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*Title:* Fourth Annual Student Sustainability Challenge Slideshow

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Angelica Gurule  
Miranda Bradley

*Intended for:* Posting on internal and external LANL webpages  
Slideshow to interested parties, including EMS POCs and AD POCs



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### Abstract

#### The 2011 Student Sustainability Challenge

Organized by the Environmental Protection Division, the Fourth Annual Student Sustainability Challenge was developed to encourage students to take an active role in contributing to LANL's environmental responsibility, raise awareness of critical environmental issues, and to inspire innovation and ingenuity for better and more sustainable science and technology.



# Fourth Annual Student Sustainability Challenge



Coordinators:

Angelica Gurule  
Miranda Bradley

Communications:

Brenna Moore

## The 2011 Student Sustainability Challenge

Organized by the Environmental Protection Division, the Fourth Annual Student Sustainability Challenge was developed to encourage students to take an active role in contributing to LANL's environmental responsibility, raise awareness of critical environmental issues, and to inspire innovation and ingenuity for better and more sustainable science and technology.

# *Sustainability is National Security*

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LANL is a national security laboratory whose primary mission is to ensure the safety and security of the United States.

Enhancing sustainability is vital to securing our country's future. Countries that fail to integrate sustainable practices – socially, economically, and environmentally – could potentially become unstable and pose a threat to the global community.

The stability of the global community is essential to our national security and ensures U.S. leadership in this century.

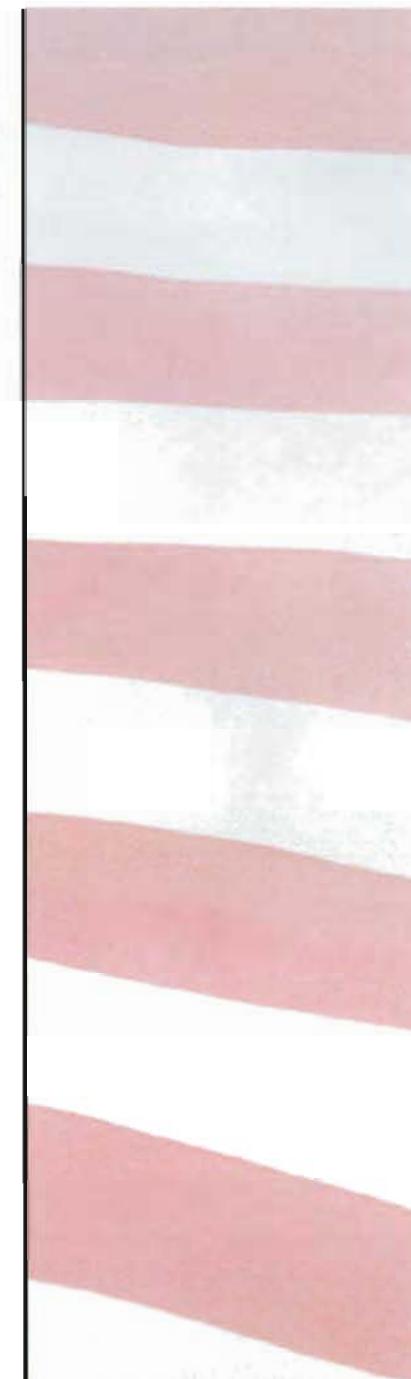


Organized by the Environmental Protection Division. The 4th Annual Student Sustainability Challenge was developed to encourage students to take an active role in contributing to LANL's environmental responsibility, raise awareness of critical environmental issues, and to inspire innovation and ingenuity for better and more sustainable science and technology.

Contact:  
*gogreen@lanl.gov*

## Student Sustainability Challenge 2011 Events & Activities

<u>DATE</u>	<u>TIME</u>	<u>LOCATION</u>	<u>AUTHOR &amp; TITLE</u>
June 9	9am -10:30am	CNLS Conference Rm	Michael McNaughton & Burgandy Brock:
		TA-3, Bldg 1690, Rm 102	Japanese Nuclear Reactors Lecture
June 15	12pm – 1:30pm	95 Entrada Drive, Los Alamos	Steve Watts: LA Coop Tour & Lunch
June 20	2pm-3pm	Los Alamos Middle School	John Wolfe: LA Solar Array
July 12	9am -10:30am	MSL Auditorium	Don O'Sullivan: BP Oil Spill
July 20	2pm – 4pm	Physics Auditorium	"Dirt" Movie Screening
July 26 <sup>th</sup>	1:30pm-3:30pm	Fuller Lodge	EMS Program Meet & Greet
July 28	8am - 4pm	San Ildefonso Pueblo	Tim Martinez: San Ildefonso Youth Farm
August 2	11am – 2pm	Urban Park, Los Alamos	LANL Annual Student Picnic
August 3	7:30am – 4pm	Albuquerque, NM	Los Poblanos CSA Field Study
August 12	7:30am – 2:30pm	Valles Caldera, Jemez	Bob Parmenter: Valles Caldera Tour





LANL 4<sup>th</sup> Annual Student Sustainability Challenge

# BEHIND JAPAN: 2011 NATURAL DISASTER



*Speaker: Mike McNaughton  
Co-Author Burgandy Brock*

## RADIOACTIVE RELEASES FROM FUKUSHIMA DAIICHI

On March 11, 2011, the Fukushima Daiichi nuclear power plant was damaged by the Great East Japan Earthquake and tsunami, and subsequently released radioactive material. We will discuss what we measured in Los Alamos and compare it with what we expected. There will be opportunities for hands-on experience with the equipment.

JUNE 9<sup>TH</sup>, 9:00AM-10:00AM, TA-3 CNLS  
TECHNICAL RESEARCH BLDG 1690 RM 102

Contact Information: [gogreen@lanl.gov](mailto:gogreen@lanl.gov)  
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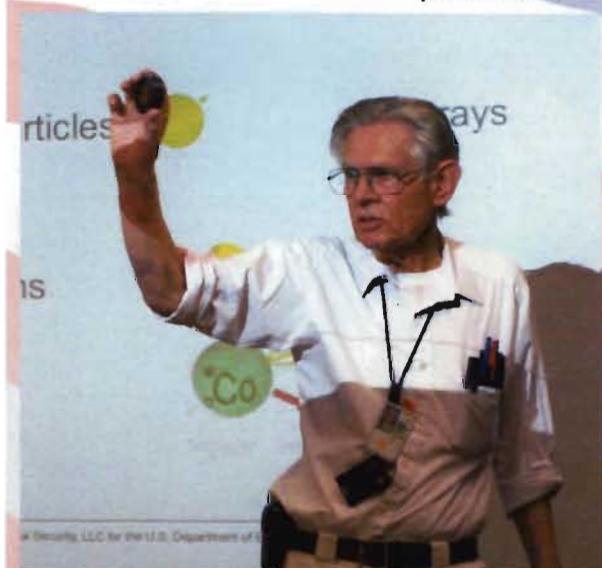
# Fukushima Daiichi Lecture with Mike McNaughton of WES-EDA



McNaughton demonstrates that everyday objects, like potassium, carry radiation.



Speaker Mike McNaughton discusses his talk, "Measuring the Radioactivity Released from Fukushima Daiichi" with Matthew Schauer of EES-16.



McNaughton demonstrates that everyday objects, like a lens, carry radiation.



A display of instruments that measure radiation and a few common items that emit radiation.

More than 80 students attended the Fourth Annual Student Sustainability Challenge's kick-off event, a lecture on Fukushima Daiichi, the Japanese nuclear power plant.

Mike McNaughton from WES-EDA delivered the talk, "Measuring the Radioactivity Released from Fukushima Daiichi," which mainly focused on the aftermath of the Great East Japan Earthquake and tsunami and their effects on the nuclear power plant, and how those effects impacted Japan, and the rest of the world.

After a discussion on differentiating radioactivity and radiation, as well as the different ways to measure the two, McNaughton spoke about the predictions that surfaced after the accident versus the reality.



# Los Alamos Cooperative Market



Copyright  
Minesh Bacrania  
(2011)

## General Manager Steve Watts

The mission of the Cooperative is to serve Los Alamos County and surrounding communities by providing fairly priced, wholesome foods and other goods in an ecologically sustainable, socially responsible, and economically appropriate manner.

**JOIN US FOR  
LUNCH & A  
TOUR!**

<http://www.losalamos.coop/>

June 15<sup>th</sup>,  
12:00pm – 1:30pm

95 Entrada Drive, Los Alamos, NM

RSVP to this event at  
[gogreen@lanl.gov](mailto:gogreen@lanl.gov)  
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LANL 4<sup>th</sup> Annual Student Sustainability Challenge

# Tour of Los Alamos Cooperative Market with General Manager Steve Watts

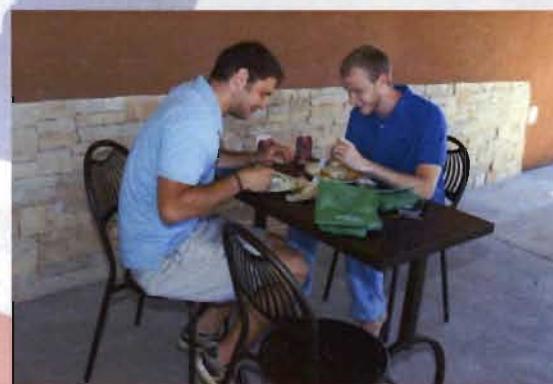
30 students attended the tour of the Co-op, where they received a presentation from General Manager Steve Watts and a tour of the new facility, learned about sustainable food, and heard about the Cooperative's mission to provide food and goods in an ecologically-sustainable, socially-responsible, and economically-appropriate manner. The Co-op also provided lunch, which consisted of freshly-made and organic sandwiches, salads, fruit, chips, cookies and soda, at a discounted price.



General Manager  
Steve Watts



Students help themselves to a lunch provided by the Co-op



Attendees  
receive a  
tour of the  
new  
Cooperative  
Market



## 4<sup>th</sup> Annual Student Sustainability Challenge



RSVP to this event at  
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**June 20th 2:00PM TO 3:30PM**



### Los Alamos Middle School **SOLAR ARRAY TOUR!**

Chief Financial Officer  
**JOHN WOLFE**

Come visit the NEW Los Alamos Solar Array! Participate in a TOUR of this 50-kilowatt solar array site, see solar energy production in action, and directly interact with the solar photovoltaic electric system. The solar farm is a great opportunity for the schools and the community to see and experience energy production and it "provides educational and energy-saving opportunities for the district." –Wolfe

# Tour of Solar Array at Los Alamos Middle School



The newly-constructed Solar Array at Los Alamos Middle School

28 students visited the new Los Alamos Solar Array, constructed in 2010, where they participated in a tour of this 50-kilowatt solar array site with Los Alamos Public School Chief Financial Officer John Wolfe. Attendees also saw solar energy production in action, learned about renewable energy, and directly interacted with the solar photovoltaic electric system. The solar farm is a great opportunity for the schools and the community to see and experience energy production and it "provides educational and energy-saving opportunities for the district," said Wolfe.

Richard Fialho  
of Sacred Power  
Corporation  
and Los Alamos  
Public School  
Chief Financial  
Officer John  
Wolfe



The students hear  
about the solar  
array project and  
renewable energy

Students get a  
closer look at  
the solar panels



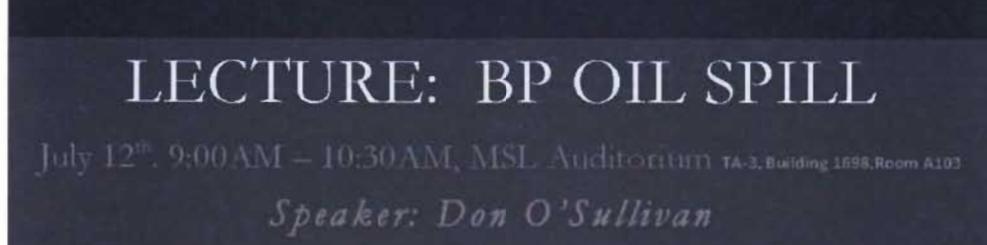


BP Image

EPA



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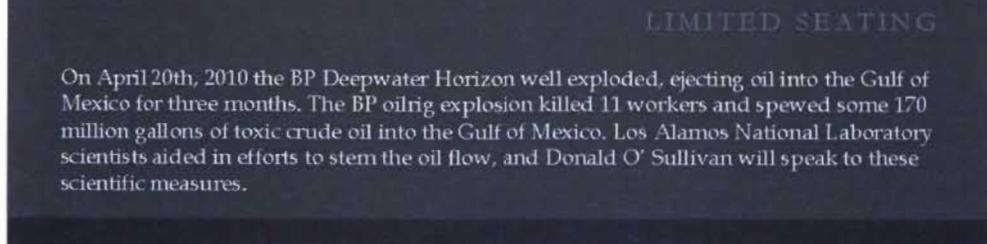


## LECTURE: BP OIL SPILL

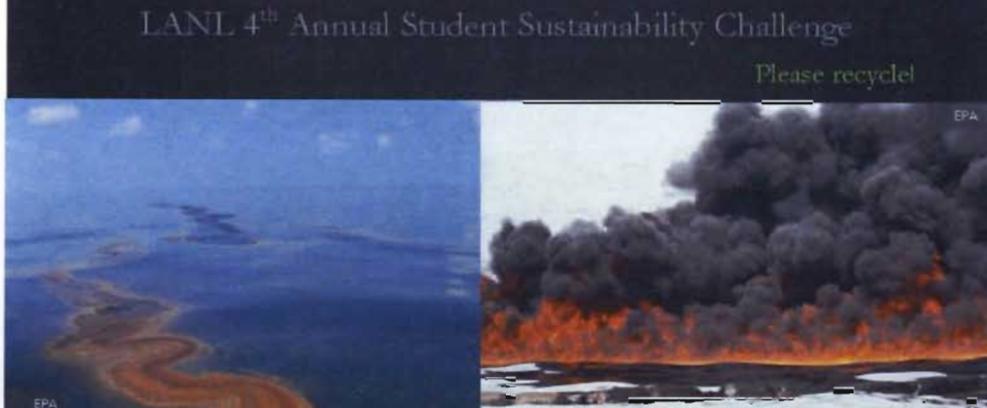
July 12<sup>th</sup>, 9:00 AM – 10:30 AM, MSL Auditorium TA-3, Building 1698, Room A103

*Speaker: Don O'Sullivan*

LIMITED SEATING



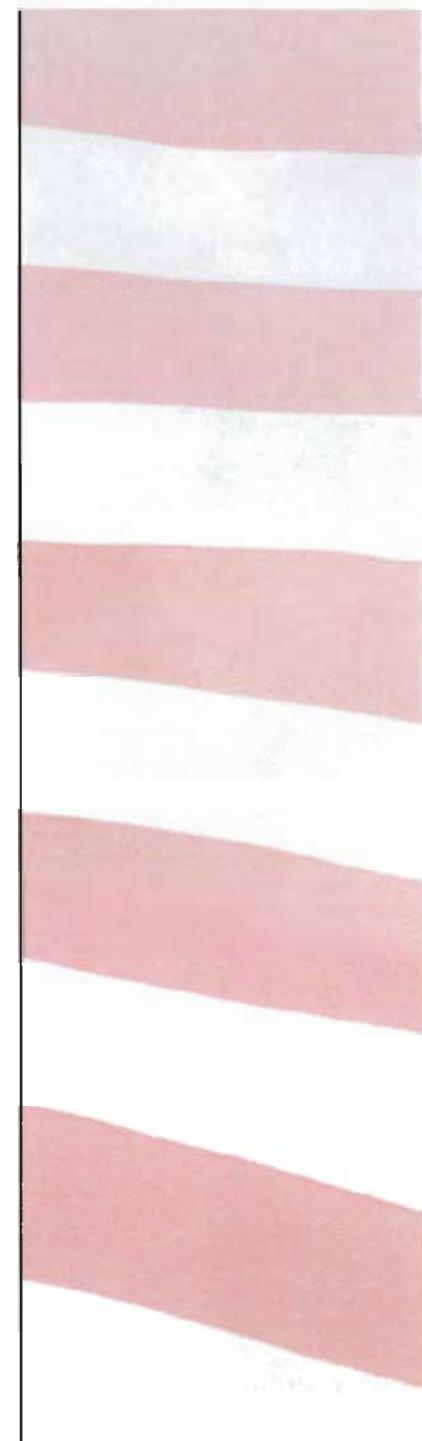
On April 20th, 2010 the BP Deepwater Horizon well exploded, ejecting oil into the Gulf of Mexico for three months. The BP oilrig explosion killed 11 workers and spewed some 170 million gallons of toxic crude oil into the Gulf of Mexico. Los Alamos National Laboratory scientists aided in efforts to stem the oil flow, and Donald O' Sullivan will speak to these scientific measures.



EPA

EPA

Please recycle!



# BP Oil Spill Lecture with Donald O'Sullivan of GS-PO

More than 60 students were present at the lecture on the BP Oil Spill and LANL's role in the efforts to stem the flow.

The talk was delivered by Don O'Sullivan of Global Security Programs (GS-PO) and focused on the incident that occurred on April 20, 2010, when the BP Deepwater Horizon well exploded, ejecting oil into the Gulf of Mexico for three months. The BP oilrig explosion killed 11 workers and spewed some 170 million gallons of toxic crude oil into the Gulf.

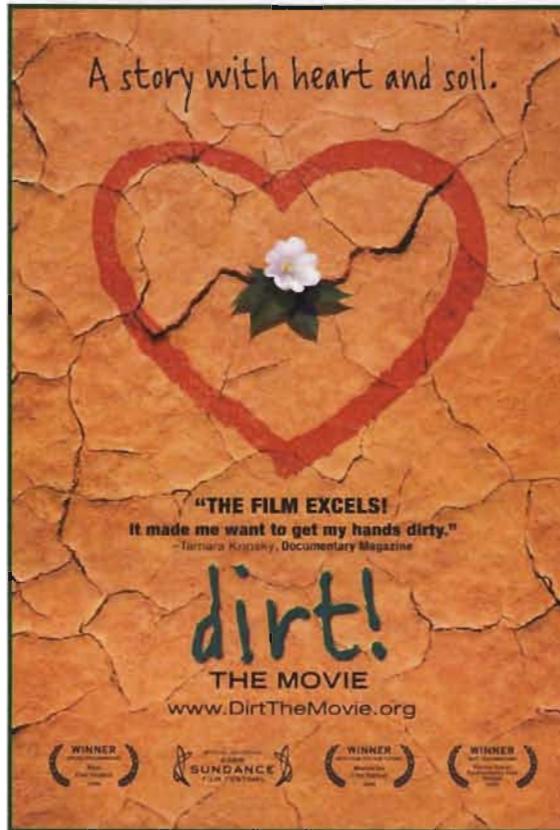
BP is a global gas and oil company headquartered in London. They are the third-largest energy company, the fourth-largest company in the world measured by revenues, and one of the six oil and gas "supermajors."



Students listen to the BP Oil Spill Lecture



Don O'Sullivan of Global Security Programs (GS-PO)



Dirt! The Movie is an insightful and timely film that tells the story of the glorious and unappreciated material beneath our feet. Inspired by William Bryant Logan's acclaimed book *Dirt: The Ecstatic Skin of the Earth*, Dirt! The Movie takes a humorous and substantial look into the history and current state of the living organic matter that we come from and will later return to.

– Dirt The Movie will make you want to get dirty!

**SPECIAL SCREENING DETAILS – Green Film Festival!**

**Where? Physics Auditorium**

**When? Wednesday, July 20<sup>th</sup>, 2pm to 4pm**

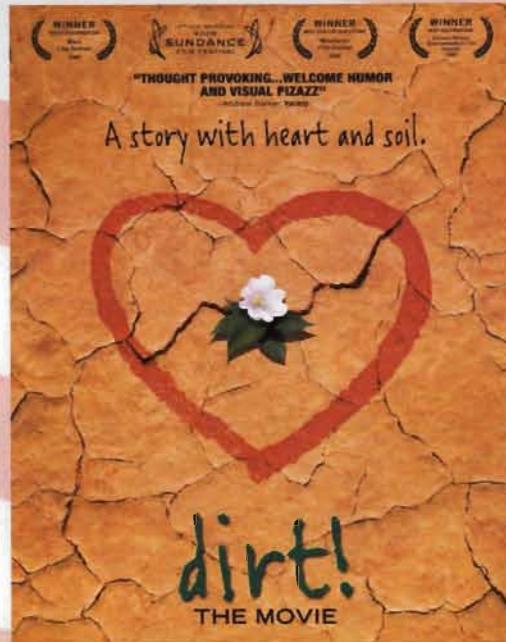
Bring your own beverage. Popcorn will be provided compliments of Reel Deal Movie Theatre.

Hosted by: LANL 4<sup>th</sup> Annual Student Sustainability Challenge Contact: [gogreen@lanl.gov](mailto:gogreen@lanl.gov)

# “Dirt! The Movie” Film Screening



Challenge organizers Miranda Bradley and Angelica Gurule give the safety and security share, and introduce the film



Students sign in at the Green Film screening

Close to 200 students attended the Green Film Screening at the Physics auditorium.

“Dirt! The Movie,” directed and produced by Bill Benenson and Gene Rosow, took the students inside the wonders of the soil. The film tells the story of Earth’s most valuable and underappreciated source of fertility—from its miraculous beginning to its crippling degradation.

The film is narrated by Jaime Lee Curtis and brings to life the environmental, economic, social, and political impacts that the soil has. It shares the stories of experts from all over the world who study and are able to harness the beauty and power of a respectful and mutually-beneficial relationship with soil.



**July 26<sup>th</sup>, 1:30PM – 3:30PM, Fuller Lodge**

This event is meant to be a relaxed, open house /information session on each area of work performed by LANL's environmental organizations. There will be tables set up to discuss each topic and refreshments will be provided.

*We plan to have 11 areas represented. They include:*

1) AIR	7) POLLUTION PREVENTION
2) WATER	8) ENERGY
3) WASTE	9) FIRE
4) MONITORING/REPORTING	10) STUDENT SUSTAINABILITY CHALLENGE
5) CLEAN UP	11) SIGN IN/ GENERAL COMMENT/ FEEDBACK
6) RESOURCES	



# SSC Booth at the EMS “Meet and Greet” Event

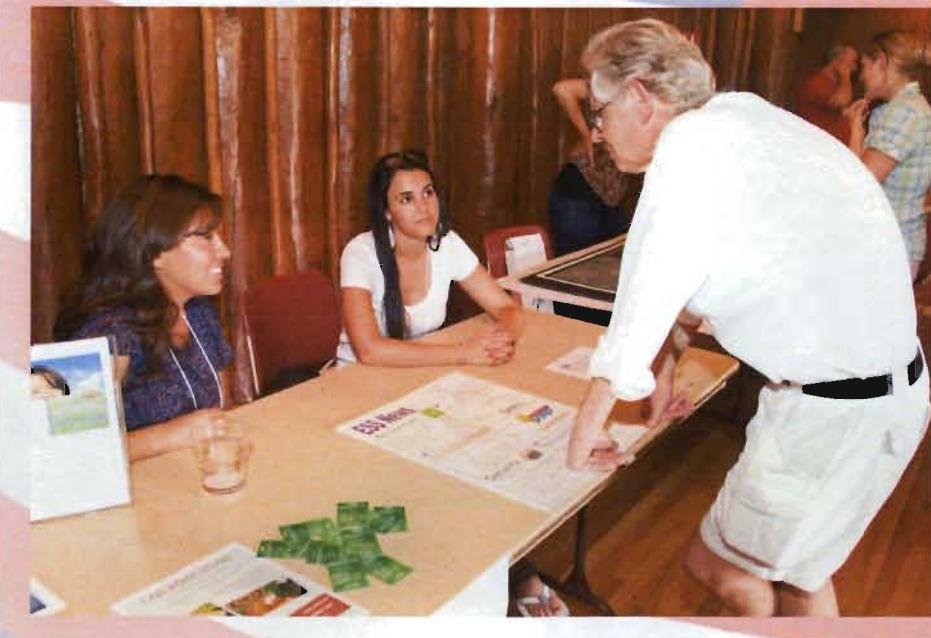
The Student Sustainability Challenge representatives Angelica Gurule and Miranda Bradley manned a booth at the Environmental Management System's Summer “Meet and Greet” Event.

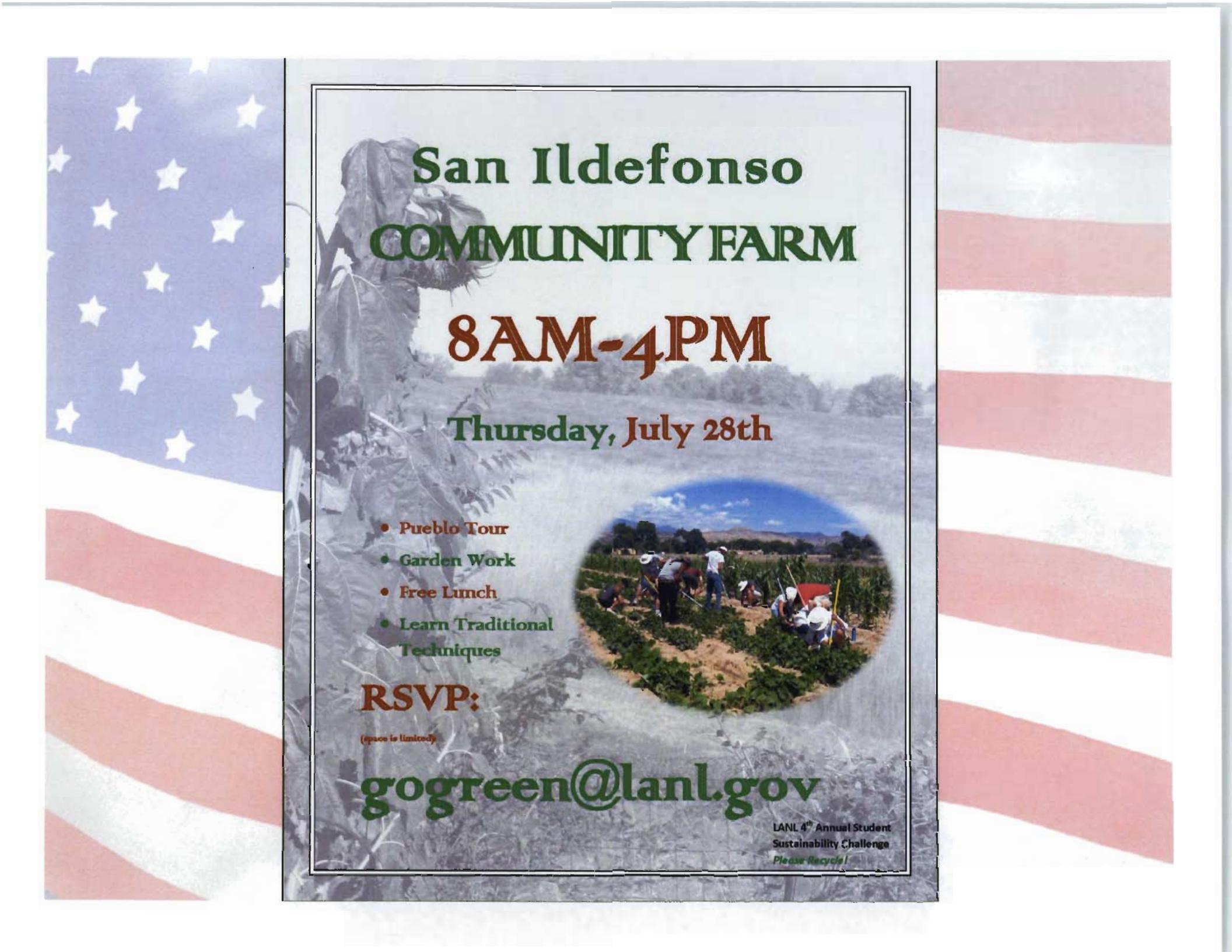
This event was an opportunity for fellow students and Laboratory employees to learn more about the Challenge, this year's events, and how the Challenge encourages students to incorporate sustainability into their work and daily lives.

Gurule and Bradley speak to Mike McNaughton of WES-EDA



Students talk to Gurule and Bradley about the Fourth Annual Student Sustainability Challenge





# San Ildefonso COMMUNITY FARM

**8AM-4PM**

**Thursday, July 28th**

- Pueblo Tour
- Garden Work
- Free Lunch
- Learn Traditional Techniques

**RSVP:**

(space is limited)

**gogreen@lanl.gov**

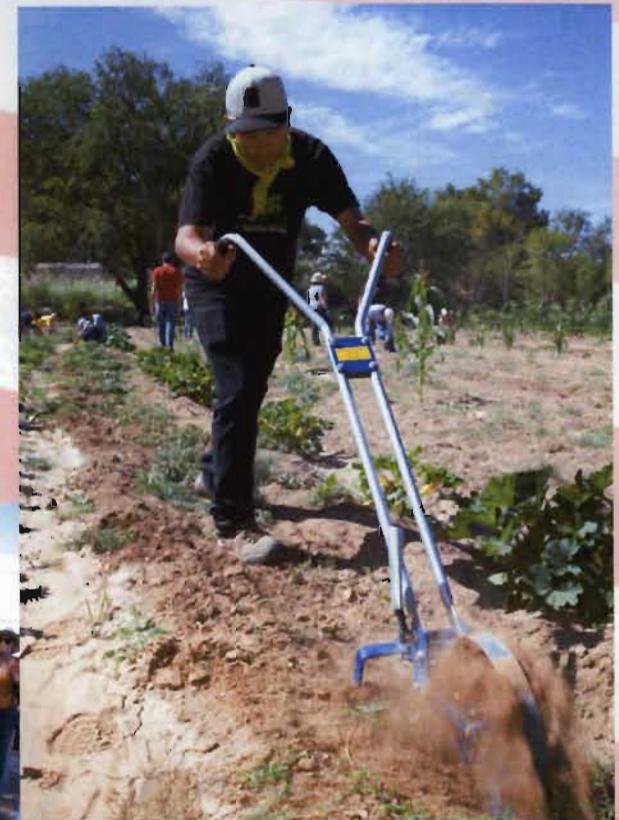


LANL 4<sup>th</sup> Annual Student  
Sustainability Challenge  
*Please Recycle!*

# San Ildefonso Community Farm Tour



The students receive a tour of San Ildefonso Pueblo and lend a hand at the farm



30 students attended an all-day field trip to San Ildefonso Pueblo where they met Tribal Council member and Farm Mentor Timothy Martinez, who led the group on a tour of the pueblo and talked about initiatives for education, tourism, economic development, and San Ildefonso's rich artistic heritage.

The group also learned about traditional farming techniques, and lent a helping hand by working in the Pueblo's new community farm.

Lunch was provided by San Ildefonso Pueblo, and transportation was provided by the Environmental Division.



# LOS POBLANOS

## CSA FIELD STUDY

AUGUST 3<sup>RD</sup>, 8:00AM – 4:00PM



**RSVP TO THIS EVENT**

[gogreen@lanl.gov](mailto:gogreen@lanl.gov)

Space is Limited!



Visit the LPO website:

<http://www.mnorganics.com/>

During the visit you will be taken on a tour of the farm and will do any of the same tasks the interns/farmers do:

**-weed      -feed chickens**

**-harvest      -gather eggs**

**And more!**

LANL 4<sup>th</sup> Annual Student Sustainability Challenge      Please recycle!

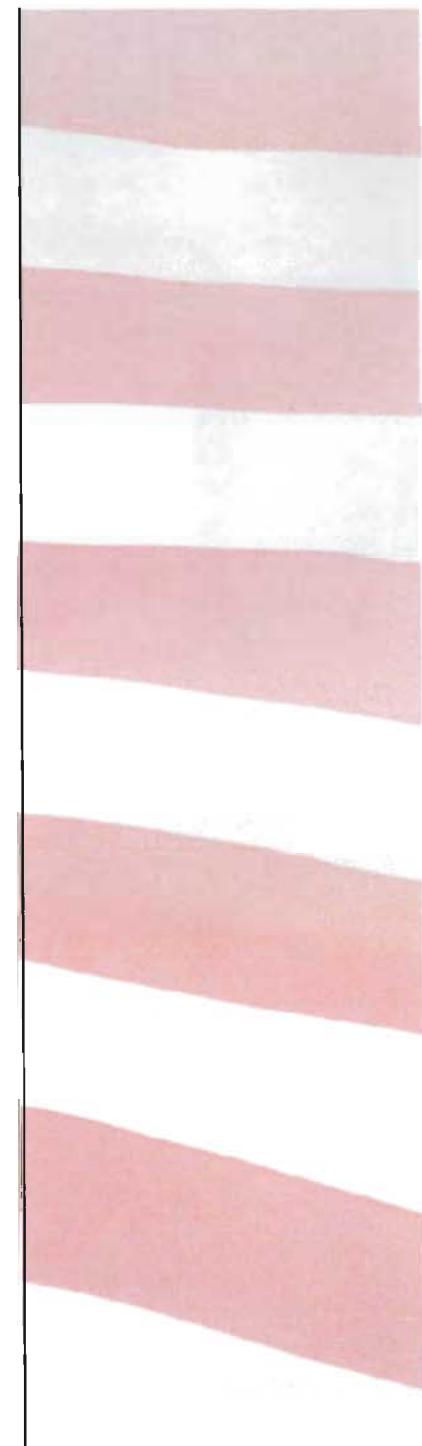
Photo by: [unclear]

# CSA Field Study of Los Poblanos Organics





A collage of four landscape images: a row of tall evergreen trees at sunset, a wide valley with rolling hills and a small town in the distance, a close-up of a rocky outcrop, and a large, shallow, light-colored lake reflecting the sky. A small logo for 'VALLES CALDERA NATIONAL PRESERVE' is overlaid on the middle image. The bottom half of the collage contains text for an event.



LANL 4<sup>th</sup> Annual Student Sustainability Challenge  
PLEASE RECYCLE!

# Valles Caldera

*Director of Science and Education: Bob Parmentor*

August 11<sup>th</sup>, 7:30am – 2:30pm

Driving **TOUR** - will stop here and there to discuss science program and effects of fire on forest, grasslands and watersheds, and forest restoration.

Visit the Valles Caldera National Preserve website <http://www.vallescaldera.gov/>

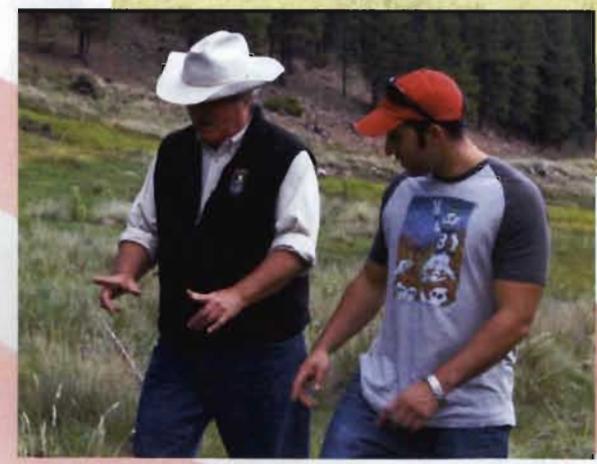
RSVP  
TO THIS EVENT AT  
[gogreen@lanl.gov](mailto:gogreen@lanl.gov)

SPACE IS LIMITED!

# Valles Caldera National Preserve



36 students participated in a half-day field trip to the Valles Caldera National Preserve where they met Director of Science and Education Bob Parmenter, who discussed the history of the Preserve, as well as the Preserve's science program. The group also discussed the effects of the Las Conchas Fire on the forest, grasslands, and watersheds. Participants spent time in an old growth forest that was managed to be preserved, and spent time talking about forest restoration, the benefits of the fire, and what type of growth is expected in the future.



We look forward to seeing you next year for  
the Fifth Annual  
Student Sustainability Challenge!



Angelica Gurule, Miranda Bradley, and Brenna Moore