

President's Message: by Rebecca Shankland

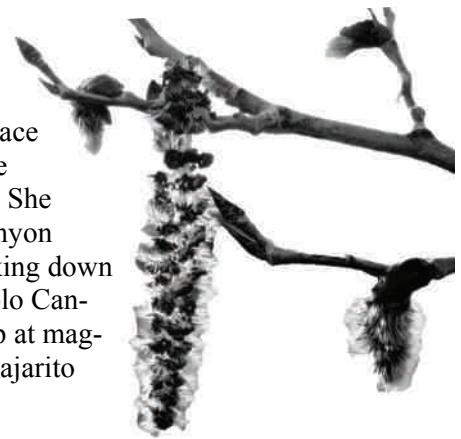
Twelve years ago, PEEC began a fragile existence with a few meetings scattered around Los Alamos. Ten years ago, PEEC sent out its first newsletter. The first PEEC board president, Claudia Lewis, wrote her first President's Message that suddenly came back to our minds when we attended her memorial service last weekend. Claudia was a vibrant, funny, earthy woman and a passionate geologist, as her message shows:

Pajarito Plateau--Bottom to Top. Every morning as I drive up the hill to work, I experience the wonder of the Pajarito Plateau rising over the Rio Grande. At Otowi Crossing, I see the river entering White Rock Canyon, having carved a gorge through thick black basalts of the Cerros del Rio volcanic field into the fine-grained orange sandstones that filled the Española basin before there was a Rio Grande. At Totavi, I pass the ancient Rio Grande gravels and climb up through Cerros del Rio basalt to the base of the Bandelier Tuff. Above me rise the banded orange and white cliffs of the million-year-old ash flow tuff sequence that underlies the plateau. I see the white Tsankawi pumice beds at the base, the cliffy exposures of compacted and welded ash, and, at the top of the talus, the ashy nonwelded tuff favored by the Anasazi for their cliff dwellings. I cross Pueblo and Los Alamos Canyons and head up Sandia Canyon, through much of the entire sequence of ash flows visible in spectacular natural exposures and roadcuts to arrive at the pine-forested top, 1000 vertical feet above the river.

Not only is the Pajarito Plateau physically impressive, it is home to diverse flora and fauna that take advantage of the variety of habitats afforded by the range in elevation from canyon bottoms to mesa tops and the nearby presence of the mountains and the Rio Grande, connected by the canyons that have served for millennia as corridors for people and animals in search of food, water, and shelter and, more recently, relaxation and renewal. This plateau will one day be home to the Pajarito Environmental Education Center.
- Claudia Lewis

Claudia's last sentence inspired me like the call of the first canyon wren of spring--PEEC has indeed made a home on the Pajarito Plateau just as Claudia predicted. And now she would be amazed at the design for a new

home for a nature center (perhaps run by PEEC) on this magnificent place on the slopes of the Jemez Mountains. She would love the Canyon Road location looking down into trail-rich Pueblo Canyon and looking up at magnificent views of Pajarito Mountain.



What would this new home offer Los Alamos?

- *a jewel of a building to set off Los Alamos's awesome beauty—canyons, mesas, mountains that entice families, kids, teens, and seniors to explore every stick and stone
- *a place to watch wildlife and birds from indoors
- *innovative, attractive exhibits, including a Children's Discovery Area for children to explore, create, and climb safely
- *space for our many talks and classes, which often overflow our small classroom—in 2011, 192 programs like hikes, talks, films, kids' clubs, summer adventure programs, serving 2,494 adults and 1,744 kids. The Earth Day Festival alone draws over 800 people.
- *space for our many school programs that are hands-on, standards-based--159 programs in 2011, serving 5,069 children
- *a small planetarium that serves also as a community room for lectures or conferences
- *a downtown signature building where tourists for watch on-demand videos about the Pajarito Plateau and Los Alamos
- *an enticement for families to stay and businesses to locate in Los Alamos, dispelling the stereotype of an "Atomic City" that is uncaring about the environment
- *synergy with other museums, restaurants, businesses, and the cultural district
- *a showpiece LEED platinum building—proving the community's commitment to energy and water conservation, and sculpture using water, sun, and wind.

On May 15, the County Council will be discussing the proposal for a new Nature Center for Los Alamos—let them know why you think that the time is NOW! ☀

Nature Notes is the quarterly newsletter of the Pajarito Environmental Education Center, Los Alamos, New Mexico 87544

Board of Directors: Rebecca Shankland, *president*; Terry Foxx, *vice-pres.*; Sue Watts, *secretary*; Paul Arendt, *treasurer*. Michele Altherr, Stephen Becker, Robert Dryja, Charles Keller, Jennifer Macke, Siobhan Niklasson, Felicia Orth, Karla Sartor, Selvi Viswanathan, Mary Carol Williams, David Yeamans.

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Staff: Katie Watson, *program director*; Angelique Dunning Harshman, *office administrator*; Jennifer Macke, *webmaster*; Esta Lee Albright and Heather Burke, *newsletter editors*.

PEEC's Science Fair Awards, 2012

Elementary

Hannah Clegg, "Why Are Some Soils better Than Others?"
Mikala Bucklin, "Everything It Takes to Have a Windmill."
Gopal Nadiga, "Splinters: Using Seed to Split Rock."

Junior

Kelsey Decker, "Bird Feeding Habits and Temperature Variation."

Phillip Heikoop, "Investigating Post-Las Conchas Fire Erosion."

Jordan Bailey, "How Does Your Rooftop Garden Grow?"

Senior

Joe Abeyta & Adrian Abeyta, "The Effects on Water Quality Before and After the Las Conchas Fire." ✨

Attention!

Those of us who knew and loved **Claudia Lewis** (see cover) want to **honor her PEEC memory** with two things that would have pleased her: a wildlife camera for our bird and butterfly garden (also home to some gorgeous squirrels— and other mysteries that the camera will reveal) and a proper sign to replace the tacky green banner we nailed to the cinder-block wall 7 years ago. We'll keep a record for her husband of the donations. If you donate via our Web site, PajaritoEEC.org, or by check, be sure to indicate that your donation is in Claudia's memory.



Now is a good time to look at the expanded list of **PEEC's programs** on the insert in this issue. Notice all the programs, walks and wonderful Earth Day events.

Favorite weekly children's activities are continuing. A new series, **Summer Family Evenings**, will have all kinds of fascinating programs designed for families. Free for member families every Tuesday at 6:30 in June and July.

Last year PEEC sponsored a tour of yards with good ideas for attracting birds and called it **Birdscape**. This year the tour will feature yards in **White Rock** on June 17, 1 - 5:00 p.m. Thanks to those who have volunteered their yards. If the birds like your yard, we will, too.

Mountain School students have been collecting **aluminum cans for recycling** and are in competition with schools in other towns for a prize of \$1000. They have decided, if they win, to donate the prize to Heart and Soul Animal Sanctuary. You can help. Bring aluminum cans to PEEC at Earth Day or before. ✨

PEEC Summer Adventure Programs

by Michele Altherr

Spectacular! The volcanic Jemez Mountains rise up from the high desert like an island in the sky surrounded by a desert sea. The Rio Grande rift splits the Colorado Plateau and a sparkling ribbon of water flows along its path. This June, PEEC offers children the opportunity to explore this wild and enchanting landscape. Each week is a chance for them to spend their days outdoors, make new friends, and meet scientists in the field.

Nature Odyssey's Wet 'n Wild Along the Rio Grande is the week of June 4-8. During this odyssey, kids will explore all things wet, wild, and wonderful along Rio Grande, from its bosques to its cienegas and lagunas. Grades 4 - 6
Nature Odyssey's Super Sleuths in the Valles Caldera and Beyond is the week of June 11-15. Kids will become nature detectives and hone all their senses as they delve into the mysteries of the mountains. Grades 4 - 6.

LEAP (Living Earth Adventure Program) is the week of June 18-22. During this adventure kids will let their curiosity be their guide as they explore the ecosystems between the Rio Grande and the Valles Caldera National Preserve. Grades 7 - 8.

To reserve your child's place, register online now at www.PajaritoEEC.org or visit PEEC at 3540 Orange St.. Please call 662-0460 with questions or to find out about financial aid. We hope to see your kids this June as we explore the beautiful wilderness we call home! ✨

An Inspired Talk at PEEC by Photographer Hari Viswanathan: Birds and a Mountain Lion

by Dave Yeamans

Note: For “A Photography Tour of the Machu Picchu Cloud Forest and Amazon Rain Forest,” Hari Viswanathan traveled from 10,000 feet elevation in the Andes to 1000 feet in the rain forest. Enjoy his photography of our local birds on PEEC’s web site: www.PajaritoEEC.org, click on Nature Guides, Birds. Hari’s web site is www.harisphotos.com. For this trip see : www.harisphotos.com/trips/peru01.html.

Amazing birds:

Hari Viswanathan was like a biathlete, alternately pursuing the most amazing tropical birds in Peru, then freezing into place, suppressing his heart rate to steady the camera and recording world class images.

Photo on disk, he'd race off to another place on his well-researched wish list and snap photos again, each time capturing the outrageous diversity and audacity of the cloud forest or high desert birds.

If the chairs in the environmental center had been equipped with seat belts I would have used mine; the edge of the chair was so narrow that it nearly spilled me off. We edged along the landslidden dirt road with our guide Virgilio to his ancestral home at the edge of Amazonia. Out of Virgilio's experience with over a thousand bird species, he was able to guide Hari to as many as could be captured "on film" in a week. The list included cream-faced spiketails, Peruvian cock-o-the rocks, yellow-headed vultures, and dozens of evocatively named birds, looking like



Cock-o-the-rock, by Hari Viswanathan

melted rainbow sherbet with improbable shapes. His greatest inspiration by far to many of us was in conceiving and planning this trip with the full support and encouragement of his wife, son, and dog, who had to stay home. His hard work and his decision to make the absolute best of everything that



Coquette Rufous, by Hari Viswanathan

could be offered gave him a benchmark birding extravaganza. He hired the best available private guide, wore his shoes constantly so as to be ready for a rare encounter at any moment and chatted up a fellow photographer. He had good fortune in the weather and sightings; he even met his photographer idol, and now peer, Glen Bartley, far in the outback. Hari optimized every instant of the adventure.

Mountain lion attack:

Hari explained how in December his family-member dog was killed in his own back yard here in Los Alamos by a mountain lion. Hari's work in support of wild cat survival world wide remains undiminished but somewhat informed by this loss. "After all," he said, "can you imagine the feelings of families in India whose children are eaten by tigers that I support?"

How Hari can incorporate a story like that into a birding talk is a testament to his compelling presentation style. Bravo, Hari, and thank you. ✨

Note: Learn more about the mountain lion in the next article, written by the taxidermist. Hari’s photos:

www.harisphotos.com/animals/mountain_lion.html.

Mountain Lion Body Has a Life Tale

by James Brooks, Taxidermist

On the morning of Christmas Eve, an unfortunate event took place in Los Alamos. A mountain lion attacked and killed a family dog. Due to its aggressive nature, it was decided the mountain lion needed to be dispatched.

Initial inspection of the lion showed some facial damage and a gunshot wound from being put down. The facial damage was first thought to be the result of a shovel used on the lion in an effort to free the dog from its jaws. All taxidermy options were weighed, with regard to how to preserve the lion.

If the skin is intact, it can be sewn back together. If the skin is missing, it can be replaced with similar skin/fur. Under the circumstances, it was decided to leave it as is. This wasn't a trophy, nor an animal that was brought in by a hunter; this was a local story and I didn't want to detract from that.

The following morning thoughts about this lion's skull injuries changed: he had a secret. During the process of preparing the lion for tanning, it became evident the facial damage was not from the shovel but from an old injury. There were several cuts from the shovel, but they were largely superficial. The lion had an unmistakable hole in his head and a large cavity in the skull. His right eye was glazed and obviously not functional. The hole in the skull was old and had begun to repair itself, as there was evidence of new bone growth. Additionally, there were bone fragments under the skin, suggesting blunt force trauma.

Furthermore, hundreds of old porcupine quills were found imbedded and being absorbed into the skin. Both ears were half gone, and what appeared to be an old bullet wound was present in his hind quarter.

While most of these injuries are self-explanatory, the hole in the skull remained a mystery. Researching the social habits, diet and hunting behavior of lions shed some light on this injury. Lions will often sneak up on their prey and attack from behind. Deer, a large part of a lion's diet, are often attacked in this manner. Further investigation of the skull revealed what appeared to be a hoof imprint. The skull and skin damage was in the shape of a rear deer hoof. It is my assumption this lion was stalking a deer from behind and was kicked in the process of the initial attack.

This would explain the shape of the injury, the bone fragments and the damage to the orbital cavity causing loss of the right eye.

Speculation as to what caused the lion to attack the dog is something that is brought up often. Here are some more observations that may or may not factor into this lion's final encounter. This was a male lion weighing over 130 pounds. The skin, gums and teeth were all in healthy condition. A late freeze last spring caused a low mast crop (Gambel Oak acorns), a primary food source for deer. The Las Conchas fire destroyed food sources and habitat. Deer and elk migrated to lower elevations in large herds this winter. At least two other lion attacks on dogs occurred after this attack. Finally, numerous lion sightings have been and continue to be reported.

This encounter is a stark reminder that these animals are always present, and are simply trying to adapt to changing surroundings. Is it possible that Los Alamos was just in the path of a normal migration of prey versus predator?



Note: James Brooks has a local studio; his web site is yukonwildlifestudio.com. He will bring a collection of his work to PEEC on Wednesday, June 5, 6:30 - 8:30 p.m. Drop in and look around;

he'll be there to answer questions. See the following:

Mountain Lion (life size) & Mountain Lion Skull,
Raccoon (life size), Bull Elk (bugling, shoulder),
Mule Deer (shoulder), Red Fox (life size, if it doesn't sell
at art show), Black Bear (life size),
Beaver (life size, if finished), Beaver Skull (if finished). ✨

Squirrels, Vacuum Cleaners, and Ecology

by Dave Yeamans

Hoover is an Abert's squirrel (*Sciurus aberti* aka tassel-eared squirrel) in my yard acting like the vacuum cleaner for which he was named. He sucks up bird seed until it's gone. Clean. Slick as a whistle. Nothing left for the birds. And what's on Hoover's menu for today? How about sunflower kernels? No, today suet will suit him. Maybe tomorrow the whole sunflower seeds buried in all that millet he doesn't like will work. Ah, down to business – let's eat. And so Hoover hangs upside down,

pulls the feeder up to him and gorges.

Hoover and his buddies, Electra, Oreck, Dyson, and Kirby (the other kinds of squirrels I also have), are a continuing challenge for any bird-feeding addict like me. Every day grows some new idea in their little pea brains about how to penetrate the feeder defenses, whether they are hungry or not. I've watched them try to get into a new feeder when the old easy one right nearby is stocked with the same food. It's actually fun to watch but there is a problem for me and my bird friends. If I go away for a wee, the birds will have exactly one day of food followed by the avian equivalents of anger, denial, sorrow, hunger, and seeking help. This is a piece of the ecological puzzle.



I think it's reasonable to feed just birds and let Hoover live on the leftovers. It is not reasonable to feed bears with birdseed because to do so would murder the bear. A fed bear is a dead bear. But Hoover won't die from my feeding or not feeding him. No problem.

The bird-feeding complexity is at least this. Birds eat different foods, depending on which birds are in the yard and what season it is; bears love to eat birdseed and they damage feeders; wind blows hanging feeders around; some birds monopolize a feeder or type of food such that other birds don't get a chance to eat; some birds are finished eating before Hoover arrives to feed. For me, this is not as sustainable as I'd like, so I take preventive measures to make my systems easier in the long run.

Every day is different in the feedlot. What worked yesterday might be a liability today. I have to watch closely and plan well so my feeders aren't destroyed, the animals aren't encouraged to become a nuisance, and the little feathered entertainers have a reason to keep coming back. So I have 12 or more feeders in non-bear season and fewer

when I have to take down the feedbag every night – which I do.

A partial solution to this feeding problem might be to plant a pole 10 feet high or more with feeding stations on it. A pole of stout steel would prevent bear damage and could be made proof against rodents, skunks, and raccoons. Feeders could be of the type that dissuaded white-winged doves from using up the feed and waddling off. The problem, other than the foolishness and difficulty of it all, is to create a way of servicing the feeders without having to climb a ladder. AHA! I'll simply add a winch, cable, and pulley system. And I'll need some housings that keep the feeders from dancing in the wind. And I'll add some branches and twigs for perches.

Until I build it, though, Hoover the Squirrel and his two buddies have the day to show me more weaknesses in my defense of the diner. Maybe I'll put up a sign: "No Wings, No Feathers, No Service." ✨

Fire, People, and the Environment

by Terry Foxx and Karla Sartor

The evidence is clear: the Southwest is getting warmer and drier. Whether you believe it is climate change caused by human actions or a natural warming, the bottom line is that it's happening in the Southwest. When temperatures are warm and dry, fire WILL happen. If you live in a forested area, you need to realize that. These mega fires are difficult to control with 2-3 mile fire fronts.

At a recent fire ecology conference in Santa Fe attended by PEEC board members Terry Foxx and Karla Sartor, various themes emerged. Having studied fire recovery for over 30 years, Terry found that a few ideas had changed, but the basic premise that "fire is important to

ecosystems” has not.

Forests of the Southwest have been altered. In the past the more natural short intervals between fires reduced fuels and forest density. Current long intervals result in forests heavily loaded with fuels and dense stands. Under these dry forest and dry windy climatic conditions, fire will be hot and destructive. The resulting problems are two-fold: 1) the ecosystem is reset by removing all the trees and shrubs. Grasslands and scrublands will persist; 2) there is immediate flood potential. Videos of floods in Frijoles Canyon and Cochiti Canyon were impressive. These floods had flows of over 7000 cubic feet per second, way off the charts from normal flows.

One of the big controversies is about seeding immediately after a fire. Does seeding help to reduce flood damage? BAER (Burned Area Environmental Restoration) team members say it does; researchers say it doesn't. Results are very site specific, depending on steepness of slope, severity of burn, timing and intensity of rainfall events. Putting down straw or other mulch to hold soil in place also has the potential risk of increasing exotic plants such as cheat grass and smooth brome. These slow the natural regeneration.

Particularly depressing at the conference was the issue of the ability of agencies to make rapid decisions. BAER teams don't have to comply with NEPA (National Environmental Policy Act). However, to be proactive in forest management, regulations such as NEPA and rules related to projects that are contracted out need to be revised. Research shows that forest maintenance can reduce fire hazards.

One positive note came from a talk about people and fire. Sociological studies show that people's perceptions of fire and fire management have improved over the years. It's encouraging to hear that the public seems more informed and actually feels that organizations are not doing enough to protect resources. The conclusion was that engagement and education of the public are essential. Public input is now more prominent because of consortiums of various federal, state, local groups and private groups such as the Nature Conservancy.

As private, educated citizens, we need to begin to educate our political leaders. Everyone at the conference agreed

that we spend billions of dollars on fire-fighting but such a small amount on trying to maintain these ecosystems through proactive management. This is upside down!

Some fascinating new ideas for monitoring animals after fires emerged. For example, the tiny, endemic Jemez salamander is very hard to monitor, but salamanders are probably not largely affected except for the short times they come to the surface (a month or so in the summer). However, their habitat of downed logs was lost in the intense Las Conchas fire. A new way of locating these animals is through the use of scent dogs. Dogs can be trained to search out salamanders through smell. That way they can be found without habitat destruction. Cool!✪

PEECbirders for Bears

Activity for the online interest group PEECbirders remains high one year after it was started. Bird sightings are shared with interesting stories and advice about problems attracting birds. Something different came last fall when the mammal raiding bird feeders was not a squirrel or a chipmunk, but a black bear. Messages flew through the group site. They carry a story of damage to property, a bear's power, its determination to get food, and actions taken to avoid providing food. This is where “living with bears” begins.

For details on black bears, with more deterrents, see the web site for Sandia Mountain Bear Watch (www.sandiamountainbearwatch.org), “... because a trapped bear does not transplant well. There are no pristine, unpopulated relocation areas left in NM. A large percentage of bears die from being relocated.”

(Dave) I have a few hairs from a beast that raided my yard last night. I'm thinking bear but it could be raccoon. I need a trichologist to resolve the difference for me.

A delicate branch was delicately broken and the suet feeder formerly supported by it was mangled and empty. A hanging seed feeder was still hanging but bent and licked clean. Another suet feeder, the one with hair, was investigated but not opened and raided -- even the ravens knew how to do it before I added a simple clip. The thistle feeders were intact, as were the outside bins for my supplies. I'm watching. If this happens again I will have to starve the birds to save the bear. "A fed bear is a dead

bear."

A solution I've seen, as noted here before, is a stout steel pole anchored in concrete and about nine or ten feet high. It should be at some distance from trees and houses.

(Selvi) I am sure I had a bear last night. I left a couple of hummingbird feeders and suet feeders outside and they all were on the ground. The hangers I use from the trees are bent. I can't find the cage feeder I had for suet. It looks like the bear took it or threw it in the canyon. So I am bringing all the feeders inside from today. Raccoons can't bend the steel hanger, I am guessing.

(Mary Carol) I had a similar experience Thursday night -- broken four-inch diameter apple tree limb, demolished or emptied seed and hummingbird feeders and, worst of all, my ripe tomatoes are all gone. I am thinking raccoon, but bears have been sighted in my neighbors' yards recently.

I use shortening mixed with powered hot red pepper to grease the feeder poles and that keeps the squirrels and usually the raccoons from climbing up. I mix the chile with the bird seed and that also helps. Apparently birds do not have hot taste sensors. Much of my sunflower seed was left on the ground after the feeders were ripped down.

(Dave) Feeders will be brought in and reduced in number so there will be fewer to put out in the morning. Meanwhile, the goldfinches love fescue seeds, catnip seeds, and sunflowers -- plants and seed.

There is a mess under the pinyon tree left when Abert's squirrels chewed up the unripe cones and dropped the sappy litter. Mr. Bear sits among all that and licks out the seed after tearing down the feeder. Then it's off to the garbage can and whatever else he can smell.



Gray fox, taken by crittercam in Selvi Viswanathan's yard

Interestingly, if this isn't interesting enough, there also was

a fox. He seemed to be orbiting the bear, possibly as a good food source. He kept a safe distance from the bear and was much more shy about noise and movement. After all, what scares a full grown black bear? This fox, as near as I could tell in full moonlight and binoculars, had a black face and black upper tail.

(Mark) Thursday night around 10:00 I heard some noise on our front porch. I turned on the light and saw a full-grown black bear eating suet from a feeder he had pulled down. He had also pulled down a sunflower and a peanut feeder and emptied them. I won't be putting them back up for a while. I expect he will be checking back now and then to see if a new dinner has been served.



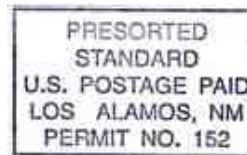
Mama bear, by Hari Viswanathan

(Hari) There was a mother bear and her cub outside PEEC's very own Michele Altherr's home this morning. Fish and Wildlife have set up a trap. Hopefully they can be relocated to a safe place.

(Michele) When mama was in the tree, she would stand on one limb and scratch her back on the limb above. The cub napped in the crown of the tree with feet dangling, as we saw through our living room window. Just unfortunate to see mama have to resort to eating trash, but she is a survivor. She had a green tag in her ear so she has been trapped before. They moved the trap this afternoon. I wish the two well and sure hope they can be moved somewhere.



PEEC
 Pajarito Environmental Education Center
 3540 Orange St.
 P.O. Box 547
 Los Alamos, NM 87544



Earth Day Celebration Week April 15-21
 Earth Day Festival at PEEC April 21
 Earth Day Party for PEEC April 22
 Earth Day Celebration Month all of April

	General Membership	\$35
	Living Lightly	\$20
	Penstemon	\$60
	Sunflower	\$100
	Wild Iris Donor	\$250
	Skyrocket Gilia Donor	\$500
	Wood Lily Donor	\$1000

	Non-Profit Membership <i>One newsletter plus PEEC This Week for up to 3 organizational members.</i>	\$75
	Corporate Membership <i>One newsletter plus PEEC This Week for up to 3 organizational members.</i>	\$100

PEEC's Mission Statement: To provide a nature center and outdoor education programs that allow people of all ages to explore the rich natural and cultural heritage of the Pajarito Plateau and to appreciate our connection to the natural world.

Joining or Renewing Is Easy!

Fill out this form and mail it in with your check or go to the website www.PajaritoEEC.org. Do it today! Thank you.

Name(s): _____ Address: _____

Phone: _____ E-mail to send receipt: _____

Subscribe this email address to PEEC This Week (circle): YES / NO / Already subscribed

PEEC is a non-profit 501(c)3 organization.

Donations are tax-deductible.

 Mail checks to: PEEC PO Box 547 Los Alamos, NM 87544 Att: Membership
