Michigan State University
Campus Tree Management Plan

PLANT PROTECTION PARTNERS
KEEPING MSU GREEN

Michigan State University Campus Tree Management Plan

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Cover photograph thanks to Michigan State University Photography Services.

Michigan State University Campus Tree Management Plan
East Lansing, MI 2018

Introduction

The campus of Michigan State University (MSU) is an outdoor living laboratory for the planting and study of trees from its establishment in 1855. Tens of thousands of trees representing the great diversity of species hardy in central Michigan have been planted on the campus next to native trees that have been growing on the land that would become the MSU campus for over 200 years. The oldest known living tree on campus was dated to have germinated over 375 years ago. The first commemorative tree was planted in 1863 by then university President Abbot celebrating the birth of his daughter. The second commemorative tree was planted in 1865 to commemorate the birth of President Abbot's son. A commemorative tree planting program has been maintained ever since. The earliest Arbor Day planting on the MSU campus dates back to the planting of a white oak (*Quercus alba*) by the Delta Tau Delta Fraternity in the 1890's. The tradition of planting a tree to commemorate Arbor Day continues to be celebrated to this day (Appendix 2). An official arboretum was established on the campus in 1874 by Professor William James Beal as a means to study how to grow trees, tree growth and to educate farmers across the state on the value of growing trees on land that was less productive for growing crops. This is the birth place of Michigan Forestry and started the campus-wide tradition of placing interpretive labels on selected trees for use by students and faculty at the university and by the public who visit campus. Today, the arboretum covers the entire 2000+ acres of the developed campus. MSU is committed to the growing and care of its trees from the nursery to removal. Trees are grown in the on campus Beaumont Nursery, planted, maintained and removed by MSU Landscape Services staff and the wood is repurposed in conjunction with the MSU Forestry Department as part of the MSU Shadows Program.

1. Purpose

The purpose of Michigan State University's Campus Tree Management Plan is to document the methods and requirements to maintain a healthy urban forest and to protect and preserve our campus trees for students, faculty, and people from the community to study and enjoy. The protection and maintenance of our trees is crucial to support the University's teaching/learning, research, and outreach mission.

Specific plan objectives include:

- Maintain and protect campus trees and woodlots by minimizing and mitigating the impact of construction, event activities, and damage as a result of exotic insects and diseases.
- Continue to promote age and species diversity through the wide use of native and non-invasive trees where appropriate.
- Ensure that all trees requiring removal due to mortality, injury, or construction are replaced in a timely and consistent manner.
- Provide for appropriate species selection comprised of high quality nursery stock, and proper planting by adherence to accepted planting procedures.
- Encourage and promote campus tree health by utilizing International Society of Arboriculture (ISA) best management practices, and following Plant Health Care (PHC) principles.
- Provide education to the campus community, citizens and contractors about the importance of the campus forest, and the protection and maintenance of trees as part of the growth and development process.

2. Responsible Authority

The Director of W.J. Beal Botanic Garden and Campus Arboretum and the Campus Arborist are the parties responsible for enforcing the Campus Tree Maintenance Plan. The Campus Arborist supervises the arborist crew who are responsible for pruning, maintenance, and tree removals.

3. Campus Tree Advisory Committee

The MSU Tree Management Committee meets quarterly, providing guidance and input on management plan components, including tree planting, maintenance, and removal procedures. They also provide outreach and education to the community and University on the value and benefits of campus trees, and help to connect us to the community at large for information exchange, program and service idea sharing, and for exploring the potential for combined local environmental goals, stewardship policy, etc.

Composition of the MSU Tree Management Committee:

Director of the W.J. Beal Botanic Garden and Campus Arboretum
Campus Arborist
MSU Landscape Architect
Faculty Member (Department of Forestry)

Student Representative
Community Representative

4. Campus Tree Maintenance Policies

The Campus Arboretum:
The Campus Arboretum encompasses the entire 2000+ acres of the developed campus of MSU which contains over 24000 trees. A comprehensive inventory of campus trees was conducted beginning in 1990, the data for each individual tree is maintained in a campus-wide accession database, BGBASE®, and the location of each tree is managed in a joint AutoCAD/Arcview GIS mapping system. Tree care data including, but not limited to propagation notes, planting date, relocation date, periodic phenological records on select trees, tree condition (health), treatments, pruning, periodic evaluation, tree diameter, height and crown spread, and removal date and reason for removal are maintained for each tree. A Plant Recorder assists the Director, Arborist, and Curator in maintaining and updating the plant records. An inventory of woody shrubs is currently being conducted. New acquisitions and introductions to the Campus Arboretum enter campus via the Beaumont Nursery. This includes propagation of new trees from seed or cuttings, and acquisition of new trees and shrubs from other arboreta and from commercial nurseries. Trees are grown up to the appropriate size before installation on the campus. A team of Landscape Architects work with the Nursery Manager and Director to maintain and increase plant diversity and are responsible for planting design plans for all campus plantings. The Site Crew within Landscape Services is responsible for the installation and subsequent watering of new plantings for a minimum period of two years after planting. The Arborist Crew is responsible for all additional plant health care maintenance as outlined below.

Plant Health Care Maintenance:
Damaging levels of insects and diseases are addressed with an integrated pest management strategy to minimize risk to environmental and human health. Proactive cultural methods to promote overall health are emphasized to mitigate damage caused by pests and diseases. MSU's W.J. Beal Botanical Garden and Campus Arboretum is a co-founding institutional member of the American Public Gardens Association's (APGA) Sentinel Plant Network (SPN) jointly supported by the USDA APHIS. The garden program provides periodic training for MSU employees, volunteers and local institutions to increase awareness and to recognize emerging new diseases and insect pests and introduce them to procedures of how to report any occurrences which may appear in our region.

Dutch elm disease, gypsy moth, oak wilt, two-lined chestnut borer, Diplodia blight, scale insects, emerald ash borer, and bronze birch borer require special attention and treatment as an ongoing program. Trunk injections of control products are used as the primary

delivery method lessening the environmental impact. Inspection prior to treatment is used to confirm the pest has reached the action threshold.

Regular inspections throughout the growing season are performed by 9 full time arborists and approximately 60 full time team members in Landscape Services. A tree inventory database (BG Base) and mapping application (ArcGIS) is available to all team members. All trees and shrubs are documented through GPS, along with health & measurement data. Routine and emergency requests for maintenance can be uploaded to ArcGIS Collector by any team member in the field by hand held mobile device.

An Air spade tool is used on trees that require root crown excavation, removal of girdling roots, inspection of below ground root system, or to assist in the preservation process during construction activities. In 2017 the arborists performed approximately 742 root crown excavations.

Soil amendments are performed only on trees after they have been diagnosed for a specific problem. Slow release nitrogen, compost, and sulfur are some of the more common materials used.

Pruning Maintenance:
All tree pruning adheres to ANSI A300 Standard Practices-Pruning. Trees are routinely inspected by the campus arborists and data is (notes, photos, maintenance tasks) entered into the ArcGIS Collector. The work is then spatially referenced and accessible to the arborist crew. Based on the number and size of limbs to be removed, the work is classified as a fine, medium, or coarse prune.

Our initiative to address structural issues, as it relates to habit and branch growth, involves subordinate pruning codominant leaders and limbs with weak branch attachment. Improved structure reduces risk of limb and stem failure, frequency of pruning needs, and excessive cut size on parent branches.

Planting & Landscaping:
Campus tree plantings are based on ANSI A300 Best Management Practices-Planting. Trees are ideally planted in the dormant season following leaf drop or before leaf bud break. Planted trees are either purchased or grown at our campus nursery and can range from 2-8” caliper inches. The species selection and location are primarily determined by campus landscape architects, in conjunction with other team members. Best planting practices are considered to provide ample beds, scarifying soil, etc. Recently planted trees are maintained and watered for two years following planting.

Special circumstances have required select trees to be relocated bare root using the air spade tool. One specimen was over 25 feet tall and still thriving 5 years after transplant.

Nursery Statistics:
Number of trees grown annually? 400+
Number of trees planted? 300
Propagating unique varieties? 373 species in production
Size when moved to campus? 2-8" caliper

See Appendix 1 for tree planting diagram and Planting vs Removal chart.

Sustainability:
MSU strives for sustainable practices in its tree care, including the following examples:

- MSU Shadows Collection: Removed trees from campus due to decline, storm-damage, or construction are repurposed into lumber via the MSU Shadows program. This is a joint program in coordination with MSU's Forestry Department to train students in urban wood repurposing and to generate funds to support this self-sustaining program, including student internships and the acquisition and planting of new trees on campus. The program generates lumber which is distributed to local artisans who produce a variety of handmade collectibles which are sold to the general public via MSU Surplus and Recycling. This program fosters the concept of sustainability by reducing the waste stream and providing for long-term sequestering of carbon in useful wood products. Profits go towards planting new trees on campus, student internships and to further develop academic programs in urban forestry.
- All woody debris is stored and reprocessed as mulch to be reused on campus.
- Reduced pesticide use through cultural practices and integrated pest management.
- Installation of porous pavement sidewalks, which uses recycled tires, for a semipermeable surface to improve drainage and aerobic conditions.
- Recent hammock post installations have been successful at deterring use of trees.
- Sidewalk Root Sulfur Analysis Project was done to research opportunities on how to mitigate tree root injury and sidewalk damage.
- MSU considers the removal and management of invasive species as part of its sustainability program. See under Tree Removals section below.

For additional information regarding tree maintenance see appendix 3.

"MSU SHADOWS"

Photo credit: J. Paul Swartz

Tree Removals:

The final decision to remove a tree is the responsibility of the Director of the W.J. Beal Botanic Garden and Campus Arboretum and the Campus Arborist. A variety of factors are considered before a tree is ultimately removed, including, but not limited to: condition, location, species, historical significance, hazard, environmental impact and rarity. When possible, risk reduction, rather than removal, is preferable. However, safety of the public is the highest priority. Relocation of trees is favored when survivability and logistics allow. In cases of historic and/or rare taxa (such as species on the IUCN Red List of Threatened Species or heirloom varieties) are threatened by removal, a decision is made to propagate the individual to maintain historic context or species diversity within the collection. There are a number of prohibited species no longer allowed to be planted on campus, these include invasive members of the following taxa: buckthorn (*Rhamnus*), tree of heaven (*Ailanthus*), Honeysuckle (*Lonicera*), multiflora rose (*Rosa multiflora*) and other invasive species.

Removal of prohibited species is determined on a case by case basis according to factors listed above and appropriate site restoration after removal.

Catastrophic Events:
Damage to campus trees, as a result of severe weather events (wind, ice, and snow) can be minimized by routine evaluation and maintenance. Subordinate pruning codominant stems and limbs with weak attachment will reduce the risk of failure when exposed to excessive forces. Tree evaluation from nursery stock, to select those with the best structural characteristics, contributes to a better growth habit. During and after periods of extreme weather events, the Campus Arborist and arborist crew in conjunction with the Director of the W.J. Beal Botanic Garden and Campus Arboretum inspect areas of high volume traffic: sidewalks, roadways, intersections, and building entrances. Initial action is to secure the hazard by removing the vulnerable portions of the tree. Repairing wounds and maintenance unrelated to mitigating risk are postponed until all high priority activities have been completed and weather conditions are safe for the arborist crew.

5. Tree Protection & Preservation Procedures

Tree protection fencing is used to protect trees from compaction and damage in or near construction sites or areas where the tree root zone is vulnerable to damage. PVC Fencing is installed around the tree's critical root zone by the arborist crew. The PVC fencing has shown to be more successful in deterring construction from entering the root zone versus orange fencing, or post and ropes.

Tree protection training is required for all contractors or persons who will be working near trees on campus. This training is to ensure individuals are made aware of practices that can be harmful to trees, the importance and history of trees to the arboretum, the expectation we have in terms of following protection policies, and the fines that can be enforced if a tree is damaged during construction activity. In the past 10 years over one thousand people have attended these classes.

See Appendix 2 for more information on tree preservation in construction areas and a photo.

6. Goals and Targets

- Maintain maintenance cycle of 5 years for all trees within landscaped areas on campus.
- Develop a tree replacement policy for removals that do not conform to the tree removal guidelines; including but not limited to construction activities and tree ordinance violations.
- Negotiate an event parking plan with the MSU Police Department that protects trees from soil compaction and root injury.

- Maintain a planting ratio higher than the annual removals to promote age diversity and increase our canopy percentage.
- Perform root crown excavations upon trees, as needed, to promote overall health and vigor.
- Improve and update ArcGIS and the Collector tree inventory app, to better manage campus arboretum.
- Support tree research projects with the academic community to benefit the urban forestry industry.

7. Tree Damage Assessment

Tree damage is assessed by the arborist team, proper care is determined with the standards recommended by the International Society of Arboriculture (ISA). Significant damage to campus trees, by contractors or other liable parties, will be charged with a fine according to the established tree value guide.

See appendix 4 for more information on general protection as well as damage assessment tables.

8. Prohibited Practices

All plants on campus including campus trees are protected under MSU Ordinances (see Appendix 6):

24.00 Plant Materials
24.001 Injury or removal
24.02 Plant samples for teaching and research

Individuals requiring access to plant material from the garden or Campus Arboretum in support of teaching, research, or outreach activities may apply for a "Collecting Permit" which is issued by the Director of the W.J. Beal Botanic Garden and Campus Arboretum.

Several prohibited activities have been established to protect the overall health of trees on campus, these include:

- Parking on the root zone is discouraged due to the compaction of the soil from vehicles repeatedly driving and parking on the root system of valuable campus trees. *
- Locking bicycles, mopeds, scooters, or other objects to trees: due to repeated use, particularly on young trees with thin bark, mechanical injury of the cambium layer is unavoidable.
- Attaching in any fashion (including tying, nailing, screwing, or stapling) any posters, signs or other objects to trees in addition to hammocks, slacklines, bicycles or other objects is prohibited. This may cause

cambium damage which may result in decline or death of the tree. Only approved interpretive or commemorative labels may be attached to campus trees under the direction of the Director of the W.J. Beal Botanic Garden and Campus Arboretum.

**See appendix 5 for information regarding vehicle use off roadways*

9. Definitions

DBH: acronym for tree Diameter at Breast Height. Measured at 1.4 meters (4.5 feet) above ground in the United States.

Cambium Layer: thin layer(s) of meristematic cells that give rise (outward) to the phloem and (inward) to the xylem, increasing stem and root diameter.

Drip line: imaginary line defined by the branch spread of a single plant or group of plants

Root Zone: horizon or layer within the soil profile where roots exist (often extends horizontally 1-1.5x the height of the tree).

ArcGIS Collector: Open source mobile software for tree inventory on a GIS map layer.

Soil Compaction: The increased bulk density of the soil resulting from mechanical forces to the soil surface thereby reducing air pore space and water holding capacity.

Root Crown: The portion of the lower stem of a tree where the flare of roots merge with the main stem of the tree.

10. Communication Strategy

The Campus Tree Management Plan will be available to the campus community and public on the MSU Landscape Service's website, and offered during community outreach programs.

Campus trees have been promoted through various events such as Grandparents University and Alumni University. These are annual events where alumni and their grandchildren can attend various classes from all different fields of education. Both the Director of the W.J. Beal Botanic Garden and Campus Arboretum and the Campus Arborist present public Campus Tree Tours which focuses on the history and significance of the many notable trees within the MSU Campus Arboretum.

Both the Director of the W.J. Beal Botanic Garden and Campus Arboretum and the Campus Arborist are invited speakers at local, regional and national conferences hosted by the International Arboriculture Society where they present aspects of and promote the campus tree management plan as it relates to other organizations and institutions.

For additional information, contact the Director of the W.J. Beal Botanic Garden and Campus Arboretum.

Appendix 1

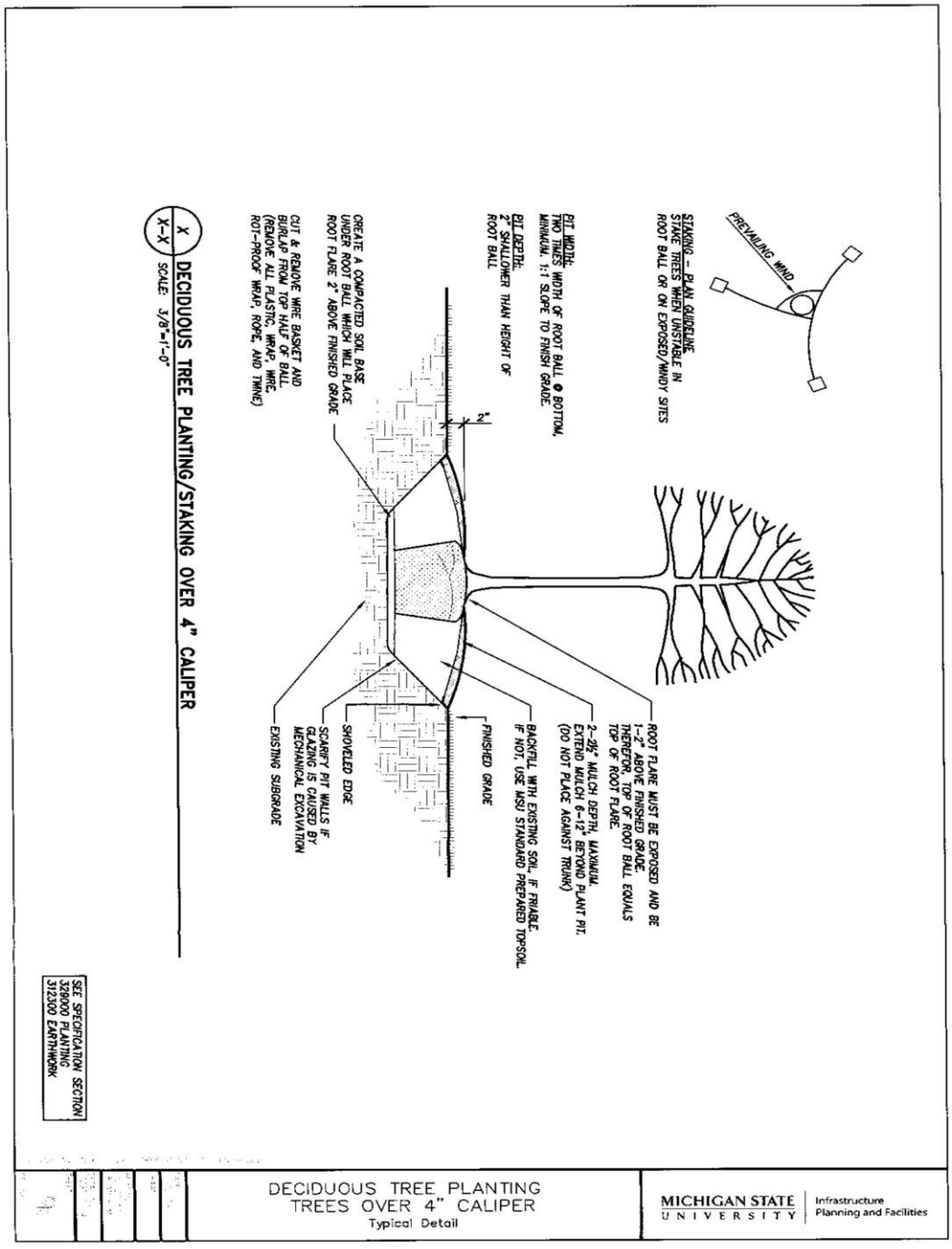
X
X-X
DECIDUOUS TREE PLANTING/STAKING OVER 4" CALIPER
SCALE: 3/8"=1'-0"
STAKING — PLAN GUIDELINE
STAKE TREES WHEN UNSTABLE IN ROOT BALL OR ON EXPOSED/WINDY SITES
PREVAILING WIND
PIT WIDTH:
TWO TIMES WIDTH OF ROOT BALL @ BOTTOM. MINIMUM. 1:1 SLOPE TO FINISH GRADE.
PIT DEPTH:
2" SHALLOWER THAN HEIGHT OF ROOT BALL
2"
CREATE A COMPACTED SOIL BASE UNDER ROOT BALL WHICH WILL PLACE ROOT FLARE 2" ABOVE FINISHED GRADE
CUT & REMOVE WIRE BASKET AND BURLAP FROM TOP HALF OF BALL (REMOVE ALL PLASTIC WRAP, WIRE, ROT-PROOF WRAP, ROPE, AND TWINE)
EXISTING SUBGRADE
SHOVELED EDGE
SCARIFY PIT WALLS IF GLAZING IS CAUSED BY MECHANICAL EXCAVATION
FINISHED GRADE
BACKFILL WITH EXISTING SOIL IF FRIABLE. IF NOT, USE MSU STANDARD PREPARED TOPSOIL
2-2½" MULCH DEPTH, MAXIMUM. EXTEND MULCH 6-12" BEYOND PLANT PIT. (DO NOT PLACE AGAINST TRUNK)
ROOT FLARE MUST BE EXPOSED AND BE 1-2" ABOVE FINISHED GRADE THEREFOR TOP OF ROOT BALL EQUALS TOP OF ROOT FLARE.
SEE SPECIFICATION SECTION
329000 PLANTING
312300 EARTHWORK
DECIDUOUS TREE PLANTING
TREES OVER 4" CALIPER
Typical Detail
MICHIGAN STATE UNIVERSITY
Infrastructure Planning and Facilities

Photo credit: J. Paul Swartz

Appendix 2

Photo credit: J. Paul Swartz

Photo credit: J. Paul Swartz

TREE PRESERVATION IN CONSTRUCTION AREAS

Trees are valuable living resources that require our efforts to preserve them during and after construction. Trees increase property values, decrease heating and cooling costs, benefit wildlife and enhance our lives in countless ways. Whether we are building, remodeling, installing utilities, or constructing roads we must take into consideration the tree's requirements to remain alive and healthy. We cannot replace a monarch in our lifetime or our children's lifetime.

The consequences of not protecting trees will result in their death or decline over a period of years. The expense of removing and replanting the trees justifies the initial cost of providing protection and care during construction. A large tree removal could cost thousands of dollars, while a fraction of that may have preserved it. Protecting trees can be accomplished in ways that will not slow the construction process. The results of our efforts will be healthy trees that will provide invaluable benefits and beauty for years to come. Tree Protection, in construction areas, is being done with excellent results at Michigan State University's campus and in other parts of the country.

WHY TREES ARE HARMED or KILLED DURING CONSTRUCTION:

1. 90-95% of tree roots are within the upper 24 inches of soil. They extend horizontally beyond one and a half times the height of the tree. This area is known as the ROOT ZONE. If the soils in the root zone are driven over by construction equipment or vehicles, COMPACTION occurs. This compaction eliminates air spaces, reduces root growth and increases drought stress. (Driving over an area seven times with a tractor will compact the soil equal to concrete). Trees need oxygen for their roots to survive. Driving or piling dirt over the root system (changing the grade) eliminates this oxygen and will slowly suffocate the tree. Because trees can live on stored food reserves, it sometimes takes up to five years before the tree dies. Soil compaction cannot easily be remedied. Prevention is the best and the most important thing you can do for your trees.

2. Roots support the tree structurally while providing water and nutrients to the leaves for growth. Cutting roots while trenching or excavation may result in death or die back to parts of the crown. These wounds can also be entry points for decay fungi. This can result in death or failure of the tree in high winds or storms creating an extreme liability in the future. It is highly important to protect the root system even though it is unseen.

3. Breakage or cutting of branches in the crown should also be avoided. When too much of the crown is removed, the tree cannot produce enough food for future growth. In this weakened state, it also becomes more susceptible to disease and insects. If pruning must be done, a professional arborist should be called. Damaging the bark on the trunk disrupts nutrient flow and provides an opening for decay fungi.

WHAT CAN YOU DO TO PROTECT TREES BEFORE AND DURING CONSTRUCTION?

Before construction begins, the site should have a thorough inspection by a professional arborist to determine which trees are worth saving. The meeting should also include the general contractor and property owner. Tree species have different characteristics that will determine their value and ability to survive in the post construction environment.

Valuable trees should be identified early so construction methods and appropriate levels of protection can be determined.

METHODS OF TREE PRESERVATION DURING CONSTRUCTION:

1. PROTECTIVE FENCING: The "Root Zone" (one and a half times the height of the tree) should be protected from compaction by fencing this area around the tree.

The "DRIP LINE" (the area from the trunk to the branch tips) should be fenced if space does not allow the entire root zone to be protected. If the area inside the drip line must be disturbed, an Arborist should be consulted to determine the impact to the tree, consider alternative construction methods, and provide remedial treatments. The amount of soil area the tree requires to survive is determined by the age, health and species. The minimum, "Protective fencing" should consist of ropes and signs, orange construction or snow fences. A better option would be a metal chain link or wire farm fence. The best for long term projects and heavily used sites is wood or vinyl 4x4 posts with 2x6 cross pieces positioned horizontally at four and eight feet. If numerous subcontractors are working on the project there is more opportunity for mistakes and damage to occur. Therefore, consider using the more substantial tree protection. Educating all of the workers on the property is very important. Once people are informed and understand the reasons trees need our protection they generally will become cooperative partners in protecting the trees. A clause in the construction contract may require restitution or fines if trees are negligently damaged.

2. Wood Chips (mulch) with a minimum depth of four inches should be placed under all trees before construction begins. Start a foot from the trunk and extend to the dripline, if possible. This will help prevent compaction should a vehicle violate the protective fence. It becomes an additional layer of protection for the root system. Wood chips can be left in place after construction. They provide moisture conservation for the trees along with many other benefits.

3. Roads and driveways should be located as far from trees as possible. If a temporary drive is needed in the root zone, use up to twelve inches of wood chips as base for the equipment to drive on. Research has found plywood does not provide adequate protection against compaction.

4. Directional boring machines should be considered instead of trenching to install gas and electrical lines. These machines can bore under trees and roads hundreds of feet. Their expense may be offset by the minimal damage to trees and structures. There are increasing numbers of contractors using this method for installing utilities. Combine utilities in one trench instead of two or more. Trenching or digging in the root zone of a tree, should be avoided.

5. Monitor the water and fertilization needs of the trees during and after construction.

Thousands of trees are destroyed needlessly every day during construction. By following some of these simple steps, you can save your customers thousands of dollars and help preserve the trees for years to come.

Author: J. Paul Swartz, Michigan State University Campus Arborist

Appendix 3

Tree Maintenance

Michigan State University's main campus sets on 2,000+ maintained acres and is home to over 24000 trees.

The Campus Arborist and 9 full-time arborists manage and maintain all trees within the campus, plus two 18 hole golf courses and 3000+ acres of farm property located south of Mt. Hope road. Five of the arborists are International Society of Arboriculture, certified arborists. In addition 2 arborists have completed the Tree Risk Assessment Qualification program, sponsored by International Society of Arboriculture. The Arborists at Michigan State University have over 150 years of combined experience in the tree care industry and are highly trained in the use of equipment, safety procedures, first aid/CPR, and chemical applications. They are responsible for the inspection, trimming, removing, vine removal/trimming, building clearance, fertilizing, cabling/bracing, pest/disease control and plant growth regulators (P.G.R.) that may be required, as well as providing significant roles in the campus snow removal efforts.

Every member of the Arborist crew has the following training plus attending yearly CEU seminars.

· Aerial lift

· Loader/Articulating loader

· Toolcat

· Fork lift

· First Aid/CPR/Aerial rescue

· Chainsaw safety

· Chipper safety

All Arborists are required to have a CDL-B endorsement on their driver's license, as well as being state certified as a Commercial Pesticide Applicator.

The safety of the MSU community is our top priority. The trees will be maintained in a way to provide safe clearance for pedestrians and motorists as well as clear lines of vision, all while maintaining the natural shape and characteristics of ~~the~~ each unique

species. While performing any type of tree work, our goal is to follow proper safety protocol as specified in the ANSI standards and to make sure that all of the "personal protective equipment" (PPE) is being used.

When pruning is required, all proper pruning methods will be used to keep the tree structurally sound and healthy. Pruning around or near the Residence halls will not be done before 9 am unless in emergency situations. Only trees that are dead, dying, diseased, considered hazardous, or are unfortunately in the way of construction will be removed. No removals are performed without first receiving careful consideration from the Campus Arborist and the Curator of Woody Plants. When a tree is removed, the stump will be removed, soil replaced and seeded as soon as possible. The site will be evaluated for a potential planting site and be recorded.

Trees will be inspected routinely for signs of pests and disease, Integrated Pest Management (I.P.M.) practices will be used when considering to treat affected trees. The structural integrity of the campus trees will be visually inspected to minimize risk of failure.

Soil compaction is a major problem on campus that adversely affects the root system and health of our trees. In an effort to prevent compaction, tree protection fencing is installed around the drip line of trees at construction sites; this prevents heavy equipment from driving on the critical root zone as well as protecting the tree from physical damage. During move in/out, and home football games, "no parking, save our trees" signs are placed around the trees to help remind people of the need to protect the root zone.

Appendix 4

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

1.3 TEMPORARY BARRIERS AND ENCLOSURES

D. Campus Woody Plant Protection

Coordinate all plant protection and site work limits with Landscape Architect.

1. Coordinate all plant protection and site work limits with the Project Representative.

SITE WORK CANNOT COMMENCE WITHOUT A PRE-CONSTRUCTION

WALK-THROUGH.

All Contractor employees engaged on the project site shall attend, or are expected to have attended, the Contractor Woody Plant Protection Seminar, hosted by MSU's Landscape Services (formerly Grounds Maintenance) Division. This seminar will be presented on an annual basis at a minimum. Coordinate with the Project Representative for times and locations of the seminar(s).

2. Work by Owner

a. Tie-back of existing plantings. Pruning, thinning, and sealing of existing plantings. Root pruning and root protection of exposed roots. Watering of existing trees under stress. Salvaging of existing small trees, shrubs, and other plant growth that the Owner wishes to retain.

b. Tree protection barricades will be provided by the Owner. Plant damage occurring within installed barricades does not absolve the Contractor from damage assessment.

c. Work shall be performed by MSU Landscape Services Department unless otherwise arranged, as needed to provide either preventative or remedial care to plants on a construction site. Contractor shall immediately contact the Project Representative should "protected plants" be compromised in violation of agreed upon fencing locations and work limits. Failure to communicate promptly could result in 100% damage assessment of fines.

3. Protection of Plantings

a. Protect existing trees and other vegetation indicated to remain in place. Prohibited practices include breaking of branches, scraping of bark, or unauthorized cutting; nailing or bolting into trees or plants; use of trees or plants as temporary support (i.e. for cables); unauthorized filling, excavating, trenching or auguring within the root zone; compaction/driving over the root zone; (see definitions below), storage of any materials or vehicles within the root zone;

Dumping of construction waste or materials (including liquids); unauthorized removal or relocation of woody plants; removal of tree protection barricades or construction fencing prior to completion of project.

b. Compaction within the root zone is the increasing of the soil density caused by heavy equipment or concentrated foot traffic which significantly alters the soil conditions from that which was present prior to construction.

c. The root zone of a tree is one and a half the distance of plant crown drip line outward from the stem, along undisturbed grade. Should placement of concrete be specified or authorized by the Owner within the root zone, a sulfur application will be applied by the Owner. The Contractor shall notify the Owner at least 48 hours prior to pouring concrete. Trees to receive sulfur shall be identified by Owner.

4. Damage

a. Damage to campus woody plants shall include any of the items indicated in paragraph 2.a above as determined solely by the Owner. The Owner shall evaluate damage and establish proportional fines up to 100% of the value shown below, regardless of the current disposition of the plant.

b. 100% Value Schedule for Campus Trees

1" - 3" caliper $120/inch

3" - 6" DBH $180/inch

6" - 9" DBH $240/inch

9" - 12" DBH $300/inch

12" - 15" DBH $420/inch

15" DBH or greater $600/inch

c. DBH is the tree trunk diameter at breast height.

d. Replacement value for shrubs, vines, and perennials shall be assessed at three times the current market cost of the plant.

e. Alternatives to the above protective measures, or any variations, must be approved by the staff Landscape Architect and the Project Representative. (Measures may include: thinning and root pruning, fertilization, aeration, boring & jacking, hand excavation, supervision by the Campus Arborist, seasonal schedule recommendations.) Alternatives would be based on the specific requirements of the plant species in question, as determined by the staff Landscape Architect.

Appendix 5

Michigan State University

Infrastructure, Planning and Facilities (IPF)

GUIDELINES FOR VEHICLE USE OFF ROADWAYS

We may need to drive on the turf at some point in doing our jobs. The following guidelines were developed to help you make the best choices which will do the least amount of harm to the campus environment. The Main reason for the concern of vehicles on the turf areas is due to the compaction of soils, especially around trees and plants. Once the soil is compacted, it is difficult to return it to its normal condition. Trees and plants cannot grow properly, if at all in soil that has no air space. IPF, Landscape Services is constantly struggling with compacted soils, especially around new construction sites. If we can avoid unnecessary compaction, it will benefit the University in many ways for years to come. Thank you for your help and cooperation.

1. Vehicles should not drive on the turf, especially near trees, unless there are no other alternatives.

a. Wet soils which occur in the spring and fall will compact more readily and should be avoided, especially near trees.

b. Driving/parking on the turf near or under the canopy (ends of branches) could damage the main feeder roots which are in this area.

c, Rubber mats should be used when it is necessary to drive or park on turf.

2. When it is necessary to have continuous access near Trees, the IPF, Landscape Services Department should be notified to provide some form of protection to prevent soil compaction. CALL 517-355-7750

3. Maintenance and delivery vehicles should not drive on paved pathways (sidewalks) unless it is the only available option. * See University ordinances regarding this.

4. Unattended Vehicles should not be left on paved pathways (sidewalks) for reasons of public safety.

5. Not every situation is the same. Weight and size of a vehicle, type of tires, soil types, weather conditions and job requirements are always different. Following these Guidelines

and policing ourselves will continue to make our Campus one of the most beautiful in the country.

Photo credit: J. Paul Swartz

Appendix 6

Michigan State University Ordinances
24.00 Plant Materials
24.001 Injury or removal
24.02 Plant samples for teaching and research

.01 No person shall break or cut branches or flowers or fruit, or otherwise damage or mutilate any tree, shrub, herbaceous plant, or flower upon property governed by the Board of Trustees, or remove from the same any identification tag or sign.

.02 Plant samples for teaching and research may be collected from University property in Ingham County with a permit issued by the Secretary of the Board of Trustees or his or her designee.

Enacted: September 15, 1964
Amended: December 10, 1994 & April 14, 1995

SUMMARY OF RECOMMENDATIONS

The following are 24 recommendations brought forward by the Environmental Systems Team. The detail and intent behind each recommendation follows these recommendations. Vice President Poston and Provost Wilcox have reviewed the recommendations and approved all of them for implementation. The list below gives a short overview of each recommendation. Background information and intent for each recommendation is contained in the next section.

ENERGY REDUCTION AND OFFSETS

1. Decision-Support Tool

Develop a decision-support tool for optimizing financial and environmental performance of the T.B. Simon Power Plant.

2. Fuel Switching

In response to campus community preference, MSU decision makers should consider a more aggressive fuel switching plan to include the use of more alternative fuels, natural gas and other available technologies that result in reducing the campus carbon footprint.

3. Green Technology

In response to campus community preference, MSU decision makers should expand the energy portfolio to include effective renewable energy (e.g. wind and solar) as part of the electricity generating capacity.

4. Database Improvement to Support Carbon Planning

Improve the campus and properties databases to provide more systematic and integrated access to information to support carbon offset planning and monitoring.

5. Forest Property Expansion

Conduct a feasibility study to evaluate the costs and benefits of expanding MSU forest properties in the UP and to provide enough growing stock for significant future carbon offsets. Other benefits could be obtained, including feedstock source for biomass energy research and production.

6. Reforestation Offset

Develop a multi-site reforestation offset project on all eligible MSU properties beyond the main campus and demonstrate feasibility and protocol for future projects.

7. Urban Forestry and Widely Spaced Tree Offset Project

Implement an urban and widely spaced trees offset project on the MSU main campus and register it with the CCX based on an approved protocol.

WASTE REDUCTION

8. Feasibility and Best Practices for Composting Campus Food Waste

Develop and implement several pilot studies to evaluate the feasibility and best practices for composting campus food waste.

9. Recycling and Reuse of Electronic Equipment

Improve energy efficiency and lower greenhouse gas emissions associated with purchased goods and equipment by extending their life through recycling and reuse. As demonstrated through a life cycle assessment of computers, extension of life can reduce GHG emissions associated with manufacturing of the purchased equipment.

10. Alternative Textbook Sources

Expand student and faculty knowledge of alternative textbook sources (bookstore, online download, rental, etc.) with information on best textbook sources on MSU's 'bookstore' website, promoting those that offer lower prices while producing less paper and transport waste than traditional bookstores.

11. Communication via Electronic Media

Proceed to replace paper-based, unsolicited MSU internal communications by electronic media. Establish a university-wide electronic publication hub that lists all available publications by department, and allows recipients to sign up to receive specific publications or information from groups of interest. Educate the community, especially student and certain staff groups, on different electronic publishing tools, including MSU electronic information systems, email and website publication, in order to ensure continued access to valuable internal communications.

12. Flow of Recycled Materials—Bin Sensor Fullness-Monitoring System

Transfer and expand the bin sensor fullness-monitoring system to a larger building in order to evaluate the usefulness and labor-savings conferred by the system.

TRANSPORTATION

13. Bicycle Utilization Study for Better Resource Allocations

Conduct a bicycle utilization study that estimates bike use/trends both around campus and commuting to campus. This effort will be coordinated with AUTTC and the University Traffic Engineer who are identifying a more substantial process for annual assessment of bicycle use and safety issues on campus. This information will allow for more focused resource allocations on future prioritized needs to improve bicycle routes, encourage ridership, and provide a safer campus circulation system.

14. Car Share Pilot Project

Establish a three-year pilot car-share program managed by a third-party on campus for use by eligible faculty, staff, and students (e.g., Zipcar, Enterprise WeCar, etc.). Identify and monitor specific indicators to assess if the program is meeting its environmental stewardship goals and if it should be continued beyond the pilot program status. [program with zip care was established and is maintained today.]

15. Eco-Map Transportation Patterns

Integrate 2009 transportation survey data with Tri-County Regional Planning Commission's existing mapping and modeling data to change commuting patterns and reduce operational costs (parking, enforcement, safety), reduce environmental impacts (resource consumption, green house gas emissions), and increase pedestrian safety (reduced vehicular traffic on campus).

16. Student Transportation Survey

Develop a student transportation survey to complement the faculty/staff survey recently completed. The purposes of the student transportation survey include accurately describing the current

transportation behavior of MSU students, gauging a more accurate overall university carbon footprint, and learning possible ways to reduce this footprint through alternative modality choices. [was done in 2011, and new one is in process now]

BEHAVIOR, COMMUNICATION & EDUCATION

17. Expand Environmental Stewards Program in Energy Conservation

Support and expand the environmental stewards program to advance communication efforts in energy conservation and carbon reduction. [could talk about the ecosteward program.]

18. Communication Approaches Differentiation

Differentiate the design and implementation of energy communications plan to the specific needs and preferences of students, faculty and staff.

19. Community Education

Education is needed for faculty, staff, and students on specific strategies to conserve energy, coupled with education on the relationship between personal energy use and climate change. A campus-wide environmental literacy effort is needed to improve basic knowledge among the MSU community.

20. Regular Updates on Energy Conservation Publicity Campaign

Provide the university community with regular updates on MSU's progress towards its conservation goals coupled with regular feedback on the energy saved by MSU members to encourage and enhance individual energy conservation behavior.

21. Signage for Campus Projects

Develop signage for campus environmental and sustainability projects to increase visibility and perceived benefits to students, faculty and staff for being associated with a "green" university.

22. Sustainability Projects Reporting Process

Create a streamlined process for reporting campus sustainability projects. By publicly cataloging projects, the community will be able to support, confirm and collaborate on environmental projects.

COMPLIANCE & TECHNOLOGY

23. Compliance Readiness

Begin a serious strategic planning process for emissions compliance readiness in advance of new greenhouse gas federal legislation and for all other emissions.

24. Web Conferencing Technology

Extensively integrate web-conferencing technology into campus life and better educate all faculty and staff in the use of the technology.

Residence Education & Housing Services 2018-19 Marketing and Communications Plan

Prepared by: Bethany Balks, Linda Karbo, Kaitlin Nye

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Executive Summary

As the needs of college students evolve with the emergence of Centennials on college campuses and the off-campus housing market continues to expand in East Lansing, Residence Education and Housing Services must also evolve. This evolution must include the way we tell our story and demonstrate our value to our target audiences and the way in which we deliver our services. It is no longer sufficient to provide safe and convenient housing options located in the heart of campus. In the age of transparency and increased expectations, we must be unapologetic in our efforts to deliver on our brand promise by tirelessly working to identify ways to surprise and delight our guests. This is what The Future's Company refers to as offering "convenience plus" and it's what team members in Residential and Hospitality Services know as Delivering Outstanding Spartan Experiences (DOSE). Combined with our commitment to creating safe, sustainable and inclusive residential environments that enhance the MSU experience, this is what will continue to set us apart from our competitors.

As Vice President Vennie Gore states, our people are our "secret sauce." In 2018-19, it is imperative that we focus on empowering our teams to get back to the basics of providing DOSE in order to help materialize our business goals of: student success, safety and security, diversity and inclusion and retention.

While we will maintain our marketing and communications strategies that promote resources, highlight the benefits of on-campus housing, for 2018-19 our marketing and communications efforts will focus on:

- **Enhancing employee experiences, communication, relationships and involvement to increase our bottom line.** This will include building the competency of team members on their role as brand ambassadors and how our guests' brand experiences directly correlates with student retention. It also includes empowering our staff to provide solutions to problems and actively seek opportunities to surprise and delight our guests.

- **Enhancing our marketing and communications strategies to be more intentional about meeting our customers where they are.** This will include a continued shift to identifying opportunities to provide outstanding service and engagement by surprising and delighting our target audiences online through compelling digital strategies and in-person through meaningful experiences and interactions.

- **Enhancing our brand message and promise to focus on "convenience plus."** This will include effectively telling our brand story by highlighting our value added through the stories of our residents and team members.

Research

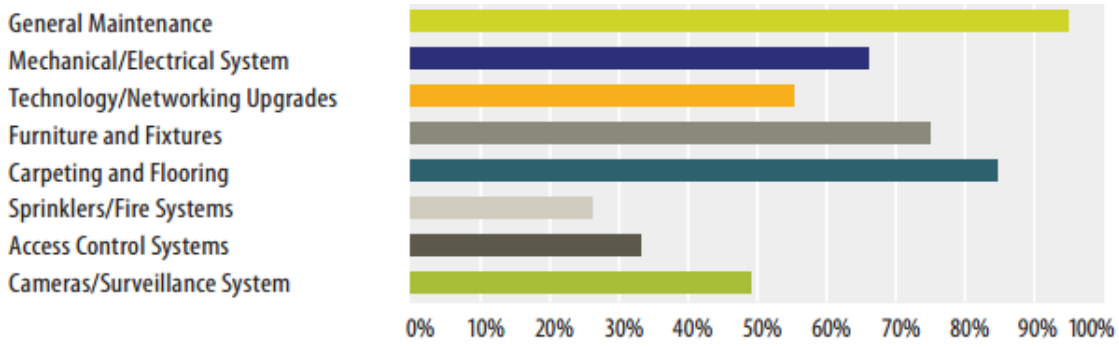
Background

Industry Trends

On-campus Housing Trends

Renovations and Upgrades in Housing across Higher Education

In a survey of university markets, conducted by College Planning and Management, they shared the top renovations/upgrades that are planned and/or underway for housing departments in the next 3-5 years.



Amenities in Residence Halls

We continue to see industry competitors increase in hall amenities with more classrooms and dining halls appear in the residence halls. If you look at the chart to the right, you will see the increase from 2013 to 2016.

Do your current or planned residence hall spaces include...	2013	2016
Central kitchen	47%	49%
Central laundry facilities	83%	93%
Classroom spaces	29%	32%
Club-style fitness centers	11%	12%
Co-ed rooms	16%	22%
Coffee shops	13%	10%
Convenience stores	23%	17%
Dining hall	29%	37%
Faculty offices	13%	15%
Family housing	14%	12%
Kitchen in rooms/suites	41%	29%
Maid services	6%	2%
Retail spaces	8%	10%
Swimming pools	3%	7%
Washer/dryer in rooms/suites	12%	15%

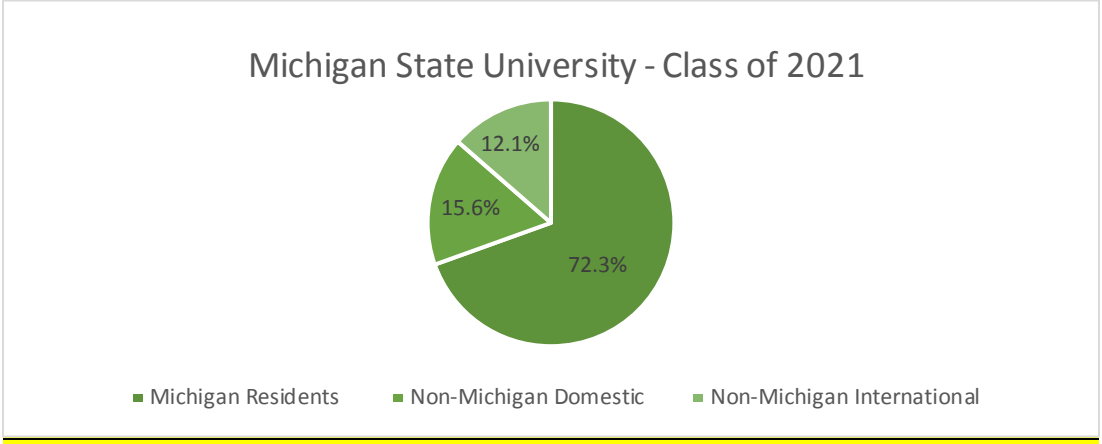
MSU Enrollment Trends

Most Popular Majors of Freshman Applicants to MSU Fall 2017

1. Business
2. No preference/undecided
3. Lyman Briggs
4. Mechanical Engineering
5. Computer Science
6. Premedical
7. Prenursing
8. James Madison
9. Kinesiology
10. Human Biology

Statistics on Class of 2021

The total number of students in the class of 2021 is 8,066. With a breakdown of 5,859 Michigan residents and 2,249 non-Michigan residents. It is also important to note that over 21.2% of our incoming class were first generation students.



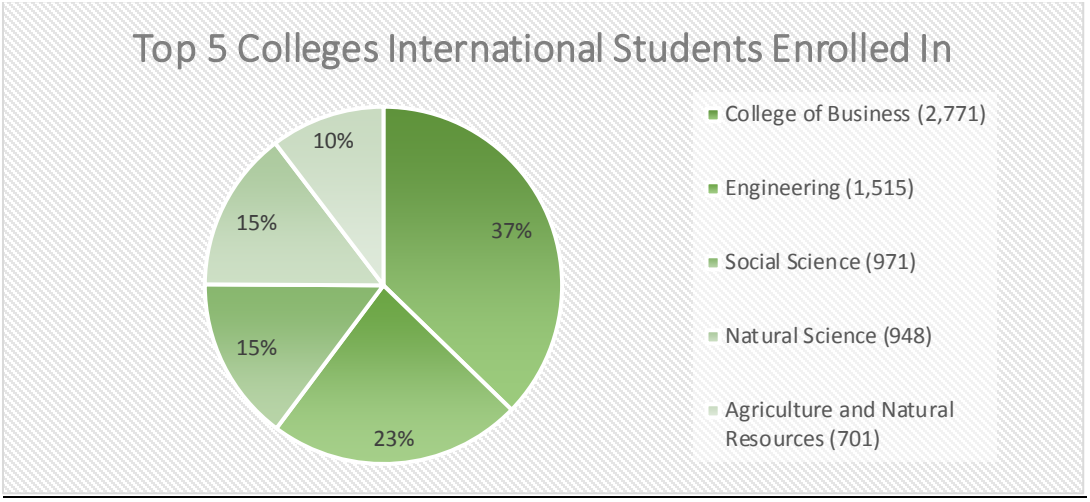
Decline in International Student Enrollment

With 6,847 international students enrolled in fall 2017, we see a decrease of 417 students over the total from a year ago. Chinese undergraduate enrollment fell by 170 from 3,857 in fall 2015 to 3,687 in fall 2016. While international student enrollment increased 10% over the previous five years, we expect that this has peaked and we will see declines for international enrollment over the next several years.

International undergraduates continue to top international graduate students: 4,461 compared to 2,086 graduate students.

According to NAFSA's (Association of International Educators) estimated economic impact formula, MSU's international students contribute an estimated $308 million to the Greater Lansing economy.

There were a total of 133 counties represented in enrollment of fall 2017. The top five countries that enrolled the most students include: (1) China with 4,157 (2) India with 398 (3) Korea with 391 (4) Canada with 175 and (5) Taiwan with 143.



Source: http://oiss.isp.msu.edu/about/statistics.htm

Consumer Trends

Centennials

Centennials are currently 12- to 19-year olds. The way to win over this group of consumers is to perfect your balancing act, become transparent, recognize that they are a mobile-only group and look at their Metrix. Centennials pride themselves on being one-of-a-kind individuals. Their phone provides anything they could possibly need or want and everything is captured through their devices.

Centennials drive to be unique is engrained in their every thought, movement, tweet, text and update. Their need for balance reflects in brands that need the correct balance of fun, maturity and keeping up with current trends. The transparency centennials look for is whether a brand is constantly improving, giving back to causes they care about and evolving with the times. Their Metrix goes back to their need to be their own individual and finding brands that allow them to do so.

Source: FuturesCo-TRU

Social Behavior Preferences on College Campuses

In a survey conducted of Michigan and national high school graduates, students were polled on what kind of social behavior they preferred on a college campus. Michigan trends were consistent to national trends.

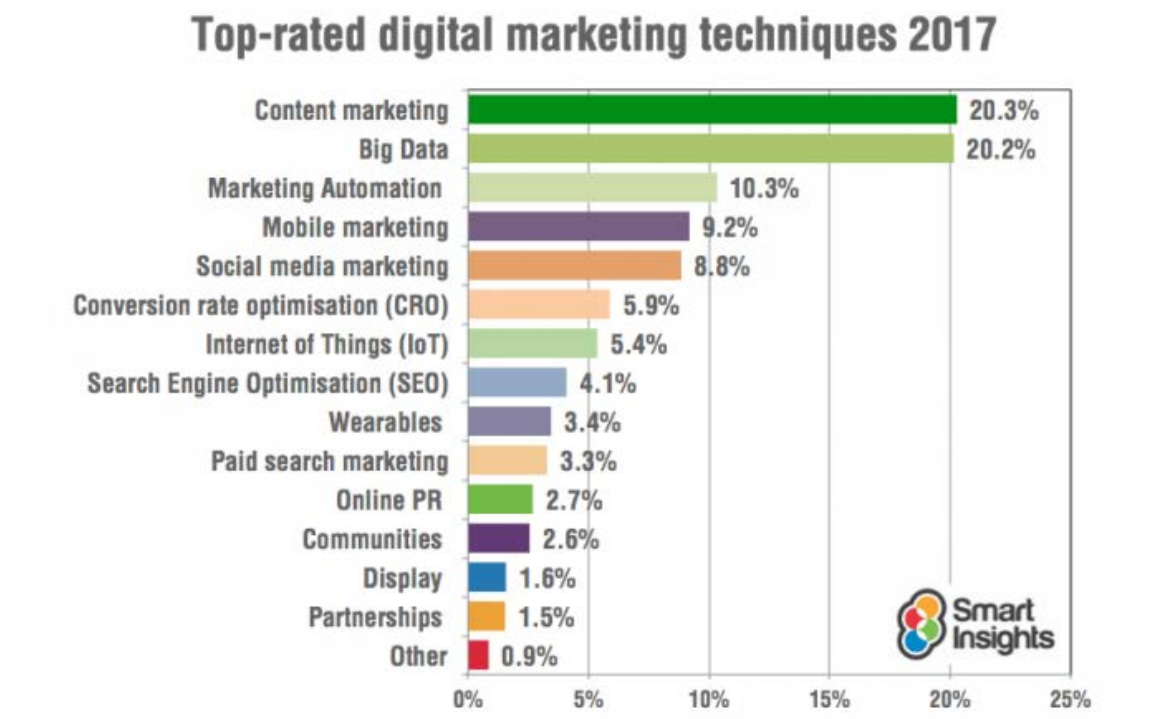
Answer	Michigan %	National %
Conservative	13.20	14.10
Liberal	20.20	20.10
Moderate	66.60	65.80

Source: https://educators.mycollegeoptions.org/Reports/SummaryReport

Marketing and Communications Trends

Content Marketing

This trend was evident in 2015 as a strategy for brands to increase awareness and ultimately increase traffic to their social media and web properties. In 2017 there has been a massive push by large brands and influencers who use vlogging, blogging and social media to tell compelling stories about their brand.



Source: Smart Insights http://www.smartinsights.com/advice/top-10-common-content-marketing-mistakes/

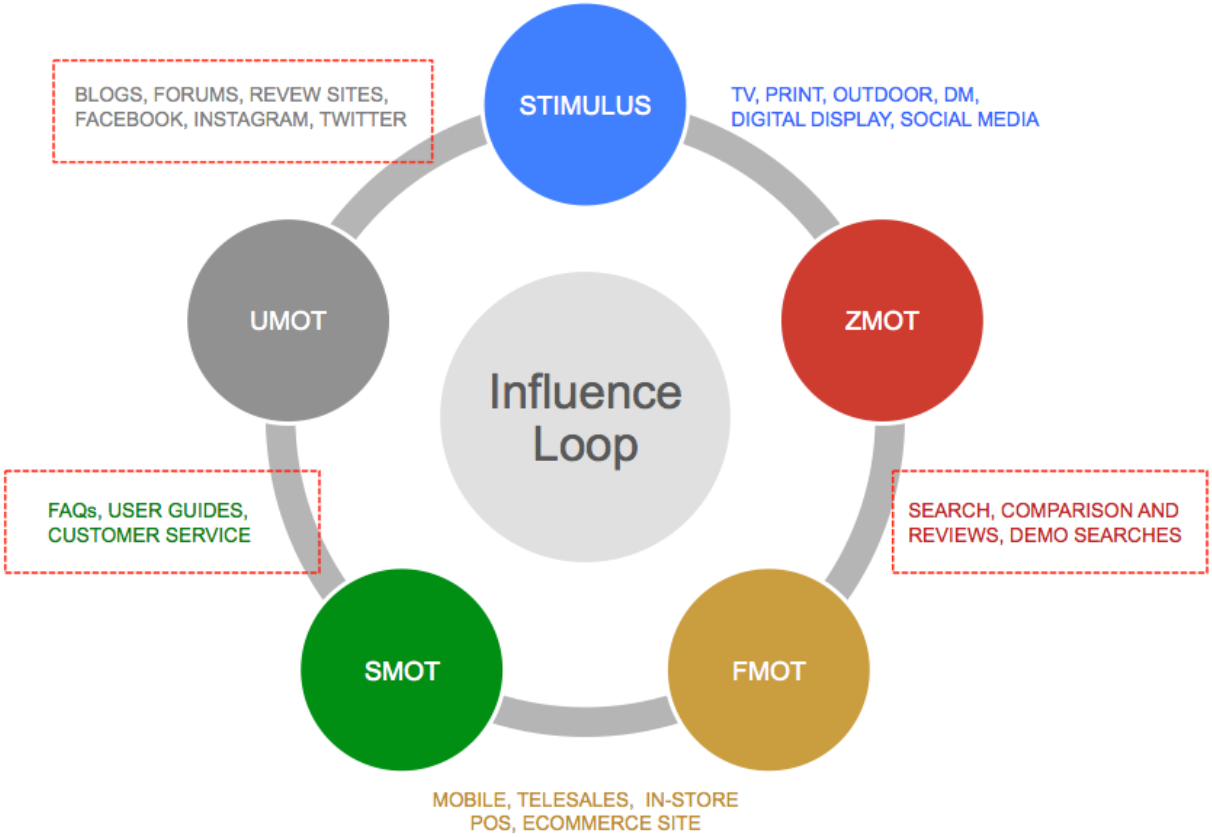
The best brands are investing in their content production. They are reaching audiences with the right content, at the right time, where the consumer is browsing content (mobile). This approach is critical as brands strive to meet business goals and objectives. To avoid content shock and fatigue, brands are emphasizing customized content delivered to each individual.

Data Collection

Consumers today do not search, engage and consume information within individual channels. Their journeys are fluid and their choices are influenced by multiple platforms, devices and screens. To be able to connect a cohesive customer journey, successful brands are putting systems in place to tie data together.

Big Data provides unprecedented insights and opportunities, but it also raises concerns. Brands must be thoughtful about policies for data privacy, security and discrimination while not allowing these concerns to dictate business goals and objectives.

Data can be used to track a "user" from the top of the marketing funnel all the way through to purchase or decision. This provides powerful insight on where and when a consumer decides to make decisions and is directly related to Google's moment of truth model.



In order: stimulus, zero moment of truth, first moment of truth, second moment of truth, ultimate moment of truth.

Source: Smart Insights http://www.smartinsights.com/advice/top-10-common-content-marketing-mistakes/

Customers will undoubtedly need multiple touch points along their journey. Having robust data to provide the content they need at the right time is critical to the effectiveness of marketing strategies.

Digital Experiences

The best brands are creating digital experiences for their customers, and it is no longer enough just to deliver a great experience on one platform. Consumers will need a multi-channel approach to influence and effect their decision.

Social Media

Creating Lasting Relationships Between The Brand and The Customer - Brands are realizing the impact of social media engagement and creating lasting relationships instead of just treating social as a platform to advertise their products. It's absolutely essential to keep followers happy by providing a network where they can reach you for customer service needs. According to Instagram, at least 80% of its users already follow a brand on the network. As social media marketing continues to grow its going to continue to be about making relationships and providing feedback when users need it the most.

Instagram Stories – Since its inception in 2016, Instagram Stories accrued more than 250 million daily users, compared to the 173 million daily active Snapchat users, which took much longer to build. Instagram Stories has become one of the top ways to engage with your audience. For example, 1 in 5 organic Instagram Stories from brands see at least one direct message from a consumer. That's a huge potential for engagement through a

somewhat new medium. The average time spent on Instagram per day grew to 28 minutes since the launch of Stories. That's roughly 7 to 13 minutes longer than time ranges collected just before Stories.

Source: sproutsocial.com/insights/social-media-trends

Social Listening - Brands need to listen to what people are saying about you, your competition, your brand, and your products, and respond accordingly. The good, the bad, and the ugly. People are talking about you more often than just when they're engaging directly with you. People are making complaints, lavishing praise, and showing off your stuff on many different platforms and networks. Some you belong to, and some you don't but that's beside the point: if they're talking to or about you, they expect a response from you.

You need systems in place to monitor many different channels for your particular keywords and phrases, and to bring those mentions to your attention so you can examine them for both insight and opportunities what are people saying about your brand? How do they feel about your latest product? What problems or complaints do they have? An active social listening strategy can provide those answers and more.

Video - According to a recent post by Hubspot, 43% of social media users want to see more video content from marketers, businesses now publish an average of 18 videos each month, the average video retains a little over one-third of its viewers (37%) to the very end, and 85% of businesses have in-house personnel and resources for video creation.

- Over 300 hours of video are uploaded to YouTube every minute
- YouTube users enjoy 1 billion hours per day
- Two-thirds of people – a full 67% – are more likely to buy a ticket to an event after watching a live video about it
- Live video is both created and watched by people in virtually every age category, from teenagers to those 55 and older. Overall, 36% of Americans watch it, while 22% create it.

Messaging Platforms - Facebook Messenger, originally integrated with Facebook itself, it's now a standalone – and very popular – app. It boasts 1.3 billion users, and 11% of the worldwide population uses it monthly. 60 million businesses are on it, as are half of all teenagers in the United States. It's a bigger platform than Instagram, Twitter, and Snapchat combined, and it hosts 7 billion conversations daily. And with A.I. and chatbot integration, the channel has the potential to be huge.

Source: blog.kissmetrics.com/7-social-media-trends/

General overview of products / services offered

The collegiate housing market offers many alternatives, including residence halls, apartments, co-ops, houses and condominiums. On-campus housing at MSU includes residence halls and apartments serving approximately 39.7 percent of just under 39,090 undergraduate students attending the university.

REHS prioritizes academic success with a student focus. Five engagement centers are fully operational in the South, Brody, River Trail, North and East neighborhoods. Along with the neighborhood resources, service improvements are ongoing in these neighborhoods and include enhanced study spaces with more electrical outlets, raised modular beds and community kitchens in each building. Fitness centers in residence halls and apartment communities have undergone extensive renovations, including safety enhancements and cosmetic upgrades. Free, unlimited laundry is offered in all residence halls on campus.

After waiting on a more cost effective way to implement Wi-Fi throughout all residence halls, MSU IT was able to deliver a solution and we will have complete Wi-Fi installation throughout the remaining residence halls by fall 2018.

Additionally, concerns regarding water quality in light of the Flint Water Crisis have increased. With the exception of Brody Neighborhood, the appearance and odor of the water available throughout most of campus is due to the fact that it is well water. The water in the residence halls is run through water softeners that pull the hardness (calcium) from the water. The water appears the way it does due to a high iron content. The appearance and odor is comparable to what you would find in homes with well water. While the MSU's Infrastructure Planning and Facilities is in the process of identifying long term solutions to address the issue, implementation will take time.

1855 Place

In June 2015, the MSU Board of Trustees gave approval for work to begin on the State Police Post Redevelopment project. Later named 1855 Place in honor of the year MSU was founded, the project includes family housing as well as single-student apartments and townhomes, an office building with student services and retail establishments on the main level, and a parking structure to accommodate events. Leasing for family housing units began in spring 2016, with 189 one- and two-bedroom units opened for occupancy in August 2016. These units also have new restrictions based on the university's definition for student families. Apartments and townhomes in 1855 Place began leasing in fall 2016, with units opened for occupancy in August 2017. This has added 579 new beds for students to the on-campus housing inventory.

Spartan Village

With the closure of Spartan Village to student residents (with the exception of current student residents with a demonstrated financial need) in summer 2017, 647 one- and two-bedroom units have come off-line for students. Many current Spartan Village residents have indicated that 1855 Place is not a viable replacement for them due to the cost and new family housing qualifications.

Visiting faculty and scholars have been identified as a group that has a continued need for housing that cannot be accommodated in 1855 Place. An RFP was sent out to local developers, but at this time the university is not pursuing any of the resulting options. As MSU considers a long-term solution, the decision has been made to continue to operate the renovated portions of Spartan Village to meet the long-term needs for faculty, staff and visiting scholars. A limited number of units in Spartan Village will be reserved for students who demonstrate a financial need. Eligibility will be determined by the Office of Financial Aid and priority will be given to student families. The facility will remain open past 2018, for up to five years.

Division of Residential and Hospitality Services Strategic Plan

REHS is a department within the division of Residential and Hospitality Services. The RHS strategic plan includes the following initiatives:

- MSU will be a residential campus, with the University committed to maintaining a residential campus occupancy of approximately 14,500 beds.
- The MSU residency requirement will remain in effect for freshman, assuming a stable enrollment of 7,800 freshmen for the next 10 years.

- Annual rate increases are not to exceed 3.95%.

Market Share and Return Rates

The services offered by Residence Education and Housing Services are integral to the success of students at MSU, with approximately 95 percent of all university students passing through our doors at some point in their academic careers. Our market leadership position is due largely to the freshman living requirement, which guarantees campus housing for approximately 7,800 freshmen residents annually. This past year began with closer to 8,000. Freshmen and sophomores (0-55 credits), including transfer students, must live in on-campus housing. The housing requirement currently is waived for sophomores. Students are exempt from this policy if they are:

1. Married
2. Twenty years or older by the first day of fall classes.
3. A U.S. armed services veteran with at least one year of active service.
4. Living with parents or legal guardians.
5. Taking six or fewer credits during the semester in question.

While approximately half of our residential base is gained annually through the freshmen class, the other half must come from returning students. Therefore, it is imperative that we provide all customers an outstanding living environment and desirable mix of services, amenities and unique experiences so that they will choose to stay on campus for subsequent years.

Overall return rates for the housing system have steadily increased over the last several years from a low in 2009 of 39.5 percent to a high in 2015 of 41% percent. Residence Education and Housing Services and Culinary Services has maintained the growth of returners by making retention a priority, coordinating efforts and streamlining marketing campaigns for greater impact.

Insights from the Marakon Study (2014)

In May 2014, MSU partnered with Marakon to conduct thorough market research of our student population and their perception of REHS and Culinary services, as well as drivers in their decision regarding living on or off campus. Here are some insights from that study in regards to housing:

- Housing challenge: As students advance through MSU, a greater and greater share move into off-campus housing. Once a student moves off campus, it is highly probable that they will never return to live on campus.
- The total cost (housing, food, amenities) of on-campus vs. off-campus living is nearly equal.
- Only 50% of students living off-campus believe that it is less expensive.
- Students feel pressure to sign their leases early and more than half do so by the end of November.
- Students are generally satisfied with their current housing situation (rating it 7 out of 10).
- Students who choose to move off acknowledge that they are giving up convenience, but prioritize low cost, good value, and preferred room configurations.
- The vast majority of undergrads who live off-campus, have their own bedrooms and have committed to a 12-month lease.
- Parents are more involved in the housing decision when students plan to move off campus than when they live on.
- Less than 25% of students are aware of all room configurations. They don't know what we have to offer.
- Upperclassmen that choose to live on campus do so because it is convenient, safe and a place to thrive academically.
- Upperclassmen that choose to live off campus do so because they perceive that option to be lower cost and a better value. They also want a preferred room configuration not offered on campus.

- Some improvements that would make students choose to live on campus for at least one additional year include:
    - Better amenities, such as wi-fi, upgraded furniture and filtered water.
    - More information on room types and configurations available.
    - Guaranteed first choice of residence hall.
- The biggest "deal breakers" for students that have chosen to move off campus include:
    - Affordability
    - Temperature controls
    - Water quality
    - For the small percentage that move back to campus after living off, the main driver in their decision was proximity to classes or campus resources.

Based on the Marakon study, the following student segments have been identified as having the best sales opportunities:

- **Education Focused Independent** – Social introvert that is looking for a safe, quiet space to help them thrive academically. 21% of all undergrad students fall in this category.
    - Thinks MSU delivers well on being safe and environment to thrive academically.
    - Thinks MSU delivers poorly on offering quiet living spaces and preferred room configurations/floor plans.
- **Collegetown, USA** – Students looking for the typical college experience; engaged member of the MSU community both socially and academically. 12% of all undergrad students fall in this category.
    - Thinks MSU delivers well on convenience to class/campus resources.
    - Thinks MSU delivers poorly on offering housing near their friends and offering a good value for money spent.
- **High-Achieving MSU Loyalist** – Lovers of the MSU on-campus housing offering (convenient, no hassle community where they can live with friends and thrive academically). 10% of all undergrad students fall in this category.
    - Thinks MSU delivers well on convenience to class/campus resources, offering a connection to MSU community, no hassle living, and offering housing near their friends.
    - Thinks MSU delivers poorly on including amenities that the student values.

Competitive Market Assessment

LOCAL COMPETITION

East Lansing has more than 50 apartment complexes, with an additional 230+ complexes in the Greater Lansing area. Phone interviews with several complexes in the area found monthly per person rental rates ranging from $300+ to $1800+ per person, and $600+ to $2,500+ per unit. Utilities included in rental payments ranged from none to water and heat, to water, heat, internet, Wi-Fi, trash and sewer. Security deposits are listed at an average of $550, but are often waived by landlords as a rental incentive.

Three new apartment communities opened for fall 2017: 565 Building with beds available from $1,100 to $2,775; The Venue with beds available from $775-$1,200; and SkyVue Apartments with beds available from $764-$1,240. By fall 2018 and 2019, there are predicted to be three new apartment additions to Grand River Avenue: Park District, a thirteen-story hotel/apartment complex; Center City, a five-story apartment for individuals 55 and older; and The Hub, a ten-story student apartment building.

An in-depth analysis of three local entities and their marketing efforts follows.

DTN MANAGEMENT COMPANY

DTN Management is headquartered in Lansing and is this area's largest property management company, in addition to maintaining properties in other areas of the state. In the Lansing area, DTN operates 70 apartment complexes and homes within five miles of MSU. Amenities vary by property, but many include some or all of the following features:

optional furnishings, heat and water, a fitness center, pools, clubhouses, quiet study rooms, washers/dryers, outdoor areas for sand volleyball and basketball, and one spot of free parking per resident. Rental rates start as low as $323 per month and go up to $1,006. **Source:** http://www.dtnmgt.com/

From a customer experience perspective, DTN offers an online resident portal for rental payments and emphasizes its DTN Club Card, which allows residents to enjoy discounts at a variety of area businesses. A full-time, dedicated staff member manages the Club Card program. The DTN Club Card has a website, www.dntclubcard.com, where residents can search for the latest deals and savings offered with the card. The Club Card has accounts with social media outlets including Facebook, Twitter and YouTube. **Source:** http://www.dtnmgt.com/

When asked about their marketing plan, a DTN former employee described their approach as an integrated marketing campaign that incorporated print (newspaper and magazine ads, fliers, Student Apartment Guide sent to freshmen each fall), billboard placements, limited use of social media (under each apartment name) and outreach through local businesses, charitable organizations and the MSU Alumni Association. In partnership with the Student Bookstore, they have created "The Apartment Store" which gives bookstore customers ready access to a personal leasing agent. In the past, they have also used an opt-in texting program, which they view as essential to communicate with their target audience however it's not clear if they still use this method. Additional tactics include digital ad on Pandora.com and Pandora mobile app, The State News, events, radio and mobile billboards. Additional tactics include, delivering a box of chocolates to each resident for major holidays and free viewing parties for football games, Victoria's Secret fashion show and the Super Bowl where snacks are served. During finals week, DTN hosts study breaks where it provides residents with free coffee and Insomnia cookies.

DTN also has a strong sales push in January and November each year where they offer a philanthropic promotion encouraging tenants to resign. In this offer, DTN will give half of resigning fees to the charity of the tenant's choice. In 2016, the top five charities that benefited were Relay for Life, Lansing Food Bank, Haven House, Red Cross and United Way. **Source:** http://www.dtnmgt.com/

WOODLARK COMPANIES/CHANDLER CROSSINGS

Woodlark Companies operates five Chandler properties, including: The Club, The Landings, The Village, The Cottages and their newest community, The Rocks Woodlark Companies, Westpac Campus Communities, and an institutional investor purchased Chandler Crossings through a joint venture in January of 2013. The Chandler properties were previously managed by Place Properties. All of these properties offer fully furnished apartments with private rooms, individual leases and roommate matching services. Washers/dryers, high-speed Internet, cable and water, clubhouses, poolside Wi-Fi, tanning beds, parking, shuttles to campus, computer rooms with complimentary printing, 24-hour fitness centers and onsite courtesy officers are included in rental rates. There are additional amenities specific to the different properties. Chandler Crossings is in the process of rolling out a $9 Million upgrade to three of the four communities (The Club, The Landings, The Villages) including complete renovation of all the clubhouses, three brand new fitness centers with new, cutting edge equipment, three indoor/outdoor pools, an indoor racquetball court, five indoor/outdoor basketball courts, three lounges, an indoor theater, ice skating rink, and three new sand volleyball courts. Rental rates range from $399 to $1,059. **Source:** http://www.chandlercrossings.com/

For the four Chandler properties, guerilla marketing and integrated marketing approaches are used incorporating social media (Facebook, Twitter, Instagram, YouTube and Pinterest), print, multimedia advertisements, partnerships with local businesses to cross-promote and offer incentives, and other promotional events. Free food is always offered at Chandler Crossings promotional events. Creative promotions in 2016-17 included:

Pool parties with free swag, food, and pie eating contests
Hidden Cash contest where an envelope of cash is hidden on the property and clues are given on social media as to where to find it
"One year of free rent" drawing
Euchre/card tournaments with free food and door prizes

March Madness bracket contest with a cash prize
"How to negotiate with a roommate" video
Periodic pancake breakfasts, pizza parties, food for finals, and pre-tailgating mini-events

Source: Phone interview with a leasing manager

AMERICAN CAMPUS COMMUNITIES - THE LODGES OF EAST LANSING

The Lodges are located behind the Michigan Athletic Club off of Hannah Boulevard, the apartments offer a 24-hour clubhouse (gym), bus services, study rooms, outdoor and indoor fireplaces, tanning deck and bed, lawn area/trees, heated pool, gym, plaza, sauna, billiards, coffee house, cyber café (computer lab-like), outdoor grills, dog park, volleyball court, outdoor ice rink, bocce ball court, performance stages and individual parking spaces. Within the apartment, washers/dryers, private bathrooms, walk-in closets and spacious bedrooms are offered. One differentiator from other properties is the private bus service to campus. They run two buses on a 15-minute schedule. Rental rates begin at $599 per month and go up to $1,114. **Source:** http://thelodgesofeastlansing.com/

Additionally, the Lodges complex was part of an $863 million acquisition by American Campus Communities (ACC) in October 2012, making it just the second property in the area owned by ACC. American Campus Communities sees the portfolio of properties acquired as valuable, as "approximately 75 percent of the select portfolio is an average of 0.3 miles from campus in submarkets with barriers to entry." In addition to Abbott Place, this is just the second property in the East Lansing area to be owned by ACC, who is the largest owner, manager and developer of high-quality student housing properties in the U.S. This acquisition has helped The Lodges better market to parents to show the reasons why it is the best place for their students to live because of certain features like individual leases, residence life programs and other amenities. **Source: Business Wire Press Release:**
http://www.businesswire.com/news/home/20121025005707/en/American-Campus-Communities-Acquire-862.8-Million-High-Quality

The Lodges places great emphasis on guerilla marketing programs and outreach, including passing out a variety of promotional items (t-shirts are handed out freely), throughout campus and at events. The Lodges also has partnerships with local businesses to cross-promote and offer incentives; hosts events such as St. Patrick's Day parties, pancake breakfasts, intermural tournaments, and Super bowl contests; and uses current events (e.g. references to Jimmy Fallon, Spartan athletics, or popular commercials) to connect with students on social media. However, social media (Facebook, YouTube, Twitter) is primarily used as a tool to keep residents informed about property news and events rather than promotions, although some promotional benefits are gained. **Source: Phone interview with leasing agent**

GREEK SYSTEM COMPETITION

The Greek System at MSU has about 3,000 members of 62 organizations, many of which have the opportunity to live in their chapter's house after their student's freshman year at MSU. Of these organizations, 36 have official housing facilities, while others may have unofficial housing apart from the organization. Sorority women are all required to live in the chapter house at least one year when space is available. While it is not usually required that all Fraternity members live in their organization's house, it is highly encouraged, and many choose to live in their chapter's house.

While rates for each of the houses vary, they are often tied into the organization's dues, which all members are required to pay. This may provide another incentive for students to live in the houses, as the cost of living there is supplemented partly by the organization's dues collection. Fraternity houses are usually smaller than sorority houses and typically can house anywhere between 10-30 residents, while some sorority houses can house over 50 residents. Additionally, fraternities do not generally hire staff to help at the houses, but many sororities do hire staff "house mothers" and chefs to help cook for and take care of members living in the house. **Source: Trace Camacho: Assistant Director, Dept. of Student Life, MSU**

Greek organizations at MSU place a high value on academics, and most have a minimum GPA required for membership. Some organizations offer scholarships; one sorority pays the next semester's dues for any student who earns a 4.0 GPA

in a semester. There are also certain organizations tailored to specific majors or areas of study, and list as a benefit of living in the house that they can all help tutor members and work together to achieve academic success. Many of these academic benefits are highlighted to encourage members to live in houses.
Source: **http://www.msugreeklife.org/msu-greek-life**

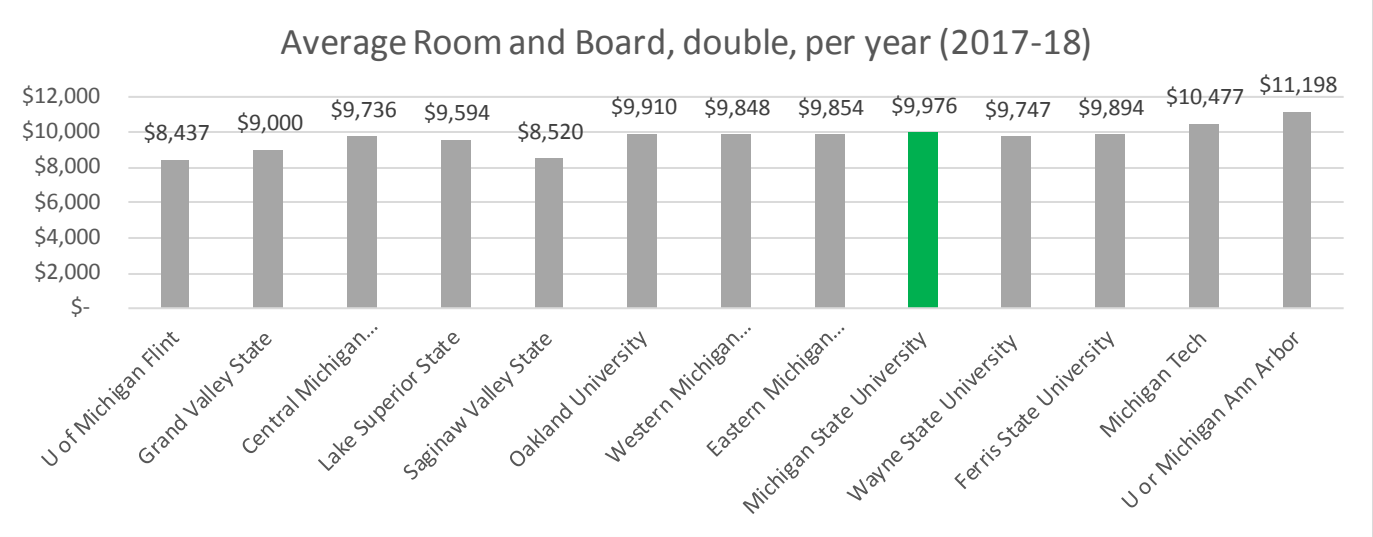
OFF-CAMPUS PROPERTIES HOUSING COSTS
A list of off-campus properties is included in the supporting "Competitive Market Assessment" document.

Note: Many properties provide a price range both on their website and when you call because each specific unit offers a unique mix of amenities. Exact pricing is not known until a unit is assigned.

Other Competitors

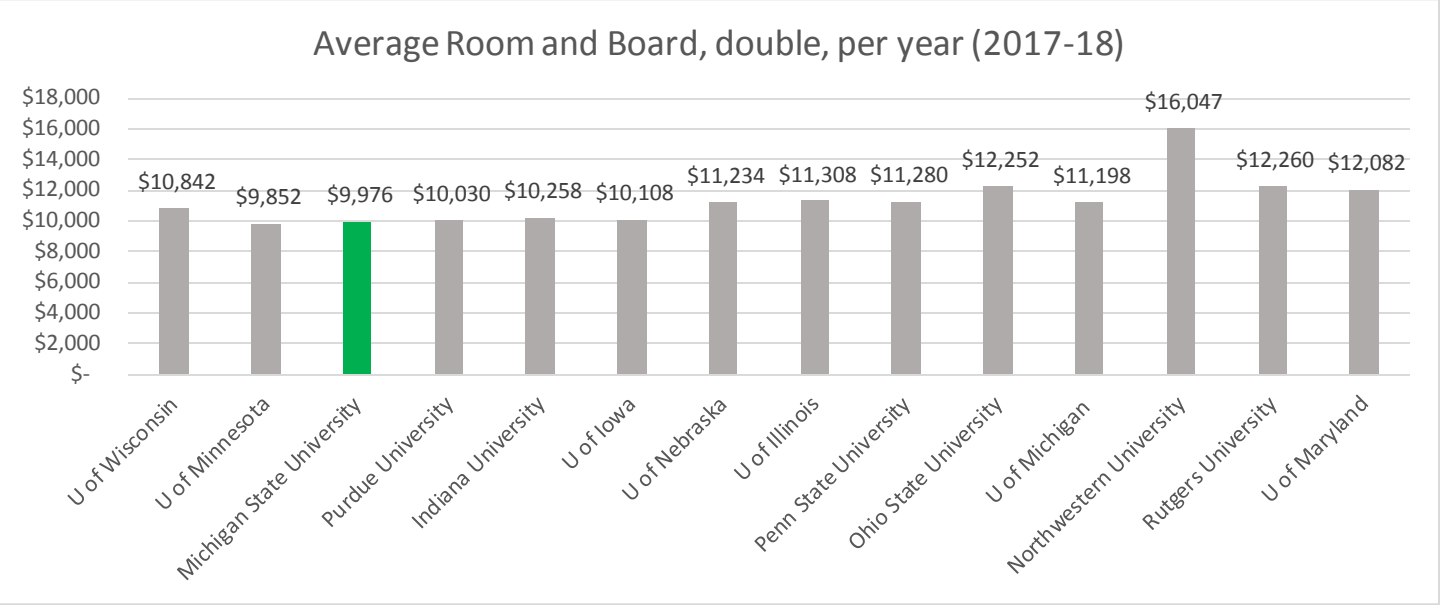
In-state Peer Institution Comparative Data

When comparing universities within the state of Michigan, with respect to room and board rates only, MSU was the ninth least expensive out of 15 for the 2016-17 academic year.



Big 10 Peer Institution Comparative Data

When comparing universities within the Big 10 Conference, with respect to room and board rates only, MSU was the third least expensive out of 12 for the 2017-18 academic year.



Competitive University Snapshot

A majority of universities offer campus safety and security services:

- 24-hour foot and vehicle patrols
- Late night transport/escort service
- 24-hour emergency telephones
- Lighted pathways/sidewalks
- Student patrols
- Controlled dormitory access (key, security card, etc.)

Source: http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-universities/data/page+2

Michigan State University has a total undergraduate enrollment of 38,996, with a gender distribution of 48.4 percent male students and 51.6 percent female students. At this school, 39 percent of students live in college-owned, -operated or –affiliated housing and 61 percent of students live off campus. There is an active Greek community with more than 50 nationally affiliated organizations. Freshmen are required to live on campus, unless they live within the university's acceptable distance and will commute from home. Room and board in the 2017-18 academic year was $9,976.

University of Nebraska, Lincoln has a total undergraduate enrollment of 20,833, with a gender distribution of 52 percent male students and 48 percent female students. At this school, 39 percent of students live in college-owned, -operated or –affiliated housing and 61 percent of students live off campus. Approximately 4,100 students are affiliated with Greek Life. Room and board in the 2017-18 academic year was $11,234.

Indiana University Bloomington has a total undergraduate enrollment of 33,481, with a gender distribution of 51.3 percent male students and 48.7 percent female students. At this school, 35 percent of students live in college-owned, -operated or –affiliated housing and 65 percent of students live off campus. There are 74 fraternities and sororities, involving over 8,200 students. Room and board in the 2017-18 academic year was $10,258.

University of Iowa has a total undergraduate enrollment of 24,476, with a gender distribution of 47 percent male students and 53 percent female students. At this school, 26 percent of the students live in college-owned, -operated or –affiliated housing and 74 percent of students live off campus. There are 53 fraternities and sororities at Iowa and 27 of them have a living structure/house. Room and board in the 2017-18 academic year was $10,108.

University of Minnesota, Twin Cities has a total undergraduate enrollment of 34,871, with a gender distribution of 48 percent male students and 52 percent female. At this school, 22 percent of the students live in college-owned, -operated or –affiliated housing and 78 percent of students live off campus. Approximately 3,400 or 11% of students are a part of fraternities and sororities. Room and board in the 2017-18 academic year was $9,852.

Rutgers University, New Brunswick has a total undergraduate enrollment of 49,681, with a gender distribution of 46.4 percent male students and 53.6 percent female. At this school, 44 percent of the students live in college-owned, -operated or –affiliated housing and 56 percent of students live off campus. There are over 80 fraternities and sororities at Rutgers University. Room and board in the 2017-18 academic year was $12,260.

University of Maryland, College Park has a total undergraduate enrollment of 28,472, with a gender distribution of 53 percent male students and 47 percent female students. At this school, 40 percent of students live in college-owned, -operated or –affiliated housing and 60 percent of students live off campus. Very little to no information was found on Greek life at this school. Room and board in the 2017-18 academic year was $12,082.

Purdue University has a total undergraduate enrollment of 31,006, with a gender distribution of 57 percent male students and 43 percent female students. At this school, 41 percent of the students live in college-owned, -operated or –affiliated housing and 59 percent of student live off campus. Nearly 20 percent of students at Purdue are affiliated with Greek Life. Room and board in the 2017-18 academic year was $10,030.

Ohio State University has a total undergraduate enrollment of 45,831, with a gender distribution of 52 percent male students and 48 percent female students. At this school, 34 percent of the students live in college-owned, -operated or –affiliated housing and 66 percent of students live off campus. There are 69 fraternities and sororities throughout Ohio State and 12% of the student body is affiliated with Greek life. Room and board in the 2017-18 academic year was $12,252.

Pennsylvania State University has a total undergraduate enrollment of 41,359, with a gender distribution of 54 percent male students and 46 percent female students. At this school, 35 percent of the students live in college-owned, -operated or –affiliated housing and 65 percent of students live off campus. There are 44 fraternities, 3 of which are co-ed, and 30 sororities at Penn State. 12% of the student body is affiliated with Greek life. Room and board in the 2017-18 academic year was $11,280.

University of Wisconsin-Madison has a total undergraduate enrollment of 31,710 with a gender distribution of 49 percent male students and 51 percent female students. At this school, 26 percent of the students live in college-owned, -operated or –affiliated housing and 74 percent of students live off campus. There are nearly 60 fraternities and sororities that are made up over 4,000 students. Room and board in the 2017-18 academic year was $10,842.

University of Illinois at Urbana-Champaign has a total undergraduate enrollment of 33,932 with a gender distribution of 55 percent male students and 45 percent female students. At this school, 50 percent of students live in college-owned, -operated or –affiliated housing and 50 percent of students live off campus. There are 90 fraternities and sororities with 7624 students who are affiliated. Room and board in the 2017-18 academic year was $11,308.

University of Michigan has a total undergraduate enrollment of 28,983 with a gender distribution of 50 percent male students and 50 percent female students. At this school, 33 percent of the students live in college-owned, -operated or –affiliated housing and 67 percent of students live off campus. There are a total of 6,259 students affiliated with Greek Life. That of which 25.73 percent are female students and 18.14 are male students. Room and board in the 2017-18 academic year was $11,198.

Northwestern University has a total undergraduate enrollment of 8,353, with a gender distribution of 50 percent male students and 50 percent female students. At this school, 50 percent of the students live on college-owned, operated or affiliated housing and 50 percent of students live off campus. Approximately 40 percent of the student body is affiliated with Greek Life. Room and board in the 2017-18 academic year was $16,047.

Situation Analysis

STRENGTHS:

- Dedicated team members offering multi-faceted services with a commitment to creating a safe, sustainable and inclusive residential environment that enhances the MSU experience.
- Location. Our inventory is located in the heart of MSU's campus, providing a one-of-a-kind experience that provides a sense of community, countless opportunities for social interactions, convenience, access to campus resources and all-inclusive billing.
- New student housing community, 1855 Place, which includes modern apartment and town home units for undergraduate and graduate students and students with families.
- Newly renovated housing and dining facilities across campus provide services and facilities of higher perceived value.
- The MSU Neighborhood Model provides a service package that students find appealing with the resources they need to be successful.
- MSU's on-campus housing inventory offers a wide variety of living options for students.
- Commitment to health, wellness and sustainability.
- Wi-Fi accessibility throughout the on-campus housing system.
- Focus on establishing and maintaining partnerships with academic and support units of the university.
- Increased cultural/international competency of REHS staff allows the department to better anticipate and meet the needs of MSU's growing international population.
- Commitment to safety and security (electronic door access, community policing, night receptionist, on-call duty system, green light emergency phones, etc.)
- The REHS Outreach Tour program has created new opportunities for the department to interact directly with admitted and prospective students, as well as their parents.
- Competitive pricing among peer institutions.

WEAKNESSES:

- The timing of the sign-up period for returning students.
- The lack of a path that directs our students through the housing systems.
- Strict housing requirements for family housing at 1855 Place.
- Dated facilities and less than desirable room configurations.
- Perceived lack of freedom, perceived lack of value and perceived high cost.
- Perception of students and parents that moving off campus after one year is the thing to do.
- Student and parent concerns regarding transitional housing.
- Design and functional limitations of liveon.msu.edu.
- Lack of familiar "apartment-like" website design.
- Lack of resources to provide personalized digital marketing and communication strategies for Centennial students who value personalization.
- Lack of resources to produce quality video content.
- Technology limitations, including: usability, processes, efficiency, timeliness, etc.
- Ability to implement platforms in a timely manner that are needed for digital marketing and communications to be successful.
- Perceptions about water quality.

OPPORTUNITIES:

- Continued timely marketing and communication to parents of residents.
- Increased outreach opportunities through Admissions.
- Increased outreach opportunities through OISS.
- Increased user functionality and updated design of liveon.msu.edu.
- Enhanced communication about what we offer and our value proposition.
- Intensified efforts to provide RAs and intercultural aides with the tools necessary for retention and student success.
- Increased collaboration with divisional and university-wide partners to allow for more consistency in messaging.
- Increased promotion of singles and quiet floors to meet the needs of Education Focused Independents.
- Increased use of data to track the user experience.
- Enhanced content strategy.
- Enhanced service experience for consumers.
- Providing "convenience plus," which is identifying opportunities to surprise and delight to set us apart from our competitors.
- Providing great living experiences for new residents in order to encourage them to live on-campus for a second year.

THREATS:

- Students seeking less expensive housing and dining options.
- Surviving in the overcrowded student housing marketing may require the ability to discount rates. RHS/REHS does not have this ability, but our competitors do.
- The opening of additional local competitors, especially those offering high-quality amenities and room configurations close to campus.
- Pressure from competitors that impacts the sign-up period.
- Decreasing number of high school graduates in Michigan.
- Decreasing number of international students.
- The university president's moratorium on living-learning and theme-based residential communities, which historically have yielded high retention rates.
- The RHS debt capacity limits our ability to renovate older building to meet the desires of students.
- Market growth of more than 2,300 more beds in the East Lansing student housing market.

Action Planning

Goals and Objectives

Business Goals

1. Student success
2. Safety and security
3. Diversity and inclusion
4. Retention

Marketing and Communication Goals

1. Increase brand awareness and engagement with students, families, staff and members of the MSU community in order to increase brand loyalty and retention in on-campus housing.
2. Increase the frequency of messages regarding resources to on-campus residents and families in order to promote the academic success of on-campus residents.
3. Increase the frequency of safety awareness messages to on-campus residents and families regarding physical safety and emotional/psychological safety on campus in order to promote safety and security in residence halls and apartment communities on campus.
4. Increase the frequency of messages and stories that promote an inclusive living and learning environment and celebrates all members of the MSU residential community.

Objectives

- **Goal 1:** Increase awareness of our offerings and engagement with students, families, staff and members of the MSU community in order to increase brand loyalty and retention in on-campus housing.

  Objectives:

  - Increase retention rate to on-campus housing to 41.5% for 2019-20.
  - Secure at least 14,450 students to live in Residence Halls.
  - Secure 95% occupancy at University Village.
  - Secure 61% occupancy at Spartan Village.
  - Secure 95% occupancy for family housing, apartments and townhouses at 1855 Place.
  - Increase retention rate of rising sophomore students to on-campus housing to for 2019.20.
  - Increase retention rate of international students to on-campus housing for 2019-20.
  - Increase followers on Instagram to 5,000 for 2019-20.
  - Establish a baseline for measuring traffic to the new Live On website.
  - Establish a baseline for measuring engagement across all social media platforms.

- **Goal 2:** Increase the frequency of messages regarding resources to on-campus residents and families in order to promote the academic success of on-campus residents.

  Objectives:

- Increase ratings for Student Learning and Development in the On-Campus Resident Survey in the following areas by:
  - Feel connected to MSU
  - Be academically successful
- Increase in ratings regarding academic success between Move-in Survey and On-Campus Resident Survey.

- **Goal 3**: Increase the frequency of safety awareness messages to on-campus residents and families regarding physical safety and emotional/psychological safety on campus in order to promote safety and security in residence halls and apartment communities on campus.

  Objectives:
  - Maintain a 97% rating in the On-Campus Resident Survey for feelings of physical and emotional safety in on-campus housing.
  - Establish baseline for safety within the move-in survey.

- **Goal 4**: Increase the frequency of messages and stories that promote an inclusive living and learning environment and celebrates all members of the MSU residential community.

  Objectives:
  - Increase ratings for Student Learning and Development in the On-Campus Resident Survey in the following areas by:
    - Interact with people from different backgrounds (from 5.96 to 6.15, or from 85% to 88%)
  - Establish baseline for inclusion within the move-in survey.
  - Establish baseline for inclusion within the REHS student employee survey.

Target Audiences

The Marakon marketing segmentation study, "Driving Combined Growth in REHS and CS" commissioned by RHS in Spring 2014, identified eight undergraduate customer segments for on-campus housing. These segments include:

- **Education Focused Independent***- Social independents who are just looking for a safe, quiet space to help them thrive academically.
- **Financially Supported Socializer**- Looking for the "full (social) college experience," which includes off-campus living with friends and no unnecessary rules—and they are getting that on their parents' dime.
- **Value Seeker**- Desire updated housing with preferred room configurations at a low cost; not the most financially disadvantages segment, but students who still care significantly about value for money.
- **Collegetown, USA Legacy**- Looking for the prototypical college experience; engaged member of the MSU community both socially and academically.
- **Paying Their Own Way**- Upperclassmen who are balancing work and school—and are finding it less expensive to do so by living off-campus**.**
- **High-Achieving MSU Loyalist***- Lovers of the MSU on-campus housing offering: convenient, no hassle community where one can live with friends and thrive academically.
- **Social Acceptance Seeker**- Tend to move off campus because that is what you are "supposed to do" and what their friends are doing.
- **Motivated By Lease Terms**- Focused on housing situation that offers their preferred lease and payment terms; only segment to mention these items as top needs.

***While all segments will be considered during the development of marketing/communications strategies, special emphasis will be given to the Education Focused Independent and High-Achieving MSU Loyalist customer segments.*

Key messaging will be developed for:

- First-year students
- Upperclassmen residents
- Off-campus students
- Admitted students
- International students
- Transfer students
- Students with families
- Graduate students
- Parents/families of students
- Academic and administrative partners
- Community members and visitors
- Visiting Scholars
- Faculty/Staff

Strategies, and Tactics

Focus Area 1: Brand Awareness & Engagement

Strategy 1. Continue to advance the Live On Brand.

Tactic 1.1 Redesign Live On website.

Tactic 1.2 Develop a comprehensive content strategy to include ongoing evaluation and routine maintenance.

Tactic 1.3 Obtain Live On photography showcasing a diverse group of student residents, staff, a variety of housing options, community events and other aspects of on-campus living.

Tactic 1.4 Develop innovative on-campus and in-hall advertising materials for Live On.

Tactic 1.5 Develop off-campus advertising materials for Live On.

Tactic 1.6 Continue Live On video series including a variety of short, fun, audience-specific videos providing students with information on adjusting to and making the most out of campus life.

Tactic 1.7 Develop on-hold messaging for all REHS phone lines.

Tactic 1.8 Provide signage templates with branding to be used throughout the system.

Tactic 1.9 Purchase swag/giveaways for Live On Street Team and Residence Education staff.

Strategy 2. Develop standard marketing and promotional materials for use by the Outreach Office, Live On Street Team and other department units (i.e., Outreach Toolkit).

Tactic 2.1 Launch and share new Live On general information video.

Tactic 2.2 REHS/Live On general information poster/die-cut/brochure for current and prospective students.

Tactic 2.3 Order logoed promotional items to distribute.

Tactic 2.4 Develop print and electronic audience-specific marketing materials promoting on-campus housing to address the unique needs of various student, including: students with families, graduate students, international students, prospective students, newly admitted students, etc.

Strategy 3. Communicate with families of student residents on a regular basis.

Tactic 3.1 Publish printed quarterly newsletter for families of students who live on campus.

Tactic 3.2 Provide families of first-year students with information and tools to assist their students in their transition to MSU.

Tactic 3.3 Encourage new families to follow the Parents of the Class of 2022 Facebook Group, along with other MSU Live On social media accounts.

Strategy 4. Utilize social media to build community, engage with residents and provide customer service responses.

Tactic 4.1 Work closely with Residence Education team members to engage with students online through hall-specific Facebook pages – gauge interest.

Tactic 4.2 Actively search out photos in and around residence halls for use on Instagram to show an authentic student experience.

Tactic 4.3 Engage in active listening across social media platforms, with a focus on Twitter, to engage with community members and identify opportunities to "surprise and delight" and Deliver Outstanding Spartan Experiences.

Tactic 4.4 Draw traffic to Instagram Direct Message for assistance with customer service needs.

Tactic 4.5 Continue to build following on Instagram to connect with students.

Strategy 5. Seek returning students by communicating benefits of living in on-campus housing, beyond convenience and proximity to campus (Convenience Plus). Messaging will be based on the needs of identified customer segments.

Tactic 5.1 Highlight the academic success benefits of living on for two years or more.

Tactic 5.2 Incorporate benefits of on-campus living in all promotional materials.

Tactic 5.3 Share benefits of on-campus living through Live On videos.

Tactic 5.4 Share benefits of on-campus living through social media outlets.

Tactic 5.5 Mention benefits of on-campus living at all events.

Strategy 6. Utilize the Live On Street Team to create unique experiences for students who live on campus and promote on-campus living.

Tactic 6.1 Host and partner on events throughout the academic year to strengthen student engagement, interaction, and awareness.

Tactic 6.2 Showcase Live On experience authentically via social media and video concentration.

Tactic 6.3 Connect with other residents and student groups to promote the Spartan experience for new students.

Tactic 6.4 Host away-game tailgates during the fall semester to build community and create unique experiences for students who live on campus.

Tactic 6.5 Host Live On Festival in the fall to kick off on-campus housing sign-up for 2019-20.

Tactic 6.6 Work with Residence Education staff on spring engagement events in the halls that can promote on campus housing sign-up for 2019-20.

Tactic 6.7 Conduct contests and giveaways for current residents.

Tactic 6.8 Serve as main and accessible focus group for REHS campaign materials.

Tactic 6.9 Enhance team member training program to promote on-going development and engagement, using REHS partners to lead some trainings.

Strategy 7. Help residents feel like they are a part of a community by acknowledging their experiences and congratulating them on their accomplishments.

Tactic 7.1 Welcome residents to campus utilizing advertisements, other print and electronic marketing materials, as well as the Welcome Team and the Live On Street Team.

Tactic 7.2 Develop a marketing and communication plan and collateral materials for Fall Move-In Welcome Team recruitment.

Tactic 7.3 Provide a personal touchpoint with residents on their birthday.

Tactic 7.4 Develop print and electronic marketing materials to encourage students during finals and midterms.

Tactic 7.5 Congratulate student residents on graduation with a personal touchpoint, and share print and electronic marketing messages for all students.

Strategy 8. Collaborate with RHS partners to utilize the Izzone Campout as an opportunity to promote on-campus living. Event will be sponsored by Live On, Eat at State and Spartan Hospitality Group.

Tactic 8.1 Provide information on on-campus housing options, amenities and benefits.

Tactic 8.2 Secure presence of the Live On Street Team at the event.

Tactic 8.3 Provide giveaways to attendees.

Tactic 8.4 Provide prizes (or drawing) for students who follow "MSU Live On" social media accounts.

Strategy 9. Appeal to graduate and professional students through targeted advertising and outreach activities, based on availability.

Tactic 9.1 Contact admitted graduate and professional students by email in May to provide information on on-campus housing options.

Tactic 9.2 Contact admitted graduate and professional students through email in late June to follow up and remind them they can still sign up for on-campus housing.

Tactic 9.3 Provide promotional materials to be displayed in graduate program offices, at events and in admission packets. .

Tactic 9.4 Participate in graduate program "Admitted Student Days" and "Interview Days" via Outreach.

Strategy 10. Utilize the MSU Tours to showcase the various housing options and amenities available on campus.

Tactic 10.1 Evaluate and update the MSU Tours website regularly.

Tactic 10.2 Incorporate virtual 360 tours into MSU Tours and Live On websites.

Tactic 10.3 Provide training curriculum and materials for tour guides. (REHS at-a-glance document and Live On Message Guide)

Tactic 10.4 Provide updating MSU Tours branding to be used on marketing materials and uniforms for presenters and tour guides. (Outreach Budget)

Tactic 10.5 Develop talking points for presenters and tour guides.

Tactic 10.6 Contact principals from elementary and secondary schools throughout Michigan via mail with information about tour opportunities.

Tactic 10.7 Invite campus partners to participate in tours.

Tactic 10.8 Provide tours for current students to explore different campus communities during the on-campus housing sign-up period.

Strategy 11. Participate in fairs and events through team members and marketing materials in order to promote awareness of housing sign-up and on-campus living among current students and campus partners.

Tactic 11.1 Participate in the AOP Resource Fair via Outreach.

Tactic 11.2 Participate in International Student Resource Fair via Outreach.

Tactic 11.3 Participate in Sparticipation via Live On Street Team.

Tactic 11.4 Participate in Spartan Remix via Live On Street Team.

Tactic 11.5 Participate in U-Fest via Live On Street Team.

Tactic 11.6 Participate in MSU's Fall Housing Fair via Live On Street Team.

Tactic 11.7 Participate in MSU's Spring Housing Fair via Live On Street Team.

Tactic 11.8 Participate in Law College Recruiting Fair via Outreach.

Tactic 11.9 Participate in College of Vet Med Welcome Day via Outreach.

Tactic 11.10 Participate in International Coffee Hour via Outreach and/or Communications staff.

Tactic 11.11 Participate in Student Parents on a Mission Events via Outreach.

Strategy 12. Utilize contests and award prizes to help keep on-campus living and sign up top of mind.

Tactic 12.1 Conduct My Spartan Space contest on Instagram in the fall.

Tactic 12.2 Conduct spontaneous social media contests throughout the academic year.

Strategy 13. Ensure on-campus residents, parents/families, staff and guests are aware of best practices and campus resources to promote a safe and secure on-campus living environment.

Tactic 13.1 Implement a two-part safety awareness campaign (part one in the fall and part two in the spring).

Tactic 13.2 Incorporate messages about safety in informational and promotional materials.

Tactic 13.3 Provide bulletin board packets with critical information on move-in throughout residence halls and apartment communities, including safety messages.

Tactic 13.4 Provide students with critical information regarding operations, dining options, safety measures, etc.

Tactic 13.5 Share partner resources regarding physical and mental well-being while living on campus.

Strategy 14. Support diversity and inclusion efforts to engage with all student residents and build inclusive communities across campus.

Tactic 14.1 Educate the campus community about the diverse cultures and heritages of MSU students as part of our ongoing commitment to building inclusive communities.

Tactic 14.2 Collaborate with Associate Director to strategize communications and marketing that reinforce and support diversity and inclusion within the MSU community throughout the year.

Tactic 14.3 Deliver marketing materials that support inclusion campaigns within Residence Education and with other partners.

Tactic 14.4 Develop materials to use during networking and presentation opportunities with current and prospective partners.

Tactic 14.5 Partner on crafting intentional diversity and inclusion social posts related to organizations and their student leaders, efforts, advocacies, etc.

Tactic 14.6 Cover diversity and inclusion-related events (at least one event per month) via social media and Live On Street Team.

Tactic 14.7 Collaborate with Residence Education to produce video content featuring different cultural backgrounds on campus and distribute throughout Live On social media.

Tactic 14.8 Support the REHS Pledge and Promise to promote inclusive and safe living environments.

Strategy 15. Ensure on-campus residents are aware of academic resources available in the MSU Neighborhoods and across campus.

Tactic 15.1 Incorporate messages about academic resources and benefits of on-campus living in promotional materials.

Tactic 15.2 Highlight academic resources available to on-campus residents through Live On videos.

Tactic 15.3 Highlight academic resources available to on-campus residents through social media outlets.

Strategy 16. Support Residential Learning Model (RLM) initiatives to ensure continued student success.

Tactic 16.1 Work with the RLM team to promote opportunities for students to engage with their neighborhood community.

Tactic 16.2 Create promotional material for neighborhood engagement events

Tactic 16.3 Collaborate with RLM team to strategize communications and marketing that reinforce and support the curriculum.

Tactic 16.4 Provide RLM team with theme-based campaign templates and tools to promote initiatives.

Tactic 16.5 Develop materials to use during networking and presentation opportunities with current and prospective partners.

Strategy 17. Drive thinking on how to strategically communicate mission of RHS Sustainability to residents throughout the year.

Tactic 17.1 Support "Pack Up. Pitch In." campaign communications to residents. Focus times include move in, move out and semester break. Create promotional material for neighborhood engagement events

Tactic 17.2 Promote the efforts of sustainability, particularly around LEED certification, happening within our residence halls and apartments via website and electronic media.

Tactic 17.3 Ensure students are aware of recycling options early on within their time at MSU with targeted print and electronic communications.

Tactic 17.4 Utilize social media and student email campaigns as outlets to share mission, fun facts, infographics, resources, etc.

Tactic 17.5 Partner with RHS Sustainability on events, such as sustainability week, Earth Day and dim down and RecycleMania.

Focus Area 2: 2019-20 On-Campus Housing Sign-up and New Student Room Selection

Strategy 18. Coordinate with RHS communicators to ensure all RHS team members are informed about the 2019-20 on-campus housing sign-up process and their roles.

Tactic 18.1 Host a Sign-Up Kick-off event for essential RHS team members.

Tactic 18.2 Communicate the sign-up goal regularly to team members.

Tactic 18.3 Provide sign-up updates at unit meetings and in RHS publications so that all team members know what progress has been made toward reaching the sign-up goal.

Tactic 18.4 Emphasize the critical role that each team member plays in retention efforts.

Tactic 18.5 Provide RHS team members with Sign Up FAQ sheets to address questions regarding sign up.

Tactic 18.6 Provide all REHS team members, and key RHS team members, with "Ask Me How to Live On Next Year" swag (buttons or shirts) to wear throughout the sign-up process.

Strategy 19. Ensure that students are aware that on-campus housing sign up for 2019-20 is happening.

Tactic 19.1 Audit current marketing material locations and options to ensure we are best utilizing our facility resources.

Tactic 19.2 Place marketing materials with information about sign-up throughout campus in residence halls, apartment communities, dining halls, engagement centers, campus center cinemas, the MSU Union, etc.

Tactic 19.3 Prominently place on-campus housing sign up information on the Live On website, Eat at State website, iLiveOn and on all "MSU Live On" and "Eat at State" social media platforms.

Tactic 19.4 Utilize paid advertisements with information about sign up on social media platforms.

Tactic 19.5 Deliver print and electronic communications regarding sign up to students throughout the sign-up period.

Tactic 19.6 Send parents of students who currently live on campus print and electronic communications regarding sign up throughout the sign-up period.

Tactic 19.7 Send campus partners communications regarding sign up periodically during the sign-up period.

Tactic 19.8 Use the parent-focused Facebook group as a tool to remind parents that sign-up is happening and answer questions as needed.

Tactic 19.9 HAO will work with staff in residence halls and apartment communities, as well as the Live On Street Team, to host sign-up events in select locations throughout campus.

Strategy 20. Engage in outreach to Deans, Directors and Chairs to educate them about department services and encourage them to promote on-campus housing options to their students.

Tactic 20.1 Send letter to Deans, Directors and Chairs from Vennie Gore at the beginning of the online sign up season expressing the academic benefits of on-campus living and the various housing options available.

Tactic 20.2 Send letter to the deans and department chairs from Vennie Gore in February/March reminding them of the academic benefits of on-campus living and that there is still time for them to encourage their students to sign up.

Strategy 21. Ensure that students are aware that on-campus housing sign up for summer 2019 is available.

Tactic 21.1 Place marketing materials with information about sign up for summer housing throughout campus in residence halls, apartment communities, dining halls, engagement centers, campus center cinemas, the MSU Union, etc.

Tactic 21.2 Prominently place summer housing sign up information will be on the Live On website, Eat at State website, iLiveOn and on all social media platforms.

Tactic 21.3 Send students electronic communications regarding sign up for summer housing.

Strategy 22. Ensure that incoming students are aware that new student room selection for 2019-20 is happening.

Tactic 22.1 Provide MSU Office of Admissions new student room selection information for their print and electronic communications.

Tactic 22.2 Prominently place new student room selection information on the Live On website, iLiveOn and on all "MSU Live On" social media platforms.

Tactic 22.3 Send incoming students print and electronic communications regarding new student room selection prior to and throughout the selection period.

Tactic 22.4 Send campus partners periodic communications regarding new student room selection.

Focus Area 3: Operational Support

Strategy 23. Provide general informational materials for REHS regarding on-campus housing for internal and external use.

Tactic 23.1 Publish electronic On-Campus Housing Handbook outlining terms and conditions.

Tactic 23.2 Publish print and electronic On-Campus Housing Catalogs for internal use, sharing facts and showcasing photos of on-campus residence halls and apartment communities. Sample floor plans and links to virtual tours will be included. (Hall Sell Sheets).

Tactic 23.3 Prepare backgrounder, FAQs, fact sheet, Leadership Team bios, and inventory documents for REHS.

Tactic 23.4 Regularly update and distribute talking points for staff use.

Strategy 24. Provide functional units with appropriate tools, templates and updated resources to effectively service customer needs.

Tactic 24.1 Ensure all housing contracts and lease agreements are up to date and readily accessible.

Tactic 24.2 Ensure all print and electronic forms are updated.

Tactic 24.3 Provide HAO and Service Center staff with targeted training, particular around "soft skills" to assist them in meeting the needs of customers.

Strategy 25. Provide information regarding operations, safety procedures and processing service requests in residence halls and apartment communities.

Tactic 25.1 Display appropriate signage related to building operations, safety procedures, reporting maintenance or facilities issues, etc. throughout residence halls and apartment communities.

Tactic 25.2 Provide students with information on how to submit requests for maintenance services.

Tactic 25.3 Provide students with information and tips to troubleshoot minor maintenance issues.

Strategy 26. Identify the Housing Assignments Office and Neighborhood Housing Specialists as a resource for students seeking in-person service/assistance or who need assistance navigating special circumstances.

Tactic 26.1 Publicize the extended hours of the HAO during weekdays and on the weekends during busy times.

Tactic 26.2 Host events in the HAO, residence halls, engagement centers and dining halls where students can get assistance from HAO staff with housing sign up, sign up for blocks of rooms with their friends, help identify the best housing option for them, help find a roommate, etc.

Tactic 26.3 Utilize parent-focused Facebook group to answer questions and provide online customer service to parents of incoming and current students.

Strategy 27. Highlight the various amenities and living options available through on-campus housing online and offline.

Tactic 27.1 Incorporate various amenities and housing options available in all promotional materials.

Tactic 27.2 Highlight various amenities and living options through Live On videos.

Tactic 27.3 Share information about amenities and living options on a regular basis through the annual social media campaign.

Tactic 27.4 REHS team members, including the Live On Street Team, will discuss various amenities and living options at all events.

Strategy 28. Provide REHS staff and campus partners with timely communication of important information regarding move-in.

Tactic 28.1 Prepare print and electronic communications to share across platforms.

Tactic 28.2 Prepare talking points when appropriate.

Tactic 28.3 Prepare presentation materials when needed.

Strategy 29. Provide students with important housing and move-in information and tools prior to their arrival to campus in the fall and spring in order to assist in their transition to MSU.

Tactic 29.1 Develop print and electronic communication materials that provide an overview of residence halls and apartment communities.

Tactic 29.2 Inform students about the roommate matching application.

Tactic 29.3 Provide neighborhood and room notification communication.

Tactic 29.4 Provide roommate notification communication.

Tactic 29.5 Send printed publication to newly admitted students prior to the start of AOP, which will include information on move-in, a list of what to bring to campus, tips on adjusting to college life and the Spartan experience.

Tactic 29.6 Provide residents and their families with a Move-In Guide that shares critical information regarding operations, traffic, parking, and other information on what to expect when they arrive to campus.

Tactic 29.7 Enhance print communications with digital and social companion pieces.

Strategy 30. Assist international students in their adjustment to MSU and the United States.

Tactic 30.1 Develop communication materials to present and distribute during Pre-Departure Meetings hosted by Office for International Students and Scholars.

Tactic 30.2 Develop welcome package for international students, given to them when they arrive to their permanent fall assignment.

Tactic 30.3 Incorporate demonstration videos that will assist international students in their adjustment.

Strategy 31. Communicate information to students, parents, staff, campus partners and media regarding transitional housing, as needed.

Tactic 31.1 Prepare talking points to assist staff in communication about transitional housing.

Tactic 31.2 Develop print and digital communications regarding transitional housing to be distributed to target audiences, particularly staff, as needed.

Tactic 31.3 Provide incentives to students temporarily placed in transitional housing.

Strategy 32. Utilize fall and spring move-in as an opportunity to provide a positive impression and welcome new and returning students, and their families to MSU.

Tactic 32.1 Display appropriate signage throughout campus and in buildings.

Tactic 32.2 Provide signage templates with branding to be used throughout the community.

Tactic 32.3 Publicize move-in and welcome students using on-campus and off-campus advertising.

Tactic 32.4 Provide bulletin board packets with critical information on move-in throughout residence halls and apartment communities, including safety messages.

Tactic 32.5 Provide welcome gifts for residents in rooms and apartments.

Tactic 32.6 Create a festive and fun environment for students and their families.

Strategy 33. Provide newly admitted and transfer students with important move-in information prior to their arrival to campus in the spring.

Tactic 33.1 Share print and electronic communication materials that provide an overview of residence halls and apartment communities.

Tactic 33.2 Provide residents and their families with Move-In Guide containing critical information regarding operations, traffic, parking, and other information on what to expect when they arrive to campus.

Tactic 33.3 Provide students arriving early with critical information regarding operations, dining options, safety measures, etc.

Strategy 34. Provide RHS staff and campus partners with timely communication of important information regarding fall move-out/closing, Between Semester Housing and spring move-in.

Tactic 34.1 Prepare print and electronic communications to share across platforms.

Tactic 34.2 Prepare talking points when appropriate.

Tactic 34.3 Prepare presentation materials when needed.

Strategy 35. Provide residents with accurate and timely information regarding fall move-out/closing for winter semester break in order to facilitate a smooth move-out experience for residents and their families.

Tactic 35.1 Prepare print and electronic communication materials with critical information about closing procedures, check-out, parking and other operational changes.

Tactic 35.2 Ensure REHS team members are informed about closing and know who to direct students to with concerns.

Tactic 35.3 Display appropriate signage throughout campus and in buildings throughout closing.

Strategy 36. Ensure students who are unable to leave their housing assignment during semester break have adequate information about alternative options.

Tactic 36.1 Prepare print and electronic communication materials with information about check-out, submitting Late Stay Request forms, applying for Between Semester Housing and other alternative housing options while residence halls and/or apartment communities are closed for semester break.

Tactic 36.2 Contact students who expressed a need for Between Semester Housing to confirm their stay.

Tactic 36.3 Ensure REHS team members are informed about alternative housing options and know who to direct students to with concerns.

Strategy 37. Provide residents with accurate and timely information regarding fall move-out/closing for spring semester in order to facilitate a smooth move-out experience for residents and their families.

Tactic 37.1 Prepare print and electronic communication materials with critical information about closing procedures, check-out, parking and other operational changes.

Tactic 37.2 Ensure REHS team members are informed about closing and know who to direct students to with concerns.

Tactic 37.3 Display appropriate signage throughout campus and in buildings throughout closing.

Strategy 38. Provide REHS staff and campus partners with timely communication of important information regarding spring move-out/closing.

Tactic 38.1 Prepare print and electronic communications to share across platforms.

Tactic 38.2 Prepare talking points when appropriate.

Tactic 38.3 Prepare presentation materials when needed.

Focus Area 4: Outreach, Partnership and Assessment

Strategy 39. Ensure coordination between REHS and MSU Neighborhood Engagement Centers. (Via Core Leadership)

Tactic 39.1 Communicate regularly with Engagement Center Directors on the neighborhood and department level.

Tactic 39.2 Maintain partnership opportunities with MSU Neighborhood Engagement Centers.

Strategy 40. Ensure coordination with the Residential Colleges and Living-Learning Communities. (Via Academic Initiatives)

Tactic 40.1 Communicate regularly with Engagement Center Directors on the neighborhood and department level.

Tactic 40.2 Maintain partnership opportunities with MSU Neighborhood Engagement Centers.

Strategy 41. Partner with MSU's Office of Admissions through collaboration, presentations and MSU Tours.

Tactic 41.1 Include information from REHS in MSU Office of Admissions Packet.

Tactic 41.2 Ensure accurate information regarding on-campus housing is included on the Office of Admissions' website.

Tactic 41.3 Ensure admissions counselors have updated information about on-campus housing to share with inquiring students.

Tactic 41.4 Participate in Future Spartans Programs with the Office of Admissions (approximately seven programs throughout the state in the month of March).

Tactic 41.5 Participate in the Alumni Distinguished Scholars Programs with the Office of Admissions.

Tactic 41.6 Participate in the Inside MSU Program with the Office of Admissions.

Tactic 41.7 Participate in Green and White Days with the Office of Admissions.

Tactic 41.8 Partner on other events throughout the fiscal year as needed.

Strategy 42. Partner with the Office for International Students and Scholars.

Tactic 42.1 Participate in OISS events sponsored by RHS (AVP Budget).

Tactic 42.2 Collaborate with OISS to develop communication materials for international students with content related to on-campus living.

Tactic 42.3 Participate in Pre-Departure meetings in China, organized by OISS and Project Explore.

Tactic 42.4 Attend OISS student group meetings on a regular basis to help build a more authentic relationship and solicit feedback on on-campus housing.

Tactic 42.5 Collaborate with OISS to produce content and share stories highlighting the international student experience.

Strategy 43. Partner with the Office of Cultural and Academic Transitions.

Tactic 43.1 Communicate regularly with Office of Cultural and Academic Transitions.

Tactic 43.2 Maintain ongoing partnership opportunities with Office of Cultural and Academic Transitions

Tactic 43.3 Sponsorship of the Office of Cultural and Academic Transitions Unity Project ($5,000 level, AVP Budget).

Tactic 43.4 Partner with groups to participate in appropriate recruiting efforts.

Tactic 43.5 Meet with CORES/COPS groups annually to discuss partnership opportunities with Live On.

Strategy 44. Monitor trends in opinions and attitudes about on-campus housing.

Tactic 44.1 Host regular focus groups with a cross-representation of current student residents.

Tactic 44.2 Host regular focus groups with a cross-representation of former student residents.

Tactic 44.3 Host regular focus groups with international students.

Tactic 44.4 Host a social event for campus partners with representatives from various departments and academic programs to network and share information and get feedback about on-campus housing and upcoming projects, initiatives, etc.

Tactic 44.5 Conduct surveys of students regularly throughout the academic year. Target periods to include: move-In (fall and spring), Between Semester Housing, closing, Summer Housing, sign-up, Live On events, etc.

Tactic 44.6 Conduct annual parent surveys during move-in.

Strategy 45. Monitor trends in opinions and attitudes on about on-campus housing in traditional and social media outlets.

Tactic 45.1 Collaborate with Creative Services to regularly review REHS media clippings.

Tactic 45.2 Review monthly media reports from Creative Services.

Tactic 45.3 Produce monthly analytic reports to track trends on websites, social media platforms, HTML messages and other digital communications.

Tactic 45.4 Utilize IBM Watson to monitor campus climate, brand perception, competitors and market trends.

Focus Area 5: Staff Recruitment

Strategy 46. Promote resident assistant opportunities for students to draw from a sizeable and diverse applicant pool.

Tactic 46.1 Prepare marketing materials with information about opportunities to be placed throughout campus in residence halls, apartment communities, dining halls, engagement centers, etc.

Tactic 46.2 Post information about positions on Live On website and through Live On social media platforms.

Tactic 46.3 Encourage current team members to promote positions and invite members of their campus networks to apply for positions.

Tactic 46.4 Work with planning committee, intercultural work team and Associate Director for Diversity and Inclusion to better reach diverse pool of applicants.

Tactic 46.5 Provide campus partners with information about positions, as appropriate.

Strategy 47. Coordinate with the RHS Student Employment Office to promote student internship and employment opportunities throughout REHS to draw sizable and diverse applicant pools.

Tactic 47.1 Develop position-specific marketing materials with information about employment opportunities to be placed throughout campus when appropriate.

Tactic 47.2 Post information about positions on RHS Student Employment and Live On websites and social media platforms.

Tactic 47.3 Provide campus partners with information about positions, as appropriate.

Tactic 47.4 Encourage REHS team members to refer students to apply for positions.

Strategy 48. Promote opportunities for graduate staff positions to draw a sizeable and diverse applicant pool.

Tactic 48.1 Provide MSU graduate and professional programs with information about opportunities for students.

Tactic 48.2 Post information about positions on RHS and Live On websites and through Live On social media platforms.

Tactic 48.3 Post information about positions on industry websites as part of annual subscription.

Tactic 48.4 Provide campus partners with information about positions.

Tactic 48.5 Encourage REHS team members to share opportunities in their professional networks.

Strategy 49. Promote opportunities for professional staff to draw a sizeable and diverse applicant pool.

Tactic 49.1 Participate in The Placement Exchange to recruit Residence Education staff.

Tactic 49.2 Promote positions on higher education and other industry websites.

Tactic 49.3 Encourage REHS team members to share opportunities in their professional networks.

Tactic 49.4 Increase RHS profile as an auxiliary resource to better recruit industry leaders.

Focus Area 6: Internal Communication and Employee Experience

Strategy 50. Building competency of team members on brand experience and it's correlation with retention.

Tactic 50.1 Hold regular meetings with applicable staff to share latest campaigns and reasoning behind our creative marketing and communication efforts.

Tactic 50.2 Partner with Creative Services on development of RHS Style Guide and REHS-related brand guides in order to produce consistent communications.

Strategy 51. Reinforce departmental mission and goals among REHS team members.

Tactic 51.1 Develop Welcome Kits for all new REHS team members.

Tactic 51.2 Ensure REHS mission statement posters are maintained in internal breakrooms.

Tactic 51.3 Distribute monthly email update to REHS team members with important departmental information and referrals to official RHS Communications channels.

Tactic 51.4 REHS Communications unit will remain actively involved in content development for RHS Weekly DOSE, Newsline and MyRHS.

Strategy 52. Ensure that REHS team members are informed about department services, strategic direction, operations, policies and procedures.

Tactic 52.1 Host annual State of the Department, led by the executive director.

Tactic 52.2 Develop annual REHS at-a-glance document for team members and campus partners that shares information about each unit and it current leadership.

Strategy 53. Familiarize REHS team members and RHS Creative Services with key departmental messages

Tactic 53.1 Maintain a message guide encompassing key departmental messages for identified target audiences.

Tactic 53.2 Ensure that messages are utilized and referenced regularly in staff communications.

Strategy 54. Enhance employee experience, communication, community/relationship building among REHS team members.

Tactic 54.1 Host bi-annual retreats with REHS CORE Leadership team.

Tactic 54.2 Host annual retreats with REHS Leadership team.

Tactic 54.3 Host LIVE. LEARN. LEAD. event(s) annually to engage staff in the work of REHS and to provide a forum to ask questions and get answers.

Tactic 54.4 Host regular, smaller roundtable discussions for team members from all levels across REHS to interact with Executive Director and Sr. Associate Director.

Strategy 55. Provide REHS team members with communications training.

Tactic 55.1 Partner with RHS Social Media Committee and MSU Communications and Brand Strategies to provide key REHS team members with social media training.

Tactic 55.2 Conduct annual media, branding and marketing/communications process (delivery and distribution) training with REHS Leadership, in-hall and other team members as needed.

Strategy 56. Provide REHS team members with information and tools to assist in the production of marketing and communication materials to be used by various functional units.

Tactic 56.1 Prepare checklist outlining the marketing/communications work process and timelines to be used by project managers/sponsors.

Tactic 56.2 Utilize a request form that REHS team members can submit to request new and repeat marketing and communications materials.

Tactic 56.3 Develop signage templates for residence hall postings and notices.

Tactic 56.4 Develop email templates for general communications that happen in the Mercury RMS.

Tactic 56.5 Continue to educate team members on the marketing and communications work process.

Focus Area 7: Public/Media Relations

Strategy 57. Enhance media relations in order to build mutually beneficial relationships and to inform the campus and local community of REHS and news and events.

Tactic 57.1 Respond to all media inquiries in a timely and efficient manner.

Tactic 57.2 Provide updated media information on RHS website.

Tactic 57.3 Develop REHS Media Kit, to include: backgrounder, FAQs, fact sheet, Leadership Team bios, inventory, etc.

Tactic 57.4 Pitch stories on new initiatives and best practices to local, national and trade/industry media outlets.

Tactic 57.5 Provide key REHS team members with media training.

Tactic 57.6 Collaborate with RHS Communicators Network, RHS Communications Manager and MSU's Communications and Brand Strategies on all media relations.

Strategy 58. Maintain REHS's position as a leader in the on-campus housing industry by leveraging awards, recognitions and publications.

Tactic 58.1 Track publications, projects, conference presentations and industry leadership positions of REHS team members.

Tactic 58.2 Develop a calendar of industry award deadlines.

Tactic 58.3 Work with RHS Communications Director on preparing applications for industry awards as necessary.

Strategy 59. Network with industry peers to share best practices surrounding student success, safety and security, diversity and inclusion and retention efforts.

Tactic 59.1 Share content through Big10 marketing and communications networking group.

Tactic 59.2 Share content through ACUHO-I and GLACUHO marketing and communications networks.

Tactic 59.3 Share content through NASPA marketing and communications networks.

Tactic 59.4 Share content through PRSA marketing and communications networks.

Tactic 59.5 Encourage REHS team members to share content

Focus Area 8: AOP/POP

Strategy 60. Effectively communicate to students during the Academic Orientation Program.

Tactic 60.1 Coordinate with REHS Outreach to develop talking points for AOP tour guides.

Tactic 60.2 Provide training to AOT Resident Assistants on messages and FAQs related RHS (via Outreach).

Tactic 60.3 Develop communication materials (Live On Campus Guide, video, etc.) to present and distribute during AOP.

Tactic 60.4 Provide informational materials and swag to distribute during the AOP Resource Fair.

Tactic 60.5 Work with RHS divisional communicators to develop innovative marketing messages to have posted during AOP within South Neighborhood and at tour locations.

Tactic 60.6 Encourage AOP attendees to follow "MSU Live On" on social media sites.

Strategy 61. Effectively communicate to parents and families during the Parent Orientation Program.

Tactic 61.1 Coordinate with REHS Outreach to develop talking points for POP presenters and tour guides.

Tactic 61.2 Develop communication materials (Live On Campus Guide, presentation, video, etc.) to present and distribute during POP.

Tactic 61.3 Encourage POP attendees to follow "MSU Live On" on social media sites and join the Parents of the Class of 2022 Facebook page to answer questions.

FOCUS AREA 9: Guest Housing –Spartan Village, Owen Hall and Kellogg Hotel and Conference Center (Revenue Generating)

Strategy 62. Partner with MSU Human Resources, MSU Family Resource Center, OISS and other various academic units

Tactic 62.1 Provide partners with transitional housing options for incoming faculty/staff

Tactic 62.2 Maintain "Guest Housing" web page and evaluate regularly

Strategy 63. Engage in outreach to academic and administrative units across campus to educate them about housing options for visiting/transitional faculty and staff and VIP guests.

Tactic 63.1 Print and electronic marketing materials with information about housing options for visiting and transitional faculty/staff and VIPs will be provided to academic and administrative units across campus for distribution to prospective residents.

Tactic 63.2 Send letter to the deans and department chairs from Vennie Gore in summer/fall 2018 informing that Spartan Village will remain open to meet the university housing need for visiting and transitional faculty/staff and VIPs, along with Owen Hall and Kellogg Center.

Production

Budget Summary

Focus Areas	Timeline	Budget
Outreach, Partnerships and Assessment- Lead Generating	Ongoing	$13,000
Staff Recruitment- Support	Ongoing	$11,500
REHS Internal Communications and Employee Experience- Support	Ongoing	$30,000
Brand Awareness and Engagement- Support and Revenue Generating	Ongoing	$80,000 (Shared Cost with Culinary Services)
Public/Media Relations- Support	Ongoing	No Supply Cost
AOT/POP Support- Support	May-August	$10,000
Operational Support- Support	Ongoing	$103,000
On-Campus Housing Sign-Up and New Student Room Selection- Revenue Generating	Ongoing	$50,000 (Shared Cost with Culinary Services)
Guest Housing- Revenue Generating	Ongoing	$2,500

Calendar

Topic/Campaign	Start Date	Event Date
2019-20 Housing Sign-up Campaign	06/2018	10/1/2018
Outreach Travel Materials	06/10/2018	9/1/2018
Brand Awareness/Retention Campaign	ONGOING	
AOP/POP Support	02/2019	5/1/2019
Fall Move-In Campaign	03/2018	7/15/2018
Fall Move-Out/Spring Move-In Campaign	09/2018	11/1/2018
Spring Move-Out Campaign	01/2019	4/1/2019
Transactional Communications	ONGOING	
Away-Game Tailgates	07/15/2018	Fall 2018 (5 events)
Fall Festival	8/2018	10/1/2018
Guest Housing	ONGOING	
Housing Fair	8/2018	10/1/2018
Izzone Campout	8/2018	10/1/2018
New Student Room Selection	12/2018	3/2019
OCRS	8/2018	10/2018
RA Recruitment	6/2018	9/2018
RLM	ONGOING	
Safety Awareness	7/2018	10/2018
Spring Festival	1/2019	3/2019
Summer Housing Campaign	1/2019	3/2019
PUPI	1/2019	3/2019
Student Recruitment (Outreach/Street Team)	1/2019	2/2019
TPE	12/2018	2/2019
Welcome Team	1/2019	3/2019

MICHIGAN STATE UNIVERSITY

SPARTANS WILL.

Carla Iansiti
RHS Sustainability Officer
LEED Green Assoc.
MSU

- MSU
  - 5,200 acres or 25 million plus sq. ft.
  - Population: 50,543
- RHS size
  - Residence halls: 28
  - Apartment complexes: 2
  - RHS Population: 14,000
  - Staff size: 833. On call and temp staff 1244
  - Student staff: 5,800 / Buildings range in ages from community-style prior to 1955 to suite style in 1960-67, includes six-story buildings and one 12-story building
    - TCRs one per floor, 12 per building. Hubbard Hall has as floor, 24 TCRS

Home

Our Vision

Six Imperatives

Performance with Purpose

Moving Forward

BOLDER BY DESIGN

Our shared strategic framework: six imperatives that commit us to delivering distinctive, high-value impact and experiences in everything we do:

1. **ENHANCE THE STUDENT EXPERIENCE** by expanding opportunities for where, when, and how students learn and increasing the value of an MSU degree.
2. **ENRICH COMMUNITY, ECONOMIC, AND FAMILY LIFE** through research, outreach, engagement, entrepreneurship, innovation, diversity, and inclusiveness.
3. **EXPAND INTERNATIONAL REACH** through academic, research and economic development initiatives, and strategic alliances.
4. **INCREASE RESEARCH OPPORTUNITIES** by expanding funding to support high-impact scholarship and research.
5. **STRENGTHEN STEWARDSHIP** by nurturing the university's financial assets, campus environment, infrastructure, and people.
6. **ADVANCE OUR CULTURE OF HIGH PERFORMANCE** by elevating the quality and effectiveness of every product and process.

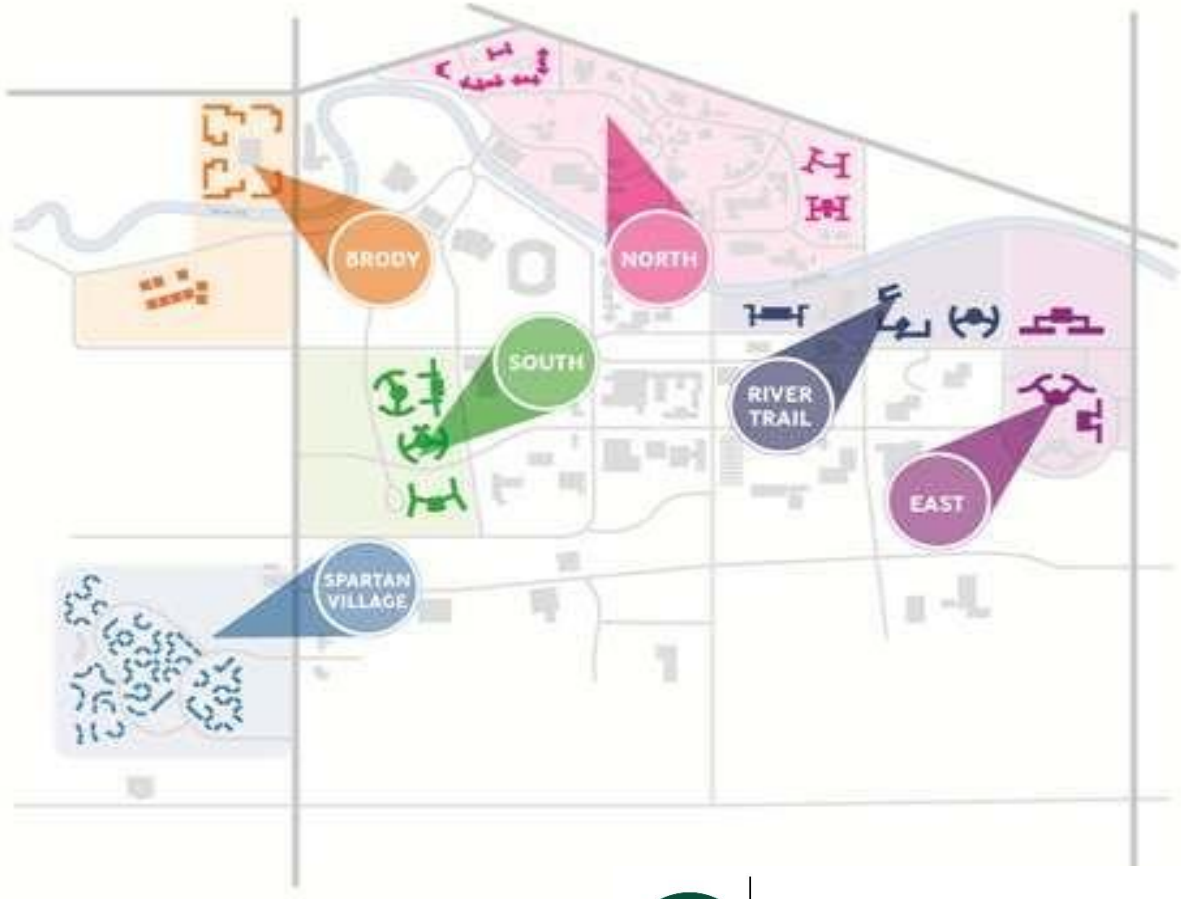
Campus Sustainability Goals

- Landfill diversion 70% by 2017
  - 57% diversion in 2013-14
- Energy transition
  - Goal of 20% reduction in energy use intensity by 2020 for main campus
  - Goal to reduce GHGs by 40%
  - Off coal in 2016

2014 MSU Sustainability report card

Neighborhood Engagement Centers

- Neighborhoods are bringing the resources of MSU to students where they live in the residence halls. At the heart of Neighborhoods are engagement centers with study lounges, game rooms and everything from advising and fitness resources to math tutoring. MSU students use engagement centers to prepare for college and the future, connect campus resources, achieve academic success, live healthy lifestyles, explore new cultures and join the MSU community
- http://neighborhoods.msu.edu/



RHS Sustainability

- RHS Strategic Plan 2013-23
- RHS Sustainability

Sustainability is a core value at MSU and RHS. RHS employees are expected to model behaviors that embrace sustainability and assist in educating those who do not know what we do.

Vision: Ensuring MSU's long-term sustainability through innovative and balanced strategies that support:

- Stewardship
- Fiscal responsibility
- Partnership

Mission: Dedication to promoting and advancing environmental stewardship throughout RHS and MSU by providing a high level of leadership to meet the environmental stewardship goals of MSU and RHS.

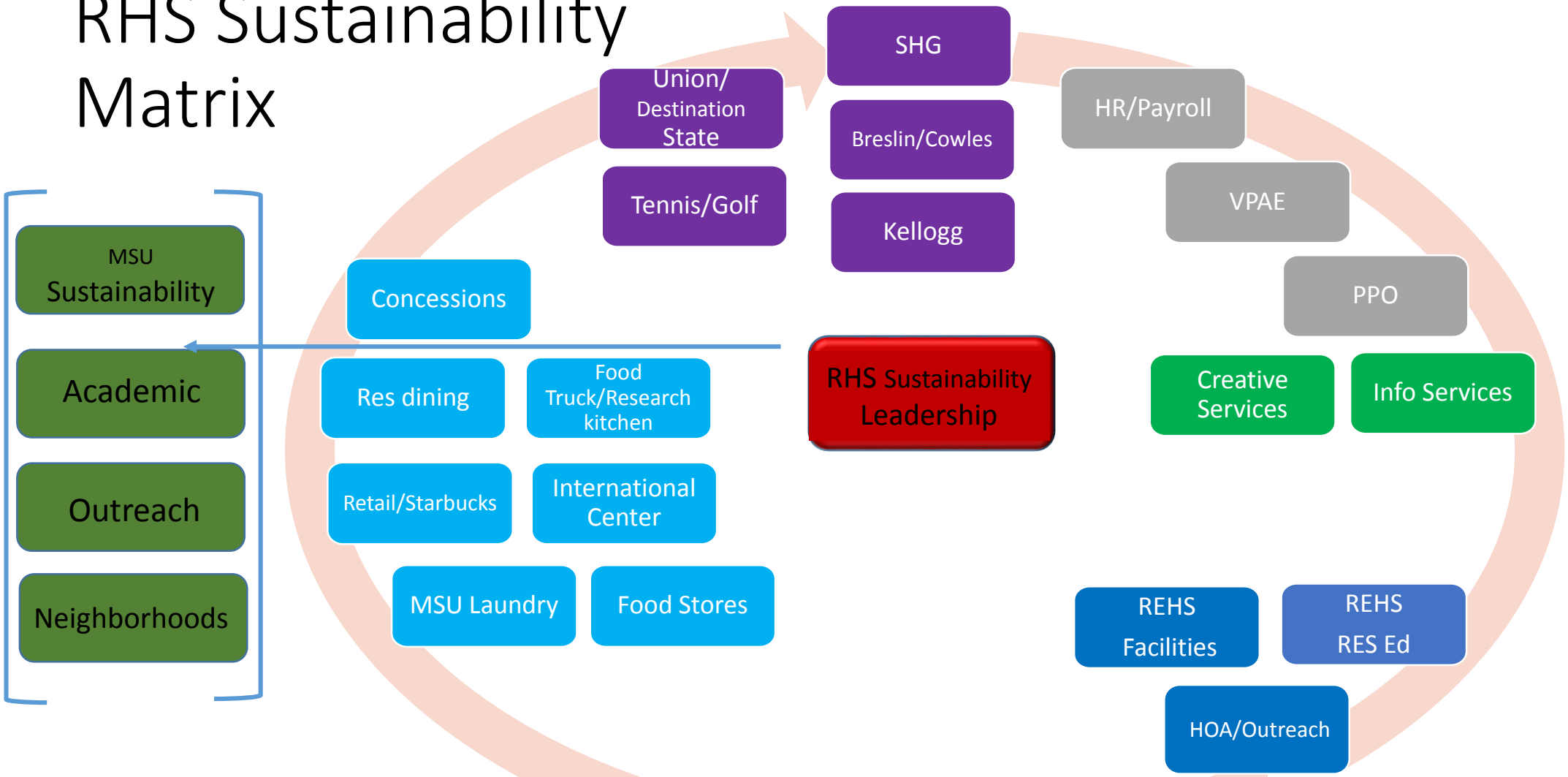
RHS Sustainability Mission, Vision & Goals

- **Vision:** Ensuring MSU's long-term sustainability through innovative and balanced strategies that support:
  - Stewardship
  - Fiscal responsibility
  - Partnership
- **Mission**: Dedication to promoting and advancing environmental stewardship throughout RHS and MSU by providing a high level of leadership to meet the environmental stewardship goals of MSU and RHS.

1. Energy conservation strategies
2. Water conservation strategies
3. Food waste strategies
4. Sustainable procurement strategies
5. Connecting sustainability, education and research
6. Materials diversion and reuse
7. Social responsibility

Sustainability is a core value at MSU and RHS. RHS employees are expected to model behaviors that embrace sustainability and assist in educating those who do not know what we do.

RHS Sustainability Matrix



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RHS Current Programs

- Food waste collections in Culinary Services and Concessions
- Clean Plates at State – Plate waste program
- Extensive Recycling collections in all RHS buildings
- Pack up Pitch In Campaigns
  - Water bottle and recycling mesh bag for all Freshmen
  - AOP/POP sustainability awareness
- Ongoing Marketing promotions
  - Sustainability awareness posters
  - Energy/Water conservations
  - Recycling tactics
- Be Spartan Green
- Certify your room
  - Green an event
  - Resources for sustainability bulletin boards

RHS STRIVING TO BE WASTE FREE

LIVE ON

eat at STATE

RESIDENTIAL AND HOSPITALITY SERVICES

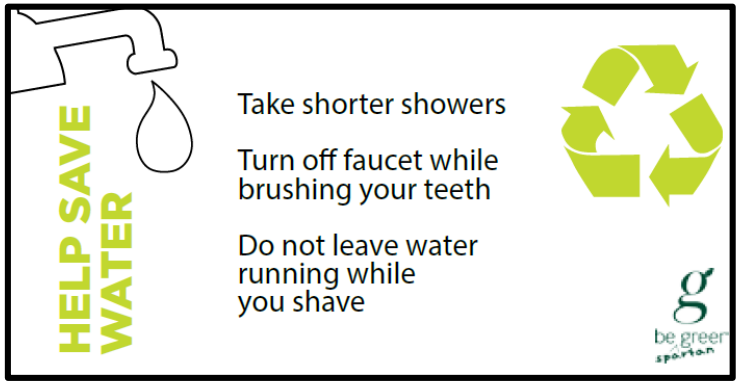
be green spartan

pitch in.
HELP OUT.

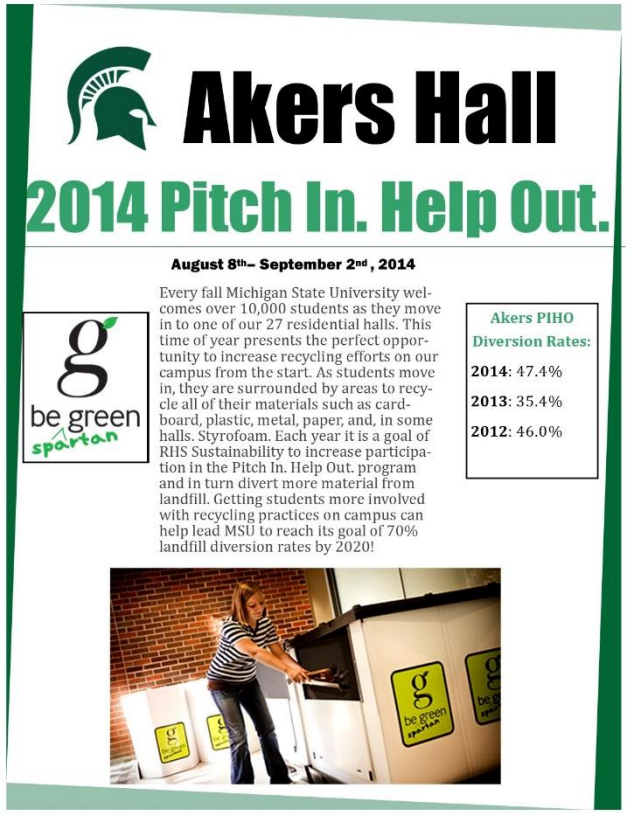
RESIDENTIAL AND HOSPITALITY SERVICES

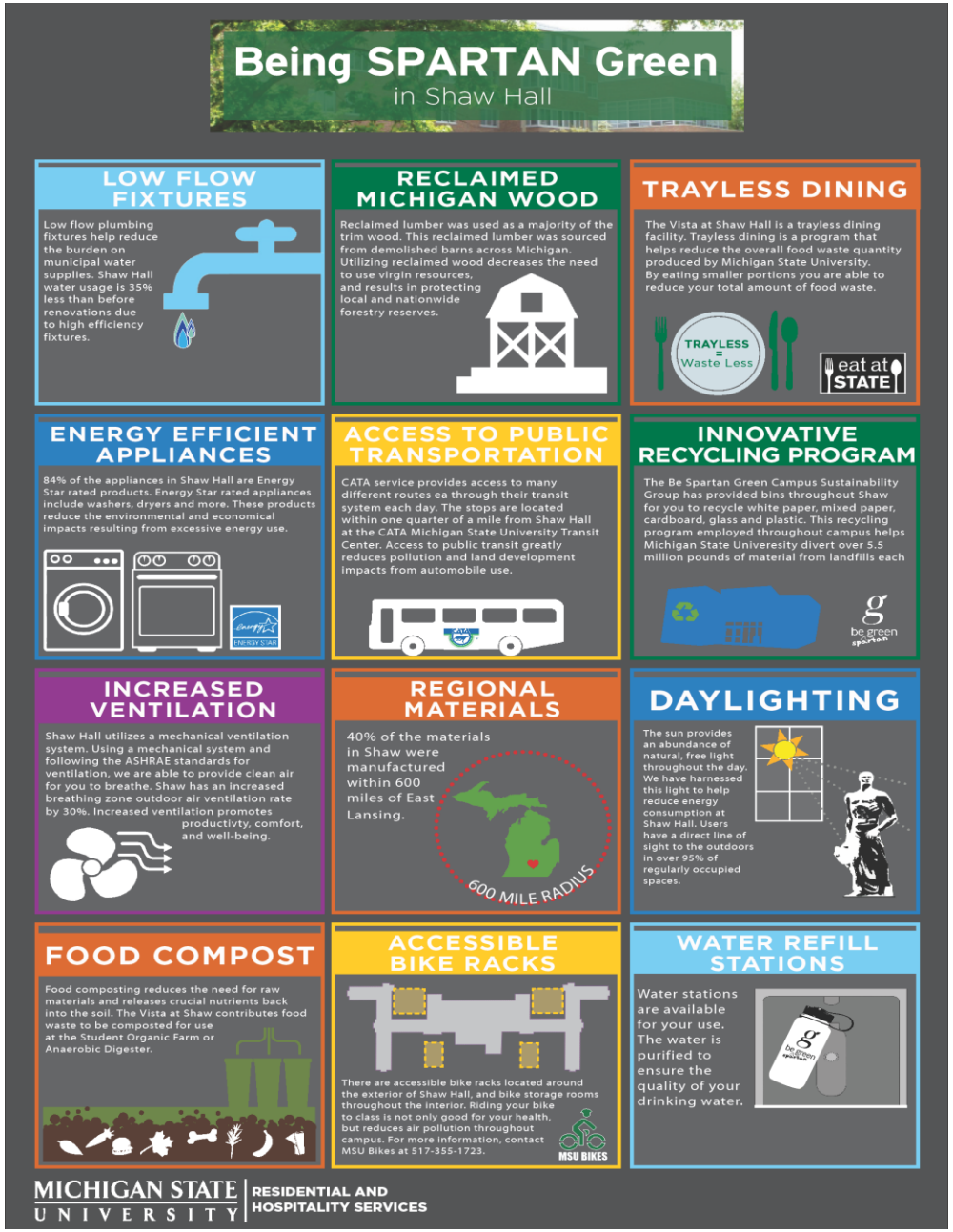
Residence Education and Housing Services

- Eco rep at all levels to deliver information
- Training sessions within all levels of Res life
  - Monthly sustainability themes
  - Be Spartan Green practices
- REHS Facilities
  - Lunch and learns
- RHS Sustainability onboarding class
- Neighborhood engagement open houses



Residence hall current programming





MICHIGAN STATE UNIVERSITY
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Residence hall current programming

MICHIGAN STATE UNIVERSITY
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Pack up Pitch in

- Events woven throughout the year tying it all together

The Recycling Stream

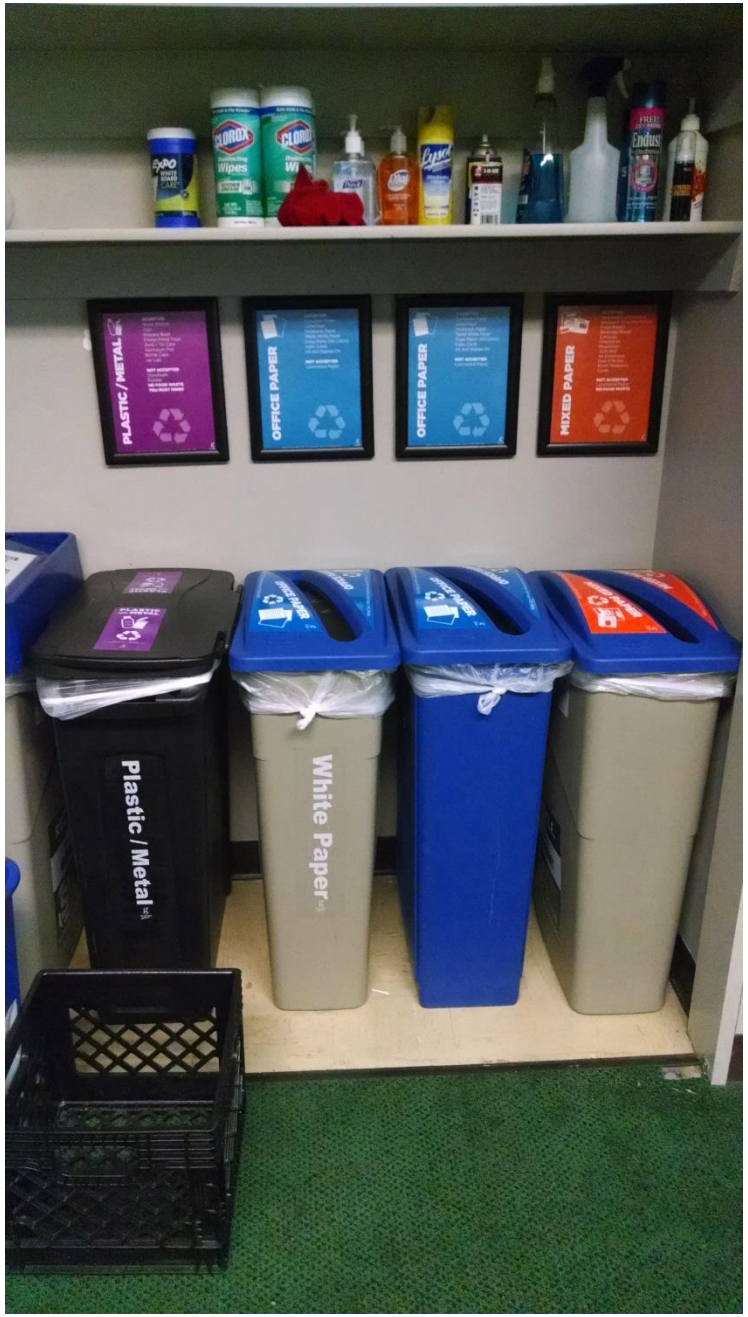
- All Paper
- All Plastics / metal
- Glass
- Boxboard/ Cardboard
- Food waste

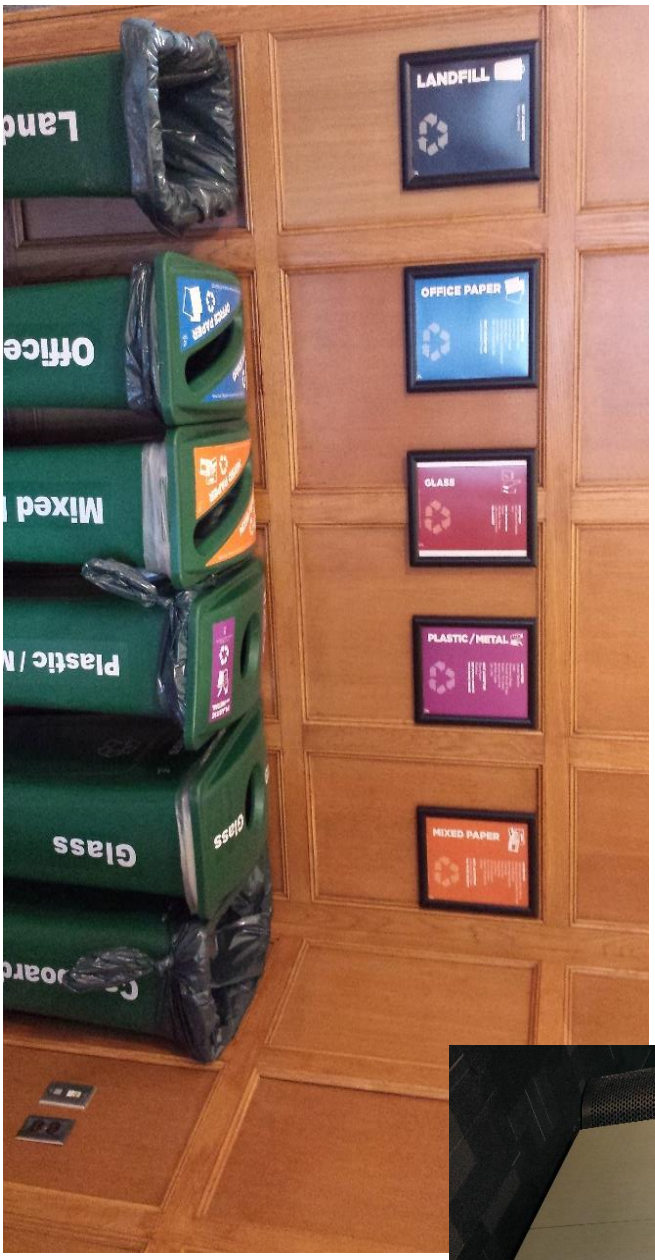
- Paper is comingled (white, mixed, boxboard and newsprint)
- Plastics / metal are sorted at the MSU Facility
- Food waste (separate Stream)
- Glass (separate steam)

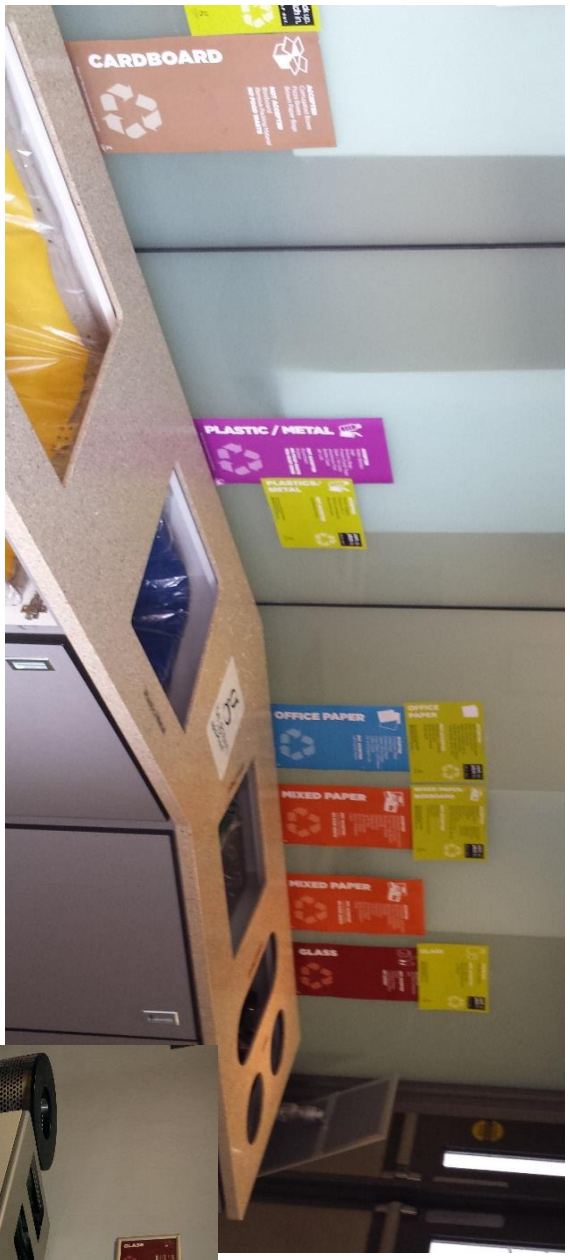
RESIDENTIAL AND HOSPITALITY SERVICES

Collections

- Residence halls have collection points on all main floors throughout
  - Recycling rooms
  - Closets
  - Hall ways by class rooms
  - Office Areas

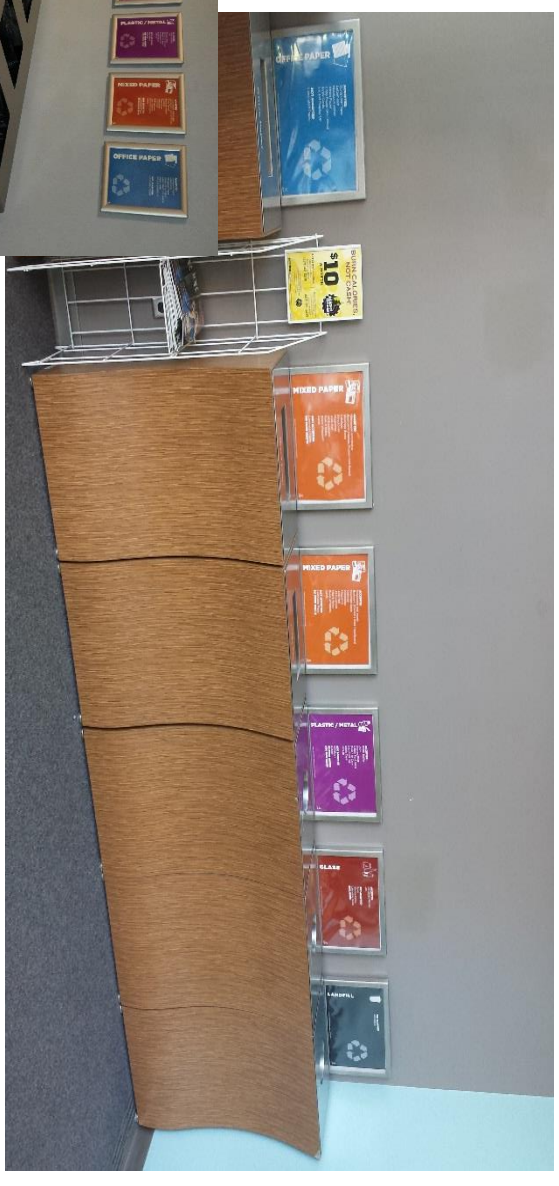



LANDFILL
OFFICE PAPER
GLASS
PLASTIC / METAL
MIXED PAPER


CARDBOARD
PLASTIC / METAL
OFFICE PAPER
MIXED PAPER
MIXED PAPER
GLASS

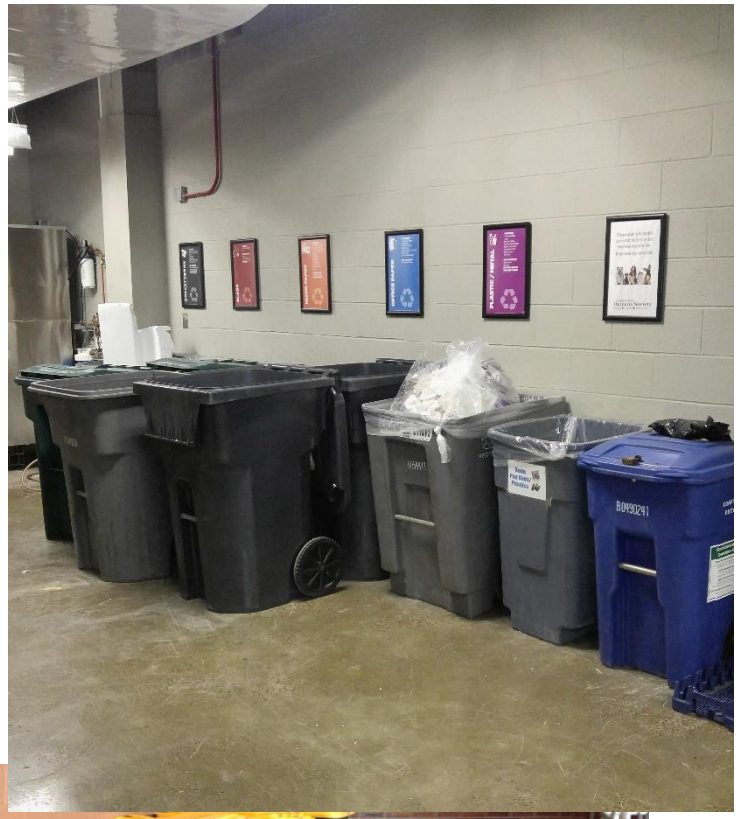
GLASS
PLASTIC / METAL
MIXED PAPER
OFFICE PAPER

PLASTIC / METAL
MIXED PAPER
MIXED PAPER
PLASTIC / METAL
CARDBOARD
GLASS


MIXED PAPER
MIXED PAPER
PLASTIC / METAL
GLASS

Recycling Path

- Fulltime staff /student staff are responsible for emptying the recycling areas
- The collection points are the back dock area for removal
- We have service daily depending on the material for pick up
- MSU Recycling is our hauler for recycling and Landfill
- Trash chutes only- they do get jammed up



Equipment

- Front load
  - 8 yds. and compactors
- Duel Packers
  - Built for two separate commodities
- Roll off
  - 20 yd./ 30 yard
- Box truck

Back Docks and Challenges

- Size constraints
- Different methods of pick up

RESIDENTIAL AND
HOSPITALITY SERVICES

	Recycling			Landfill			Food Waste			Surplus		
	2014-2015	2015-2016	% Change	2014-2015	2015-2016	% Change	2014-2015	2015-2016	% Change	2014-2015	2015-2016	% Change
Akers Hall	22620.27	80433	255.6%	88660	161820	82.5%	0	35445.4	#DIV/0!	22148	2029	-90.8%
Armstrong Hall	6982.2	7663	9.8%	26730	24640	-7.8%						
Bailey Hall	11281.36	7380	-34.6%	25500	23661.25	-7.2%				36	321	791.7%
Brody Hall	114319.4	123593.5	8.1%	87895	87225	-0.8%	134756.5	146194	8.5%	2026	7355	263.0%
Bryan Hall	2079	3090	48.6%	28260	32100	13.6%						
Butterfield Hall	6200	5278	-14.9%	23374	24420	4.5%				640	4	-99.4%
Case Hall	91255.72	84987.54	-6.9%	189660	154700.6	-18.4%	33345	47112	41.3%	6907	5408	-21.7%
Emmons Hall	8453	8478	0.3%	28230	25360	-10.2%				10000	10	-99.9%
Holden Hall	50614.15	39513.98	-21.9%	110780	105168.4	-5.1%	14157	18057	27.5%	15575	7252	-53.4%
Holmes Hall	75543.92	57825.36	-23.5%	146712	105760	-27.9%	20358	24717	21.4%	9623	8335	-13.4%
Hubbard Hall	64684.63	51286.99	-20.7%	125560	116300	-7.4%	20358	12948	-36.4%	4877	4395	-9.9%
Mary Mayo Hall	10911.8	8963.88	-17.9%	11320	13428.75	18.6%				253	10	-96.0%
Mason-Abbot Halls	24979.34	29536.44	18.2%	56880	54506.88	-4.2%				12209	14707	20.5%
McDonel Hall	30363.01	38858.26	28.0%	91840	96448.63	5.0%				5617	7703	37.1%
Owen Hall	35974.82	34306.64	-4.6%	96980	105420	8.7%	15015	11193	-25.5%	19494	14361	-26.3%
Rather Hall	7770	5769	-25.8%	25736	28280	9.9%				66	7	-89.4%
Shaw Hall	73377.1	77800.39	6.0%	110105	122540	11.3%	38922	50271	29.2%	4150	7585	82.8%
Snyder-Phillips Halls	86417.5	67025.85	-22.4%	141060	109655.8	-22.3%	30927	29211	-5.5%	133	12567	9348.9%
VanHoosen Hall	0	0		7860	7600	-3.3%						
West Circle	60438.5	59482.5	-1.6%	143560	136050	-5.2%	13416	1209	-91.0%	9574	3320	-65.3%
Williams Hall	12600	11179	-11.3%	12280	14140	15.1%				2282	0	-100.0%
Wilson Hall	44290.02	54492.07	23.0%	115329.5	110060	-4.6%	10764	19110	77.5%	2366	7969	236.8%
Wonders Hall	16705.55	29565.76	77.0%	65980	89166.5	35.1%	0	292	#DIV/0!	6493	5934	-8.6%
Total	**857861.3**	**886509.2**	**3.3%**	**1760292**	**1748452**	**-0.7%**	**332018.5**	**395759.4**	**19.2%**	**134469**	**109272**	**-18.7%**

Annual Volumes

- Data collected Monthly be each building
- Four categories
- MSU Recycling downs loads to RHS Weekly
- Data may shift as collections points are condensed in halls

	2013	2014
Landfill	5,939,148	5,533,725
Recycle	2,967,964.46	2,711,991.74
Food Waste	806,170	639,704
Surplus	463,026	309,975
Diverted	4,237,161	3,661,671
Total	10,176,309	9,195,396
Diversion Rate	40%	42%

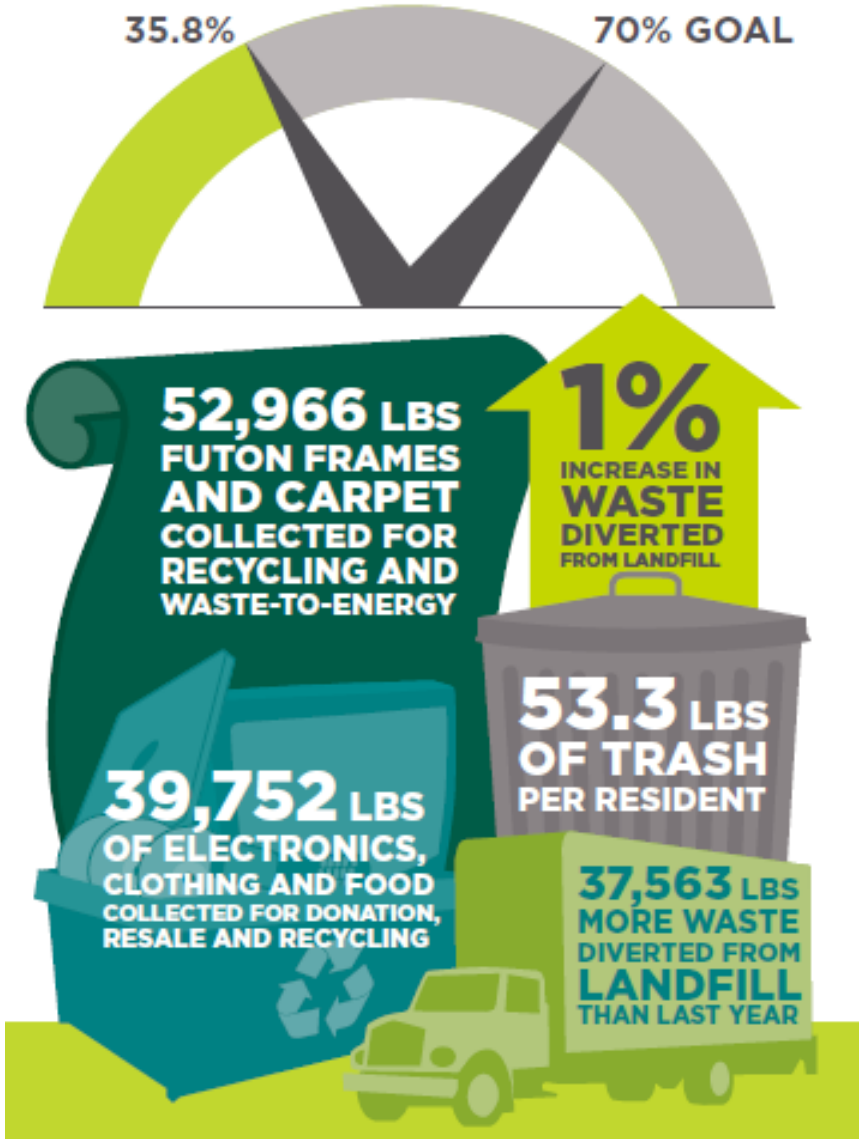
RESIDENTIAL AND HOSPITALITY SERVICES

What we did this move-out

- Pilot in East Neighborhood – increased communication with building community staff
  - Recycling stations on each floor
  - Most signage
  - Internal charities
- Some halls carried carpet to basement because lack of space
- One neighborhood left carpet and futons in rooms for staff to move
- Eliminated 20 yrd roll offs in efforts to gain a more usable product
- Tents located for furniture and carpet outside

LANDFILL DIVERSION RATES

The Pack Up. Pitch In. campaign hopes to contribute to Michigan State University's goal of a 70 percent landfill diversion rate by 2017.



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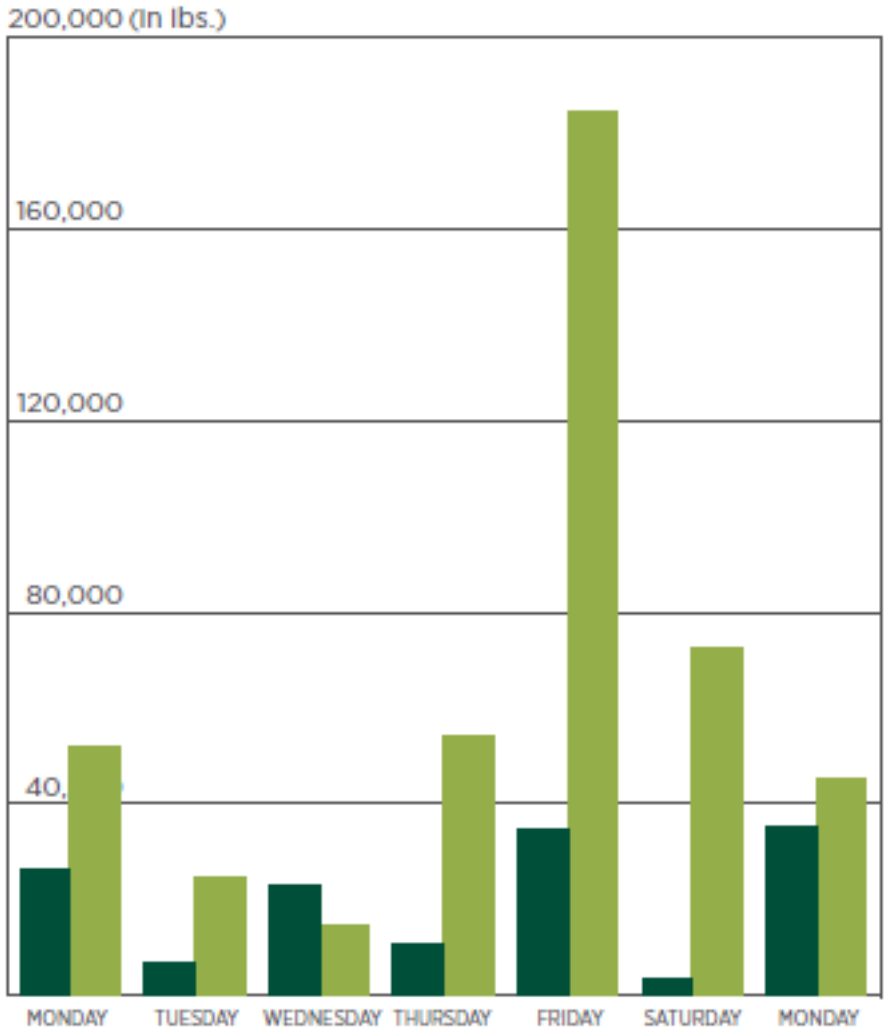
FINALS WEEK MOVE OUT DAILY DISTRIBUTION WEIGHT



GOALS

Work with MSU Recycling for **ACCURATE DATA THAT CAN BE SHARED**

PROVIDE DATA AT THE UNIT LEVEL to increase participation in the residence halls

Structure study in a way to share pounds per person to **CREATE AWARENESS OF EACH INDIVIDUAL'S IMPACT**

CREATE CONSISTENT METHODS OF COLLECTIONS based on available technology

Raise awareness of these four categories and their meanings: **RECYCLING, REUSE, ORGANICS, WASTE**

COMMEMORATE THE 20TH ANNIVERSARY OF PUPI in ways that will resonate with residents to increase participation

MICHIGAN STATE UNIVERSITY
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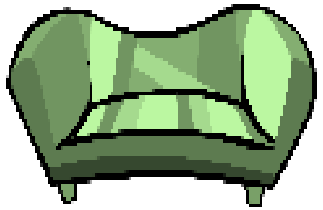
The Data-move out 2016

14% increase in diversion rates

21% total waste diversion
- Organics not included
- Res halls
- Apts

40 lbs. per person



183 futons

80,000 lbs. of carpet

http://www.lansingstatejournal.com/story

	Waste	Recycling	Reuse	Diversion Rate
South Neighborhood	141,040	56,164	27,484	37.2%
East Neighborhood	124,445	35,900	37,066	37.0%
River Trail Neighborhood	101,420	27,770	31,166	36.8%
North Neighborhood	118,497	46,401	8,132	31.5%
Brody Neighborhood	95,457	22,245	8,580	24.4%
Apartments	98,000	22,479	2,988	20.6%

More thoughts

- Increased man hours to move materials from basements.
- Employee staff to recover carpets and furniture in rooms
- Did not see a difference from having a 20 yrd roll off to manually moving product
- Updated signage needed for better collections, missed opportunities
- More uniformity throughout system
- More staff communications about programs

Resources

- http://www.rhs.msu.edu
- http://www.energytransition.msu.edu
- http://www.eatatstate.com
- http://www.bespartangreen.msu.edu
- http://www.sustainability.msu.edu
- http://www.recycle.msu.edu
- http://www.msusurplusstore.com
- https://rise.natsci.msu.edu/

- Carla Iansiti- iansiti@rhs.msu.edu

(http://msu.edu)

RESIDENTIAL AND HOSPITALITY SERVICES (/)

MENU

For RHS, Sustainability Means Responsibility

Published On: September 24, 2018

The clock strikes one on the Thursday afternoon of spring semester finals week. Minivans and flatbed trucks begin to line the turnaround driveway of East Akers Hall. Students pack Spartan-green pushcarts full of Ikea decor and other first-year materials that made the past nine months unforgettable. Tented areas outside the hall begin to fill with discarded cardboard and plastic beneath signs that read “Pack Up. Pitch In.”

Later in the day, when the chaos has passed, a team of MSU Surplus Store staffers swoop in and collect discarded shelving units and broken-down cardboard boxes students left behind as they vacated campus. 250,000 pounds of material is collected, expertly sorted through and transported to a location on campus where it will be reprocessed to benefit the university’s environment.

MSU's Division of Residential and Hospitality Services (RHS) takes delight in doing tasks just like these to display its genuine care for students and the environment.

"It just makes sense that MSU is a green institution," says Sustainability Officer Carla Iansiti. "We're all about the environment already, so why don't we just add on to those things? It's been a very exciting and rewarding position and to have students be a part of it."

Iansiti helps carry down initiatives created on a university-wide level, such as the Be Spartan Green campaign, and applies them to RHS. Because RHS covers such a significant portion of on-campus activity, there is a greater responsibility to be sustainable and responsible.

"You see sustainability in little pockets of things around campus," Iansiti says. These pockets include landfill diversion, cost avoidance issues and being responsible for the students RHS serves. There are programs in place on RHS' end that aren't necessarily apparent to students on an everyday basis.

Facilities Supervisor Charlotte DeVaney is a symbol of all the behind the-scenes work that occurs every day on campus. Devoted to earth-friendly practices, she oversees and promotes recycling responsibilities for East Neighborhood.

"I really love being a part of an organization that puts recycling at the forefront of thoughts and events," she says. "It isn't just a thought; it's a top priority."

Large university-wide events, like residence hall move-in and move-out, could easily have detrimental impacts on the environment, but RHS has made it known that these kinds of obstacles won't deter them from making environmentally responsible choices.

RHS runs several waste-free events each year, including the RHS Team Member Appreciation Picnic and the first-year student welcome event, Sparticipation. In 2017, the picnic had a diversion rate of 89 percent and more than 300 pounds of leftover food was given back to the surrounding community and donated to the Greater Lansing Food Bank.

Move-in and move-out days may pose threats to sustainability practices, but passionate team members like DeVaney work day in and day out to ensure the best practices are in play.

She remembers an especially notable trip to the MSU Surplus Store where she felt in awe of how passionate so many people on campus felt about recycling and being sustainable. Meandering through the aisles and seeing an entire section devoted to do-it-yourself projects where heaps of buttons were available for crafters, she took the moment to self-reflect and ask herself what more she could be doing to repurpose materials throughout the residence halls she oversaw.

It was that moment when she began to see ordinary, abandoned structures for the potential they had.

"I repurposed ancient telephone closets into accessible recycling stations for students," she says.

And DeVaney's solution to excessive landfill use during move-in and move-out?

"My team and I didn't set out dumpsters this year," she laughs. "I didn't even give that as an option."

Though these ideas got some laughs, they are the epitome of what RHS Sustainability stands for. Her team worked relentlessly to pursue DeVaney's vision and successfully achieved the highest rate of diversion seen in 2017. A total of 80 percent of materials during move-in were diverted from landfills and recycled or

repurposed on campus.

“It’s very exciting to be able to contribute in a positive way and influence so many people,” she says of her team’s relentless hard work.

Another example of that hard work is the close-list food waste process where food waste from dining halls is sent to the Student Organic Farm and converted into compost. The compost assists garden growth and allows RHS the ability to purchase vegetables directly from the university to serve in dining halls. Other noncompost viable waste is transported to the Anaerobic Digestion Research and Education Center where food waste becomes energy used for fueling various structures located on the southend of campus. Additionally, there is a push to create campus buildings with Leadership in Energy and Environmental Design (LEED) certification in mind.

Developing buildings that become LEED certified is the responsible way to build. All of Brody Neighborhood is LEED certified and 1855 Place, opened in fall of 2017, is looking to gain this designation as well. Iansiti explains every component built into the structure —the paint used, sealant chosen and amount of daylight let into the building — is taken into account. LEED-certified buildings like Brody Hall, which diverted 72.2 percent of materials in 2017, achieve incredible results toward being sustainable.

“Sustainability is showing students we are responsible,” Iansiti says. “We want students to know that we’re safe here, to know that we’re taking care of them as far as food and the environment.”

Community Impact (/news/?field_category_tid=4) Publications (/news/?field_category_tid=6)
Sustainable RHS (/news/?field_category_tid=3)

Related Stories

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MSU BAKERS CELEBRATING 10 YEARS OF GWEN'S BAGELS

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BRESLIN STUDENT EVENTS CENTER (http://breslincenter.com)

SpartanCash Michigan State University (http://spartancash.com)

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LOVE MSU TENNIS CENTER (http://msutennis.msu.edu)

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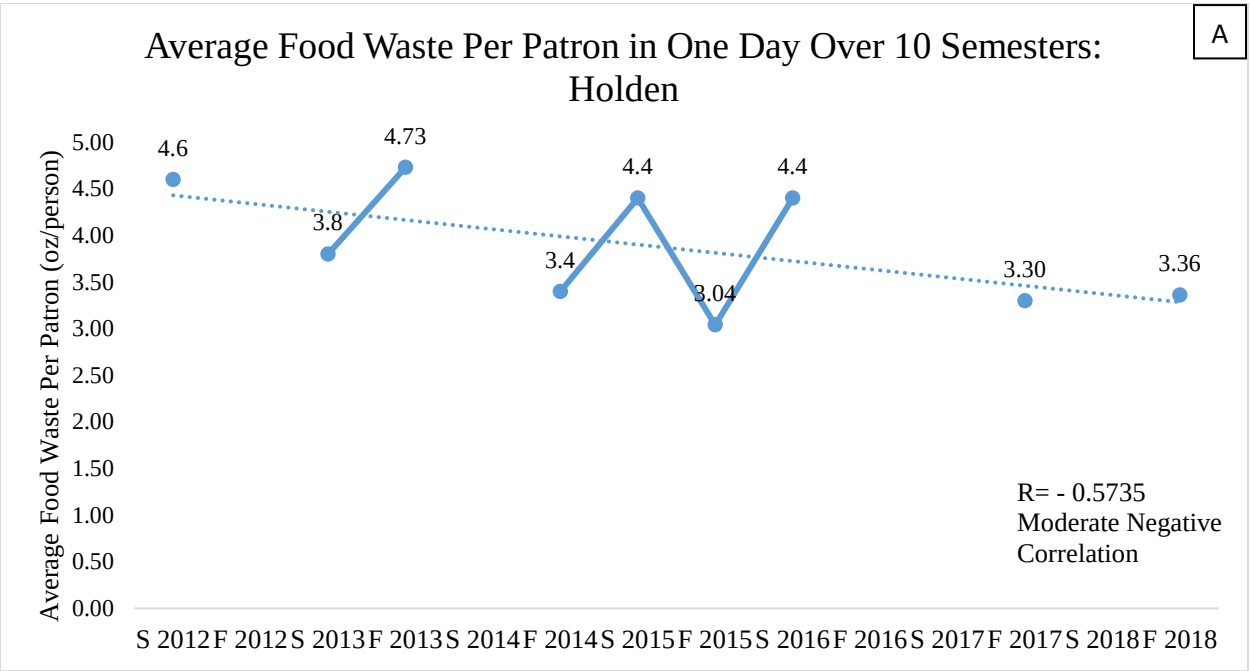
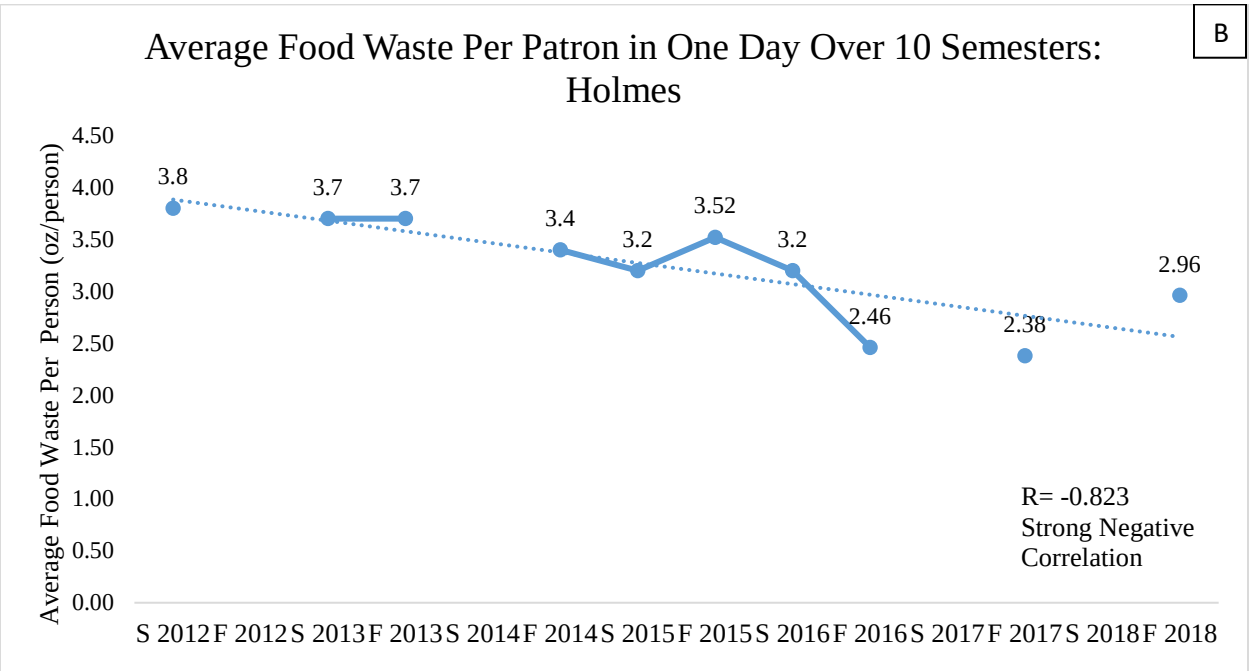
Data:

Figure 1A-I





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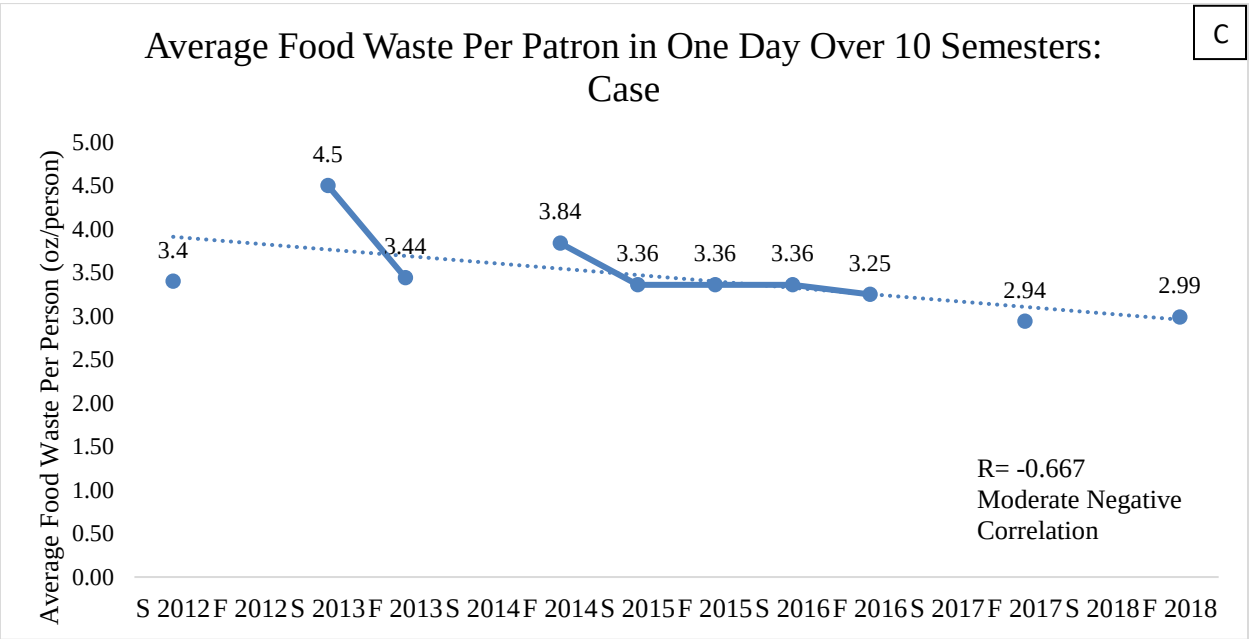
Average Food Waste Per Patron in One Day Over 10 Semesters: Case
Average Food Waste Per Person (oz/person)
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
4.5
3.84
3.4
3.44
3.36
3.36
3.36
3.25
2.94
2.99
R= -0.667
Moderate Negative Correlation
S 2012
F 2012
S 2013
F 2013
S 2014
F 2014
S 2015
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S 2016
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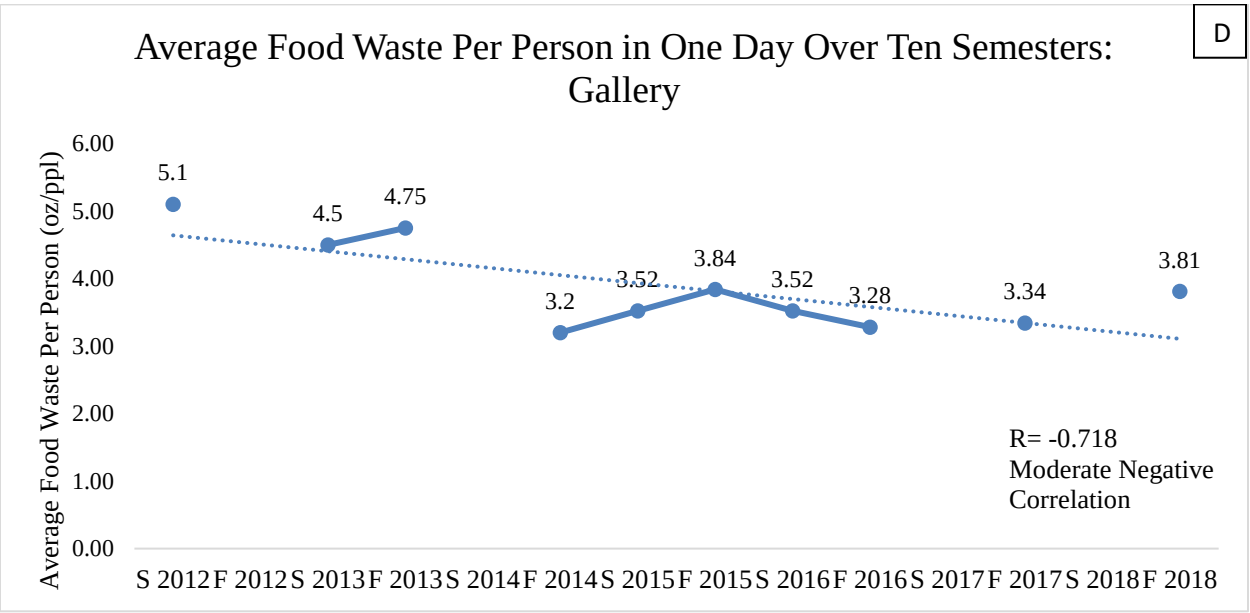
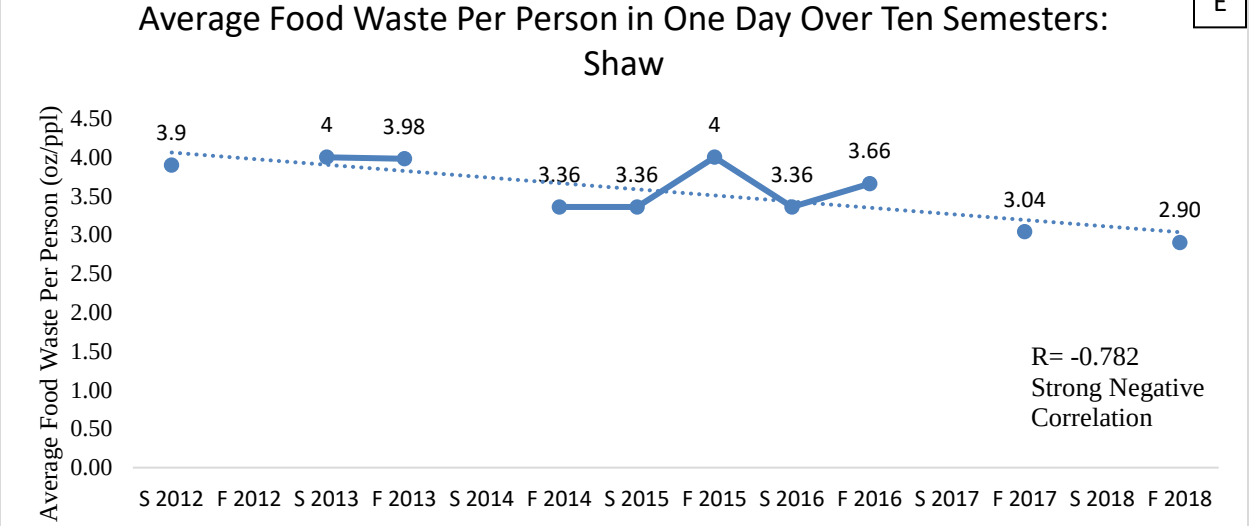
F 2018

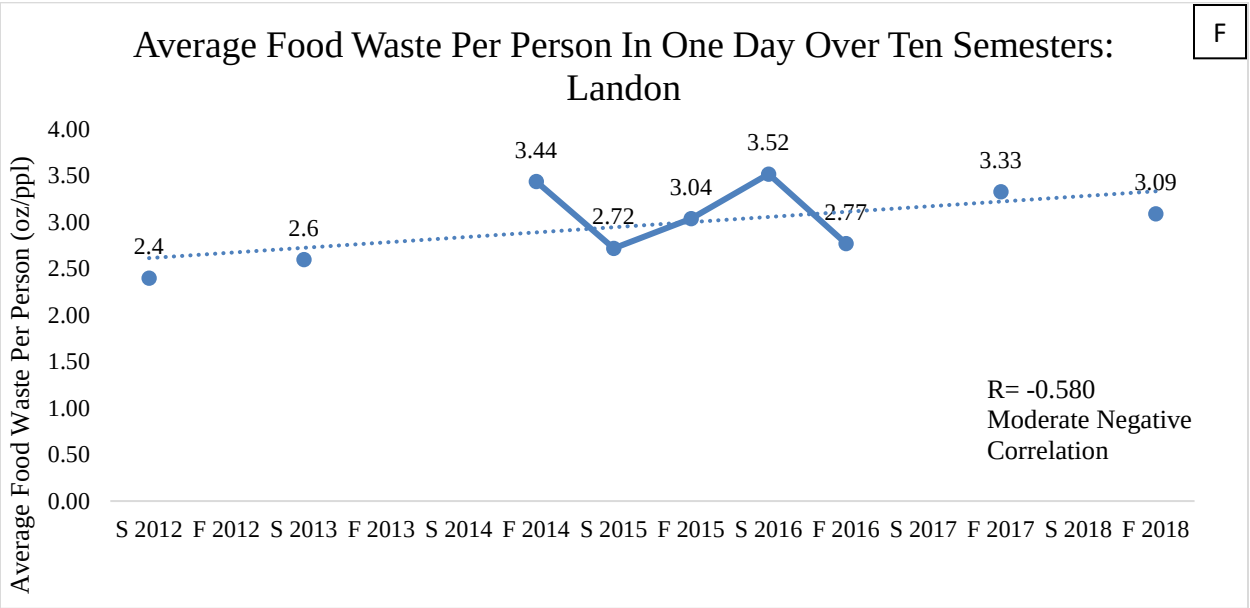
D

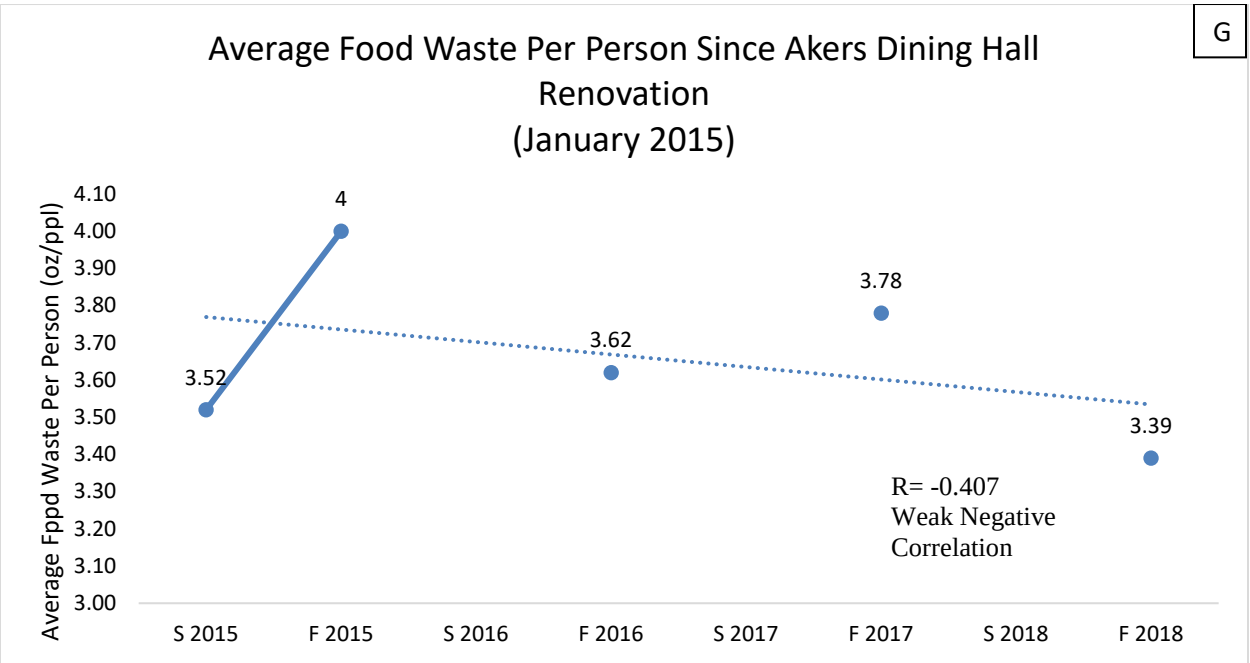

Average Food Waste Per Person in One Day Over Ten Semesters: Gallery
Average Food Waste Per Person (oz/ppl)
6.00
5.00
4.00
3.00
2.00
1.00
0.00
5.1
4.5
4.75
3.2
3.52
3.84
3.52
3.28
3.34
3.81
R= -0.718
Moderate Negative Correlation
S 2012
F 2012
S 2013
F 2013
S 2014
F 2014
S 2015
F 2015
S 2016
F 2016
S 2017
F 2017
S 2018
F 2018

E


Average Food Waste Per Person in One Day Over Ten Semesters: Shaw
Average Food Waste Per Person (oz/ppl)
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
3.9
4
3.98
3.36
3.36
4
3.36
3.66
3.04
2.90
S 2012
F 2012
S 2013
F 2013
S 2014
F 2014
S 2015
F 2015
S 2016
F 2016
S 2017
F 2017
S 2018
F 2018
R= -0.782
Strong Negative
Correlation

F


Average Food Waste Per Person In One Day Over Ten Semesters: Landon
Average Food Waste Per Person (oz/ppl)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2.4
2.6
3.44
2.72
3.04
3.52
2.77
3.33
3.09
S 2012
F 2012
S 2013
F 2013
S 2014
F 2014
S 2015
F 2015
S 2016
F 2016
S 2017
F 2017
S 2018
F 2018
R= -0.580
Moderate Negative
Correlation



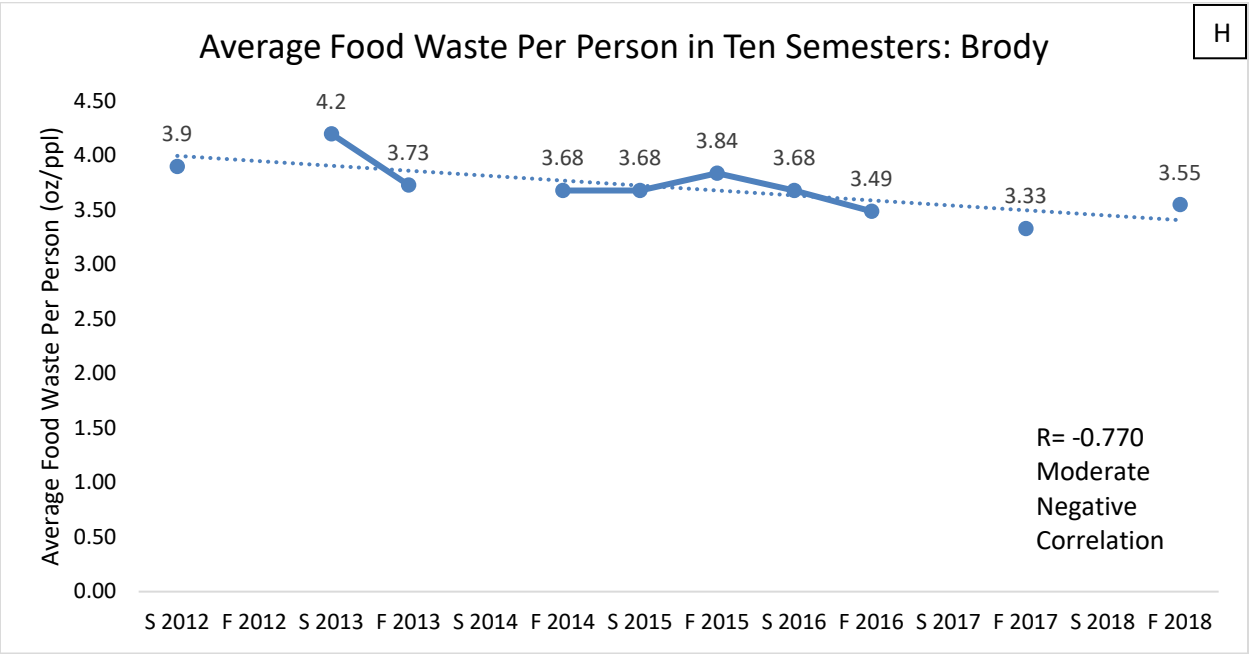


Figure 1A-H: One day refers to the two hour time data collection period at both lunch and dinner.

Each of these graphs shows the food waste trend over time. The data entries are the averages of the lunch and dinner waste during the study period

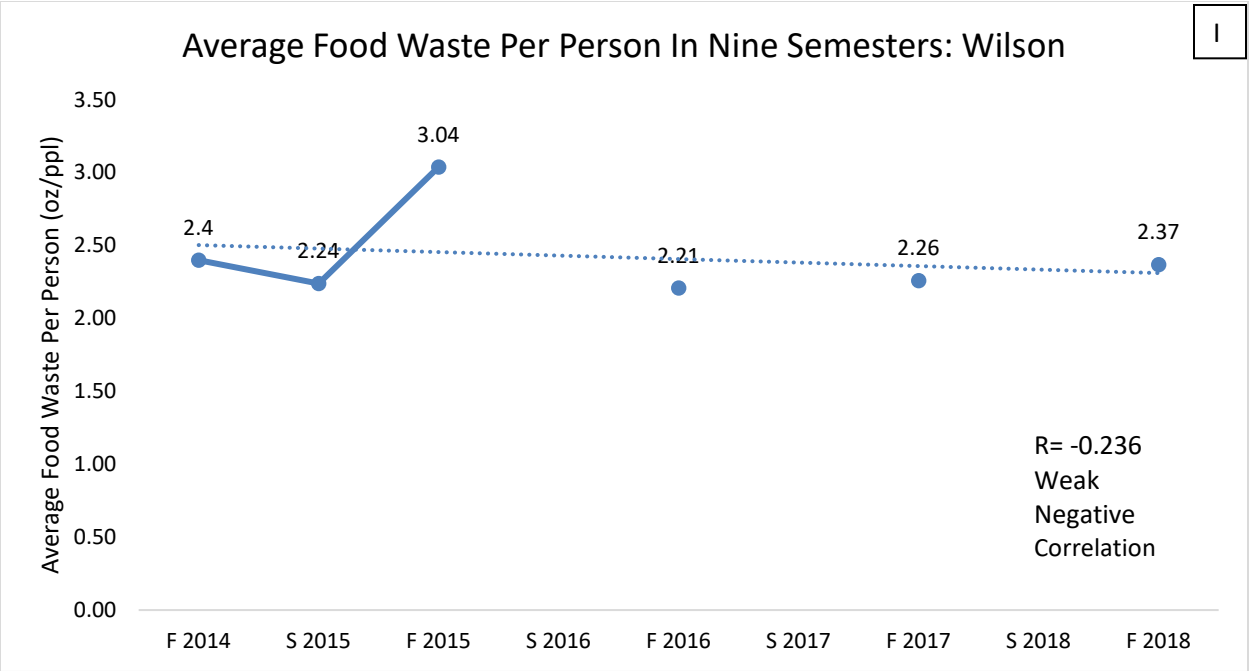
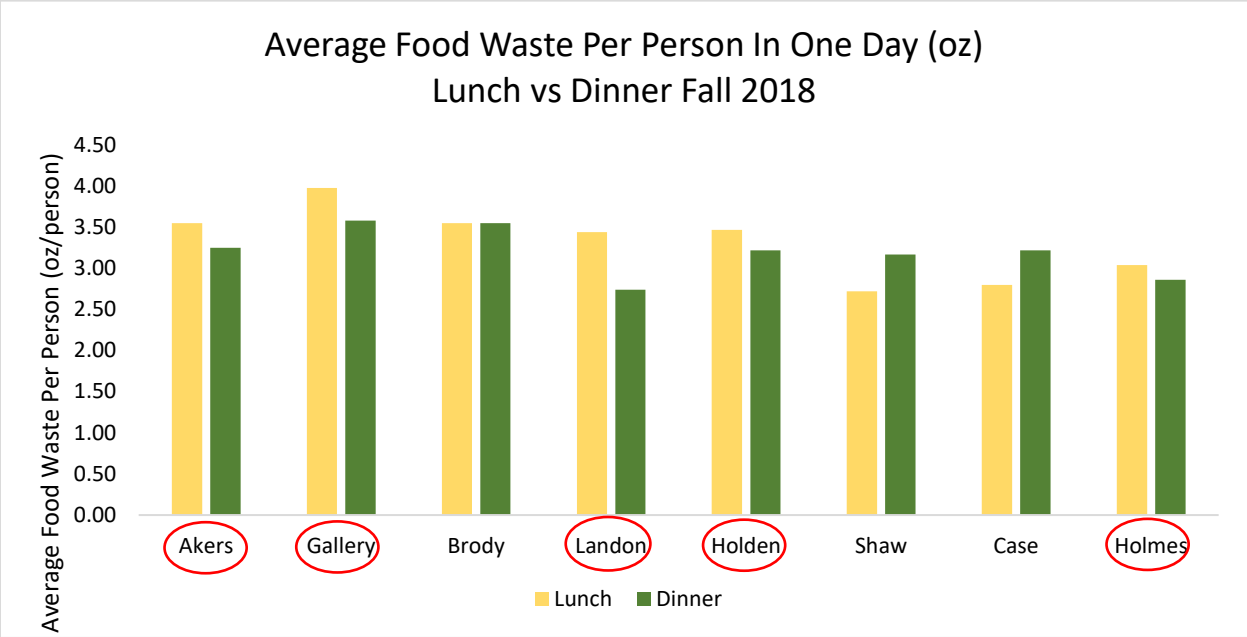


Figure 1I: Wilson is the only dining hall where we collected food waste during dinner and late night. Wilson is unique compared to the other dining halls because it does not serve lunch.

Figure 2



This graph is a comparison of lunch and dinner at each of the dining halls. Food waste at lunch is higher than dinner at 5 of the 8 dining halls. (Akers, Gallery, Landon, Holden, and Holmes)

Figure 3

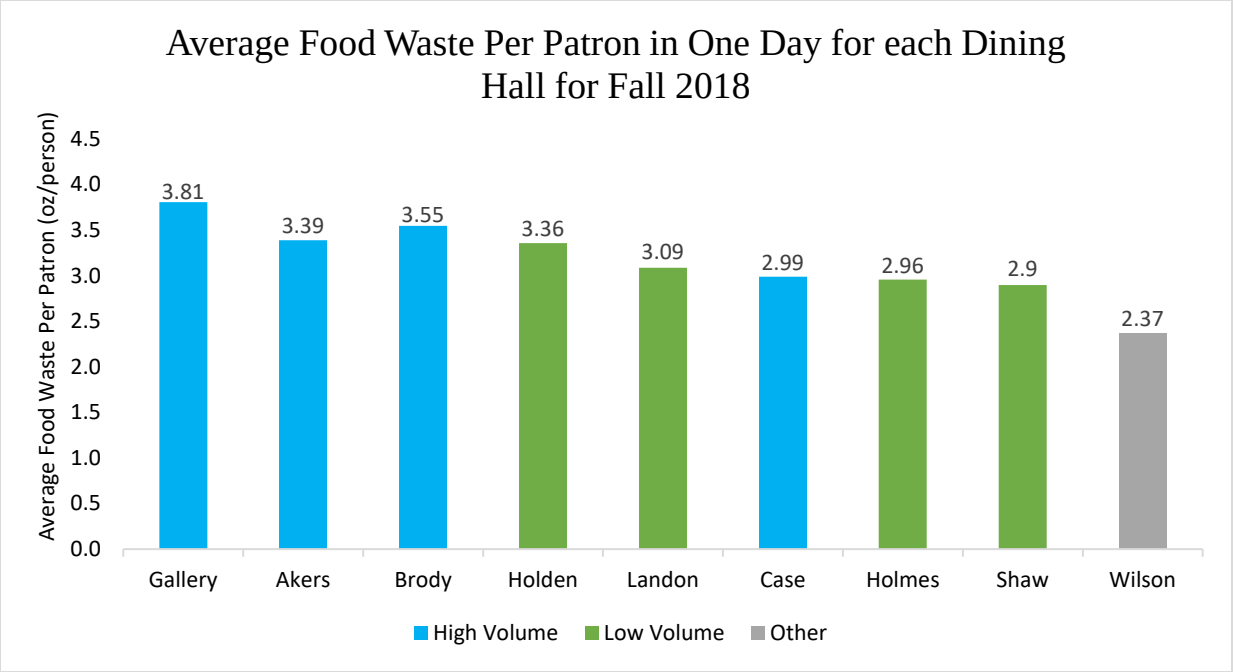


Figure 3: The above graph depicts the average food waste per patron at each dining hall during fall 2018. Gallery had the most food waste per person at 3.81 ounces. The dining hall with the least amount of food waste per person is Shaw at 2.90 ounces.

Wilson has a lower average food waste per person at 2.37 ounces; however Wilson is labeled as other because the measurements occurred during dinner and late night instead of lunch and dinner

Figure 4

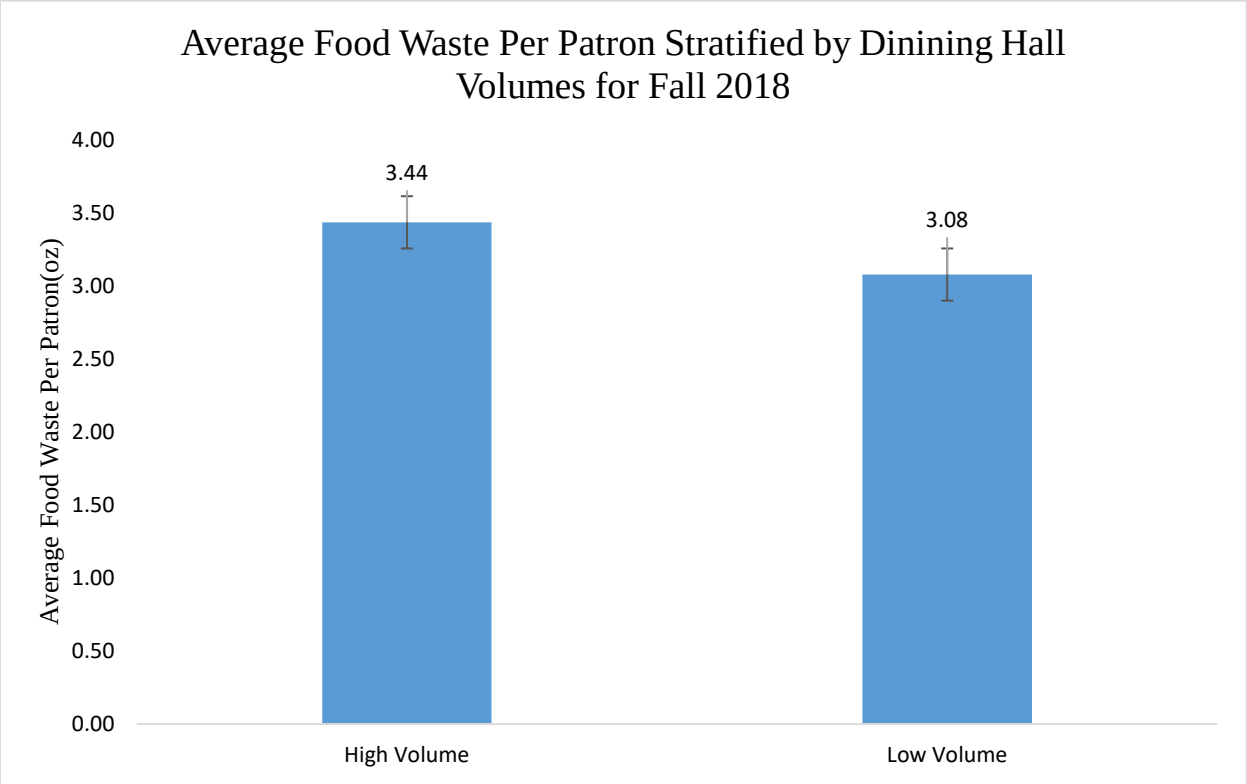
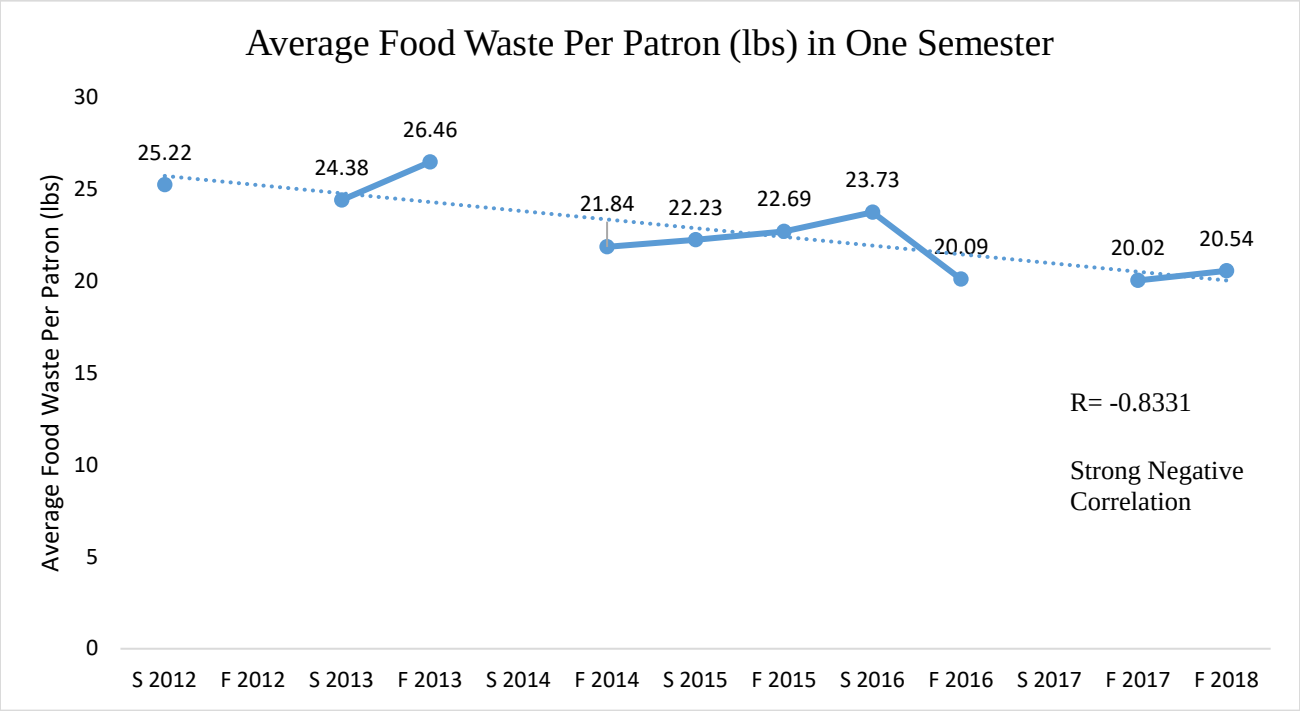


Figure 4 compares average food waste in high and low-volume dining halls.

Figure 5



At the beginning of the program, the average amount of food a student would waste during a semester was 25.22 pounds. That number has now dropped to 20.54 pounds per student per semester. Although it is 0.52 pounds more than last year, there is a significant decreasing trend overall.

Figure 6

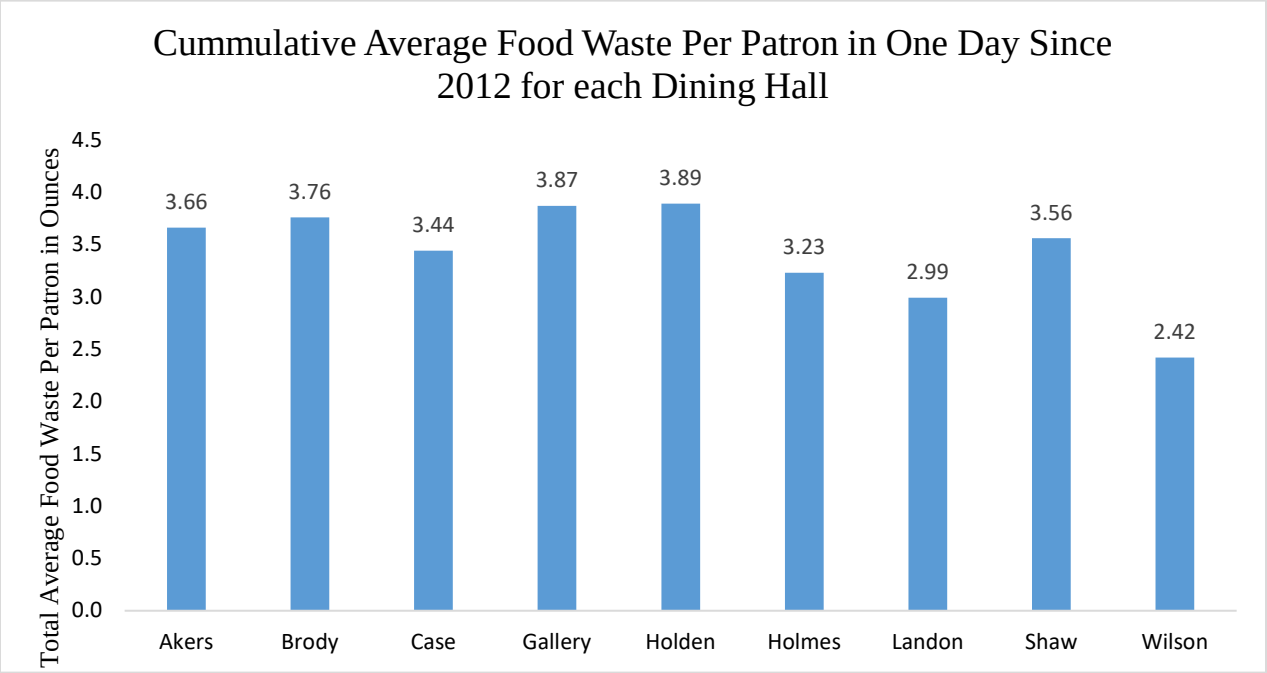


Figure 6: This graph is similar to figure 3 as it shows the cumulative average waste per patron since the beginning of the program. Holden has the highest average food waste per patron since spring 2012. Gallery, Brody, and Akers are high volume halls and are the greatest target for reduction of food waste.

Figure 7

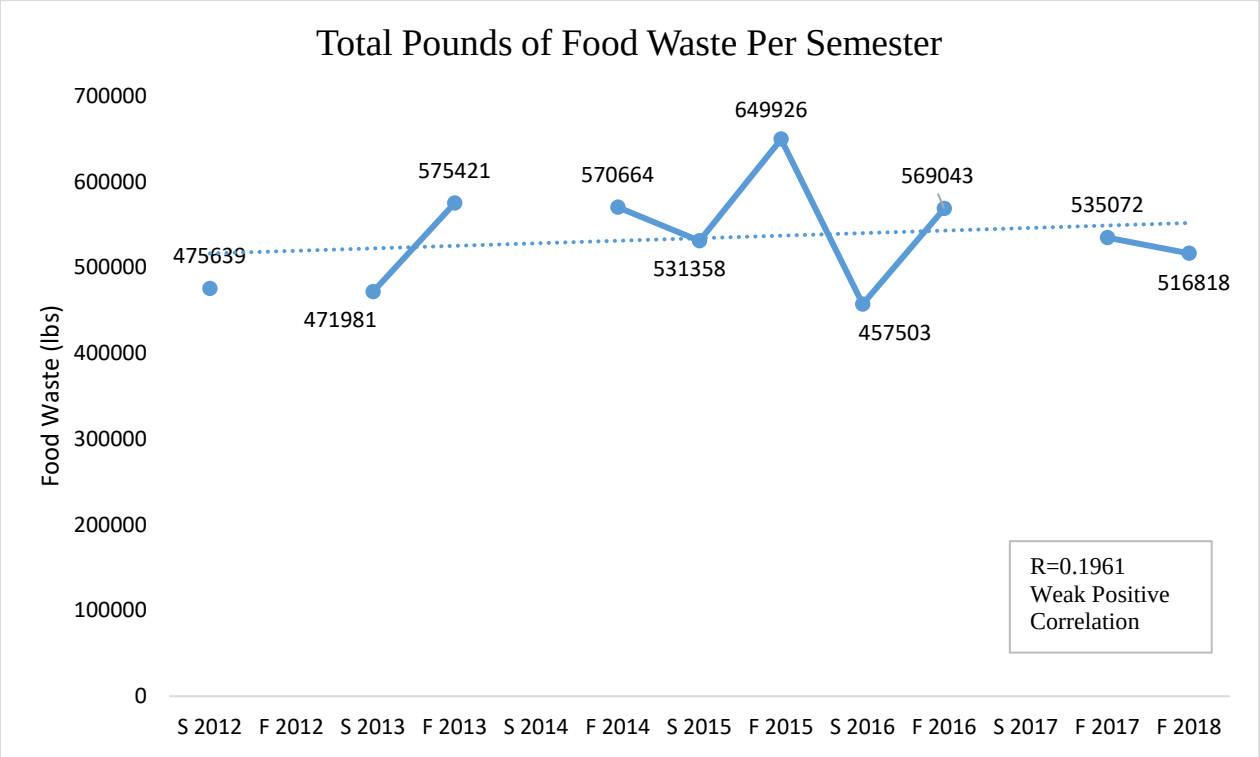


Figure 7: The graph shows an increasing trend in the number of pounds of post-consumer food waste.

Figure 8

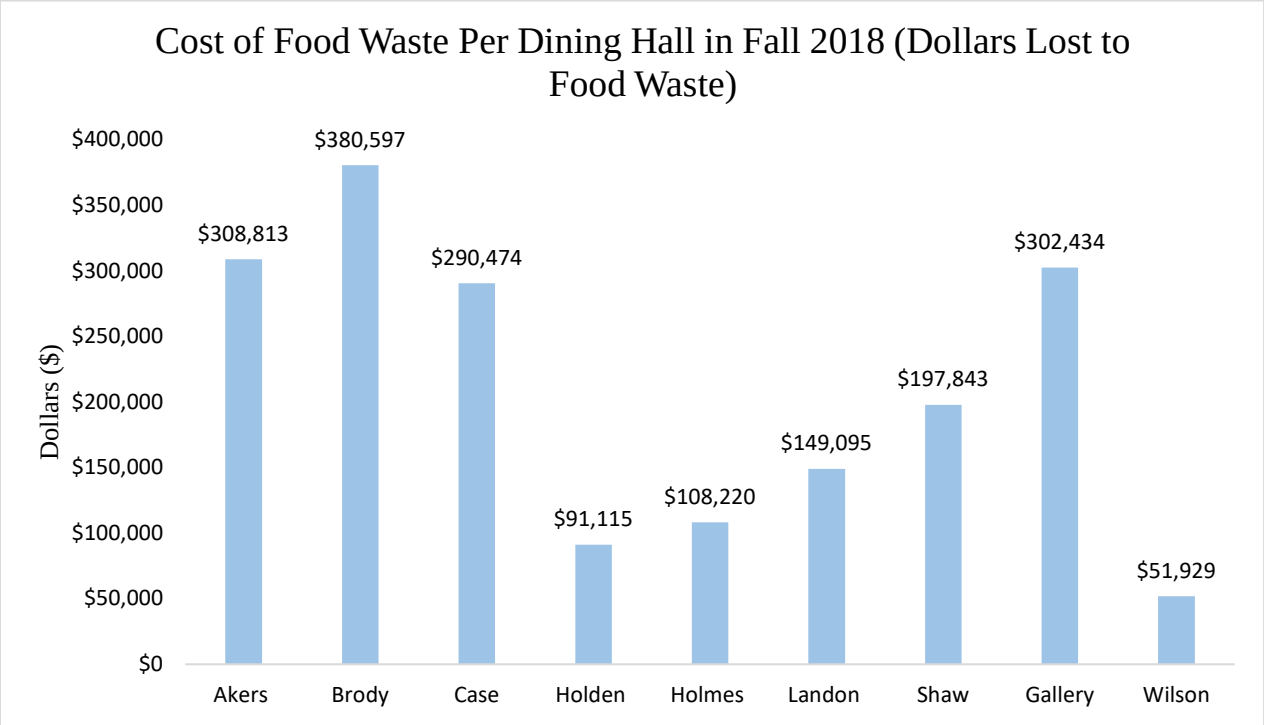


Figure 8: Brody lost the most amount of money due to food waste in fall 2018. The total number of dollars lost is $1,880,519.08. Numbers are rounded to the nearest dollar.

Figure 9

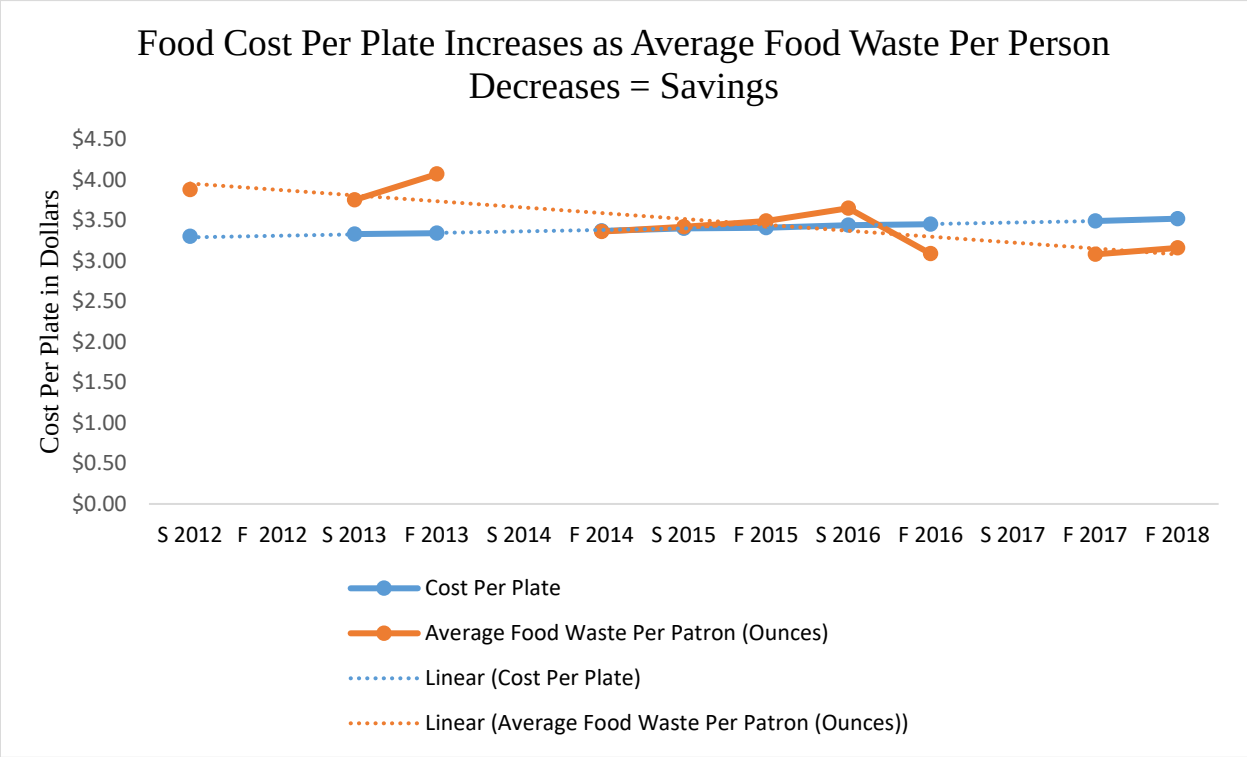


Figure 9 shows cost per plate and food cost overall is increasing even though food waste is decreasing. If food waste were not decreasing, then the cost per plate would be higher. The food cost per plate increases each year due to inflation of food prices, food services, and the increase of people eating in the dining halls.

Figure 10

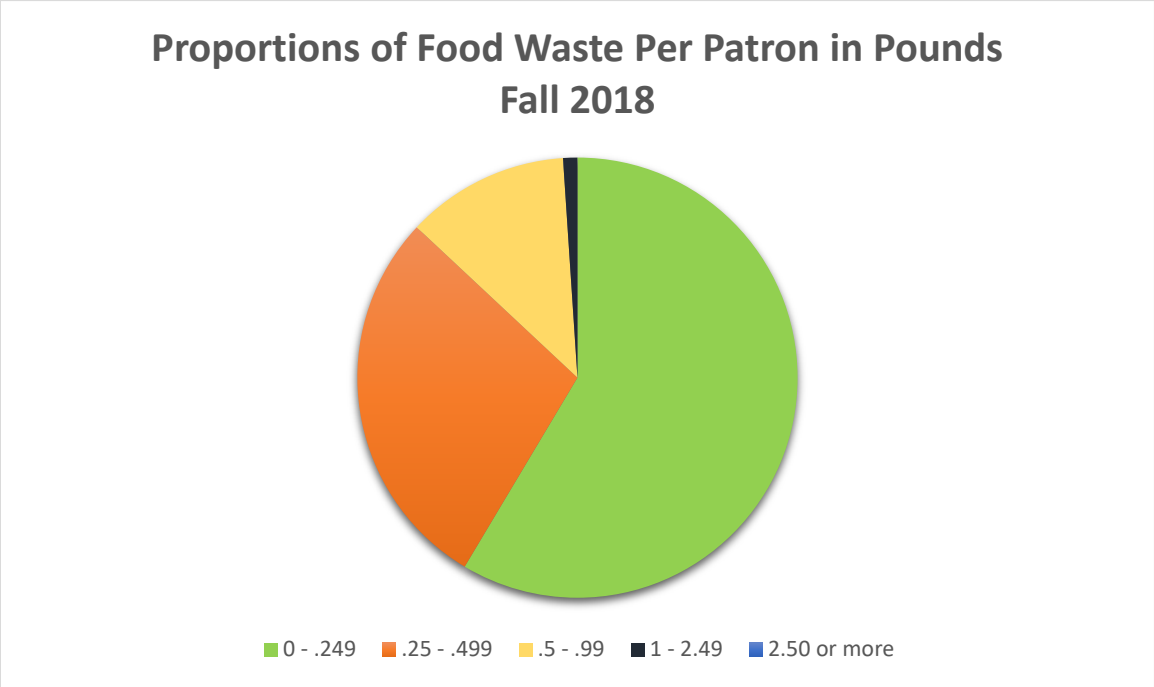


Figure 10 shows the division of patrons according to food wasted in pounds. 59% of the patrons wasted between 0 and .249 pounds of food.

Sustainability Communication Overview

July 2017

3,753 newsletter subscribers

8,416 YouTube video views

353 Instagram followers

3,951 Twitter followers

July 2016-17: Be Spartan Green Website

50.26%

**Of new traffic is driven by social media channels;
traffic driven from
social channels has increased
over the last three months**

July 2016-17: Social campaign results

	video views	total engagements	total content reach
2016 Fall welcome	**18,042**	**931**	**55,189**
2016 Year in Review	**7,860**	**883**	**26,465**
2017 Earth Month	**N/A**	**1,016**	**56,460**

Specific Community Engagement in Planning with MSU.

As a land-grant institution, Michigan State University is actively involved in communities throughout Michigan. There are key areas of university governance and management that community representatives serve as a part of the planning and resource development teams. Two specific examples include: Campus Tree Management and the Stormwater Management Plan Committee. Each are highlighted below:

CAMPUS TREE MANAGEMENT PLAN ADMINISTRATION:

Campus Tree Committee:

The MSU Tree Management Committee meets quarterly, providing guidance and input on management plan components, including tree planting, maintenance, and removal procedures. They also provide outreach and education to the community and University on the value and benefits of campus trees, and help to connect us to the community at large for information exchange, program and service idea sharing, and for exploring the potential for combined local environmental goals, stewardship policy, etc.

Composition of the MSU Tree Management Committee:

Director of the W.J. Beal Botanic Garden and Campus Arboretum
Campus Arborist
MSU Landscape Architect
Faculty Member (Department of Forestry)
Student Representative
Community Representative

The purpose of Michigan State University's Campus Tree Management Plan is to document the methods and requirements to maintain a healthy urban forest and to protect and preserve our campus trees for students, faculty, and people from the community to study and enjoy. The protection and maintenance of our trees is crucial to support the University's teaching/learning, research, and outreach mission.

Specific plan objectives include:

- Maintain and protect campus trees and woodlots by minimizing and mitigating the impact of construction, event activities, and damage as a result of exotic insects and diseases.
- Continue to promote age and species diversity through the wide use of native and non-invasive trees where appropriate.
- Ensure that all trees requiring removal due to mortality, injury, or construction are replaced in a timely and consistent manner.
- Provide for appropriate species selection comprised of high quality nursery stock, and proper planting by adherence to accepted planting procedures.
- Encourage and promote campus tree health by utilizing International Society of Arboriculture (ISA) best management practices, and following Plant Health Care (PHC) principles.

- Provide education to the campus community, citizens and contractors about the importance of the campus forest, and the protection and maintenance of trees as part of the growth and development process.

6. Goals and Targets

- Maintain maintenance cycle of 5 years for all trees within landscaped areas on campus.
- Develop a tree replacement policy for removals that do not conform to the tree removal guidelines; including but not limited to construction activities and tree ordinance violations.
- Negotiate an event parking plan with the MSU Police Department that protects trees from soil compaction and root injury.
- Maintain a planting ratio higher than the annual removals to promote age diversity and increase our canopy percentage.
- Perform root crown excavations upon trees, as needed, to promote overall health and vigor.
- Improve and update ArcGIS and the Collector tree inventory app, to better manage campus arboretum.
- Support tree research projects with the academic community to benefit the urban forestry industry.

Sustainability:

MSU strives for sustainable practices in its tree care, including the following examples:

- MSU Shadows Collection: Removed trees from campus due to decline, storm-damage, or construction are repurposed into lumber via the MSU Shadows program. This is a joint program in coordination with MSU's Forestry Department to train students in urban wood repurposing and to generate funds to support this self-sustaining program, including student internships and the acquisition and planting of new trees on campus. The program generates lumber which is distributed to local artisans who produce a variety of handmade collectibles which are sold to the general public via MSU Surplus and Recycling. This program fosters the concept of sustainability by reducing the waste stream and providing for long-term sequestering of carbon in useful wood products. Profits go towards planting new trees on campus, student internships and to further develop academic programs in urban forestry.
- All woody debris is stored and reprocessed as mulch to be reused on campus.
- Reduced pesticide use through cultural practices and integrated pest management.
- Installation of porous pavement sidewalks, which uses recycled tires, for a semipermeable surface to improve drainage and aerobic conditions.
- Recent hammock post installations have been successful at deterring use of trees.
- Sidewalk Root Sulfur Analysis Project was done to research opportunities on how to mitigate tree root injury and sidewalk damage.
- MSU considers the removal and management of invasive species as part of its sustainability program. See under Tree Removals section below.