**Part 1: Green Research Program**

The Green Research Committee (Committee) was formed to provide recommendations for *Green Research Activities* that will contribute significantly to the achievement of Illinois’ iCAP goals and the University’s commitment to sustainability. The following are recommendations resulting from the research, conversations, and ideas of the Green Research Committee members in response to the Committee’s first two charges.

Green Research Program: Staffing and Support Framework

A Green Research Program must be established to make progress in research environments. There must be an investment in developing, leading, and communicating all initiatives. We recommend the following initial minimum resources for a Green Research Program:

* **Funding for one full-time individual** to lead the efforts, a Green Research Coordinator (GRC).
* Support of a communications team and IT development team.
* Space to receive, store, and distribute lab supplies, equipment, and chemicals as part of the proposed reduce, reuse, and recycle campaign discussed below (e.g., space in existing storerooms or abandoned labs).
* Annual budget of $30,000 for training development, promotional materials, equipment and supplies for new initiatives and pilot programs, and paid student workers.
* Access to OVCRI Training Portal to post training modules.
* Green Research Ambassadors throughout the University.

The GRC’s main duties are to work closely with stakeholders (researchers, safety units, sustainability office, and facilities & services), foster collaboration, be persistent, maintain communication channels, and track progress. The GRC will need to prepare metrics for each initiative that tracks progress and participation at the lab, department, and college level and communicate those metrics to the campus community. Metrics should include both leading and lagging indicators. Examples of leading indicators include number of people completing green research training, number of Green Research Ambassadors, percent of lab participation, clicks rates on emailed promotional materials, and number of GRC interventions. Examples of lagging indicators include waste reduction, materials diverted, energy reduction, and water use reduction.

The GRC will be expected to have frequent meetings with F&S, ISEE, and DRS so they can make informed decisions about new initiatives, while understanding regulatory impacts and campus goals.

It is recommended that the Green Research Program reside within the Office of Vice Chancellor for Research and Innovation (OVCRI) with their reporting line being decided by the Vice Chancellor for Research and Innovation with input from the Executive Director of Facilities & Services, Director of the Institute for Sustainability, Energy and Environment, and other necessary Directors and leadership in the OVCRI and research colleges.

We recommend that each department names at least one **Green Research Ambassador (Ambassador)**. It should also be encouraged for each research group to have at least one Ambassador to implement applicable initiatives and stay in contact with the GRC. Ambassadors will be the primary liaison between research groups and the GRC. Departments and labs are encouraged to have more than one Ambassador. Departmental Ambassador engagement and participation activities will be tracked by the GRC. The GRC will request that departments replace Ambassadors that fail to achieve minimum metrics established by the GRC. Due to variation in Ambassador engagement, it will be important for the GRC to periodically engage directly with research groups. As the Green Research Program grows, both in scope and participation, the employment of a second GRC may be necessary to achieve and sustain success.

Green Research Program: Initiatives

The GRC will develop a Green Research Program by piloting a few initiatives with diverse research groups (size, research environment, discipline).

Communication/education initiatives:

* Develop a communication/advertisement plan for rolling out all new initiatives in the Green Research Program. This can be done in collaboration with the communication team assigned to support this program and shared with the stakeholders from diverse research groups.
* Develop a training curriculum.
  + Online Ambassador Training: All Ambassadors will be required to take training that outlines their role and topics put together by the GRC (e.g., intro to iCAP, green research initiatives, benefits of participation, etc.).
  + Green Research Awareness Modules: Short videos or informational training will be created to educate and promote green practices in research. The target audience is all researchers.
* Transparency: Identify relevant data and share with the research community to encourage making green research decisions. (e.g., volume and cost of waste, highlight small success stories, etc.)

Behavioral lab/group specific initiatives:

* Reduce, reuse, and recycle campaign: The GRC will partner with the Zero Waste Coordinator (F&S) and the Division of Research Safety to identify opportunities in research. This campaign will impact the hazardous waste streams (DRS) and the non-hazardous waste streams (F&S, Zero Waste Coordinator). All waste streams are a significant cost to the University. This campaign will focus on opportunities to divert waste streams to reuse or recycle, as well as limiting over purchasing and encouraging sharing among labs. The GRC and Zero Waste Coordinator should evaluate opportunities to partner with recycling vendors that provide a revenue stream and to identify Principal Investigators that have a need for waste stream materials in their existing research programs. The GRC should also partner with the Zero Waste Coordinator and Purchasing to promote green research products by highlighting or listing first sustainable products in iBuy, sending out promotional information on sustainable alternatives for frequently used non-sustainable products, and pressuring vendors to offer products that meet sustainable conditions.
* Shut the sash, equipment timers, or other changes researchers can do to make a difference.
* Promote My Green Labs assessment tool, existing resources, or similar tools developed by the GRC. Identify the resources that make the most impact or can be easily adopted by researchers in the early stages of green research.

Behavioral lab/group specific changes are achievable through educational campaigns led by the GRC. Efforts should be made to explain the importance of the initiative and provide each participating group with the means, to the extent feasible, to successfully implement by minimizing barriers to implementation (e.g., delivery of proper containers for recycling to lab, provide and install shut the sash stickers, review assessment tool with research group personnel to identify activities that can be readily implemented).

All educational materials, initiatives, pilot programs, and metrics should go through a formal review process that provides input from as advisory board comprised of DRS, Safety & Compliance (S&C), Code Compliance & Fire Safety (F&S), F&S Sustainability, and researchers from a variety of academic units. The GRC and advisory board should meet at least semi-annually or more often as determined by the needs of the GRC.

Green Research Program: Recognition

Certification

Certification was reviewed and discussed. The committee believes that certification should be a long-term goal with the GRC determining the best approach based on discussions with Ambassadors, faculty, campus safety offices, F&S and other partners.

Incentives

It is recommended that leadership support incentives for this program to encourage more participation. **Recognition of Ambassadors and labs that achieve excellence** in the program is one way to encourage participation. This can be a public display of appreciation through massmail or similar messaging that draws attention to the importance of moving toward more sustainable research. Monetary awards should be considered for research groups that implement strategies or invest in sustainable initiatives that lead to cost savings, revenue generation, or lead to significant progress towards iCAP goals.

**Part 2: Building-Specific Plans**

The Green Research Committee (Committee) was formed to provide recommendations for *Green Research Activities* that will contribute significantly to the achievement of Illinois’ iCAP goals and the University’s commitment to sustainability. The following are recommendations resulting from the research, conversations, and ideas of the Green Research Committee members in response to the Committee’s third charge.

The third charge asked the Committee to outline a framework to recommend building-specific plans for safe energy conservation in research spaces. There are two processes that need to be evaluated: 1) Hibernation/off-boarding of research spaces and 2) prioritization of remodeling/renovation projects. **We recommend two task forces be formed** to establish a required process to address both with the GRC chairing both task forces. Task forces should include representatives from DRS, S&S, CC&FS, F&S, college and departmental leadership and facilities personnel, and Principal Investigators. The GRC must take a leadership role in both processes to ensure ongoing stakeholder collaboration and consistent implementation. Each task force will need to identify and report on metrics that track work completed, outstanding work, and progress towards sustainability goals.

The first task force would be charged with creating the required process for off-boarding and hibernation of research spaces and equipment for research spaces. Some departments existing successful processes that can be used as a baseline to identify best management practices and share lessons learned. The committee recommends the following items be included in this process:

* 1. Date space will be vacated.
  2. Description of most recent research including a list of chemicals, infectious materials, radiological materials, and any other items/materials that could still present a hazard.
  3. Estimated duration space will be unoccupied.
  4. Anticipated future operations of the space.
  5. Removal of chemicals – disposal or reallocation.
  6. Shutdown of equipment – items 3, 4, and item 10 from next section will likely determine the scope.
  7. Reallocation/disposal of portable equipment, supplies, and other materials, mostly disposal initially until GRC can explore lab supply surplus.
  8. Thorough disinfection and decontamination for materials used.
  9. Any code/safety concerns bringing the space back into service. (Required updates or limitations due to code)

The second task force would be charged with establishing a means for prioritizing remodeling/renovation projects. A tiered approach based on project scope, level of disrepair, non-departmental funding availability, and improvement delivery methods is necessary. The task force should also prepare a template for the development of Strategic Facility Plans that document:

* Current conditions. Note that there is an existing project underway to create Facility Condition Assessment Reports for many campus buildings.
* Opportunities for sustainable improvements.
* Estimated budgets to complete improvements.
* Anticipated college and departmental budget available to address improvements.
* Anticipated funding available from campus and state sources.
* Anticipated funding from other sources such as donors or private funding (e.g., Energy Performance Contracting).
* Feasible timeline to make improvements based on funding and anticipated project delivery method for each improvement.

Strategic Facility Plans should be prepared collaboratively amongst the various stakeholders including college and department leadership and facilities personnel, building occupants, F&S, campus safety offices, and the GRC. Plans should be reviewed and updated at least annually to account for completed projects, inflationary pressures on project budgets, and changes in building condition, research initiatives, and departmental priorities.

Priority for improvements must always first address core infrastructure deficiencies, code compliance issues, and ensure the health & safety of building occupants. Sustainable technologies are simply irrelevant if the core infrastructure of the building prohibits these types of updates or significantly reduces their effectiveness. Improvements in facilities with infrastructure or life-safety deficiencies that do not receive capital funding, will likely need to be completed in multiple phases with goals established in the Strategic Facility Plan.

Project cost-sharing should occur when improvements address departmental research infrastructure and equipment, reduce the deferred maintenance backlog, result in resource conservation with cost savings, and contribute to meeting iCAP goals.

Green Research Committee:

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