ESCO by July 1 2017. Setting the ambitious goal of 20% additional decrease in energy use in two years.

## Buildings

Since making the decision to move toward carbon neutrality, the College has raised the bar on sustainability features with each building constructed.

- **Pondside 3 Residential Hall**, opened in 2008, earned **LEED Silver** rating
- **TDS Center** academic building, dedicated in 2012 with a goal of serving as a model for sustainability, earned **LEED Platinum** with an impressive array of features:
  - Photovoltaic arrays on the roof and on the adjacent Science Center
  - A south-side glass curtainwall and window area maximize passive solar heating
  - Skylights help to brighten the interior of the building and electric lighting is energy efficient
  - Building materials include recycled materials for the carpets, porcelain tiles, ceramic tiles, acoustical ceiling tiles, plastic toilet partitions, tack board. Ceiling panels were crafted from fast-growing Aspen trees

- The absence of volatile organic compounds or carbon-based chemicals present in paint, polished concrete flooring, and exposed structuring, contribute to better air quality
- Extensive metering systems allow for live-data tracking of utility use, from energy consumption to energy generation
- **Living Learning Commons (LLC)**, the newest residential hall, opened August 2016, further advances sustainability on campus as a high performance building aspiring to meet the ambitious **Architecture 2030 Challenge** standard for being a carbon neutral, fossil-free, building by 2030. It is a high performance building showcase.
  - High performance building envelop: Walls, R-28; Roof, R-38
  - Geothermal heating: 25 geothermal wells harvest earth’s temperature to provide radiant heating for the ground floor and pre-heating of the hot water
  - High Efficiency Air-to-Air Mini-split heat pump units provide capacity for individual room control
  - Passive solar design
  - Energy efficient windows and glazing
  - PV-ready roof
  - Operable room windows are programmed to automatically power-down room HVAC when window opens
  - Efficient LED lighting throughout the building
  - Low VOC materials
  - Native landscaping and rain garden.

Collectively our new construction since 2008 demonstrates an increasing, demonstrable commitment to sustainability and climate action and provide a showcase of high performance building features that students and community members learn from by being engaged with the building itself. One of KSC’s goals is to be a showcase and living-learning laboratory for sustainability, green building, and the emerging green economy—not only with our academics, but throughout our built environment of the campus.

## **ELEMENT 1B: IMPROVED WATER QUALITY, EFFICIENCY, AND CONSERVATION**

Keene State College is bounded to the south and west by the Ashuelot River. This beautiful natural asset plays prominently in many courses and recreational activities on campus, but also is a visible reminder to students, faculty, and staff of our connection to water resources and the larger watersheds to which we are connected. An ethic of responsible water resources management infuses the campus, which is especially evidenced in our grounds maintenance program and to our commitment to myriad water conservation efforts.

### **Grounds and Water Quality**

The KSC Grounds Crew is motivated by an ethic of “doing the right thing” for people and the ecological systems. This ethic infuses all of their decisions as they practice the ecologically beneficial uses of grounds in myriad ways:

- **History and Environment:** Conserves the history of the grounds, and the stories of individual trees and plants, as well as ensuring that the trees and gardens are cared for in a way that is environmentally sound
- **Organic and IPM-Like Approaches:** Practices organic landscaping and grounds maintenance and other ecologically beneficial practices similar to IPM but without a formal policy. These practices (e.g., delayed mowing and taller grass heights to help with drought stress, using native plants, minimizing irrigation and watering based on monitored need rather than a pre-programmed schedule, spot-checking for pests, eliminate or minimize chemical inputs) support a healthy campus environment and water quality.<sup>viii</sup>
- **Campus-Made Compost:** Enriches the soil and fertilizes with organic campus-made compost comprised of leaf litter, wood chips, and kitchen waste from campus services.

The Campus Grounds Crew is one of the most innovative in the nation and practices “full circle” sustainability<sup>ix</sup> through its use of local plants and campus-made compost. This program is unique to KSC but fully replicable in its approach to engaging students and staff to collect food waste and create nutrient rich compost:

- **Late Winter:** Head gardener starts seeds in his home nursery that provide the beautiful floral annuals that adorn the campus



- Early Spring and Throughout the Year: Flowers and plants started by head gardener are planted in rich compost created by the Grounds Crew with student support
- Campus composting offers unique co-curricular opportunity: Student recycling program (ROCKS, Recycling on Campus Keene State) collects compost containers from the Dining Commons and Student Center Monday-Friday. It is weighed and added to KSC yard and leaf waste from mowing and other grounds maintenance. Even the flowers grown by our Head Gardener end up creating more compost when they die and are added to the compost bin.
- “Compost tea” is also created from campus made compost and used for spot fertilizing.

## **Water Conservation**

KSC plumbing operations have been on the forefront of water saving and efficiency for over five years. These efforts, combined with the conservation-focused commitments of KSC’s Residential Life office, resulted in hundreds of water saving upgrades installed across campus. KSC realized a **14% reduction in total water use** between May 2008 to May 2014. This was accomplished without a formal goal, but through a commitment to replace aging fixtures with low-flow alternatives. KSC is aggressive in installing water saving fixtures all across campus, from Residential Halls to Education buildings. The Plumbing Team has installed dual-flush toilets, low water urinals, 1.28 to 1.6 gallon toilets, and efficient shower heads.

All shower heads on campus have been replaced and approximately 50% of the Residential Hall toilets have been upgraded. Approximately 60% of the remaining campus buildings are upgraded.

KSC is stepping up its water conservation initiatives to achieve an additional 10% savings over the next year. We are partnering with the City of Keene to support its drought response efforts, and plan to be a lead participating institution for their 10% Challenge for water consumption reduction.

The results of the water saving work bubbles up to significant savings. Campus water use in FY 2016 decreased by over two million gallons compared to the previous year. Keene State is committed to continue this trend for years to come.

## **ELEMENT 1C: REDUCED WASTE PRODUCTION**

### **Waste: Reduce, Re-use, Recycle, Responsibly Dispose, Restore**

Keene State College practices six “R’s” of waste management and a culture of responsible waste management infuses campus consciousness since the creation of a Recycling Coordinator position in 2000. What started as a limited commitment to recycle paper, cans, and bottles has grown into a far-reaching materials management approach involving the Sustainability Office, Recycling Coordinator, Campus Food Services, Grounds and other Physical Plant staff, and close coordination with high waste producing academic programs (e.g., science labs and the arts).

Through these efforts we have been able to **divert approximately 30% of our total waste over the last 10 years** through aggressive recycling, composting, and re-use programs. The KSC Recycling Coordinator is currently developing a proposal to dramatically expand our composting program to accept food waste and paper products through a partnership with Windham County, Vermont’s Project C.O.W. (Composting Organic Waste)<sup>x</sup>. This will provide KSC with significant progress towards our ultimate goal of becoming a zero-waste campus.

### **Reduce**

Education and process review are at the heart of our waste reduction efforts. In January 2016 KSC began deploying LEAN—a systematic way to identifying waste and improving processes—on campus. The Sustainability Office is working with the LEAN Team to apply LEAN concepts to all waste-producing activities on campus. This is part of the Sustainability Office’s Green=\$Green Campaign to promote conservation and improved efficiency as a way to meet the triple goals of environmental sustainability, well-being, and financial sustainability.

Education about waste reduction is currently led by student employees of the Sustainability Office – the Keene State Eco-Reps. Eco-Reps follow a curriculum-based program, supplemented with specific outreach programs like Earth Week and

campus clean-up days, to provide training on recycling and waste reduction, energy and water conservation, food waste, and other ways to be better environmental stewards.

The Office of Sustainability is currently working with the President's Council for a Sustainable Future and the Coordinator of Student and Community Relations to develop a comparable peer-to-peer Eco-Ambassador's program for faculty, staff, and off-campus students.

Two exemplary educational programs include Eco-Reps working with Dining Services staff and the student recycling team to conduct food and waste audits:

- **Food Waste Audits:** The Eco-Reps host food waste audits about once every semester. They ask students to scrape their plates into compost bins. The total waste is weighed and divided by the number of students served at that specific meal, giving us the average amount of food waste per person per meal. The dining services staff collects similar data by weighing all of the waste coming out of the dish room. This provides us with a more accurate number for food wasted per person per meal. Statistics collected by Dining Services and an Environmental Studies class indicated the efficacy of these food waste audits: diners on campus cut plate waste in half from 4 oz./person to 2 oz./person.
- **Waste Audits:** Every semester the Eco-Reps and student recycling staff conduct a waste audit, collecting 10 - 20 trash bags from residence halls and/or campus buildings and then open them up on the Student Center lawn. Everything is sorted into different recycling categories, compost, reuse and landfill.

**Printing and Paper Use:** Campus-wide policy for 100% recycled paper and ways to reduce printing included a policy for double-sided copying (all campus printers are pre-set for this default); strong movement for making their materials available online while others only offer their materials through a digital medium. Campus uses online platforms for classes so faculty can post pdfs of reading assignments, the syllabus, and other key documents for the class without using any paper.

### **Re-Use, Re-Purpose**

- **Reuse Room:** The Eco-Reps and Recycling program host a Reuse Room where people can take/leave "still good" materials ranging from office supplies to kids toys. The Recycling program provides "reuse room" bins to anyone cleaning out their office/department and then transport the materials to this space. A second space in the Media Arts building—the ROSE Room (Reuse Office Supply Exchange)—has free office and school supplies available for campus. KSC also sponsors a Surplus Program where furniture and larger goods are available for reuse on campus or available to the general public for sale, which takes place one weekend per month.
- **Move-In and Out:** The recycling program places donation bins in 38 residential hall locations. Each location collects clothing, shoes, bedding, food, household goods, cleaning supplies, toiletries, school supplies and appliances/electronics. These items are collected by the recycling staff, stored, cleaned/organized and then resold to the campus community in June and to the first year students in August. The focus of the August sale is to minimize the amount of new items students purchase and to bring to campus by buying gently used items as a greener alternative.
- **Used Oils/Grease becomes Heating Oil:** All Dining Commons and Student Center used vegetable oils and greases are collected by LifeCycle Renewables and are processed into the renewable heating fuel (LR-100) described in Pillar I that KSC is using for a portion of campus heat.
- **Food Donations:** The dining commons frequently donates food from the coolers at the end of every semester; recycling program collects food during move-outs and donates it to the local food kitchen and shelter. Other food is donated by the dining services program or recycling program to community partners throughout the semester.

### **Recycle**

KSC operates a unique and innovative student led recycling program. A staff Recycling Coordinator provides leadership training and program oversight, but day-to-day activities are conducted by the students. This ROCKS (Recycling on Campus Keene State) is one of the College's exemplary career preparation opportunities as Recycling Coordinators represent one of the fastest growing green jobs sectors. ROCKS students get hands-on experience that directly prepares them for employment. As the primary waste management organization on campus, ROCKS responsibilities include:

- Providing consistent and thorough recycling collection for campus

- Working to constantly improve material management by providing industry best standards and practices, policies, and accurate information for multiple waste streams
- Collaborating with multiple departments across campus to divert as many commodities as possible from the waste stream
- Training, motivating and empowering a team of student employees to provide recycling services to campus
- Serving as a community leader for sustainable material management
- Exploring new ways to capture and divert materials
- Completing EPA reporting for Waste Wise
- Completing EPA reporting for Food Recovery Challenge
- Tracking and adapting to campus (waste stream) fluctuations and patterns
- Providing leadership to other college campuses on our successes and revisions of programs
- Coordinating with DTZ (housekeeping) and Grounds to ensure complete collection of materials across campus and delivery of materials to the Keene Recycling Center per Flow Control regulation
- Working with Sodexo to establish food reduction practices and ways to capture food scraps for donation, reuse and/or compost

**E-Waste:** The Information Technology Group maintains an e-waste recycling program for all surplus workstations and printers resulting from upgrade cycles. Good monitors, keyboards and mice that have been replaced might also get sold through our surplus program. All other electronics produced on campus by students, staff and faculty is collected by the recycling program and picked-up by a local electronic waste recycling company. The recycling program hosts an additional e-waste collection event every spring open to the entire Keene State community.

### **Restore**

The best example of reuse, or practicing full circle sustainability, is with the composting program described in Pillar I under Grounds. Last year over 1,071,480 pounds of pre-consumer kitchen food waste was composted.

### **Commencement and Greening Events**

With support of the Eco-Reps and the Sustainability Office, KSC initiated an effort to reduce waste on campus during events. Commencement 2016 provided an opportunity to pilot test some of these initiatives. Most impressive were Eco-Rep efforts to “Ban the Bottle” as a way of reducing the amount of waste from disposable water bottles. The results of the pilot test were impressive:

Baseline Year: 2015

Cost to provide Seniors with bottled water: \$1587.20 (1280 20-oz bottles)

Pilot Test Year: 2016

Cost: \$111.98 for 168 8-oz bottles (for graduates on Quad) and 75 20-oz bottles (for platform, support and musicians).

Through the “Ban the Bottle” campaign the campus reduced disposable plastic water bottle consumption by **89%**, and save the College almost \$1,500. As a result of last year’s successful project, the President’s Council for a Sustainable Future established a Working Group for developing Green Events Guidelines and a certification program. This group anticipates concluding its work for program roll out at the beginning of academic year 2017-2018.

### **Hazardous waste**

KSC’s approach to Hazardous Waste management is discussed in Pillar II, Element 2A.

## **ELEMENT 1D: USE OF ALTERNATIVE TRANSPORTATION**

**Green Bikes:** Keene State’s fleet of free bikes for students and staff has been in operation for over 14 years, steering KSC closer to a cleaner future by promoting emissions-free transportation that’s as easy to access as signing out a library book. Free to students and anyone having a library card, Green Bikes can be used for a few hours or up to a full semester; they even come with a free helmet. All green Bikes and bike parts are donated by City of Keene and KSC community members, then repaired, refurbished, and painted green – they model the ethic of re-using and re-purposing materials. A part-time staff bicycle mechanic works with students to keep the fleet going. Green Bikes at Keene State help to decrease

the campus community's reliance on fossil fuels, reduces air and noise pollution, all while providing an easy opportunity for exercise and physical well-being for everyone on campus.

**Shuttle Buses:** Two shuttle bus services provide free transportation around the campus and city for students. The City Express Shuttle runs from 7:30 am to 7:30 pm Monday through Friday during the academic year. Keene State has seven designated shuttle stops located throughout campus to make this free service visible and accessible to the entire campus community. The shuttle provides transportation to Cheshire Medical Center, the community's YMCA, and three area shopping districts. The KSC Shuttle offers evening and weekend shuttle service around campus and the immediate area when the City Express is not in service. This ensures students have convenient transportation at all times and supports car-free living.

**Walking and Biking:** KSC shares its Main Street location with the City of Keene. Getting to and around town is a breeze on-foot or on a bike. This quick access to Main Street businesses makes it easy for the campus community to strengthen local businesses, and have a direct link with the Keene community. In addition, Keene State abuts a host of hiking and biking paths, including two extensive converted rail trails.

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## **PILLAR II: IMPROVE THE HEALTH AND WELLNESS OF STUDENTS AND STAFF (30% total points)**

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As with the Pillar 1 objectives for reduced environmental impacts and costs, Keene State College places focused attention on the health and wellness of students, faculty and staff in the Strategic Plan and College-Wide Learning Outcomes. The **Commitment to Well-Being** College-Wide Learning Outcome specifically encourages students and the broader community to "reflect critically on their own well-being and that of the larger world." KSC also participates in the innovative community wellness initiative, Healthy Monadnock 2020, as an organizational champion.

KSC recognizes that the health of humans and the health of the places and planet we inhabit are inextricably interdependent, and that we cannot advocate for one without the other. The KSC Strategic Planning Oversight Committee, Well-Being Learning Outcome Committee, and President's Council for a Sustainable Future are working collaboratively to develop SMART Goals, benchmarks, and tracking metrics to clearly articulate KSC sustainability and well-being goals and actions. This effort integrates across all three Green Ribbon School Pillars, as goals will reflect the College's physical plant, sustainability and environmental education and the eight dimensions of wellness (emotional, environmental, intellectual, physical, sexual, occupational, social, and spiritual). As a campus community we embrace the challenge of developing a suite of sustainability and wellness indicators that address a holistic approach, encompassing the objectives of AASHE STARS and the 8 dimensions of wellness.

Our campus is a proving ground for this type of integrative approach. For example, KSC emphasizes organic landscaping using compost made from Dining Services kitchen waste in order to protect our watershed and create healthy ecosystems, but we also want grounds that are chemical free to enhance student safety and enjoyment. Achieving environmental sustainability and GHG reduction goals was a clear objective of replacing a portion of our polluting #6 heating oil with a renewable, carbon-neutral purified used vegetable oil biofuel, but it also has improved the well-being of students, faculty and staff through reduction of noxious off-gassing associated with #6. These and other opportunities provide chances for students to participate through hand-on projects and research. For example, students participate in collecting the kitchen waste for the KSC composting program and then conduct food waste audits to determine additional opportunities. Students also participate in an award-winning biodiesel research project to address the health and environmental impact of burning such fuels. These are just a few of many ways that environmental, sustainability, and health and wellness objectives intersect at KSC.

### **ELEMENT 2A: INTEGRATED CAMPUS ENVIRONMENTAL HEALTH PROGRAM**

Keene State College emphasizes training and prevention as the foundation for environmental health. As a result, we are fortunate to have very few incidents and are in good compliance with regulatory requirements. Each year, for example, the entire Physical Plant staff convenes for a comprehensive day of training on topics related to chemical management, workplace safety, and sustainability. KSC rigorously complies with the requirements of OSHA's Hazard Communication Standard<sup>xi</sup> through programs overseen by the Campus Environmental Health and Safety Manager.

## **Integrated Pest Management**

Our approach to Integrated Pest Management is described in the Pillar I narrative.

## **Indoor Air Quality, Moisture Control, Asthma Control, and Contaminant Controls and Ventilation**

KSC benefits from a compact, well-designed and well-maintained campus which allows for a proactive maintenance plan for its facilities. In addition, most of our buildings which house potentially concerning operations (laboratories, art studios, and machine shops) have been recently renovated and their current use is in line with the design parameters for these spaces. For this reason, there are remarkably few Indoor Air Quality concerns reported for a campus of this size (3 or 4 a year).

Nevertheless, the Campus Environmental Health and Safety Manager maintains an active oversight program for indoor air quality, asthma controls, moisture control, and contaminant controls and ventilation, so that if a concern about these issues arises, it is addressed quickly and effectively. One example of this program is a group of student projects for industrial hygiene classes taught at KSC, which enables students to gain experience at collecting and interpreting data associated with nationally recognized Indoor Air Quality (IAQ) standards. These projects enable the EHS Manager to plan an ongoing IAQ sampling program in campus locations which house chemical and other potential indoor pollutants.

KSC conducts continual monitoring and maintenance on Heating Ventilation and Air Conditioning equipment to ensure proper performance and to minimize potential indoor air concerns. Capital projects that support a more healthy indoor environment are prioritized and completed as soon as fiscally possible. For these reasons, the KSC facilities provide a healthy environment for faculty, staff and students to conduct their academic work.

## **Chemical Management**

Chemical management efforts at KSC represent a collaboration between the EHS Manager, Recycling Coordinator, campus electricians, plumbers and other maintenance staff, and Science and Fine Arts faculty to identify wastes of concern, seek out and obtain environmentally sound alternatives, and to reduce use overall. All vendors brought to campus are screened for their proven track record in chemical management and sustainability.

KSC developed *Hazardous Waste Management Procedures* in 2012 that guide management and disposal of these materials. KSC maintains an active program for collection of wastes that are not appropriate for routine solid waste management (i.e. trash and recycling). Such wastes include laboratory and studio wastes from academic programs; facility operations wastes; and one-time wastes associated with capital projects on campus. The proper disposal of these wastes is covered by a variety of New Hampshire and Keene city regulatory requirements and careful attention is paid to assure that these regulations are followed. In addition, many wastes that are not regulated by federal EPA requirements are managed by the hazardous waste program to prevent their disposal in landfills. Drain disposal of chemicals from KSC activities is overseen by the Keene Department of Public Works, which conducts annual inspections of campus chemical sources to assure that our practices meet their requirements.

By taking proactive measures to reduce the amount of hazardous materials used on campus, or replace them with less-hazardous or non-hazardous alternatives, KSC demonstrates a clear reduction trend from 2005 to 2015 from over 3000 pounds per year to less than 1500 – a 50% reduction. As a result of this trend, it is likely that KSC will be able to be reclassified from a NH “large quantity” to “small quantity” generator in 2017.

KSC uses a web-based Chemical Emergency Management System to manage chemical inventories and provide safety information for the College.

## **ELEMENT 2B: HEALTH AND WELLNESS**

### **Coordinated Campus Health**

Keene State College's approach to coordinated campus health involves collaboration between the Center for Health and Wellness, Counseling Center, Human Resources, Recreational Sports, and Dining Services (which is described under "Food and Nutrition"). These groups interact with the Office of Sustainability, Physical Plant, and Academic Affairs.

**Health and Wellness Initiative:** KSC Wellness initiative began in 2001 with a community wide SPEAK OUT that launched the Wellness Promotion Council and hired a Director of Wellness Promotion. In 2004 the Center for Health and Wellness was established with a Director and Coordinator of Wellness Education. The Wellness Promotion Council is now a campus-wide stakeholder effort called Healthy KSC.

The Center for Health and Wellness:

- Supports KSC students in creating and achieving health and wellness goals
- Provides up to date health information and evidence based/research informed wellness programming to KSC students
- Collaborates among students, staff, and faculty to promote wellness through service learning projects, internships, independent studies, workshops, trainings, committee work, and other initiatives
- Provides patient services through an in-house clinic
- Offers outreach and programming on a wide-range of topics associated with wellness
- Offers wellness and nutritional coaching.

Staff Health Promotion is championed by the KSC Human Resources Department through the Healthy KSC program. Healthy KSC advocates and promotes wellness on a holistic level to support the KSC community in making healthy choices for mind, body, and spirit by providing opportunities and strategies that promote the well-being of faculty and staff, such as: FitBit Fanatics Loan Program, KSC Moves Walking Program, Lunch & Learn Wellness Programming, Meditation, One-on-One Nutrition Consultation, Dietetic Interns, Yoga, Massage, Fitness center membership fee support, and Wellness clinics.

**Counseling, Psychological, and Social Services:** Co-located with the Center for Health and Wellness is the KSC Counseling Center (<http://www.keene.edu/life/services/counseling/>). The Counseling Center at KSC is a fee-supported department in the Division of Student Affairs and Enrollment Management at KSC. In general, the Counseling Center provides short-term mental health services to the KSC community and a wide variety of prevention, resiliency-building, and emotional well-being outreach programming. The main function of the Counseling Center is to provide emotional/behavioral health services and prevention/well-being programming to the students enrolled at KSC.

Last year, 658 students were seen for traditional counseling services and we provided a total of 3,517 appointments overall in the Center. In the Center's work in prevention, well-being, and resiliency-building programming, we provided 246 various activities and events on campus resulting in 9,755 student contacts this past year. Post-treatment survey data demonstrated that being in counseling helped an overwhelming majority of students improve their emotional health (89%), become more effective in their relationships with others (85%), and increased their understanding of themselves and their motivations (90%). In addition, of those completing the survey, data showed that being in counseling was instrumental in preventing the drop-out of 90% students, helped 92% of students cope with the challenges of being in college, and contributed to the academic success of 85% of students.

**Nutrition Coaching:** Nutrition Coaching is a free, confidential service offered through a collaboration between the KSC Dietetic Internship Program and the Center for Health and Wellness. Nutrition Coaches, who consist of KSC Dietetic Interns, offer an initial 15-20 minute goal setting session and 45-60 minute follow up coaching sessions as desired where individualized nutrition education can be provided. Nutrition Coaches help motivate and enable KSC students, faculty and staff toward reaching their personal nutrition and wellness goals.

## **Fitness and Outdoor Time**

Keene State College offers a beautiful 150 acre campus laced with walking, running and biking paths. A Green Bikes free lending program (described in Pillar I) ensures that all KSC community members have access to a bicycle. Trail maps are provided through the KSC web site.

The Recreational Sports Program offers many opportunities for students, faculty, and staff:

Campus pool, racquet ball court and shower facilities are free for all to use.

The on-campus Bodyworks Fitness Center provides low cost membership opportunities for the whole community. The Bodyworks Mission is to help motivate everyone in the campus community to achieve and maintain a lifestyle of wellness-defined as a high level of physical, emotional, and intellectual health. The Bodyworks Fitness Center employs professional staff and students to offer a range of exercise classes and other group activities. Through KSC's athletic training, health sciences, and physical education programs, individual support is available by Personal Trainers and Nutrition Coaches.

In addition to sanctioned sports teams, KSC also provides a popular Intramural Program with over 25 different sports opportunities.

Take Time Tuesdays is a new weekly meet-up that occurs at a meeting location outside the KSC gym. The goal is to give students an opportunity to learn the importance of physical activity, discover on and off campus resources, and meet like-minded peers.

Environmental Outing Club: A student led, faculty/staff mentored, and very popular group provides frequent local and occasional longer outdoor adventure trips including hiking, biking, rock climbing, backpacking, paddling, camping and other adventures.

## **Food and Nutrition**

The integration of KSC's environmental, sustainability, and health and wellness strategic imperatives are clearly demonstrated through partnerships between Dining Services (managed by Sodexo Corporation); the Office of Sustainability; academic programs in Environmental Studies, Health Sciences, and Art; and the KSC Grounds crew.

**Commitment to Local and Fair Traded Food:** Currently 18% of dining's food purchases are local and fair trade certified. KSC purchases from over 82 farms and suppliers in NH, VT, Maine, and MA. Popular twice yearly Locavore Lunches offer a celebration of local foods, local farms, and local food producers from our agriculturally rich region.

**Sustainable and Healthy Food Options:** Dining Services currently provides cage free eggs, regionally sourced beef, local and Fair Trade coffee, certified sustainable seafood

**Healthy and Mindful Choices:** Offers vegetarian and Vegan options at each meal; most dining staff and all managers are certified in managing food allergies and gluten; Mindful Dining Program provides nutrition education

**Internships:** Dining Services provides hands-on experience for students through a robust Internship Program of six internships: Sustainability Intern, Health and Wellness Intern, Dietetic Intern, two Graphic Design Interns, and Marketing Intern.

**Award-Winning Education:** In partnership with the Office of Sustainability Eco-Reps and ROCKS Recycling students, Dining Services puts on programs such as food waste audits described elsewhere in this application. Twice a semester we display a "waste buffet" of all the untouched food that students leave on their plates when they bring them to the dish return. We also built a pile of "waste" in the DC represented by a collection of boxes that represented the amount of waste for a particular day. Every day we added boxes so the students could see how much their community wasted in the course of a week. We also (student driven) created a representation in fresh fruit of the amount of food thrown out after one meal

(students always want more fresh fruit). Programs like this and “just ask” for a sample and “take less and waste less” prompt students to think critically about portion control, and what and how much they are going to eat versus throw away. They also are recognized by EPA through its Food Recovery Challenge: four EPA awards including the 2015 award for exemplary Educational and Outreach Campaign, both the 2014 and 2013 Demonstrated Commitment to Improving Sustainable Food Management Practices Awards, and 2012 (combined with 2011) Outstanding Achievement in Food Waste Prevention.

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### **PILLAR III: PROVIDE EFFECTIVE ENVIRONMENTAL AND SUSTAINABILITY EDUCATION (35% of total points)**

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Keene State College’s *College-Wide Learning Outcomes*, published in 2015 after a thorough campus-wide engagement process, articulate a clear framework for all academics and emphasize outcomes particularly important for effective environmental and sustainability education. Five learning outcomes demonstrate KSC’s strong commitment to a liberal arts education that values science *and* the arts, provides training in interdisciplinary approaches, teaches students about environmental and sustainability topics through the integrative lens of well-being for self and the larger world, offers preparation in green career pathways, and holds up community and civic engagement.

- **Critical Thinking:** Keene State College students will evaluate evidence, consider multiple perspectives, choose and defend a position from several alternatives, and analyze complex problems.
- **Creative Inquiry:** Keene State College students will engage in research, scholarly activity or creative work to contribute new knowledge, art or expression and reflect on the process of inquiry or self-expression.
- **Intercultural Competence:** Keene State College students will reflect critically on their own culture and on the intersectionality of culture and social location, demonstrate knowledge of a diversity of cultures, and communicate effectively with people from a variety of backgrounds.
- **Civic Engagement:** Keene State College students will demonstrate knowledge of one or more social or environmental issues including relevant cultural, political and policy contexts; take action individually or collectively to address issues; and reflect on the ethical dimensions of civic engagement.
- **Commitment to Well-Being:** Keene State College students will reflect critically on their own well-being and that of the larger world, demonstrate knowledge of issues that impact health and wellness, advocate for themselves, and commit to one or more practices that promote well-being.

These College-Wide Learning Outcomes provide the overarching framework that each Department uses to develop its specific learning outcomes and strategic plans. Therefore, all KSC programs include an environmental and sustainability component as part of the Civic Engagement and Commitment to Well-Being Learning Outcomes.

### **ELEMENT 3A: INTERDISCIPLINARY LEARNING ABOUT THE KEY RELATIONSHIPS BETWEEN DYNAMIC ENVIRONMENTAL, ENERGY AND HUMAN SYSTEMS**

Central to solving current and emerging (wicked) challenges of our complex world is the capacity to synthesize a great deal of information from across disciplines and perspectives. KSC recognizes that today’s students must be able to perform critical thinking, creative inquiry, and demonstrate intercultural competence – all of which require interdisciplinary skills. This is especially true for environmental and sustainability education, which is far more than addressing energy efficiency, renewable fuels, and green buildings, although these are fundamental. An environmental and sustainability education at KSC is not pigeon-holed into narrow disciplines but engages the whole curriculum so that students glean perspectives from the arts, humanities, health, and social sciences—in addition to natural sciences. KSC offers a liberal arts education that emphasizes the needs of students to think critically, weighing all the information to have “wisdom to make a difference.” This approach emphasizes the need for interdisciplinary understanding *as well as* specialty training in a single discipline.

#### **Integrative Studies Program**

KSC’s commitment to interdisciplinary approaches as a whole is articulated through our Integrative Studies Program (ISP)<sup>xii</sup>. As a liberal arts institution, Keene State believes that the best way to prepare students for the future is to teach them to think critically and creatively, to communicate effectively, and to experience the connections between the



different branches of knowledge. Students develop the skills needed to be proficient in their majors, but will also understand how those skills are connected by studying the arts and the sciences. This helps provide the flexibility and resilience to adapt to a changing world.

Keene State's Integrative Studies program is designed to provide this kind of training. Every student is required to complete 40 credits within ISP, including a required course in Quantitative Literacy, 1-3 courses in natural and social sciences, and one class designated as interdisciplinary. Themes directing the overall ISP are: Diversity, Ethics, Global Issues, and Social and Environmental Engagement.

### **Academic Programs Emphasizing Interdisciplinary Learning about the Key Relationships between Dynamic Environmental, Energy, and Human Systems**

In addition to the Integrative Studies Program that is required of all students, KSC offers four majors (Environmental Studies, Geography, Sustainable Product Design and Innovation, and Safety and Occupational Health Applied Sciences) that incorporate interdisciplinary learning about the key relationships between environmental, energy, and human systems. It is also important to emphasize that environmental and sustainability topics are not constrained to these four majors. Environmental awareness and stewardship and sustainability are important topics that lace throughout the KSC curriculum as evidenced by the online inventory of courses prepared for KSC's 2015 STARS report<sup>xiii</sup> which indicates that over **35%** of all academic classes either directly or indirectly address environmental or sustainability topics. The Inventory was prepared by reviewing the content of classes presented in the KSC course catalogue and verifying as necessary with faculty. It is currently being updated for KSC's 2017 STARS submission.

**Environmental Studies** (<http://www.keene.edu/academics/programs/enst/>): ENST uses an interdisciplinary approach to examine the interaction of people and our environment, incorporating natural, social, and political systems. Students acquire the ability to evaluate, analyze, and synthesize complex information relating to environmental issues. The program emphasizes a participatory learning community that generates critical thinking and problem solving through active collaboration with faculty and off-campus stakeholders. Values hands-on experience and community service.

**Geography** (<http://www.keene.edu/academics/programs/geog/>): Geography at Keene State addresses physical, environmental, cultural, and technical dimensions. The program specializes in Geospatial technologies, including GIS, remote sensing, and computer mapping, form an integral component of analysis; community and sustainability planning; water resources management; recreation and tourism.

**Sustainable Product Design and Innovation (SPDI)** (<http://www.keene.edu/academics/programs/spdi/>): The SPDI program is premised on the belief that to move society toward a more sustainable future, the world needs creative change-makers, confident and competent in their design thinking practices and grounded in a framework of sustainability principles to guide their decisions. The Sustainable Product Design and Innovation (SPDI) program was designed to integrate product design methodologies, cutting-edge technologies and hands-on model and prototype building within the context of business enterprise and the liberal arts. This innovative program brings together the most essential aspects of environmental and sustainability education *with* preparation for green career pathways. SPDI majors learn how to navigate the design process, integrate principles of sustainability, collaborate with interdisciplinary teams and bring forth unique solutions to improve our lives on this planet. Cross-disciplinary studies in management, marketing, operations management and safety are woven together in capstone courses in product design and manufacturing enterprise.

**Safety and Occupational Health Applied Sciences (SOHAS)** (<http://www.keene.edu/academics/programs/safe/>): Students in this major learn "the science of keeping people safe" through the application of interdisciplinary skills that help students think critically, anticipate, identify, and prioritize hazards, the course of study emphasizes problem-solving, understanding cost effectiveness, developing professional and program management skills, and learning the full range of safety and environmental regulatory compliance.

### **ELEMENT 3B: USE OF THE ENVIRONMENT AND SUSTAINABILITY TO DEVELOP STEM CONTENT, KNOWLEDGE, AND THINKING SKILLS**

Keene State College's location in the Monadnock Region, Ashuelot River watershed, and City of Keene offer abundant hands-on, field-based opportunities for learning STEM content, knowledge and thinking skills "in action" while addressing real world issues. Our own campus provides opportunities for living and learning, as well. STEM education is a high priority for KSC and the setting is conducive for integrating the environment and sustainability into STEM curriculum.

Keene State is a partner in a commitment made in 2012 by the University System of New Hampshire and the Community College System of New Hampshire to increase the number of STEM graduates by 50 percent by 2020 and double that number by 2025. Faculty and students embrace this commitment through courses, research, and community service. The STEM disciplines at KSC are known for their undergraduate research experiences, effective and hands-on use of technology, community and industry collaborations, and successful job and graduate-school placements. Keene State's David F. Putnam Science Center and Technology, Design, and Safety (TDS) Center are state-of-the-art facilities that welcome new STEM students. The Putnam Science Center houses biology, chemistry, physics, geology, and geography. The College's greenhouse is located on the roof of the Putnam Science Center. The TDS Center, a LEED Platinum educational building (described in Element 1a), was expressly designed to support STEM education.

**TDS Center:** In many ways, the TDS Center models the intention of Element 3B in that it:

- Brings together three of KSC's rapidly expanding flagship environmental and sustainability academic programs (Safety and Occupational Health Sciences, Architecture, and Sustainable Product Design and Innovation) under one state-of-the-art roof that models the intention of each program
- The LEED Platinum building supports provides an outstanding living laboratory for learning: students were involved in the building design, interpretation (graphics department students worked with architecture and SPDI students to create professional-quality interpretive signs explaining the high performance features of the building), and on-going building monitoring.
- Exceptional laboratory equipment enables students to use state-of-the-art CAD/CAM software, digital manufacturing technologies (3D printing) and challenging model/prototype construction to experience the manufacturing processes involved in producing design durable products that minimize waste, and to create economically-viable products that solve contemporary problems.

**BEST (Building Excellence in Science and Technology)<sup>xiv</sup>:** The Building Excellence in Science and Technology (BEST) program at KSC is designed to help students succeed in the sciences. Students in the BEST program have access to mentoring, one-on-one contact with faculty, transformative teaching practices, and increased opportunities for undergraduate research, community service, leadership development, alumni networking, and field trips. KSC's new state-of-the-art Living Learning Commons (Residential Hall and Academic Building) offers a BEST Living Learning Community for first-year students who are interested in exploring majors in biology, mathematics, chemistry, computer science, geology or physics.

**Go-STEM:** KSC's commitment to STEM education extends beyond our classroom walls and into the greater Keene community. A key feature of our popular "Kids on Campus" program is the Go-STEM camp for girls interested in the sciences. The idea is to engage middle-school girls in hands-on activities designed to spark their curiosity to explore and learn through a technology-based project using KSC's state-of-the-art facilities.

### **ELEMENT 3C: DEVELOPMENT AND APPLICATION OF CIVIC KNOWLEDGE AND SKILLS**

Keene State College places a high value on cultivating civic knowledge, skills, and action through academic programs (one College-Wide Learning Outcome focuses on Civic Engagement; see Introduction to Pillar III), community service, participation in the American Democracy Project, and campus clubs. As a result of this we were one of 240 colleges and universities to be awarded the prestigious Carnegie Community Engagement Classification.

Community Engagement at KSC is designed to inspire, teach, and engage students in the processes of leadership and citizenship by creating a framework in which faculty and students can connect in the exchange of knowledge and resources with local, national and global partners. As a core value of the College, innumerable opportunities to serve are presented; a select few described below. The College staffs a Community Service Office with a Director of Student Involvement, Coordinator of Community Services, and Coordinator of Student and Community Relations, along with supporting student workers.

**Community Service Day:** On Fall Break day, KSC's students, faculty, and staff have partnered with area organizations for Community Service Day performing a range of activities including Ashuelot River clean ups, litter pickups, landscape maintenance, painting, cleaning and other projects across town. This popular program led to **New Student Community Service Day**, a team-building service opportunity for entering freshmen during Orientation.

**Adopt a Street:** The popular Adopt-A-Street Program kicks off the school year with an community clean up event where KSC groups, organizations or class can "adopt a street" to help keep clean throughout the year.

**Green Up Keene:** Green-Up Keene, a volunteer city-wide litter pick-up annual event.

**Alternative Spring Breaks:** Consists of domestic and international service-based trips during KSC's winter and spring breaks, as well as on select weekends throughout the academic year. Participants travel in teams, take part in service projects that address unmet community needs, gain awareness of critical social issues, enhance their individual growth, and prepare for lives of active citizenship. Twenty student leaders receive in-depth training and contribute as partners in the development, planning and execution of ten Alternative Break experiences which directly involve about 125 students each year.

**Student Organization:** Students play a significant role in shaping opportunities for community engagement through student organizational leadership of Habitat for Humanity, Circle K, Big Brothers, Big Sisters, and Students for St. Jude, and Relay for Life. This is just a small example; over 80 additional student clubs and organizations arrange activities and service projects related to their interests (see list of student organizations at <http://www.keene.edu/life/si/osi/sao/student-organizations/>).

The KSC Community Service Office uses GiveGab, an online system, to record students' co-curricular community service hours.

Based on National Survey of Student Engagement (NSSE) data for 2012 (the last year for which data are currently available), KSC seniors who participated in community service were significantly more likely than other students to say that their time at KSC had helped them to develop a commitment to contributing to the welfare of their community (64% vs. 46%,  $p = .023$ ). This compares to 39% and 19%, respectively, in 2006.

**American Democracy Project (ADP)<sup>sv</sup>:** Since 2008, KSC is an active participant in the ADP, a national multi-campus initiative focused on higher education's role in preparing the next generation of informed, engaged citizens for our democracy. The goal of the American Democracy Project is to produce graduates who are committed to being active, involved citizens in their communities and "Stewards of Place."

KSC's participation in the ADP advances the public liberal arts mission of the College by providing opportunities to reflect on community engagement and active citizenship. The ADP at KSC enjoyed a very productive 2015-2016 academic year at KSC, including a collection of curricular experiences, greater community engagement for our students, and a wide assortment of successful programming events. Members of the ADP Steering Committee participated in the initial development and adoption of a civic engagement rubric for the College Wide Learning Outcomes which will provide ADP the opportunity to begin a formal assessment plan of civic engagement and lead efforts to more thoughtfully and deeply engage students. The ADP has also succeed in establishing a Living-Learning Community focused on civic engagement beginning with the fall 2016 semester.

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<sup>i</sup> <http://www.keene.edu/administration/mp/>

<sup>ii</sup> <http://www.keene.edu/academics/liberal-arts/outcomes/>

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- iii <http://www.keene.edu/administration/councils/planning/>
- iv <https://www.keene.edu/administration/councils/planning/assets/documents/academic-co-curricular-plan/download/>
- v <http://www.keene.edu/featured/mag/>
- vi <https://vimeo.com/189169627>
- vii See *College Planning and Management*: <https://webcpm.com/Articles/2016/11/01/Heating.aspx> as one of hundreds of articles
- viii See *Vision for the Grounds*: <https://vimeo.com/152574967>
- ix <https://vimeo.com/152748930>
- x <http://www.windhamsolidwaste.org/index.php/composting/project-cow-composting-organic-waste>
- xi <http://www.keene.edu/administration/policy/detail/hazard-communication-program/>
- xii <http://www.keene.edu/academics/isp/overview/>
- xiii <http://www.keene.edu/academics/stars/courses/>
- xiv <http://www.keene.edu/academics/liberal-arts/best/>
- xv Keene State College ADP Annual Report: 2015-2016