

2009 - 2012

President's Sustainability
& Climate Commitment
Task Force



Environmental Sustainability and Climate Neutrality Plan

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Executive Summary

After months of work and consideration, the President's Sustainability & Climate Commitment Task Force (PSCC) is presenting a summary report of our findings and recommendations for environmental sustainability and reducing CNM's carbon footprint and potential strategies for achieving these goals. In the spring of 2008, President Winograd became a charter signatory to the American College and University Presidents Climate Commitment in alignment with CNM's Strategic Direction of College Success and Sustainability. She charged the PSCC with developing a plan for how CNM would set specific goals to meet the expectations within the Commitment. To help understand this goal, we conducted an inventory of CNM's historical energy use and greenhouse gas emissions, made future energy scenario projections, explored ways to reduce emissions, and studied what others were doing. The PSCC worked to understand the political and market environments, learned about carbon offsets, carbon emission, held college-wide forums of discussion, attended conferences, and talked to CNM faculty, staff and students. We read, surfed, and debated and discovered that:

- CNM already has many sustainable practices in place, which are inventoried in the appendix of this document.
- Many faculty, staff, and students are interested in working and learning in an educational environment that fosters environmentally friendly practices
- Areas of impact at CNM are associated within eight categories: Academics, Built Environment, Energy, Landscaping, Procurement, Waste/Recycling, Water, and Transportation.
- Many colleges and universities are currently engaging in exercises similar to ours - trying to find ways to reduce their contribution to climate change, struggling with understanding the complexities associated with reducing energy consumption and emissions and balancing the goal of environmental sustainability with the many others goals focused on meeting the mission of the college.
- Most of us in higher education want to reduce our carbon footprint, but the best courses of action are not yet clear.

The PSCC is comprised of representatives from across the college including faculty, staff, and students. The following document illustrates the work of the PSCC in evaluating all of the input received from over 100 faculty, staff, and student participants in the forums and through open input submissions. All suggestions were considered and evaluated for feasibility; budgetary impact, both in reducing costs and in the cost of adoption; operational scope of responsibility and assignment; and impact on CNM's overall carbon footprint.

All but one of the goals and actions within this document are of equal importance in CNM's commitment to reducing the college's impact on the environment. The one resoundingly significant goal that flows throughout all areas of impact and across all individual areas of interest is a goal of educating and informing the CNM community.

The recommended strategy for implementing the many goals and actions within this document reflects the long-standing culture of making change through the work of teams. The PSCC recommends that CNM develop a fluid team structure for the environmental sustainability initiatives – one team per area of impact. Each team will be charged with choosing one goal or action to carry through per year. Lead by a member of the PSCC, the membership of these teams must be able to ebb and flow with the current CNM community interest in the action or goal.

Finally, the completion of the first year contract of the Energy Service Provider (ESP) will enable the PSCC to recommend appropriate short- and long-term measurable goals for reducing CNM's carbon footprint through controlling greenhouse gas emissions. The PSCC should have five and ten year, as well as specific targets for 2020, which CNM can strive to reach through informed planning from the ESP. These targets should be set by December 2010 and evaluated annually for appropriate adjustment.

Academics

1.1 INTRODUCTION

CNM has begun to develop a comprehensive set of offerings for students interested in sustainability and environmental education. Currently CNM offers courses that include teaching or discussion on sustainability, social justice, the environment and conservation and green education and career pathways are under development within the School of Applied Technologies and the Workforce Training Center. The education and career pathways in green/sustainable/renewable energy are built to meet the needs of emerging industry needs.

Additionally, the ACUPCC requires each campus to integrate sustainability into the curriculum, and to make it part of the educational experience. As noted above a number of sustainability related course and other educational experiences are available to students, in a number of departments and schools across campus. For example, CNM will offer technician training programs including Photovoltaic Technician, Solar Thermal Technician, Small Wind Turbine Technician, Alternative Energy System Designer, Alternative Fuels Technician and Photovoltaic manufacturing Technician.

1.2 GOALS AND ACTIONS

Summary of Goals

1. Reduce the use of classroom supplies.
2. Develop a college-wide culture of concern for sustainability.
3. Establish a college-wide task team to address sustainability in the classroom
4. Establish an educational component for faculty

GOALS AND REVELANT ACTIONS

Goal:

1. Reduce the use of Classroom supplies

Relevant Actions:

- Reduce the use of paper and toner for classroom purposes by 7.5% per year over the next ten years.
- Reduce other paper use by:
 - Providing for e-timesheets and e-grade books to reduce paper use
 - Providing for e-filing of all other administrative processes form discipline issues to newsletters.
 - Creating a culture of re-cycling by providing classroom recycling bins.

- Providing large centralized shredders to allow for faculty to dispose of confidential papers.

Goal:

2. Develop a school wide culture of concern for sustainability.

Relevant Actions:

- Create a culture of shutting off lights and equipment when a room is not in use.
- Encourage faculty and students to ride mass transit and use bicycles and motorbikes for commuting to campus.
- Increase sustainability by including sustainability into the convocation and increase awareness on Sustainability initiatives and encourage faculty to attend one or more events in syllabi.
- Creating a sustainability 'Book of Term' program across campus including web site/ blog to include interdisciplinary discussions, brining speakers including the authors in the field.
- Create green lessons plans tied to class outlines.
- Develop and implement a Student Chapter of the US Green Building Council and encourage Faculty participation with students.

Goal:

3. Establish a task team to address sustainability in the classroom.

Relevant Actions:

- Develop a team to determine interest and participation in introducing sustainability issues into current courses.
- Increase the number of courses to include one or more green lessons by 30% by 2013 and track information.
- Increase the number of Hybrid and Distance Learning classes to both reduce class-room hours for students and reduce the need for new classrooms.
- Schedule classes needed by students into standard blocks across school to reduce trips to campus and waiting times between classes.
- Task each program to include a sustainability course into curriculum and task each school to develop a sustainability program in its own area in conjunctions with other schools.

Goal:

4. Establish an educational component for faculty.

Relevant Actions:

- Provide educational opportunities to educate faculty on latest technology and the use of **myCNM**.
- Work with Professional Development to teach faculty regarding Distance Learning and hybrid classes.
- Provide additional training to new faculty hires.
- Offer sustainability curriculum workshops.

1.3 CHALLENGES

Bringing together multidisciplinary groups to conduct survey and educate students on sustainability issues may be challenging, given the departmentalized nature of each school. Creating new courses and adding sustainability to the existing curriculum will take time and resources on the part of administrators, faculty and staff. With today's busy time, finding time and resources will be difficult. Funding may also be needed to develop campus wide data bases for sustainability information.

Energy

2.1 INTRODUCTION

CNM has been at the forefront of energy management and has been tracking campus GHG emissions for the past few years, as evidenced by our signature in the President Climate Commitment. Notable actions taken to date include a new ground source heating system for the new Rio Rancho Campus and other notable actions including building energy conservation projects which include HVAC upgrades on existing buildings including, S, A, E, KC and TC. Numerous other projects have been completed or are ongoing, such as energy efficiency retrofits, energy audits, and construction of high performance green buildings. CNM is also working to reduce energy usage of computing and other electronic equipment through various energy efficiency projects and cyber infrastructure programs.

However, in spite of our leadership and aggressive action to manage energy usage, energy consumption and GHG emissions has been rising due to ongoing campus growth, and are likely to continue due to continued growth plans until 2020. Figure 1 and 2 show both natural gas and electric use over the past ten years.

2.2 GOALS AND ACTIONS

Summary of Goals

To retain a leadership role in climate change and energy use and develop a guideline for reducing emissions which is as follows: 2000 levels by 2015, 1990 levels by 2020 and climate neutral by 2025.

5. Implement various energy efficiency projects and retrofits to buildings
6. Implement other efficiency projects
7. Purchase renewable energy.
8. Have an educated campus community on energy conservation and sustainability efforts.

GOALS AND REVELANT ACTIONS

Goal:

5. Implement various energy efficiency projects and retrofits to buildings.

Relevant Actions:

- Numerous energy efficiency retrofits are already planned and funded, and will be implemented from 2010 to 2015. These projects include diverse actions, such as updating heating, ventilation and air conditioning equipment in buildings, to lighting retrofits to building commissioning, to building temperature set points.

- Other projects include installation of occupancy sensors and energy and sensors on beverage and snack machines, and improving efficiency of automatic doors.
- Installation of separate meters to buildings to track energy use.

Goal:

6. Implement other efficiency projects.

Relevant Actions:

- CNM is working to improve efficiency of computing systems and other electronic equipment and will continue to perform research and implement in these areas. Additional information regarding purchasing will be located in procurement section
- CNM will work to have all computers shut down at 11:30pm.
- Turn off all lights to buildings and parking lots at 11:30pm.
- Mandate the consolidation of personal appliances to break rooms

Goal:

7. Purchase renewable energy

Relevant Actions:

- Purchase renewable energy from PNM sky blue program in the amount of 50% by 2010 with a plan to purchase 80% by 2015

Goal:

8. Have an educated campus community on energy conservation and sustainability efforts.

Relevant Actions:

- Develop a plan to perform outreach to inform the campus community of their impacts on the environment through energy usage, and ways they can reduce energy consumption. This outreach will be performed as part of a larger sustainable outreach campaign.

2.3 CHALLENGES

The challenges that CNM faces are not unique, although important steps have been taken to reduce energy usage and begin the transformation to a low carbon energy future, there lies much work ahead, especially in considering the campus plans for future growth. The Facilities Master plan, the Information technology plan and the strategic plan will all have to align to assist in reducing energy usage. Another challenge is that there is currently no funding for renewable energy and steps will need to be made funds available for future funding.

Food

3.1 INTRODUCTION

CNM has identified the need to review programs and processes that would create opportunities to improve sustainable efforts in the area of food service. Food services at CNM are provided through a third party vendor. This vendor has committed to a partnership in identifying green opportunities. Current efforts to improve sustainable practices include the use of a Carbon Footprint Self Audit, creation of a list of energy efficient equipment in preparation for upcoming replacements, culinary training of staff to emphasize the reduction of food waste in the preparation of meals, and recycling of used grease and cardboard.

3.2 GOALS AND ACTIONS

Summary of Goals

9. Partner with the main supplier to the Food Service vendor to use local products when available.
10. Improve the impact of the Carbon Footprint related to Food Services.
11. Reduce waste in Food Services.

GOALS AND REVELANT ACTIONS

Goal:

9. Partner with the main supplier to the Food Service vendor to use local products when available.

Relevant Actions:

- Third party vendor to create relationships with local farmers in New Mexico, and identify suppliers who use local products when available.

Goal:

10. Improve the impact of the Carbon Footprint related to Food Services on campus.

Relevant Actions:

- Coordinate with Facilities Management to have a third party complete an analysis and energy audit of the full carbon footprint of kitchens on CNM campuses.
- Train food service employees regarding eco efficiencies in food production.

Goal:

11. Reduce waste in Food Services.

Relevant Actions:

- Convert to new Apex Ware Washing System to reduce the amount of water and chemicals used in dish washing process.
- Convert to XpressNap single serve napkin dispenser to reduce amount of napkins wasted.
- Transition to condiment pump from single serve packets.
- Identify newer green disposable products and their possible use in the Food Service operation.
- Create a recycling marketing program to educate students on the importance of recycling.

3.3 CHALLENGES

Reducing the carbon footprint related to food services will be a challenge as the college manages food service through a third party vendor. Fortunately, the current vendor has already begun implementing sustainability improvements and is a willing and eager partner in sustainability initiatives. Challenges related to the cost of implementing initiatives will be significant, particularly in the area of the use of local produce versus large suppliers from nearby states.

Built Environment

4.1 INTRODUCTION

The CNM Facilities department has begun implementing policies and practices to reduce CNM's impact on the environment. The maintenance of buildings and other facilities, including the cleaning of facilities is included under this category.

CNM has implemented a number of green practices. All new buildings will be constructed to be certified LEED Silver. In addition all major renovation to existing facilities will be certified under the LEED for Existing building (LEED-EB) program. It is intended that about 3% of all CNM buildings will be green certified buildings by the year 2012 and the percentage will increase to 15% by 2016 after new facilities and existing buildings are certified in the next few years.

76% of the cleaning supplies used at CNM operations department are Green Seal Certified; Green Seal Certification is issued by an independent, non-profit organization.

4.2 GOALS AND ACTIONS

Summary of Goals

12. Improve performance of all campus buildings in terms of energy and water usage.
13. Reduce the impacts of cleaning supplies
14. Establish as a standard LEED Silver as the standard for all new buildings, and achieve LEED Gold where possible
15. Incorporate a LEED-EB standard for all renovation projects that are approved in the Five Year Master Plan.

GOALS AND RELEVANT ACTIONS

Goal:

9. Improve performance of all campus buildings in terms of energy and water usage.

Relevant Actions:

- Issue a proposal to select an energy service provider. The proposal will call for the energy service provider to assess the CNM campus in terms of energy use and determine the best way to improve performance to each building. The project will also call out for each building to be independently metered to give the campus a specific view of each building in terms of the amount of energy each consumes. Among other energy saving methods, the data will guide the development of a set seasonal temperature standards for each building during the year.

- Replacement of current urinals and toilets with new low flow models throughout the campus to reduce water use. Urinal replacements include East, West and South Valley. Toilet replacement includes S, E, A, South Valley , H, J, and K buildings.
- Tie the list of projects in the Facilities Master Plan that note HVAC and building renovations to the review of building energy and water usage performance.
- Consolidate weekend classes into fewer buildings to conserve energy
- Change working hours for the custodial cleaning crews to work during CNM normal operating hours to allow for the lights and buildings to be shut down to conserve energy.

Goal:

10. Reduce the impacts of cleaning supplies.

Relevant Actions:

- By 2010, use 100% Green- Seal –Certified cleaning supplies
- By 2010 100% of restroom paper supplies will contain a portion of post consumer waste product.
- By 2010, use only cleaning supplies purchased in bulk and diluted before use.
- By 2011 convert to reusable rags and recycled paper alternatives for cleaning and maintenance
- Perform continuous research for new green products and adopt them whenever possible, such as germicides.

Goal:

11. Establish as a standard LEED Silver for all new buildings; review the possibility of achieving LEED GOLD where possible with no fiscal impact.
12. Incorporate a LEED-EB standard for renovation projects that tie annually to the Five Year Master Plan.

Relevant Actions:

- Develop a standardized LEED checklist for new construction that will become the standard for each new facility.
- Prioritize an order in which LEED-EB practices will be incorporated into renovation for existing buildings.

4.3 CHALLENGES

Currently, green alternatives are not available for some cleaning supplies, or if they are available, they are not cost effective at this time. It is expected that this will change over time as the market continues to demand greener products.

A second challenge is that achieving LEED-EB certification can be a time-intensive process. CNM is working to find a simpler and faster process. To this end, one Facilities Staff member is also attending training to be certified to assist CNM in developing this process.

Landscaping

5.1 INTRODUCTION

CNM has been taking on a leadership role with regards to development of sustainable landscaping. CNM has implemented a landscaping plan that includes xeriscaping techniques in an effort to reduce water and maintenance to the CNM campus.

5.2 GOALS AND ACTIONS

Summary of Goals

16. Implement a reclaimed water system to landscape areas across CNM campuses.
17. Develop a landscape irrigation and water strategy plan.
18. Reduce use of toxic chemicals.
19. Have an educated campus community regarding sustainable landscaping initiatives.

GOALS AND REVELANT ACTIONS

Goal:

13. Implement a reclaimed water system to landscape area across CNM campuses.

Relevant Actions:

- Develop a reclaimed water plan for CNM. CNM does not need potable water for irrigation and should look at options when available to use reclaimed water in landscaping
- Review storm water and drainage at all campuses to see if opportunities exist to use storm water runoff in irrigation areas.
- Review and develop a partnership with the local agencies such as the City of Albuquerque to use reclaimed water for certain landscaping areas and parking lots.
- Develop a landscaping irrigation water strategy and outreach plan. The plan will outline best practices for landscape irrigation as well as a plan for educating grounds staff regarding best practices.

Goal:

14. Develop a landscape irrigation and water strategy plan.

Relevant Actions:

- Purchase and install water meters in all buildings as well as irrigation lines. Track information on a monthly basis to see water usage.
- Sub meter the landscaping to obtain a better of water use.

- Sub meter 100% of the buildings for water usage.

Goal:

15. Reduce use of toxic chemicals.

Relevant Actions:

- a. Continually research use of non-toxic or less toxic chemicals.
- b. Research commercial grade Green Seal Certified chemicals.

Goal:

16. Have an educated campus community regarding sustainable landscaping initiatives.

Relevant Actions:

- Perform outreach to 100% of the incoming students and post signage with sustainable conservation messages. The outreach will stress ongoing behavioral changes that the campus community can take to reduce water usage.

5.3 CHALLENGES

Reducing water usage will be challenging given the planned campus growth, both in number of students enrolled at CNM and the new campus buildings being constructed. One challenge is related to the expectations from the campus community regarding traditional campus landscaping which includes turf areas. Planning will need to be done to ensure that outdoor areas are well developed that allow for students to gather while at the same time reduce water usage.

Procurement

6.1 INTRODUCTION

CNM has initiated a number of policies and programs to reduce environmental impacts associated with purchasing and materials management practices. Implementation of the Purchase Card, purchase of computers that meet EPEAT standards and requiring all fleet copiers to meet energy star requirements are three such examples. A key challenge is have the entire CNM community educated on more sustainable purchasing guidelines that will need to be reviewed, studied, approved and implemented for the College. The following goals and actions both address the overall need for CNM to establish guidelines and give some suggested areas for CNM to consider within the 2012 timeframe.

6.2 GOALS AND ACTIONS

Summary of Goals

20. Implement sustainable criteria which will have a positive impact on the environment while remaining fiscally responsible.
21. Achieve a 30% post consumer waste (PCW) content on all paper purchases by 2012.
22. Reduce per capita paper usage by 20% by 2012. Reduce the usage of colored non- recyclable paper by 50% or greater.
23. Reduce the amount of printers, copiers and other applicable electronic equipment purchased and used. Reduce the usage of colored non- recyclable paper by 50% or greater.
24. Reduce the total emissions from the life cycle of materials purchased, used and discarded on campus, including the emissions and impacts from extracting the materials, processing materials into products, transporting products to the campus for use and transporting waste materials for final disposal or recycling.
25. Have an educated campus community regarding sustainable procurement initiatives.

GOALS AND REVELANT ACTIONS

Goal:

17. Implement sustainable criteria that will have a positive impact on the environment while remaining fiscally responsible.

Relevant Actions:

- Establish guidelines to evaluating green products, services and vendor practices. Some factors to consider include the following:
 - Use or adoption of 3rd party certification or eco labels
Ex: Energy Star rating, Green Seal, USGBC, Green Guard, EPEAT, USDA Organic, Forest Stewardship Council, EPA Environmentally Preferable Purchasing, etc.

- Procurement of Remanufactured or refurbished products
- Establishment of minimum recycled product content for applicable commodities
- Specification criteria based upon the products life cycle impact as applicable
- Establish guidelines which determine green product options falling outside of budget specifications, while remaining compliant with the New Mexico Procurement Code.

Goal:

18. Achieve a 30% post consumer waste (PCW) content on identified paper purchases by 2012

Relevant Actions:

- Research available recycled paper products (20# copy paper, colored paper, paper used in janitorial applications, reports, etc), look for alternatives to either virgin or low recycled or PCW products.
- Set guidelines that specify the use of post consumer waste recycled paper. Many vendors now make a 30% PCW paper. Limit the use of virgin paper unless specifically authorized by CNM due to the technologies and equipment that do not have a feasible green alternative.
- Require manufacturers to guarantee paper offered can work in high speed copiers and have a minimum guarantee not to jam so product waste is minimized and the cost to the College.
- Research and implement minimum requirements for copier contracts to have copiers that can use PCW content paper.

Goal:

19. Reduce per capita paper usage by 20% by 2012. Reduce the usage of colored non- recyclable paper by 50% or greater.

Relevant Actions:

- Utilize electronic versions instead of paper versions for all reports. Archive reports in PDF or other digital formats. Reducing overall paper usage will require policies and training so that all campus members begin to replace printer versions with electronic whenever possible.
- Replace the use of colored paper with white recyclable or PCW recyclable paper whenever possible.
- Research the possibility of using centralized, multi- functions printers to reduce paper usage and reduce the amount of equipment in use.
- Establish specifications requiring duplex capable printers and set all defaults to duplex to increase double sided documents.
- Replace paper driven systems with automated systems such as on line travel, electronic procurement and electronic mailing.

Goal:

20. Reduce the amount of printers, copiers and other applicable electronic equipment purchased and used. Reduce the usage of colored non- recyclable paper by 50% or greater.

Relevant Actions:

- Institute a policy requiring a review process for non- standard computer equipment, configurations, e.g. multiple monitors, personal printers, etc.
- Continue to purchase power efficient computing products, specifically, all new computers and other electronic equipment to meet the Energy Star 4.0 standard.

Goal:

21. Reduce the total emissions from the life cycle of materials purchased, used and discarded on campus, including the emissions and impacts from extracting the materials, processing materials into products, transporting products to the campus for use and transporting waste materials for final disposal or recycling.

Relevant Actions:

- Perform a survey to identify green vendors under CNM's sustainable guidelines. A survey shall serve as an information gathering tool from vendors regarding their knowledge and ability to supply goods identified as green products, sustainable products.
- Identify local producers for material as well as local markets for recycling of waste materials where possible.
- Highlight the environmentally preferred product guidelines and ensure that the first option for any product is the environmentally preferred product so long as it meets the requirements for the department or College.
- Perform education and training to users and buyers to inform non procurement faculty and staff about sustainable procurement guidelines established by CNM.
- Design a tracking and monitoring program of green purchasing and packaging reduction programs.
- Reduce emissions through use of consolidated procurement activities which lower emissions by taking advantage of full bulk purchasing.

Goal:

22. Have an educated campus community regarding sustainable procurement initiatives.

Relevant Actions:

- Provide education and training in sustainability initiatives related to procurement for all CNM employees who purchase for the college.

6.3 CHALLENGES

CNM has many methods available to set green or sustainable procurements guidelines. The process of educating departments and their end-users, educating buyers and vendors about sustainable purchasing programs and creating consistency in the use of specifications and terminology for CNM's procurement of green products could be a challenge. Compatibility with existing equipment, software or other services may also be a factor in establishing standards for goods and services.

The greatest challenge may be to weigh cost/benefit to CNM in making these changes. Change in the culture and workplace practices of faculty, staff and students will take a variety of resources. There will also be an impact to the College budget with the implementation of minimum green specifications.

CNM must also maintain compliance with all CNM policies, and applicable local, state and federal laws.

Transportation

7.1 INTRODUCTION

CNM has been working on a transportation program that encourages the campus community to use alternative transportation for commuting to campus. Alternative options include carpools, walking, bicycling and public transportation such as buses and trains. CNM has worked with the Albuquerque transit group to develop bus stops throughout its campuses. CNM has purchase alternately fueled vehicles for the campus fleet, including hybrid, and vehicles fueled by compressed natural gas. Air travel has been restricted this year to lower air travel emissions.

7.2 GOALS AND ACTIONS

Summary of Goals

26. Reduce per capita emissions from air travel by at least 10% from the previous year's emissions.
27. Reduce the percentage of commuters using single occupancy vehicles by 30% by 2018.
28. Reduce Campus Fleet emissions by at least 4% per year, based on the previous year's emissions.
29. Increase bicycle and walking on the campus.
30. Have an educated campus community on transportation alternatives and sustainability efforts.

GOALS AND REVELANT ACTIONS

Goal:

23. Reduce per capita emissions from air travel by at least 10% from the previous year's emissions.

Relevant Actions:

- Replace in-person meetings with video conferences, webinars, and on-line training. Although attending meeting and conferences can be more effective, some conferences and training could be conducted over the internet and by video conferencing. Many conferences are being broadcast via web webinars online.
- Review and modify travel policies to encourage faculty and staff to use video conferencing, webinars, and local networking and training opportunities.

Goal:

24. Reduce the percentage of commuters using single occupancy vehicles by 30% by 2018

Relevant Actions:

- Develop and implement a carpool and vanpool programs to discourage single vehicle use.

- Implement standardized block scheduling for classes to allow for more students to participate in carpool programs
- Increase telecommuting and use of flexible work hours. CNM can develop a sign up and program to work with supervisors on developing a flexible work schedule that fits their needs.
- Improve local transportation options and infrastructure. Work with the City of Albuquerque to provide more routes and services to meet the needs of the CNM community.

Goal:

25. Reduce Campus Fleet emissions by at least 4% per year, based on the previous year's emissions.

Relevant Actions:

- Replace gasoline powered vehicles with alternatively fueled vehicles.
- Optimize fleet usage. Many departments on campus operate their own campus vehicles; however there are opportunities for car sharing among campus groups.

Goal:

26. Increase bicycle and walking on the campus.

Relevant Actions:

- Improve facilities and infrastructure related to bicycling at CNM.
- Develop safe bike paths and tie the paths to existing City bike lanes to encourage biking to work.
- Develop a secure bike parking and storage in renovations to allow for additional security of bikes and encourage bicycling to work.

Goal:

27. Have an educated campus community on transportation alternatives and sustainability efforts.

Relevant Actions:

- Survey students on commuter attitudes towards driving and alternative vehicles to determine if they consider alternative means of travel and determine what opportunities exists to better meet the needs of CNM.
- Work with the City of Albuquerque public transit to inform students and staff of bus routes and create schedules which would support and encourage use of public transportation.
- Educate the CNM community regarding transportation options.

7.3 CHALLENGES

Reducing the emissions from transportation will be challenging given the planned growth of the CNM campus population expected over the next few years. In addition, the campus will need to address the challenge of financing additional transportation options. This may require increasing parking fees to finance programs. In the area of air travel, the key challenge has been gathering accurate data to calculate emissions. A centralized data base may need to be developed to track information. Finally due to the campus schedule, there is peak parking periods and not enough capacity for parking which in term adds to vehicles circling the campus and increasing emissions. Review of the current scheduling will need to be done with an objective of reducing the need for additional parking on campus.

Waste/ Recycling

8.1 INTRODUCTION

CNM is seeking to reduce its waste diversion by 20% by 2015 and is in the process of instituting a single stream recycling program. A recycling program is in place at CNM that has won state recognition in reducing our waste diversion and numerous strides are being made in improving and expanding the recycling programs. Currently a request for proposal is seeking vendors to assist in our waste diversion actions.

8.2 GOALS AND ACTIONS

Summary of Goals

31. Reduce waste by 20% by 2010 with an emphasis on zero waste by 2020
32. Reduce the total emissions from the life cycle of materials purchased, used and discarded on campus.
33. Have an educated campus community regarding sustainability practices for waste and recycling.

GOALS AND RELEVANT ACTIONS

Goal:

28. Reduce waste by 20% by 2010 with an emphasis on zero waste by 2020

Relevant Actions:

- Improve single stream recycling program by updating and evaluating containers and signage. Currently an assortment of recycling and waste containers is spread throughout the campus. In some locations, the number of recycling bins is adequate and in other places larger containers are needed. Improving the location, size, and placement of bins will improve participation in the program. Also developing a consistent signage will improve participation as all the campus community will better understand where to discard their recyclable waste with the proper signage posted.
- Improve waste reduction efforts. Waste reduction should occur before recycling in order to minimize the waste stream. Education efforts may also focus on reducing waste through encouraging the use of durable, re-usable products when possible.
- Recycle all construction and demolition debris. Almost all construction and demolition debris is recyclable and should be diverted from the landfill. CNM should develop a debris recycling plan with the goal of developing and implementing a campus wide recycling policy for these materials.
- Install water hydration stations near drinking fountains to reduce the need for bottled water. Bottled water is considered a wasteful practice. A study will be done to investigate where these

stations should be located. This recommendation is also included in the water section of the report.

- Work with City of Albuquerque, City of Rio Rancho, and Bernalillo County on hosting periodic electronic waste collections events. A large amount of e waste is generated in the form of computers, printers, monitors, cell phones and other types of e-waste. In order to prevent these items from being thrown into the trash, regularly scheduled events are needed to capture the recyclable e-waste.

Goal:

29. Reduce the total emissions from the life cycle of materials purchased, used or discarded on campus.

Relevant Actions:

- Develop a long term zero waste strategy and review and revise the strategy as needed.
- Research local and national markets for recycling, and to implement a policy requiring the use of local markets for recyclables when possible to reduce the life cycle impacts of recycling. A proposed committee is suggested to research the information and provide a policy and timeline. Educate CNM community regarding these sources.
- Locate local producers for materials, as well as local markets for recycling of waste materials, when possible.

Goal:

30. Have an educated campus community regarding sustainability practices for waste and recycling.

Relevant Actions:

- Increase education of all staff, students, and faculty regarding the recycling program. All campus stakeholders need to be included in the education efforts. Campus users need to know how to sort their waste and place it in the proper bins, and the campus staff should be regularly trained so that they properly handle the waste and recyclables.

8.3 CHALLENGES

One of the major challenges is the lack of recycling and composting facilities and markets near the CNM campus. Because few facilities exist in New Mexico, CNM may need to develop its own composting facility or partner with other local agencies to develop a composting solution. Also local markets for certain recyclable material do not have enough capacity to handle the waste generated, so that some recyclable materials are shipped overseas for the recycling. Finally capturing data on the makeup of the waste stream are also needed to better understand what is recycled and what is thrown in the trash.

Water

9.1 INTRODUCTION

CNM's water usage has remained relatively steady in recent years at about 30 million gallons per year. Of that amount none is currently reclaimed. Additionally, approximately one half of the buildings on campus do not have water efficient fixtures.

Additional research is needed to understand exactly where and how water is being used on campus. Water usage is not well tracked on campus, with both irrigation and potable water coming from the same source and metered together.

Storm water runoff is an issue of concern at CNM. One method used to reduce storm water is implementation of low impact development which is occurring with the New Rio Rancho Campus development. Low impact development is a sustainable landscaping approach which replicates or stores natural watershed functions to address targeted watershed goals and objectives.

One of the most important tasks ahead is that of creating awareness regarding water usage and educating campus community members on how to reduce its use. This has the potential to sharply reduce usage by spurring changed behavior on the part of all members of the CNM community.

9.2 GOALS AND ACTIONS

Summary of Goals

34. Reduce overall water usage by 4% per year while increasing the usage of reclaimed water
35. Sub meter 100% of buildings for water usage
36. Sub meter the landscaping to obtain data on water use.
37. Have an educated campus community regarding water awareness and sustainability practices.

GOALS AND RELEVANT ACTIONS

Goal:

31. Reduce overall water usage by 4% per year while increasing usage of reclaimed water.

Relevant Actions:

- Develop a reclaimed water plan for CNM in partnership with the City of Albuquerque. CNM does not need potable water or irrigation and will explore options to use reclaimed water in landscaping and adopt feasible measures.
- Installation of irrigation water meters and associated water management equipment to increase accuracy and control over water use within the landscaping.
- Develop purchasing standards for water fixtures. About one half of the buildings on campus mostly the newer buildings have water efficient fixtures installed. The campus has an

opportunity to take advantage of the new technology available in ultra efficient fixtures in all buildings that are retrofitted. Newer fixtures in all new buildings that will be constructed in the next few years, and in buildings that are retrofitted.

- Assess future building and new landscaping projects for water usage before construction. All new buildings will be certified at a LEED Silver or higher. The LEED standards include consideration of water usage, but additional assessment may be needed to measure and reduce potential water usage at new projects.
- Obtain a commitment from the administration to reduce all bottle water purchases from GAA funding.
- Supply new water fountains and water distribution stations to reduce the need for bottled water. CNM will conduct a study to research area across campus for drinking water outlets and will review potential for installing water filtering stations.
- Develop a landscaping irrigation water strategy which will define best practices for landscape irrigation and a plan for training of grounds staff to implement the practices.

Goal:

32. Sub meter 100% of buildings for water usage
33. Sub meter the landscaping to obtain data on water use

Relevant Actions:

- Purchase and install water meters in all buildings as well as irrigation lines. Track information on both on a monthly basis to evaluate water usage.

Goal:

34. Have an educated campus community regarding water awareness and sustainability practices.

Relevant Actions:

- Develop an awareness campaign which targets all new students and employees.
- Post signage with sustainable conservation messages. The outreach will stress ongoing behavioral changes that the campus community can take to reduce water usage.
- Include water usage and conservation information regularly in campus news media.

9.3 CHALLENGES

Reducing water usage will be challenging given the planned campus growth, both in number of students enrolled at CNM and the new campus buildings being constructed. One challenge is related to the expectations from the campus community regarding traditional campus landscaping which includes turf areas. Planning will need to be accomplish to ensure that outdoor areas are developed in ways that allow for students to gather while at the same time reduce water usage.

Appendix

Members of the President's Sustainability and Climate Commitment Task Force

Samantha Bousliman, Chief Communications Officer, President's Office – Co-Chair

Luis Campos, Executive Director, Physical Plant – Co-Chair

Juliane Ziter, Labor Relations and Administration Planning Manager – Co-Chair

Clint Ewell, Executive Director, Planning, Budget, & Institutional Research

Charlotte Gensler, Director, Purchasing

Tom George, Instructor, School of Applied Technologies

Anthony Guevara, Student

Sue Gunckel, Instructor, School of Business & Information Technology

Blaine Henderson, Facilities Project Manager, Physical Plant

Monicalyn Luthien, Student

Richard Mazon, Infrastructure Manager, Information Technology Services

Lisa McCulloch, Executive Director, CNM Foundation

Douglas McDoniel, Instructor, School of Math, Science & Engineering

David Miertschin, Instructor, School of Applied Technologies

Anthony Rael, Operations Manager, Physical Plant

Sam Romo, Materials Handler, Recycling Coordinator

M.J. Zimmerman, Instructor, School of Communication, Humanities & Social Sciences

Academics

▪ Current Sustainable Practices

- Printed Student Catalog to go On-line
- Leadership in Individual Faculty to promote sustainability
- Distance Learning
- Green Team



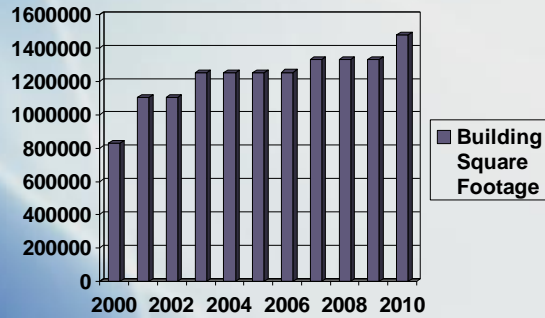
Built Environment

▪ Current Practices

- All new building to be built to US Green Council Leadership in Energy and Environmental Design (LEED) Silver Certification
- Well maintained campus noted by State HED study
 - CNM ranks with in the top five
- Rio Rancho Campus will be first campus to be built with sustainable practices
- CNM is working to develop procedures and policies to convert all renovations on campus to use green building practices.
- Promoting a campus master plan focused on the pedestrian
- Scheduling software to track space utilization



Building Square Footage

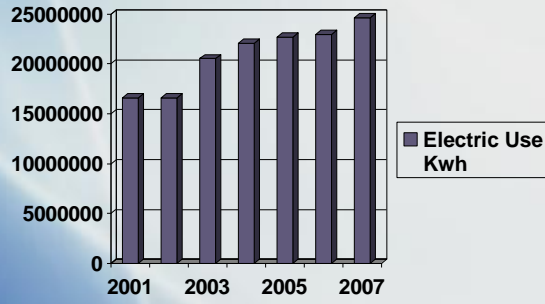


Energy

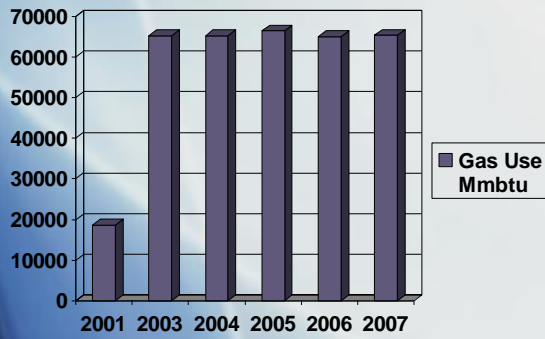
- Implementing energy-efficiency projects such as upgrading lighting systems, retrofitting HVAC systems, and improving laboratory ventilation.
- Purchase Gas on the Market to lower cost
- RFP for Electrical Service Provider to help CNM seeks way to lower energy use.
- 14 buildings are currently tied to Energy Management System
- CNM received a grant for the State Energy and Minerals Department to do lighting upgrades which will allow CNM to purchase renewable energy from the savings



Energy Electrical



Energy Gas

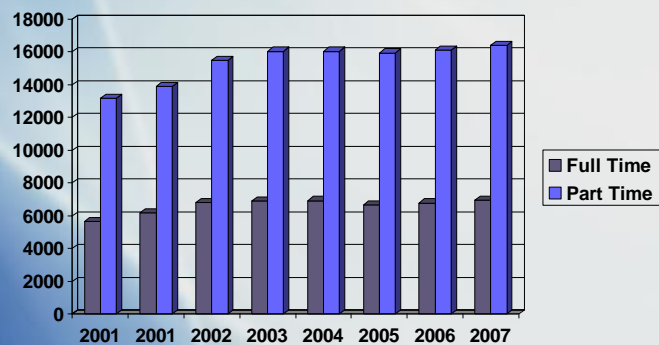


Food

- Use of Recyclable paper products



CNM Student Population



Landscaping

- **Current Practices**

- Use of drought tolerant native plants
- Removing invasive non native plants
- Reduced the use of herbicides
- Reduced the use of power tools
- Moving to use reclaimed water to irrigate campus



Procurement/ Material Management

- **Current Practices**

- P Card process to eliminate paperwork
- Use of Energy Miser for Food Vending Machines
- Data Warehousing
- Reviewing policies to add Energy Star to purchases
- Looking at purchasing post consumer recycled paper products for operations



Transportation

- **Current Practices**
 - Partnership with City of Albuquerque to allow CNM students to ride for free
 - Development and funding of bus stops at all campuses
 - Use of High Efficiency LED lights on all future campus parking lot developments
 - Percentage of Motor pool vehicles must be alternative energy.
 - Bicycle Parking at each campus



Waste/ Recycling

- **Current Practices**
 - CNM Recycling Program
 - Addition of recycling trash can throughout CNM
 - Equipment Auctions
 - Hazardous waste material program



Water

- **Current Practices**
 - Replacement of old irrigation systems to new more efficient systems
 - Low flow faucet and flush valves to reduce water use
 - Use of reclaimed water in new construction
 - Improved storm water and waste water management
 - Use of native plants

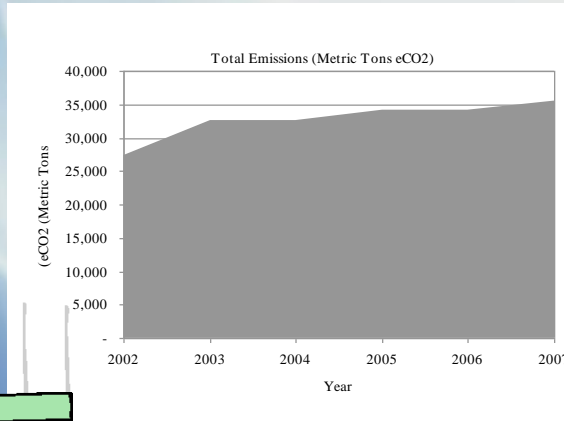


CNM Carbon Footprint

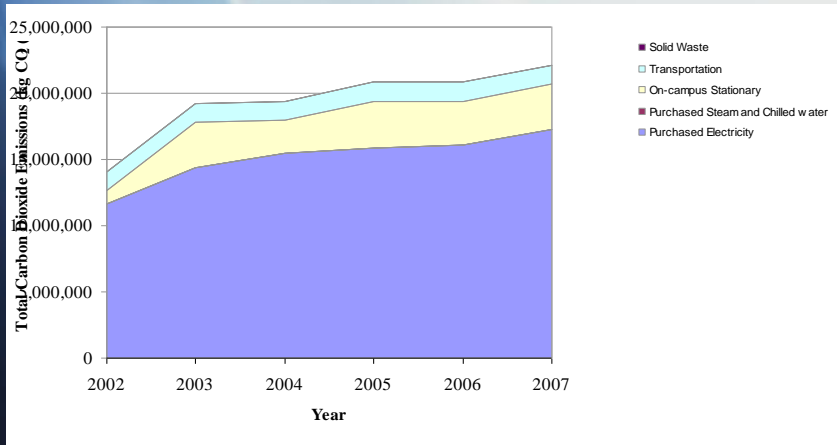
- **Electricity**
 - Use 25,000,000 KWh for the year 2007
- **Gas**
 - Use 653,210 Therms of natural gas in 2007
- **Waste**
 - Generate 26,592,000 lbs of garbage in 2007
- **Transportation**
 - Fleet vehicles traveled 422,643 miles in 2007
 - CNM did approximately 456,775 air miles (550 trips) in 2007
 - Use 650 gallons of gasoline to power M and O equipment



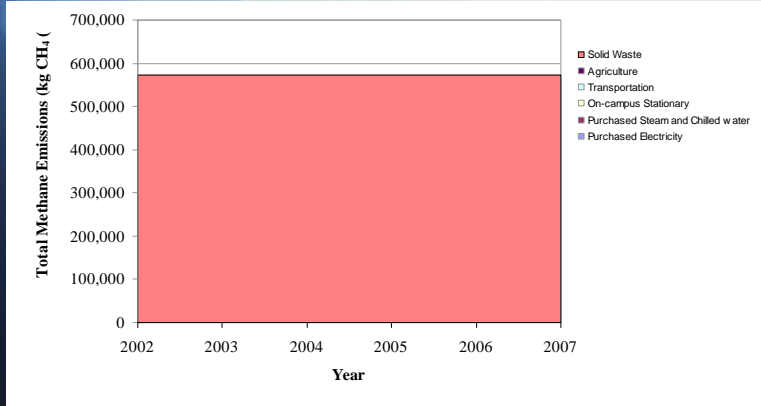
CNM Carbon Footprint



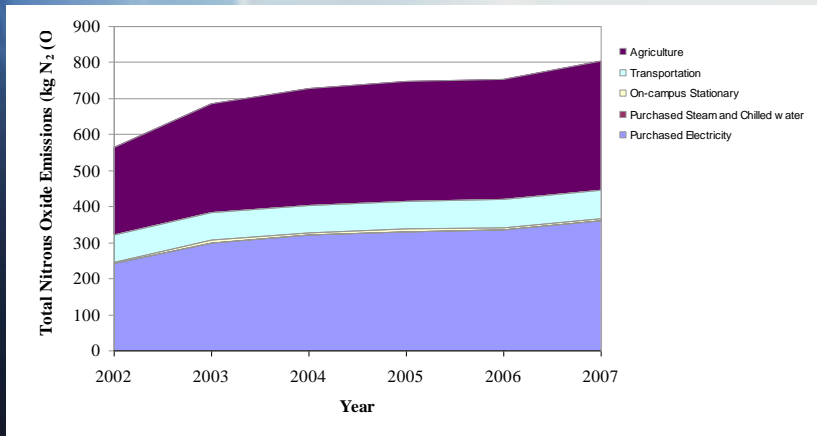
Total Carbon Dioxide Emissions



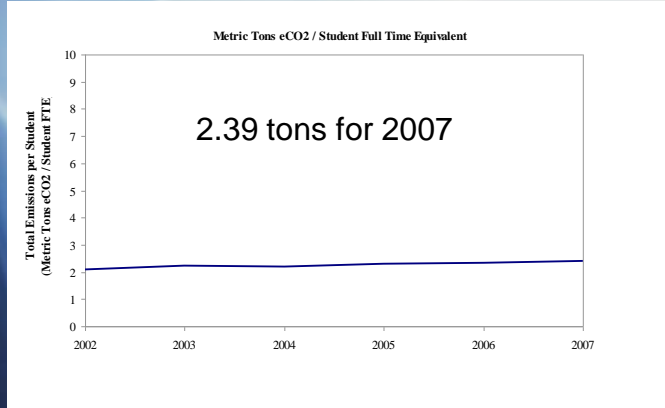
Total Methane Emissions



Total Nitrous Oxide Emissions



CO2/ Student FTE



CO2/ CNM Community

