MASSIVE HEAD-STARTING OF THE MOJAVE DESERT TORTOISE

A Desert Tortoise Council Position Paper

Populations of the Mojave Desert Tortoise (Gopherus agassizii) have declined significantly over recent decades due largely to human activities, including unauthorized collection of animals as pets, human-subsidized predation, overgrazing by domestic livestock, off-road vehicle impacts to tortoise habitat, the introduction of disease, habitat fragmentation by highways, and urbanization. The conservation and recovery of these populations is, therefore, of the utmost importance, and this goal is stipulated in the Desert Tortoise (Mojave Population) Recovery Plan (1994). Proposals and actions to address this decline and ensure the survival of the species must be founded on the best available science, conform to Federal and State law regarding protected species, and not further endanger the Mojave Desert Tortoise. Reducing existing threats to the tortoise from human activities is central to the survival of viable, native populations.

One strategy for increasing desert tortoise populations is head-starting, whereby eggs and hatchlings are protected and then released at an age when the animals are less vulnerable. There are pilot head-starting programs at Edwards Air Force Base, Fort Irwin National Training Center, and the Marine Corps Air Ground Combat Center in

Photo Credit: Irene Alexakos
Taken at Military Corps Air Ground Combat Center
Twentynine Palms. In a variation on this strategy, the proposal by James Juvik, Kenneth Nagy and Ross Kiester (2009) is to collect eggs from the captive desert tortoise held by thousands of private owners in Southern California, rear the hatchings to “predator-resistant” size, and then release these tortoises by the thousands into the Mojave Desert. The initial goal is to collect and incubate 1,000 eggs from some 200 captive tortoise pairs. This massive head-starting proposal raises a number of concerns for the Desert Tortoise Council.

A desert tortoise restoration program on the scale proposed by this project must rest on the best available science, yet there are scientific issues that remain to be addressed by the proponents. The authors assert that they will “break the cycle of disease transmission…associated with captive tortoises…and provide healthy animals for reintroduction.” However, the work on Gopher Tortoises in Florida and Desert Tortoises in California cited by Juvik, Nagy and Kiester only “appears to confirm that maternal tortoise disease transmission does not occur in ova” (italics added). There must be certainty that all eggs are disease free, and not just for the Mycoplasma that we know of. In addition, there must be irrefutable evidence that the captive-bred tortoises will survive once released. To date, there are insufficient data to conclude that current head-starting programs are successful. These trial projects simply have not operated long enough to determine their degree of success. Habitat matters on this issue since the places referenced by the proponents as examples where this type of intervention appeared to work in the past are quite different habitats. Those locations are not as arid as the Mojave Desert where there is less annual forage, particularly during drought periods. A massive head-starting program, furthermore, might simply increase food shortages for both native and released tortoises.

Releasing captive tortoises without sufficient scientific evidence that they will survive would be unethical.

The Desert Tortoise Council is concerned with the implications of the proposed intervention for the genetic composition of the Mojave Desert Tortoise. Juvik, Nagy and Kiester state that genetic studies suggest “a relatively uniform genotype over most of the California Mojave.” We are concerned that “relatively uniform” is irrelevant. A single base pair substitution can be adaptive. The assessment of genetic variation they cite was based on the mitochondrial genome only and not nuclear genes. Evidence is mounting that localized mitochondrial discordances reflect selection on the mitochondrial genome itself via mito-nuclear discordance. Such evidence also implies selection on the corresponding nuclear genes. Juvik, Nagy and Kiester note that Murphy et al. (2007) “hypothesized that these genetic differences may be adaptive.” This is untrue. A scientific hypothesis cannot contain “may”, rather it tests whether a specific null hypothesis can be rejected or not; a null hypothesis can never be proven to be true and hypothesis testing involves “either/or” decision making, not hedging. Many recent studies demonstrate that selection occurs in functional genes that have clear adaptive value, such as those involved in sensing the environment. Rather than forming and scientifically testing a hypothesis of local adaptability, Juvik, Nagy and Kiester explicitly assume that tortoises can (rapidly) adapt to anthropogenic effects. Evidence suggests otherwise. Adaptability is a function of generation time and many species with far shorter generation times than Mojave Desert Tortoises are unable to adapt and are going extinct. Juvik, Nagy and Kiester cite no literature demonstrating adaptation in either mitochondrial or nuclear genomes, and none of the more modern in vitro experimentation demonstrating adaptive selection to variables such as salinity and temperature. They have not tested whether the genetic structuring in the Mojave Desert Tortoise corresponds to adaptive gene complexes, or not. Their assumption is not science.

While screening to ensure that captive tortoises contributing eggs are of Mojave rather than Sonoran stock or hybrids, the goal of the massive head-starting proposal “…is to create populations with high genetic variability to provide the greatest opportunity for evolutionary response to change.” In pursuing this goal, the proponents reject the argument that reintroduced populations should genetically match wild populations due to
demonstrated genetic differentiations within the Mojave Desert Tortoise (Murphy et al. 2007). While genetic variability may or may not contribute to greater adaptability, the proposed intervention contradicts the fundamental strategy of the Desert Tortoise (Mojave Population) Recovery Plan (1994) to protect evolutionarily significant population units. The six “recovery units” in the Recovery Plan were identified with data on genetic variability, morphology, and behavior patterns of populations as well as ecosystem types. Consistency with the genetic specifications of the Recovery Plan must be a consideration in the preparation of the State of California “Propagation Permit” that would be required. It is illegal in California to privately breed tortoises in captivity without a permit. The genetic composition of the Mojave Desert Tortoise must also be a consideration in the preparation of the Environmental Impact Report that would be necessary because of the scale of the proposed project and in the Environmental Impact Statement that would be required for releasing numerous tortoises on Federal land.

The Desert Tortoise Council is concerned that massive head-starting could further endanger wild populations of the Mojave Desert Tortoise. The proposed project might train more ravens, coyotes and dogs to pursue this State- and Federally-protected species by releasing large numbers of captive-bred tortoises in the field. More people might be encouraged to release captive tortoises in the wild under the belief (due to the project’s use of captive tortoises) that they are advancing the well being of tortoise populations. Returning captive tortoises to the field would only increase the risk of disease for wild populations. It is ironic that Juvik, Nagy and Kiester cite the successful head-starting and reintroduction of the Espanola Island Galapagos Tortoise. Here, success depended on the removal of competitive species (goats), predators (rats) and the highly restricted access to the island by humans. With the Mojave Desert Tortoise such controls are impossible yet possibly essential for successful head-starting.

Juvik, Nagy and Kiester propose to start the raising of the tortoises prior to determining where they will be placed upon release. However, the Desert Tortoise Council believes it would be imperative to ascertain where these tortoises could be placed before the head-start process began. Since they are captive bred and of unknown origin, they should not be released in designated critical habitat. Areas outside of critical habitat are mostly military lands, privately-owned lands, open off-road vehicle areas, lands slated for the construction of solar energy facilities, or lands adjacent to urban and urban/rural areas within the West Mojave Desert. Such lands clearly would not be conducive to the survival of head-started tortoises.

A fundamental aspect of the massive head-starting proposal is that it would simply return animals to areas where the situation that lead to their previous decline or extirpation has not been eliminated or substantially reduced. The proponents state that massive head-starting “…can potentially swamp some decline factors…” and they cite the captive breeding program of the Nene Goose (Branta sandvicensis) as evidence (Juvik et al. 2009) Yet the analogy is faulty because only the eggs and young of the Nene Goose were threatened, and it was only alien predators that led to the bird’s near extinction. It is sustained anthropogenic transformations of the environment that are the cause of the decline in populations of the Mojave Desert Tortoise, and subsidized predators are only one of those transformations. Instead of returning the offspring of captive tortoises to an environment where threats continue unabated, the priority should be to protect native populations from the full range of transformations that threaten their survival.

References


Editors Note: The position of this paper reflects the position of the Desert Tortoise Council. Please direct any questions/comments to sdaly@burnsmcd.com and they will be passed on to the authors.

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ANNOUNCEMENTS

Address Updates!!!

Please renew your addresses, including e-mail. Every time we e-mail newsletters, 10 to 20 percent of the e-mail addresses we have are bad.

College of Veterinary Medicine
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Mycoplasmosis and Upper Respiratory Tract Disease of Tortoises

This webpage is recently updated and provides a wealth of knowledge related to URTD. Many of the references are provided in PDF for convenience. Bookmark the site and keep it handy.

http://www.vetmed.ufl.edu/college/departments/sacs/research/MycoplasmosisofTortoises.html

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FROM THE EDITOR

Since most of the newsletters are being received electronically, we would like to invite everyone to send us your photos. Have really great pictures of tortoises or other wildlife? Send them to us and we will put a few of them in the newsletter each issue.

Any other updates or news items are welcome as well.

Also, if you have moved or have a new email, please make sure you update your mailing and email addresses.

In an effort to conserve time, money, and paper, we strongly encourage all of our members to receive the newsletter electronically rather than hardcopy.

Send your photos and any other updates to sdaly@burnsmcd.com.

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DEsert TORTOISE COUNCIL
2010 SYPOSIIUM INFORMATION

The 2010 Symposium will feature three exciting authors and dynamic speakers. Drs. Howard Wilshire and Jane Nielson, former employees of the U.S. Geological Survey, and authors of numerous
scientific papers, will discuss and sign their new book. They, with Richard Hazlett, published "The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery," which will be available at the meeting. Published by Oxford Press, many chapters contain information critical to biologists and land managers in the western states where tortoises occur. Council members may remember Dr. Wilshire from previous meetings and from his book with Robert Webb on "Environmental Effects of Off-road Vehicles."

Dr. Richard Minnich, a Professor in the Department of Earth Sciences at the University of California at Riverside will chair a session and speak about "California's Fading Wildflowers, Lost Legacy and Biological Invasions." Dr. Minnich has written numerous articles on alien plants and fire. This book gives vividly detailed historical accounts and synthesizes changes in the landscapes over the past 300 years. It is a "must read" and valuable reference for restoration ecologists and invasive plant specialists.

HOTEL REGISTRATION. To reserve your room at the Doubletree Hotel Ontario, call 1-800-222-TREE (8733). Be sure to mention you are with "The Desert Tortoise Council," or group #DTC. Room rates per night (2/24 to 2/28) for a single or double room is $89.00 plus state and local taxes and fees. Requests for rooms after the MONDAY, JANUARY 25, 2010 cut-off date will be accepted on a space-available basis but the special group rate will not be available. It is highly recommended that you make your room reservation as soon as possible, as there are a limited number of rooms (i.e. 100 for Saturday and Sunday) being held. The hotel address is: 222 N. Vineyard Avenue, Ontario, CA 91764.

TRANSPORTATION. FREE 24-Hour AIRPORT SHUTTLE: Ontario International Airport Pick-Up: Courtesy Phone in Baggage Claim or call (909) 937-0900. The airport is 1.5 miles from the hotel. Taxi is also available for a fee.

2010 SYMPOSIUM PHOTO CONTEST

The Council sponsors the annual Photo Contest to honor and encourage our members to participate in educating the public through photography.

AWARDS: Qualified winners will be awarded first, second, and third place ribbons in each of the eight categories. First Place awards will be $50.00; second and third place winners will receive ribbons. The Best of Show will receive $100. Awards will be presented during Saturday evening's program.

CATEGORIES:
Wild Desert Tortoises
Captive (pet) Desert Tortoises
Other Desert Reptiles
Desert Mammals
Other Desert Wildlife
Wild Desert Plants
Desert Scenics
Tortoise Conservation. (This category covers a range of subjects, but must depict activities or subject matter important to the perpetuation of the species. Examples are research, impacts (i.e. raven predation), improvements (i.e. fencing), and environmental education.)

FORMAT: For 2010, the format is mounted print photographs. Prints may be either in a mat frame, or mounted on cardstock or similar weight paper to enable display. NO GLASS PLEASE. All prints must be labeled with the following information placed on the back: common and scientific names of subject; location; date photograph was taken; contestant's name, address and phone number; and entry category. No names on the front, please, but titles are acceptable. This year, the council requires contest entrants to provide a digital copy of the photograph as well. If you are submitting more than one photo, you can put multiple files on your LABELED disk.

OTHER RULES: The contestant must be a registered attendee of the 2010 symposium. Contestants will be limited to a maximum of three (3) entries each, with no more than one (1) per category. With the exception of Captive (pet) tortoises, all photographs must be taken of WILD (i.e. unrestrained and photographed in its natural habitat) subjects occurring WITHIN THE

www.deserttortoise.org
GEOGRAPHIC RANGE OF THE DESERT TORTOISE. Photographs must have been taken by the contestant.

SUBMISSION OF ENTRIES: PRINTS must be available for viewing no later than 1:30 p.m. Friday, February 26. Please bring the prints (and your electronic disk) to the symposium and turn them in at the registration table.

JUDGING: Prints will be judged at the Symposium by the attendees. Attendees will pick up ballots at the registration table and voting will be from 3 p.m. Friday to 3 p.m. Saturday. Winners will be announced at the Awards on Saturday night. PRINTS and DISKS will not be returned and will become the property of the Desert Tortoise Council. The Council will have the right to use these photographs in its publications and educational programs, as well as to assign such permission to others, with full credit given to the photographer.

Questions and/or concerns may be directed to Ann Bedlion via email: ann.bedlion@nellis.af.mil

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NEWS

OBAMA MOVES QUICKLY TO PRESERVE THE WEST

WASHINGTON - In the never-ending struggle in the West over whether public lands should be harvested for their valuable metals, fuels and timber or set aside for future generations of people and wildlife, environmental interests have gained the upper hand since President Barack Obama moved into the White House.

Obama has begun a dramatic reversal in Western land-use policy that already has had a major impact in Arizona. In a sharp departure from the Bush administration, the Obama team has halted new uranium-mining claims near the Grand Canyon, proposed new preserves for wild mustangs and funded the expansion of the Petrified Forest National Park.

Obama also signed into law the Omnibus Public Lands Management Act of 2009 that protected thousands of miles of scenic, historic and recreational trails, including the 807-mile Arizona National Scenic Trail from the state line with Mexico to the Utah border. The sweeping bill designated more than 2 million acres as wilderness area - nearly as much protected land as President George W. Bush created in two terms in office. "The environmentalists have been waiting in the wings for eight years," said Paul Lewis, assistant professor of political science at Arizona State University. "Now, they have a chance to be heard again."

Environmentalists' allies in Congress say they are hopeful their legislation can become law now that they have the support of the White House.

"The previous administration was really all about extraction of resources from the land," said Rep. Raúl Grijalva, D-Ariz., who chairs the House Natural Resources subcommittee on national parks, forests and public lands. "Now, there's an effort to strike a balance between extraction and protection of the environment. That's a healthy change."

'Land-use control' blasted

Not everyone agrees.

"As a property-rights person, I would view what's happening as massive land acquisitions and land-use control," said R.J. Smith, adjunct environmental scholar at the Competitive Enterprise Institute, a Washington, D.C.-based group that advocates free enterprise and limited government and opposes most environmental regulation. "There's been a push to create these huge wild lands areas and connect them with corridors that are designed for wildlife rather than for people."

That does not mean the Obama administration does not see dollar signs when it looks west. While the Bush administration went after the region's oil and gas reserves as a way to achieve greater energy independence, the Obama administration is shifting the focus to solar, wind and geothermal power as it
looks for ways to boost both the economy and the state of the environment.

Its greatest challenge may be whether it can develop those renewable resources without running into some of the same environmentalists who worried about the Bush administration allowing the destruction of environmentally sensitive land.

Environmentalists say the public is finally being heard.

For eight years, the Bush administration crafted policies that opened doors wider for multiple uses on public lands. Users such as mining and logging companies won greater access in some areas, and federal agencies were given greater leeway in allowing development.

Conservationists say the damage from those policies was dramatic. In the Rockies, for instance, roads were built to serve new natural gas fields, destroying wildlife habitat.

**New focus on conservation**

One of the biggest changes has come from the Bureau of Land Management, whose new director, Bob Abbey of Nevada, issued guidance to agency employees in October that ensures increased environmental protection for national monuments and conservation areas.

To read the rest of the article, please see the original article: [http://www.azcentral.com/arizonarepublic/news/articles/2009/11/05/20091105az-enviro1105.html](http://www.azcentral.com/arizonarepublic/news/articles/2009/11/05/20091105az-enviro1105.html)

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**HARRIET ALLEN DIES AT 95; ENVIRONMENTALIST SUCCESSFULLY PUSHED FOR THE CALIFORNIA DESERT PROTECTION ACT**

In 1954, she joined the Desert Protective Council and helped preserve land in Joshua Tree, Death Valley and Anza-Borrego Desert State Park.

Harriet Allen, an environmentalist who mentored generations of desert activists and played a key role in the 1994 passage of the landmark California Desert Protection Act, has died. She was 95.

Allen died Sept. 30 of complications related to old age at a Kaiser hospital in San Diego, her family said.

"She waged a decades-long battle to educate everyone that the desert matters," said Elden Hughes, a longtime desert-protection activist. "The fact that the desert has sustained itself as well as it has is a tribute to Harriet Allen. She deserves a big chunk of the credit."

In 1954, she joined the Desert Protective Council, then newly formed to protect Joshua Tree National Monument from mining.

She would hold every leadership position in the council, becoming "the cement who had almost single-handedly held the organization together for years," Nick Ervin, council president, said in the group's winter 2007 newsletter.

Allen was one of the leading activists who spent eight years "tirelessly working" for the passage of the California Desert Protection Act, said Terry Weiner, the council's conservation coordinator.

"Everything I know about being an effective activist...was taught to me by Harriet Allen," Weiner said.

When President Clinton signed the protection act, nearly 8 million acres of Southern California desert land became off-limits to developers -- and Death Valley and Joshua Tree national monuments were designated as national parks.

As a member of the council's Anza-Borrego Committee, Allen actively engaged for years in the acquisition of lands in Anza-Borrego Desert State Park, California state park rangers said when they made her an honorary ranger in 1978.

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www.deserttortoise.org
On one occasion, Allen took options on land that could specifically help save the bighorn sheep in the state park area, according to the rangers.

Active in the Sierra Club, she chaired its San Diego chapter in 1963 and helped lead a grass-roots campaign that resulted in the 1970 expansion of Torrey Pines State Reserve along San Diego's coast.

The rest of the obituary can be found at http://www.latimes.com/news/obituaries/la-me-harriet-allen12-2009oct12,0,4722158.story

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US SETTLES GRAZING LAWSUIT WITH NEVADA RANCHER

Nevada rancher who has fought the federal government for more than a decade over grazing and property rights has settled a civil suit with the Justice Department over livestock trespass, the government said Wednesday.

The stipulation filed in U.S. District Court in Reno ends the government's case against Goldfield rancher Ben Colvin.

John C. Cruden, acting assistant attorney general for the Justice Department's Environment and Natural Resources Division, said the agreement partially resolves "many years of disputes and litigation" over unauthorized grazing on federal lands in Nevada.

Colvin's lawyer, Jonathan Hansen, was out of town and unavailable for comment, his office said.

In 2007, the government sued Colvin, the estate of late Nevada rancher Wayne Hage and Hage's son, claiming they repeatedly defied federal land managers by grazing cattle without permits on land overseen by the U.S. Bureau of Land Management and the U.S. Forest Service.

Wayne Hage came to epitomize Nevada's Sagebrush Rebellion, a movement that gained momentum in the 1960s and '70s to retake control of federally owned public lands. He died in 2006 at age 69.

The suit further alleged the Hages unlawfully "leased" lands owned by the government to other ranchers for livestock grazing.

Under the agreement announced Wednesday, Colvin paid a $34,000 fine and agreed to comply with federal grazing regulations in the future. It also requires him to remove unauthorized improvements he made on the public lands, such as aboveground water pipelines, water tanks and corrals.

Once those conditions are met, he can reapply for grazing permits, the government said in a written statement.

The settlement pertains to Colvin only, and the government's suit against the Hages is still active.

The BLM canceled Colvin's grazing allotment preferences in the late 1990s. In 2001, the agency seized and auctioned 62 of his cattle, saying he was trespassing on federal land and owed the government $73,000 in back fines and fees.

Colvin filed against the government in the federal claims court two years later, seeking $30 million in compensation. A judge denied his claim, and that ruling was later upheld by an appellate judge, BLM spokeswoman JoLynn Worley said.

The original story can be found at http://www.mercurynews.com/news/ci_13560753?n_click_check=1

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MOHAVE COUNTY WIND FARM PROJECT

The Bureau of Land Management (BLM), Kingman Office, will be preparing an Environmental Impact Statement (EIS) to analyze potential impacts of issuing rights-of-way for a large-scale wind energy project and ancillary facilities in northwest Arizona.
The Mohave County Wind Farm project is proposed by BP Wind Energy of North America to construct, operate and maintain up to 335 wind turbine generators on federally managed lands in Mohave County. The site – 44,860 acres of public land -- is in the White Hills area about 40 miles northwest of Kingman and 20 miles southeast of Hoover Dam.

The project is anticipated to provide up to 500 megawatts (MW) of electricity – enough energy to meet the needs of about 110,000 homes. Up to 235 wind turbine generators are proposed for the first phase. Ten additional wind turbine generators could be installed on adjacent private lands in the first phase. Transmission lines are planned to connect to existing Western Area Power Administration lines.

Subsequent phases are proposed for up to 100 wind turbine generators.

As the project progresses, this web site will contain information about meetings, reports, maps, and other information about the project. November 20, 2009 marked the “official” beginning of the project with publication in the Federal Register of the Notice of Intent to write an Environmental Impact Statement. If you are interested in the Federal Register publication, follow the links to read the publication or see other project documents.

The Western Area Power Administration, National Park Service Lake Mead Recreation Area and Arizona Game and Fish Department are cooperating agencies.

The original notice can be found at http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html

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DRAFT ENVIRONMENTAL STUDY AVAILABLE FOR PROPOSED IVANPAH SOLAR ELECTRIC GENERATION SYSTEM PROJECT

The Bureau of Land Management (BLM) today released for public comment a Draft Environmental Impact Statement (DEIS) and the California Energy Commission (CEC) released a Final Staff Assessment (FSA) for the Ivanpah Solar Electric Generation Project on public land in San Bernardino County, California.

The joint DEIS/FSA is now open to public comment through February 11, 2010. BLM and CEC will hold at least one joint public hearing/meeting on the project. The exact date, time and location for the public meetings will be published on CEC and BLM web sites, and advertised in local media.

Bright Source Energy of Oakland, CA has applied for four right-of-way authorizations to construct solar power plants on approximately 4,000 acres of public land in California about 4.5 miles southwest of Primm, Nevada. The project would be the first commercial scale thermal solar power project constructed on public land in the United States. It would be constructed in three phases over a three year-period.

The proposed 400 megawatt solar plant would provide enough electricity to power 320,000 homes. The plant would use solar "power tower" technology, involving the construction of seven 459 foot tall towers. The planned 214,000 heliostats consisting of two flat mirrors would be constructed in concentric circles around each tower to reflect the sun’s rays on a central receiver. The tower would heat water and run steam through a turbine to generate electricity. The electricity would be transmitted via tie lines to a new substation and into the transmission lines running through the proposed project.

BLM, as the lead agency under the National Environmental Policy Act, and CEC as the lead agency under the California Environmental Quality Act, have jointly prepared the Draft EIS/FSA which is available online at the CEC address below and by contacting BLM at the Needles Field Office, 1303 S. Highway 95, Needles, CA 92363.

A Notice of Availability in the Federal Register will be published shortly and will initiate the 90-day comment period. BLM and the CEC will use public comments received to prepare a Final EIS in

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the spring of 2010, with a decision expected later in the year.

The original notice can be found at http://www.blm.gov/ca/st/en/info/newsroom/2009/november/deis-ivanhap.html

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MOJAVE MAX EMERGENCE CONTEST OFFICIALLY OPENS

The Bureau of Land Management, a partner of the Desert Managers Group (DMG), announces the official opening of the fifth annual California Mojave Max Emergence Contest. California’s Mojave Max is a female tortoise approximately 30 years old who lives at The Living Desert in Palm Desert, Calif. The object of the contest sponsored by the DMG is to guess when Mojave Max will emerge from her burrow for the first time after a long winter sleep (brumation). Each fall, when the weather turns cold, desert tortoises brumate, a reptilian form of hibernation.

This year Mojave Max went into her burrow sometime during Thanksgiving weekend. Last Feb. 24, she had emerged at 1:52 p.m., while the previous year she emerged on Feb. 10.

Students in grades 1-12, as well as youth groups, from Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties may enter the contest. Contestants should go on-line to www.deserttortoise.gov and register their guesses for when Mojave Max will emerge from her burrow for the first time in 2010. Winners and their classes or groups will receive prizes.

The contest is designed to increase understanding of desert ecosystems and how the desert tortoise and other native organisms are affected when ecosystems change. Desert tortoises are California’s state reptile; they are also listed on federal and state endangered species list as threatened.

In California, the program was launched by the DMG, a collaborative partnership of local, state, and federal agencies, including the Bureau of Land Management, responsible for the management of public desert lands. The DMG has also developed “Tortoise Education Trunks” as part of its desert tortoise outreach campaign. Tortoise trunks is an activity-based curriculum package for third through sixth graders that satisfies state standards for science and social science requirements for those grades. For more information, contact Lorna Lange, education specialist at Joshua Tree National Park, (760) 367-3011 or Anne Staley, desert tortoise outreach coordinator at Joshua Tree National Park (760) 367-5528.

The original notice can be found at http://www.blm.gov/ca/st/en/info/newsroom/2009/december/CDD1024_mojavemax_contest.html

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RENEWABLE POWER PLANTS HIT ROADBLOCK

Even while California pursues the most aggressive renewable energy goals of any state in the country, Senator Dianne Feinstein is trying to find a delicate balance between developing renewable energy to combat climate change and protecting the environment where that renewable energy will be built.

Feinstein, who has voted her pro-environmental convictions time and time again, introduced a bill Dec. 21 that would protect 1 million Mojave Desert acres and thwart the development of 13 large scale solar and wind energy projects. It also includes some incentives for renewable energy developers (Todd Woody wrote about it in the New York Times, and at his Green Wombat blog).

From Woody’s New York Times’ story:

On Thursday, Mrs. Feinstein introduced legislation to provide a 30 percent tax credit to developers that consolidate degraded private land for solar projects.

The types of projects proposed in the Mojave produce power using thousands of acres of the sun-and-wind-rich land, and then would transport that

www.deserttortoise.org
power hundreds of miles along not-yet-built power lines back to civilization.

Besides desecrating the “viewscape” (I learned that word when someone proposed building a large wind turbine in Marin County), there are water use issues (some of the solar projects use tons of water – not readily available in the desert) and endangered species like the desert tortoise to consider.

The complications with desert-based utility scale projects have turned some renewable advocates against the idea.

Arno Harris, a San Francisco-based solar developer, thinks distributed generation — that located within areas where transmission already exists — is the only answer. He recently blogged about it here.

CEO Tom Rooney, of Novato-based installer SPG Solar, feels the same way.

There are drawbacks to a distributed-only strategy. Distributed power is more expensive to install, and can only be installed in smaller quantities on rooftops, parking decks or open urban land.

Companies like Oakland-based BrightSource are trying to deliver thousands of megawatts of renewable power in one pop by planning large-scale, desert-based projects, which could really make a dent in California’s energy mix.

But as Feinstein has shown, the trade-offs required to accommodate such projects are not always palatable, even to environmentalists.

The original article can be found at http://sanfrancisco.bizjournals.com/sanfrancisco/blog/2009/12/renewable_power_plants_hit_roadblock.html

WASHINGTON - December 3 - Federal funds to protect the Mojave Desert tortoise in Utah were misused by local Utah officials to plan a freeway and construct a building, according to a former top county employee. Those charges, detailed in correspondence released today by Public Employees for Environmental Responsibility (PEER), are under federal investigation.

For more than 14 years, William Meador oversaw the Red Cliffs Desert Reserve, a 62,000-acre expanse in southern Utah set aside to provide habitat for the desert tortoise, a federally listed threatened species. Meador, a PhD wildlife biologist, worked for Washington County, Utah, until he was removed in late 2008 in a dispute over the County Commissioners’ diversion of funds and violations of a federal permit.

Recovery of the desert tortoise has been a high federal priority, with more funds devoted to the reptile than to some more charismatic species such as the bald eagle, gray wolf and grizzly bear. In letters sent to federal agencies and congressional appropriators, Meador outlines widespread misappropriation by county commissioners of funds for desert tortoise habitat:

$50 million to acquire desert tortoise habitat was instead earmarked by the county for a freeway slated to cut through the last viable tortoise population in the state; $200,000 of money for a tortoise Habitat Conservation Plan was transferred to the Utah Department of Natural Resources to construct a building in Washington County; and Other funds were transferred out of habitat conservation funds without public notice.

In addition, Meador struggled against official opposition to enforce county ordinances that protected tortoises from being killed. In the complaints, Meador calls for greater public oversight and transparency in Washington County management of Red Cliffs. His charges have been referred to the U.S. Bureau of Land Management (BLM) for investigation and a financial audit.

Meador's disclosures come at a time when federal spending in the Red Cliffs Desert Reserve is slated...
to grow. In 2009 legislation, Congress created a National Conservation Area (NCA) within the Red Cliffs Desert Reserve. The law directs BLM to develop a long-range management plan "to conserve, protect, and enhance ...the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources" of public lands within the NCA.

"Conservation partnerships are an important tool but they are not a license to steal," stated PEER Executive Director Jeff Ruch. "As the Red Cliffs National Conservation Area comes into being, it is important that BLM determine that taxpayer investments are used for the intended purposes and not siphoned away for political payoffs."

The original notice can be found at http://www.commondreams.org/newswire/2009/12/03-9

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SENATOR PROPOSES 1-MIL. ACRE SOCAL DESERT PRESERVE

California Sen. Dianne Feinstein introduced legislation Monday that would prohibit development on about 1 million acres of Southern California desert but allow construction of solar and wind farms on "suitable" desert land outside the protected area. The legislation would create two separate national monuments on areas of the Mojave Desert that are home to bighorn sheep, desert tortoises and other animals and plants.

The larger preserve, Mojave Trails, would be a 941,000-acre parcel along a 105-mile stretch of old Route 66 ending on the California-Nevada border.

The legislation would also protect another 134,000 acres about 100 miles east of Los Angeles and make permanent five existing off-highway vehicle areas in inland Southern California.

Earlier this year, Feinstein expressed opposition to plans to build at least 19 solar and wind facilities within the boundaries of the proposed Mojave Trails monument. She said such development would violate the spirit of what conservationists had intended when they donated much of the land to the public.

The Bureau of Land Management, which considers the land now open to all types of development, except mining, is reviewing 130 applications for solar and wind-energy development in the California desert.

Feinstein said the development of cleaner energy sources is vital to addressing climate change, but "we must be careful about selecting where these facilities are located."

Her legislation would help companies with projects currently proposed inside the proposed monuments relocate to federal energy zones being developed elsewhere. It would also allow construction of transmission lines within existing utility rights of way to facilitate the transfer of renewable energy generated in the desert.

"I strongly believe that conservation, renewable energy development and recreation can and must coexist in the California desert," Feinstein said in a statement. "This legislation strikes a careful balance between these sometimes competing concerns."

Environmentalists, hunters and off-road vehicle enthusiasts have expressed support for the proposal.

The original article can be found at http://www.mercurynews.com/news/ci_14044177

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RELATED MEETINGS

Natural Resource Needs Related to Climate Change in the Great Basin & Mojave Desert: Research, Adaptation, Mitigation

USGS
Where: Las Vegas, NV
When: 20-22 April 2010

www.deserttortoise.org
Purpose of Workshop

The workshop on natural resource mitigation, adaptation and research needs related to climate change in the Great Basin and Mojave Desert will provide you with a chance to gather at the University of Nevada, Las Vegas on April 20 - 22, 2010 for an important information exchange opportunity. This interorganizational workshop is a joint effort sponsored by the U.S. Fish and Wildlife Service, the U.S. Geological Survey, the National Park Service, and the Environmental Protection Agency, and is being planned in collaboration with several other agencies and organizations.

Participants

Stakeholders in the natural resources management and research communities with interest and expertise in the potential effects of climate change on the aridlands of western North America. The intended audience includes federal, state, tribal, and local government land and resource management agencies; federal, state and local government officials; federal, state, university, and non-governmental researchers; and other partners of interest.

Workshop Overview

The planned workshop will focus on how climate change is affecting natural resources in deserts of the western U.S., as well as the land, water, and species management and research needs that are essential to address in the coming decade. Workshop objectives include:

- **Overview:** Climate change drivers affecting the interior West; synthesis presentations about natural resource responses to climate change and associated mitigation and adaptation options
- **Current research and information needs:** Will not only consider "best available scientific information," but will also provide different perspectives on future research emphases and management information needs
- **Tools:** Data, analyses, models, and conservation planning related to species, habitats, and conservation areas, in addition to socioeconomic drivers of change in the arid West; existing and new possibilities for improved coordination

- **Strategies and Actions:** An examination of existing efforts: What networks and organizations exist or need to be formed to mitigate and adapt to ecosystem changes driven by a changing climate?

The conference, which will take place over 2 1/2 - 3 days in Las Vegas, will include synthetic plenary and focused break-out sessions designed to foster innovative applications to climate-related management problems. The workshop's lofty objectives include formulation of issue-specific research-management working groups and using technology to reduce environmental and monetary costs of the workshop.

For more information, please go to: [http://www.wr.usgs.gov/workshops/](http://www.wr.usgs.gov/workshops/)

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HERP LEAGUE SYMPOSIA SUBMISSIONS SOUGHT

The Herpetologists', League sponsors one or more thematic symposia at each of its annual meetings. Any HL member may submit a proposal for a symposium for the following year's meeting by sending a proposal application to the Chairperson of the Symposium Committee.

Official sponsorship by HL allows for the scheduling and announcement of the symposium in the meeting program and registration materials. In addition, a modest amount of financial support (a maximum of USD$ 2000) is available to support sponsored symposia. Sponsorship by HL does not guarantee financial support, and symposia might be sponsored in name only or funded at a level lower than the requested by the applicant(s).

Proposals are now being accepted for symposia to be held at the 2011 JMIH in Minneapolis, Minnesota. Meeting dates are 6-11 July 2011. The deadline for submitting proposal applications is 8 February 2010. For more information, application
Potential symposia organizers are encouraged to contact Rafael de Sa early in the proposal application process.

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IN INVOLVEMENT OPPORTUNITY

GET INVOLVED WITH RESOURCE ADVISORY COUNCILS AND COMMITTEES

Four Resource Advisory Councils (RACs) in California provide advice and recommendations on public land issues for the Bureau of Land Management. These citizen-based groups address everything from land use planning and fire management to recreation and grazing on federal lands.

Established by the Federal Land Policy and Management Act, each RAC consists of 12 to 15 local citizens appointed by the Secretary of the Interior. Members represent diverse interests in local communities such as ranchers, environmental groups, tribes, local government and other public land users. They serve without salary, but are reimbursed for travel and expenses. All meetings are open to the public.

In addition to the RACs, there are advisory committees for National Landscape Conservation System units and a Recreation RAC that helps the Departments of the Interior and Agriculture on issues involving public lands managed by the BLM and U.S. Forest Service.

More information can be found at http://www.blm.gov/ca/st/en.html

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SCHOLARSHIPS / AWARDS

FUNDING OPPORTUNITIES

Conservation Maven (an online hub for the conservation community)

The Conservation Funding board profiles government and foundation grants for restoration, land preservation, stewardship, environmental education, research, fellowships, volunteers, outreach, clean-up, training, and more. We also list funding opportunities for work related to birds, fish, forests, oceans, watersheds, wildlife, & wetlands.

Please check out the numerous resources available at their website, http://www.conservationmaven.com/

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ERNEST E. WILLIAMS RESEARCH GRANTS ESTABLISHED

The Herpetologist's League Board of Trustees has initiated the Ernest E. Williams Research Grants for graduate students, named in honor of the late Ernest E. Williams, first Distinguished Herpetologist of HL and an eminent and honored faculty member at Harvard University.

Five grants of $500.00 (maximum amount each) will be awarded in 2010, one for each of the following categories:

Behavior
Conservation
Ecology
Physiology
Morphology/Systematics

The Herpetologist's League requests assistance in reviewing and judging proposals submitted for these grants. The proposals are limited to 1200 words. If you volunteer to judge, it would be helpful if you will judge all of the applicants for the category you choose. We hope to have 3-5 judges for each category.

Submitted proposals will be sent to judges by the first week of February at the latest.
Judges will need to submit their decisions by the end of March. Winners of the inaugural grants will be announced at the joint meetings in Providence, Rhode Island, in 2010.

A unique feature of the HL grants is that written feedback will be provided for each applicant, in an effort to assist each student in grant writing and to provide a service that will create more student interest in HL. Therefore, each judge will be responsible for scoring proposals according to a template (provided). In addition, judges will also have the task of providing a review of each proposal. We anticipate perhaps a half page of comments and a "track changes" type response for each proposal. These, of course, will be anonymous and will be collated and given to the students.

If you are willing to serve as a reviewer for the inaugural year of the Williams Research Grants for graduate students, please respond to the Committee Chairperson and indicate a first and second choice for which category you would prefer to judge.

If you have questions, please don't hesitate to contact the Committee Chairperson (below).

Thank you in advance for your interest.

Erin Muths
Chairperson
Ernest E. Williams Research Grant Committee
Herpetologist's League erin_muths@usgs.gov
Memorandum

To: Parties Interested in Sonoran Desert Tortoise Management and Conservation

From: Field Supervisor

Subject: 90-day Deadline Extension for Submittal of Information Regarding the Status Review for the Sonoran Population of the Desert Tortoise

On August 28, 2009, we published in the Federal Register (74 FR 44335) a notice of our 90-day finding on a petition to add the Sonoran population of the desert tortoise (Gopherus agassizii) to the Endangered Species Act List of Threatened and Endangered Wildlife and Plants as a distinct population segment (DPS), and initiated a status review for the population. In that Federal Register notice, we specified October 27, 2009, as the deadline for the submittal of information from the public on the status and threats pertaining to the Sonoran DPS of the desert tortoise.

We have since received several requests for an extension to the October 27, 2009, deadline. In response to these requests, we are extending the deadline an additional ninety (90) calendar days for the submittal of information to ensure the best opportunity for the public to prepare and submit their information, while still providing us the time required to evaluate information submitted. Therefore, the new, extended deadline by which to submit information on the status and threats pertaining to the Sonoran DPS of the desert tortoise is January 25, 2010. In order to facilitate the submission of information pertaining to this request, please submit information via e-mail to SonoranDT@fws.gov; or in writing to:

Steve Spangle, Field Supervisor
Arizona Ecological Services Office
2321 West Royal Palm Drive; Suite 103
Phoenix, Arizona 85021

Please note: While we always welcome new information regarding any endangered or threatened species at any time, to allow us adequate time to fully consider Sonoran desert tortoise information submitted for this status review within established time frames, information must be received on or before January 25, 2010.
We are seeking information on the historical and current status and distribution of the Sonoran desert tortoise; its biology and ecology; ongoing conservation measures for the species and its habitat; and threats to the species and its habitat. If we find that listing the Sonoran desert tortoise is warranted, we intend to propose critical habitat to the extent prudent and determinable and therefore we also request information about physical or biological features essential to the conservation of the species; where these features are currently found; whether any of these features may require special management considerations or protection; and whether there are areas outside the geographical area currently occupied by the species that are essential to the conservation of the species.

Thank you for any information you can provide. If you have questions regarding the status review, please contact Jeff Servoss at (602) 242-0210 (x237).

Steven L. Spangle
CALL FOR PAPERS AND POSTERS
35th ANNUAL MEETING AND SYMPOSIUM
Friday, Saturday, and Sunday, February 26 to 28, 2010

The Desert Tortoise Council will host its Thirty-fifth Annual Symposium on Friday, Saturday, Sunday, and Monday (field trip only), February 26 to March 1, 2010 at the Doubletree Hotel, Ontario, CA. **Titles and abstracts for sessions or contributed papers and posters are hereby invited.** The Council welcomes pertinent papers on turtle and tortoise biology and conservation, especially regarding the Sonoran Desert and Mexico. Papers on habitat, behavior, health, disease, anthropogenic impacts, listing and recovery efforts are also important.

Please return the form below with abstract by **January 10, 2009** (If necessary, abstracts can be submitted by January 15, 2010, but the form below should be submitted by January 10, 2009).

**Abstracts**

**Content:** They should be substantive, focused on findings and implications of findings (not methods). Abstracts for 15 minute papers should be 250 words (body, not title and addresses) and double-spaced. For invited speakers or with permission, abstracts can be longer with references. Capitalize and center the title; underneath the title, list and center all authors (include first names) with affiliations and addresses. Italicize all scientific names and statistical notations. Authors need to follow the Guidelines for Authors.

**Submission:** Send a virus-free file by e-mail (Microsoft Word 2003 for Windows for a personal computer). ALL e-mail transmissions must include all the information requested below, including author's address, phone, e-mail address, fax number, and student status. E-mail transmissions must include the abstract as an attachment in Word 2003 for Windows, not in the body of the text. The Program Chair must be informed immediately if a cancellation or substitution is necessary.

**Papers**

**Speakers:** should be prepared to give professional papers. Most papers will be scheduled at 15-minute intervals (12 minutes for presentation, three minutes for questions), unless other arrangements are made or the presentation is specially invited.

**Featured Speakers:** The Keynote and Invited or Featured Speakers will be allotted additional time, to be arranged with the Program Chair.

**Posters**

Posters will be displayed throughout the meeting. Poster presentations may be offered at specific times. If you have questions about your paper or need assistance, please contact the Program Chair, Dr. Kristin Berry, at the address below. Information should be exact, because the program copy will be prepared from this sheet. If your title and the speaker list are tentative, say so.

**Paper** __________  **Student Paper** __________  **Poster** __________  
**Author(s) and Affiliations(s).** Indicate speaker with an asterisk ____________________________

Title of Paper __________________________________________

Address of Speaker ______________________________________

Work Phone _______________ Home phone _______________ E-mail ____________________________

Special needs (e.g., AV equipment): _______________________ Time: __________

**Submission**

Mail to: Dr. Kristin H. Berry, Program Chair; USGS; 22835 Calle San Juan De Los Lagos, Moreno Valley, CA 92553. E-mail to: kristin_berry@usgs.gov and to fldhcky@cox.net (send copies to both).

[www.deserttortoise.org](http://www.deserttortoise.org)
REGISTRATION FORM

Desert Tortoise Council 35th Annual Meeting and Symposium
February 26-28, 2010

Return by mail to: Desert Tortoise Council, c/o Doug Duncan, P.O. Box 331, Tuscon, AZ 85702
Return by e-mail to: fldhcky@cox.net
Please complete a SEPARATE form for each attendee.

Name: ____________________________ (First, Last) (Name to be used on ID badge)
Organization: _______________________
Address: ___________________________
City: ___________________ State: _______ Zip: _______
Email: ____________________________ Daytime Phone: _______

Payment Method: □ Check □ Online
To make your payment online, visit http://www.deserttortoise.org/symposium/
Make checks payable to Desert Tortoise Council

SYMPOSIUM FEES

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TOTAL ENCLOSED __________

I would like to attend one of several Thursday, February 25, 2010, field trips:

□ Field Trip #1 □ Field Trip #2 □ Field Trip #3 (See website for descriptions of field trips)

If you email submit, a copy of your form will be in your "Sent" box. Keep for your records.
Check one: _____MEMBERSHIP APPLICATION/RENEWAL _____CHANGE OF ADDRESS

DATE: __________________________________ EMAIL ADDRESS: ____________________________

NAME: __________________________________ PHONE: ________________________________
(Please Print) (Include Area Code)

ADDRESS: ______________________________________________________________________

CITY: ________________________ STATE: _______ ZIP CODE: _______________________

____ Regular ($30.00 per year) _____________________________________________

____ Contributing ($100.00 per year) ____________________________

____ Student ($20.00 per year- Requires endorsement of student’s advisor or Major Professor)

____ Organization ($125.00 per year)

____ Lifetime ($300.00 or more)

NEWSLETTER FORMAT:

____ Pdf file via e-mail ______ E-mail notice for web page viewing ______ Hardcopy

Make check or money order payable to the Desert Tortoise Council

and send with this application

to: Desert Tortoise Council, P.O. Box 3273

Beaumont, CA 92223

The Desert Tortoise Council does not release its membership list

www.deserttortoise.org