

Environmental *VOICES*

Office of Prevention, Pesticides,
and Toxic Substances and
Tribal Environmental
News Exchange

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Featuring Information and Topics
from EPA's Office of Research and Development

EPA Administrator Whitman Meets with EPA's Tribal Operations Committee

On July 11, 2001,
EPA's Administrator
Christine Todd Whitman
met with the EPA Tribal
Operations Committee
(TOC) at the National
Press Club in
Washington, DC.



In keeping with the Agency's commitment to collaborate with Tribal governments in protecting the environment and safeguarding human health in Indian Country, Administrator Whitman reaffirmed EPA's Indian Policy and re-certified the TOC's Charter. Both of these actions are significant measures that will ensure that the long established policy and principles taken by EPA in the past will continue and progress under her leadership.

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"Crisis changes people and turns ordinary people into wiser or more responsible ones."

— Wilma P. Mankiller, Cherokee chief, 1987

In light of the world-changing events of September 11, 2001, the staff of *OPPTS Tribal News* sends its deepest sympathy to those affected by the tragedy. In these unsettling times, may our hearts and minds be clear and open to allow the wisdom and love of human kind to lead us all to better days and tender spirits.

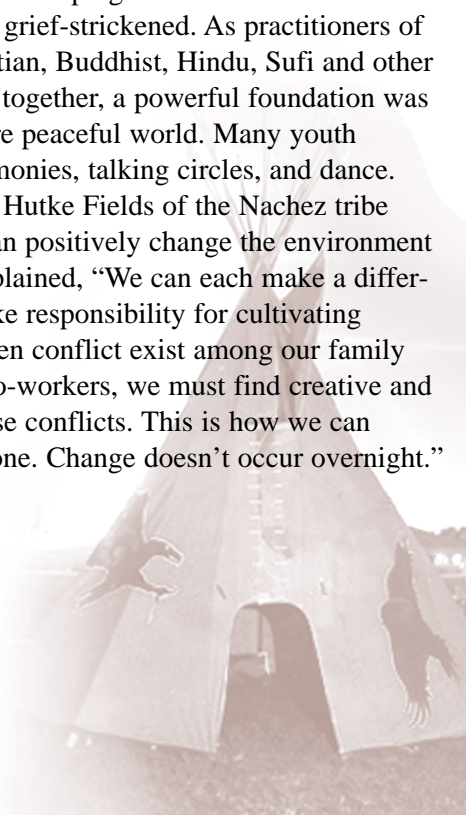


May Peace Prevail on Earth

“*May Peace Prevail on Earth*” was the heartfelt decree of the international, multifaith, prayer gathering at the Washington Monument, held on September 22-23, 2001. This marked the 9th Anniversary of the “*Prayer Vigil of Earth*” in Washington, DC. In the aftermath of the September 11th national tragedy, the 33-hour prayer vigil took on heightened importance as many sought comfort in the sacred circle of prayer, unity, and healing. Native American elders and other spiritual leaders led in prayer and ceremony. The cathartic “Wiping of the Tears” Native ceremony was held for the grief-stricken. As practitioners of the Moslem, Jewish, Christian, Buddhist, Hindu, Sufi and other Indigenous faiths gathered together, a powerful foundation was laid to help cultivate a more peaceful world. Many youth actively joined in the ceremonies, talking circles, and dance.

Mary Van Franklin and Hutke Fields of the Nachez tribe spoke about how people can positively change the environment in which we live. They explained, “We can each make a difference. Each person must take responsibility for cultivating peaceful relationships. When conflict exist among our family members, neighbors and co-workers, we must find creative and loving ways to resolve these conflicts. This is how we can change the world, one by one. Change doesn’t occur overnight.”

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OPPTS Mission Statement

- ▶ *Protect and improve human health and the environment*
- ▶ *Achieve risk reduction, sustainability, and environmental justice*
- ▶ *Promote safer designs and use of materials, products, and disposal methods through pollution prevention*
- ▶ *Inform and educate the public on the risks associated with pesticides and toxic substances.*

OPPTS has used reasonable measures to ensure that material contained in this newsletter was correct at the time of production. However, OPPTS gives no warranty and accepts no responsibility for the accuracy or completeness of the material. The content of this publication does not necessarily represent the views of the Agency. No official endorsement should be inferred.

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From the Editors...

With great pleasure, the Office of Pollution Prevention and Toxics (OPPT) and the Office of Pesticides (OPP) present this Summer/Fall 2001 issue of *OPPTS Tribal News*.

As always, we would like to extend our thanks and gratitude to all of our contributors for providing important information and photographs, graphics, and illustrations. We would like to especially acknowledge our visiting intern and editor for this issue, Mary Cathy Garcia. Mary is a member of the Tohono O’odham Nation of Southern Arizona and a Master’s candidate in American Indian Studies at the University of Arizona. Mrs. Garcia believes that traditional values are a key to self-governance and is committed to strengthening her Nation.

Finally, we would like to remind our readers to visit OPPTS’s Web site at www.epa.gov/opptintr/tribal to get the latest news and information from EPA office links.

- Mary Lauterbach, OPPT Tribal Coordinator
- Regina Langton, OPP Tribal Coordinator

OPPTS Tribal News requests interesting success stories about pesticide and pollution prevention programs and projects in Indian country from our readers. If you want to share your experience with our readers, please write or send an e-mail to Regina Langton (pesticides), 1200 Pennsylvania Avenue (MC7506C), Washington, DC 20460, langton.regina@epa.gov, or Mary Lauterbach (pollution prevention), 1200 Pennsylvania Avenue (MC7408), Washington, DC 20460, lauterbach.mary@epa.gov.

To be placed on our mailing list, write to: OPPTS Tribal News, U.S. EPA, OPPT 1200 Pennsylvania Avenue (7408), Washington, DC 20460, or send an e-mail to lauterbach.mary@epa.gov.

OPPTS Tribal News can be viewed on the Internet at www.epa.gov/opptintr/tribal

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News & Events

May Peace Prevail on Earth

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Other vigil highlights included a Memorial Healing Grove in honor of the Pentagon and World Trade Center victims, and a display of the John Denver Peace Quilt, which memorialize the work and legacy of John Denver. Denver's legacy of songs is the inspiration and motivation for hundreds of peacemakers. Other activities included storytelling, sharing of ancient prophecies, community dancing, and ongoing musical performances where participants could join in with their own instruments.

The Annual Prayer Vigil for the Earth is an interfaith, multi-cultural grassroots effort dedicated to unity, peace, and respect during which participants pray over a 33-hour period on the grounds near the Washington Monument. For additional information, visit www.oneprayer.com.

POPS Document Available for Comment

The external review draft of the document: "The Foundation for Global Action on Persistent Organic Pollutants: A United States Perspective," is now on EPA's Office of Research and Development National Center for Environmental Assessment (NCEA) web site www.epa.gov/ncea. Look at "What's New". This 140 page document is open for external review and comment until January 25, 2002.

Comments should be sent to Bruce D. Rodan, Medical Officer (Research), US EPA, Office of Research and Development National Center for Environmental Assessment (8601D), 1200 Pennsylvania Ave, Washington, D.C. 20460, rodan.bruce@epa.gov.

President George W. Bush Attends Navajo Code Talker Medal Ceremony

Adapted from U.S. Newswire Update, July 26, 2001

At the United States Capitol's Rotunda on July 26, 2001 in Washington, D.C., President George W. Bush, spoke to attendees of the Navajo Code Talker Medal Ceremony. The Medal Ceremony honored 21 Native Americans who, in World War II, used their native language to relay secret messages that turned the course of battle. Those rewarded included John Brown, Chester Nez, Lloyd Oliver, Allen Dale June, and Joe Palmer, represented by his son Kermit Palmer, along with 13 other deceased Native men, known as members of the original Navajo Code Talkers. In presenting gold medals to each of them, Congress recognized their individual service, bravely offered and flawlessly performed. Dozens more who served later were honored with silver medals, with the same courage and distinction. By the end of World War II, approximately 400 Navajos served as Code Talkers. In World War I, more than 12,000 Native Americans served their country, and thousands more served in Korea, and Vietnam.

"Today we mark a moment of shared history and shared victory...We recall a story...of ancient people, called to serve in a modern war. It is a story of one unbreakable oral code of the Second World War, messages traveling by field radio on Iwo Jima in the very language heard across the Colorado plateau centuries ago. Above all, it's a story of young Navajos who brought honor to their nation and victory to their country..."
– U.S. President George W. Bush

Pesticide Use in Museum Curation and Associated Health Risks

By Rebecca Ware, Delaware Nation

The Delaware Nation of Oklahoma was recently awarded a pesticide special project grant to provide public outreach education on pesticide use in museum curation and associated health risks. The goal of this project is to document pesticides used in museum curation techniques, examine associated health risks resulting from pesticides use, and provide information to tribes on how to reduce exposure levels during museum inventory or when articles are repatriated. The outreach focuses on Native American health risks and prevention strategies. Alternative solutions also will be provided for cleaning museum articles or how other tribes have approached similar problems.

Native American museum collections have been preserved with pesticides that are not traditionally documented with the inventory. As the museum inventory inspections and repatriation of associated articles increase, so does the risk of contamination from the pesticide residues. With the proposed closing of the Smithsonian Center for Material Research and Education, information associated with museum techniques will be harder to access, and the educational agenda for the center will cease. The Delaware Nation is therefore working to continue the educational outreach in the area of museum curation pesticide use and exposure prevention strategies. For more information about this project, contact Rebecca Ware, Delaware Nation Environmental Department at 405-247-2448 or aapanahkih@westerndelaware.nsn.us.

EPA Celebrates American Indian Heritage Month in November

Each November, EPA sponsors events in celebration of American Indian Heritage month. This year's theme, "Building a Natural Heritage," created an opportunity for the Agency to promote employment and advancement of American Indian/Alaska Natives within its workforce and reminded us of traditional life practices of American Indian/Alaska Natives. Most importantly, this year's theme highlighted EPA's responsibility to ensure a sustainable environment for future generations and to envision opportunities to increase cultural sensitivity. In observance of National American Indian Heritage Month, American Indian Special Emphasis program managers across the Agency, in coordination with staff in EPA's Office of Civil Rights, planned many activities to celebrate the values, ideas, and heritage of American Indians/Alaska Natives, including an "In the Light of Reverence" video showing, a panel discussion, and a performance of "Tha Tribe" Drum and Dance Group of Haskell Indian Nations University. For more information, contact Carl Etsitty at 703-605-0749 or etsitty.carl@epa.gov.

Irv Provost, Oglala Lakota, Receives A. Wade Vitalis Award

By Karen Rudek, USEPA

In June 2001, Mr. Irving Provost, Director of Pesticide Enforcement for the Oglala Sioux Tribe, Pine Ridge, North Dakota, received the prestigious A. Wade Vitalis Award for Environmental Leadership. This award was presented to Provost in recognition of his strength and leadership as an environmental steward for the Oglala Sioux, and his exceptional commitment to the environmental health of all Indian Country.

In November 1997, under Irv's leadership, the Oglala Sioux Tribe was the first tribe in the United States to develop and receive EPA concurrence for a generic pesticide management plan. In 1999, under an EPA grant to the Native Ecology Initiative, Irv became one of a three-person team that developed a water quality protection and pesticide management workshop for tribal environmental managers. To date, he and his teammates have presented this course to more than 450 persons representing over 240 tribes across the United States. In addition, Irv Provost has served as the Executive Director of the Tribal Pesticide Program Council (TPPC) since its inception in late 1999. Under Irv's leadership, the TPPC is supporting working groups focused on issues of special interest to tribes, such as subsistence and jurisdiction under the Federal Insecticide Fungicide and Rodenticide Act. These groups have been instrumental in identifying and prioritizing tribal pesticide concerns.

We thank Irving Provost for the work he continues to do for pesticide management in Indian country, and congratulate him on his receipt of the A. Wade Vitalis Award.



FOSTTA Attracts the Most Tribal Representatives Ever to Its Spring TAP Meeting

By Mary Lauterbach, EPA

Seventeen tribal representatives attended the Forum on State Tribal Toxics Action (FOSTTA) Tribal Affairs Project (TAP) meeting on June 11-12, 2001. The representatives were from the following federally recognized tribes: Aroostook Band of Micmacs (Maine), Colville Confederated Tribe (Washington), Mississippi Band of Choctaw Indians (Mississippi), Salt River Pima-Maricopa Indians (Arizona), Regis Mohawk (New York), Oneida (Wisconsin), Cherokee Nation (Oklahoma), Shawnee Nation (New Mexico), Ponca (Oklahoma), Santa Clara Pueblo (New Mexico), Navajo Nation (Arizona), Yakama Nation (Washington), Native Village of Unalakleet (Arkansas), Qawalangin (Arkansas), and the Native Village of Noatak (Arkansas).

In greeting the representa-



Delaware Tribe of Western Oklahoma – Household Hazardous Waste Cleanup Day Stillwater, Oklahoma September 30th, 2001

tives, Fred Corey, Co-Chair of TAP, said, "I'm pleased to have at this meeting the largest number of tribes ever to participate at FOSTTA. We are fortunate to have FOSTTA as a federal mechanism for the tribes to provide input and advice to EPA on environmental policy issues. We tribes need to make the most of this opportunity...I encourage the tribes to network with other tribes outside of FOSTTA and to share the information we get from these meetings. While FOSTTA can't solve all environmental problems, it provides an excellent opportunity for dialogue with EPA on important tribal toxics and pollution prevention issues."

According to tribal representatives, a multitude of environmental issues exist in Indian Country and should be addressed. The issues include lead and asbestos, persistent organic pollutants, subsistence lifestyle, superfund sites, polychlorinated biphenyls (PCBs), persistent and bioaccumulative toxic (PBT) chemicals, contaminated ground water, pesticides, radon, and air quality.

The agenda of the June 11-12th TAP meeting focused on subsistence, the HUD lead rule, HUD grants, and subsistence issues. TAP is developing a lead issues paper to address current difficulties in obtaining autho-

rization of a tribal lead program and securing HUD grants to support lead programs. Over the past several months, TAP also has provided input to EPA's OPPTS on its Strategic Plan, which will allow the office to build a better foundation for implementing programs in Indian Country.

At an October 2001 FOSTTA TAP meeting, representatives mainly focused on conducting an interactive dialogue with tribal risk assessors, EPA risk assessors, and tribal toxics staff to examine traditional risk assessment techniques and how these techniques can be modified to incorporate tribal-specific risks.

Formed in June 1997, TAP deals specifically with issues of concern to Indians. Participants are expected to spend at least two years in FOSTTA and participate in monthly conference calls. FOSTTA is a partnership between the EPA's OPPTS and state and tribal leaders to increase understanding and improve collaboration on toxics and pollution prevention issues. In addition to TAP, other FOSTTA projects include the Chemical Information and Management project, Pollution Prevention Project, and the Toxics Release Inventory.

EPA Administrator Whitman Meets with EPA's Tribal Operations Committee

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Also during the July 11th meeting, Administrator Whitman listened and discussed the following major areas of tribal environmental concerns and priorities:

- Tribal subsistence foods and cultural issues affected by potential toxic contaminants, such as persistent organic pollutants (POPs) and persistent bioaccumulative and toxic (PBT) chemicals,
- Stability of EPA program funding to tribes to ensure consistent funding for building capacity and developing expertise,
- Tribal assistance with EPA's Annual Budget and Planning Processes to ensure that improved priority setting and sufficient resources are being requested and provided for tribal programs, and
- Direct implementation to improve federal delivery of environmental protection activities and programs in Indian Country and to provide more expertise in communicating and exchanging technology, information, and data, as well as, compliance assistance and programs.

The TOC is comprised of EPA managers from headquarter and regional offices and selected tribal representatives from each of EPA's ten regions. This committee has been authorized to develop recommendations in



In 1984, EPA became the first federal agency to adopt an Indian Policy. The policy essentially stated that the Agency acknowledges the unique legal relationship with tribal governments based upon the Constitution, treaties, statues, executive orders and court decisions. EPA also strongly supported the primary role of tribal governments in matters affecting Indian country, and in 1994 EPA's former Administrator Carol Browner established EPA's Tribal Operations Committee (TOC) in order to strengthen EPA's tribal programs and operations. The official Tribal Operations Committee Charter was adopted in 1996.

consultation with tribal members of the committee to strengthen EPA's programs and operations in accordance with EPA's Indian Policy, including the Agency's budget and long and short term strategy decisions; EPA's implementation of programs, management, compliance activities; and training of EPA staff regarding knowledge of Indian Affairs.

You can view more information on EPA's Indian Policies and the TOC Charter at www.epa.gov/indian/polin.htm.

EPA Tribal Science Council

Claudia Walters, EPA

The Tribal Science Council (TSC), proposed by Dr. Norine Noonan, former Assistant Administrator of EPA's Office of Research and Development, continues to make great strides forward. As announced in the Fall/Winter 2000-2001 issue of *OPPTS Tribal News*, the TSC was designed to provide a mechanism for a more systematic and thorough consideration of tribal science needs and the Agency's ability to address the highest priorities among Native American communities.

Since the November 2000 meeting at the Miccosukee Reservation, the TSC planning group, consisting of Agency TSC and interim Tribal Caucus representatives, has worked to

refine its mission statement, goals, and a flow diagram that illustrates how tribal science will flow from the tribes to the TSC. The TSC provides an exciting new way for Agency and tribal representatives to work together, collaborate, and reach a mutual understanding and direction on scientific issues of importance in Indian Country. In addition, the Council will provide the ability to address scientific issues in a holistic, multi-media approach that supports the subsistence, cultural, and ceremonial lifestyles of Indians.

Also, the following goals were identified for the TSC, and since the group recognized that some tribal science issues are not solely the responsibility of

EPA, these goals will require the involvement of other federal agencies to effectively address priority issues.

- Develop a better understanding of the priority science issues of tribes from across the nation and the Agency's ability to address these issues and consider them as part of its' formal planning process,
- Reach consensus on collaborative approaches for addressing priority scientific issues,
- Share Agency scientific products or activities that could help address the priority scientific issues of Tribes,
- Promote partnerships between tribal and Agency scientists in the development and application of sound science, and
- Facilitate communication and coordination with other Agencies and organizations to more effectively respond to issues.

On June 13, 2001, the TSC mission statement, goals, and flow diagram were endorsed by the Tribal Caucus who were pleased with the foundation that the documents provided for the TSC. In addition, the TSC decided to have only one tribal

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Tribal Science Council Mission Statement

In a manner consistent with the U.S. Environmental Protection Agency Indian Policy and trust responsibility, the mission of the Tribal Science Council is to provide a forum for interaction between tribal and Agency representatives of mutual benefit and responsibility to work collaboratively on environmental scientific issues. The Council will address a wide range of scientific issues including research, monitoring, modeling, information, technology, and training in Indian Country. To support the subsistence, cultural, and ceremonial lifestyles of Indians and the safe use and availability of a healthy environment for present and future generations, the Tribal Science Council is committed to the development of sound holistic, integrated, and cross-media scientific approaches. The relationship between the tribes and EPA in the Tribal Science Council will not substitute for but rather augment the government-to-government relationship between EPA and tribal governments.

News & Events

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representative from each Region. The TSC now has 9 tribal representatives and complete agency membership.

The TSC was also presented at the full Tribal Operations Committee meeting in July 2001 that was led by the Tribal Caucus chair, Latane Donelin, and EPA Administrator Christine Todd Whitman. Both voiced strong support for the Council and the importance of the work that the group will accomplish in addressing tribal science issues. With the endorsement of the tribes and the Agency on the TSC mission statement and

goals, the group can continue to move forward.

The TSC along with the original Tribal Caucus members held their first conference call on September 25, 2001, and will continue to collaborate during a series of conference calls in preparation for the December 2001 TSC meeting in Phoenix, Arizona. The Ak Chin and Gila River Indian Community will be hosting the December meeting, which will focus on organizational aspects of the Council. The group also will be developing its operating parameters.

Tribal Representatives on the Tribal Science Council

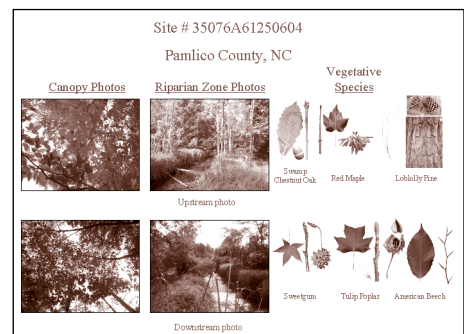
- Dan Kusnierz, EPA Region 1, Penobscot Nation
- Mary Arquette, EPA Region 2, St. Regis Mohawk Tribe, Akwesasne Taskforce on the Environment and James Ransom (alternate), Haudenosaunee Environmental Task Force
- Bernadette Hudnell, EPA Region 3, Mississippi Band of Choctaw Indians
- John Persell, EPA Region 5, Minnesota Chippewa Tribe Research Lab
- Kendal H. Coats, EPA Region 6, Muscogee (Creek) Nation
- Gina Kneib, EPA Region 7, Sac & Fox Tribe of Missouri in Kansas
- Fran King-Brown, EPA Region 8, Southern Ute Indian Tribe
- Kesner Flores Jr., EPA Region 9, Cortina Indian Rancheria
- Chris Gannon, EPA Region 10, Confederated Tribes of Warm Springs

The Neuse River Basin Virtual Field Reference Database is Now Internet Accessible

The Neuse River Basin (NRB) Virtual Field Reference Database is now available and directly accessible on the Internet at www.epa.gov/nerlesd1/lcb/nrb/VFRDB. Three years in the making, the Database contains site characterization, field measurement, and digital imagery (camera) data for 1,390 sampling locations within the NRB, consisting of 0.4 hectares circular plots collected over the 1998 and 1999 field seasons. Sites include approximately 1,000 general watershed sites and 390 riparian buffer

zone sampling locations with coordinates reported at Å1.0 meter. The Database was designed using a stratified random approach to provide a statistically robust source of reference data to validate the results of satellite based land-cover mapping and to establish baseline conditions for future measurement efforts to document future land-use mediated (anthropogenic) and naturally occurring land-cover changes within the basin. For a detailed database description, methods documentation, and

application examples, see the June 2001 issue of *Photogrammetric Engineering and Remote Sensing* or contact Ross Lunetta at lunetta.ross@epa.gov to request an article reprint.



Research

Research at the National Center for Atmospheric Research

Four American Indian undergraduate students spent their summers conducting environmental science research at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. These four students joined a group of 17 other undergraduate and graduate students of diverse backgrounds from the United States and Puerto Rico to participate in the Significant Opportunities in Atmospheric Research and Science (SOARS®) program.

Theresa Jo Johnson (Miwok), third-year SOARS protégé, from Humboldt State University, and her NCAR science research mentor traveled to Brazil to measure boundary layer ozone profiles over the Amazon rainforest. After returning, Theresa reported having observed a maximum ozone deposition gradient of 5.4 ppb at 100 m above the forest and a negligible gradient above a nearby reservoir. These results have large-scale implications for future land-use change, such as a forest flood to make a reservoir, and for better understanding the role of ozone in earth's global atmospheric chemistry budget.

It is well known that the major contributors to earth's magnetic field are electric currents within its core. Michael Johnson (Laguna/Diné), first

year protégé, from New Mexico Technological Institute, is interested in studying lesser-known contributors. He researched ionospheric currents contributing to magnetic activity over the polar region and in the auroral zone. His assessment of the geomagnetic disturbances will ensure accurate plotting and mapping of this activity to produce an empirical model that may provide future reference for computer simulation model comparisons and predictions.

Erik Noble (Cherokee), first-year protégé, from Pennsylvania State University, focused on a ten-year comparison of satellite measurements of ozone and water vapor within the mesosphere and analyzed the relationships between them. It is generally thought that ozone should decrease where water vapor increases within the mesosphere. Erik's analysis yielded strong, negative correlations at sunset, suggesting that statistical relationships simulating ozone and water vapor within the mesosphere should be updated to include diurnal variation.

Earth's very important neighbor, the sun, was the



subject of study for J. Summer Sands (Ojibwa/Ottawa), from the University of California at Santa Cruz.

Summer analyzed data from the Precision Solar Photometric Telescope at Mauna Loa Solar Observatory in Hawaii to determine if supergranulation observed on the sun's outer layer (or photosphere) may indeed be convection. Her results seem to confirm this, but more samples all needed to be collected to substantiate her findings. In addition to furthering the understanding of solar convection, this research may yield insight into the role that networks play in solar irradiance variations.

SOARS® was established in 1995 to create career pathways in science for American students from groups that have been historically under-represented. For more information, please contact Thomas Windham, Director, SOARS Program, at 303-497-8624, 303-497-8629 (fax), twindham@ucar.edu or visit the SOARS Web Site at www.ucar.edu/soars.



Nez Perce Tribe Bio-Control Center

The Idaho Department of Agriculture (ISDA) took steps to create a comprehensive weed management system with the Nez Perce Tribe by forming a biological control center with funding from USDA, Rural Business Enterprise, and the United States Department of Commerce Economic Development Administration Grant programs. The Nez Perce Bio-Control Center has developed contractual agreements with several state, federal and private agencies to manage weeds biologically, provide biological control organism releases for targeted weeds, and monitor their impact on targeted weeds and changes in vegetation communities. Final construction on the Center is expected to begin during the next fiscal quarter and to be completed by June 2002.

The Center has developed a database for tracking bio-control organism releases throughout the state and utilizes experienced Geographic Information System (GIS) staff to assist with map development. The goal is to have the database available on-line with the Center managing and coordinating the distribution of biological control organisms throughout the state.

Nursery sites for biological control agents have already been established for the yellow starthistle (*Eustenopus villosus*, *Larinus curtus*), spotted knapweed (*Cyphocleonus achactes*, *Agapeta zoegana*,



NPBC Director, Chris Kuykendall, showing seed feeder damage at tech transfer workshop

Larinus minutus), and dalmatian toadflax (*Gymnetron linariae*, *Mecinus janthinus*). Field sites are being utilized as collection sites for the yellow starthistle (*Bangesternous orientalis*, *Chaetorellia australis*), spotted knapweed (*Metzneria paucipunctella*), and St. Johnswort (*Chrysolina spp.*, *Agrilus hyperici*, *Aplocera plagiata*).

Ongoing coordination efforts with regional, national and international partners seek to acquire agents for weeds not prevalent in or adjacent to the Nez Perce location in north-central Idaho and to establish a network for the Center to receive new agents as they become available. The Center also has led technology transfer workshops to increase awareness of biological control of the yellow starthistle (*Centaurea solstitialis*). Over the

past two years, these workshops have provided landowners and managers with the agents used in yellow starthistle biological control and the technology for managing and monitoring their infestations. Finally, through a Memorandum of Agreement with BIA for coordination, facilitation, and implementation of biological control weeds within the Northwest, the Center will be providing weed biological control technology transfer sessions specifically for tribal land managers during the 2002 field season.

To learn more about the Center's goal and current activities, please contact Chris Kuykendall, Nez Perce Bio-Control Center Director, at 208-843-7392, ext2, or chrisk@nezperce.org.

Resources, Programs, and Conferences

International Conference on Pesticide Exposure and Health

An International Conference on Pesticide Exposure and Health that will highlight health issues relating to pesticide exposure in the home, school, public health setting, and workplace within the agricultural industry and military is scheduled for July 8-12, 2002. The goal of the conference is to bring together occupational and environmental health researchers, educators, health care providers, and related specialists in order to exchange up-to-date information, foster collaborations, and create a forum for addressing some of the problems that exist with pesticide exposure.

Conference proceedings and a directory of participants will be distributed to further encourage collaboration and consultation among conference attendees. Also, medical guideline papers, with special focus on chronic health effects of pesticides, will be presented at the conference as the basis of a document on chronic health effects associated with pesticides and worker monitoring. This text is being developed as a companion to the widely used *EPA Recognition and Management of Pesticide Poisonings*, which deals with acute health effects associated with pesticides.

The July 2002 conference, sponsored by the Society for Occupational and Environmental Health (SOEH) and co-sponsored by EPA, CDC, ATSDR, NIEHS, and several other organizations, will take place at the Natcher Conference Center, National Institutes of Health, 45 Center Drive, Bethesda, Maryland 20892 on July 8-12, 2002. Tribal representatives are encouraged to participate. The conference also will include a two-day workshop to highlight medical guidelines for health care providers. Finally, medical and nursing educational credits, provided by the George Washington School of Medicine and Howard University School of Nursing, respectively, will be available for attendees. For more information, please contact SOEH, 6728 Old McLean Village Drive, McLean, VA 22101, 703-556-9222, 703-556-8729 (fax), soeh@degnon.org, or visit www.soeh.org.

17th Annual NEJAC Meeting, Seattle, Washington December 3-6, 2001

The 17th Annual National Environmental Justice Advisory Council (NEJAC) Meeting was held December 3-6, 2001 at the Renaissance Madison Hotel in Seattle, Washington. NEJAC, a federal advisory committee established in 1993, provides advice and recommendations to EPA Administrator Christie Todd Whitman, on matters that will further the integration of environmental justice in the Agency's policies, programs and activities. At the December 2001 meeting participants held discussions on water quality, fish consumption, environmental justice, relationships between water quality standards, subsistence consumption patterns, and environmental justice. NEJAC also examined these policy issues with respect to research methodologies, risk assessment and risk management approaches, remediation and prevention strategies, and the utilization of statutory authorities to protect the health and safety of all people, including minority, low-income and tribal communities. The three-day conference included structured presentations by stakeholders on policy issues and many exhibit displays, videos, easels, handout materials, and posters.

For more information, contact Danny Gogal, EPA, at 802-564-2876 or gogal.daniel@epa.gov

Resources, Programs, and Conferences

Workshop to Improve Pesticide Worker Safety Programs

EPA's OPP and the National Environmental Education and Training Foundation co-hosted a workshop on July 30 - August 1, 2001 in Orlando, Florida to assess the effectiveness of the national agricultural worker protection program. Four workshops have been held around the country, including Texas and California, to identify issues and possible solutions to improve this important program that protects 3.5 million United States agricultural workers from adverse effects from pesticides. A final conference is scheduled to convene in Washington, DC in Spring 2002.

Approximately 250 participants from grower, worker, and medical communities, as well as federal, state and tribal regulatory agencies, focused on improving pesticide safety training, enforcement, communications, and the integration of EPA's pesticide worker safety programs at the workshop. Tribal representatives attending the meeting included Fred Gonzales, Colorado River Indian Tribes; Eileen Lopez, Tohono O'odham Nation; Marcie Phillips, Shoshone-Paiute Tribes of the Duck Valley Reservation; and Michael Vaughn, Inter Tribal Council of Arizona, Inc.

Workshop participants agreed that greater effort should be made to clearly communicate pesticide hazards to the millions of agricultural workers.

Therefore, EPA, in partnership with states, growers and workers, is developing a pilot project in Florida that will identify the appropriate information and means to communicate pesticide hazards to a multilingual workforce. Participants also agreed to partner with EPA on a pilot for a national train-the-trainer program to significantly improve the quality and national consistency of the pesticide safety training.

Other pilot projects include a new bilateral project on agricultural worker protection initiated by EPA and Mexican agencies to promote the safe and proper use of pesticides, reduce human exposure to pesticides, and strengthen pesticide safety training efforts and agricultural worker protection in Mexico. Other pilot programs that will strengthen compliance and enforcement include a complaint and education hotline for workers and growers, as well as additional training for state pesticide inspectors.

Healthy agricultural workers



are essential for a robust agricultural economy. EPA, through this assessment process, is generating partnerships among workers, farmers, regulators, safety trainers and clinicians that will produce positive change in the nation's worker protection program and ensure a healthy labor force in agriculture. EPA established the federal worker protection regulation in 1992 under the Bush Administration to reduce the occupational risk of pesticide poisonings and injuries among agricultural workers and pesticide handlers. For more information, contact OPP's Sara Ager at 703-308-3003.

Water Quality Workshops for Tribal Environmental Managers

Water quality workshops for tribal environmental managers will be held:
Feb 5-7, 2002 Santa Ana Pueblo, Bernalillo, NM
Apr 23-25, 2002 Cortina Rancheria, Citrus Heights, CA
Jun 4-6, 2002 Coeur d'Alene Casino and Resort Hotel, Worley, ID
All workshops are free. Travel, room, and board are the responsibility of workshop participants. For further information, contact Lillian Wilmore, Native Ecology Initiative, 617-232-5742, naecology@aol.com

Resources, Programs, and Conferences

Using Pesticides? Be Sure to Read the Label First

Amy Breedlove, EPA

Do you know the consequences of:

- The act of pouring rat poison into a food storage bag, leaving it within a child's reach, and forgetting to label it!
- Spraying a herbicide on a berry bush near a fishing pond!

These are all potentially dangerous acts and can be prevented by first reading the labels on pesticide products. Accidental poisonings occur all too often as the direct result of not reading pesticide labels before use. While pesticide products are quite effective in pest control, you should always use caution when handling them, so as not to endanger your health, the health of your family, pets, or neighbors. Remember: **READ THE LABEL FIRST!**

The National Pesticide Telecommunications Network (NPTN), a product of a cooperative effort between EPA and Oregon State University, is the most complete and reliable source of information for pesticide information in the United States. In fact, it is the only source of its kind. This toll-free telephone service provides information about pesticides in the United States, Puerto Rico, and the Virgin Islands.

NPTN handles over 23,000 calls a year on topics related to pesticides and pesticide poison-



ings. Its staff includes toxicologists and medical doctors trained to interpret human health and environmental questions about pesticides, answer questions about pesticide label information, and supply general information on the regulation of pesticides in the United States. Staff members also make referrals for laboratory tests, incidents involving poisoning and/or exposure to pesticide products, and emergency medical treatment and provide information regarding safety practices for field/farm workers and handlers.

NPTN also operates the National Antimicrobial Information Network (NAIN). NAIN, also a toll-free telephone service, provides callers with information about antimicrobial pesticides. Antimicrobial pesticides are pesticides that serve as disinfectants, sanitizers, and sterilants and are used to kill bacteria on surfaces, in sponges,

and on hospital utensils. At NAIN, staff members interpret product labels and permitted uses; provide lists of products registered as sterilants, tuberculocides, and HIV virucides; provide safety information on specific antimicrobial chemicals; supply information on regulations and registration of antimicrobials in the United States; field complaints on product effectiveness; and refer requests that are outside of the expertise of NAIN to the correct agencies and resources.

To reach NPTN, simply call 1-800-858-7378, Monday through Sunday, 6:30 a.m. - 4:30 p.m., PT. You may also contact NPTN at 541-737-0761 (fax), nptn@ace.orst.edu, or <http://nptn.orst.edu>. To reach NAIN, call 1-800-447-6349 Monday through Friday, 7:30 a.m. - 4:30 p.m., PT. You may also contact NAIN at 541-737-0761 (fax), nain@ace.orst.edu, or <http://nain.orst.edu>.

Resources, Programs, and Conferences

Spray and Dust Drift Label Statements for Pesticide Products

EPA has published a new, draft labeling guidance to provide pesticide registrants, applicators, and other individuals responsible for pesticide applications with improved and more consistent product label statements for controlling pesticide drift. Within its Pesticide Registration (PR) Notice, published on August 22, 2001, EPA has made clear its position on drift, a rationale for the label statements, and an implementation plan. The Agency has also suggested appropriate labeling in the PR Notice that will reduce human health and environmental risks associated with pesticide drift.

The PR Notice applies to all pesticide products labeled for use outdoors that can be applied as sprays or dusts. Application sites for affected products include, but are not limited to, agricultural crops, forestry, rights-of-way, recreational areas, lawns, and home gardens.

The Agency has focused its attention on improving the control of spray drift and depicting spray drift science. The

“Spray or dust drift is the physical movement of pesticide droplets or particles through the air at the time of pesticide application or soon thereafter from the target site to any non- or off-target site. Spray drift shall not include movement of pesticides to non- or off-target sites caused by erosion, migration, volatility, or windblown soil particles that occurs after application or application of fumigants unless specifically addressed on the product label with respect to drift control requirements.”

Agency and many other stakeholders believe product labeling for spray drift control should be improved and standardized to provide applicators with more consistent and appropriate directions for controlling drift. These suggested changes are consistent with the requirements of 40 CFR Part 156 and section 2 (q) of FIFRA.

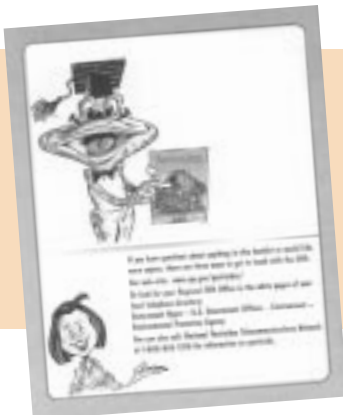
EPA’s position on pesticide drift is that applicators must not allow pesticide spray or dust to drift from the application site to contact people, animals, and nearby sensitive sites.

Applicators must consider and use necessary application practices required by states or tribes in addition to mandatory drift control measures that are stated on product labels.

Accordingly, EPA believes that the suggested label statements published in the PR Notice will help ensure that the requirements of FIFRA are met and that pesticides are used responsibly. The new statements, or some variation, also allow flexibility for the use of new application technology. For more information on this PR Notice and other related efforts, visit www.epa.gov/pesticides/ and www.epa.gov/pesticides/citizens/spraydrift.htm. For further information about this notice, contact Jay Ellenberger, Field and External Affairs Division, at 703-305-7099 or ellenberger.jay@epa.gov.

Bugged by Bugs Now Available

New publications of "Bugged by Bugs - An EPA Family Guide to Safe Pest Control" are available to the public. In this easy-to-read, illustrated family safety guide, Professor Frog promotes natural safe ways of controlling pests around the home. If you have questions about safe pest control or would like to receive free copies of "Bugged by Bugs," contact Barbara Barron at 800-227-8917, ext. 6617 or 303-312-6617.



Resources, Programs, and Conferences

Tribes Invited to Collaborate with Recycling Council on Container Collection Programs



Most states conduct empty pesticide container collection programs, often with the assistance and collaboration of a non-profit organization called the Ag Container Recycling Council (ACRC). ACRC was formed in 1992 to promote collection and recycling of pesticide containers into environmentally-sound products and to assist pesticide container collection programs by providing training, funding, guidance and public outreach materials. ACRC's member companies are pesticide

manufacturers who each contribute to the Council an amount of money proportional to the quantity of plastic containers used to distribute its pesticides. ACRC also contracts with independent companies that consolidate containers from collection sites, then ship them to facilities where they are granulated and recycled into other products. ACRC also conducts research to find broader uses for granulated plastic, such as plastic pellets for pesticide storage. ACRC has

helped states and counties collect and recycle more than 46 million pounds of plastic pesticide containers, but they estimate that this is only about 30% of the total used. They are actively seeking new partners in order to increase the volume of plastic containers collected, and tribes are encouraged to contact them. Please contact ACRC at their toll-free number 877-952-2272 and Web site www.acrecycle.org.

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ATSDR's Toxicological Profiles Accessible on the Web

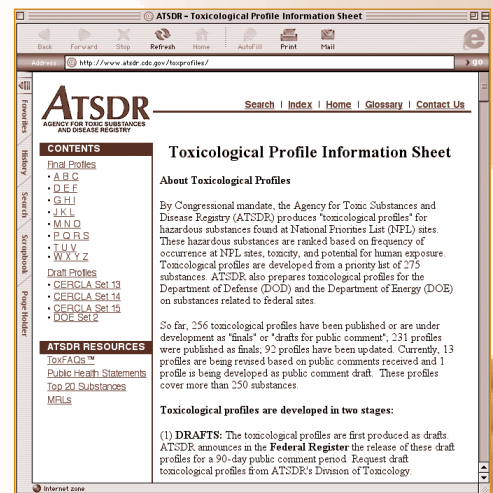
Randy Brinkhuis, EPA

ATSDR Toxicological Profiles are now accessible on the Web at www.atsdr.cdc.gov/toxprofiles. The profiles are formatted as portable document format (PDF) files which can be read using Adobe Acrobat software. Readers may view or download an entire profile or selected sections. Each profile contains comprehensive reviews on selected toxic substances. Each one contains a public health statement and plain-English answers to the following questions:

- What is this substance?
- What happens to it when it enters the environment?
- How might I be exposed to it?

- How can it enter and leave my body?
- How can it affect my health?
- Is there a medical test to determine whether I have been exposed to it?
- What recommendations has the federal government made to protect human health?
- Where can I get more information?

The Website also provides information on health effects, chemical and physical data, potential for human exposure, analytical methods, and regulations and advisories. For more information, please contact the ATSDR Information Center at - 888-42ATSDR, 404-498-0110, or at sdric@cdc.gov



Resources, Programs, and Conferences

Recent Foot-and-Mouth Disease Outbreaks at Home and Worldwide

Hundreds of cases of foot-and-mouth disease (FMD) are reported in the United States and in countries around the world, and members of the Tohono O'odham Nation are especially concerned. The Tohono O'odham Nation (or the Nation) is a federally-recognized Native American tribe located in the Sonoran Desert within the boundaries of Arizona. It has the second largest reservation in the United States, covering approximately 2.85 million acres, roughly the size of Connecticut. There are over 22,000 enrolled members in the United States and Mexico. Approximately 14,000 O'odham live on the Nation's lands over 65 small rural communities, with only a few communities larger than 200 residents. Cattle ranching is one of the most important sectors of the Nation's economy, with a majority of O'odham families owning at least a few heads each. There are an estimated 50,000 to 70,000 heads of cattle roaming the Nation presently, and an average of 10,000 O'odham cattle are sold per year. These cattle share the desert with large numbers of deer and javelina, and there are limited populations of bighorn sheep and small isolated groups of domesticated pigs and sheep.

Currently, there is no system for health inspection for the Nation's cattle. The only inspections are brand inspections

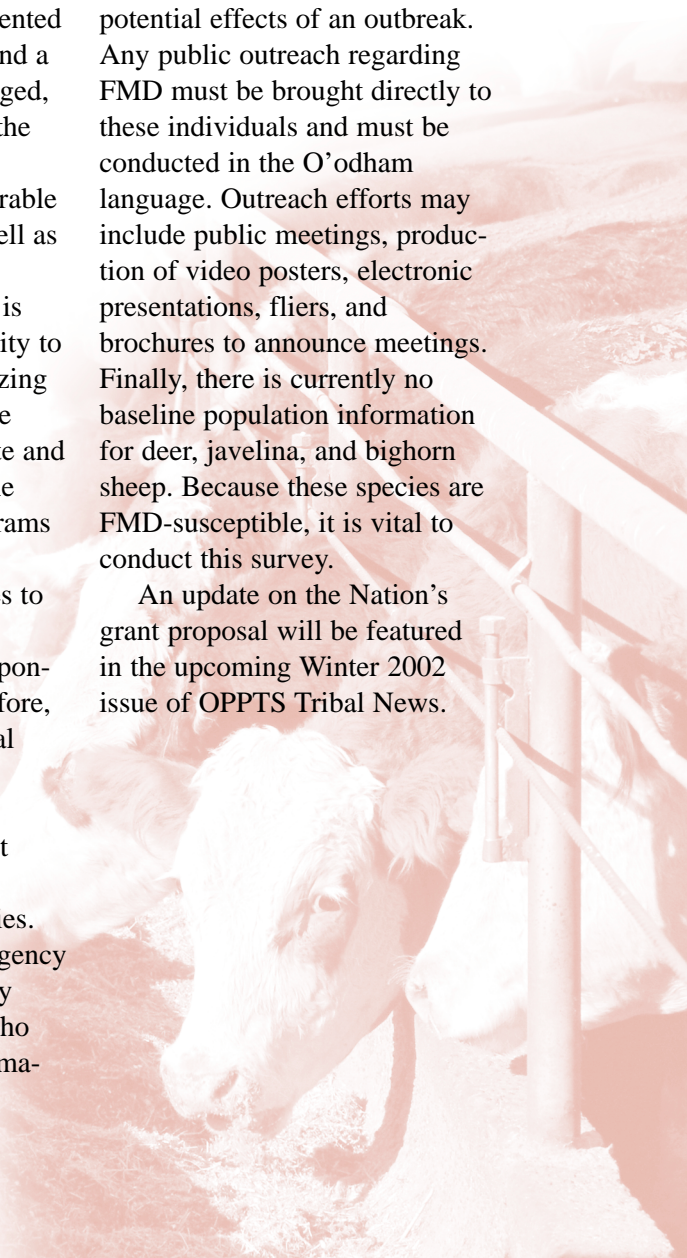
during market sales. Commonly, veterinary services are provided by a contract veterinarian who comes once a week. Also, there are very few defined ranges within the Nation, with most fences in disrepair and cut regularly by either undocumented aliens heading north or federal agents in pursuit. Furthermore, the cattle roam freely back and forth across the Mexican border. This combination — a flood of undocumented aliens crossing the border and a large population of unmanaged, free-range cattle — makes the Nation's cattle and wildlife population extremely vulnerable to exposures of FMD, as well as other diseases.

The Nation's leadership is very aware of its vulnerability to FMD and is quickly mobilizing its resources and making the necessary contacts with state and other agencies to address the issue. However, those programs identified to coordinate this effort have limited resources to carry out this mandate in addition to their current responsibilities. The Nation, therefore, has submitted grant proposal materials to the USDA that would provide the basic resources needed to conduct initial public outreach and emergency planning activities.

An effective FMD emergency planning effort must directly involve those individuals who have the most current informa-

tion on the status of the infrastructure and come into direct contact with the cattle, while being capable of spotting symptoms of FMD. These individuals include "Roundup Bosses" and the "Ground Crews," as well as families conducting their own roundups when the need arises. In order to reach these individuals, the first step is to increase awareness of FMD, its symptoms, and the potential effects of an outbreak. Any public outreach regarding FMD must be brought directly to these individuals and must be conducted in the O'odham language. Outreach efforts may include public meetings, production of video posters, electronic presentations, fliers, and brochures to announce meetings. Finally, there is currently no baseline population information for deer, javelina, and bighorn sheep. Because these species are FMD-susceptible, it is vital to conduct this survey.

An update on the Nation's grant proposal will be featured in the upcoming Winter 2002 issue of OPPTS Tribal News.



Resources, Programs, and Conferences

Fish Quality Index: Are my fish safe to eat?



In EPA's Mercury Report to Congress, an important finding indicated that certain populations of subsistence fishermen are at high risk for exposure to methyl mercury toxicity because of their high consumption of contaminated fish. Often the health risks of persistent bioaccumulative and toxic (PBT) chemicals, such as the mercury compound methyl mercury, PCBs, or dioxin and dioxin-like compounds, are underestimated because of their amplification in the food chain that results in toxicity, even though ambient levels of these PBT are within acceptable limits. Two concerns have developed from this situation: (1) most of the affected groups have not been identified, and (2) means of effectively communicating the possible risk to the affected groups do not readily exist. While EPA is moving to reduce mercury pollution, it will take many years before fish in some lakes are safe to eat, and avoiding the most contaminated fish can reduce health risks.

EPA's Office of Research and Development's Technology

Transfer Branch is working to increasingly define regions and specific lakes and rivers that have high levels of consumption of native fish, and where high levels of mercury or other PBT concentrations in water can occur. This effort includes additional compilation of mercury or other PBT concentrations from water bodies and fish that inhabit these lakes and rivers from historical data or from data that has been recently collected. The Technology Transfer Branch is also identifying populations of subsistence fishermen or other high-risk groups who consume large quantities of fish from these waters.

The final product will be a user-friendly risk communication tool, the Fish Quality Index. The Fish Quality Index will be a color-coded pictogram of various fish species. For example, fish that are safe to eat will be colored green, even at subsistence consumption levels, and yellow fish will be noted as being safe to eat once a month. Fish colored red, for example,

will be safe only if eaten less than once a year. This map-based tool transcends language and literacy boundaries and should inform anglers of the relative health risks according to the species of fish that they regularly consume in an easy-to-understand format. It has the benefit of steering people toward safer lakes and streams and safer species of fish. In most lakes examined, there are safe and unsafe species of fish in the same areas, depending mostly on the trophic level of the fish's food supply.

A pilot of the Fish Quality Index has been developed for several New England states and is currently being tested by several groups. It will eventually be available on the Internet and on CD-ROM, but the individual maps can be printed in wallet-size or larger formats. For further information or questions regarding the activities in EPA's Office of Research and Development's Technology Transfer Branch, contact Dan Petersen at 513-569-7831 or petersen.dan@epa.gov.

Emergency Management Operations Center Releases of FMD Outbreaks

The Emergency Management Operations Center (EMOC) released several notices on foot-and-mouth disease (FMD) outbreaks occurring in Kazakhstan, Malaysia, Turkey, and the United Kingdom.

Updates regarding the FMD outbreaks are provided as new information becomes available. If you have questions, please contact the Emergency Programs staff at 301-734-8073, 800-940-6524, or emoc@aphis.usda.gov.

Resources, Programs, and Conferences

Tohono O'odham Nation Ecological Border Concerns

Mary Cathy Garcia, Tohono O'odham, EPA

The web of jurisdictional influences by federal, state, and international authorities complicates the implementation of Tohono O'odham environmental policy and results in eco-cultural border concerns, especially when dealing with Mexico. Some of these influences include the 1853 severing of traditional Tohono O'odham lands from their Mexican land base, and Operation Gatekeeper, launched five years ago by the United States government in an effort to seal off key portions of the Mexican border. Pressures by the United States Border Patrol and Customs service in their efforts to reverse the tide of undocumented aliens and drug smugglers also adds to eco-cultural border concerns.

The war between Mexico and the United States (1846-1848) was concluded by the Treaty of Guadalupe Hildago, which left the Tohono O'odham territory intact as the northern-most part of Mexico. However, the desire to secure a good route for trans-continental railroad pressured United States officials to negotiate the Gadsden Purchase in 1853. This in effect transferred much of the Tohono O'odham territory to the United States and left the rest Mexican jurisdiction. This condition of being divided between two foreign governments continues to have devastating eco-cultural consequences for the Tohono O'odham.

Some 14,000 O'odham residents live on lands of the Tohono O'odham Nation in 65 communities, and many members reside on or near the border. The Tohono O'odham Nation estimates about 7,000 of its 24,000 enrolled members live in Mexico, and approximately, 1,400 of its members were born and reside south of the US/Mexico boundary. Tohono O'odham tribal members are mistakenly harassed and held suspect as drug smugglers or as aliens making illegal crossings. The terror of being arrested and deported to Mexico keeps many Tohono O'odham tribal members from participating in traditional ceremonies, seeking medical treatment, and collecting subsistence materials such as basket-making Yucca.

The implementation of Operation Gatekeeper has resulted in pushing the flow of impoverished workers and peasants seeking a living in the United States to more remote and dangerous border crossings along the Tohono O'odham/Mexico border. Illegal immigrant crossings impact public services, federal employees working in the area, and residents and businesses located



on reservation lands. In 1999, 60 cars were abandoned, and the estimated cost to the Tohono O'odham Nation was \$9,000. Moreover, cultural resource sites have been damaged by the creation of roads for observation posts on hills of archaeological sites.

Undocumented aliens have caused damage to natural and cultural resources by harming desert tortoises, dumping trash on archaeological sites, and driving vehicles across sites. In addition, unsecured areas along a 63-mile stretch of the Nation adjacent to the border enable unauthorized cattle to cross, off-highway vehicle use, and even cattle rustlers to take stolen cattle back to Mexico.

The Tohono O'odham have traditionally made little distinction between the sacred and profane--the religious and the secular. For the Tohono o'odham, creation stories, song,

Resources, Programs, and Conferences

prayers and traditional ecological knowledge and wisdom instruct members to visualize and understand the relationship between the physical environment and spiritual values that create and bind communities. According to Tohono O'odham basket weaver, Art Babachi Wilson, "Cedagi Wahia, which is thirteen miles south of the US/Mexico border is unique because it is the sacred location of many Tohono O'odham oral testimonies." To aid many of these eco-cultural issues and other socio-cultural citizenship issues, Ed Pastor, 2nd District, Arizona and representatives Jackson Lee of Texas and Frank Pallone of New Jersey presented a bill to amend U.S. nationality law. The Tohono O'odham Nation's "Make It Right" Citizenship Campaign emphasizes, "From time immemorial Tohono O'odham have lived on these desert lands. Tohono O'dham means desert people. Our creator I'ittoi made us from clay of our desert lands. We believe these desert lands, are sacred. We have harmony with the great gifts of I'ittoi---moving freely about our lands. This is our way of life."

There are four non-contiguous land areas of the Tohono O'odham nation, which together total 2.8 million acres or 5,000 square miles, approximately the size of Connecticut. As recent as, May 2001, only miles from the Tohono O'odham Nation 14 illegal immigrants succumbed to the arid 114-degree heat in the Sonoran Desert of Southern



Arizona. While the U.S. Border Patrol provides eight units per shift to cover the immense area of the Tohono O'odham Nation, it is estimated that between 1,200 to 1,500 undocumented aliens continue to cross the lands of the Nation on a daily basis during the summer months.

Illegal immigrants also leave thousands of plastic, metal, and glass food and beverage containers, along with clothing, bedding, diapers, and other products. Trash and litter pose hazards to human health and wild life, and many have a potential for long term impact on the Tohono O'odham's eco-cultural links to the land. Approximately, 5,000 to 7,000 pounds of solid waste are illegally disposed of daily, and costs for possibly cleaning up this solid waste are approximately \$306,600 per year.

The US/ Mexico boundary and present nationality law disrupts the Tohono O'odham Nation's interconnected ecological relationship to the land. A Tohono O'odham delegation demonstrated on the footsteps of the United States Capital on June 4, 2001 to formally request that the United States Congress

amend the Immigration and Nationality Act of 1952. The Tohono delegation proposed the Citizenship Act (H.R. Bill 2348) to make all Tohono O'odham tribal members identification cards equivalent to federally-issued citizenship certificates to help U.S. Border Patrol agents identify Tohono O'odham tribal members from illegal aliens and help to prevent racial profiling as members cross US/Mexico borders. Since the Tohono O'odham Nation's June 4th demonstration, 87 lawmakers have signed on to support the proposed Citizenship Act.

The Tohono O'odham Nation is seeking assistance to battle their eco-cultural concerns and has initiated H.R. Bill 2348, the "Make It Right Bill." To learn more about recent efforts, contact Henry Ramon, Vice Chairman, 520-518-2028, or Margo Cowan, General Counsel, Tohono O'odham Nation, 202-518-8660 or 520-471-0108.

Resources, Programs, and Conferences

Small Drinking Water Treatment Systems Research and Development at EPA's Test and Evaluation Facility

The Safe Drinking Water Act (SDWA) Amendments passed by Congress in 1996 promised to provide safe drinking water to all Americans. There are approximately 170,000 small and non-community drinking water treatment systems in the United States serving over 25 million people. Many of these drinking water systems are having difficulty in complying with increasing numbers of regulated contaminants. Currently, it is estimated that small drinking water treatment systems contribute nearly three-fourths of the annual violations under the SDWA, with the majority being microbiological violations. Because small systems are widely dispersed in rural areas and face financial constraints, it is difficult to evaluate, select, and maintain technologies. Recognizing these constraints, EPA has invested substantial resources towards the research, development, and evaluation of drinking water technologies for small systems. A number of these evaluations are conducted by EPA's Water Supply and Water Resources Division at the EPA Test and Evaluation (T&E) Facility located in Cincinnati, Ohio.

At the T&E Facility, a wide variety of water and waste treatment technologies are conceived, designed, and evaluated at the bench- and pilot-

scale. Studies conducted at the T&E Facility promote the development and commercialization of practical and innovative technologies to enhance water treatment and understand the characteristics of water quality in distribution systems. A team of EPA and contractor staff that includes engineers, chemists, microbiologists, technicians, and craftsmen conducts the research. The facility, located within the grounds of Cincinnati's Mill Creek Wastewater Treatment Plant, is also accessible to commercial entities, academic institutions, and other government agencies.

Currently, research identifying technological and institutional issues regarding conventional drinking water package plants indicates there is a mismatch between operator certification and knowledge required for satisfactory treatment technology operation. Conventional drinking water treatment technology requires substantial water chemistry and microbiology experience and a knowledge of raw water characteristics to properly provide potable water. It is EPA's goal to develop these skills for conventional and innovative drinking water technologies through evaluations at the T&E facility. The T&E Facility also utilizes three distribution system simulators (DSS) to evaluate water quality charac-

teristics within a distribution system, and results from these studies are used to provide guidance on how to maintain high levels of water quality through the infrastructure of small and large distribution systems. Finally, various package plants and distribution systems at the T&E Facility and other field locations have been equipped with remote telemetry units to aid in control and monitoring activities. SDWA regulations require small and large public water treatment operators to provide routine monitoring, and this can be costly for small system operators, particularly in remote locations. Remote telemetry, however, supports regulatory guidelines by providing real-time, continuous monitoring of the water quality and reporting the information electronically.

For additional information, please contact Roy C. Haight, EPA, 513- 569-7067, 513-569-7052 (fax), haught.roy@epa.gov, or James A. Goodrich, EPA, 513-569-7605, 513-569-7185 (fax), goodrich.james@epa.gov.



Resources, Programs, and Conferences

Mercury-exposure Measurements

Mercury levels in fish tissues, human hair, and bird feathers can now be measured with an easy-to-use direct mercury analyzer according to EPA's Environmental Sciences Division (ESD) in Las Vegas, Nevada. EPA's ESD, National Exposure Research Laboratory, and Office of Research and Development have validated the use of the direct mercury analyzer for whole-fish homogenates and demonstrated that muscle-plug analyses can provide statistically equivalent mercury data when compared to fillet analyses by the conventional cold vapor AAS methodology.

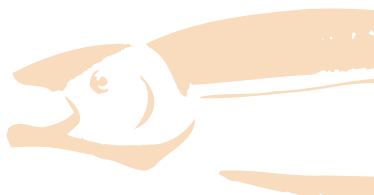
Use of such a mercury analyzer has been proposed by EPA ESD research chemist Thomas Hinners for a study of the Aleut community on St. Paul Island in the Arctic. According to Mr. Hinners, this analyzer has been used extensively since October 1998 for studies of fish from eleven national parks and Lake Mead located near Laughlin, Nevada. In an outreach effort with Mr. Michael Schaver, Environmental Coordinator with the Big Valley Band of Pomo Indians at Big Valley Rancheria, Lakeport,

California, this type of analyzer may be acquired by the tribe to assess mercury exposures in nearby areas. Mr. Hinners has made use of muscle plugs in determining mercury concentrations by using body punches. Use of biopsy punches has also been successful in a non-lethal study of endangered razorback suckers for determining selenium concentrations.

Mercury levels in fish tissue are relevant to the health not only of humans, but also of fish-eating mammals and birds. In 2001, EPA defined a mercury water quality criterion based on a maximum concentration of 0.3 parts per million of mercury in noncommercial freshwater or estuarine fish tissue that should not be exceeded in order to protect the health of an adult human consuming a typical amount of fish-fillet tissue, approximately 18.5 ounces per month. For people who consume more than this typical amount of fish, lower mercury levels in the fish muscle are considered safe. Fish-mercury concentrations of 0.1 and 0.02 ppm have been reported as wildlife critical values for fish-eating mammals and birds, respectively.

Elevated levels of mercury in the hair of pregnant women also have been associated with health effects in their babies. A report from the National Academy of Sciences has recommended the analysis of hair segments to assess short-term human exposures since brief high intake of mercury might be more relevant to health effects than lower, constant uptake. Also, mercury levels in feathers can indicate whether the exposure to birds is changing.

Additional information related to this topic is available at EPA's fish-consumption website at www.epa.gov/ost/fishadvice and EPA's water quality criterion at www.epa.gov/waterscience/criteria/methylmercury and www.epa.gov/epaoswer/hazwaste/test/7473.pdf. More information also can be found at EPA's Environmental Justice and Tribal grant website at <http://es.epa.gov/oeca/index.html> and the NAS mercury report at <http://books.nap.edu/catalog/9899.html>. For questions about mercury analyses, contact Tom Hinners at hinnertom@epa.gov.



Resources, Programs, and Conferences

Who's to Host the 6th National Tribal Conference on Environmental Management?

EPA requested proposals from federally-recognized Indian tribes or intertribal consortia to host the 6th National Tribal Conference on Environmental Management. EPA began sponsoring this bi-annual conference in 1992 to provide an opportunity for tribal leaders, tribal environmental managers, tribal organizations, federal agencies, and others to share information about tribal environmental programs and discuss issues of vital interest to Indian country. For the 2002 conference, EPA is seeking to broaden

the scope of the conference to include more multi-media environmental issues, establish stronger tribal networks and relationships in Indian country, identify shared lessons learned, and familiarize tribes with the full extent of tribal and EPA environmental programs. Topics at past conferences that have helped to build tribal capacity include managing environmental and integrated waste programs; grant assistance to tribes; addressing concerns about human health risks and subsistence; contracting, research, and

business development opportunities; and GIS and natural resource management.

EPA will be awarding a cooperative agreement to co-sponsor the conference to a selected host tribe whom submitted their proposal by September 30, 2001. For more information, please contact Felicia Wright at 202-260-4410, Caren Rothstein-Robinson at 202-260-0065, Claudia Walters at 202-564-6762 or Clara Mickles at 202-260-7519.

Effects of Exposure to Uranium Waste Products in Drinking Water

Angela Justice, United States Public Health Service

Navajo Neuropathy is a fatal disease of unknown etiology caused by exposure to uranium waste products in drinking water, affecting only Navajos in the Four Corners area of the United States. A three-year study, headed by James W. Justice, M.D., linked the disease, previously thought to be a genetic disorder, with intrauterine exposure to radioactive uranium mine wastes, mostly by ingestion of rain water collected in abandoned mine pits. Exposure only affects the intrauterine fetus, not normal siblings exposed only after birth.

The three-year study began in 1997 and was conducted by a team of researchers led by Dr. James Justice, a retired Public Health Service researcher. Families of 41 affected children

were contacted and interviewed. Medical records were retrieved and studied, and eight surviving patients were examined. The study method used was to compare *in utero* exposures of affected children with their unaffected siblings, including *in utero* exposure to surface water found in uranium mine pits. It was concluded that Navajo Neuropathy was most likely caused by *in utero* exposure to water contaminated by uranium mining waste products, and all exposure cases occurred during a time when fences surrounding mine pits were removed by mining companies in 1959 and when pits in the most accessible areas were filled using EPA Superfunds in 1993. The results of the three-year study were presented at the 2001 Public

Health Professional Conference in Washington, DC on May 31, 2001. For further information on this study and current findings, contact James W. Justice, M.D., United States Public Health Service, 3663 East Kingler Spring Place, Tucson, AZ 85718, 520-577-2202.

Navajo Neuropathy affects young children from one year to eight years of age, and is characterized by a hepatitis that can be mild, but is often fatal. If the patient survives liver failure, a chronic demyelinating neuropathy develops with paralysis but has no effect on mental functions.

Resources, Programs, and Conferences

2002 OPPTS Tribal Subsistence Summit Update

OPPTS is planning a subsistence summit for 2002. The goal of the Summit is to help Indian tribes build capacity to assess environmental health threats from toxic chemicals and pesticides, including persistent, bioaccumulative toxics (PBTs) in foods and other materials used in subsistence practices and lifestyles. Tribes will learn to develop the necessary tools and guidelines to better understand exposure and risk situations based upon the unique circumstances associated with culture, and religion. Tribes will gain knowledge on appropriate analytical and technical capacities to design, implement, and manage food-related subsistence risk assessment programs and to design the framework and components of a multi-media tool that meets the needs of tribes and reflects EPA administrative and programmatic responsibilities.

A web-based manual will be produced to serve as a reference guide and platform for EPA and other federal and tribal organizations to address subsistence food issues. The manual will include adaptable tools to help identify contaminant-related abnormalities in subsistence food, prepare samples for laboratory testing, and develop appropriate models for risk communication. Cooperative education and training opportunities will be identified, including potential interfaces with science-based programs in federal and state agencies.

This program is being coordinated through a number of EPA's tribal partners, including the Tribal Operations Committee (TOC), Tribal Affairs Project of FOSTTA, Tribal Pesticide Program Council, Regional TOCs, and other tribal organizations. For more information, contact Bille Hougart, EPA OPPT, at 202-564-8816 or hougart.bille@epa.gov.

National Cardiovascular Health Conference 2002 - Cardiovascular Health for All: Meeting the Challenge of Healthy People 2010

Sponsoring organizations have united to develop Cardiovascular Health (CVH) 2002 as a way to highlight Healthy People 2010 objectives related to cardiovascular health and disease. The conference program will encourage health professionals to implement practices designed to significantly reduce cardiovascular disease in all communities by the year 2010. Each plenary and concurrent session accordingly will highlight ways to achieve the goals and objectives related to cardiovascular health and disease.

- April 11-13, 2002
National Cardiovascular Health Conference 2002 - Cardiovascular Health for All, Marriott Wardman Park Hotel, Washington, D.C.

For more information, contact Jenny Bogue at 703-683-8500 (ext. 227), 800-687-7469 (ext. 227), 703-836-4486 (fax), or ntpinfo@ntpshow.com (email). You may also visit www.nhlbi.nih.gov/health/prof/heart/other/na_bkgd.htm

Available Funds for EJ Small Grant Program

On November 1, 2001 EPA's Office of Environmental Justice announced the availability of \$1.5 million for the FY 2002 EJ Small Grant Program. The purpose of this program is to provide financial assistance to eligible community groups, including community based- and grassroots organizations, churches or other nonprofit organizations, focused on community-based issues and federally-recognized tribal governments working on environmental justice issues. The grant program provides funding for a full range of activities that promote protection of human health and the environment, and in the past, it has proven to be a good source of funding for efforts relating to pesticide safety and risk reduction. This year's applications are due by February 22, 2002. Average grant awards are valued at \$15,000, and EPA plans to award 100 grants. For more information on the FY 2002 EJ Small Grant Program, including instructions for preparing proposals and a summary of projects funded in the past, visit EPA's web site at www.epa.gov/oeca/main/ej/index.html.

EPA Grant Funding Opportunities

Claudia Walters, EPA

The U.S. Environmental Protection Agency's Office of Research and Development (ORD), as part of its Science to Achieve Results (STAR) program, is seeking requests for applications (RFA) in two areas of research. One area concerns epidemiologic research on the health effects of long-term exposure to ambient particulate matter and other air pollutants. The RFA invites applications for the following two specific types of particulate matter air pollution research: (1) retrospective epidemiologic studies that make use of currently available information on health and air quality, and (2) methods/model development studies relating to future, prospective epidemiologic research. The RFA opening period began on August 28, 2001 and will close on January 18, 2002.

The second solicitation seeks the development of regional-watershed classification schemes that can be used within the context of a national framework for determining ecosystem vulnerability, designing monitoring systems, and identifying watershed restoration opportunities. Regional-watershed classification schemes should be based on a strong conceptual understanding of watershed processes, as well as illustrating quantitative linkages among watershed attributes, loadings, and ecological responses. The solicitation opening period began on October 1, 2001 and will close on January 30, 2002.

For more information about both EPA grant funding opportunities, visit <http://es.epa.gov/ncer/rfa/> or contact Stacey Katz 202-564-8201, katz.stacey@epa.gov (epidemiologic research), Gail Robarge 202-564-8301, robarge.gail@epa.gov (epidemiologic research), or Bill Stelz 202-564-6834, stelz.william@epa.gov (regional-watershed classification scheme development).

TPPC Meeting in September

In spite of the tragic events of September 2001, Tribal Pesticide Program Council (TPPC) members flew to Arizona from around the country to unite at the Ak Chin Indian Community Resort in Arizona to carry out their fourth meeting. Discussion topics included tribal authority under the Federal Insecticide, Fungicide, and Rodenticide Act, issues relating to the Native American Graves Protection and Repatriation Act, and tribal pesticide training. The next meeting of the TPPC will be in March 2002 in Arlington, Virginia. For more information, contact TPPC Coordinator Lillian Wilmore at 617-232-6742 or NAEcology@aol.com.

2001 National American Indian Science & Engineering Fair Winners

Daniel Concho, Barstow High School, California
Kimberly Mann, Wingate High School, New Mexico
Kimberly Yazzie, Wingate High School, New Mexico
Christine Concho, Barstow High School, California
Brian Boyd, Bayfield High School, Wisconsin
Roxanne Shepard, Wingate High School, New Mexico

Behavioral & Social Science Winners

5th grade

Kirstin Desjarlais, Turtle Mountain Community Elementary, North Dakota
Whitney Cadotte, Wilson Elementary, Wisconsin
Angelica Acedo, Gila Crossing Community School, Arizona

6th Grade

John Jojola, Isleta Elementary, New Mexico
Jena Jeanotte, Turtle Mountain Middle School, North Dakota

7th Grade

RaeAnn Morin, Turtle Mountain Middle School, North Dakota
Julia McMillian, Choctaw Central Middle School, Mississippi
Eldora Thompson, Thoreau Mid School, New Mexico

8th Grade

Jannica Atencio, Santo Domingo Middle School, New Mexico
Ajanee' Thomas, Dunseith Indian Day School, North Dakota
Kathy Renault, Ojibwa Indian School, North Dakota

Melissa Norris, Riverside Indian School, Oklahoma

10th Grade

Cheriena Ben, Choctaw Central High School, Mississippi

11th Grade

Mahli Saunders, Choctaw Central High School, Mississippi

12th Grade

Amilia Notah, Grants High School, New Mexico

To learn more about scholarships and programs offered by the American Indian Science and Engineering Society, visit their website at www.aises.org or call 505-765-1052.

Resources, Programs, and Conferences

Pesticide Health Hazards Focus of Tribal Medicine Project

David F. Goldsmith, MSPH, PhD, George Washington University

EPA's Office of Pesticide Programs is supporting a Tribal Medicine Project with George Washington University that focuses on health care provider outreach in the area of pesticide-related medical conditions and pesticide sampling on tribal lands. This project, which was featured in the Spring 2001 issue of OPPTS Tribal News, is led by Dr. David F. Goldsmith, and in recent months, Dr. Goldsmith has successfully applied for continuing medical and nursing education accreditation from the George Washington University Office of Continuing Medical Education for the Tribal Medicine Project and held numerous workshops in Native lands to discuss areas of outreach and research.

The accreditation at George Washington University will standardize evaluations and provide credit hours and official letters of attendance for non-health care professionals participating in job-relevant trainings at the accredited school of medicine.

Dr. Goldsmith hosted a one-day health workshop, sponsored by the Intertribal Council of Arizona (ITCA), in Phoenix, Arizona. The one-day training workshop was held in late July and focused on the leading crops and pesticide chemicals. Representatives from the Colorado River Indian Tribe,

Fort McDowell Yavapai Nation, White Mountain Apache Tribe, and the Navajo Nation attended. Another health training program, sponsored by the Hopi Tribe, was held on July 26, 2001 in Keams Canyon, Arizona and included sessions devoted to both pesticides use for common tribal activities, such as agriculture and applications to school grounds and facilities, and for repatriated Hopi religious artifacts. Representatives from Hopi and Navajo Nations, Bureau of Indian Affairs, Arizona Department of Transportation, Hopi community police, and the Hopi Health Care Center attended. A joint sampling program was held in late July to test for herbicide residues applied to shared Tribal roadways. With participation of

the Arizona Department of Transportation, the sampling effort focused on roadside herbicides and grazing lands, with attention to subsistence and elder Natives gathering grasses, reeds, and plants.

On August 1, 2001, a successful health training program was held in Lapwai, Idaho to present a description of the Nez Perce air quality monitoring effort and responses to concerns about increasing numbers of asthma cases among tribal members.

For more information on the Tribal Medicine Project and upcoming activities, contact David F. Goldsmith, George Washington University, at 202-994-1734, 202-994-0011 (fax), and eohdfg@gwumc.edu.

Annual Toxics Release Inventory National Meeting

EPA is holding its annual Toxics Release Inventory (TRI) National Meeting on February 13-15, 2002 in Alexandria, Virginia. Participants include TRI staff from EPA, states, and tribes. EPA's Toxics Release Inventory Program collects data on chemical releases from industrial facilities and makes the data available to the public through the Internet, written reports, and other media. The purpose of the meeting is to share information and discuss issues relating to TRI program implementation, TRI data use, and enforcement. For more information, please contact Amy Newman at 202-260-1846 or newman.amy@epa.gov.

Resources, Programs, and Conferences

EPA's Office of Research and Development Announces Graduate and Undergraduate Fellowship Programs

EPA's Office of Research and Development (ORD), as part of its Science to Achieve Results (STAR) program, manages a graduate fellowship grant program for students achieving a master's or doctoral degree in environmentally-related fields of study. EPA also manages the Minority Academic Institute (MAI) fellowship program for undergraduate and graduate study in environmental fields. These fellowship programs are designed to encourage promising students to obtain advanced degrees and pursue careers in environmental areas.

The STAR graduate fellowship grant for students in a master's or doctoral degree program is subject to availability of funding, and the Agency plans to award approximately 100 new fellowships by July 22, 2002. The EPA MAI Graduate Fellowship Program also offers fellowships for master's and doctoral level students in environmentally-related fields of study. Also subject to availability of funding, the Agency plans to award approximately 25 new MAI fellowships by July 22, 2002. Under both fellowship programs, master's level students may receive support for a maximum of two years. Doctoral students may be supported for a maximum of three years. The fellowship

programs provide up to \$34,000 per year of support. This amount covers a \$17,000 annual stipend, \$5,000 for authorized expenses, and up to \$12,000 for tuition and fees. Actual annual support may vary based on length of fellowship award and tuition and fees.

The EPA MAI Undergraduate Fellowship Program offers fellowships for bachelor-level students in environmentally-related fields of study. Subject to availability of funding, the Agency plans to award approximately 20 new fellowships by July 22, 2002. Undergraduate level students may receive support for their final two years of undergraduate study and a Summer Internship at an EPA facility between their junior and senior years. The fellowship program provides up to \$15,200 per year of support, and this amount covers a \$2,700 nine-month stipend, \$2,500 for authorized expenses, and up to \$10,000 for tuition and fees. Summer Internship stipends will



be compensated separately and is not included in this amount.

For more detailed information about the application process, visit <http://es.epa.gov/ncer/rfa>. Also contact Virginia Broadway at broadway.virginia@epa.gov

Interview with Lydia Olympic



Lydia Olympic is a member of the Igiugig Tribe and a member of their Council. Lydia is active in many EPA tribal programs and other environmental initiatives throughout the country. The picture above was taken with EPA Administrator Christine Todd Whitman at the Tribal Operations Committee Meeting in Washington, DC in July 2001. Below, Lydia speaks with Mary Cathy Garcia, EPA.

Tell us about yourself. Where were you born? What schools did you attend?

First of all I am an avid basketball fan. I especially love college basketball; I always attend the Great Alaska Shootout and the Final Four. I was raised in Igiugig, Alaska and graduated from Igiugig High School. I attended the University of Alaska in Fairbanks for three years before transferring to the University of Alaska Anchorage. I loved going to school, logged in several hundred credits, and minored in Anthropology, Biology, and History. I am now working on my Rural Development degree.

How long have you been on the tribal council?

I have been on the Igiugig Tribal Council since October of 1999. It has been a challenge, and I do like challenges.

What EPA programs or funding does your village seek?

Funding for an open dump closure and funding for solid waste operation and maintenance. We also need technical assistance and funding for a watershed management program in the Lake Iliamna/Kvichak River area. Right now this area is pristine, most beautiful, and we can still drink out of it. However, we would like to preserve and protect it. The Kvichak River has the largest Sockeye Salmon run in the world, and we really do need to protect their habitat and sustain our livelihood. We are also interested in alternative energy programs. The cost of fuel and electricity is highly expensive, and a successful alternative energy source would be great for rural Alaska and our village. A subsistence program would be appreciated too.

What is the most serious environmental issue facing the Village of Igiugig?

We have many serious environmental problems that are intertwined and related, and we should not put one in front of the other. Open dumps 50 yards from an area school affect the air that the children of Igiugig

breathe, and it affects the water quality. Subsistence is dependent upon the air, the water, and the land. There is an alarmingly high rate of cancer and diabetes in our villages, and we need to take a look at what may be causing these problems by probing into the Western diet. Our diet includes highly processed food such as white flour, sugar, basic staples, and soda pop, along with possible contaminants in our subsistence foods. We really do need to do a holistic approach and not isolate the problem.

In relation to the January 2001 Washington Post article "314 acres for the Shoshone within Death Valley National Park," published this year (Washington Post Jan. 1, 2001, A3), please describe your personal experience in proposing that Alaska Natives co-manage natural resources with the Alaska state government?

I have worked with the Alaska Department of Fish and Game over a period of nine years. The state of Alaska has not given the Tribes of Alaska a fair shake. I would actually like to co-manage our natural resources with the federal government, as I am uncertain about the Alaskan state government.

EPA Celebrates Children's Health Month in October

EPA's Office of Children's Health Protection celebrated Children's Health Month in October. At EPA, protecting children from environmental health risks is fundamental to their vision of making the world a better place for future generations. Children are vulnerable and at great risk from harmful environmental pollutants. Children's neurological, immunological, digestive, and other bodily systems are still developing, and their behavior patterns, such as crawling and placing objects in their mouths, result in greater exposure to environmental contaminants. Children also eat more food, drink more fluids, and breathe more air in proportion to their body weight when compared to adults.

Because of these risk factors and noted increases in certain childhood illnesses thought to be affected by environmental exposures, including asthma and some developmental disorders, EPA featured the following efforts to protect children from environmental harm during Children's Health Month.

Help Children Breathe Easier

The number of children with asthma in the United States has more than doubled in the past two decades, and an estimated 10 million school days are

missed due to asthma related illness each year.

• **Diesel Rule:** EPA's new rule will reduce emissions of air pollutants to prevent 117,000 cases of acute bronchitis in children and help avoid more than 360,000 asthma attacks and 380,000 cases of respiratory symptoms in asthmatic children per year.

• **Tools for Schools:** EPA has developed IAQ Tools for Schools Kit, an easy-to-use guide intended to support schools in preventing and resolving indoor air quality problems. As a result, over 10,000 schools have taken steps to improve their indoor air quality.

Protect Children from Lead Poisoning

Lead poisoning in children may cause lowered intelligence, impaired hearing, hyperactivity, and other health repercussions. Almost one million American children have elevated blood lead levels.

• **Lead Hazard Reduction:** EPA spends \$7 million annually on establishment, enforcement and compliance of lead hazard reduction regulations, and

public education.

For more information about EPA's Office of Children's Health Protection and Children's Health Month, visit www.epa.gov/children.

Tips to Protect Children from Environmental Threats

- Help children breathe easier**
 - Don't smoke and don't let others smoke in your home or car
 - Keep your home as clean as possible. Dust, mold, certain household pests, second-hand smoke, and pet dander can trigger asthma attacks and allergies.
 - Limit outdoor activity when air pollution is bad such as on smog alert days
- Protect children from lead poisoning**
 - Wash children's hands before they eat and wash bottles, pacifiers, and toys often
 - Wash floors and window sills to prevent kids from dust and peeling paint
 - Remove lead paint - especially in older homes
 - Run the cold water for 30 seconds to flush lead from pipes
 - Get kids tested for lead - check with your doctor
 - Test your home for lead paint hazards if it was built before 1978
- Protect children from carbon monoxide (CO) poisoning**
 - Fix any fuel-burning appliances, furnace flues and chimneys checked once a year
 - Never use gas ovens or burners for heat and never use barbecue grills outdoors or in the garage
 - Never sleep in rooms with unvented gas or kerosene space heaters
 - Don't run cars or lawnmowers in the garage
 - Install a UL approved CO alarm in sleeping areas
- Keep pesticides and other toxic chemicals away from children**
 - Put food and trash away in closed containers to keep pests from coming near your home
 - Don't use pesticides if you don't have to - look for alternatives
 - Read product labels and follow directions
 - Use bait & traps instead of bug sprays when you can and place the bait & traps where kids can't get them
 - Store pesticides and toxic chemicals where kids can't reach them and never put in other containers that kids can mistake for food or drink
 - Keep children, toys & pets away when using pesticides and don't let them play in fields, yards and gardens after pesticides have been used
 - Wash fruit and vegetables under running water before eating - peel them when possible
- Protect children from too much sun**
 - Have them wear hats, sunglasses, and protective clothing
 - Use sunscreen on kids over 6 months and keep infants out of the sun
 - Keep them out of the mid-day sun - the sun is most intense between 10 and 4
- Safeguard them from high levels of radon**
 - Test your home for radon with a home test kit
 - Fix your home if your radon level is 4 pCi/L or higher. If you need help, call your state radon office or 1-800-442-4799
- Protect children from contaminated fish and polluted water**
 - Call the local or state health department to learn about any local advisories for limiting the amount of fish to be eaten or beach doings
 - Take used motor oil to a recycling center and properly dispose of toxic household chemicals
 - Find out what's in your local drinking water - call your local water system for your annual drinking water quality report or, if you have a private home drinking water well, test it every year

Get involved
 Call toll free 1-877-590-KIDS for more information or check out EPA's web site at www.epa.gov/children

EPA Office of Children's Health Protection
 EPA 1307-80008

Resources

ToxRAP: Talking Toxics with Tohono O'odham Children

By Mary Cathy Garcia, EPA

ToxRAP is a Native American educational program that introduces children in grades K-9 to environmental issues and concerns that affect their communities and human health. Through this program, Tohono O'odham children are gaining access to environmental education and career choices.

According to Stephanie Hines, Director of the Community Outreach & Education Program at the Southwest Environmental Health Sciences, Center

“One of the specific target audiences of my outreach program...is to meet the unique environmental health needs of local and regional Native American communities...these communities have to deal with issues such as mining, illegal dumping, brownfields, clean water, and water rights. This is being done through the ToxRAP materials...”

The Native American program, held at the Elvira Elementary School, in Tucson, AZ, was sponsored by the Sunnyside Unified School District Native American Education Program and the San Xavier District of the Tohono O'odham Nation. The San Xavier District is located within miles of the City of Tucson. The overall goal of this University of Arizona Southwest Environmental Health Sciences



Center Community Outreach and Education Program is to communicate with the general public and the K-12 education community about environmental health sciences and common and local environmental health issues through workshops and educational sessions. Approximately 20 students participated in a hands-on Toxicology, Risk Assessment, and Pollution (ToxRAP) curriculum series designed to teach students in grades K-9 how to evaluate an environmental health problem. The program lasts 4 weeks, and each week focuses on a different topic. It uses a framework that draws upon concepts from toxicology, environmental health risk assessment, and risk management.

Access to ToxRAP at Other Educational Centers:

- Arizona - University of Arizona, Southwest Environmental Health Sciences Center. Stefani Hines, 520-626-3692, hines@pharmacy.arizona.edu
- California - University of Southern California, So. Calif. Environ. Health Sciences Center (SCEHSC) & Children's Environ. Health Ctr., Andrea Hricko, 323-442-3077, ahricko@hsc.usc.edu
- Michigan - Wayne State University, EHS Center for Molecular & Cellular Toxicology with Human Applications. Mary Dereski, 313-964-5251, m.dereski@wayne.edu
- New Jersey - The University of Medicine and Dentistry of New Jersey-School of Public Health and the Environmental and Occupational Health Sciences Institute (EOHSI). Laura Hemminger, 732-445-0110, rc@eohsi.rutgers.edu
- Oregon - Oregon State University, Environmental Health Sciences Center, Kendra Mingo, 541-737-4374, kendra.mingo@orst.edu
- Tennessee - Vanderbilt University, Center in Molecular Toxicology. Brad Hawkins, 615-936-2179, brad.hawkins@vanderbilt.edu
- Texas - University of Texas Medical Branch at Galveston. Jennifer Gorenstein, 409-772-1776, jennie@nmr.utmb.edu
- Wisconsin - Center for Biology Education. Kevin Neimi, 608-262-5480, kjniemi@facstaff.wisc.edu

Kids' Page



ToxRAP is divided into three modules, each centered around a case study adapted from real-life situations: K-3 “The Case of the Green Feathers,” 3-6 “What’s Wrong with the Johnson Family,” and 6-9 “Mystery Illness Strikes the Sanchez Household.” In each module, students role play environmental scientists and are introduced to careers in toxicology, epidemiology, industrial hygiene and medicine. Through age-appropriate, hands-on, investigative science, math, and language arts activities, students learn to recognize, evaluate and, when necessary, control contaminants. Students are able to describe the impact that environmental hazards have on human health and experience first-hand the processes and tools scientists use to solve environmental problems.

The curriculum series is indexed to the national science standards and received a 1997 National Environmental Education Achievement Award from the National Environmental Education and Training Foundation. To learn more about ToxRap and available workshops, contact Stefani Hines, University of Arizona, Southwest Environmental Health Sciences Center, 520-626-3692, hines@pharmacy.arizona.edu

"The ToxRAP workshop we co-sponsored for our children enlightened them on the various environmental challenges our community faces daily, and how those challenges are dealt with using scientific methods. Through programs such as ToxRAP, I am hopeful that our children will pursue careers in the environmental field to insure a safe, healthy community for generations yet to come. We must continually teach our children to respect all living things if we are to continue to survive as indigenous people."

— Austin Nunez, of the San Xavier District of the Tohono O'odham Nation

Kids' Page

Tohono O'odham Native Coloring Page—
try to stay in the lines boys and girls!



Mark Your Calendars!

January

15

OECA The Basic

Inspector Training Course

EPA Office of Enforcement and Compliance Assurance
Jonathan Binder, 202-564-2516

February

5-7

EPA Office of Water Quality

Workshops for Tribal Environmental Managers

Coeur d'Alene Casino & Resort Hotel
Worley, ID
Lillian Wilmore, 617-232-5742
naeology@aol.com

12-14

Region Tribal Operations Committee Meeting

EPA Region 4
Atlanta, GA
Mark Robertson, 404-562-9639

13-15

Annual Toxics Release Inventory (TRI) National Meeting

EPA Office of Information Analysis and Access
Amy Newman, 202-260-1846 or
newman.amy@epa.gov

25

OECA Workshop on Pesticide Inspections

EPA Office of Enforcement and Compliance Assurance
Jonathan Binder, 202-564-2516

EPA Websites and Hot Lines

EPA	www.epa.gov
OPP	www.epa.gov/pesticides/
OPPT	www.epa.gov/opptintr
Pollution Prevention	www.epa.gov/opptintr/p2home
American Indian Environmental Office	www.epa.gov/indian
Asbestos Ombudsman Hotline	1-800-368-5888
EPCRA Hotline	1-800-535-0202
Lead Hotline	1-800-532-3394
National Pesticide Telecommunication (NPTN) Hotline	www.ace.orst.edu/info/nptn 1-800-858-7378
TSCA Hotline	202-554-1404

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