UNIVERSITY OF MINNESOTA

BOARD OF REGENTS

Facilities Committee

Thursday, December 8, 2011

9:45 - 11:45 a.m.

600 McNamara Alumni Center, West Committee Room

Committee Members
Dean Johnson, Chair
Clyde Allen, Vice Chair
Laura Brod
John Frobenius
Venora Hung
David Larson

Student Representatives
Kathryn Holmquist
Molly Tomfohrde

AGENDA

   A. 4th St. SE Residence Hall and Dining Facility – Twin Cities Campus
   B. Crookston Residence Hall and Academic Classroom Bldg. – Crookston Campus

   A. 4th St. SE Residence Hall and Dining Facility – Twin Cities Campus
   B. Crookston Residence Hall and Academic Classroom Bldg. – Crookston Campus
   C. Lind Hall First Floor Remodel project – Structural Repairs, Twin Cities Campus
   D. Lind Hall First Floor Remodel project – Taylor Center Upgrade, Twin Cities Campus


6. Information Items – K. O’Brien (pp. 103-120)
Facilities Committee

December 8, 2011

Agenda Item: Schematic Plans

☐ review  ☒ review/action  ☐ action  ☐ discussion

Presenters: Vice President Kathleen O’Brien
Vice Provost Gerald Rinehart
Chancellor Charles Casey
Associate Vice President Michael Perkins

Purpose:

☐ policy  ☐ background/context  ☒ oversight  ☐ strategic positioning

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, and consistent with current practice for reviewing the design of major capital projects or review of the revised plans and funding changes for the following projects:

a. 4th Street SE Residence Hall and Dining Facility – Twin Cities Campus
b. Crookston Residence Hall and Academic Classroom Building – Crookston Campus

Outline of Key Points/Policy Issues:

4th Street SE Residence Hall and Dining Facility – Twin Cities Campus

Twin Cities Housing and Residential Life (HRL) has not added any new University owned housing since 2002. HRL is able to meet the on-campus housing demand for first-year students who meet the May 1st housing guarantee by utilizing approximately 4,400 on-campus beds and an additional 250-300+ expanded housing spaces (temporarily converted lounges, study rooms, etc.)

Factors that impact the demand for new on-campus housing include the following:

• The size of the first year class and the transfer student class is a key driver that defines the demand for new housing. First-year student enrollment target is expected to range from 5,300 to 5,600 over the next 5 – 10 years.
• International and out-of-state students choose and accept U of M housing at a higher rate than in-state, particularly Twin Cities, students.
• HRL is unable to meet current on-campus housing demand for transfer students.
• New research suggests that students who live on campus for a second year achieve greater academic success (GPA) and persist and graduate at higher rates than those who do not live on-campus for a second year.

The impact of an additional 600 on-campus beds in the 4th St SE Residence Hall and Dining Facility will allow the University to reduce the number of expanded beds by approximately 200, accommodate the University’s planned first-year student enrollment growth on the Twin Cities campus, reserve up to 200 beds for Greek community members, and potentially provide some additional beds for transfer students.

The Project Data sheet is included in the Capital Budget Amendment agenda item of the Facilities Committee docket. This addresses the basis for the request, project scope, construction document cost estimate, and schedule. A map locating the project on the campus is also attached.

**Crookston Residence Hall and Academic Classroom Building – Crookston Campus**

The enrollment continues to grow at University of Minnesota Crookston and the demand for on campus accommodation has strengthened. Off campus housing is limited in the Crookston community and with the construction of Centennial Hall (2005) and Evergreen Hall (2009) on campus housing is very attractive to students. Demand for student housing in the 2011 fall semester has been strong with approximately 75 students accommodated in non-traditional overflow accommodations. Completing of this project will satisfy current housing requirements for the Crookston Campus.

The Project Data sheet is included in the Capital Budget Amendment agenda item of the Facilities Committee docket. This addresses the basis for the request, project scope, construction document cost estimate, and schedule. A map locating the project on the campus is also attached.

**Background Information:**

**4th Street SE Residence Hall and Dining Facility – Twin Cities Campus**

• The schematic funding for the 4th Street SE Residence and Dining Facility project was provided in the 2012 Capital Budget, which was acted upon at the June 2011 Board meeting.

**Crookston Residence Hall and Academic Classroom Building – Crookston Campus**

• The schematic funding for the Crookston Residence Hall and Academic Classroom Building was provided in the 2012 Capital Budget, which was acted upon at the June 2011 Board meeting.

**President's Recommendation for Action:**

The President recommends approval of schematic plans for the projects listed below and of the appropriate administrative officers proceeding with the authorization of contracts for the implementation and construction of these projects, subject to approval of the project as part of a capital budget amendment:

4th Street SE Residence Hall and Dining Facility – Twin Cities Campus

Crookston Residence Hall and Academic Classroom Building – Crookston Campus
1. Basis for Request:

On-campus housing plays an integral role in supporting the University’s academic mission. Research and University of Minnesota data indicate that the on-campus living experience contributes significantly to students’ academic success, retention, graduation, and overall satisfaction with the University experience. Attractive, well-maintained, student-centered residential communities also play an important role in the recruitment of highly qualified prospective students. Additionally, the on-campus housing environment supports and nurtures the personal growth and development of students through the intentional design of programs and services that focus on the University’s student development outcomes.

A recent study conducted by Housing & Residential Life concluded that the demand for on-campus student housing on the Twin Cities campus exceeds the University’s current capacity (6,331 total beds in 8 residence halls and 3 apartment facilities). Housing & Residential Life currently utilizes 250-300 “expanded housing” spaces on an annual basis to meet the first year student housing guarantee. Expanded housing spaces consist of converting lounge spaces to temporary living spaces and temporarily expanding some room types, such as converting a standard single room to a double room. Additionally, Housing & Residential Life is currently able to provide only a limited number of incoming transfer students on-campus housing.

In order to meet the undergraduate student housing demand; reduce the number of “expanded housing” spaces currently utilized; and increase the number of transfer students offered on-campus housing, an additional 600 beds is necessary.

The University is in discussions with leadership from several fraternity and sorority organizations about the opportunity to provide on-campus housing and chapter house space. The new facility will include housing beds and dedicated chapter house space for Greek organizations.

2. Scope of Project:

This project consists of a 227,000 gross square foot new building with the following primary elements:

- 600 bed residence hall consisting of 290 double bedrooms, 5 single bed/private bath units and 15 single bedroom Community Advisor units.

2011-2015 Capital Budget Goals:

Ensure student success by:
- Creating facilities that are directly related to recruiting, educating, supporting, and graduating students
- Creating facilities that improve learning outcomes
- Creating facilities that uniquely enhance student satisfaction

Protect public assets and investment by:
- Implementing campus master plan and advancing the University’s sustainability goals
- Leveraging facility investment to advance the academic mission and priorities

Recognize current extraordinary financial realities by:
- Honoring projects that have an identified source of payment for debt costs
• 350 seat dining facility designed to be a Fresh Food Market Concept, where food is prepared in view of the customer.
• 3 Greek Chapter Houses designed to support and enhance the sorority and fraternity student experience.
• Extension of utility infrastructure from campus systems consisting of high pressure steam, electric, and chilled water.

The building will be designed to meet Minnesota B3 sustainability guidelines and LEED Silver.

3. Environmental Issues:

Considerable historical environmental data is available for the Knoll and Athletics areas of campus where this project is located. Any environmental issues encountered during the excavation will be addressed as a part of the project.

4. Cost Estimate:

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<tr>
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<tbody>
<tr>
<td>Construction Cost</td>
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<tr>
<td>Non Construction Cost</td>
<td>6,901,000</td>
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5. Capital Funding:

University Bonds $62,500,000

University bonds will be issued to finance the development and construction of this project. Rent charged to students living in Housing & Residential Life facilities will be used to make principle and interest payments on the debt.

6. Annual Operating and Maintenance Cost and Source of Revenue:

The annual operating and maintenance cost is projected to be $1,900,000 and will be funded by Housing & Residential Life and University Dining Services revenue. An agreement on the funding of the required building operating costs will be completed consistent with the compact / budget process.

7. Time Schedule:

• Design: March 2011-July 2012
• Construction: March 2012-July 2013
• Occupancy August 2013

8. Architect / Construction Manager:

Stanius Johnson Architects and Mackey Mitchell Architects / Mortenson
9. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:

Richard Pfutzenreuter, Vice President and Chief Financial Officer

E. Thomas Sullivan, Senior Vice President for Academic Affairs and Provost

Kathleen O'Brien, Vice President for University Services
University of Minnesota, Twin Cities Campus
New Residence Hall and Academic Classroom
Crookston, MN

Project No. 05-881-11-2462

1. Basis for Request:

The need for an additional residence hall at the University of Minnesota Crookston campus is driven by at least three factors: increasing campus enrollment; increasing international students; and a growing number of junior and senior students wanting to live on campus.

Off campus housing is limited in the Crookston community and with the construction of Centennial Hall (2005) and Evergreen Hall (2009), on campus housing is very attractive to students. Demand for student housing in the 2011 fall semester has been strong. Below is summary of the details;

- Total capacity on campus is 612 beds, which includes 35 overflow space by converting lounge and study spaces into living areas
- 41 beds have been contracted off site at the Northland Inn
- Request for spring semester exceeds current capacity by an additional 44 beds
- Fall occupancy in Centennial (125) and Evergreen (129) was done by lottery and filled in a matter minutes this past spring. Over 90% of residents are juniors and seniors.
- On campus living accommodations is an important factor influencing retention and graduation rates

With the growing enrollment at Crookston also comes the demand for additional academic classroom space. The larger incoming class size has increased demand for introductory classes. The most efficient method for delivery of those classes is through larger classes and alternative learning styles. The largest existing classroom on campus seats just 64 students in a traditional format. The new classroom constructed in conjunction with the residence hall provides for the following:

- Flexible classroom for up to approximately 100 students
- Incorporation of the latest classroom technology such as that which was deployed at the new STSS building on the Minneapolis campus
- Provides additional study area for students at the new residence hall

This request is for an amendment to the 2012 fiscal year Capital Budget.

2011-2015 Capital Budget Goals:
Ensure student success by:

- Creating facilities that are directly related to recruiting, educating, supporting, and graduating students
- Creating facilities that improve learning outcomes
- Creating facilities that uniquely enhance student satisfaction

Protecting public assets and investment by:

- Implementing campus master plans and advancing the University’s sustainability goals
• Leveraging facility investment to advance the academic mission and priorities
• Making infrastructure investments that ensure reliability over the long term, lower energy and operating costs and advance environmental stewardship

Recognize current extraordinary financial realities by:
• Honoring projects that have an identified source of payment for debt costs

2. Scope of Project:
The project consists of a new residence hall for freshman and sophomore students and an adjoining academic classroom addition, with the following elements:
• A 43,000 sq. ft., 141 bed residence hall consisting of 39 - two bed room, two bed units and 5 single bed student staff units, each with its own bathroom and study area.
• Each of the four building wings includes a common area kitchenette, study room, exercise, and laundry rooms.
• Two story common area between the two wings of the building, which include furnished open area, private study rooms, vending, and activity room.
• An academic building consisting of approximately 5,100 sq. ft., multipurpose flexible classroom, with seating for approximately 100 students, common area restrooms and a common area study area.

3. Master Plan:
The new residence hall is consistent with the Crookston Master Plan, which calls for the build out of the residential neighborhoods, adjacent to Centennial Hall and the recently completed Evergreen Hall.

Site Plan - The building design takes full advantage of the site, flanking the academic building between two identical L-shaped residence halls, and providing for green space and additional parking in front of the residence hall and academic building.

Architectural Design - The Architectural Design is in keeping with the current facilities and will share many of the same materials used at Centennial and Evergreen Halls.

4. Environmental Issues:
The site of the new residence hall and academic buildings are not known to contain any environmental concerns. Any issues encountered during excavation for the foundation shall be addressed as part of the project.

5. Cost Estimate:
Construction Cost $ 8,222,000
Non Construction Cost 1,578,000
Total Project Cost $ 9,800,000

6. Capital Funding:
UMC Campus Funding $ 400,000
University bond $ 9,400,000
Total Funding $ 9,800,000
The academic classroom is estimated to cost approximately $800,000. The classroom costs will be funded by UMC Campus funding and $400,000 of debt paid for through Crookston’s operating budget.

7. Annual Operating and Maintenance Cost and Source of Revenue:
The annual operating maintenance cost is projected to be $100,000 and will be funded by residential life revenues for the residence hall and general operating funds for the academic building.

8. Time Schedule: (Additional milestone maybe added or substituted if appropriate.)

<table>
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<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Complete Design</td>
<td>February 2012</td>
</tr>
<tr>
<td>Begin construction</td>
<td>March 2012</td>
</tr>
<tr>
<td>Complete construction – residence hall</td>
<td>December 2012</td>
</tr>
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</table>

9. Design-Build Construction Manager
Community Contractors, Grand Forks, ND
Michael Burns Architects, Moorhead, MN

10. Recommendation:
The above described project scope of work, cost, funding, and schedule is appropriate:

Richard Pfuntenreuter, Vice President and Chief Financial Officer

Charles H. Casey

Charles Casey, Chancellor, University of Minnesota Crookston

Kathleen O’Brien, Vice President for University Services
University of Minnesota, Crookston
Facilities Committee

December 8, 2011

Agenda Item:  Capital Budget Amendments

☒ review  ☐ review/action  ☐ action  ☐ discussion

Presenters:  Vice President Kathleen O'Brien
             Vice Provost Gerald Rinehart
             Chancellor Charles Casey
             Dean Steven Crouch
             Associate Vice President Michael Perkins

Purpose:

☐ policy  ☐ background/context  ☒ oversight  ☐ strategic positioning

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, review the Capital Budget Amendments for the following projects:

• 4th Street SE Residence Hall and Dining Facility, Twin Cities Campus.
• Crookston Residence Hall and Academic Classroom Building, Crookston Campus.
• Lind Hall First Floor Renovation project – Structural Repairs, Twin Cities Campus.
• Lind Hall First Floor Renovation project—Taylor Center Upgrade, Twin Cities Campus.

Outline of Key Points/Policy Issues:

4th Street SE Residence Hall and Dining Facility-Twin Cities Campus

Refer to the attached project data sheet and map for this project.

Twin Cities Housing and Residential Life (HRL) has not added any new University owned housing since 2002. HRL is able to meet the on-campus housing demand for first-year students who meet the May 1st housing guarantee by utilizing approximately 4,400 on-campus beds and an additional 250-300+ expanded housing spaces (temporarily converted lounges, study rooms, etc.) Factors that impact the demand for new on-campus housing include the following:
• The size of the first year class and the transfer student class is a key driver that defines the demand for new housing. First-year student enrollment target is expected to range from 5,300 to 5,600 over the next 5 – 10 years.
• International and out-of-state students choose and accept U of M housing at a higher rate than in-state, particularly Twin Cities, students.
• HRL is unable to meet current on-campus housing demand for transfer students
• New research suggests that students who live on campus for a second year achieve greater academic success (GPA) and persist and graduate at higher rates than those who do not live on-campus for a second year.

The impact of an additional 600 on-campus beds in the 4th St SE Residence Hall and Dining Facility will allow the University to reduce the number of expanded beds by approximately 200, accommodate the University’s planned first-year student enrollment growth on the Twin Cities campus, reserve up to 200 beds for Greek community members, and potentially provide some additional beds for transfer students.

**Crookston Residence Hall and Academic Classroom Building-Crookston Campus**

Refer to the attached project data sheet and map for this project.

The enrollment continues to grow at the University of Minnesota Crookston and the demand for on-campus accommodation has strengthened. Off campus housing is limited in the Crookston community. The construction of Centennial Hall (2005) and Evergreen Hall (2009) has made on campus housing very attractive to students and the demand for student housing in the 2011 fall semester has been strong. Currently there are approximately 75 students housed in non-traditional overflow accommodations.

**Lind Hall – First Floor Renovation project - Structural Repair, Twin Cities Campus**

Refer to the attached project data sheet and map for this project.

The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project. This capital budget amendment requests approval of a change order to expend University funds for repairs to the Lind Hall first and second floor structure.

During the renovation of the first floor, cracks in plaster were discovered on the second floor. Structural engineers and building code officials reviewed the conditions and verified the building is safe to occupy. To reinforce and add rigidity to the existing structural floors, the structural engineer has designed a structural concrete topping for the first floor and plans structural beam which will be installed on the underside of the second floor. These additions to the Lind Hall First Floor Renovation will greatly reduce or stop further plaster cracking on the second floor and the project cost is estimated to be $896,000.

**Lind Hall – First Floor Renovation project - Taylor Center Upgrade, Twin Cities Campus**

Refer to the attached project data sheet for this project.

The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project. This capital budget amendment requests approval of a change order to this project to expend private donation funds to remodel the Lind Hall Taylor Center to add fifty (50) student computer work stations, upgraded wireless access, electrical outlets for laptops and printing facilities. The College of Science and Engineering’s plans for the historic Taylor Center will address both the shortage of space and the overcrowding in the computer equipped classrooms and study areas. The project cost is estimated at $754,000.
Background Information:

**4th Street SE Residence Hall and Dining Facility-Twin Cities Campus**

- The schematic funding for the 4th Street SE Residence and Dining Facility project was provided in the 2012 Capital Budget, which was acted upon at the June 2011 Board meeting.
- An amendment to the Fiscal Year 2012 Capital Budget is being requested at this time for the 4th Street SE Residence and Dining Facility project in order to allow for occupancy in September 2013.
- The Regents are also being requested to review and act on the schematic plans for this project at this time

**Crookston Residence Hall and Academic Classroom Building-Crookston Campus**

- The schematic funding for the Crookston Residence Hall and Academic Classroom Building was provided in the 2012 Capital Budget, which was acted upon at the June 2011 Board meeting.
- An amendment to the Fiscal Year 2012 Capital Budget is being requested at this time for the Crookston Residence Hall and Academic Classroom Building project to allow for occupancy in January of 2013.
- The Regents are also being requested to review and act on the schematic plans for this project at this time

**Lind Hall – First Floor Renovation project -Structural Repairs– Twin Cities Campus**

- The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project.
- This capital budget amendment requests approval of a change order to expend University funds for repairs to the Lind Hall first and second floor structure.

**Lind Hall – First Floor Renovation project- Taylor Center Upgrade -Twin Cities Campus**

- The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project.
- This capital budget amendment requests approval of a change order to expend private donation funds to remodel the Lind Hall Taylor Center to add fifty (50) student computer work stations.

**President's Recommendation for Action:**

The President recommends approval of the following Capital Budget Amendments:

- Amend the Fiscal Year 2012 Capital Budget by $59,070,000 to fund the construction of the 4th Street SE Residence Hall and Dining Facility on the Twin Cities Campus.
- Amend the Fiscal Year 2012 Capital Budget by $9,050,000 to provide the additional funding for the completion of the design and construction of the Crookston Residence Hall and Academic Classroom Building on the Crookston Campus.
- Amend the Fiscal Year 2012 Capital Budget by $896,000 to fund structural repairs to the Lind Hall First Floor Renovation project located on the Twin Cities Campus.
• Amend the Fiscal Year 2012 Capital Budget by $754,000 to fund the addition of fifty computer work stations to the Taylor Center which is part of the Lind Hall First Floor Renovation project located on the Twin Cities Campus.
Lind Hall – First Floor Remodel  
Twin Cities, East Bank Campus  
Capital Budget Amendment  
Project No. 01-031-11-1376

1. Basis for Request:  
Currently, the College of Science and Engineering does not have a welcoming, central location for students, alumni, industry partners and staff. Lind Hall houses most of the CSE’s student services programs and is in need of modernization. As part of a larger, strategic reorganization the CSE would like to renovate Lind Hall into a singular Student Services Office. This will help ensure the provision of seamless services to students and college affiliates.

Lind Hall – First Floor Renovation Structural Repairs  

The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project. This capital budget amendment requests approval of a change order to expend University funds for repairs to the Lind Hall first and second floor structure.

During the renovation of the first floor, cracks were discovered in second floor plaster walls. Immediately upon discovering the plaster cracks, the structural engineer and building code official reviewed the conditions and verified the building was safe to occupy. The structural engineer has designed a structural concrete topping for the first floor and plans structural beam members which will be bolted to the underside of the second floor. These measures will add rigidity to the existing structural floors and will greatly reduce further plaster cracking on the second floor. The additional project cost has been estimated to be $896,000.

2. Scope of Project:  

Lind Hall, built in 1912 and originally known as the Main Engineering Building, is located at 207 Church Street SE, on the University of Minnesota Twin Cities East Bank Campus. The main scope of this Project includes the renovation and modernization of the entire first floor of Lind Hall (20,200 GSF) as a new central location for a Student Services and Welcome Center for the College of Science and Engineering.

The renovation of the first floor of Lind Hall will provide a one-stop-shop space where students can access multiple services including orientation, academic advising, tutoring, study abroad programs, diversity programs, and career planning. Office and support space for staff and faculty shall be provided, including conference rooms. The space will provide a central location for workshops and trainings. The renovation work will include: exterior windows (1st floor); ADA compliant toilet rooms; central air conditioning systems, fire-life safety systems; electrical lighting, power and data; and A/V technology.

This capital budget amendment requests approval of a change order to expend University funds for repairs to the Lind Hall first and second floor structure.
3. **Master Plan or Precinct/District Plan:**

This project is in conformance with the University of Minnesota Twin Cities Campus Master Plan 2009, “…making the most productive and efficient use of an existing facility.” and “…preserve historic buildings and open spaces”.

4. **Environmental Issues:**

A full building survey for hazardous materials has been conducted. All hazardous materials will be abated prior to construction activities.

5. **Cost Estimate:**

- Construction Cost $4,500,000
- Non Construction Cost $1,700,000
- **Structural Repairs** $ 896,000
- Total Project Cost $7,096,000

6. **Capital Funding:**

- College of Science and Engineering $2,808,000
- UM Foundation $3,392,000
- **HEAPR** $ 896,000
- Total Capital Funding $7,096,000

7. **Capital Budget Approvals:**

The Lind Hall First Floor Renovation project was included in the 2012 Capital Budget.

8. **Annual Operating and Maintenance Cost:**

The projected annual cost to operate and maintain the facility will remain the same.

9. **Time Schedule:**

- Schematic Design Completed April, 2011
- Establish Construction Guaranteed Maximum Price May 2011
- Complete Design (Construction Documents) July, 2011
- Begin construction July, 2011
- Complete construction March, 2012

10. **Architect, Engineers, Construction Manager:**

   - Architect: Collaborative Design Group
   - Construction Manager at Risk: McGough Construction Company
11. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:

Richard Pfutzenreuter, Vice President and Chief Financial Officer  11/22/11

E. Thomas Sullivan, Senior Vice President for Academic Affairs and Provost  11/21/11

Kathleen O'Brient, Vice President for University Services
Lind Hall
East Bank – Twin Cities Campus
1. Basis for Request:
Currently, the College of Science and Engineering does not have a welcoming, central location for students, alumni, industry partners and staff. Lind Hall houses most of the CSE’s student services programs and is in need of modernization. As part of a larger, strategic reorganization the CSE would like to renovate Lind Hall into a singular Student Services Office. This will help ensure the provision of seamless services to students and college affiliates.

Lind Hall – First Floor Renovation of the Taylor Center
The Fiscal Year 2012 Capital Budget approved by the Board of Regents in June 2011 included $6,200,000 for the design and construction of the Lind Hall First Floor Renovation project. This capital budget amendment requests approval of a change order in the amount of $754,000 expending private donation funds to remodel the Lind Hall Taylor Center to add fifty (50) student computer work stations.

The recent Regent’s approval of the University’s enrollment management plan calling for growth in STEM disciplines has placed additional focus by the College of Science and Engineering (CSE) on accommodating additional undergraduates. CSE’s plans for the historic Taylor Center will address two growing problems in the College – a shortage of space and overcrowding in the computer equipped classrooms and study areas. The current computer-based classrooms and study areas in the College are full and often have students waiting in line to use them. The Taylor Center has been underutilized in recent history and CSE would like to change that by bringing hundreds of students per day into this beautiful room. Maintaining the historic library ambiance will be the primary goal in developing a computer-based learning center for students.

CSE would like to unite the historic aura of the original library with the tools in use at modern libraries as they incorporate a student collaborative learning/tutoring facility into the Taylor Center. The Taylor Center will become a place where students will be able to use state-of-the-art computers, personal mobile devices, and multimedia projection systems. It will also provide space for large and small group collaboration, presentations, individual study, and computer-based learning. CSE intends that the Taylor Center will be a multi-function room that will easily adapt to meet current and future educational needs.

2. Scope of Project:
Lind Hall, built in 1912 and originally known as the Main Engineering Building, is located at 207 Church Street SE, on the University of Minnesota Twin Cities East Bank Campus. The main scope of this Project includes the renovation and modernization of the entire first floor of Lind Hall (20,200 GSF) as a new central location for a Student Services and Welcome Center for the College of Science and Engineering.

The renovation of the first floor of Lind Hall will provide a one-stop-shop space where students can access multiple services including orientation, academic advising, tutoring, study abroad programs, diversity programs, and career planning. Office and support
space for staff and faculty shall be provided, including conference rooms. The space will provide a central location for workshops and trainings. The renovation work includes: exterior windows (1st floor); ADA compliant toilet rooms; central air conditioning systems, fire-life safety systems; electrical lighting, power and data; and A/V technology.

This amendment request includes upgrades to the Taylor Center to modernize the space allowing for 50 computer workstations, upgraded wireless access, electrical outlets for laptops, and printing facilities.

3. Master Plan or Precinct/District Plan:

This project is in conformance with the University of Minnesota Twin Cities Campus Master Plan 2009, “…making the most productive and efficient use of an existing facility.” and “…preserve historic buildings and open spaces”.

4. Environmental Issues:

A full building survey for hazardous materials has been conducted. All hazardous materials, such as asbestos and lead will be abated prior to construction activities.

5. Cost Estimate:

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<tr>
<td>Non Construction Cost</td>
<td>$1,700,000</td>
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<td><strong>Taylor Center</strong></td>
<td><strong>$ 754,000</strong></td>
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<tr>
<td>Total Project Cost</td>
<td><strong>$7,096,000</strong></td>
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6. Capital Funding:

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<th>Funding Source</th>
<th>Amount</th>
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<td>College of Science and Engineering</td>
<td>$2,808,000</td>
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<tr>
<td>UM Foundation</td>
<td>$3,392,000</td>
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<tr>
<td><strong>Private Donations</strong></td>
<td><strong>$ 754,000</strong></td>
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<tr>
<td>Total Capital Funding</td>
<td><strong>$7,096,000</strong></td>
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7. Capital Budget Approvals:

The Lind Hall First Floor Renovation project was included in the 2012 Capital Budget.

8. Annual Operating and Maintenance Cost:

The projected annual cost to operate and maintain the facility will remain the same.

9. Time Schedule:

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<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Schematic Design Completed</td>
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<tr>
<td>Establish Construction Guaranteed Maximum Price</td>
<td>May 2011</td>
</tr>
<tr>
<td>Complete Design (Construction Documents)</td>
<td>July, 2011</td>
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<tr>
<td>Begin construction</td>
<td>July, 2011</td>
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<tr>
<td>Complete construction</td>
<td>March, 2012</td>
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</table>
10. Architect, Engineers, Construction Manager:

Architect: Collaborative Design Group
Construction Manager at Risk: McGough Construction Company

11. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:

[Signature]
Richard Pfuntenreuter, Vice President and Chief Financial Officer

[Signature]
E. Thomas Sullivan, Senior Vice President for Academic Affairs and Provost

[Signature]
Kathleen O'Brien, Vice President for University Services
Agenda Item:  Report on Sustainability & Energy Efficiency Policy & University Sustainability Goals

☐ review  ☐ review/action  ☐ action  ☑ discussion

Presenters:  Vice President Kathleen O'Brien
Chancellor Jacqueline Johnson, University of Minnesota, Morris
Director Amy Short, System-Wide Sustainability, University of Minnesota

Purpose:

☐ policy  ☑ background/context  ☐ oversight  ☐ strategic positioning

The purpose of this item is to provide an annual update to the Board on the University's efforts to advance the Board of Regents Policy: Sustainability and Energy Efficiency.

Outline of Key Points/Policy Issues:

Sustainability is a continuous effort integrating environmental, social, and economic goals through design, planning and operational organization to meet current needs without compromising the ability of future generations to meet their own needs. The presentation will update the Board on the following items:

Presidential Charge to University of Minnesota Strategic Sustainability Committee.

The Strategic Sustainability Committee charge is to advance the implementation of the Board of Regents Policy: Sustainability and Energy Efficiency by developing strategies to guide sustainability integration across the University’s mission. The charge areas include:

- Strategy: Set direction and provide input to each campus regarding systemwide sustainability priorities, areas of focus and key messages regarding meeting the goals outlined in the report, University of Minnesota Systemwide Sustainability: Goals, Outcomes, Measure, Progress.
- Enterprise Solutions for Success: Support enterprise solutions to advance sustainability while also recognizing individual campus contributions and solutions, and unique regional approaches.

- Measurement System and Key Metrics: Identify key systemwide measures aligning to existing campus programs and commitments. Ensure consolidated systemwide reporting.

- Assessing Progress: Assess systemwide progress and overall impact of sustainability efforts on the university, and community beyond.

- Communications: Ensure communications that improve transparency, awareness and strengthen U-wide engagement.

The Committee is co-chaired by Vice President for University Services Kathleen O’Brien and Chancellor Jacquie Johnson, University of Minnesota Morris. The membership includes faculty, staff and students and is responsible for facilitating implementation of the policy. The committee formed workteams in the following areas that would benefit from systemwide attention:

- Energy
- Purchasing
- Student Engagement
- Academic and Curriculum
- Communications

**Signing of the American College and University Presidents Climate Commitment**

Colleges and universities are committed to exercise leadership in their communities and throughout society by modeling ways to eliminate global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. To date, 675 colleges and universities have signed the commitment. President Bruininks signed this commitment in January 2008. The commitment implementation will be integrated into the efforts to implement the Regents policy. Each campus has developed a greenhouse inventory and a climate action plan that takes into account campus specific needs. Energy use reduction and conservation are cornerstone actions. Almost 5% reduction has been realized so far, avoiding over $4 Million dollars in energy costs.

**Association for the Advancement of Sustainability in Higher Education, Sustainability Tracking and Reporting System (AASHE STARS)**

Morris, Duluth and Twin Cities campuses are Charter members of AASHE STARS, a peer-reviewed measurement system that is being implemented as a way to self-assess progress in various sustainability categories. The use of this metrics and reporting system is intended to compliment the need for establishing performance measures outlined in the 2009 Systemwide Sustainability Goals and Outcomes Report. The Twin Cities Campus received a Silver rating for the AASHE STARS in August 2011.

**2010 Campus Sustainability Report**

This year the campuses continued their work to become more sustainable. Reports from each campus are presented to highlight a few examples of where we are on our path to becoming a stronger and more sustainable institution. Key activities are identified that have a systemwide component.

**Background Information:**

In July 2004, the Board adopted the Board of Regents Policy: *Sustainability and Energy Efficiency*. Periodic updates on sustainability have been provided to the Board of Regents. The most recent update was October 2010.

Refer to:
Board of Regents Policy: *Sustainability and Energy Efficiency*
2009 U of MN Systemwide Sustainability: Goals Outcomes Measures Progress Report
http://www1.umn.edu/regents/policies/administrative/Sustain_Energy_Efficiency.pdf

2010 Campus Sustainability Report: http://www.services.umn.edu/sustainableU/index.html

Environment and Sustainability Portal highlights our Systemwide commitment and is organized along the lines of the Policy Guiding Principles. http://portal.environment.umn.edu/
Annual Report to
President Eric Kaler and the Board of Regents on

University of Minnesota
Systemwide and
Campus Sustainability
[ 2010- 2011 ]

November 2011
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A. Board of Regents Policy: Sustainability and Energy Efficiency
B. University of Minnesota Systemwide Sustainability Goals by Guiding Principle
C. 2010 Campus Sustainability Committee Information
Campus Reports

Primary Report authors and preparation:

Professor Dan Svedarsky, Agriculture and Natural Resources, Director, Center for Sustainability, & Research Biologist, Northwest Research and Outreach Center, Crookston
Mindy Granley, Sustainability Coordinator, Duluth
Troy Goodnough, Sustainability Coordinator, Morris
Gail Sauter, Assistant Vice Chancellor for Finance and Operations
Shane Stennes, University Services Sustainability Coordinator, Twin Cities
Amy Short, Sustainability Director, Twin Cities and System

Contributors also include:

Jacquie Johnson: Chancellor, U of MN, Morris
Kathleen O’Brien: Vice President, University Services, Twin Cities and System
Jill Weinberg: Sustainability Student Assistant, Twin Cities
Laura Logsdon: Sustainability Student Assistant, Twin Cities
JP Hagerty: Assistant To, University Services OVP, Twin Cities

Members of the Campus Sustainability Committees
Introduction

“Sustainability is a continuous effort integrating environmental, social, and economic goals through design, planning, and operational organization to meet current needs without compromising the ability of future generations to meet their own needs.

Sustainability requires the collective actions of the University of Minnesota (University) community and shall be guided by the balanced use of all resources, within budgetary constraints.

The University is committed to incorporating sustainability into its teaching, research, and outreach and the operations that support them.”

-University of Minnesota Regents Policy: Sustainability and Energy Efficiency, adopted 2004

This annual report to the Board of Regents constitutes a summary and highlights of the U of M system work on sustainability.

As stated in the 2010 report, the comprehensive nature of the Regents policy supports decisions that will create healthier communities for the people of the state of Minnesota. The University of Minnesota campuses are as diverse as the state. The people, places and priorities reflect a convergence similar to the four biomes of our state - prairie, deciduous forest, boreal forest, tall grass aspen forest. Environmental stewardship is a strong existing foundation that will help integrate the more complex aspects of sustainability into the University’s land grant mission. The Board of Regents Policy: Sustainability and Energy Efficiency provides guiding principles to help move us more thoughtfully together while ensuring that campus priorities are met.
**Background and Context**

The University of Minnesota Strategic Sustainability Committee represents a model for system thinking, system work, and tracking system progress. This is illustrated in the document that follows. A timeline of the key recent sustainability milestones are shown below:

- In 2004, Regents adopt comprehensive sustainability policy ahead of their time in terms of the national landscape of higher education. The policy commits to integrate sustainability across the mission of the university (Appendix A).

- In 2008, the Systemwide Sustainability Goals and Outcomes Committee is charged by President Robert Bruininks, co-chaired by Dr. Deborah Swackhamer and VP O’Brien, to propose goals and measures aligned with the guiding principles for the University of Minnesota to implement with Regents policy (Appendix B).

- In 2009, the report *University of Minnesota Systemwide Sustainability: Goals, Outcomes, Measures, Process* was presented to the Board of Regents. This report outlined an ambitious path toward becoming a more sustainable university and included goals and measures as a way to connect many individual efforts.

- In 2010, a standing system wide sustainability committee was charged by President Robert Bruininks, chaired by VP O’Brien and Chancellor Johnson, and composed of representatives from all campuses of the U and from all constituencies—staff, faculty and students.

- This is the second report of the committee's work and progress presented to the Board of Regents. The report covers progress achieved from October 2010 to October 2011.
Spotlight on Sustainability

2011
- UMD and UMTC named to Princeton Review’s 311 Green Colleges
- UMTC receives straight A’s on the Sustainable Endowments Institute Sustainability Report Card
- UMTC becomes a Founding Circle Member of the Billion Dollar Green Challenge
- UMM chemistry professors receive the American Chemical Society’s 2012 Award for Incorporating Sustainability in Chemistry Education.
- UMM receives the 2011 Minnesota Construction Association’s Special Recognition Award for the Welcome Center
- UMTC received a Silver Rating from the League of American Bicyclists.
- UMTC Donhowe is the first campus building to be rated as an Energy Star Building by the United States Environmental Protection Agency
- UMC chosen to partner with Otter Tail Power for a Campus Energy Challenge
- Architecture Minnesota January/February 2011 issue features campus green buildings across the state: UMD’s Bagley Nature Area Classroom and James I. Swenson Civil Engineering Building, UMTC’s Science Teaching and Student Services and Wallin Medical Biosciences Building, UMM’s Welcome Center.
- Between 2009 and 2011, Institute on the Environment’s Momentum has received 30 awards locally and nationally.

2010
- UMTC, UMM, UMD are AASHE STARS charter members
- UMTC Science Teaching and Student Services building awarded LEED Gold Certification by U.S. Green Building Council
- UMTC receives a Silver Rating on AASHE STARS
- UMTC Parking and Transportation named Transit System of the Year by Minnesota Public Transit Association
- UMD Bagley Outdoor classroom awarded LEED Platinum Certification by U.S. Green Building Council
- UMD Swenson School of Engineering awarded LEED Gold Certification U.S. Green Building Council

2009
- UMC Center for Sustainability’s Director, Professor Dan Svedarsky, represents The Wildlife Society at the United Nations Conference on Climate Change
- TCF Bank Stadium awarded LEED Silver Certification by U.S. Green Building Council

2008
- University of Minnesota Regional Sustainable Development Partnerships Clean Energy Resources Teams (CERTS) receives the Champion of Sustainability in Communities Award from the Sustainable Endowments Institute
- UMD Labovitz School of Business and Economics awarded LEED Gold Certification by U.S. Green Building Council
- UMM was selected as one of 12 campuses for analysis by the Rocky Mountain Institute, and is featured in their publication: “Accelerating Campus Climate Initiatives: Breaking Through Barriers” as a campus leader.
- UMM receives American Council on Renewable Energy Excellence Award.

2007
- Numerous recognitions for UMTC Parking and Transportation between 1997 and 2010:
  - Minnesota Association of Government Communicators Award and Commuter Choice Award for Outstanding Promotion for a Large Organization of Excellence for response to the 35W bridge collapse.
  - 2005-2010 Fleet Equipment Magazine 100 Best Fleets in North America Award (one of just two universities in the country to receive the designation)
  - 2001 National Wildlife Federation Achievement in recognition of leading transportation programs
The Regents policy, goals report and relationships nurtured through these new institutional structures are an inspirational model for other universities across the country. The collective work is notable because it is inclusive of all areas of the university’s mission across all campuses and has led to a unique collaboration which is the envy of peer institutions. The systemwide University of Minnesota Strategic Sustainability Committee and campus sustainability committees are finding inspiration through these systemwide contacts.

A strong foundation has been laid to help the university understand how to begin to measure this complex interwoven concept of sustainability.

The University of Minnesota was chartered as a land grant institution, and many of the efforts across the U of M in relation to sustainability today harken back to that legacy, including the original mission and the efforts of the agricultural boarding schools that were once present on the Crookston and the Morris campuses and whose legacy remains today in the form of outreach centers and experiment stations. In some ways, these efforts bring us full circle, encouraging us to think about the relationship between place and educational program; between place and research; allowing the university to use the full force of its resources to improve communities and empower individuals across the state; encouraging us to consider the ways in which we use the natural resources abundant in our particular regions effectively and efficiently, and thereby avoid costs and save money. Finally what we do today provides a means by which we can reconnect to our local communities, local foods and materials, which, in a way, links us even more strongly than ever before to traditions that were in practiced in this state for thousands of years.

What we do today, as stewards, is our legacy to future generations. Examples that speak to this land grant mission and our stewardship for future generations are present throughout this report.

**National context:**
The U of M Regents were ahead of their time when, in 2004, they adopted a system wide sustainability policy. The policy states that sustainability is broadly defined as

“...a continuous effort integrating environmental, social, and economic goals through design, planning, and operational organization to meet current needs without compromising the ability of future generations to meet their own needs.”

The U of M's work on sustainability has unfolded in a context of national interest and activity. The U has been aligned with that interest from its beginnings and has also been a leader in the national effort. In 2007, an affiliation of University college presidents and chancellors was formed--the American College and University Presidents’ Climate Commitment (ACUPCC). The U of Minnesota Morris is a charter...
signatory of that group, and, in 2009, President Robert Bruininks signed the commitment on behalf of the entire university system. According to the annual report, the president's climate commitment now includes over 673 presidents and chancellors representing nearly 5.9 million students nationwide.

The commitment requires participating schools to track and publicly report carbon emissions and to develop plans aimed at their reducing their environmental impact. This report includes summaries of the progress made at all the U of M campuses in this effort.

The University’s campuses participate in another tracking and rating system, this one developed by the Association for the Advancement of Sustainability in Higher Education (AASHE) and called STARS (Sustainability Tracking and Reporting System). This tracking system was developed at the request of institutions seeking a common metric and language for sustainability in higher education. Nearly 70 institutions participated in the year-long pilot before the STARS program launched in January 2010. The Twin Cities, Morris and Duluth campuses are Charter Participants. STARS allows campuses to track and report progress in a broad array of areas--including administration and planning, curriculum, green building efforts, energy conservation, research, dining, etc. This report includes information from each of the campuses of the U of M system who participates in STARS. Chancellor Johnson serves on the boards for both ACUPCC and AASHE. Beth Mercer Taylor, Sustainability Education Coordinator at the Twin Cities campus, is on the Education and Advisory Technical Committee for AASHE STARS.

The University of Minnesota also follows the State of Minnesota B3 standards and participates in the National Council of Green Buildings LEED ranking system on a case by case basis. Minnesota B3 standards and other design related programs like Leadership in Energy and Environmental Design (LEED) are intended to transform buildings to become more efficient, to be healthier, and to be designed with considerations of local site characteristics. A summary of buildings which have been evaluated in these programs are described in the report.

**UMTC Example of Cost Savings realized through increased efficiency:**

Since 1996:
- Campus Space ↑ 3.7 Million Square Feet
- Steam Efficiency ↑ 37 percent
- Cumulative Avoided Costs of $76 Million

**Work of the Committee:** During the past year, the work of the system wide sustainability committee was conducted by organizing in five working groups: an energy conservation work team; a curriculum work team; a work team that focused on student engagement; a work team that focused on communications; and a work team that focused on procurement. Each group developed its own statement of mission and purpose in line with the committee's broader charge, goals to achieve, and measures of success. The accomplishments of the working groups are reported in a subsequent section.
Finally, as further context for the report which follows, one overarching conclusion of this committee is that sustainability matters. It matters economically—sustainability efforts pay. This is evident in energy cost reductions; in cost avoidance; and in carbon footprint reductions.

Sustainability efforts unify: this is evident in the cross campus research, learning and student engagement collaborations that are documented in this report.

Sustainability efforts inspire and transform— they provide a framework for collective and creative endeavor, research and outreach activities. They provide a way for the University to connect to its relevant constituents and communities in new and creative ways and in a variety of geographic settings-- urban and rural.

These Sustainability efforts provide a renewed framework to enhance how the university fulfills its land grant mission, and thereby provide a means for the university to contribute to the growth and development of communities and business across the state.

Broadly speaking, the umbrella of sustainability provides a space under which individuals and groups who represent quite different perspectives can stand. Issues like local control and self-sufficiency, energy independence, and national security cross political and economic boundaries. The university provides a gathering place for engagement and civil discourse that is, perhaps, unparalleled in contemporary American society.

We applaud the great leadership our university community of faculty, students and staff show in their work every day as they grapple with the natural tension of change. This report is a glimpse of what has happened in the past year at each campus and with highlights of the beginnings to better understand how we can work together as a system.

Jacqueline Johnson, Chancellor, U of M, Morris
Kathleen O’Brien, Vice President, University Services
Amy Short, Sustainability Director, University Services
The University of Minnesota Strategic Sustainability Committee is a representative group of faculty, students and staff. The committee’s current membership is shown in Appendix C. This newly formed committee and workteams are a cohesive and energetic group committed to making a difference and encouraging use of the principles of sustainability to help create a stronger institution.

This year new members were added from U Relations to provide expertise on improving communications about our sustainability initiatives. Three new student representatives were added. Two replaced graduating seniors from Duluth and a student representative from the Rochester campus was also added. The committee co-chairs charged workteams in areas that would benefit from a systemwide focus and collaboration.

Each summer the sustainability professionals gather at a different campus to learn about the unique campus features and sustainability initiatives underway, share information and assess progress. This year the group’s “Prairie Advance” was hosted by Professor Dan Svedarsky and student interns at UMC.

**Committee Workteams**

During this year the U of M Strategic Sustainability Committee identified key areas that could benefit from a systemwide focus. Workteams were formed from the committee members to take these ideas and move them into action plans. Below are a few of the actions

- **Curriculum and Academic (Nick Jordan, chair; Beth Mercer-Taylor, staff)**
  - The Curriculum and Academic Workteam determined that an initial ‘high-impact’ pilot project will be to convene and facilitate a working group of faculty and academic leaders to jointly define promising models/vehicles/approaches to increase the scale and scope of sustainability education at the U. The current view is that, in many academic programs, sustainability education is relatively limited. The workteam believes that U of M can draw on its unique assets (land-grant, research, multi-campus etc.) to become a national leader in sustainability education. The Sustainability Studies Minor and other Interdisciplinary Minors have laid the groundwork.
  - Representatives for the Curriculum and Academic group are also part of the UMTC Graduate Network which is described later in the UMTC Sustainability report.

- **Communications (Ann Freeman, chair; Amy Short, staff)**
  - A draft communication plan was developed with strategies to better highlight the work being accomplished across the campuses. Conversations with each campus sustainability office were held to identity best practices, needs and focus areas. The process helped improve reporting on sustainability-related matters in the Brief, a regular weekly U of M news.
  - During the past year each campus improved the online presence both on website materials and through social media.
  - Looking forward, the work team will initiate conversation with representatives from our University research community to understand and communicate the breadth of work and synergies to achieve U of M sustainability goals.
● A portal was developed with resources from the Institute on the Environment. It launched August 2010 and continues to be improved.

- Renewable Energy /Energy Conservation (Jerome Malmquist, chair; Shane Stennes, staff)
  - Find practical approaches to increase renewable energy use on campus and better understand opportunities for advocating for policies. Share technical and research opportunities using campus as a living laboratory. A proposal for a linkage committee that helps identify and provide expertise for energy related operations projects was developed by the team and members are being identified.
  - Ensure that best practices in energy conservation and energy efficiency along with resources are being shared across campuses. A planning call was held with energy and facilities contacts at each campus to identify interests and needs at each campus.

- Purchasing (Leslie Bowman, chair; Mindy Granley, staff)
  - Leverage purchasing across our system for bigger impact and cost savings related to green products and energy efficient equipment.
  - A survey was prepared for key campus purchasing entities to help prioritize products of interest and opportunity. University Purchasing is engaged in the process.
  - Members of the workteam also participated in a Big Ten Stewardship Conference call was held on this topic and opportunities for the conference were also identified.

- Student Engagement (Linda Kingery, chair; Troy Goodnough, staff)
  - Define how students can encounter sustainability every day; identify and provide student leadership opportunities.
  - A systemwide sustainability student leadership workshop was hosted in Morris in conjunction with the annual regional UMACS (Upper Midwest Association on Campus Sustainability). Students, staff and faculty were present. Student lightning talks highlighted student and student worker projects. Opportunities for informal networking were also provided.

The following page provides a snapshot of the U of M Systemwide Student Leadership Workshop. The student presenters and sustainability staff are listed. There are also quotes representative of student feedback from the event.

The University’s reputation as a sustainability leader is growing. In addition to key research areas of energy technologies, environment, policy, agriculture, water resources, biofuels, global land use, transportation and many other areas, our campuses have been given high marks and recognition in various surveys. Our sustainability staff is also being recognized for their knowledge and expertise. At the October 2010 nationwide AASHE conference, students and staff from Duluth, Morris and the Twin Cities were accepted for presentations, posters and panels. In 2011, students from UMTC and Duluth were presenters. The Energy Efficiency Student Alliance - Power Police, Zero+ campus project which focuses on the campus as a living lab for sustainable projects as part of our built environment and grounds and Communications Planning on a Budget at UMD were featured.
Spotlight on Sustainability

1st Systemwide Sustainability Student Leadership Workshop 2011

- Sustainability Legacy Fund and MN Youth Environmental Network, Christy Newell
- Investing in energy savings: the UMD Green Revolving Fund, Stacy Gerths, Mindy Granley
- Morris is a renewable energy destination, Heidi Eger
- Development and maintenance of the Nature Nook, Ben Sullivan
- Campuses Beyond Coal, Siri Simons
- Growing our healthy and local food efforts at Morris, Naomi Wente, Alissa Jacobsen
- Reviving the UMD Farm, Lanae Smith, Nate Levendoski
- Student engagement with energy conservation: Otter Tail Energy Challenge, Ben Williams
- Student activism around sustainability at Morris, Kayla Pridmore, Joe Hartmann
- U of M "Sys"tainability News Flash, Amy Short

“This inspired me to think about the U as a whole system and I want to make sure that if students on one campus are working on a campaign or project, others could learn from them and utilize their resources.”

– Emma Wright

“It’s exciting to realize other students are working on similar issues and that together, we could make a big change. Discussing our shared challenges and visions for the future made me hopeful that there is a systemic way to address various sustainability topics.”

– Siri Simons
Measurement of Progress: System

Climate Action Planning
During recent years, all campuses developed a climate action plan. This is a significant effort at all campuses, with widespread impacts. The process of identifying and reviewing projects that impact the footprint have helped the campuses prioritize actions taking into account both ROI and carbon reduction. Many projects have positive benefits of avoided operating costs. These plans are typically closely tied to the Energy and Utility planning because the largest contributor to the campus carbon footprint is energy use. These plans will influence our work into the future.

Reduction in Energy use leads to reduction in footprint for University of Minnesota System (expressed in CO2 equivalents)

Carbon Footprint 101: The pie chart in the image above shows the sources of greenhouse gases system-wide. These emissions are expressed in units of Carbon Dioxide equivalents. Some compounds like refrigerants have a higher greenhouse gas impact than carbon, but it helps to have a common unit of measure. In this chart, for the University campuses, 51% of the carbon emissions, or footprint, is from electricity purchased and 32% is from on-campus heating plant. The change in these energy-related greenhouse gas emissions is shown to the right. A 4.5% total decrease in energy related emissions was seen. The data from each campus is presented in the campus reports.
The following chart shows the goals and targets for the University of Minnesota system and depicts the timeframe for achieving these reductions. A depiction of the overall impact of these targets is shown in the graph.

<table>
<thead>
<tr>
<th>Campus</th>
<th>Greenhouse Gas Emission Inventory (Data year)</th>
<th>Initial Greenhouse Gas Emissions Reported (Metric Tons CO2 equivalent)</th>
<th>Gross Square Footage Campus (Appx.)</th>
<th>Climate Neutrality Target and Climate/Energy Action Plan Status</th>
</tr>
</thead>
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<tr>
<td>Crookston</td>
<td>Complete (2009)</td>
<td>12,500</td>
<td>774,000</td>
<td>Climate Neutrality Target 2030</td>
</tr>
<tr>
<td>Duluth</td>
<td>Complete (2009)</td>
<td>56,500</td>
<td>3,400,000</td>
<td>25% by 2020 relative to 2007 baseline Climate Neutrality Target 2050</td>
</tr>
<tr>
<td>Morris</td>
<td>Complete (2007)</td>
<td>11,900</td>
<td>960,000</td>
<td>90% Reduction in Scope 1 and 2 by 2010 relative to 2007 baseline Climate Neutrality Target 2010</td>
</tr>
</tbody>
</table>

Background: In 2008, President Bruininks signed the American College and University Presidents Climate Commitment (ACUPCC), which commits the University to achieve climate neutrality as soon as possible. Jacqueline Johnson, Chancellor at the Morris campus was a charter signatory, signing before March 2007. This commitment is aligned closely with the direction already set by Energy Management goals, work undertaken as participants in the Chicago Climate Exchange, the Board of Regents Policy: Sustainability and Energy Efficiency, as well as work of the Institute of the Environment and energy-focused research at IREE (Initiative on Renewable Energy and the Environment). University Presidents around the country united around the scientific consensus regarding the anticipated serious adverse impacts of global warming. The commitment acknowledges the important role for universities to play in research, education and modeling solutions to help achieve significant reductions in greenhouse gas emissions, especially those associated with energy use. Over 600 institutions have become signatories.

The University of Minnesota campuses completed plans that include conserving energy, installing renewable energy options, and generating energy through onsite energy production. There are student and community groups with interests in specific aspects of our climate action plan, for example, the use of coal as a flexible fuel source. The process for developing climate action plans included public forums and opportunity for input. The path to achieving climate neutrality has regulatory, policy, budgetary and personal implications that will require innovative research and creative solutions over many years.

Source and more details found at: [http://acupcc.aashe.org/](http://acupcc.aashe.org/)
Green Building Highlights

Energy conservation and building design for energy efficiency are critical elements of energy and climate action planning. Space utilization and reducing the number of buildings on campus is part of our conversation in how to reach these goals.

When new buildings are needed, how we build them is important.

On the Twin Cities campus alone, building space has grown by nearly 20 percent in the past ten years, while maintaining a fairly flat carbon footprint. This has been done through dedicated energy conservation programs and ensuring new buildings are as energy efficient as possible. The State of Minnesota requires higher energy standards for bonded buildings. These standards, targeted to the unique regional cold weather conditions, are called B3 standards and generally require buildings to perform at least 30 percent better than a building built to code. The B3 standards (Sustainable Buildings 2030) were developed at the University of Minnesota’s Center for Sustainable Building Research.

A third party verification system called Leadership in Energy and Environmental Design (LEED) developed by the US Green Building Council (USGBC) has received high visibility and attention around the country as a way to demonstrate adherence to green building standards. Many states without their own standards have adopted LEED as their system for green building construction. At the University of Minnesota, a case by case decision has been made for LEED certification based upon local campus situations. Cost is one consideration to consider when applying for LEED certification. Moving forward, the University of Minnesota intends to better communicate our state and university building standards to individuals, media and survey institutions that are familiar with LEED.

The buildings on the University campuses are our legacy to future generations. How we approach the building design have operational impacts for years to come. According to the EPA, buildings use 40 percent of the energy in the US. Transformation toward a more sustainable future includes our relationship with our built environment and energy used. Minnesota B3 standards and other design related programs like LEED are intended to transform buildings to become more efficient, to become healthier and to be designed with considerations of local site characteristics. The table below presents new buildings on the campuses that have been designed for higher efficiency and to meet B3 and LEED standards.

Adaptive reuse, or repurposing buildings for a new use, is an important way to transform our campus while honoring our history.
<table>
<thead>
<tr>
<th>Campus</th>
<th>Building name</th>
<th>Square footage</th>
<th>Features/ details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crookston</td>
<td>Evergreen Hall</td>
<td>53,400</td>
<td>First LEED-certified residence building in U of M system</td>
</tr>
<tr>
<td>Duluth</td>
<td>Life Sciences</td>
<td>86,000</td>
<td>LEED – Silver</td>
</tr>
<tr>
<td></td>
<td>Labovitz School of Business and Economics</td>
<td>76,000</td>
<td>LEED – Gold. First LEED certified new higher education building in the state of MN.</td>
</tr>
<tr>
<td></td>
<td>Swenson Civil Engineering</td>
<td>46,600</td>
<td>LEED – Gold</td>
</tr>
<tr>
<td></td>
<td>Bagley Outdoor Classroom</td>
<td>1,985</td>
<td>First LEED Platinum building in the U of M System, also followed Passivhaus energy efficiency standard</td>
</tr>
<tr>
<td>Morris</td>
<td>Welcome Center</td>
<td>16,300</td>
<td>Applied for LEED certification; National Register of Historic Places</td>
</tr>
<tr>
<td>Rochester</td>
<td>318 Commons (Includes Student Housing)</td>
<td>120,000</td>
<td>City Partnership through combined University and Commercial Space in city for positive community impacts</td>
</tr>
<tr>
<td>Twin Cities</td>
<td>TCF Stadium</td>
<td>890,000</td>
<td>LEED - Silver; First collegiate or professional LEED stadium in the country</td>
</tr>
<tr>
<td></td>
<td>Science Teaching and Student Services</td>
<td>120,000</td>
<td>LEED – Gold</td>
</tr>
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<td></td>
<td>Donhowe Building</td>
<td>91,000</td>
<td>First building in the system to earn ENERGY STAR, performing in the 90th percentile</td>
</tr>
<tr>
<td></td>
<td>Education Sciences Building</td>
<td>62,000</td>
<td>ENERGY STAR building, earning a rating of 93</td>
</tr>
<tr>
<td></td>
<td>Akerman Hall Renovation</td>
<td>17,000</td>
<td>B3 standards met</td>
</tr>
<tr>
<td></td>
<td>Center for Magnetic Resonance Research Renovation &amp; Addition</td>
<td>62,000</td>
<td>B3 standards met</td>
</tr>
<tr>
<td></td>
<td>Folwell Hall Renovation</td>
<td>115,000</td>
<td>B3 standards met</td>
</tr>
<tr>
<td></td>
<td>Hanson Hall</td>
<td>130,000</td>
<td>B3 standards met</td>
</tr>
<tr>
<td></td>
<td>Mayo Garage – NMR Relocation</td>
<td>68,000</td>
<td>B3 standards met</td>
</tr>
<tr>
<td></td>
<td>Medical Biosciences Building</td>
<td>68,500</td>
<td>B3 standards met</td>
</tr>
</tbody>
</table>
Letting go of buildings that are not green……

The University, through the regular capital planning and facility condition assessment processes, is working to identify high cost and programmatically obsolete buildings that should be considered for decommissioning. Evaluation criteria include:

- The building has significant facility condition deficiencies
- The cost to renovate is near to or exceeds the cost to replace the facility
- The current facility does not allow efficient space utilization
- The building is not of major historical significance for University
- The current building does not provide flexibility of use.

The University has identified an initial set of obsolete buildings and has been working to remove these buildings from its space inventory. For those that pass the analysis, buildings may be renovated and repurposed. Reusing an existing building is often viewed as more sustainable. It can mean less waste from demolition and energy efficient features can be added to the building. A few buildings that have been “reused” or “repurposed” are listed below.

Examples: Adaptive Reuse in Existing University of Minnesota Buildings

<table>
<thead>
<tr>
<th>Campus</th>
<th>Building name</th>
<th>Square footage</th>
<th>Former use</th>
<th>Current use</th>
<th>Features/ details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin Cities</td>
<td>Education Sciences Building</td>
<td>62,000</td>
<td>Minerals Research Lab</td>
<td>Offices for education and human development</td>
<td>Built 1922, renovated 2007</td>
</tr>
<tr>
<td></td>
<td>Folwell Hall</td>
<td>113,000</td>
<td>Offices and classrooms</td>
<td>Offices and classrooms</td>
<td>Built 1901, renovated 2011</td>
</tr>
<tr>
<td></td>
<td>Jones Hall</td>
<td>29,000</td>
<td>Architecture, classrooms, offices, studio arts department (1940's)</td>
<td>Admissions and a Computer Language Lab</td>
<td>Built in 1901, Renovated in 2006</td>
</tr>
<tr>
<td></td>
<td>Nicholson Hall</td>
<td>73,000</td>
<td>Offices and classrooms</td>
<td>Offices and classrooms</td>
<td>Built 1890, renovated 2005</td>
</tr>
<tr>
<td></td>
<td>Northrop Auditorium</td>
<td>195,000</td>
<td>Auditorium</td>
<td>Renovated auditorium, classrooms, offices, and Honors Department.</td>
<td>Built in 1928, Renovation underway. Slated to open in 2013.</td>
</tr>
<tr>
<td></td>
<td>Pomeroy Center</td>
<td>7,000</td>
<td>Dairy Barn</td>
<td>Alumni and Student Learning Center</td>
<td>Built 1907, renovated 2008</td>
</tr>
<tr>
<td></td>
<td>Walter Library</td>
<td>237,000</td>
<td>Library</td>
<td>Digital Media Center</td>
<td>Built 1922, renovated 2001</td>
</tr>
<tr>
<td>Morris</td>
<td>Welcome Center</td>
<td>16,300</td>
<td>Former stable, iron works, offices.</td>
<td>Admissions, External Relations, and the Center for Small Towns</td>
<td>Built 1915, renovated in 2009</td>
</tr>
</tbody>
</table>
Minnesota GreenCorps

In 2009, the University of Minnesota Morris campus and the Minnesota Pollution Control Agency (MPCA), in partnership with AmeriCorps and ServeMinnesota launched a new program to protect and preserve Minnesota’s environment while developing the next generation of environmental professionals. Minnesota GreenCorps, an environmentally focused AmeriCorps program administered by MPCA, helps communities conserve energy, reduce waste, and, through proper recycling and conservation education, reduce the amount of toxic chemicals discarded. As of 2010, GreenCorps positions were located on the Crookston and Duluth campuses. In 2011, the Twin Cities campus and Clean Energy Resource Teams were provided Green Corps resources. These environmental professionals, new graduates and some undergraduates are working on campus initiatives and in the surrounding communities and towns – supporting the education and outreach mission of our university. GreenCorps experience on our campuses is a useful transition for new graduates from college to more permanent employment.


Additional Measures and Progress – Research and Education

This annual report has a strong emphasis on operations. As indicated in the 2010 report to the Regents, in many ways, this information is easier to measure and report. Like other campuses around the country, gathering comprehensive information to report on areas of research and education that integrate sustainability concepts is a challenge, in part due to our size and decentralized nature, in part due to the absence of clear and simple systems for “counting” curriculum and co-curriculum initiatives, and in part due to the absence of agreed upon categories for coding sustainability research. Even with these challenges, there is considerable evidence to demonstrate the presence of curriculum, co-curriculum, research and outreach activities related to sustainability in the University of Minnesota system.

We are improving our methods for quantifying and tracking this information in order to participate, report and work to improve AASHE STARS metrics. UMD, UMM and UMTC campuses are participating in AASHE STARS.

In initial data gathering at the Twin Cities campus, it was determined:
- 247 faculty members engaged in sustainability research.
- 37 academic departments are involved in sustainability
- 73 departments offer sustainability-related undergraduate courses.

Each campus provides highlights of research, education and outreach unique to their location in the following reports.
The Crookston campus is located in the Red River Valley, a prime agricultural region of northwest Minnesota. The first development was as an agricultural experiment station in 1895 followed by the establishment of a residential, agricultural high school in 1905. In 1966, the high school phased out and a two-year technical college was established, building on the experiential learning tradition. The experiment station continues to be co-located with UMC and is now called the Northwest Research and Outreach Center of the College of Food, Agriculture, and Natural Resource Sciences; conducting research and outreach in agronomy, soils, plant pathology, and natural resources. The technical college transitioned to a baccalaureate institution in 1993 with a current enrollment of 1,537 students pursuing degrees in one of the following departments: Agriculture and Natural Resources; Business; Math, Science, and Technology; and Liberal Arts and Education. The Crookston campus has a large enrollment of online students and nearly 8 percent of the student body is international students which broadens the global perspective of the campus. The smaller campus size facilitates students having an awareness of other disciplines and majors that may not be as obvious on a larger campus. There is an active service learning program on campus which engages students with the broader community and makes education real.

History: In a sense, sustainability had its beginnings on the UMC campus in 2005 when Fabian Pommier, a French graduate student, conducted the first campus energy audit as a summer internship along with other students studying sustainable landscaping and farming methods. A Sustainable Development Conference was hosted on campus with international dimensions. Strong support for campus sustainability initiatives was provided by Linda Kingery, Northwest Regional Sustainable Development Partnership (NW RSDP) and is on-going. In 2006, campus sustainability seminars were held and development of Nature Nook and the Shaver Butterfly Garden began as an illustration of native campus plantings and carbon sequestration. A Biofuels and Renewable Energy major was established in 2007.
In 2008, Chancellor Casey appointed a Sustainability Committee with various work groups.

A student, Chris Waltz was hired to complete the Greenhouse Gas Inventory as part of American College and University Presidents’ Climate Commitment (ACUPCC) agreement signed by President Bruininks in 2008. UMC students formed Crookston Students for Sustainable Development (CSSD) and obtained an $8,000 grant from the Clean Energy Resource Teams (CERTS) for planning of the new residence hall to be constructed according to LEED standards, sponsor sustainability speakers, and establish a $2.00 per student “green fee” to fund a student sustainability assistant. Peter Phaiah conducted research on food waste effects of going tray-less in Dining Services and commenced recycling efforts with recycling bins managed by different student clubs. UMC Students in Free Enterprise (SIFE) increased their sustainability activities, as sustainability is included in their organizational themes. UMC landscape architect, Eric Castle, began development of a campus stormwater and landscape management plan.

In 2009, funding was procured from NW RSDP, CERTS grant, Chancellor’s office, and NW Minnesota Foundation to support hiring the University of Minnesota Center for Sustainable Building Design preparing a climate neutrality plan. Chancellor Casey also established the Center for Sustainability coinciding with the fall dedication of Evergreen Hall as the first LEED-certified residence hall in U of M system. UMC was chosen to partner with Otter Tail Power Company for a Campus Energy Challenge with the objective of reducing campus energy use by 10-15 percent over a 1 ½-year period. UMC was named a host site for the inaugural GreenCorps program and Chris Waltz was appointed as an energy conservation specialist. Lisa Gentele was hired as the first student sustainability assistant supported by the green fee. Recyclemania engagement was coordinated by Peter Phaiah.

In 2010, a revision of the University of Minnesota Crookston Campus Master Plan was approved. The following guidelines from the Master Plan were related to sustainability: which includes the following guidelines related to sustainability:

10. Pursue climate neutrality and efficient energy operations on the Crookston campus.

11. Give priority to building retrofits to achieve energy conservation goals.

12. Adopt energy-related financial policies which enable the University to be socially, environmentally and fiscally informed.

13. Engage and mobilize the Crookston university community in energy conservation.

14. Require future building, technology and infrastructure facility investments to achieve targeted sustainability criteria.

19. Connect campus destinations so that walking and biking is more convenient than driving a private automobile.

24. Encourage use of more sustainable transportation alternatives.

A number of student-led energy conservation promotions were conducted to implement the Otter Energy Challenge as well as infra-structure changes and management efforts to reduce energy use. For a second year, UMC was awarded a host site for GreenCorps program but with stormwater emphasis instead of energy conservation.
The **UMC Center for Sustainability**, in conjunction with the NW RSDP, provides a focus for interdisciplinary, sustainability innovation and action across the Crookston campus and the local community to promote a “Communiversity” theme. The Center provides coordination for the Campus Sustainability Committee, Crookston Students for Sustainable Development, and Student Sustainability Assistants. The Director works closely with Otter Tail Power Company to implement energy efficiency and conservation measures. The Center schedules guest speakers to stimulate integrative thinking and provides sustainability information in the “Green Library” in Hill 109 and on the UMC Sustainability web page.

The **Action Plan for Climate Neutrality and Sustainability** was approved by Chancellor Casey in February of 2011 and provides a functional “strategic plan” for campus sustainability activities. The Sustainability Committee was approved as a standing committee of Campus Assembly. “Smart meters” were installed in 10 campus buildings to better monitor energy usage displayed through the “Power Profiler” graph added to the Sustainability web site. The Green fee was increased to $4.00 to support two sustainability assistants. IonE Mini-Grant of $2,500 approved to host campus and community group, *Sustainability Suppers* to discuss applications of sustainability and implementation of the Action Plan. GreenCorps specialist installed first raingarden in Crookston. Student-led sustainability initiatives continue to highlight campus sustainability efforts. A campus culture that broadly embraces sustainability is slow in coming but faculty and staff interest continues to grow. A proposal to establish sustainability minor is still under consideration illustrating that interdisciplinary programs can be challenging to implement.

**Accomplishments, Future Goals and Focus Areas**

1. **Leadership and Modeling**

The Center for Sustainability aspires to be a UMC campus and community model to stimulate interdisciplinary and integrative thinking and action. Sustainability is an ideal umbrella to connect all disciplines as well as operational services as we strive to prepare students in a “living laboratory” setting for the world after college. These connecting principles are well stated in the Regents policy of 2004, U of M Systemwide Sustainability Goals and Outcomes document of 2009, UMC Action Plan for Climate Neutrality and Sustainability, and the recently updated UMC Campus Master Plan. Outcomes of our campus focus and the Center are perhaps exemplified by our two GreenCorps personnel using their experience as preparation for a regional staff position with Franklin Energy and admission to a Master’s
program at UND in stormwater management, respectively. Students and faculty have worked collaboratively to obtain grant support and install native vegetation and sustainable landscaping in the Youngquist Prairie Garden and the Nature Nook. This provides opportunities for on-campus nature study experiential learning, and Nature Nook carbon sequestration. [Leadership and Modeling, Goals 1, 3, 4, 5]

Goals:
- Continue to promote existing University policy guidelines which embrace sustainability concepts to increase overall efficiency of effort and resources across the campus community and enhancement of the student educational experience.
- Planning for a new residence hall is underway and will take into account energy efficiency and sustainability considerations.
- To increase the regional reputation and visibility of the campus as a “go-to” place for knowledge and demonstration of green technologies and job training, and examples of energy efficiency.

2. Operational and Energy Efficiency Improvements

The engagement of UMC with Otter Tail Power Company in the energy challenge program has yielded many positive results as far as energy use. Otter Tail has provided technical expertise and equipment, facilitated informational sessions with the campus community, and provided over $82,000 in equipment rebates for equipment retrofits to date. Along with bringing Evergreen Hall and its energy saving features into service, infrastructure upgrades in lighting (incandescent to LED, metal halide to Hi-Bay T8, etc.), installation of variable frequency drives (VFD), and air handler controls in various campus buildings have been significant (Table 1.) In addition, Otter Tail provided “Smart Meters” in 10 buildings which provide remotely accessed energy use data via the internet which are displayed on the campus web site (“Power Profiler”) to improve feedback. Otter Tail Power has also selected UMC as the first customer to receive energy planning assistance for the new residence hall under their Commercial Design Assistance program. The Sustainability Suppers series promote implementation of the Action Plan. [Operations, Goals 1, 3 and Energy Efficiency, Goals 1, 2, 3]

Table 1. Infrastructure upgrades at U of M, Crookston.
(Data from Otter Tail Power Company)

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>Rebate from Otter Tail Power</th>
<th>Net Cost</th>
<th>Savings</th>
<th>Payback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting</td>
<td>$61,011</td>
<td>$33,109</td>
<td>$27,902</td>
<td>$13,760</td>
<td>2 years</td>
</tr>
<tr>
<td>VFDs*</td>
<td>$55,000</td>
<td>$26,518</td>
<td>$28,482</td>
<td>$29,835</td>
<td>1 year</td>
</tr>
</tbody>
</table>

*Variable frequency drives
Goals:

- Continue to work with Otter Tail Power and Facilities Management personnel in fine-tuning operational systems to improve energy efficiency and conservation.
- Promote the designation of a campus “energy manager” to monitor energy use, infrastructure improvements, and recommend needs.
- Continue the development of an “energy dashboard” on a touch-screen monitor to be located in the Student Center which will provide real-time data on energy and perhaps other resource use information.
- Evaluate the continued use of coal as the major source of campus heating, using $100,000 that has been earmarked to conduct a comprehensive study of energy sources and uses on campus. Geothermal, biomass, and natural gas will be evaluated as well.
- Engage students in undergraduate research projects to assist in the development of “Operating Manuals” for campus buildings.
- Install a radio frequency identification (RFID) system near the beginning of the bike path to Crookston to monitor bicycle trips to the city (about 1.5 miles) which will record gasoline saved, CO₂ not produced, calories burned, etc., as an incentive to reduce automotive travel to Crookston and increase exercise.
- Continue to expand sustainability connections to local community with regard to energy use and explore biomass utilization options in the region for possible use in UMC’s heating plant.

4. Research

Dr. Katy Smith is actively engaged in greenhouse gas research, evaluating nitrogen gas release from soils in conjunction with the Northwest Research and Outreach Center. Michael Knudson will transition from his GreenCorps position to graduate school at the University of North Dakota where his research topic will address the development of a stormwater management plan for Crookston and the campus. UMC has allocated 50K per year to fund undergraduate student research projects. Some of these have focused on
recycling in Nepal, establishment of campus gardens and sustainable agriculture in northwest Minnesota. A mini-grant program is being established through the Center for Sustainability and will incentivize modest sustainability theme projects. The NWRSDP is currently funding the researching and development of nature adventure parks in Crookston and Warren with staff from the Twin Cities campus, Eric Castle, and a UMC Horticulture student. The Agricultural Utilization and Research Institute funded a student researcher to conduct a feasibility study of methane generation on campus. [Research, Goals 1, 2, 3, 4, 5]

Goals

- Continue to promote UMC undergraduate research topics with interdisciplinary, sustainability themes.
- Promote interdisciplinary faculty research which addresses sustainability topics and involves faculty from other campuses and perhaps community people. UMC departments have a largely untapped potential to learn from each other regarding sustainability.

5. Education and Outreach

A proposal for a minor in Sustainability has been prepared and will be promoted to provide students the opportunity to strengthen their academic credentials. The Center supported the efforts of the NWRSDP and the U.S. Fish and Wildlife Service in sponsoring the Children and Nature Conference which focused on the many benefits of connecting children to nature. The Crookston Students for Sustainable Development meet weekly and is chaired by the two student sustainability assistants. Their focus promotes awareness as well as appropriate projects. Lisa Loegering, Director of Service Learning regularly attends these meeting to connect willing workers with related opportunities in recycling, community clean-ups, etc.

GreenCorps energy specialist, Chris Waltz helped the city of Crookston obtain a $ 99,000 grant and the city of Halstad one for $ 90,000 to offset cost of installing energy-saving LED street lights; both from Minnesota Office of Energy Security. Michael Knudson, a GreenCorps specialist in stormwater management has authored press releases and spoken to various groups to educate a community where the traditional attitude towards stormwater is to move it off the landscape as quickly as possible. He also installed the first raingarden in the city of Crookston at a senior citizen facility. The Center for Sustainability is represented on the Crookston Downtown Revitalization Task Force, Crookston Stewardship Planning Initiative, and promoting the Crookston “Communiversity” Trail. [Education and Outreach, Goals 1, 2, 3]

Goals:

- Implement the minor in sustainability.
- Strive to have tangible and highly visible sustainability related projects and equipment on campus to inform and engage the campus community.
6. **Communication**

The Communications working group of the campus sustainability committee posts press releases to the Sustainability web site and coordinates media events and messages with the University Relations office about speakers, programs, and Otter Tail Power Company events. Once the Energy Dashboard becomes operational, it will provide a variety of resource use data in a very visible location. *[Communications, Goals 1, 2, 3]*

**Goals:**

- Expand the web site for the Center for Sustainability to be more informative, provide more resources, and be more eye-catching.
- Coordinate sustainability messages to be posted on new informational monitors recently installed on campus.
University of Minnesota Duluth

Introduction

The University of Minnesota Duluth has a student enrollment of over 11,000, and is located at the western edge of Lake Superior in northeastern Minnesota. The area’s climate demands a long heating season of the campus heating plant, which is powered by natural gas boilers. The air conditioning season is shorter, but campus chillers are electrically powered. Electricity is supplied by Minnesota Power and mainly generated by coal-fired power plants. Electricity purchases are the largest source of greenhouse gas emissions for the campus; natural gas is second.

UMD has adopted a new Strategic Plan (http://www.d.umn.edu/publications/strategicplan/), along with a Campus Action Plan to assist in implementation. The Strategic Plan will help focus UMD efforts and resources over the coming years, and sustainability is cited as one of seven Core Values for the campus. Goal 6 of the Campus Action Plan states that UMD will

“Enhance UMD’s infrastructure; technologies; and information, financial, and human resources to support the campus in a sustainable manner.”

A large part of this effort will relate to reducing campus greenhouse gas emissions, and addressing campus energy use.

The energy used to heat, cool, and power buildings on campus contributes over 85 percent of the campus carbon footprint, therefore, buildings are a large priority for sustainability activities at UMD. With four LEED-certified buildings on campus, including the U of M’s only Platinum certified building (Bagley Outdoor Classroom) UMD is a leader in green buildings. The campus is also an innovator in terms of grounds management having installed several rain gardens, pervious pavements, green roofs, and other stormwater treatment practices.

The UMD Office of Sustainability was established in fall 2008, and soon afterwards, the first greenhouse gas inventory was completed (for calendar year 2007.) Energy efficiency has been a priority for many years on the campus, and continued building retrofit projects help to reduce the per square foot energy use and greenhouse gas emissions for campus. The UMD Energy Action Plan (Version 2.0 completed in June 2011) outlines ways to further save on energy and reduce carbon emissions through short, medium, and long-term Action Steps.

UMD Sustainability at the Minnesota State Fair
1. Leadership and Modeling

The UMD Energy Action Plan was adopted in December 2010 and updated in June 2011 after gathering comments from the campus and community. The plan, written to meet the climate action planning requirement of the American College and University President’s Climate Commitment, will guide efforts on campus into the future to save energy and reduce greenhouse gas emissions. [Leadership and Modeling, Goal 4; Energy Efficiency Goals 1, 2, and 3]

The UMD Strategic Plan was adopted in Spring 2011, and sustainability is integrated throughout the core values, goals, and action plan steps. In particular, Goal 6 “Enhance UMD’s infrastructure; technologies; and information, financial, and human resources to support the campus in a sustainable manner.” lists action steps that address reducing emissions and integrating sustainable operations and curriculum across campus. [Leadership and Modeling, Goals 2, 3, and 4]

UMD is a reporting school in the Association for the Advancement of Sustainability in Higher Education’s STARS program – Sustainability Tracking and Rating System and made their submission in August 2011. This was the first comprehensive assessment of sustainability efforts on campus, and included operations, education and research, and planning, administration, and engagement. Although the UMD rating was not published, the campus landed near the high end of the Bronze category. Projects over the next year that help integrate sustainability into the UMD curriculum will help lead UMD to a Silver rating the next time the campus reports. [Leadership and Modeling, Goal 4]

2. Operational Improvements

The Bagley Outdoor Classroom building, built to meet a remarkable level of energy efficiency, water conservation, and waste reduction, continues to be used as a base for education and research for many UMD classes (biology, environmental science, outdoor education, etc.) The building itself is a teaching tool, and in the past year over 40 tours have highlighted its many unique and sustainable features. The building is used as a gathering space for many campus groups, and has been highlighted in community tours for architects, engineering groups, and city councilors. [Operational Improvements, Goals 1, 2, and 4; Leadership and Modeling, Goal; Energy Efficiency, Goals 1 and 3; Education and Outreach, Goal 1; Communications, Goal 1]

The first UMD Residence Hall to seek LEED certification, Ianni Hall, was built and opened in Fall 2011. Certification is pending; the building features include energy monitoring by floor, a large bike storage room for residences, and energy and water-efficient fixtures. This Hall is in addition to the four existing LEED certified buildings on campus,
including the Bagley Outdoor Classroom, which remains the University of MN’s only Platinum-certified building. (Life Sciences, Labovitz School of Business and Economics, and Swenson Civil Engineering are the other three buildings to gain certification.) Pursuing LEED certification certifies the campus’ efforts to conserve energy, treat stormwater runoff, purchase green materials, provide healthy indoor spaces, and minimize water use. [Operational Improvements, Goals 1, 2, and 4; Energy Efficiency, Goal 1]

Stormwater management is a leadership area for UMD. The campus location—set in two Lake Superior tributary watersheds, one of which is a trout stream—makes controlling runoff and pollution important. In 2005, a large rain garden was built on campus that is a popular destination for stormwater professionals and community members to learn about stormwater best management practices. Additional rain gardens and runoff treatment methods (green roofs, pervious pavements, biofiltration, underground storage) have been added, along with continued partnership with the Regional Stormwater Protection Team and the LakeSuperiorStreams.org website. Edible landscapes have provided learning opportunities for student groups and campus departments in growing food, and alternative landscapes (wildflowers, sunflowers, and native plantings) are being used to replace some maintenance-intensive sod areas. [Operational Improvements, Goal 1]

The UPASS program remains a popular and sustainable transportation option, especially with UMD students. The UPASS allows ridership of all full-time students, staff, and faculty on the Duluth Transportation Authority bus system. The UPASS is currently provided free-of-charge and has exceeded 4 million rides since its inception. Recently, UMD has been contacted by other universities about this effective mass transportation model. [Operational Improvements, Goal 1]

3. Energy Efficiency

In 2010, the campus used 1 percent fewer kilowatt-hours of electricity compared to 2009, despite opening two buildings: Civil Engineering and the Bagley Outdoor Classroom. [Energy Efficiency, Goals 1, 2, and 3]

UMD greenhouse gas inventory in 2010 showed a 5 percent reduction from our 2007 baseline greenhouse gas inventory. A majority of these reductions come from the improvement of our electricity supplier’s fuel mix (doubling of wind power and biomass, and increased hydropower.) [Energy Efficiency, Goals 1, 2, and 3]
UMD Facilities management staff in the Building Systems Operation Center and the Heating Plant continue to focus whenever possible on energy efficiency and energy conservation. UMD continues to conserve energy by scheduling and operating buildings efficiently, and conducting retrofits for existing buildings such as upgrading lighting and heating/cooling/ventilation systems, and replacing windows and rooftops. This work has resulted in a reduction in the intensity of energy use for heating/electricity, along with associated greenhouse gas emissions by 12 percent since the 2007 baseline year. [Energy Efficiency, Goals 1, 2, and 3]

Increased metering of campus buildings continues, and an online software program now supplies access to information on energy use for 14 campus buildings. (This is in addition to stand-alone buildings which already receive individual utility bills, such as Chester Park, Research Laboratory Building, Natural Resources Research Institute, and more.) Although the interconnectedness of campus buildings is an added challenge, Facilities Management is working to meter buildings when practical. [Energy Efficiency, Goals 1, 2, and 3]

UMD Facilities Management established a small UMD Green Revolving Fund ($100K), in partnership with Stacy Gerths, a student working on a Sustainable Development Opportunity Project. The fund will be used to support energy and water efficiency projects with a payback of 10 years or less. Projects with significant student/faculty involvement and high visibility will also be a priority. [Energy Efficiency, Goals 1, 2, and 3; Education and Outreach, Goal 1; Research Goal 5]

- As the first project funded, the UMD Refrigerator Exchange has helped replace 13 outdated and inefficient refrigerators/freezers on campus, resulting in:
over 14,000 kwh to be saved annually (62 percent increase in efficiency overall) along with over 10 metric tons of CO2-equivalent emissions (greenhouse gas savings estimated using the Clean Air Cool Planet calculator)

- an overall 6-year payback for the replacements to the UMD Green Revolving Fund

- yearly electricity savings of nearly $1,000

4. Research

The Sustainable Agriculture Project at the University of Minnesota Duluth (SAP@UMD) seeks to expand the role that UMD can play as an anchor institution in a broad transformation taking place in the Western Lake Superior region revolving around ideas of food justice, food citizenship and community collaboration. SAP includes a field site consisting of a ten-acre field and a five-acre heritage apple orchard which were part of the former Northeast Experimental Station. SAP@UMD serves as a research and teaching collaborative, as a framework for educating engaged food citizens, and as an incubator for renewing a civic food system. Examples of collaborative initiatives include: a student-centered social enterprise developing around the production of vegetables; student-designed permaculture and ethnobotanical plantings; research and practice related to compost making; a community of practice created around apple cultivation; a foodshed analysis led by a farmer, a GIS technician and an anthropologist; campus edible gardens created through joint effort by facilities staff, students, and faculty; research into public policies to support the revival of a regional food system; and a community food summit organized by SAP@UMD collaborators. (Summarized from an abstract written by David Syring, UMD Anthropology, UMD College of Liberal Arts.) [Research, Goals 1, 2, and 5; Education and Outreach, Goals 1, 2, and 3; and Communications, Goal 1]

Research efforts on sustainability-related issues take place across the UMD campus led by faculty and researchers in many colleges, and especially in the Swenson College of Science and Engineering and its associated research institutions (http://www.d.umn.edu/scse/researchInstitutions/index.html). In particular, sustainability-focused collaborations balancing economic, environmental, and societal impacts take place through the Natural Resources Research Institute, which has a mission of “fostering economic development of Minnesota’s natural resources in an environmentally sound manner to promote private sector employment.”

5. Education and Outreach

Planning has begun to include sustainability as a requirement in UMD Liberal Education Program. Starting in Fall 2012, undergraduates will be required to take one course that meets the Sustainability category requirements. Courses approved for the Sustainability requirement focus on developing an awareness of the interaction of the natural environment with societal needs and desires. The courses may come from a variety of disciplines, including interdisciplinary approaches involving two or more departments. The course will focus on examining the ways in which the science of the natural environment interact with economic, social, and political forces in a local, national, and/or global context. [Education and Outreach, Goals 1 and 3]
Food systems courses are offered, and a food systems certificate program is being developed, through the UMD Office of Continuing Education (http://www.d.umn.edu/ce/); an Environmental Education certificate program is offered currently.  [Education and Outreach, Goal 4]

The UMD Office of Sustainability has supported sustainability integration into courses, through co-hosting a Sustainability Think-Tank workshop with VCAA (September 2011), and sponsoring a Fall 2011 Book Group (The Sustainable Learning Community) to help promote further cooperation between disciplines in integrating sustainability into courses. [Education and Outreach, Goals 1, 2, and 3]

Recently, UMD was well-represented by students, staff, and faculty at the Upper Midwest Campus Sustainability Conference and University of Minnesota Sustainability Leadership Workshop on Sept 23-24, 2011 at the University of Minnesota Morris campus. Five UMD Students (Carl Berwald, Stacy Gerths, Nate Levendoski, Kevin Pexa, Lanae Smith), one staff member (Mindy Granley), and one faculty member (David Syring) attended Creating Change Together, the 2011 Upper Midwest Campus Sustainability Conference. Syring presented The Sustainable Agriculture Project at UMD (SAP@UMD), co-authored by Randy Hanson. Granley and Levendoski presented Lessons learned: effective sustainability communications on a lean budget. Pexa presented a poster about the UMD Students for Sustainable Agriculture Project. Pexa, Smith, and Levendoski gave a 5-minute "Lightning Talk" on Reviving the UMD Farm. Gerths and Granley shared information through a "Lightning Talk" on Investing in energy savings: the UMD Green Revolving Fund. [Education and Outreach, Goal 1; and Communications, Goal 1]

Students have taken the lead on carbon reduction activities, ranging from creating a UMD Green Revolving Fund, taking part in a solar research project at Malosky stadium, attending sustainability fairs and events, volunteering, working on class projects focused on campus operations, or interning/working with the UMD Office of Sustainability on resource conservation. A recent student audit of laboratory fume hoods on campus (by student Evan Engaman) identified areas where ventilation could be adjusted to help save energy. [Education and Outreach, Goal 1; Research, Goal 5; and Energy Efficiency Goals 1, 2, and 3]
6. Communication

Engaging the campus in energy conservation makes a difference. Nearly 400 campus members have signed onto the UMD Energy Pledge. Winter break energy conservation efforts continue to save resources and reduce greenhouse gas emissions. The UMD Sustainability website, www.d.umn.edu/sustain has been improved and serves as a useful resource for students, staff, and faculty. Campus energy-conservation announcements help keep the campus community informed and engaged.

[Communication, Goal 1; and Energy Efficiency, Goal 2]

The UMD Sustainable Agriculture Project (SAP@UMD) recently won a community apple orchard through a nationwide contest of online voting. The contest, sponsored by Edy’s Fruit Bars, ended in June 2011 with UMD being one of the winners of an orchard. Details at http://www.communitystakeroot.com/. The participation in online voting by UMD and Duluth community members showed strong support for the UMD orchard proposal. In Spring 2012, the orchard will be planted and 100 percent of the apples harvested from the community orchard will benefit the surrounding Duluth area.

[Communication, Goal 1; and Education and Outreach, Goal 1]

**Action Steps for Campus**

**Duluth**

Implement the UMD Strategic Plan: The Strategic Plan helps to focus UMD efforts and resources on sustainability, which is listed as a core value. Sustainability is most directly addressed in Goal 6 of the accompanying Campus Action Plan, which lists short, medium, and long-term actions steps.

**Goal 6:** Enhance UMD’s infrastructure; technologies; and information, financial, and human resources to support the campus in a sustainable manner.

<table>
<thead>
<tr>
<th>UMD Greenhouse Gas Emissions, 2010</th>
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<tbody>
<tr>
<td><strong>Total CO2-equivalent emissions:</strong> 54,557 metric tons of CO2-equivalent</td>
</tr>
</tbody>
</table>

[Diagram showing distribution of greenhouse gas emissions]
• Expand the campus master plan to incorporate more depth in sustainable planning issues. These should include effective use of green space, community connectivity, alternate transportation (bike and walking paths) and inclusion of outlying properties (May 2012).

• Reduce campus greenhouse gas emissions in line with the UMD Energy Action Plan (Immediate and Ongoing).

• Infuse the concept and application of sustainability into our curriculum and co-curriculum, our research activities, and our use of facilities (immediate and ongoing).

Reduce Greenhouse Gas emissions 25 percent by 2020: Future challenges for progress on reducing greenhouse gas emissions at UMD include the long heating season, the electricity use for air conditioning of buildings, the need to meter individual buildings (difficult for the connected layout of the UMD campus), and reducing energy use despite a growth in student enrollment and an increase in square footage of campus. The UMD Sustainability Committee will establish a work team to develop ideas for a campus energy policy and for future projects to help supply clean energy to the campus.

Seek creative funding sources for energy projects: Funding for energy efficiency projects in the past has been provided by UMD Facilities Management, energy savings, and the Higher Education Asset Preservation and Replacement funds. In 2010, the small UMD Green Revolving Fund ($100K) was established in order to help fund energy improvement projects, especially those suggested and researched by UMD students, staff and faculty. However, future energy projects will require additional funding sources and our campus will continue to look for grants, industry partnerships and other funding opportunities to accomplish Energy Action Plan goals.
University of Minnesota, Morris

Introduction

The University of Minnesota, Morris, is situated in a unique location in west-central Minnesota. The City of Morris is the county seat of Stevens County and is on the Minnesota prairie. The region has many important assets. The soil is young and productive despite the short Minnesota growing season, and if one visits in summer you will see corn and soybeans from horizon-to-horizon in each direction. To reach Morris, one would travel Interstate 94 for about one-and-a-half hours northwest to Sauk Centre, and then travel west on a county road for one hour. From a distance outside of Morris, one would begin to see twin University of Minnesota wind turbines, situated on a glacial ridge above the Pomme de Terre River, located around the U of M West Central Research and Outreach Center. The region is rich in natural resources, abundant biomass and sun, and winds that spin turbine blades and discourage mosquitoes.

The history of this region and campus are equally rich. Since the late 1800s, this campus has been a place of learning. It began life as an industrial boarding school for American Indians, under the auspices of the Sisters of Mercy. The experiment of integration began to falter in the early 1900s and the federal government stepped in to continue it until about 1910. During the next fifty years, the land and buildings became home to the West Central School of Agriculture, transmitting important skills and knowledge to regional youth for decades. Many graduates of the WCSA are still living in the region and are proud of its heritage. In 1960, the educational experiment in Morris evolved again, and the lands became the University of Minnesota’s first and only public liberal arts college. For the past fifty years, the University of Minnesota, Morris has served a dedicated population of students seeking a small, residential college experience with a focus on teaching excellence. Today the Morris campus serves about 1,900 students seeking an undergraduate education. The campus does not offer any masters or doctoral degrees.

The Morris campus has the highest percentage students of color in the U of M system. UMM student body is 20 percent students of color, 12 percent of whom are American Indian. The UMM student body travels widely and has been nationally recognized for their adventurousness. Our students are serious scholars, with large percentages of the body taking part in undergraduate research, scholarly and creative work and eventually, attending graduate schools to pursue their educations.

In the past decade, the connections between how we live, how we treat our land and natural resources, and how intertwined these considerations are has never been clearer. In our 1973-1975 bulletin, it reads, “UMM is in the continual condition of “becoming,” changing as the vision of its participants changes, reflecting as an institution the ceaseless learning which is life both to community and to educated women and men.” Today this learning has come full circle and connects liberal arts learning to the themes of sustainability. Our new tagline for the Morris campus reads, “A renewable, sustainable education.” As a
campus community, the University of Minnesota Morris is working to infuse our curriculum, co-
curriculum and campus life with opportunities to ask big questions, and find big solutions. Together, the
history and regional abundance provide a unique opportunity and place for our students to explore these
questions, the ethic of sustainability, and their own educational and personal development.

Campus Sustainability Highlights

- A second 1.65MW wind turbine was erected at UMM this year – in combination with the first turbine
  Morris expects to provide over 70 percent of the campus’s electricity on an annualized basis for the
  next 25 years. The new turbine dedication took place September 2011, coinciding with UMACS, a
  regional sustainability conference.

- The UMM biomass gasification facility continues to displace fossil-fuel feedstocks with Minnesota-derived biomass, with a
  goal of offsetting more than 70 percent of our previous natural gas and fuel oil usage. There are now days at the Morris campus
  where all electricity and heating/cooling is obtained from renewable energy assets.

- Crocus Valley, the student organic garden, began a new venture this year, and planted a Native American Garden in collaboration
  with several partners and respected elders.

- A “Solar Swim” community event was developed and held in collaboration with a student leadership
  team, faculty and staff, to celebrate the new 32-panel solar thermal installation at the Regional Fitness
  Center.

- Several visits with respected guests culminated in significant engagement events. For example:
  During the Barbara Freese (a former assistant Minnesota attorney general) visit, Morris held an Open
  Space community discussion around energy and climate with the regional community. During the Jim
  Farrell (a distinguished professor from St. Olaf College) visit, UMM held a sustainability-across-the-
curriculum faculty workshop.

- UMM students received continued recognition, including a National Wildlife Federation Campus
  Ecology Fellow, and a Newman Civic Fellow Award.

- UMM continues to partner in the development and work of the Minnesota GreenCorps program with
  the Minnesota Pollution Control Agency, with five student AmeriCorps members. UMM also received
  a competitive three-year grant award to continue the program. Center for Small Town at Morris
  partnered with MCPA to create the program.

- The Center for Small Towns has engaged a record number of students engaged in community
  outreach work.
A new Morris campus outreach initiative, called the Carbon College, hosted Carbon 101, an informative lecture series for community members to increase their carbon-related knowledge. It was taught by a former USDA soil scientist and adjunct professor from University of Minnesota, Twin Cities, Dr. Don Reicosky.

UMM conducted a successful University of Minnesota Systemwide student Sustainability leadership conference with a focus on student leadership and cross-campus collaboration in September 2011.

The Morris campus hosted the Upper Midwest Association for Campus Sustainability (UMACS) 2011 conference in September 2011, bringing together sustainability leaders from across the region, including students, faculty and staff. This was the largest UMACS conference so far with 180 participants.

Accomplishments, Future Goals and Focus Areas

1. Leadership and Modeling
The Morris campus is playing a national leadership role in advancing sustainability, energy production, conservation and policy initiatives. UMM is also consistently produces student sustainability leaders. The University of Minnesota Morris strategic and master plans feature sustainability, energy production and conservation, and food procurement components. The Morris campus is a charter signatory of the American College and University Presidents Climate Commitment (ACUPCC).

The Morris campus was a pilot site and is a charter signatory of Association for the Advancement of Sustainability in Higher Education STARS program, a sustainability tracking and rating system. UMM participated in a Rocky Mountain Institute Advancing Campus Climate Initiatives project and was featured as a campus leader. In 2006, UMM hired the first sustainability coordinator in the U of M system. Morris campus Chancellor Jacquie Johnson is a member of the AASHE Board of Directors and ACUPCC. Vice-Chancellor Lowell Rasmussen is a board member of the American Council on Renewable Energy Higher Education Steering Committee. The Morris campus Center for Small Towns continues its collaboration with MPCA in advancing a new AmeriCorps program in Minnesota, the GreenCorps. UMM is a charter member of the Pride of the Prairie, one of the longest running local food programs in Minnesota Higher Education. Morris campus and community partners,
including Blue Cross and Blue Shield of Minnesota, are currently advancing the **Morris Healthy Eating Initiative** to bring even more local, sustainable food to the table of students and citizens. These efforts have culminated in a campus student organic garden (called Crocus Valley) and a Native American Organic garden. UMM students are actively engaged in all of these initiatives and creating new ones.  

**[Leadership and Modeling, Goals 1, 2, 3, 4, 5, 6]**

### 2. and 3. Operational Improvements and Energy Efficiency

UMM operational work has examined everything from what we eat, to how we heat, to what we drive. The two University of Minnesota wind turbines will provide 70 percent of Morris’s electricity on an annualized basis for the next 25 years. And the Morris campus biomass gasification facility continues to displace fossil-fuel feedstocks with Minnesota-derived biomass, with a goal of offsetting more than 70 percent of the previous natural gas and fuel oil usage. In fact, there are now days at the Morris campus where all electricity and heating/cooling are obtained from renewable energy assets. This is not reflected yet in the carbon footprint profile but reductions from renewable energy will be available starting in 2011.

**[Pie chart: Morris Carbon Footprint: Sources and Trend]**

UMM has finished an energy service contract (ESCO) to improve the campus’s conservation efforts, which includes building improvements, equipment upgrades, more efficient lighting and windows, and new renewable energy technologies – with expected savings of 6 percent over the next 15 years. These reductions represent work completed in the ESCO contract and relate to conservation measures in electrical consumption. Biomass is not factored into this information as the plant was not running in production mode in 2010.

### Total Metric Tons of CO₂

<table>
<thead>
<tr>
<th></th>
<th>Pre Project</th>
<th>Post Project</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Contribution</td>
<td>8,005</td>
<td>6,034</td>
<td>1,971</td>
</tr>
<tr>
<td>Fossil Fuel Consumed On Site - Buildings</td>
<td>4,901</td>
<td>4,745</td>
<td>156</td>
</tr>
<tr>
<td><strong>Total CO₂ Footprint (Metric Tons)</strong></td>
<td><strong>12,900</strong></td>
<td><strong>10,780</strong></td>
<td><strong>2,120</strong></td>
</tr>
</tbody>
</table>
At the Morris campus one can see and experience wind, biomass, solar thermal, solar PV systems, and more. The newly renovated and historic Welcome Center (National Registry of Historic Places) is on track to becoming a LEED-Gold certified building. UMM is converting their transportation fleet over to hybrids to conserve fuel and lower greenhouse gas (GHG) emissions – over 40 percent of the fleet is hybrid. A green cleaning policy has been instituted at the Morris campus and efforts continue to improve the food system. For example, there are no trays in the dining hall at UMM, which has eliminated 50 percent of food waste, and UMM continually increases the amount of local food brought to the dining tables. The goal is 50 percent locally sourced and organic food by 2013. UMM has plans to build a green residence hall in the near future, the Green Prairie Living and Learning Residence Hall. [Operations, Goals 1, 2, 3, 4 and Energy Efficiency, Goals 1, 2, 3, 4, 5]

4. Research
The Morris campus faculty and students are engaged in a variety of research areas that connect to our sustainability mission. UMM has established a relatively new Environmental Studies and Environmental Science programs to encourage multidisciplinary collaboration. The Morris Environmental Studies department participated in the Engaged Department Program through the U of M system, identifying ways that their research could impact community needs. One faculty member in Environmental Studies and Economics and Management, realigned some of his research to help understand the benefits and tradeoffs of community versus corporate wind projects. He was sought by the Minnesota Legislature to give testimony about this topic. Faculty members have performed other community engaged research in collaboration with the Center for Small Towns addressing pressing needs of communities. A sampling of other research at UMM includes: investigations into antibacterial resistance at organic versus conventional dairies, synthesis of new materials for LEDs, new synthetic paths for making ammonia, nature-inspired poetry, sustainability-themed theater (Fashion Trashion) and art, and investigations into the effects of climate change on the prairie, local food systems analysis, and more. UMM also had a successful sustainability-across-the-curriculum workshop that reached all areas of campus scholarship. [Research, Goals 1, 2, 4, 5]

5. Education and Outreach
The Morris campus outreach and educational work continues to evolve in the curricular and co-curricular offerings. In October 2011, three UMM chemistry faculty received the 2012 American Chemical Society Award for incorporating Sustainability into Chemistry Education. UMM offers numerous renewable energy tours to
students and many visitors each year from both educational and business sectors. UMM has made sustainability and energy a part of everyday activities. Sustainability is incorporated into the new faculty and student orientation experiences on campus. Students and student groups have played a catalyst role in creating new opportunities that reflect this change. Students help lead the on-campus recycling program.

UMM has a sustainability floor in the residence halls and students lead a month-long sustainability-themed and energy reduction competition in February each year. A Morris GreenCorps member coordinated the entire regional competition in 2011. The Morris Center for Small Towns partnered with MPCA to create the GreenCorps program and UMM is the first and only campus in Minnesota to engage undergraduate students in this AmeriCorps service program. UMM has also developed new educational opportunities including offering renewable energy courses focused on biomass gasification, hosting an industry short course on biomass gasification, and developing online course information. Finally, engaged students have helped to write grants and secure funding for a solar thermal system on the Regional Fitness Center in Morris. The Morris Office of Community Engagement has doubled the number of sustainability-related service-learning courses since 2006, with a goal of reaching 25 percent sustainability-related courses. UMM has also launched a new outreach and educational initiative, called the Carbon College, which offered a series of lectures to help regional community members speak “the language of carbon.” UMM plans to extend the work of the Carbon College in 2011. UMM hosted an important regional sustainability conference this year, which brought many sustainability leaders to the Morris campus. This was the largest UMACS conference so far with 180 participants. [Education and Outreach, Goals 1, 2, 3, 4]

6. Communication

The University of Minnesota, Morris campus tagline is, “A renewable, sustainable education.” The branding is reinforcing our campus commitment to sustainability. UMM has worked to improve sustainability messaging across campus and with outside audiences. A new sustainability piece has been developed that will help communicate the efforts with students and other audiences. There is an improved sustainability presence on the website, informational kiosks on campus that provide real-time monitoring information, a Green Tour that can be accessed from the web, a campus “green features” map and more. UMM continues to improve the website and available information about these efforts. UMM has a goal of increasing the data available to students to manage their own personal carbon footprint. [Communications, Goals 2, 3]

Action Steps for Campus

- Use STARS framework to assess the progress, celebrate accomplishments and existing work, and to prompt future actions.
• Advance healthy eating and sustainable food procurement goals with the Morris Healthy Eating Initiative partners.
• Advance sustainability-focused, community-engaged efforts through increased collaboration with Center for Small Towns, GreenCorps, Office of Community Engagement, Office of Sustainability, Carbon College and other campus units.

Continue to advance renewable energy and conservation work by identifying new opportunities to conserve financial resources and shrink the carbon footprint.

GlobalEcoGuy Jonathan Foley Tweets:

“Sustainability is about building an enduring prosperity for people and the planet.”
University of Minnesota
Twin Cities

Introduction

Situated in the heart of one of the nation’s most vibrant metropolitan communities, the Twin Cities campus (UMTC) has grown since its founding in 1851 from a handful of scholars into a bustling academic community of over 52,000 students and 16,000 faculty and staff. Through 19 colleges and schools, and 200 interdisciplinary centers and institutes, the flagship campus of the University of Minnesota engages in research, instruction, and public engagement of tremendous breadth. From medicine to business, law to liberal arts, and science and engineering to agriculture, UMTC is home to a rich, unequaled portfolio of programs which are a source of enduring value to Minnesota and the world.

The span and size of the campus’s intellectual endeavors are reflected in its infrastructure and operations. The campus is comprised of three distinct geographies: East Bank, West Bank, and St. Paul. Straddling the Mississippi River, the East and West Banks of the Minneapolis campus include over 160 buildings and the St. Paul campus, located in the suburban city of Falcon Heights, is home to another 100 University facilities. Combined, UMTC has over 22 million gross square feet of facilities to support the academic enterprise. The campus is the third largest traffic generator in the state and third largest purchaser of electricity from Xcel Energy.

The Twin Cities campus of the University of Minnesota is among the largest, most comprehensive, and most prestigious public universities in the world. This size and complexity create both unique opportunities and challenges.

Sustainability is essential within a decision-making framework to capitalize on the breadth and depth of our institution. As a topic of scholarship, sustainability related questions can be relevant to academic disciplines across the institution and the subject can bring together faculty from disparate disciplines to create groundbreaking discoveries. Sustainability is also a set of organizing principles that can transcend and be relevant to all the activities of the institution, from the core functions of teaching, research, and outreach, to the operations that support them. Numerous initiatives at UMTC demonstrate how sustainability thinking has overcome the challenges of working in a large, multifaceted institution to produce outcomes of substantial impact and significance. Recent examples of this include the formation of the interdisciplinary minor in sustainability studies, the success of faculty teams working on sustainability topics, and the energy savings achieved at the Twin Cities campus.

In 2010, a UMTC campus-wide sustainability committee was established to build on our prior successes in sustainability. Over the last year the committee took important actions to further implementation of the Board of Regents Policy: Sustainability and Energy Efficiency, including the creation of a plan to substantially reduce and eventually eliminate greenhouse gases attributable to the campus. The committee also created a process for broad engagement and coordination of administration, faculty, students, and staff on the topic of sustainability.
Over the last year and half the UMTC campus has expanded upon existing sustainability initiatives and advanced implementation of the Regents Policy: Sustainability and Energy Efficiency through the following actions:

- **Formed the Twin Cities Sustainability Committee.** In April 2010, President Bruininks created the Twin Cities Sustainability Committee to guide and facilitate the implementation of the Regents policy. The Committee includes administration, faculty, students, and staff, and has been hugely successfully in developing a means for broad engagement and coordination.

- **Developed a climate action plan.** The Committee developed a plan for cutting UMTC greenhouse gas emissions in half by 2021 and reducing them to zero by 2050. The plan helps the University system fulfill its commitment to the American College and University Presidents’ Climate Commitment, which the University signed in 2008.

- **Participated in a national benchmarking program.** Through the Committee’s coordination and leadership, UMTC completed a comprehensive benchmarking effort to provide institutions across the United States and Canada a way of measuring their sustainability performance. The Association for the Advancement of Sustainability in Higher Education’s Sustainability Tracking, Assessment, and Rating System (AASHE STARS) enables meaningful comparisons over time and across institutions using a common set of measurements.

The remainder of the report for the Twin Cities campus details some of the accomplishments for the prior 18 months and goals for the coming year. The accomplishments and goals are organized according to the guiding principles articulated in the Regents Policy: Sustainability and Energy Efficiency and the Systemwide Sustainability Goals, Outcomes, Measures, and Process report. Due to the size of the Twin Cities campus, only a sample of the sustainability related activities, accomplishments, and goals for the campus community are chronicled.

**Accomplishments, Future Goals and Focus Areas**

1. **Leadership and Modeling**
   
   Formed in 2010, the Twin Cities Sustainability Committee guides implementation of the Regents Policy Sustainability and Energy Efficiency and goals established by the Systemwide Sustainability Goals and Outcomes Committee. The Twin Cities Sustainability Committee has developed a process for broad
consultation, goal setting, and prioritization that includes faculty, students, administrators, and staff. Supported by full-time sustainability staff from University Services, the UMTC Committee undertakes initiatives that further the University’s sustainability leadership.

**Highlights:**
UMTC participated in a comprehensive benchmarking effort to provide institutions across the United States and Canada a way of measuring their sustainability performance. The Association for the Advancement of Sustainability in Higher Education’s Sustainability Tracking, Assessment, and Rating System (AASHE STARS) enables meaningful comparisons over time and across institutions using a common set of measurements. UMTC is one of four Big 10 institutions and 229 charter participants in AASHE STARS. On its first submission to STARS, UMTC received a Silver Rating from AASHE for the campuses sustainability programs, initiatives, and accomplishments. The STARS inventory recognizes the Twin Cities’ leadership across the country in integrating sustainability into education, research, operations, and outreach, in accordance with the Regents Policy on Sustainability and Energy Efficiency. [*Leadership and Modeling, Goal 1*]

UMTC also earned an ‘A,’ the highest grade possible, from the Sustainable Endowments Institute’s College Sustainability Report Card in the fall of 2010. The Report Card assesses the 300 institutions with the largest endowments in the United States and Canada, plus 22 other institutions that have applied for inclusion in the assessment. UMTC was one of two institutions to earn straight A’s across all nine categories of assessment, reflecting the University’s progress in integrating sustainability broadly across the campus. [*Leadership and Modeling, Goal 1*]

<table>
<thead>
<tr>
<th>Sustainability Report Card Grades</th>
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<tbody>
<tr>
<td>2007 B-</td>
</tr>
<tr>
<td>2008 B</td>
</tr>
<tr>
<td>2009 B+</td>
</tr>
<tr>
<td>2010 A-</td>
</tr>
<tr>
<td>2011 A</td>
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Figure: Annual Grades on the Sustainable Endowments Institute Sustainability Report Card from 2007 – 2011 for UMTC.

In October 2011 UMTC became a signatory to the Billion Dollar Green Challenge. This initiative spearheaded by the Sustainable Endowments Institute encourages higher education institutions across the United States to collectively invest a total of $1 billion in revolving loan funds that will pay for energy efficiency upgrades on their campuses. UMTC has had a revolving loan fund for this purpose since 1998. The fund is currently valued at $4 million and pays for energy efficiency projects with a payback period of six years or less. The campus was pleased to join Green Challenge to demonstrate how these investments can yield both environmental and economic benefits. [*Leadership and Modeling, Goal 3*]

**Objectives:**
Continue participation in AASHE STARS, contribute to STARS’ future development, be a leader among large institutions in public reporting on sustainability, and improve our score on the next submission. [*Leadership and Modeling, Goal 1*]
2. Operational Improvements

Sustainability principles and goals have long been embedded in operational support units such as Parking and Transportation, Facilities Management, Capital Planning and Project Management, University Dining Services, and Housing & Residential Life. These departments and many others are continually taking steps that reduce the campus’ environmental impact, support the surrounding community, and efficiently use financial resources from the state and tuition.

Highlights:

A Radio Frequency Identification (RFID) Program for bicyclists was implemented by UMTC Parking and Transportation during 2011. The RFID program allows bicycle commuters to voluntarily track their trips through a radio tag attached to each person’s bike. Data is collected when the bike passes an RFID reader on campus which records his or her mileage and reduced carbon footprint. Currently, a program is being developed to incentivize this healthy, environmentally friendly option for traveling to work. [Operations, Goal 3 and Leadership and Modeling, Goal 5]

The UMTC University Bike Center opened in fall 2011. Located in the Oak Street Parking Ramp, the Bike Center will provide secure bike parking, shower facilities, repair services, and other amenities to encourage bike commuting. The Center was funded through a federal grant and is being operated by The Hub Bike Co-Op, a local Twin Cities business. [Operational Improvements, Goal 3]

Housing & Residential Life and the University ReUse Program collaborated to collect unwanted goods from UMTC residents moving out of University residence halls at the end of spring semester. After Housing collected the items during move out, ReUse sent them to local charities, which included:

- 406 lbs. of food donated to the Wellstone Foundation,
- 3,161 lbs. of clothes donated to Joseph's Coat and Families HF, and
- 110 lbs. or 181 cell phones donated to Cell Phones for Soldiers. [Operational Improvements, Goal 4]

Facilities Management began the Gopher Green Team Cleaning program in August 2011, which encompasses all FM supported buildings on the UMTC campus. This program will reduce the amount of chemicals FM purchases for regular, daily cleaning to six, with four of the six certified as Green Seal Certified products. The program also utilizes vacuums with HEPA filtration and reusable microfiber clothes. The new program is expected to create healthier spaces for those using the cleaners and occupying the buildings while saving the campus $3.1 million annually. [Operational Improvements, Goal 1, 2, and 4]
Objectives:
UMTC Parking and Transportation Services is purchasing a hybrid bus to replace the East Bank Campus Circulator, connecting the East and West Banks. The bus is expected to be delivered to campus in September 2012 and will increase fuel efficiency of the bus fleet. [Operational Improvements, Goal 3]

Sustainability by the Numbers

6,000,000
Pounds Recycled Annually by the Campus.

$180,000
Amount saved by recycling…and it’s good for the planet too.

UMTC Recycling has teamed up with the It All Adds Up conservation campaign to set a goal to increase waste diversion by 5 percent or 450 tons of materials by the end of 2012. This will reduce 900 tons of CO2 from entering the atmosphere and save more than $50,000 annually. [Operational Improvements, Goal 4]

A bus tracking and passenger counting system will also be installed on buses across the UMTC campus, which will allow riders to find out arrival times and occupancy of each bus. Parking and Transportation anticipates an increase in bus ridership as a result of the new system. [Operational Improvements, Goal 3]

University Services’ goal is to have 50 percent of the Twin Cities vehicles as hybrid, alternative fuel or nontraditional vehicles by the end of 2015. [Operational Improvements, Goal 3]

3. Energy Efficiency
In their role coordinating and ensuring a supply of energy to the campus, University Energy Management is guided by three principles – Cost Effectiveness, Reliability, and Sustainability – and their performance reflects those principles. The UMTC campus consistently gets the power it needs to ensure the success of the academic enterprise while avoiding increased utility costs and emissions to the environment.

Highlights:
A plan has been developed and will be presented with the University’s state bonding request this spring to construct a Combined Heat and Power Facility on the Twin Cities East Bank. The facility will address future needs for steam on the UMTC campus, reduce costs for purchased electricity, and reduce emissions to the environment. It is expected to reduce the carbon footprint by 60,000 Metric Tons of CO2 equivalents [Energy Efficiency, Goal 3]

Sustainability Successes

Working closely with Energy Management, the Sustainability Committee was able to set a goal in the Climate Action Plan to reduce coal use in the on-campus steam plants. Energy Management began implementing the plan Spring 2011 and is striving to reduce coal use by up to 85% without compromising reliability or adding costs.
Annual, recurring cost avoidance equal to 5 percent of FY10 and FY11 energy costs was achieved. In total, over $4,600,000 in steam, electric, gas and water cost savings / avoidance was realized and CO₂ emissions were reduced by approximately 50,000 tons. \[\text{Energy Efficiency, Goal 1}\]

Energy Management began using benchmarking programs to evaluate the energy efficiency of UMTC campus buildings. The United States EPA’s Energy Star Building Certification System and the State of Minnesota’s Buildings, Benchmarks and Beyond (B3) Benchmarking Tool were both incorporated into Energy Management’s analysis efforts. Two Twin Cities campus buildings were certified as Energy Star buildings in FY11. Donhowe earned a rating of 90 and the Education Sciences building a score of 93. Energy Star buildings typically cost less to operate and maintain, while providing safe, healthy environments to work and study. \[\text{Energy Efficiency, Goals 1 and 3}\]

A Climate Action Plan was completed for UMTC laying out an ambitious, but achievable plan to reduce emissions 50 percent from 2008 levels within the next ten years. While working on the plan, the Twin Cities Sustainability Committee hosted many campus and community sessions to obtain input and reactions about the proposed Climate Action Plan. The committee engaged students, staff, faculty, government leaders, and community members, resulting in a collaborative and inclusive process. \[\text{Energy Efficiency, Goal 3 and Leadership and Modeling, Goals 1, 2, 3, 4, and 5}\]

A second Greenhouse Gas Inventory was completed for the campus to meet our reporting obligations to the American College and University Presidents’ Climate Commitment. \[\text{Energy and Efficiency, Goal 3, Leadership and Modeling, Goal 4}\]

Objectives:

A 5 percent energy consumption avoidance goal has been established for FY12. This represents another $2 million in annual, recurring cost avoidance, which will be accomplished through building recommissioning and an energy conservation campaign. \[\text{Energy Efficiency, Goal 1 and 2}\]

Begin implementing the strategies within the Climate Action Plan to reach the goal of a 50 percent reduction in greenhouse gas emissions in 10 years. \[\text{Leadership and Modeling, Goal 4}\]
4. Research
Sustainability is heavily embedded in research at UMTC. Faculty are conducting groundbreaking sustainability research in a multitude of areas including renewable energy, consumer behavior, economics, industrial psychology, education, agriculture, biology, horticulture, and chemistry. In addition, many of the campus’s institutes and centers are focused on topics focused on or related to sustainability.

Highlights:
Fourteen UMTC faculty from 13 departments and eight colleges and schools were named resident fellows of the U’s Institute on the Environment in September 2011. Representing a broad range of disciplines, the new fellows joined 32 others in taking on the task of building bridges across disciplines to solve environmental challenges. [Research, Goals 1 and 4]

Earthducation, a seven-continent journey to explore the meaning of education in different cultures and create a global narrative describing the connections between education, environment and sustainability began in January 2011. Traveling by motorcycle, foot, bike and SUV, expedition members led by Aaron Doering and Charles Miller, faculty in the College of Education and Human Development, will visit seven “climate hot spots” around the world – places particularly impacted by climate change. While on the expedition, the project will use adventure learning models to engage teachers and students from around the world via the web. [Research, Goal 2]

The Institute on the Environment began a new partnership with the Natural Capital Project, a worldwide effort to align economic forces with conservation. The other partners include Stanford University, The Nature Conservancy and World Wildlife Fund. Founded in 2006, the Natural Capital Project aims to mainstream the values of nature into major resource decisions. Working with public, private and nonprofit partners around the world, “NatCap” is developing practical, science-based software for mapping and valuing societal benefits provided by healthy ecosystems. [Research, Goal 1]
A multi-disciplinary team of researchers led by UMTC computer science professor Vipin Kumar in the University’s College of Science and Engineering was awarded a $10 million grant from the National Science Foundation (NSF) to study climate change. The team includes faculty and researchers from the University’s College of Science and Engineering, College of Food, Agricultural and Natural Resource Sciences, College of Liberal Arts, and the Institute on the Environment, as well as researchers from North Carolina A&T University, North Carolina State University, Northwestern University and University of Tennessee/Oak Ridge National Laboratory. [Research, Goal 1]

The University of Minnesota St. Anthony Falls Laboratory in the College of Science and Engineering was awarded a $7.9 million United States Department of Energy (DOE) wind energy research grant in 2009. The award supports an academy-industry consortium focused on wind energy research, education activities and construction of a U.S.-made 2.5 megawatt Clipper Liberty wind turbine. Fotis Sotiropoulos, director of the St. Anthony Falls Lab is the consortium leader. In October 2011, DOE officials, energy industry partners, wind energy researchers, political leaders, University administrators and hundreds of local school children watched the ceremonial “flip of the switch” to start up a 263-foot-tall wind turbine at the U’s new Wind Energy Research Station at UMore Park.

Development of the UMore Park community Sustainability Action Plan is underway. In April 2011, more than 150 people attended an event to help identify goals and strategies to achieve sustainability across ten key areas including health, sense of community, culture, job creation, energy, water, the landscape and others. The goal-setting process was led by international nonprofit BioRegional. [Research, Goal 5]

**Objectives:**

Develop and implement a process to enable use of the East and West Banks, and St. Paul campus landscapes and infrastructure as a living laboratory for research and education. [Research, Goal 5 and High Level Goal 2]

Plan and implement a sustainability research symposium to highlight, encourage, and enrich sustainability scholarship by students. [Research, Goal 4]

5. **Education and Outreach**

The UMTC campus has numerous sustainability related undergraduate majors and graduate programs, and it started one of the first Sustainability Studies Minor programs in the country, which now serves as a model for other universities. The minor’s interdisciplinary nature enables students from any major to enroll and it provides skills that are critical for future prosperity.
Highlights:

With a curriculum and learning goals established by faculty from seven UMTC colleges and students drawn from over 50 different majors, the Minor successfully breaks down academic silos. More than 600 students have completed one or both of the core courses and about 200 have graduated with the Minor or with a sustainability component within an interdisciplinary major. An internship course established in 2009 offers students experience in implementing sustainability plans, practices and products in non-profit, governmental, corporate and campus settings. A carbon policy course established in 2010 considers whether and how current and prospective local, state, national and international public policies respond to increasing levels of carbon and other greenhouse gases in the atmosphere. More information at http://sustainabilitystudies.umn.edu [Education and Outreach, Goal 1]

Housing & Residential Life increased opportunities for students to learn about sustainability in the residence halls. The Sustainability Education Coordinator, a part-time student employee, develops sustainability programs and resources for residence hall staff to deliver to students. [Education and Outreach, Goal 1]

Over 15 students involved in sustainability initiatives on the Twin Cities campus traveled to the University of Minnesota, Morris for a systemwide sustainability leadership event. The event provided several students the opportunity to present work they are doing on campus to advance sustainability. It also created an opportunity to share and connect with peers from across the system on topics of mutual interest. [Education and Outreach, Goal 1]

Objectives:

Maintain long-term synergies, as well as efficiencies, among sustainability education initiatives through building the capacity of the Sustainability Education Network of University of Minnesota Faculty (the Network). Started last year, the Network is a multidisciplinary collaboration among over fifty faculty and staff members across twelve schools and colleges in the University system. Working with the Sustainability Studies minor and other partners, the Network’s goal is to increase coordination, communication, and marketing across the emerging suite of sustainability-related programs. [Education and Outreach, Goal 3]

6. Communication

Communication efforts on sustainability topics is a multifaceted endeavor. Communications professionals embedded within UMTC colleges, schools, and divisions develop media. The News Service and campus sustainability staff help disseminate content to audiences to various audiences to expand the reach of messaging and to grow our reputation in the field.
**Highlights:**
University sustainability efforts were included in various UMTC campus events throughout the year, including the 2011 Quality Fair, the Health and Wellness Fair, the Transportation Fair, and the ReUse Bike Sale. Beautiful U Day highlighted sustainable transportation options at the University’s Twin Cities campus, bringing together student groups, operations, and external vendors to highlight ways to travel in and around the U. In addition, the UMTC Welcome Week Sustainability Fair engaged over 2200 new students, providing them information about sustainability throughout education, research, operations, and student life at the on-set of their time at the Twin Cities campus.  

[Communications, Goal 1]

The Institute on the Environment launched the Momentum event series to bring top environmental visionaries to the Twin Cities for evenings filled with engaging ideas and entertainment. The spring 2011 the series featured Majora Carter, Hans Rosling, and Sylvia Earle.  

[Communications, Goal 1]

**Objectives:**
Work toward an online interactive map to increase awareness of Twin Cities University sustainability initiatives in operations, education, and research.  

[Communications, Goal 1]

Develop feature stories, social media, and residence and workplace engagement programs. Increase awareness and encourage sustainable practices at the U, and promote the University’s position as a leader on sustainable issues to external audiences.  

[Communications, Goal 2]

*Bringing “It All Adds Up” to Celebrate U employee event with Goldy’s help.*
University of Minnesota Rochester

Introduction

Mission Statement

“The University of Minnesota Rochester promotes learning and development through personalized education in a technology-enhanced environment. The University of Minnesota Rochester empowers undergraduate and graduate students to be responsible for their own learning and provides appropriate support to prepare them to succeed in a global and multicultural society.

The University of Minnesota Rochester serves as a conduit and catalyst for leveraging intellectual and economic resources in Rochester and southeastern Minnesota through its signature academic, research, and public engagement programs in collaboration with other campuses of the University of Minnesota, other higher education institutions throughout the state and nation, governmental and non-profit organizations, and private enterprise.”

(Campus Mission Statement Approved, Board of Regents, June 2009)

UMR, as the newest campus in the University of Minnesota system, exists physically in leased space. Although there is limited control over decisions impacting the physical space, UMR strives to create sustainable policies and activities as able. Certainly, UMR has the unique ability to completely build and maintain the future campus within the new world of sustainable mindfulness.

Greenhouse Gas Emissions Mitigation Plan

The University of Minnesota Rochester has an excellent record of contributing extremely low amounts of carbon to the atmosphere because it is a new campus. In 2010, UMR contributed 942 metric tons of CO2e. UMR is beginning its third year of undergraduate education. Currently, UMR leases space in a shopping mall, office building and a public/private partnership building for student housing and academic space. UMR continues to utilize existing community resources to meet needs.

The hope is that as UMR grows, it can protect the policies and initiatives that give a low-carbon status. Those policies/initiatives include:

- Continue to use community resources and infra-structure. Examples include:
  a. Utilizing the many varied food options within walking distance of the campus;
  b. Partnering with the Rochester Family Y (YMCA) to provide students with recreational and student activities space;
  c. Partnering with Olmsted Medical Center to provide a part-time student health service; and
  d. Developing community-based student work/study employment opportunities to augment the availability of on-campus employment.
• Continue to utilize technology to decrease the need to travel to other University of Minnesota campuses. Being part of a system requires employees to pursue relationships with the other campuses. Fortunately, UMR has six ITV equipped rooms and faculty and staff can easily communicate with others using UMConnect and PolyCom. Driving to other campuses is discouraged unless there is no other technological option.
• Continue to use only hybrid technology if driving is necessary. Also, utilize an online reservation system to facilitate carpooling to off-campus meetings.
• Continue to purchase furniture made largely of recycled materials.
• Continue to use automatic lighting in all common areas.
• Continue the aluminum, plastic and paper recycling plan and work within the mall where UMR is located to expand recycling opportunities beyond UMR’s borders.
• Continue to utilize a state-of-the-art heating and cooling system of pumps to regulate temperatures over a 24-hour period.
• Continue to seek out and work with interested and energetic students.
• Continue to plan future building and expansion with sustainability as a major factor.
Green Building

The University of Minnesota Rochester opened its newest building – 318 Commons – in August 2011. The Rochester campus, through a public/private partnership, entered into a 10-year master lease, with options for two additional three-year terms, for academic space and student housing. There are six floors of residential housing and two floors of classroom/lab, office and student life activity space. The remainder of the building will house retail opportunities and one floor of non-UMR residential housing (that can be converted to student housing as necessary).

The HGA (architects) design team led a process to achieve LEED certification at the Silver level for the facility. The LEED designation level will not be known until the review process is finalized. 318 Commons contains sustainability components that help UMR to meet its sustainability goals in leased space. The classroom, lab and office furniture being used for the 318 Commons academic and office space are Steelcase products, which are 74-95 percent recyclable and are made from 33-58 percent recycled material.

The multipurpose science lab accommodates physics, biology, and anatomy/physiology and uses state-of-the-art learning-design lab tables with integrated media components that can be activated by students and faculty. This lab accommodates both lab and lecture for three disciplines within one space, decreasing the need for additional labs until enrollment exceeds space capacity. The faculty “office” space design retains an identified space for each faculty member, yet without individual offices being built. UMR is able to accommodate 20 faculty between numerous disciplines, housed together, encouraging collaboration. The faculty are immediately adjacent to student study spaces and the student life space. The third floor outdoor plaza is available to student tenants in the building. A majority of the surface contains winter-hardy plantings designed for rooftop gardens.

UMR purchased two properties in FY11 on the site of the future permanent campus. UMR is beginning a consulting process with the University of Minnesota’s Dr. Ignacio San Martin, Dayton Hudson Professor, Chair of Urban Design and Director of the Metropolitan Design Center, College of Design. It is UMR’s intent to work with Dr. San Martin and a College of Design fellow to prepare an environmentally sensitive and sustainable interim plan for this property that meets the goals of the Rochester Campus Master Plan and the Rochester Downtown Master Plan.

UMR and Downtown Rochester

The University of Minnesota Rochester has been working closely with community leaders, including the City of Rochester, to plan a downtown community to encourage living, working and learning in the downtown area. The effort, known as the Rochester Downtown Master Plan, includes elements designed
to promote a reduced dependency on the automobile, establishment of open and green connected spaces for community health, and provide for a walkable downtown.

The following comes from the Executive Summary of the Downtown Rochester Master Plan Report, August 2010 and the section on Mobility.

A Flexible Framework for Development

“The master plan establishes a strong and sustainable framework of open space, streets, and an engaging public realm that forms a foundation within which future development will occur. The framework is composed of several parts: a framework of districts that envisions the specific mix of land uses that makes up each distinct area of downtown; an urban design framework that defines the urban form of the city by giving shape to the public realm through building massing, density, and the scale of streets; and an open space framework that sets the landscape character and helps define priority investments for streets, the river, trails, open spaces, and plazas. The mobility framework builds on the relationship between transportation and land use and balances an increasing number of mobility options—from transit to pedestrians and bikes to single occupancy vehicles—replacing priorities that privilege one mode at another’s expense. And, finally, the sustainability framework ties together these components to achieve a plan that is not only environmentally sensitive and climatically appropriate, but also socially and economically sustainable.

The following principles directed the development of the master plan and the prioritization of its initiatives:

- Create a vibrant, economically healthy downtown that is walkable, livable and promotes human interaction
- Create strong connections between major activity centers including the CBD, UMR, and the Mayo Clinic
- Promote mobility options that reduce dependency on automobiles
- Create pedestrian friendly streets that balance use by people and automobiles
- Build upon historic buildings and landmarks that contribute to Rochester’s history and culture
- Establish a connected open space system including the river
- Create strong connections between indoor and outdoor spaces at street level, subway, and skyway
- Develop buildings that engage the street, shape the civic realm and minimize energy use”
Mobility

“Today, approximately 71 percent of commute travel to downtown Rochester is by single-occupant automobile. Travel by other modes will need to increase in future years to accommodate planned growth in downtown, enhance the quality of the downtown environment, and limit impacts on the natural environment. The RDMP proposes an aggressive, but attainable shift in downtown commute travel by 10 percent each decade, bringing the commute mode split to 50 percent single-occupant trips by 2030. The Plan also encourages street design and land use changes that will facilitate non-commute trips be made on foot, transit or by bike. The plan goal is that no more than 70 percent of non-commute trips be made by single occupant modes by 2030.”

This report was prepared for the City of Rochester, in cooperation and partnership with Mayo Clinic, the University of Minnesota Rochester, the Rochester Downtown Alliance, and the Rochester Area Foundation. There was significant input and participation by hundreds of Downtown Rochester stakeholders throughout the entire process. The consultant team included: Sasaki Associates, Inc. (lead), P.U.M.A., Ellerbe Beckett, and Nelson Nygaard.

Environmental Research

UMR is in its infancy in developing a research agenda. As of Fall 2011 UMR is in its third year of employing tenure-track faculty in its first degree program - the Bachelor of Science in Health Sciences (BSHS). The research component’s primary focus for all tenure-track faculty is teaching and learning, with a secondary focus on disciplinary research. The faculty’s chief agenda through the 2012-2013 academic year is developing the curriculum for the BSHS program. A few of the faculty are beginning to explore research opportunities in teaching and learning and their focus on disciplinary research will begin in the future.

Sustainability and Health Science Education

UMR’s signature undergraduate program, the Bachelor of Science in Health Sciences, is built with an integrated curriculum design model as a foundational principle. One of the themes used as an integration point is "Environment and Health". Courses across the curriculum plan to coordinate content delivery on multiple aspects of the relationship between the environment (all dimensions: cultural, psychological, social, natural, physical), public health, individual health, politics of health, public policy and sustainability. For example, a topic such as "chemical toxins" might be addressed in chemistry, biology, sociology, history, statistics and ethics.
It is hoped that the broad curricular context in which this material is delivered will inform a broader contextual understanding of the issues related to the concept of environment in general and the natural environment specifically. From this perspective, UMR students will develop a better understanding of the effects that global warming and other pressing environmental issues have on various aspects of their daily lives. They will understand that issues concerning the environment and sustainability are not simply outside of themselves and have little direct impact. Rather, the students should develop an appreciation of the direct effect that these phenomena and concepts have on their daily lives and personal health. Furthermore, the interdisciplinary approach to addressing environmental issues will assist student understanding of the variety of approaches that could be used to address these problems. Solutions and courses of action will be informed by student understanding that carbon neutrality and sustainability can and should be approached from disciplinary perspectives beyond biology.

The UMR educational model does not end at the classroom door. Each student at UMR receives a monthly newsletter, “Student Health 101” that publishes articles relevant to all aspects of students’ experiences in college. Articles addressing the environment are included and some examples include: June 2011 “Living Green for a Healthier You” and November 2010 “Is the Smoke Really Clearing on Campus?” Once students appreciate the variety of steps that they could take, UMR will provide them with opportunities to form student organizations dedicated to contributing to decisions and actions. These organizations will provide a contact point to help educate other students, faculty, staff and members of the local community on carbon neutrality and sustainability.
Appendix A
Board of Regents Policy:

Sustainability and Energy Efficiency
SUSTAINABILITY AND ENERGY EFFICIENCY

SECTION I. COMMITMENT.

Sustainability is a continuous effort integrating environmental, social, and economic goals through design, planning, and operational organization to meet current needs without compromising the ability of future generations to meet their own needs. Sustainability requires the collective actions of the University of Minnesota (University) community and shall be guided by the balanced use of all resources, within budgetary constraints. The University is committed to incorporating sustainability into its teaching, research, and outreach and the operations that support them.

SECTION II. GUIDING PRINCIPLES.

Subd. 1. Leadership. Through excellence in environmental education, research, outreach, and stewardship, the University shall strive to be a world leader by promoting and demonstrating sustainability and energy efficiency and by producing leaders and informed citizens.

Subd. 2. Modeling. The University shall strive to be a model in the application of sustainability principles to guide campus operations by:
(a) meeting and aspiring to exceed all applicable regulatory requirements;
(b) preventing pollution at its source;
(c) reducing emissions to the environment; and
(d) encouraging the use of a life-cycle cost framework.

Subd. 3. Operational Improvements. The University shall undertake a continuous improvement process that seeks to meet the operational performance targets, goals, and objectives designed to achieve sustainability.

Subd. 4. Energy Efficiency. The University shall undertake a process to increase energy efficiency, reduce dependence on non-renewable energy, and encourage the development of energy alternatives through research and innovation.
Subd. 5. Research. The University shall (a) promote innovative, high visibility research projects focused on sustainability and energy efficiency to inform campus operations as a whole as well as the broader community; and (b) promote collaborative projects that include faculty research undertaken in partnership with operations staff, students, public entities, community organizations, and industry.

Subd. 6. Education and Outreach. The University shall promote educational and outreach activities that are linked to operational improvements and innovation principles.

SECTION III. IMPLEMENTATION.

Subd. 1. Administration. The University shall have sustainability goals that inform administrative policies and procedures in the areas of planning, decision-making, execution, assessment, reporting, and alignment. These policies and procedures shall rely on scientific analysis and support the efforts described in subds. 2-4 of this section.

Subd. 2. Operations. Each University campus shall develop specific sustainability objectives and targets in the areas of:
(a) physical planning and development, including buildings and infrastructure;
(b) operations;
(c) transportation;
(d) purchasing; and
(e) waste management and abatement.

Subd. 3. Accountability. The president or delegate shall develop indicators and measures of success in the implementation of the principles outlined in this policy in consultation with appropriate faculty, staff, students, and experts in the broader community.

Subd. 4. Reporting. The president or delegate shall report to the Board annually on progress toward established targets and standards, using this information to identify opportunities for subsequent improvement.

Appendix B:
University of Minnesota
Systemwide Sustainability Goals
These high-level goals are distilled from the 27 work team goals and reflect key themes that repeatedly surfaced in the work teams’ reports.

1. Leadership
As a large public research land-grant university, the University of Minnesota will strive to be a leader in sustainability and energy efficiency.

2. Living Laboratory
The University of Minnesota will serve as a living laboratory as we integrate sustainability across operations, education, research, and outreach.

3. Engagement
The pursuit of sustainability will actively engage all dimensions of the University, and the University will promote activism and engagement related to sustainability.

4. Communication
Transparent and abundant communication will help build awareness of the what, why, and how of sustainability throughout the University of Minnesota community. The University will encourage communication, marketing, and transparency to build awareness and participation.

5. Policies
Uniform policies will help departments and programs adopt best practices for sustainability. The University will establish policies that make best practices (energy, purchasing, etc.) the most desirable choice for all departments.

6. Culture Change
The University of Minnesota community will undergo a fundamental culture change as sustainability is integrated through our programs and practices. The University will nurture a culture that views sustainability as an integral component of all we do.

7. Community Impact
The University of Minnesota’s pursuit of sustainability will enhance awareness and adoption of sustainable practices in the broader community. The University will create mechanisms for measuring impacts on campus and beyond. (How does our work change the world?)

8. Integration
The University of Minnesota will integrate sustainability into operational and financial decisions, teaching, research, and outreach.

Find out more about University of Minnesota Sustainability
http://portal.environment.umn.edu/
University of Minnesota System Sustainability Goals

Leadership and Modeling
Goal 1: Be a national leader and pioneering model for sustainability and energy efficient operations among large public research land-grant institutions
Goal 2: Actively advance the transition to a sustainable world economy through research, teaching, outreach, and operations
Goal 3: Inspire and influence the community, nation, and world through innovative sustainable research and practices
Goal 4: Make significant continuous achievements toward sustainability goals and commitments
Goal 5: Embrace an organizational culture and individual decisions that support an inclusive, engaged, active, and sustainable healthy community
Goal 6: Meet all regulatory requirements and support the development of future regulations and policies through technical review, academic study, and practical experience

Operational Improvements
Goal 1: Plan, program, design, construct, and operate University of Minnesota facilities throughout their life cycle to provide restorative impacts to the natural environment and a healthy indoor environment for the University community
Goal 2: Integrate environmental, economic, and social priorities into purchasing and contract decisions
Goal 3: Use lower impact transportation alternatives that increase fuel efficiency, provide more sustainable fuel options, and help reduce the miles traveled on campus, to campus, and as part of the University of Minnesota enterprise
Goal 4: Manage resources for their highest end use by reducing consumption, minimizing waste, and strongly supporting the reuse and highest value recycling of unwanted materials

Energy Efficiency
Goal 1: Reduce energy use
Goal 2: Engage the University of Minnesota community in energy conservation
Goal 3: Pursue climate neutrality and energy efficient operations across the University of Minnesota
Goal 4: Adopt energy-related financial policies which enable the University of Minnesota to be socially, environmentally, and fiscally informed
Goal 5: Contribute to the development of progressive state and federal energy policies

Research
Goal 1: To advance sustainability, nurture cross-disciplinary collaboration and sharing of ideas and perspectives within and beyond the University
Goal 2: To advance sustainability, promote civically engaged, socially informed, and community responsive research and scholarship
Goal 3: To advance sustainability, instill sustainability principles in the research culture of the University of Minnesota; all levels of University leadership should embrace sustainability as a core pillar of the University’s mission
Goal 4: To advance sustainability, eliminate institutional barriers and disincentives to interdisciplinary and collaborative sustainability research
Goal 5: To advance sustainability, transform the University of Minnesota into a living laboratory for sustainability

Education and Outreach
Goal 1: Capture the land-grant mission: Sustainability is part of the educational or campus experience of each and every University of Minnesota student
Goal 2: Integrate service learning into the undergraduate and graduate experience, linking students, faculty, University of Minnesota Extension and community partners
Goal 3: Create and implement curricula and educational programs that address the interface of environment, society, and economy
Goal 4: Develop outreach programs for sustainability education of working professionals in the public and private sector

Communication
Goal 1: Create opportunity for dialogue to discuss global and local sustainability challenges, opportunities available, and the work of the University to advance sustainability
Goal 2: Develop and implement marketing/promotion efforts to engage those who may not be aware of sustainability-focused education, outreach, and research opportunities
Goal 3: Develop and maintain a transparent data management information system to enable decisions utilizing environmental, economic, and social factors
Appendix C: 2010 Sustainability Committee Information

University of Minnesota
2010-2011 Sustainability Committees across the system:
*Implementing Sustainability Goals in each unique campus setting*

**University of Minnesota Strategic Sustainability Committee**

*Chairs: Kathleen O’Brien and Jacqueline Johnson*
*Staff to Committee: Amy Short*
*Representation from all campuses - faculty, students and staff*

**Crookston Sustainability Committee**
*Chair: Daniel Svedarsky*

**Duluth Sustainability Committee**
*Chair: Mindy Granley*

**Morris Sustainability Committee**
*Chair: Troy Goodnough*

**Rochester Sustainability Committee**
*Contact: Gail Suater*

**Twin Cities Sustainability Committee**
*Chairs: Mike Berthelsen, Emily Hoover*
*Staff to Committee: Shane Stennes*

*Subcommittees:*
- Research
- Education & Outreach
- Energy & Operations

*Task Groups:*
- Waste Stream
- Dining
- Landcare
- Transportation
- Utilities
- Energy Demand

Working Groups:
- Communications & Outreach
- Curricular
- Foods
- Physical Operations
- Recycling
- Water & Landscape
University of Minnesota (Systemwide) Strategic Sustainability Committee:

Kathleen O’Brien, Vice President, University Services, Co-Chair
Jacqueline Johnson, Chancellor, University of Minnesota, Morris, Co-Chair
Britta Anderson, undergraduate student, UMTC
David Bael, Graduate Student, HHH Institute of Public Affairs, UMTC
Leslie Bowman, Executive Director, Contract Administration, Auxiliary Services
Tom Cariveau, undergraduate student, UMD (graduated December 2010)
Jeffrey Corney, Managing Director, Cedar Creek Ecosystem Science Reserve, UMTC
Robert Dunbar, Associate Professor, Biology, UMR
Ann Freeman, Director, Internal Communications, University Relations, UMTC
Ken Gilbertson, Associate Professor, Health, Physical Education and Recreation, Director, Center for Environmental Education, UMD
Mary Guzowski, Associate Professor, Architecture, College of Design, UMTC
Nick Jordan, Professor, Agronomy & Plant Genetics Department, UMTC
Linda Kingery, Executive Director, Regional Sustainable Development Partnership, UMC
Alexandra Klass, Associate Professor of Law, UMTC
Jerome Malmquist, Director, Energy Management, Facilities Management
Orlyn Miller, Director, Planning & Architecture, Capital Planning and Project Management
Craig Moody, Director, Department of Environmental Health and Safety
Karen Mumford, Assistant Professor of Biology & Environmental Studies, UMM (left summer 2011)
Kayla Pridmore, Undergraduate Student and Sustainability Student Intern, UMM
Amy Short, Sustainability Director and Staff to the Committee
Lanae Smith, Undergraduate student representative, UMD
Peggy Sundermeyer, Executive Director, Research Advancement, OVPR
Dan Svedarsky, Director, Center for Sustainability, UMC & Northwest Research and Outreach Center
Lauren Snively, Undergraduate Student, UMC
Pete Wyckoff, Associate Professor of Biology, UMM (replaced Karen Mumford in Sept 2011)

Staff to the committee:

Michael Fridgen, Assistant to the Vice Chancellor for Academic Affairs, UMR
Troy Goodnough, Sustainability Coordinator, UMM
Mindy Granley, Sustainability Coordinator, UMD
Annie Rittgers, Sustainability Student Assistant, UMD (graduated Dec 2010)
Nathan Levendoski, Sustainability Student Assistant, UMD (beginning January 2011)
Beth Mercer-Taylor, Sustainability Education Coordinator, UMTC
Adam Overland, Assistant Program Director, University Relations, UMTC
Shane Stennes, Sustainability Coordinator, UMTC
University of Minnesota Crookston

**Crookston Sustainability Committee:**
Daniel Svedarsky, Professor and Director of Center for Sustainability, Chair
Paul Aakre, Faculty
Jason Brantner, Research Fellow (NWROC)
Richard Connell, Director of Facilities and Operations
Kent Freberg, Faculty
Linda Kingery, Executive Director, Northwest Regional Sustainable Development Partnership
Douglas Langer, Senior Operating Engineer
Rachel McCoppin, Faculty
Peter Phaiah, Associate Vice Chancellor for Student Affairs
Christo Robberts, Faculty
Tricia Sanders, Finance Director
Ben Sullivan, Student
Ben Williams, Student
Chris Winjum, Asst to Chancellor

**Crookston Working Groups:**

**Recycling Working Group**
Lisa Loegering, Office of Student Engagement
Peter Phaiah, Associate Vice Chancellor for Student Affairs

**Curricular Working Group**
Paul Aakre, Faculty
Katy Smith, Faculty
Dan Svedarsky, Faculty
Beth Walters, Student

**Foods Working Group**
Doug Pedrick, Director of Dining Services
Linda Kingery, Linda Kingery, Executive Director, Northwest Regional Sustainable Development Partnership
Harouna Maiga, Faculty
Ken Myers, Faculty
Terry Nennich, Minnesota Extension
Peter Phaiah, Associate Vice Chancellor for Student Affairs
Sharon Stewart, Faculty
Deborah Zak, Minnesota Extension

**Communication and Outreach Working Group**
Amber Bailey, E-Communications Manager
Amber Evans, Director of Admissions
Kate Holmquist, Student
Linda Kingery
Rachel Lundbohm, Faculty - Marketing
Rachel McCoppin, Faculty - Communication
Ben Sullivan, Student
Dan Svedarsky, Faculty
Elizabeth Tollefson, Assistant Director of Communications
Ben Williams, Student

**Physical Operations Working Group**
Paul Aakre, Faculty
Jason Brantner, Research Fellow (NWROC)
Richard Connell, Director of Facilities and Operations
Kent Freberg, Faculty
Douglas Langer, Senior Operating Engineer

**Water and Landscape Working Group**
Eric Castle, Faculty
Michael Knudson, Graduate Student
Brenda Miller, Faculty
University of Minnesota Duluth

**Duluth Sustainability Committee to Sept 2010:**
Mindy Granley, Campus Sustainability Coordinator
Tom Ferguson, Visiting Professor Electrical/Computer Eng
Rod Leivano, Professor Finance/Management Info Services
Mike Mageau, Assistant Professor Geography
Tim Bates, Adjunct Instructor Outdoor Program, chair
Terry Brown, Research Associate
Rich Axler, Senior Research Associate
Stacey Stark, Coordinator Geography, GIS Lab
John Sawyer, Principal Engineer Supervisor
Tim Bushnell, Principal Food Operations Manager
Karl Novek, Maintenance Planner/Scheduler
Nate Haugen, Student
Cliff Tanner, City of Duluth Human Resources
John King, VCFO/Director FM
Cheryl Anderson, Finance and Operations
Stacy Gerth, Student
Mahjoub Labyad, Environmental Health & Safety

**Duluth Sustainability Committee as of Sept 2011.**
Carl Berwald, Political Science Student
Geoff Bell, Associate Professor, Department of Management Studies
John King, Director, Facilities Management
John Sawyer, Principal Engineer Supervisor, Facilities Management
Karl Novek, Maintenance Planner/Scheduler, Facilities Management
Lisa Fitzpatrick, Viz Lab Coordinator
Mahjoub Labyad, Public Health Specialist, Environmental Health and Safety Office
Mike Mageau, Assistant Professor, UMD Geography, Center for Sustainable Development
Nan Stubanvall, Sustainable Twin Ports Board Member
Rich Axler, Senior Research Associate, Natural Resources Research Institute
Stacey Stark, GIS Lab Coordinator, UMD Geography
Stacy Gerth, Economics student
Terry Brown, Research Associate, Natural Resources Research Institute
Tim Bates, Associate Director, Recreational Sports Outdoor Program
Tim Bushnell, Principal Food Operations Manager, UMD Dining Services
Tom Ferguson, Visiting Professor, UMD Electrical/Computer Engineering
*Cheryl Anderson, Executive Office and Administration Specialist, Facilities Management
*Mindy Granley, Campus Sustainability Coordinator
* staff to committee
University of Minnesota Morris

Green Team
Troy Goodnough, Chair, Sustainability Coordinator
Lisa Harris, David Aronson, Facilities Staff
Tom Ladner, Office of Residential Life
Margaret Kuchenreuther, faculty
TBD Representation from the students (2—to be appointed in consultation with MCSA)
Tony Nemmers, food Services
Melissa Weber, communications
Kayla Pridmore - sustainability student intern and staff to the committee

University of Minnesota Rochester
For more information, contact Gail Sauter, Vice Chancellor for Academic Affairs or Michael Fridgen, Assistant to the Vice Chancellor for Academic Affairs.
University of Minnesota Twin Cities

Twin Cities Sustainability Committee:
Mike Berthelsen, Associate Vice President, Facilities Management, Co-chair
Emily Hoover, Professor and Head, Department of Horticultural Science, Co-chair
Abou Amara, Graduate, Graduate and Professional Student Assembly Representative
Todd Arnold, Associate Professor, Department of Fisheries, Wildlife, & Conservation Biology
Laura Babcock, Director, MN Technical Assistance Program
Nick Deffley, Program Manager, Capital Planning & Project Management
Jim Green, Assistant Directory, Energy Management, Facilities Management
Raymond Hozalski, Professor, Civil Engineering
Phillip Kelly, Undergraduate, Minnesota Student Association Representative
Heather Mentgen Dickson, Marketing Manager, University Dining Services
Beth Mercer Taylor, Education Sustainability Coordinator, Institute on the Environment
Ned Mohan, Professor, Electrical & Computer Engineering
Lance Neckar, Professor, Department of Landscape Architecture
Christy Newell, Undergraduate, Environmental Science and Policy Management
Andrew Phelan, Assistant Director, Department of Environmental Health & Safety
William K. Roberts, Associate Director, Parking and Transportation
Amy Short, Sustainability Director, University Services
Virajita Singh, Senior Research Fellow, Center for Sustainable Building Research
Tim Smith, Associate Professor Bioproducts/Biosystems Engineering and Director of the Northstar Initiative for Sustainable Enterprise at the Institute on the Environment
Deb Swackhamer, Charles M. Denny Chair of Science, Technology, and Public Policy, Humphrey and Professor Environmental Health Sciences, School of Public Health and Co-director Water Resources Center
Brian Swanson, Chief Financial Officer, University Services
Connie Thompson, Assistant Director, Housing and Residential Life
George Weiblen, Associate Professor, Department of Plant Biology
Amelious Whyte, Chief of Staff, Office for Student Affairs

Subcommittees and Task Groups:

Energy and Operations Subcommittee
Mike Berthelsen, Facilities Management
George Weiblen, Associate Professor
David Crane, Classroom Facilities Coordination Manager
Nick Deffley, Capital Planning & Project Management
Jim Green, Associate Director Energy Management
Brad Hoff, Facilities Management
Judith Martin, Senate Committee for Finance & Planning Representative
Cindy McComas, MN Technical Assistance Program
Laurie McGinnis, Center for Transportation Studies
Heather Mentgen-Dickson, University Dining Services
Andy Phelan, Department of Environmental Health & Safety
Bill Roberts, Parking & Transportation Services
Amy Short, Sustainability Director
David Smith, Graduate Student
Connie Thompson, Housing & Residential Life
Donovan Woldt, Undergraduate  
Shane Stennes, Sustainability Coordinator

Energy/Ops Task Groups:
Waste Stream: Stacey White  
Dining: Leslie Bowman  
Landcare: Les Potts  
Utilities: Mike Nagel  
Energy Demand: Jim Green

Research
Fotis Sotiropoulos, St. Anthony Falls Laboratory  
Richard A. Hemmingsen, IREE, Institute on the Environment  
Raymond Hozalski, Associate Professor & Director of Graduate Studies  
Ryan Kennedy, Graduate Representative, GAPSA  
Ned Mohan, Professor  
Lance Neckar, Professor  
Tim Smith, Associate Professor

Education and Outreach
Emily Hoover, Professor  
Beth Mercer-Taylor, Education Sustainability Coordinator  
Todd Arnold, Associate Professor  
Norman Chervany, Senate Committee for Education Policy Representative  
Ben Falter, Housing and Residential Life  
Laurel Hirt, Career/Community Service-Learning Center  
Peter Hudleston, Professor  
Cody Mikl, Senate Committee for Education Policy Representative  
David Moeller, Assistant Professor, Plant Biology  
Christy Newell, Undergraduate  
Karen Oberhauser, Associate Professor, Fisheries, Wildlife, and Conservation Biology  
Virajita Singh, Senior Research Fellow, Center for Sustainable Building Research  
Amy Short, University Services  
Amelious Whyte, Office for Student Affairs

Sustainability – University of Minnesota  
Is on Facebook
Facilities Committee

Agenda Item: Twin Cities Campus Master Plan: Open Space Plan Progress

☑ review □ review/action □ action □ discussion

Presenters: Vice President Kathleen O'Brien
Monique MacKenzie, Capital Planner

Purpose:

□ policy ☑ background/context □ oversight □ strategic positioning

Present to the Board of Regents an update on the open space planning progress associated with the Twin Cities Campus Master Plan. Open spaces of a variety of types are an essential component of the campus environment. Recent projects and initiatives have created additional open spaces and advanced the plan vision for open space on campus.

Outline of Key Points/Policy Issues:

The Twin Cities Campus Master Plan (approved in 2009) outlines a vision for an open space network that contributes to the campus character and creates a comfortable welcoming experience for the campus community. A diversity of scale, character and functional nature of open space exists on the campus and are guided by policy define in the Campus Master Plan. The attached maps are the basis for the presentation and discussion.

Background Information:

In March, 2009, the Board of Regents acted on the Twin Cities Campus Master Plan to support the University's academic mission and guide future land use and capital project decisions over the next decade.
Facilities Committee  
December 8, 2011

**Agenda Item:** Consent Report

- [ ] review
- [x] review/action
- [ ] action
- [ ] discussion

**Presenters:** Vice President Kathleen O'Brien

**Purpose:**

- [ ] policy
- [ ] background/context
- [x] oversight
- [ ] strategic positioning

In accordance with Board of Regents Policy: *Reservation and Delegation of Authority*, review and recommend approval of the following real estate transaction:

> Agreements for Use of University Facilities and Services for Walden University Summer Session Residency Program, July 6 through 24, 2012 (Twin Cities Campus)

**Outline of Key Points/Policy Issues:**

The details of this transaction and its financial impact are described in the transaction information pages immediately following this page.

**Background Information:**

Board of Regents Policy: *Reservation and Delegation of Authority* states that “The Board of Regents reserves to itself authority to approve the purchase or sale of real property having a value greater than $250,000 or larger than ten (10) acres, and all leases, easements, and other interests in real property with a present value of the gross rent to be paid by or to the University during the initial term in excess of $250,000, consistent with Board policies.”

In accordance with the *Board of Regents Calendar*, which is included in the Board of Regents Policy: *Board Operations and Agenda Guidelines*, the “sale or purchase of real property between 10 and 40 acres, or with a value between $250,000 and $500,000” and “leases with a present value between $250,000 and $500,000” are presented for review/action as part of the Facilities Committee Consent Report.
President's Recommendation for Action:

The President recommends approval of the Consent Report.
AGREEMENTS FOR USE OF UNIVERSITY FACILITIES AND SERVICES
FOR WALDEN SUMMER SESSION RESIDENCY PROGRAM,
JULY 6 THROUGH 24, 2012
(TWIN CITIES CAMPUS)

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to execute the agreements for the use of University facilities and services by Walden University, Inc. during the period of July 6 through 24, 2012 for its 2012 Summer Session Residency Program.

2. Description of Facilities and Services

Lodging: Single bed space for approximately 110 adults in Middlebrook Hall, 412-22nd Avenue South, Minneapolis, July 8 through 17, 2012, and for 310 adults in Middlebrook Hall, July 18 through 22, 2012 (departure on July 22, 2012).

Food Services: Residential dining in Middlebrook Hall (breakfast and lunch) and catering in various venues; July 9 through 22, 2012.

Seminar, Workshop, Storage and Event Facilities: Anderson Hall, Blegen Hall, Willey Hall, Willey Atrium, Hubert H. Humphrey Center, Mondale Hall, Frederick R. Weisman Art Museum, Ted Mann Concert Hall, University Libraries, and numerous classrooms; July 6 through 24, 2012.

Parking: 21st Avenue South Ramp on the West Bank Campus and the East River Road Garage on the East Bank Campus, on a reservation, space-available basis; July 6 through 24, 2012.

3. Basis for Request

Since the summer of 2007, Walden University has held its Summer Session Residency Programs at the Twin Cities Campus. Prior to 2007, Walden University had held its summer seminars and workshops at Indiana University for 16 years, but outgrew the facilities.

Walden University has requested the use of Twin Cities Campus facilities and services for a sixth summer for its Summer Residency Program, scheduled during the period of July 6 through 24, 2012, which will require University lodging and services for approximately 900 adults from all over the world attending courses over the nineteen days of its 2012 summer programming.
4. **Fees**

Walden University, Inc. will pay an estimated $104,364 for lodging facilities, $46,400 (which includes taxes) for food service, and $124,283 for use of Anderson Hall, Blegen Hall, Willey Hall, Hubert H. Humphrey Center, Mondale Hall, Weisman Art Museum, Ted Mann Concert Hall and numerous classrooms. In addition, Walden University will pay an estimated $66,991 for the costs of services provided to Walden University for its 2012 summer session by other University units, such as University Libraries, Office of Information Technology, Parking and Transportation Services, UDS Catering, Facilities Management, AV Technician, etc., resulting in a total to the University related to this event of $342,038.

5. **Use of Funds Received by the University**

Housing and Residential Life will receive the payment for the lodging and registration facilities, estimated at $104,364. University Dining Services will receive the payment for the food services, estimated at $46,400. The University facilities at which workshops and seminars will occur will receive those use payments estimated to total $124,283. The other University units which provide services to Walden University for its 2012 Summer Session Residency Program will receive the payments attributable to those services, estimated to total $66,991.

6. **Recommendations:**

The above-described real estate transaction is appropriate:

Richard H. Pfutzenreuter, III, Vice President and CFO

E. Thomas Sullivan, Senior Vice President for Academic Affairs and Provost

Kathleen O’Brien, Vice President for University Services
Agreements for University Facilities and Services for Walden Residency Summer Program 2012 -- Minneapolis Campus

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Sources: Real Estate Office, U of M Facilities Management
Facilities Committee  

December 8, 2011

**Agenda Item:** Information Items

- [ ] review  
- [ ] review/action  
- [ ] action  
- [x] discussion

**Presenters:** Vice President Kathleen O'Brien

**Purpose:**

- [ ] policy  
- [x] background/context  
- [ ] oversight  
- [ ] strategic positioning

Update the Board of Regents regarding the following information item:

B. Final Project Review – Saint Anthony Falls Laboratory Infrastructure Upgrade
C. Final Project Review – Physics and Nanotechnology Building

**Outline of Key Points/Policy Issues:**

*Capital Planning & Project Management Semi-Annual Project Report*

This report includes projects in process that have been approved in the Capital Budget and for which the Regents have approved the Schematic Plans. The report highlights progress performed, challenges encountered in delivering the project scope of work within the approved budget and schedule.

In accordance with the Board of Regents Calendar, the Capital Planning and Project Management Semi-Annual Project Report is presented in the summer and in the winter to provide performance information prior to the consideration of the annual capital budget and the 6-year capital plan.
Final Project Reviews for the Saint Anthony Falls Laboratory Infrastructure Upgrade and the Physics and Nanotechnology Building, Twin Cities Campus

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, Article 1, Section VIII, Subdivision 10, “The Board reserves to itself authority for a subsequent review of approved capital budget projects with a value greater than $5,000,000 prior to the award of construction contracts.” The project information sheets for the Saint Anthony Falls Laboratory Infrastructure Upgrade and the Physics and Nanotechnology Building on the Twin Cities Campus are attached

Background Information:

Information items are intended to provide the Board of Regents with information needed for them to provide their oversight responsibilities.
Capital Planning & Project Management (CPPM)

Semi-Annual Project Report
December 8, 2011
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EXECUTIVE SUMMARY

This Semi-Annual Project Report submitted by Capital Planning & Project Management includes projects in process that have been approved in the Capital Budget and for which the Regents have approved the Schematic Plans.

The projects in this report are organized by phase: Projects in Design, Projects in Construction, Projects Completed and Projects with Exceptions / Issues. A total of 13 projects are listed, 2 in design, 5 in construction, 4 that have been completed and 2 with exceptions / issues.

The full scope of work within Capital Planning & Project Management includes the following additional active projects:

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Quantity*</th>
</tr>
</thead>
<tbody>
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<td>Project Initiation</td>
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<tr>
<td>Projects in Pre-Design</td>
<td>38</td>
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<tr>
<td>Projects in Design</td>
<td>51</td>
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<tr>
<td>Projects in Construction</td>
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</tbody>
</table>

**Total Active Projects** 231

*As of November 2011*
CPPM MEASURES & STRUCTURE

CPPM uses the following performance measures and accepts full accountability for the following:

- Meeting project scope expectations
- Delivering expected quality
- Delivering projects on schedule
- Delivering projects on budget
- Improving process productivity
- Limiting / eliminating legal liabilities
- Promoting targeted business participation
- Support University of Minnesota sustainability initiatives

CPPM Teams:

- CPPM is organized in the following Team structure:
  - Academic Health Center & Biomedical Discovery District
  - Provost
  - President/Administration, System Academic Administration, Athletic, Student Services, Out State
  - Planning & Architecture
  - Best Value / Business Process
PROJECT STATUS

Projects in Design

Center for Magnetic Resonance Research
New 3T MRI Magnet

Description: This project will renovate the existing 1,200 square feet 9.4T MRI suite to accommodate the purchase of a new 3.0T MRI. The 9.4T MRI will be decommissioned.

- Proposals have been received from 3T magnet vendors
- Design will begin once a magnet vendor has been selected
- Project planning and design is on schedule and within budget

Project Executive: Michael Perkins
A & E Firm: RSP Architects
Budget: $2,700,000
Schedule: Summer 2012

Project Manager: Kevin Ross
Contractor: M. A. Mortenson
St Anthony Falls Lab Infrastructure

**Description:** The project will help transform the laboratory into a national shared research facility conducting cutting edge research in the energy/environment nexus, expand its role as major hub for industry/academia collaborations, and strengthen and broaden its educational and outreach missions. Infrastructure renovations will include fire/life safety, ADA upgrades, building structural systems, collaborative meeting space, and updated research and laboratory space to meet current and future science needs.

**Project Executive:** Michael Perkins  
**A & E Firm:** Perkins & Will  
**Budget:** $15,800,000  
**Schedule:** September 2013

- Currently in Design Development
- Construction anticipated to begin in February 2012
- **Project planning and design is on schedule and within budget**
Projects in Construction

Biomedical Facilities – Cancer / Cardiology Research Center

**Description:** This project will provide approximately 280,000 square feet of space for chemistry and biology labs, lab support, and office space to support Cancer and Cardiovascular research. It also includes shared research and public commons on the first level that will house a large vivarium, shared instrumentation spaces, meeting space and a small food service venue. The project will be connected to the Medical Biosciences Building and linked by skyway to the Center for Magnetic Resonance Research.

<table>
<thead>
<tr>
<th>Project Executives:</th>
<th>Project Director:</th>
<th>Contractor:</th>
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</thead>
<tbody>
<tr>
<td>Vice Presidents</td>
<td>Richard Johnson</td>
<td>M.A. Mortenson</td>
</tr>
<tr>
<td>Aaron Friedman and</td>
<td></td>
<td></td>
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<tr>
<td>Kathleen O'Brien</td>
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</table>

<table>
<thead>
<tr>
<th>A &amp; E Firm:</th>
<th>Budget:</th>
<th>Schedule:</th>
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</thead>
<tbody>
<tr>
<td>Architectural Alliance</td>
<td>$200,300,000</td>
<td>May 2013</td>
</tr>
</tbody>
</table>

- Concrete decks and columns are complete
- Structural steel installation is in progress
- **Project is on schedule and within budget**

Northrop Auditorium Phase II Interior Renovation

**Description:** Northrop Auditorium will become a pre-eminent Cultural Center that inspires and nourishes the human spirit by creating a +/-2,800-seat hall with excellent acoustics and sightlines, and state-of-the-art technologies to provide the highest quality experience attainable. Northrop will house the University Honors Program, the Institute for Advanced Study, and the Innovation by Design Lab.

<table>
<thead>
<tr>
<th>Project Executives:</th>
<th>Project Managers:</th>
<th>Project Contractor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice Provost Bob McMasters</td>
<td>Michael Denny and</td>
<td>JE Dunn</td>
</tr>
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<td>Vice President Kathleen O’Brien</td>
<td>Roger Wenger</td>
<td></td>
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<tr>
<td>A &amp; E Firm:</td>
<td>HGA Architects</td>
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<table>
<thead>
<tr>
<th>Budget:</th>
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<tbody>
<tr>
<td>$80,830,000</td>
<td>Fall/Winter 2013</td>
</tr>
</tbody>
</table>

- Construction Documents phase complete
- GMP has been established
- Construction has started
- **Project is on schedule and within budget**
University Recreation Center Expansion

**Description:** The URC expansion includes a 148,000 Gross Square Feet, four-level addition to the existing south side of the University Recreation Center. The program for the expansion of the Sports and Recreation Center on the University Minnesota main campus consists of the following components: a two-court gymnasium, fitness and weights area, seven multi-purpose rooms, outdoor recreation center with a climbing wall, locker rooms, jogging track, offices and miscellaneous spaces. The entry of the building also has a café with an associated serve-and-prep area, public toilets and a social lounge.

- Construction Documents phase complete
- GMP has been established
- Project is in construction
- **Project is on schedule and within budget**

Physics & Nanotechnology Building

**Description:** The new Physics/Nanotechnology building will be approximately 144,000 square feet. It will be located on the site bounded by Civil Engineering to the north, Akerman Hall to the west, Scholars Walk to the south and Recreation Center to the east adjacent to the existing Institute of Technology (IT) campus. The building will house approximately 200 faculty, postdoctorate, graduate level, and visiting researchers. The facility also includes forty research laboratories, and a 5,000 net square foot Nano cleanroom laboratory designed for Class 100 chip fabrication and Class 1000 bio-nano work.

- GMP has been established
- Construction has started
- Construction documents will be complete in December 2011
- **Project is on schedule and within budget**
Variety Club Research Center 2nd Floor Room Remodel

Description: Remodel and upgrade of Cardiology Department space to provide adequate facilities for the growing number of faculty and to support the division’s ability to carry out its teaching, research, and clinical work. The project will upgrade building infrastructure and systems, make the facilities ADA compliant, and renovate an 81 person conference room for teaching, clinical, and research activities.

Project Executive: Michael Perkins
A & E Firm: CM Architecture
Budget: $852,000
Schedule: March 2012

- Abatement is in progress
- Construction schedule to begin in November 2011
- Project is on schedule and within budget
Projects Completed

**Mayo Garage – NMR Relocation**

*Description:* The project consists of complete interior renovation of the current garage. The temporarily shored, structurally unsound upper parking deck will be removed. Construction will provide level floor surfaces and fully isolated (vibration) concrete slabs in the NMR lab. Completely new building systems (Mechanical, Electrical, Life Safety, etc.) will be constructed to serve the repurposed building. Improvements to the on-grade plaza have not been fully developed yet but will need to be fully constructed in the construction period of this project.

- **Project Director:** Richard Johnson
- **A & E Firm:** BWBR Architects
- **Budget:** $23,546,000
- **Schedule:** August 2011
- **Project completed on schedule and within budget**

---

**Recreational Sports Field – Inflatable Field Bubble**

*Description:* Construction of an enclosed (inflatable structure) synthetic turf field on the Bierman Fields on the East Bank campus to meet the programmatic demands of intramural and sports club teams for recreational activities. The indoor field will provide a variety of sports and activities for University students during the late fall, winter and early spring.

- **Project Executive:** Michael Perkins
- **A & E Firm:** Studio Five
- **Budget:** $7,280,000
- **Schedule:** December 2011
- **Project completed on schedule and within budget**
Smith Hall Room 21 & 23 Remodel (Blank Lab Relocation)

**Description:** Relocate the Department of Chemistry, Blank Research Group Labs from the north side of the lower level of Kolthoff Hall to a new location on the northeast corner of Smith Hall. The reason for the relocation is the operational continuity of the Blank Research Group Lab and its research during the Central Corridor Light Rail Transit construction and operation.

- **Project Director:** Rick Johnson
- **A & E Firm:** BWBR Architects
- **Budget:** $863,000
- **Schedule:** September 2011
- **Project completed within budget**

UMORE Park Wind Turbine

**Description:** The majority of the UMN project involves construction of wind research site at UMORE Park. A 2.5 megawatt turbine will be installed at the site along with a 130-m tall meteorological tower. Once completed, the facility will serve as a national research site for wind power research. The research program targets basic and applied research performed in close collaboration with wind industry partners.

- **Project Executive:** Michael Perkins
- **A & E Firm:** Ryan Companies
- **Budget:** $5,929,000
- **Schedule:** September 2011
- **Project completed within budget**
Projects with Exceptions / Issues

Lind Hall First Floor Remodel

Description: The main scope of this Project includes the renovation and modernization of the entire first floor of Lind Hall (20,200 GSF) as a new central location for a Student Services and Welcome Center for the College of Science and Engineering (CSE). CSE envisions Lind Hall as a singular Student Services Office, providing seamless services to students and college affiliates.

Project Executive: Michael Perkins
A & E Firm: Collaborative Design
Budget: $6,200,000
Schedule: January 2012

- Structural improvements to existing structure are needed, impacting budget and schedule (Requires Capital Budget Amendment)
- Scope change requested by client to upgrade the Taylor Center, impacting budget and schedule (Requires Capital Budget Amendment)
- Project completion now scheduled for March 2012
Wind to Hydrogen to Ammonia, Morris Campus

**Description:** The University of Minnesota Morris will construct a globally unique research and demonstration facility to foster the development of wind, hydrogen, and other renewable energy sources. To store wind energy, electricity is converted to hydrogen by electrolysis of water and stored in compressed gas cylinders. When demand calls, the hydrogen is burned in an internal combustion engine to run a generator. In addition, the hydrogen will be converted into anhydrous ammonia for use as a fertilizer within the local community. The facility will provide researchers opportunities to measure efficiencies and optimized production of anhydrous ammonia fertilizer.

**Project Executive:** Michael Perkins  
**Project Manager:** Oliver Real Estate  
**A & E Firm:** Sebesta Blomberg  
**Design/Builder:** Knutson  
**Budget:** $3,750,000  
**Schedule:** Winter 2011 – Anhydrous Project

- Redesigned to fit within the allocated budget
- **Hydrogen Project completed within budget**
- **Anhydrous Ammonia Project over budget due to problems with delayed design schedule**
Policy Summary:

According to Board of Regents Policy *Reservation and Delegation of Authority*, Article I, Section VIII, Subdivision 9, “The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than $5,000,000 prior to the award of construction contracts.”

Project Summary:

SAFL is an active 60,000 gross square foot / 49,000 usable square foot research laboratory of the University, which houses approximately 100 employees including University faculty, staff, students and visitors. The project will provide fire / life safety improvements, address Building Code / ADA regulations, upgrade building structural systems, update existing research areas, and update / replaced select building infrastructure systems to support current / future building use and research.

Board of Regents Approval Summary:

<table>
<thead>
<tr>
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</thead>
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<td>September 2011</td>
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Project Team:

<table>
<thead>
<tr>
<th>Architect</th>
<th>Perkins + Will</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction manager at risk</td>
<td>McGough Construction</td>
</tr>
</tbody>
</table>

Capital Funding:

- NSF ARI-R2 Grant $7,100,000
- University HEAPR $8,700,000
- Project total $15,800,000

Project Schedule:

- Begin Construction: March 2012
- Substantial Completion: September 2013

Consistency of project with approved scope, schedule and budget:

- X Yes
- ___ No
MEMORANDUM
October 18, 2011

To:        Regent Linda Cohen, Chair, Board of Regents
           Regent David Larson, Vice Chair, Board of Regents
           Regent Dean Johnson, Chair, Facilities Committee

From:      Kathleen O'Brien
           Vice President, University Services

Subject:   Final Project Review for Physics and Nanotechnology Building

According to Board of Regents Policy Reservation and Delegation of Authority, Article I, Section VIII, Subdivision 9, "The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than $5,000,000 prior to the award of construction contracts."

The University Physics and Nanotechnology Building project is currently within the scope, schedule and budget approved by the Board of Regents. In order to maintain their scope, schedule and budget, it is important that the University award the construction contracts for this project prior to the next Board of Regents meeting. Therefore, I am providing notification this Final Project Review outside of the normal Board of Regents meeting schedule. I have consulted with the President, who supports proceeding in this manner.

With the award of these contracts we are committing to complete this project as approved. We will include the attached project summary as a part of the information item for the December 8, 2011, Board of Regents Facilities Committee meeting.

Please feel free to contact me if you have any questions or concerns.

C:        Eric Kaler, President
          Ann Cieslak, Executive Director
          Ken Savary, Assistant to the Executive Director
University of Minnesota
Final Review of Capital Projects over $5 Million

Physics and Nanotechnology Building
Twin Cities Campus (#01-155-08-1718)

Policy Summary:

According to Board of Regents Policy Reservation and Delegation of Authority, Article I, Section VIII, Subdivision 9, “The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than $5,000,000 prior to the award of construction contracts.”

Project Summary:

The Physics and Nanotechnology Building is a new stand-alone research laboratory building to be built on the open site bound by the Washington Avenue Parking Ramp on the south, the Recreation Sports Center to the east, Civil Engineering to the north and Akerman Hall to the west. The 144,000 GSF building will house approximately 200 faculty, post doctorates, graduate level, and visiting researchers for both the departments of Physics and Astronomy and the Center for Nanostructure Applications (CNA). The building will include approximately forty research laboratories, a 5,000 NSF cleanroom designed for both Class 100 and Class 1000 nano research work, and office and support spaces.

Board of Regents Approval Summary:

Capital Budget: 2011
Schematic Plans: February 2011

Project Team:

Architect/Engineer Team: Architectural Alliance with Zimmer Gunsul Frasca /
Affiliated Engineers Inc.
Construction Manager: M.A. Mortenson Company

Capital Funding:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>State of Minnesota</td>
<td>$10,000,000</td>
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<tr>
<td>University of Minnesota</td>
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<td>Total Project Funding</td>
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Project Schedule:

<table>
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<tbody>
<tr>
<td>Begin Construction</td>
<td>November, 2011</td>
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<tr>
<td>Substantial Completion</td>
<td>November, 2013</td>
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</tbody>
</table>

Consistency of project with approved scope, schedule and budget:

__X__ Yes  ___No