

NMSU Sustainability Plan formatted from the 10 Sustainability Initiatives

NMSU Office of Sustainability Initiatives

1. Relationships
2. Energy reduction
3. Waste reduction



4. Water conservation
5. Climate change resilience
6. Food and Health
7. Green buildings

8. Transportation
9. Materials
10. Social justice



Go Aggies! Go Green!

NMSU Sustainability Plan

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1. Relationships

We all know what relationships are. But what are they in reference to sustainability and the environment?

Everything the Office of Sustainability does is in relationship with another person, entity, organization, or quite simply, the planet. None of us can deny our close bond to Mother Nature. When we take on a project we always take into consideration how it affects everything we touch. Like the butterfly that flaps its wings in China affects something across the globe, consideration must be taken into account how our actions affects those at NMSU and those we are connected to – in relationship with. We like to think of that as a large web to which we have a bond, a connection, and engagement.

Our relationship to Mother Earth

1. The Sun is the primary source of energy for Earth's climate system
2. Climate is regulated by complex interactions among components of the Earth system
3. Life on Earth depends on, is shaped by, and affects climate
4. Climate varies over space and time through both natural and man-made processes
5. Our understanding of the climate system is improved through observations, theoretical studies, science, and modeling
6. Human activities are impacting the climate system
7. Climate change will have consequences for the Earth system and human lives

**“Join the Office of Sustainability in our relationship with
the environment and your fellow human beings”**

2. Energy Reduction

Energy Reduction Campaign

The Office of Sustainability strives to reduce energy consumption at NMSU by focusing on energy efficiency in our buildings and in our operations. In order to do this, we have developed an Energy Reduction Campaign, which is an awareness and behavioral modification program with the goal of reducing energy consumption on campus as a way to reduce energy costs while helping the environment.

Strategies of the Energy Reduction Campaign include:

- Collaborating with each of the College Deans and Department Heads
- Developing educational programs aimed at students, faculty, and staff
- Education the importance of turning off monitors, lights, chargers, etc.

The College of Education has their own Green Team for their various buildings across main campus. They designed their own stickers for their light switches to remind occupants to turn off their lights when they leave the room and they made their own recycling bins for the classrooms. If you'd like to start your own Green Team for your building contact the manager of the Office of Sustainability at sustain@nmsu.edu



Facilities and Services (FS) has been working on energy reduction since 2007 through the following ways:

- Incorporating more efficient use of power generation at the Central Utility Plant such as:
 - turning off certain chillers during the day when the energy costs are high and then running them for chilled water storage at night when the energy costs are 1/5 of that during the day
 - replacing old fans and motors in Heating Ventilation Air Conditioning (HVAC) units with new energy efficient motors
 - using the Niagara Energy Supervisor system to monitor the energy use
- Installing meters in our buildings that monitor use of electrical energy, chilled water, natural gas, and domestic water
- Constructing LEED buildings for all new buildings and remodels over 15,000 square feet
- Replacing incandescent and outdated "T12" fluorescent lights with either compact fluorescent lamps (CFL or T8) or LED's (light emitting diode) where possible
- Through a rebate program with El Paso Electric, NMSU has gotten checks for over \$113,000 by doing things such as updating swamp coolers in family housing and replacing old energy-hog refrigerators with EnergyStar® refrigerators, and upgrading lighting
- Housing replaced 10,000 old incandescent bulbs with energy efficient CFL's in 2010 thanks to El Paso Electric
- We are working on getting an ESCO (Energy Services Company) for an "Energy Performance Contract". This allows a consultant to survey campus for all types of energy reduction strategies that has the potential to save the university millions of dollars.

What you can do on campus and in your personal life to cut energy costs:

- Turn off equipment such as monitors, computer peripherals, microwaves, coffee machines, and fans when not in use
- Unplug items to eliminate “Vampire Energy” (i.e., power consumed while electronics are turned off but still plugged in)
- Replace incandescent lighting with either compact fluorescent lamps (CFL’s) or LED (light emitting diode) bulbs
- Turn off the lights in your dorm rooms, offices, and classrooms when not in use
- Buy EnergyStar® appliances and computers

The Office of Sustainability works to expand these efforts through building a comprehensive behavioral modification plan to be implemented across the university.



3. Waste Reduction

- 1. Prevention: Don't purchase the item in the first place
- 2. Minimization: Use products that use minimal construction or packaging
- 3. Reuse: when you're done with an item, find it a new home, give it away, or take it to a reuse store like Habitat for Humanity or Savers
- 4. Recycle: Even though about 35% of items purchased in the US are recycled, recycling is still a great option if you can't manage the first three above



Read the entire article at: http://en.wikipedia.org/wiki/Waste_minimisation

NMSU has implemented source reduction strategies to reduce total waste generation (garbage, recycling, and compost) per weighted campus user compared to a 2005 baseline.

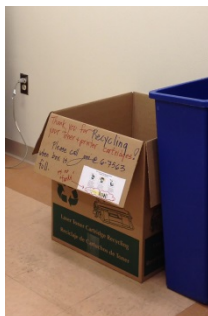
Total waste generation at NMSU includes all materials recycled, composted, and disposed of as trash except construction, demolition, electronic, hazardous, special (e.g. coal ash), universal and non-regulated chemical waste.

“More than 96% of food waste that could be composted ends up in landfills and incinerators”

For every ton of paper recycled, we can save the energy equivalent of 165 gallons of gasoline. NMSU's Aggie Recycling recycled 280 tons of paper in 2012 or the equivalent of 46,200 gallons of gasoline! Recycling 1 ton of aluminum cans conserves over 153 million BTU's that is the equivalent of 26 barrels of oil or 1665 gallons of gasoline. Aggie Recycling recycled 4.5 tons of aluminum cans in 2012 or the equivalent of 7,492 gallons of gasoline. **Go Aggies! Go Green!**

Toner Recycling Program

A Toner Recycling program was started in November 2012. Staples provides 20x20x20 boxes for free. NMSU departments request a box, fill it with empty toner cartridges (in the plastic bag and back in the new cartridge box), then call us for a pick up. We then deliver a new empty box. FS Movers partner with the OoS by picking up the full boxes and delivering them to the FS Warehouse for UPS pickup – all paid for by our partner Office Max. We keep plastic and other materials from the landfill by using this program.



Office of Sustainability's third Initiative is Waste Reduction. In the first two months of the Toner Recycling program (Nov-Dec 2011), we recycled almost 80 toner cartridges. By March of 2014, with 56 locations across campus, a total of approximately 800 cartridges have been kept from the landfill. Thanks to everyone who is involved for your support! Give the OoS a call if you want your own toner recycling box: 646-7563.

4. Water Conservation

Water is a quickly disappearing resource in our Chihuahuan Desert environment. Water conservation is extremely important to NMSU. We conserve water in the following ways:

- Low flush toilets, water faucets, and shower heads are building standards in new and remodeled buildings
- We water plants and turf at night whenever possible; our sprinkler and drip systems are on timers to maximize water efficiency
- The Chiller Plant and Central Utility Plant insulate the chilled water pipes

Xeriscaping

The Facilities and Services Grounds Department uses xeriscaping on approximately 20% of the campus with many more xeriscaped landscapes to come. Xeriscaping is a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques as well as the use of drought-tolerant plants, mulch, and efficient irrigation.

Xeriscaping principles

1. Planning, design, plant selection
2. Soil amendment
3. Resourceful use of water through efficient irrigation
4. Mulch
5. Turf alternatives, such as native grasses
6. Maintenance

Water Master Plan

The NMSU water master plan identifies improvements required to bring our existing water system up to accepted standards and to identify additional improvements required to support the planned developments described in the NMSU Water Master Plan [NMSU2009 Water Master Plan](#)

Storm Water Management



NMSU operates a Municipal Separate Storm Sewer System (MS4) that is permitted by the Environmental Protection Agency. The MS4 consists of the streets, drainage ditches, and storm drain pipes that convey stormwater runoff through the campus. The permit requires NMSU to implement a program to reduce pollutants in stormwater runoff to the maximum extent practicable. [NMSU 2009 Storm Water Management Program](#)

5. Climate Change Resilience

NMSU signed the American College and University Presidents' Climate Commitment (ACUPCC) in 2007. In 2015 the name was changed to the Climate Leadership Commitment. The mission and history of the program is as follows:

“The ACUPCC is a high-visibility effort to address global climate disruption undertaken by a network of colleges and universities that have made institutional commitments to eliminate net greenhouse gas emissions from specified campus operations, and to promote the research and educational efforts of higher education to equip society to re-stabilize the earth’s climate. Its mission is to accelerate progress toward climate neutrality and sustainability by empowering the higher education sector to educate students, create solutions, and provide leadership-by-example for the rest of society.

The ACUPCC provides a framework and support for America’s colleges and universities to implement comprehensive plans in pursuit of climate neutrality. The Commitment recognizes the unique responsibility that institutions of higher education have as role models for their communities and in educating the people who will develop the social, economic and technological solutions to reverse global warming and help create a thriving, civil and sustainable society.

The college and university presidents and chancellors who are joining and leading the Commitment believe that exerting leadership in addressing climate disruption is an integral part of the mission of higher education and will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni, business and local communities.”

By signing the commitment some of the things NMSU has agreed to accomplish:

- Complete an emissions inventory
- Within two years, set a target date and interim milestones for becoming climate neutral by 2050
- Take immediate steps to reduce greenhouse gas emissions by choosing from a list of short-term actions
- Integrate sustainability into the curriculum and make it part of the educational experience
- Make the action plan, inventory and progress reports publicly available ([NMSU 2014 Climate Action Plan](#))

6. Food and Health

"Eat food. Not too much. Mostly plants." Michael Pollan "In Defense of Food" 2008

Pollan goes on to say "That, more or less, is the short answer to the supposedly incredibly complicated and confusing question of what we humans should eat in order to be maximally healthy."

The Office of Sustainability agrees with Mr. Pollan's ideas and reminds NMSU Aggies that to be sustainable we must be healthy ourselves so we are using resources wisely and taking care of our ecological and agricultural planet so that it can continue to take care of us.

The manager of the Office of Sustainability is a Naturopathic Doctor so the topic of food and health is a very important one to her personally. Feel free to set up a time to discuss and educate yourself or your department about what you can do as a Green Aggie to participate.

Here are a few of the things that could help change your thinking or encourage your already healthful thinking:



Some questions to ask yourself at the grocery:

- "Where was this food grown?"
- "How far did it travel to get to me?"
- "When was this food grown?"
- "How many ingredients does it have?"
- "Is the company that grew, harvested, and transported this food a socially responsible company (i.e., do they treat their farmers well, provide health insurance, and pay them a fair wage)?"



Good Food Ideas

- Eat organic if possible (pesticides are not good for our bodies)
- Eat local (food that has traveled long distances increase our greenhouse gasses in the transportation and they are not picked at an ideal time in their ripeness)
- Shop at the Farmer's Market
- Grow your own (our local coop Mountain View Market has classes in gardening)
- Eat seasonal
- Eat less meat and more vegetables and fruit
- Olive oil – yummy for your tummy!



Ever wonder... "Is there an animal product in that dish?" Wonder no more! Sodexo, our food services contractor on main campus, has the Wild Mushroom food station in Taos Café and they serve delicious healthy protein-rich vegetarian food. Typical ingredients used are soy and almond milk, nut butters, quinoa, beans, lentils, tomatoes, and yes, tofu. Many of the dishes served are vegan as well, such as the vegan French toast and the zucchini pasta.

7. Green Buildings

[Leadership in Energy and Environmental Design \(LEED\)](#), is a program of the [US Green Building Council \(USGBC\)](#) that is redefining the way we think about the places where we live, work and learn. LEED provides building owners and facilities managers with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

In 2006, New Mexico Governor Bill Richardson passed [Executive Order 2006-001](#) that states that all new state buildings and remodels over 15,000 square feet will be built to LEED Silver certification or above. NMSU got its first LEED certified building in 2009 on the DACC Alamogordo campus. Since then we have constructed a total of seventeen Gold and seven Silver certified buildings.

As of October 2016 NMSU has the following LEED certified buildings:

Alamogordo Campus

Advanced Technology Center (Gold)
Health Sciences Center, Alamogordo DACC (Gold)

Carlsbad Campus

Allied Health Building (Silver)

Doña Ana Community College Las Cruces Campus

East Mesa Phase 5 Auditorium (Gold)
East Mesa Phases 6 and 7 (Silver)
Gadsden Center Remodel and Addition (Gold)
Hatch Center (Silver)

NMSU Las Cruces Main Campus

ASNMSU Center for the Arts (Gold)
Addition to NMDA (Gold)
American Indian Student Center (Silver)
Barnes & Noble (Gold)
Chamisa Village Residence Hall Phase II (Gold)
Football Coaches Office (Silver)
Gardiner Hall Remodel (Silver)
Health and Social Services Annex (Gold)
Undergraduate Learning Center (Silver)

LEED categories aimed at achieving high performance in key areas of human and environmental health:

- Location and transportation
- Water efficiency
- Materials and resources
- Innovation
- Sustainable sites
- Energy and atmosphere
- Indoor environmental quality
- Regional priority

The Office of Sustainability works closely with NMSU FS Project Design and Engineering Departments' Project Managers to ensure that all new buildings follow LEED standards.

8. Transportation

“Transportation makes up 27% of the total amount of greenhouse gas emissions produced in the US, making it the second largest producer after electricity generation.” – EPA

Since New Mexico State University is primarily a commuting-based university, with nearly 75% of students commuting onto campus, the Office of Sustainability is continuously striving to educate the campus community about the importance of alternative transportation methods as well as transforming the campus environment to foster more sustainable alternatives. Listed below are some of the initiatives that the NMSU community is supporting to alleviate fossil fuel consumption and reduce NMSU’s carbon footprint created from transportation.

Bicycle Friendly University

The [Bicycle Friendly University](#) (BFU) program is an initiative of the League of American Bicyclists, which encourages states, communities and businesses to provide better facilities, encouragement activities, infrastructure and education for cyclists and publicly rewarding them for doing so. The benefits of bicycling are far-reaching, including helping the environment by reducing carbon emissions, saving money, reducing congestion, optimizing space, improving health and enhancing campus quality of life www.bikeleague.org

New Mexico State University is currently in the process of providing a more bicycle friendly campus for our students, faculty, staff and visitors. The NMSU [Sustainability Council](#) will be taking on this initiative during the 2014-2015 school year.

Bike Share Program

The all-volunteer Sustainability Council and the Office of Sustainability are in the planning stages of creating a bicycle share program at NMSU. We hope to tie it together with the City of Las Cruces in the future.

A bike share program is a service in which bicycles are made available for shared use to individuals on a very short term basis. Bike share allows people to depart from point “A” and arrive at point “B” free from the worries of ownership.

Bike share has seen explosive, global growth over recent years. According to Wikipedia, as of April 2013 there were around 535 bike sharing programs around the world, made of an estimated fleet of 517,000 bicycles. In May 2011 there were around 375 schemes comprising 236,000 bikes. Those two years saw a doubling of bike share globally.

Many bike share systems offer subscriptions that make the first 30-45 minutes of use very inexpensive, encouraging their use as transportation. This is different from a bike rental, which Outdoor Recreation does at the Activity Center. If ASNMSU helps fund the program, rides would be free to students. For more information about the goals and accomplishments NMSU has achieved thus far, please check out the [BFU page](#) on the Environmental Health and Safety website.

NMSU and Las Cruces Bicycle Route Map

A graduate student spent spring 2013 semester as an intern for the Office of Sustainability. His project for the semester was to create a bicycle route map. His very impressive map can be found here: [NMSU and Las Cruces Bike Route Map](#)

Campus Fleet

The NMSU Transportation and Parking Services (TPS) has gone to great lengths to minimize its campus fleet, reducing greenhouse gas emissions while saving money for the University. From 2009 to 2012, TPS reduced its vehicle fleet and rental fleet by 23% and as a result, on-campus fuel consumption has decreased by 54%. The University is also purchasing more fuel-efficient vehicles as well. In 2011 the NMSU fleet had about 90 electric vehicles, two hybrids, twelve B-20 biofuel vehicles, and eight vehicles using E85 fuel.

NMSU Transportation Services (in the Administration and Finances Auxiliary Services Unit) is actively reducing our greenhouse gasses (GHG) by reducing our fleet of vehicles on campus. They are also using alternative fuels which lower our GHG emissions as well. For more information please read the NMSU 2011 [Transportation and Parking Analysis](#) report.

Aggie Shuttle

The University is serviced by a shuttle system that primarily provides transportation from parking areas to various academic and housing centers on campus. The service is provided by the local City of Las Cruces transit system "RoadRUNNER" Transit. The University contracts with RoadRUNNER Transit to provide this service at the direction of the University. The service is paid for through a student imposed fee that is added to the tuition. The level of service provided and the routes and schedules are determined by a student run committee that administers the collected transportation funds. The University provides assistance to the committee.

Aggie Shuttle is to encourage people to park on the east end of campus and ride to distant destinations instead of driving on campus. The transit program provides free shuttle routes that transports riders with a valid NMSU ID from free parking lots from all across campus, rather than driving their personal vehicles. The Aggie Transit is intended to reduce campus congestion, promote public transportation, and reduce carbon emissions.

9. Materials

We are surrounded by materials of all kinds: naturally occurring materials, bio-materials, new eco-friendly and safer chemicals, man-made materials and chemicals, bio-based materials and bio-energy; carpet, paint, ceiling tiles, furniture, and electronics. Each of these not only has an effect on the planet but it certainly has an effect on each of us individually.

The Office of Sustainability encourages use of green materials such as zero VOC paints and stains, furniture and millwork that has zero-formaldehyde adhesives, carpet and wall covering that don't off-gas of chemicals. When Facilities and Services performs a remodel or we build a new building, we follow the policy that the materials we use are safe for the building occupants and visitors.

The best example we use is Interface, Inc., the world's largest flooring company. Interface has a program where people from around the world take old fishing nets from the ocean, that are choking our sea life, remove them, and send them to the factory that makes carpet out of the nylon. Also, at the end of the life of the carpet (15-20 years), it is sent back to the factory, recycled and turned into new carpet. It's called "**upcycling**" and Interface does it best!



10. Social Justice

Social responsibility is an ethical theory that one has an obligation to act to benefit society at large. Social responsibility is a duty every individual or organization has to perform so as to maintain a balance between the economy and the ecosystem. Equilibrium between economic development, in the material sense, and the welfare of the society and environment must be achieved. It pertains not only to business organizations but also to everyone whose actions impact the environment. This responsibility can be passive, by avoiding engaging in socially harmful acts, or active, by performing activities that directly advance social goals.

The Office of Sustainability has social justice and responsibility as an initiative to remind people that *sustainability isn't just about lowering our energy bills or recycling*. We can take it a step further to taking care of our fellow citizens to sustain us on many levels. We become caring people, we work lovingly with others, we share, we volunteer, and we purchase things from companies that take care of their employees. It's a continuous circle of care.

The layers of social responsibility are deep and varied. We are a very diverse campus and we have the obligation to treat everyone equally, to be ethical members of our campus culture and the greater society. As an institution of higher education we have promised to teach students and send them out into the world with knowledge. Let's make sure that the knowledge we imbue includes kindness and opening our hearts to others.



NMSU Gender Neutral Restrooms and Nursing Parent rooms

An important part of Social Justice is treating everyone equally. NMSU has updated many buildings on campus to have gender neutral restrooms as well as nursing parent rooms. Find them here:

Gender neutral restrooms on main campus

1. Activity Center, Rms. 104, 105
2. ASNMSU Center for the Arts, Rms. 117, 130, 131, 208, 215, 329
3. Campus Health Center, Rms. 100A, 100B, 154A, 154B
4. Corbett Center (2), Rms. 139, 141
5. Garcia Annex, Rm. 140
6. Jett Hall, Rm. 101
7. Satellite Chiller Plant, Rm. 105
8. Sisbarro Park (to be completed April 2017)
9. Speech Building, Rm. 182
10. Undergraduate Learning Center, Rm. 131
11. Zuhl Library, Rm. 128

Nursing Parent rooms on main campus

1. Regents Row, Rm. B100
2. Gerald Thomas, Rm. 220
3. Zuhl Library, Rm. 129
4. Business Complex, Rm. 249