



OPPTS Tribal News

Environmental VOICES

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

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Featuring Pesticides and Toxics Information

Research Needs within Indian Country and Alaska Native Villages

The need for research in Indian Country and Alaska Native Villages is an important issue facing Indigenous communities, tribal organizations, research groups, federal organizations, and EPA. In February 2001, EPA published the *Environmental Justice and Community-Based Health Model Discussion and Recommendations Report*. The report presents advice and recommendations concerning research needs within Indian country and Alaska Native villages based on results from pre-meeting preparation, on-site discussion, and public comment associated with the meeting of the National Environmental Justice Advisory Council (NEJAC), held May 23-26, 2000. The meeting and report were prepared by NEJAC, as requested by EPA's Office of Environmental Justice. (See story continued page 9).

This initiative, as well as several other research projects featured within this issue, provide information and updates on research in pesticides, pollution prevention, and risk assessment within Indian country and Alaska Native Villages.

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New EPA Administrator, Christine Todd Whitman

OPPTS Tribal News would like to welcome new EPA Administrator Christine Todd Whitman. Administrator Whitman was sworn in on January 31, 2001 after serving as the 50th Governor of New Jersey. Whitman carries with her a strong history of environmental leadership, including establishing a new watershed management program, introducing a new funding source to preserve over 1.25 million acres of open space and farmland by 2011, and encouraging redevelopment of cities through programs to streamline cleanups of brownfields while serving as governor.



"... Whitman said she believed environmental and economic goals go hand in hand and that she would continue her record of working to forge strong partnerships among citizens, government and business to produce measurable environmental results of cleaner air, water and land."

(Source: EPA's Office of the Administrator, Biography)

From the Editors...

With great pleasure, the Office of Pollution Prevention and Toxics (OPPT) and the Office of Pesticides (OPP) present the Spring 2001 issue of *OPPTS Tribal News* featuring research in pesticides and risk assessment and new pollution prevention initiatives in tribal communities.

We offer our thanks and gratitude to all contributors providing us with program information and beautiful photographs to highlight in our publication.

Finally, we would like to remind our readers to visit the Tribal Web Site, which features tribal news and events, along with other tribal publications, and links to other EPA offices, such as AIEO, Water, and Pesticides, and other EPA Regions. Visit us at www.epa.gov/opptintr/tribal.

— 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 contact 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.

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.**

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OPPTS Tribal News, U.S. EPA, OPPT
1200 Pennsylvania Avenue (7408), Washington, DC 20460, or
send an e-mail to lauterbach.mary@epa.gov.

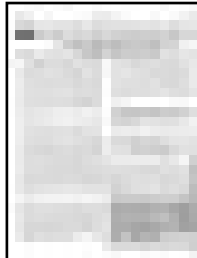
OPPTS Tribal News can be viewed on the Internet at
www.epa.gov/opptintr/tribal

Mary Lauterbach, OPPT Editor
Regina Langton, OPP Editor
Shanita Brackett, Writer
Gilah Langner, Editorial Assistance
Brian Adams, Graphic Design

News & Events

EPA Announces New TRI Reporting Requirements for Lead and Lead Compounds

The U.S. Environmental Protection Agency announced on April 17, 2001 that it will proceed with its Toxics Releases Inventory (TRI) rule to significantly expand information available to the public about lead emissions in their communities. The final TRI lead ruling has been under review by the Administration as part of its broad-based review of new regulations. Under EPA's Persistent, Bioaccumulative, and Toxic (PBT) Chemical Rule, private-sector and government facilities including facilities located on tribal lands or operated by tribal businesses are required to report release and other waste management information if they manufacture, process, or otherwise use lead (except when contained in stainless steel, brass, and bronze alloys) or lead compounds in amounts above 100 pounds. Prior to this new ruling, lead and lead compounds were subject to release and other waste management reporting if manufactured or processed in amounts above 25,000 pounds and otherwise used in amounts above 10,000 pounds. The facility-based TRI information is submitted to the Agency and applicable state and tribal emergency response commissions each year on July 1, and the first TRI reports under the new rule must be submitted by July 1, 2002 for the 2001 reporting year. To gather more information on the new lead and lead compound reporting requirements, press release, and the TRI program, visit www.epa.gov/tri or contact the Emergency Planning and Community Right-to-Know hotline at 800-424-9346.



Update on EPA's Authorization Criteria for State and Tribal Inspectors

In September 2000, EPA distributed the Authorization Criteria to leaders of each federally-recognized Indian Tribe, state agriculture commissioners, and state environmental protection administrators. EPA requested and received many comments on the Criteria from tribes, tribal organizations, and states.

EPA's Office of Compliance is currently considering a number of changes to the Criteria based on the comments received and is drafting, as appropriate, specific responses to the issues raised. After the changes are drafted, management within the Office of Compliance will review the revised Authorization Criteria. For more information, visit

<http://es.epa.gov/oeca/main/statetribal/inspectcrit.html> or contact Jonathan Binder at 202-564-2516 or binder.jonathan@epa.gov.

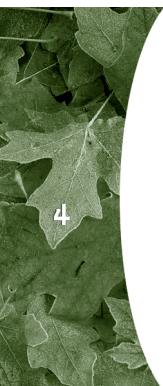
EPCRA Section 313 RY1999 TRI Data Released

EPA's Office of Information Analysis and Access posted on the Internet the 1999 Toxics Release Inventory (TRI) Public Data Release Report (EPA260-R-01-001, April 2001) and the 1999 TRI State Fact Sheets (EPA260-F-01-001, April 2001). The 1999 TRI Public Data Release Report provides an overview of the 1999 TRI data and detailed analyses and supporting tables for TRI releases and other waste management. The 1999 TRI State Fact Sheets report provides a general overview of TRI and the 1999 TRI data in state summary tables and provides a snapshot of each state's releases and other waste management activities. The TRI 1999 Data Release Web site at www.epa.gov/tri/tri99/index.htm also provides links to TRI data access tools, including a new, user-friendly tool called the TRI Explorer. The TRI Explorer provides access to the TRI data to help communities identify facilities and chemical release patterns that warrant further study and analysis. Questions about the TRI Program may be directed to 202-260-1488 or tri.us@epa.gov.

OPPT Plans Grant Program for Indian Tribes

EPA is planning to issue notices of available funds for two grants exclusively for federally-recognized Native American Tribes. One grant program will conduct a baseline assessment of exposure risks of lead poisoning for tribal children. The project will include inspection and/or risk assessment of pre-1978 tribal homes; collection and analysis of blood, paint, dust and soil samples; and training of individuals to perform lead inspections and risk assessments. The second grant will provide for lead educational outreach activities to encourage Indian Tribes to consider continuing such activities in the future. EPA plans to award 25-50 grants in ranges of \$25,000 to \$75,000 under each grant program. These grants will be awarded entirely on the basis of EPA's evaluation of the proposals.

EPA offered a similar tribal grant program last year for blood-lead screening and outreach. This year's programs are expanded beyond blood-lead sampling and also include paint, dust, and soil sampling. EPA expects to publish the notices in August 2001 in the Federal Register and accept applications for a period of about two months. Copies of the Federal Register notice will be available through the National Lead Information Center and the EPA home page at www.epa.gov/lead. For further information, contact the EPA project officer, Darlene Watford at 202-260-3989 or watford.darlene@epa.gov.



National Worker Protection Assessment Workshop

In collaboration with the National Environmental Education and Training Foundation, EPA's Certification and Worker Protection Branch will host the National Assessment of the Worker Protection Program on July 30- August 1, 2001 in Lake Buena, Florida. The meeting will continue with discussions of the agricultural worker protection regulation, implementation and effectiveness of its provisions, enforcement at the state level, and possible future directions for the program. This is the third in a series of workshops and represents an opportunity for EPA, states, tribes, agricultural employers, worker representatives, and other program stakeholders to engage in problem-solving workgroup discussions on major aspects of the regulation. For more information, contact OPP's Sara Ager at 703-308-3003 or ager.sara@epa.gov.

Tribal Subsistence Summit in the Works

EPA is planning for a subsistence summit to be held in Spring 2002. A pre-summit planning group of technical experts in subsistence issues will meet this Fall to prepare for the Summit meeting. The goal of the Summit is to work with Indian tribes to build capacity to address environmental health issues associated with subsistence lifestyles. Tribes will learn to develop 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 also 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. For more information, contact Bille Hougart, OPPT, at 202-260-3345 or hougart.bille@epa.gov.

Update on OPPT Tribal Strategy

By Mary Lauterbach, EPA, OPPT

In Denver, CO this past February, the FOSTTA Tribal Affairs workgroup assembled in a working session to address issues regarding OPPT programs as they relate to developing the OPPTS Tribal Strategy. The workgroup was tasked to identify and prioritize at least four general areas where OPPT should focus its efforts over the next five years. These areas could become more specific and, therefore, be developed into written long-term and short-term goals and objectives.

Following this step, the development process of the OPPTS Tribal Strategy will continue with an efficiency contractor assessing how effective OPPTS programs are in addressing environmental issues in Indian Country and to obtain tribal perspectives on where OPPTS should focus its efforts. There will be at least five outreach meetings throughout the country to help determine this focus. Meeting locations will be announced at a later date. For more information, please contact Caren Rothstein-Robinson at 202-260-0065, Mary Lauterbach at 202-260-9563, or Karen Rudek at 703-305-6005.

Members in Attendance:

Jeff Besougloff, US EPA, American Indian Environmental Division
Chris Casey, Middletown Rancheria
Kris Colt, US EPA, Region 10
Dave Combs, US EPA, Region 8
Fred E. Corey, Aroostook Band of Micmacs
Calvert L. Curley, Navajo Nation
Cynda Deschambaut, US EPA, Region 9
Nancy Rae Gibson, Tribal Environmental Programs
Joanna Glowacki, US EPA, Region 5
Sarah Eagle Horse, US EPA, Region 8
George Hagevik, NCSL
Darlene Harrod, US EPA, OPPT
Bernadette Hudnell, Mississippi Band of Choctaw Indians

Tribal Goals and Objectives of the OPPT Tribal Strategy

- Provide a definition for pollution prevention within the Tribal Strategy for tribes, not just for industry, in order to adopt a much broader definition
- Present more of a field presence in Indian country, such as community outreach, or implement an exchange program that would allow tribal environmental staff to work at EPA, while EPA staff work in tribal environmental programs
- Focus on brownfields model for tribes and on developing alternate fuel sources
- EPA and tribal risk assessment
- More geographical risk assessment through partnership with the Agency of Toxic Substances and ? ATSDR
- More monitoring of toxics by geographical analyses and emergency procedure planning
- Develop more tools for tribes in *Community Right-to-Know* programs
- More *Community Right-to-Know* or *Toxics in Your Environment* reports on ambient exposures
- Tribal exposure
- Health effects
- Cross-media/educational materials
- Communicating risks to tribes

Mary Lauterbach, US EPA, OPPT
Usha K. Little, Native American Environmental Protection Coalition
Georjean Moomaw, Colville Confederated Tribe
Steven Parker, Salt River Pima-Maricopa Indian Community
Phil Robinson, US EPA, OPPT
Reuben Rodriguez
Sharri Venno, Houlton Band of Maliseet Indians
Joan Whitney, Te-Moak Tribe of Western Shoshone

News & Events

Tribes Participate in National Endangered Species Workshop

Representatives of the Shoshone-Paiute and Winnebago Tribes participated in a national workshop on May 2-3, 2001 in Albuquerque, New Mexico to finalize OPP's Endangered Species Protection Program (ESPP). The purpose of the meeting, hosted by OPP's Environmental Field Branch, was to work with state agencies responsible for pesticide regulation, tribes with pesticide cooperative agreements, EPA regional offices, and other federal agencies to examine the details of a Federal Register notice seeking public comment on the final ESPP. The framework for this notice resulted from previous national workshops held in 1997 and 1999.

Topics of discussion at the workshop included the scope of the program, County Bulletins, program priorities, funding, monitoring programs and enforcement issues. Tribal representatives also expressed interest in how best to use limited grant funding to protect threatened and endangered species and the applicability of County Bulletins on Tribal lands. For more information on OPP's Endangered Species Protection Program, contact Mary Powell at 703-305-7384 or powell.mary@epa.gov.

IPM Pilot Project Underway in Indian Country

In a cooperative effort among the Navajo Tribe, EPA's Office of Pesticide Programs, EPA Region 9, and the Bureau of Indian Affairs, a new Tribal Integrated Pest Management (IPM) pilot project has been established to build tribal environmental and custodial capacity on the Navajo Reservation to treat pest problems in schools. The project will allow EPA and the Navajo Tribe to initiate a proven pesticide reduction program on the reservation, demonstrate technological and program planning innovations, develop and disseminate outreach materials, and conduct audits of pesticide use, costs, and exposure, outlining tangible progress for the mitigation of risk to the tribal school community.

The project is designed to be transferable to other tribal school communities. For more information on this tribal pilot project, call OPP's Sherry Glick at 703-308-7035. See related story on page 15.

Tribal Groundwater Protection and Pesticides Management

The Tribal Groundwater Protection and Pesticides Management Team will continue to provide training workshops for tribal employees and tribal organization representatives during the Fall and throughout the coming year. These workshops were originally aimed at assisting tribes in assessing the impact of a proposed Federal Rule and how to comply with that rule. However, at this time the Federal Rule is not moving forward. Nevertheless, team members Ron Cooper, Lil Wilmore, and Irv Provost encouraged tribes to continue learning and stay abreast of the development on this important topic for the safety of their drinking water.

A workshop was held on June 12-15, 2001 and was co-sponsored by the Big Valley Rancheria at Finley, California. At the request of tribes in EPA Region 2, a workshop is being planned in Syracuse, New York in October 2001. A second, advanced workshop is being planned for December in Tampa, Florida. In order to participate in the advanced workshop, attendees must have previously taken an orientation or basic workshop. Another regional workshop is tentatively scheduled for Nevada and will be co-sponsored by Yerington Paiute. The Team also was asked to schedule other workshops in California, New Mexico, and Spokane, Washington.

Finally, the Team meeting agenda now includes a training segment on risk assessment and alternatives assessment, and future agendas may include a segment on understanding FIFRA. If you have feedback or comments, or wish to participate, contact Lillian Wilmore at Native Ecology Initiative, PO Box 470829, Brookline Village, MA. 02447, 617-232-5742, 617-277-1656 (fax), NAEcology@aol.com.

U.S. Signs Treaty on POPs

On May 23, 2001 the United States, represented by EPA Administrator Christine Todd Whitman, signed the Convention on Persistent Organic Pollutants (POPs) at a diplomatic, international conference in Stockholm, Sweden. More than 100 countries negotiated the treaty.

The U.S. played a leading role in pushing for international action on these substances and has already banned and severely restricted the production, use, sale and/or release of these chemicals.

What are POPs?

POPs are toxic, persist in the environment for long periods of time, and biomagnify as they move up through the food chain. POPs have been linked to adverse impacts on human health and animals, such as cancer, central and peripheral nervous system damage, and reproductive and immune system disorders. Because they circulate globally via the atmosphere, oceans, and other pathways, POPs released in one part of the world can travel to regions far from their source of origin. Therefore, they are chemicals of both local and global concern.

What is the POPs Convention?

The Convention on POPs sets forth ambitious, yet realistic obligations, to eliminate or significantly restrict production, use, and releases of twelve POPs, known as the “dirty dozen.” These include the pesticides, industrial chemicals and unintentional byproducts of industrial combustion processes.

How do I get additional information?

OPP is developing a document on POPs, which will be posted on OPP’s international home page in the near future. Additional information can be found at EPA Websites www.epa.gov/pesticides and www.epa.gov/pcb/, United Nations Environment Program Website www.irptc.unep.ch/pops/, and U.S. Department of State Website www.state.gov/www/global/oes/.

Third TPPC Meeting

On March 8-9, 2001, tribal representatives from across the United States gathered in Arlington, Virginia for the third national meeting of the Tribal Pesticide Program Council (TPPC). The meeting included discussions on tribal subsistence issues, Section 18 authority, antimicrobial pesticides, and pesticide disposal, among other topics.

TPPC was organized to provide tribes with a forum for discussion on pesticide issues in Indian country. Membership has grown and now includes 42 tribes, 30 of which were represented at the Arlington meeting. The next meeting will be in September 2001 in Arizona. For more information, contact Lillian Wilmore, TPPC Coordinator, at 617-232-5742 or NAEcology@aol.com.

The “Dirty Dozen”

Pesticides

aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, and toxaphene

Industrial Chemicals and Byproducts

polychlorinated biphenyls, polychlorinated dibenzo dioxins and furans, and hexachlorobenzene

Alaskan Native Corporation Receives Largest EPA Contract Ever

In November 2000, EPA, along with the U.S. Small Business Administration, awarded a five-year Information Management Center Services Contract (IMCSC) to the Arctic Slope Regional Corporation's ASRC Aerospace, a small, disadvantaged business enterprise founded by Inupiat Eskimos. Under the \$65 million contract with EPA, ASRC Aerospace provides information management, records management, and library support services at EPA offices. ASRC Aerospace places over 280 employees in 17 cities at 43 library and records management sites. This is the largest contract ever awarded by EPA to an Indian tribe or an Alaskan Native Corporation. The contract was awarded under the authority of the Business Opportunity Development Reform Act of 1988, which permits non-competitive awards to small, disadvantaged tribal firms to provide business development opportunities.

Specifically, ASRC Aerospace assists EPA by managing collections of scientific and technical information and data, responding to requests for information, and developing virtual services to reach the public and Agency staff at their desktops. ASRC also supports database training, document conversion, imaging, data collection, indexing, inventory control, metadata creation, records scheduling, archiving, and preservation. In addition, ASRC Aerospace maintains Internet and Intranet sites, including EPA's main homepage, www.epa.gov, and supports the United Nations Environment Programme through INFOTERA/USA to support international environmental information services.

ASRC Aerospace is a wholly-owned subsidiary of ASRC. Owned by over 7,500 Inupiat Eskimos, ASRC actively manages lands, resources, diversified operating subsidiaries, and investments throughout the world in order to enhance Inupiat culture and economic freedoms. ASRC is currently one of the largest of 13 Alaska Native Claims with numerous other subsidiaries across the United States. For additional information, contact Paul Dawson, 202-564-4473, dawson.paul@epa.gov, or Annette Duley, 202-564-4739, duley.annette@epa.gov.

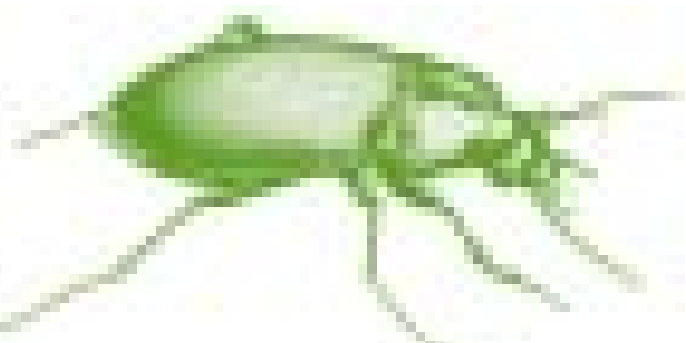
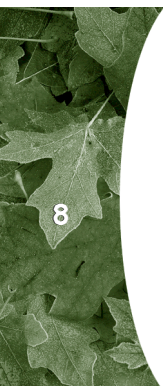
Preservation of Natural History Collections

From April 6, 2001 to April 9, 2001 the National Conservation Training Center, in Shepherdstown, West Virginia, held a retreat to address the preservation of Native American and natural history collections contaminated with pesticide residue and issues surrounding repatriation of contaminated collections. The retreat was sponsored by the Society for the Preservation of Natural History Collections, National Park Service, and the Museum of the American Indian.

During the retreat, 39 Native Americans, museum and preservation professionals, scientists, public health officials and related representatives participated in several discussions topics, including sampling and testing; tribal perspectives and training; and exposure and risk assessment.

Dr. Ana Maria Osorio of EPA's OPP contributed to the topic of exposure and risk assessment.

As noted in the retreat's Executive Summary, "...There was a remarkable level of consensus among the participants on methods to address the problems associated with contaminated collections, particularly collections covered by the National Historic Preservation Act and the American Graves Protection and Repatriation Act." This respectful exchange of subject matter points and counterpoints produced plans to have proceedings from the Symposium published for distribution to Native American groups by December 2001. In addition, a Fall 2001 WebSite is scheduled to facilitate further efforts of the retreat's working groups and implement these action plans. For further information, contact Dr. Judy Bischoff, Conservation Scientist, Department of Conservation, National Park Service at 304-535-6146 or judith_bischoff@nps.gov.



Research Needs within Indian Country and Alaska Native Villages

The National Environmental Justice Advisory Council (NEJAC) held a meeting on May 23-26, 2000 to discuss research needs in Indian Country. EPA also published the Environmental Justice and Community-Based Health Model Discussion and Recommendations Report based on findings and discussions presented at this meeting. The NEJAC meeting was held in order to provide advice and recommendations for strategies and areas of research that should be pursued to achieve more effective and integrated human health assessments and risk prevention efforts. The meeting also addressed socioeconomic status and cultural factors that may contribute to human health and environmental issues.

As part of the advice and recommendations presented in the NEJAC report, the Indigenous Peoples Subcommittee (IPS) of NEJAC developed advice and a set of recommendations for EPA concerning the environmental health and research needs within Indian country and Alaska Native villages. The subcommittee addressed questions, such as:

- What are primary environmen-



tal and human health concerns within Indian country and Alaska Native villages?

- What are the existing research needs within these communities?
- What is needed for an effective environmental health programs and research agenda?
- What role should EPA have in developing and supporting an environmental health program and research agenda?
- What agencies and organizations should be involved in creating and implementing an effective environmental health research agenda?

The subcommittee also reviewed the needed improvements of infrastructures required to support research within Native communities and implement changes based on findings. As a result, IPS recommends that EPA support legislative initiatives, such as the Indian Health Care Improvement Act, assert a leadership role among federal agencies in devel-

oping new financing mechanisms and leveraging all available resources to implement research projects, and support innovative and sustainable technologies within Indian country and Alaska Native villages.

In order to support tribes with environmental health research, including establishing baseline data, IPS recommends that EPA:

- Consult with federally-recognized tribes and involve members of American Indian and Alaska Native communities in designing, planning, and implementing specific environmental health research that reflects traditional and cultural practices, along with needs and concerns,
- Ensure that environmental health research data is reported back to tribal governments and native communities clearly and promptly,
- Preserve the confidentiality of individuals contributing environmental health data,
- Identify the benefit of research to tribal governments before, during, and after the completion of research projects,

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Research

Research Needs within Indian Country and Alaska Native Villages

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- Ensure that researchers obtain all approvals from the appropriate tribal government or review board before conducting research,
- Review all available baseline environmental health data and take prompt steps to address data insufficiencies,
- Request that the Indian Health Service make its annual data on health status readily available to each tribe, native community, and other federal agencies, and
- Along with federally-recognized tribes and tribal organizations, conduct research, studies, and monitoring programs to determine the effects of human exposure to environmental hazards, such as persistent organic pollutants; persistent, bioaccumulative, and toxic pollutants; nuclear resource development, and contamination of water sources and the food chain.

Finally, IPS recommends that EPA collaborate with other federal agencies to ensure that federal agency staff members and managers are trained in federal Indian law, the history of federal Indian policies and legislation, and tribal culture and government. For more information, contact Danny Gogal, EPA, Office of Environmental Justice, at 202-564-2576 or visit <http://es.epa.gov/oeca/main/ej/healthmodel.htm>.

Groundwater Pesticides Management Plan Development by the White Mountain Apache Tribe

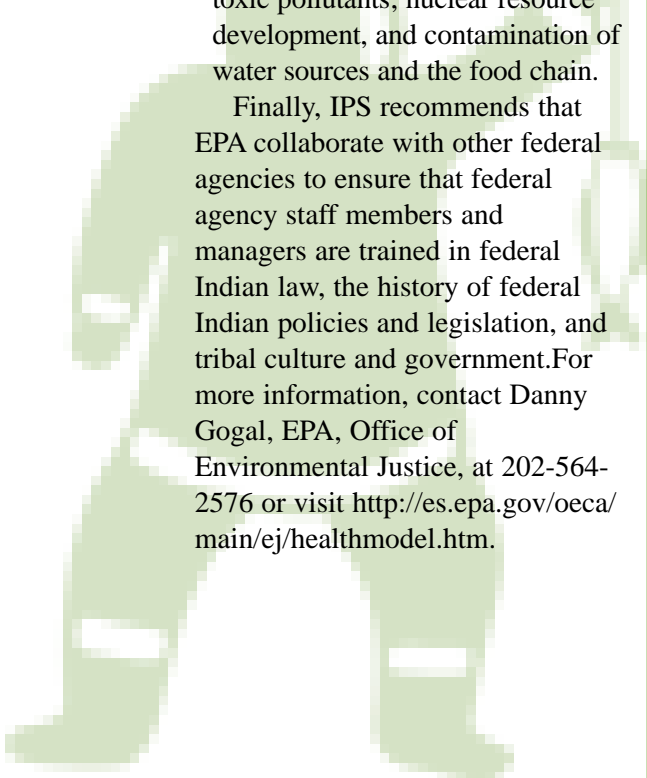
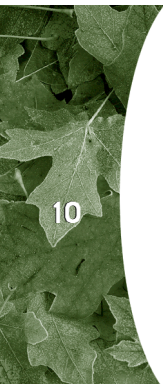
By Laurel J. Lacher, Senior Hydrologist

The White Mountain Apache Tribe, located in east-central Arizona on the Fort Apache Indian Reservation, is developing an integrated groundwater-pesticides management plan to promote careful and sustainable use of pesticides and herbicides to protect drinking water sources on the Reservation.

In order to determine the extent of pesticide use on the Reservation, the Tribal Hydrology and Water Resources program conducted a study of government agencies and private businesses on the Reservation. Most facilities suggested that pesticides are used mostly as a preventive measure in offices, schools, and hospitals, and routine spraying for insects and rodents comprises most of the pesticide use in Tribal communities. The Arizona Department of Transportation also sprays highway margins for toxic weed control and improved visibility.

The results of this study will enable the White Mountain Apache Tribe to develop standard protocol for the handling, use, and storage of pesticides and herbicides on the Reservation. The Tribe also is currently reviewing similar codes from other tribes that have extensive experience with pesticide use. After completion and approval, the groundwater-pesticides management plan will be incorporated into the White Mountain Apache Tribe's Eco-System Management Code.

US EPA, the Spray Drift Task Force, and the American Association of Pesticide Safety Educators are pleased to announce a second conference on Pesticide Spray Drift. This conference is targeted at pesticide regulators, pesticide educators, industry representatives, pest control advisors, and pesticide applicators. This two-day conference will be held in Sacramento, California on September 5-6, 2001. Meals, notebook and CD-rom will be provided through the registration fees. There will be limited seating, so register early. For more information on registration fees, hotel accommodations, and ground transportation, please visit <http://pep.wsu.edu/ncodm/conf01.html> or contact Carol Ramsay, Pesticide Education Specialist, Washington State University at P.O. Box 646382, Pullman, Washington 99164-6382, 509-335-9222, 509-335-1009 (fax), or ramsay@wsu.edu.



Learn about Contaminants in Northern Canada

Source: *Highlights of the Canadian Arctic Contaminants Assessment Report: a Community Reference Manual, 1997.*

Within the last decade, studies have shown that chemical contaminants from industrial and agricultural activities outside of Canada have migrated to the North by natural processes.

What are these contaminants? Where do they come from? How do they migrate to the North? How is wildlife affected? Does this have any bearing on human health? Is traditional food safe to eat? The answers to these questions and many others are found in *Highlights of the Canadian Arctic Contaminants Assessment Report: a Community*

Reference Manual, 1997. Throughout this document, Northern communities, as well as others seeking knowledge of contaminants and their effects on subsistence lifestyles, can review trends in contaminant exposure, study the results of research and data analyses, and learn prevention techniques that will help to preserve the balance between traditional communities and the environment.

This reference manual was produced by the Northern Contaminants Program and prepared in consultation with Northern Canadian Aboriginal organizations and communities. The Northern Contaminants Program (NCP) was established because of concerns about contaminants in traditional/country food north of 60 degrees, and the effects of contaminants in the Arctic environment on human and ecosystem health.

Presented below is a snapshot of valuable information found in this community reference manual. A summary is also presented in the NCP brochure, *The Northern Contaminants Program, 2000.*

What are these contaminants? Contaminants of concern for the NCP are organochlorines, metals, and radionuclides. Organochlorines, such as polychlorinated

“The ultimate goal of the Northern Contaminants Program (NCP) is the reduction or elimination of contaminants in traditional/country food. The NCP also puts emphasis on providing Northerners with the information they need to make their own decisions, participate in the issues, and contribute to solutions.”

biphenyls (PCBs) and toxaphene, are manufactured chemicals found in pesticides and combustion processes. Metals, such as mercury and lead, occur naturally in the environment, but are also released to the environment through industrial activities, such as mining, smelting, and coal burning power generation. These heavy metals are harmful to human health and the environment when present in excessive concentrations. Radionuclides are atoms that decay and emit radiation and may occur naturally in the environment or result from atmospheric testing of nuclear weapons and nuclear waste disposal in oceans.

Where do they come from? Because most contaminants of

Continued



Research

concern are not manufactured or used in Canada, it is believed that industries in other countries produce many contaminants that migrate to the North.

"...analyses of blood, milk, and hair samples of Northerners who consume marine animals have shown, in some cases, elevated levels of contaminants."

How do they migrate to the North?

Contaminants are "carried" to the North by air within winds and clouds, oceans, ice, and rivers. Parts of Asia, Europe, and North America are the main source regions for many of these contaminants. Transport by air is the most important pathway.

How is wildlife affected? Some contaminants do not break down in the environment or when eaten by animals. Instead, they stay in the body and are usually stored in fatty tissues or certain organs. As an animal continues to consume contaminants over its lifetime, the levels in the body will increase. Therefore, older animals tend to have higher contaminant levels. This is bioaccumulation. Animals that eat other animals can build up higher levels of contaminants because the concentration increases with each step along the food chain, from prey to predator. This is called biomagnification. The most vulnerable animals are those higher in the food chain. For example, marine

animals, such as polar bears, whales, and seals, usually have higher contaminant levels than terrestrial animals since they are higher in their food chains.

Does this have any bearing on human health?

Yes. Because traditional/country food is the primary source of many important nutrients and a part of the daily culture for Northern people, many are exposed to levels of contaminants that are of concern.

Is traditional food safe to eat?

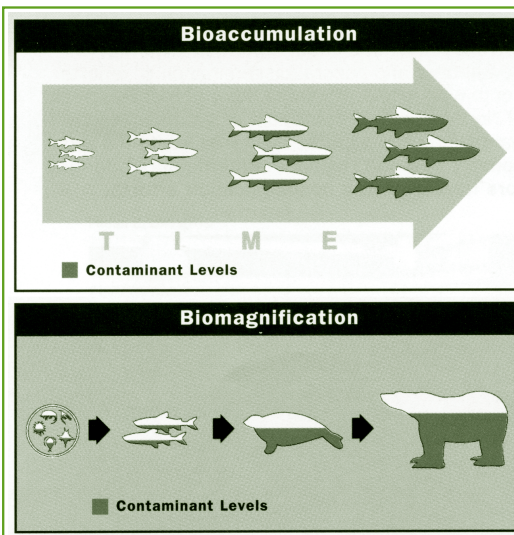
Research on the possible health effects of exposure to contaminants is being conducted in

source of many important nutrients and often more nutritious and less expensive than store-bought food. In addition, traditional/country food is strongly linked to the social, cultural, and spiritual well-being of Aboriginal peoples. Infants and unborn children are thought to be most vulnerable to effects of contaminant exposure.

Because many of the contaminants entering Northern Canada come from other countries, reduction of contaminant levels in the North requires international actions. The NCP is participating in international action and initiatives on contaminants through the Arctic Monitoring and Assessment Programme, the United Nations Economic Commission for Europe, and United Nations Environment Program Global Agreement on persistent organic pollutants.

For more information on contaminants in the North or the NCP, visit www.inac.gc.ca/ncp or contact the Department of Indian

Affairs and Northern Development, Northern Contaminants Program at 10 Wellington Street, Hull, Quebec, Canada K1A 0H3, 819-953-8109, 819-953-9066 (fax), ncp@inac.gc.ca.



Northern Canada and around the world. Northerners need a clear understanding of the risk of contaminants in traditional/country foods in relation to the benefits of a traditional diet and the consequences of abandoning this diet. Traditional/country food, in many cases, is the primary



Cultural Risk Assessment and Quality of Life Issues

Source: "Using Eco-Cultural Dependency Webs in Risk Assessment and Characterization of Risks to Tribal Health and Cultures," *Environmental, Science, & Pollution Resources, Special Issue 2, 2000*

While indigenous communities face environmental, social, cultural, and economic problems related to pollution, many organizations rely on risk assessment and exposure models to indicate problem areas, origins of pollution, environmental contamination, and resulting health effects. Because indigenous lifestyles rely on Native lands and resources, evaluation of risks from contamination, and therefore risk assessment tools, must integrate human physiology and mental health, ecological health, socio-economic health, and cultural and spiritual health within a single framework.

Written by Stuart G. Harris, Confederated Tribes of the Umatilla Indian Reservation, and Barbara L. Harper, International Institute for Indigenous Resource Management, "Using Eco-Cultural Dependency Webs in Risk Assessment and Characterization of Risks to Tribal Health and Cultures" presents a methodology for adding social, cultural, and economic risks to the conventional risk assessment framework, which normally provides computer-generated results of fate and

transport models and exposure scenarios. Their research of risk assessment appropriate for indigenous communities focuses on understanding the entire eco-cultural system and provides suggestions for improving risk assessment through the use of dependency webs.

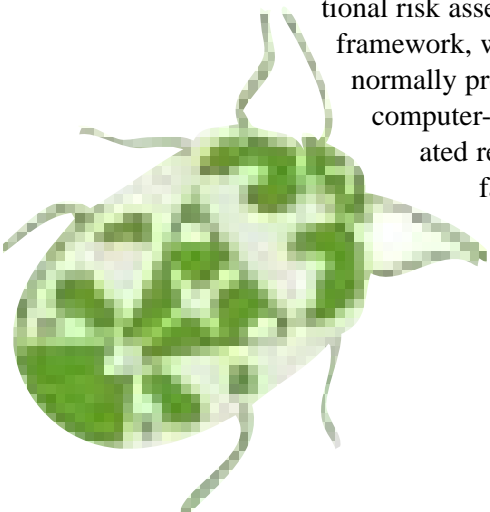
Harris and Harper began examining risk assessment methods to evaluate tribal risks at the Department of Energy, Hanford Site, and discovered that conventional methods were extremely inadequate. As a result, they developed a human exposure scenario that reflected subsistence activities and lifestyles practiced by the Confederated Tribes of the Umatilla Indian Reservation. In addition, they incorporated EPA's Comparative Risk method, which includes a community quality of life component, in order to reflect traditional tribal cultural values and to capture the impacts of contamination to the tribal culture. Finally, this research team utilized the natural-cultural resource dependency web, based on cultural ecosystem stories, developed by the Tulalip Tribe and EPA. The resource dependency web helps to identify the resources, uses, functions, and

services associated with a resource or area that is at risk from contamination, and therefore includes many elements

Eco-cultural System: "People and biota interlocked in a co-adapted system of behaviors and ecologies that is sustainable over time, which is now severely strained, even without the addition of contamination."

important to the affected community.

For more information on eco-cultural dependency webs and risk assessment, contact Stuart G. Harris, Confederated Tribes of the Umatilla Indian Reservation, Special Science and Resource Program, P.O. Box 638, Pendleton, OR 97801, stuartharris@ctuir.com, 541-966-2408, and Barbara L. Harper, International Institute for Indigenous Resource Management, 444 South Emerson Street, Denver, CO 80209, bharper@nwinform.net, 509-967-5174.



A Look at Pollutants within the Arctic

Source: *Arctic Pollution Issues: A State of the Arctic Environment Report, Arctic Monitoring and Assessment Program, June 1997*

The *Arctic Pollution Issues: A State of the Arctic Environment Report* examines the levels of anthropogenic pollutants and their effects within the Arctic environment. The report presents the findings of the Arctic Monitoring and Assessment Program, established in 1991, in their assessment of contaminants and pollutants in the eight Arctic countries, Canada, Denmark/Greenland, Finland, Iceland, Norway, Sweden, Russia, and the United States.

Pollution within the Arctic is the focus of this report in order to evaluate contaminants within

“The most exposed animals to many contaminants are those high in the food webs, such as marine mammals, including polar bears, and birds of prey, but also some fish species.”

Arctic countries and their effects on humans and the environment. Communities with the Arctic are closely linked to local resources, and diets of indigenous and other Arctic people consist of subsistence foods, therefore, placing these communities at high risk to environmental contaminants. The report addresses contaminant sources and pathways, contaminant levels, trends, and effects, geographical areas of concern,

human exposure, and potential threats, as well as gaps in current understanding and research.

As a result of research, there are sources within the Arctic and outside of the Arctic that contribute to pollutants of concern. Outside of the Arctic, exists persistent organic pollutants, including organochlorine pesticides, polychlorinated biphenyls, chlorinated dioxins and furans, and polycyclic aromatic hydrocarbons. Sulfur and nitrogen compounds associated with industry, energy production, and transport are also present, while heavy metal contamination results mainly from industrial processes within Europe and North America.

Inside of the Arctic, similar pollutants arise from different sources. Polychlorinated biphenyls are found in decommissioned (Distant Early Warning) Line sites in Canada, while chlorinated dioxins and furans are released from smelters in Norway. Heavy metals result from mine sites and industrial activities within Arctic areas.

According to the results of the report, contaminants typically travel with winds and in rivers and ocean waters to Arctic areas. Also, human and animal exposure and health risks are mostly affected by the presence of polychlorinated biphenyls and pesticides.



Researchers and scientists within the Arctic Monitoring and Assessment Program also presented recommendations within the report, including human health advice, suggestions for keeping indigenous people active and interested in research, international strategies to protect the Arctic from environmental contamination, and further research on contaminant levels, trends, and effects of pollution.

Further information on the Arctic Monitoring and Assessment Program and pollutants research can be found in a related document, *AMAP Assessment Report: Arctic Pollution Issues*. You may also contact John Calder, National Oceanic and Atmospheric Administration, at 301-713-4023 or john.calder@noaa.gov or visit www.amap.no/assess/assess.htm.