



"Sustain the Mission—Secure the Future"

On Friday, November 19, EPA and the Army Environmental Policy Institute (AEPI) met at the Woodrow Wilson International Center for Scholars in Washington, DC, in what was the culmination of a series of meetings to explore opportunities for greater collaboration, such as development of demonstration projects between the two agencies. Of particular interest to AEPI were EPA programs such as Smart Growth, Performance Track, and the National Center for Environmental Research's (NCER) Collaborative Science and Technology Network for Sustainability. Representatives from each of these programs delivered presentations that would later serve as the basis for discussing potential demonstration projects.

Strategy for the Environment: Sustain the Mission—Secure the Future," which can be viewed at https://www.asaie.army.mil/Public/ESOH/1ESOH_default.html. The foundation for the strategy is built on the principles of sustainability and already has been initiated successfully at a number of Army installations such as Forts Bragg, Campbell, Gillem, McPherson, and Lewis. Also of interest was the ecological footprinting tool promoted and used by the sustainability experts at Redefining Progress, a nonprofit group. Michel Gelobter, Executive Director, presented the ideology behind the tool and the results of footprinting assessments completed at the Fort Campbell, Gillem, and McPherson installations.

On October 1, 2004, Les Brownlee, Acting Secretary of the Army, approved the "Army

Sustain continued on p. 2

CRADA Training in Las Vegas

EPA's National Exposure Research Laboratory (NERL) in Las Vegas, NV, was the site of the December 2, 2004, training course on Cooperative Research and Development Agreements (CRADAs), licenses, and intellectual property for NERL and Office of Air and Radiation (OAR) staff. This was the second training course provided by the Federal Technology Transfer Act (FTTA) staff

since the FTTA program moved to Washington, DC. This course was similar to that provided for NERL, National Health and Environmental Effects Research Laboratory (NHEERL), and Office of Air Quality Planning and Standards (OAQPS) employees in Research Triangle Park (RTP) earlier this fall.

The training highlights the CRADA and license program, providing information on the benefits of using CRADAs to leverage and enhance research, and the process of patenting and licensing inventions. When EPA researchers patent technologies, these then can be licensed out to external parties for commercialization, thereby providing the EPA laboratory and inventor(s) with royalties. Another major component of the FTTA training focuses on how to protect intellectual property so that opportunities to patent inventions are not forfeited.

Additional training sessions are tentatively planned for the ORD laboratories in

CRADA continued on p. 3

A Letter from the Director, Office of Science Policy

As you all know, we are starting the new year off with some uncertainty about the most senior leadership of the Office of Research and Development (ORD) as well as the Agency while we wait for permanent (and in some cases, acting) appointments to be made. In addition, we need to deal with the recent budget cuts and the impact on our staff and functions. I want all of you to know that I am absolutely confident that we will weather these changes and emerge a stronger OSP as the dust settles. Taking a lesson from "real life," when the going gets tough, the tough get going, and I am sure glad I am going with OSP!

Have a safe, healthy, and happy New Year!

What's Inside

"Sustain the Mission—Secure the Future"	1
CRADA Training in Las Vegas	1
Regional Science Liaison Training Workshop	2
Region/ORD Workshop on Animal Feeding Operations: Science and Technical Support Needs	2
ORD/OPPTS Seminar Series	3
Summary of Region/ORD Science Summit IV	3
Scientist-to-Scientist Meeting	4
Staff Corner	5
What Does ORD Have To Do with GEOSST?	5
National and Regional Tribal Caucuses Meeting	6
Working Effectively with Tribal Government Training	6
All Hands Off-Site Meeting	6
7th National Tribal Conference on Environmental Management	7
Tribal Science Priorities of the National EPA—Tribal Science Council	7
National EPA—Tribal Science Council's Tribal Risk Assessment Workshop	7
Crossword	8

Regional Science Liaison Training Workshop

ORD's Regional Science Liaisons (RSLs) participated in interactive discussions on high-priority regional science issues with EPA managers and scientists during their November 16-17, 2004, meetings in Washington, DC. The meeting was scheduled around RSL participation in the November 17, 2004 Region/ORD Science Summit IV (see the article on p.3).

Early on the first day of the meeting, Ira Leighton (Deputy Regional Administrator [DRA]/Region 1) presented, via conference call, to Tom Voltaggio (DRA/Region 3, the ORD Lead Region) and Kevin Teichman (Director, OSP) a request for establishing processes by which short-term, high-priority, cross-regional science needs might be addressed by the Agency. The RSLs contributed to the formation of response options and agreed to work with the National Regional Science Coun-

cil, the Lead Region Coordinators, and others in their region to identify, characterize, and prioritize short-term regional science needs. While the procedures for this broad-based approach are being developed, Region 3 agreed to lead pilot projects to address specific short-term science needs in two priority areas, i.e., landscape characterization and air toxics. OSP committed to helping the regions identify opportunities for addressing their science needs across the Agency and for the ones requiring research within ORD. For the remainder of the day, the RSLs participated in interactive presentations by NCER, the Office of Policy, Economics, and Innovation (OPEI), and the Science Advisory Board on ecosystem valuation and incentives; the Office of Homeland Security on Agency preparations in this area; the OSP on the FTTA; and NCER on the future of risk assessment.

During the afternoon of November 17, the RSLs discussed strategies and procedures for providing regional input to each of the three major new projects presented and endorsed at the summit.

- **ORD science advice during regional decision-making.** By the end of January 2005, RSLs would send Connie Bosma a description of at least two upcoming regional decisions (expected to be made at least 6 months hence) for which the region would like technical advice from ORD.
- **Accountability study pre-proposals.** The RSLs in the Lead Regions will work with their Lead Region Coordinators as necessary to ensure that at least one

RSL Workshop continued on p.3

Region/ORD Workshop on Animal Feeding Operations: Science and Technical Support Needs

The Region/ORD Workshop on Animal Feeding Operations (AFOs), which was held on December 6-9, 2004, in College Park, MD, was co-sponsored by the U.S. Department of Agriculture (USDA) and involved participation from the U.S. Geological Survey (USGS), Food and Drug Administration (FDA), and National Oceanic and Atmospheric Administration (NOAA). In addition to EPA and other federal agencies, attendees included representatives from states, academia, and industry.

The major goal of the workshop was to share information on available data and tools that would assist regional staff working on AFO issues address their highest priority scientific and technical support needs, and to identify priority research questions where data are lacking. The workshop sessions were struc-

tured around the top 10 priority research questions identified by the EPA regions prior to the workshop. Each session contained presentations to convey to attendees the regional perspective, the national perspective, and an overview of the state-of-the-science related to each question, for example:

- What are the most significant air pollutants, their sources, and their emission rates from AFO operations?
- What methodologies can be used to distinguish the source(s) of nitrogen and other contamination (e.g., pathogens) in ground or surface waters (i.e., specific animal species, septic tanks, fertilizers)?

AFOs continued on p.4

Sustain

Continued from p. 1

Following the speakers, Dave Rejeski of the Foresight and Governance Project (Wilson Center) both facilitated and participated in a discussion with Alan Hecht (ORD) and Tad McCall (AEPI) on the "Journey to Sustainability." Each talked about how the Army might best achieve its sustainability goals with EPA's help.

The meeting ended with a commitment to hold a larger regional meeting with a broader discussion involving community groups and the Agency's researchers in early 2005 at RTP, given the already active relationship between the Army and Region 4.

For additional information, please contact Anita Street at (202) 564-3626 or street.anita@epa.gov. ■



ORD/OPPTS Seminar Series

October 28, 2004 – Exposure Measurement Results from the Agricultural Health Study/Pesticide Exposure Study

Presenter: Dr. Kent Thomas, NERL, ORD

To quantify cancer and noncancer health risks in the agricultural community and to study the relationship between agricultural exposures and disease, the National Cancer Institute, the National Institute of Environmental Health Sciences, and EPA are working on a collaborative research effort—the Agricultural Health Study (AHS). EPA's NERL is leading a sub-study, the AHS Pesticide Exposure Study, to directly measure exposures resulting from the agricultural use of 2,4-D and chlorpyrifos for a subset of pesticide applicators and family members. Dr. Thomas presented urinary biomarker and personal exposure measurement results for pesticide applicators and urinary biomarker measurement results for spouses and children. Associations between measurements were presented with a discussion of relationships between exposures,

work practices, and hygiene for data analyses completed to date.

November 3, 2004 – Utility of Sperm Measures in Reproductive Toxicology and Risk Assessment: Of Mice (or Rats) and Men

Presenter: Dr. Sally Perreault Darney, Acting Director, Reproductive Toxicology Division, NHEERL, ORD

Evaluation of semen quality (sperm numbers, motility, morphology) is an established clinical test used in the diagnosis and treatment of male infertility. Recent concern about environmental influences on male reproductive health (e.g., declining sperm counts) has led to the use of semen analysis as an indicator of toxicant-induced changes in environmental and occupational epidemiology studies. In these cases, sperm qualities are interpreted as reflecting testicular and/or

Seminar Series continued on p.6

Summary of Region/ORD Science Summit IV

November 17, 2004
Jefferson Hotel, Washington, DC

Tom Voltaggio (DRA/Region 3), representing the new Lead Region, opened the Region/ORD Science Summit IV on November 17 in Washington, DC, by welcoming Paul Gilman (AA/ORD) to his final summit in the series of workshops to address high-priority regional science issues. This event marked the fourth such meeting of DRAs and ORD senior management to discuss ways to enhance the ORD regional partnerships and build science capabilities in the regions. Topics included progress on the implementa-

tion of recommendations in the Regions' Science in Regional Decision Making report, Environmental Monitoring and Assessment Program (EMAP)/Regional EMAP (REMAP) in FY04 and FY05, the National Academy of Sciences (NAS) reviews on perchlorate and dioxin, and a discussion of region/ORD communication issues. ORD senior managers gave presentations on additional topics:

- Tim Oppelt, Director, National Homeland Security Research Center (NHSRC),

Summit continued on p.4

CRADA

Continued from p.1

Athens, GA, and Cincinnati, OH, later this spring. An online training course also is planned for employees who cannot attend one of the training sessions.

For more information, please contact Laurel Schultz at 202-564-3917 or schultz.laurel@epa.gov or Kathleen Graham at 202-564-2678 or graham.kathleen@epa.gov. ■

RSL Workshop

Continued from p.2

good proposal is submitted within each media to Rebecca Calderon, Director, Human Studies Division/NHEERL, by mid-January. All RSLs will work within their respective regions to develop good proposals to be submitted to the Lead Region Coordinators (or directly to Rebecca if desired by the region).

- **State Outreach.** RSLs will collaborate with their DRAs and others in the region to identify appropriate state outreach contacts with whom OSP (Megan Grogard – lead) can work to establish networks to state health and environmental officials for the purpose of making problem-directed ORD science and tools available to the states.

For further information, contact David Klauder at (202) 564-6496 or klauder.david@epa.gov. ■

OSP Update Contributing Writers

- Maryellen Radzikowski
- David Klauder
- Kathleen Graham
- Greg Susanke
- Claudia Walters
- Ruth Partridge
- Anita Street

For more information on the *OSP Update*, contact Susan Peterson at 202-564-1077 or peterson.susan@epa.gov.



Scientist-to-Scientist Meeting

Recent epidemiologic studies have associated one's proximity to roadways with a variety of adverse health outcomes, including asthma aggravation and incidence, birth outcomes, cancer, and mortality. The Near Roadway Exposures and Effects Research Meeting, sponsored by the Air Research Coordination Team (RCT), was held on January 4-5, 2005, in RTP to discuss this issue. The meeting began with staff from OAR's Office of Transportation and Air Quality (OTAQ), the Regions, and OPEI's Smart Growth program presenting the policy backdrop for this issue, including federal regulations such as the Mobile Source Air Toxics Rule, conformity determinations, local siting of roads and schools, and initiatives to develop brownfields projects.

The focus then shifted to the science, with ORD staff discussing and interpreting the health and exposure literature connected with near roadway issues. A lively discussion of what the existing science is telling us that may inform policy decisions that need to be made in the immediate future completed the first day of this scientist-to-scientist meeting.

The second day began with a discussion of improving coordination efforts of current research activities within EPA's offices, laboratories, centers, and regions, with the importance of a more comprehensive dialogue and partnering with other organizations (such as the Department of Transportation and the State of California) to coordinate and leverage resources being stressed. The group agreed to develop a White Paper on the topic, with a draft to be available for internal review within 6 months, and to be used in a more comprehensive workshop in early 2006. There also was some preliminary discussion of the design of a research program attuned to the needs of the programs and regions.

In addition, toxicological studies have continued to focus considerable effort on mobile-source related particles and several exposure studies are underway that will characterize the nature of near roadway air pollution exposures.

For more information, please contact Bob Fegley at 202-564-6786 or fegley.robert@epa.gov ■

AFOs

Continued from p.2

- How can the fate, transport, and environmental impacts of pharmaceuticals and pathogens be determined?
- What is the strength of the evidence that demonstrates linkages between exposures to AFO contaminants and incidents of disease?
- What are the best alternative uses of manure (i.e., other than land application)?

Workshop attendees were encouraged to identify priority gaps in available data and tools, and opportunities for collaborative

research/technical support projects to address them. As a follow-up to the workshop, an interagency workgroup comprised of interested representatives from EPA and other federal and state agencies is being organized. This workgroup will develop collaborations for addressing the needs identified at the workshop and a need raised by NAS for better coordination among federal agencies to improve EPA's policy and regulatory activities associated with AFOs.

For additional information, please contact Ron Landy at 410-305-2757 or ronald@epa.gov. ■

Summit

Continued from p.3

provided an overview of the ongoing research and technical support programs sponsored by the NHSRC, identifying the Center's key research areas and forthcoming products addressing regional needs, and emphasizing areas of cross-Agency collaboration.

- Kevin Teichman, Director, OSP, presented ORD's current approach to providing the EPA program offices with science support during the regulation development process. This same service was offered to the regions.
- Rebecca Calderon, Director, Human Studies Division, NHEERL, described the Accountability Research Project, an ongoing Agency effort to experimentally determine whether specific EPA decisions have achieved their intended human health objectives. Program and regional offices were invited to submit preproposals targeting actions or activities for which they wish to measure progress toward specific health endpoints.
- Bill Farland, Deputy Assistant Administrator (DAA) for Science, ORD, expressed ORD's interest in working with the regions to promote ORD science to state public health and environmental decision makers.

The DRAs expressed their support for the projects presented, the follow-up actions to achieve them, and their appreciation to Paul Gilman for his courageous efforts to champion regional science issues during his tenure at EPA after which, Dr. Gilman summarized the meeting highlights.

For further information on the summit, please contact David Klauder at 202-564-6496 or klauder.david@epa.gov. ■

*November '04
thru January '05*

Welcome to Our New Folks!

Amanda Evans joined the Program Support Staff Air Team on January 10. Amanda has a B.S. in Physics from Arkansas State University and an M.S. in Atmospheric Sciences from the University of Washington.

Nicole Pavlos joined the Program Support Staff Water Team on January 10. Nicole has a B.S. in Marine Biology and an M.S. in Biological Oceanography. She earned both degrees at the University of Maryland.

Intra-OSP Staff Moves

Neil Stiber competed for and has been selected to serve in a permanent posi-

tion on the Program Support Staff Waste Team. Neil had been serving in a 3-year postdoctoral position on the CREM Team. Congratulations Neil!

Greg Susanke moved from his position as the Pesticides/Toxics Research Coordinator to serve as the Multi-Media Team's Research Coordinator for Ecological Research.

Details/Training Assignments/ Students/Internships

Marsha Morgan joined OSP on November 8. She served on a Developmental Assignment through the Executive Potential Program with the Immediate Office through January 14. She helped in the preparation and presentation of transition materials that describe ongoing and upcoming environmental decisions, and how ORD can contribute to the science informing these decisions.

Danielle Tillman is serving on a 6-month detail as the Water Team Leader on the Program Support Staff until July 2.

We'll Miss You!

Congratulations and best wishes to **Molly Whitworth** (25 years federal service) and **Sam Williams** (30 years federal service) on their recent retirements!

Congratulations on the New Babies!

Congratulations and best wishes to **Monica Rodia** and her husband Carmen on the birth of their second son, Cole Jared (6 lbs. 12 oz.), on December 23!

Congratulations and best wishes to **Neil Stiber** and his wife Jennifer on the birth of their third child, a daughter named Tamar Shifra (8 lbs. 9 oz.), on January 14, 2005.

What Does ORD Have To Do with GEOSS?

The concept for an "earth observation system" gained international support in early 2003, and since then ORD has played a leadership role within EPA, the U.S. inter-agency working group, and the international Group on Earth Observations (GEO) representing more than 54 countries and 23 international organizations. The Global Earth Observation System of Systems (GEOSS) concept has been described as "being able to take the pulse of the planet" by compiling a system of all databases (or systems), which will revolutionize our understanding of how Earth works. The expectation of GEOSS is to be able to link all Earth-focused data systems—from remote sensing of Earth via orbiting satellites, to ocean surface-based or ground-based direct monitoring, to human health surveillance, to underground or sub-surface

ocean monitoring (plus more)—and to begin to piece together all these separate sensors of Earth, to enable them to work together, as a system of systems.

EPA and ORD involvement with GEOSS began with the first Earth Observation Summit, July 31, 2003, where Acting EPA Administrator Marianne Horinko presented the closing remarks and Gary Foley (ORD) was named co-chair of the "User Requirements & Outreach Subgroup" of GEO. Then, under the White House National Science and Technology Council (NSTC), the Committee on Environment and Natural Resources (CENR) established the Interagency Working Group on Earth Observations (IWGEO), where ORD's Assistant Administrator Paul Gilman played a key leadership role for EPA. In April 2004,

EPA Administrator Mike Leavitt led the U.S. delegation to the second Earth Observation Summit in Tokyo, Japan. In ORD, Gary Foley and John Lyon continue to play the GEOSS leadership role within EPA working with the Office of International Affairs and other EPA offices to finalize the draft Strategic Plan for the U.S. Integrated Earth Observation System—the U.S. contribution to the evolving international 10-year implementation plan for GEOSS, which is to be approved on February 16, 2005, in Brussels, Belgium, at the third Earth Observation Summit.

For more information on GEOSS go to www.epa.gov/geoss/. If you have questions, please contact John Lyon (NERL) at 702-798-2525 or lyonjohn@epa.gov. ■



National and Regional Tribal Caucuses Meeting

The National and Regional Tribal Caucuses met with the EPA National Indian Work Group (NIWG) at a biannual meeting on November 15-18, 2004, at Haskell Indian Nations University in Lawrence, Kansas, to discuss Tribal priority issues, such as:

- FY07 Budget,
- Tribal consultation guidance,
- National Tribal Conference on Environmental Management, and
- Tribal Program Enterprise Architecture.

The Tribal Caucus also held its annual election of officers. The results of the re-

gional elections of National Caucus members and the newly elected officers are available on the American Indian Environmental Office (AIEO) Web Site at <http://www.epa.gov/indian/overtoc.htm>.

The National Tribal Caucus is comprised of Tribal representatives from each of EPA's regions for a total of 18 individuals. Tribal Caucus members are selected by the Regional Tribal Caucuses that consist of representatives from all of the federally recognized tribes within the respective region. Each group meets regularly to discuss implementation of the environmental protection programs for which EPA and the tribes share responsibility as co-regulators. ■

Seminar Series

Continued from p. 3

epididymal toxicity because obtaining direct measures is too invasive (e.g., via testicular biopsy).

In rodents, on the other hand, the testis can be evaluated directly and in detail (testis weight, histology, biochemistry, genomics, and proteomics). Thus, sperm measures in rodent experimental models are used to help characterize the impacts of testicular toxicants and to augment the interpretation of testicular effects.

This seminar highlighted research conducted in NHEERL's Reproductive Toxicology Division that contributes to the use and interpretation of sperm measures in reproductive effects testing and research in both rodents and humans. For example, the research has optimized methods for computer-assisted sperm analysis in rodents and documented specific effects of several toxicants on sperm motility. A kit for home collection of semen is being developed to make it feasible to sample men from remote and diverse locations

and mail the samples to a central laboratory for analysis. Human semen studies in this laboratory and elsewhere also are starting to incorporate new assays for the genetic integrity of sperm and to examine their utility for evaluating environmental effects on male reproductive health and male-mediated developmental defects. Information from parallel studies in test species and humans will contribute to interspecies risk extrapolation, provided important differences between rodent epididymal sperm and human semen are taken into consideration.

Slides: PowerPoint slides and reference material are available on the following EPA intranet site: <http://intranet.ord.epa.gov:9876/development/RCT/PestToxRCT.nsf/1d97341def1e57d185256a5c006ee712/bbb802f009f6d9fa85256f3b006d7be5?OpenDocument>.

For more information about the Seminar Series, please contact Greg Susanke at 202-564-9945 or susanke.greg@epa.gov. ■

Working Effectively with Tribal Government Training

ORD partnered with other offices across EPA to create a comprehensive electronic version of the "Working Effectively with Tribal Government" (WETG) training, making it more readily available to EPA staff than the 1-3 day course offered periodically throughout the year by various offices. The graphical and interactive fashion of the electronic version has been well received by EPA staff and managers and offers cultural, legal, regulatory, and historical background on how to work effectively with Tribal governments. It is available on EPA's intranet site during a pilot period at <http://intranet.epa.gov/optpsval/training/tribal/>.

The WETG training was first developed as a classroom session by EPA's American Indian Environmental Office in 1998 to ensure that the EPA workforce was knowledgeable about the Agency's responsibility to implement its programs in Indian country as outlined in EPA's Indian Policy. ■

All Hands Off-Site Meeting

An OSP All Hands Off-Site Meeting was held at the Wyndham Hotel in Washington, DC, on February 2-3, 2005, to accomplish several goals. First, to get together and have some fun, introduce new staff, renew old acquaintances, and get away from the office. Second, to discuss the impact of the recent decision to reassign the research planning/coordination function from OSP to the National Program Directors (NPD). Third, the meeting provided staff a forum to air their ideas on the future challenges and opportunities on which OSP needs to focus.

Stay tuned for the outcome in the next issue of the OSP Update! ■



7th National Tribal Conference on Environmental Management

The Grand Traverse Band of Ottawa and Chippewa Indians (GTB) will host the National Tribal Conference on Environmental Management (NTCEM) in Traverse City, Michigan, on June 7-10, 2005. The conference will be held at the Grand Traverse Resort and Spa, which is owned by the tribe.

The NTCEM, initiated by OSWER in 1992 and one of the premier environmental events in Indian Country, is now sponsored by all program offices and focuses on multimedia issues.

Attendance for this year's conference is expected to exceed 800 participants

including tribal leaders, tribal environmental managers, tribal scientists, tribal organizations, federal agencies, and other interested entities who will share information, establish partnerships, create alliances, strengthen existing relations, and share solutions about tribal environmental programs and other tribal environmental issues to enhance the environmental protection of native communities throughout the United States. The Grand Traverse Band is in the process of shaping the conference agenda based on suggestions of important environmental issues from tribes across the country. The conference also will provide opportunities for posters, exhibits, and vendors. ■

Tribal Science Priorities of the National EPA—Tribal Science Council

At the November 8-10, 2004, National EPA-Tribal Science Council (TSC) meeting, tribal TSC representatives reassessed the 2002 Tribal Science Priorities to determine whether the issues needed further attention from EPA. The TSC recommended the removal of toxic mold from the 2002 list and identified four new, equally important tribal science priorities that should be addressed concurrently. The tribal representatives clarified the importance of Tribal Traditional Lifeways and emphasized that it serves as an "umbrella" or overarching concept by which all individual science issues are considered and addressed. The current list of priorities includes:

"Umbrella" Tribal Science Priority

- Tribal Traditional Lifeways

New Tribal Science Priorities

- Habitat Loss

- Contaminated Precipitation
- Algal Blooms (e.g., cyanobacteria)
- Environmental Triggers for Respiratory Distress

Revised 2002 Tribal Science Priorities

- Pharmaceuticals in Wastewater (including personal care products, antibiotics in livestock products)
- Research (topics of interest to tribes including global warming and climate change)
- Cumulative impacts
- Dioxin reassessment and reference dose
- Persistent Bioaccumulative Toxics Source Reduction
- Endocrine disruptor chemicals

National EPA—Tribal Science Council's Tribal Risk Assessment Workshop

The National EPA-Tribal Science Council (TSC) and the Pyramid Lake Paiute Tribe hosted a workshop entitled "Addressing Tribal Traditional Lifeways in EPA's Risk Assessment Policies and Procedures," on January 25-28, 2005, in Reno, Nevada. The workshop was designed for tribal or EPA persons with interest or involvement in tribal environmental issues, tribal risk assessments, and Tribal Traditional Lifeways (ceremonial, cultural, and other daily traditional tribal activities). The workshop explored how Tribal Traditional Lifeways can be considered in EPA's risk assessment process with the objectives of establishing a tribal policy for risk assessments by:

- Examining the risk assessment process to identify where Tribal Traditional Lifeways can be incorporated into EPA's existing approach;
- Identifying data, products, and tools that can modify or enhance EPA's risk assessment policies or procedures to incorporate Tribal Traditional Lifeways; and
- Developing overarching principals that account for Tribal Traditional Lifeways in EPA's risk assessment policies and practices. ■

Also discussed was the need for educating the Tribes about networking opportunities, funding, work being done by science organizations, etc., for all tribal science priorities. The TSC is in the process of developing a summary for each issue that will contain a description of the issue, accomplishments or progress on the issue, and proposed actions and products to address the issue. Draft documents are expected in February 2005.

For more information, please contact Claudia Walters at 202-564-6762 or walters.claudia@epa.gov. ■



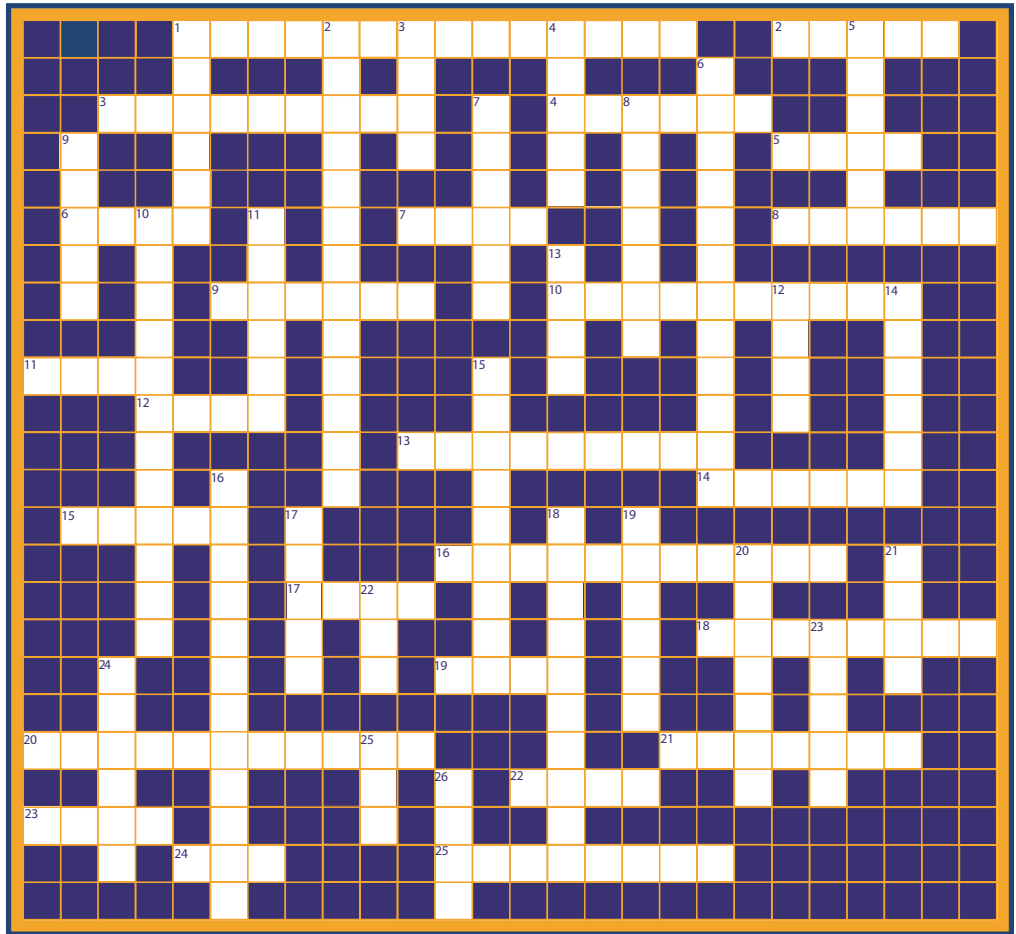
Crossword

Across

- The topic of the "Sustain the Mission" meeting
- Growth that recognizes connections between development and quality of life
- A motivational offer intended to persuade
- Dave Rejeski's center
- Responsible for the Collaborative Science and Technology Network for Sustainability
- Social Care Institute of Excellence
- Heavy metal
- A regularly interacting or interdependent group of items forming a unified whole
- CRADAs allow EPA researchers to do this
- This biopsy determines sperm quality
- Hosted CRADA training course
- NHEERL and NRMRL
- Ecosystem _____ was a topic of the Regional Science Liaison Training Workshop
- Region/ORD Science Summit IV was his last
- Relationship in quantity
- USDA's focus
- Sewage container
- Nutrient of concern with AFOs
- Participated in the AFOs Workshop
- These exposures were topic of scientist-to-scientist meeting
- Fertilizers can contaminate this water
- Met with EPA at the Wilson Center
- Rodents
- Collaborates with EPA on the AHS
- Substance discharged into the air

Down

- _____ the Future
- Topic of Region/ORD Workshop
- A gap in research
- Fort _____ initiated principles of sustainability
- May host future CRADA training session
- Ecological _____ tool used by Redefining Progress
- Distant location
- What EPA researchers can do with an invention
- Focuses on homeland security



- Property of CRADA training session
- Managed by FTTA staff
- Internet addresses
- This program moved to Washington, DC
- Tom Voltaggio represents one
- Region 3's DRA
- _____ Air Toxics Rule
- Additional
- Measured in spouses and children in the AHS Pesticide Exposure Study
- Held November 17 in Washington, DC
- The biomarker described in ORD/OPPTS Seminar
- Participated in AFOs Workshop
- Will be responsible for research planning/coordination for specific program
- EMAP expansion
- Public _____

- NCI, NIEHS, and EPA collaborative study
- Presented at RSL Training Workshop

Solution to October OSP Update Word Find

