

Meeting Reports
February NAEHS Meeting
February 19 – 20, 2014

Breast Cancer and the Environment Research Program (BCERP): 10th Annual Meeting on Extended Environmental Exposures
Madison, Wisconsin
November 6-8, 2013

The Breast Cancer and the Environment Research Program (BCERP) held their annual scientific meeting November 6-8, 2013 in Madison, WI. The meeting followed the usual format of a one-day business meeting open to BCERP members only, followed by a larger public meeting.

Public Meeting

As this was the 10th annual meeting of the program, it was designed to reflect on the progress of the program to date, including a session to showcase highlights of the first phase of the program, a session on current research within the program, and a final session addressing the future of breast cancer research. Dr. Les Reinlib of NIEHS served as the NIH representative on the meeting planning committee, chaired sessions on the past and present accomplishments of the Breast Cancer and the Environment Research Program (BCERP) and presided over the annual Meeting. Drs. Caroline Dilworth, Symma Finn and Claudia Thompsons of DERT/NIEHS also attended the meeting. The meetings were hosted by the University of Wisconsin, Madison led by the principal investigator of the local BCERP project, Dr. Michael Gould.

The Public Session was very well attended with approximately 225 participants. In addition to the usual attendees - scientists, advocates and community partners (both within and outside BCERP) - this meeting attracted a large number of local students— undergraduate as well as graduate students and postdoctoral associates.

The sessions featured BCERP investigators, community engagement experts, and community partners as well as invited speakers. A panel of leading funding agencies was held that featured Linda Birnbaum (Director, NIEHS), Ken Olden (Director, National Center for Environmental Assessment, EPA), Mehl Kavanaugh-Lynch (Director, California Breast Cancer Research Program), and Marc Hurlbert (Executive Director, Avon Breast Cancer Crusade). The visions of these thought leaders for the future of research on breast cancer provided a basis for considerable discussion.

The BCERP Annual Meeting fills a much needed niche that allows the public and advocate organizations to speak directly with investigators and communication / outreach experts, as well as officials from funding agencies, and policy makers. Activities during the meeting included dedicated time for questions and answers, panel discussions, and “Lunch with the Experts.” A particularly useful presentation was given prior to the poster session about “How to Read a Poster.” This talk exemplifies the type of capacity building that BCERP provides to its community partners.

Business Meeting

A closed BCERP business meeting was held on November 6, 2014 for members of the current program. It included brief presentations from the six collaborative teams that have received BCERP Opportunity Fund awards. The day also included a formal meeting of the puberty study and coordinating center investigators with the BCERP External Advisory Board and Working Group (EAB/WG) and a 2-hour “open space interactive discussion”, led by Dr. Claudia Thompson of NIEHS, in which individuals were asked to identify topics of interest in the area of breast cancer and the environment and then break out into smaller groups to discuss.

Future Meeting

The 2014 Annual Meeting is planned for the San Francisco Bay Area, led by Janice Barlow, Director of Zero Breast Cancer.

Annual Meeting of the Superfund Research Program

October 15-17, 2013

Baton Rouge Louisiana

Introduction/Background

The NIEHS Superfund Research Program (SRP) celebrated its 26th anniversary in 2013 at its Annual Meeting in Baton Rouge Louisiana. More than 250 researchers, trainees, and administrators from across the nation gathered to discuss the Program’s current contributions and future directions in new research, technology, communication, and community engagement. It provided a forum to discuss activities in critical areas related to the SRP mission of multidisciplinary research addressing human and environmental health challenges related to Superfund and other hazardous waste sites. Sadly, due to the government furlough, NIEHS staff and other federal attendees were not able to attend.

Meeting Highlights

The main session opened with remarks by Stephania Cormier, Ph.D., the LSU SRP co-director. She discussed the state of the program and mentioned the wide range of SRP scientific disciplines featured in journal publications, grantee research highlights, and community engagement and research translation activities from the past year.

Following Cormier, LSU President and Chancellor F. King Alexander, Ph.D., related the mission of the SRP to his own background, describing how he grew up near a Superfund site and observed negative health effects first hand. He spoke highly of the transdisciplinary group of researchers before him and tasked them with continuing their substantial work to improve human health and the environment in the U.S. and around the world.

“This kind of university-wide research program is exactly the type of approach necessary for LSU to really make an impact in the health of its citizens,” said Alexander. “When you add that to the combined

efforts of researchers at every Superfund site across the country, you get the kind of impact that truly affects a nation. I'm proud that LSU can play a part in that."

The science focused on four main topics: halogenated pollutants, emerging contaminants and pollutant mixtures, developmental and other human health effects, and arsenic and heavy metals. Along with the traditional science presentations, the meeting set aside time for celebrating award-winning students including the 2013 Wetterhahn winner the KC Donnelly Externship winners and student poster winners. In addition to the science sessions, grantees involved in research translation and community engagement gathered separately to participate in discussions related to communication strategies for forming stronger connections with communities, NGO's, and public agencies.

Chemistry in Motion - American Chemical Society (ACS) Fall Meeting

Sept. 8-9, 2013

Indianapolis, IN

Introduction/Background

Superfund Research Program (SRP) Health Science Administrator Heather Henry, Ph.D., organized a symposium titled "Biogeochemical Interactions Affecting Bioavailability and Remediation of Hazardous Substances" at the American Chemical Society (ACS) Meeting in Indianapolis.

Meeting Highlights

Heather Henry (SRP), Mark Maddaloni (Region 2, USEPA) and Kirk Scheckel (National Risk Management Research Laboratory, USEPA) co-chaired a session within the symposium dedicated to *in situ* remediation of lead contaminated soils with respect to environmental and human health concerns. An emerging theme of this session was the special consideration needed for using amending agents to reduce toxic effects of Pb. Understanding the mechanism of the processes that immobilize Pb are key to knowing what the impact of matrix may have on the effectiveness of remediation. For example, certain soil amendments are sensitive to pH changes and under certain pH ranges, will not effectively immobilize lead. In addition, there is growing concern about the unintended consequence of mobilizing other toxic metals when a lead-soil immobilizer is amended to soils. There was a robust discussion about effectively measuring *in situ* remediation effectiveness through bioaccessibility and bioavailability.

In addition to the lead immobilization session, Heather Henry and Jon Chorover, Robert Root (both from University of Arizona) co-chaired a session that drew from the success of the recent SRP R01 bioremediation mechanisms solicitation. This session highlighted microbial-soil interactions for reducing the hazard of mixed metals in mine tailings; mechanisms of chromium bioremediation; and novel biomimetic tools for immobilizing uranium in groundwater.

Recommendations/Outcomes

As a result of this session, the presenters developed a working group to draft a manuscript that targets technology transfer of important information about soil amendments for the purposes of safe urban

gardening. There will also be a poster presentation of this work at the National Remedial Project Managers EPA Training meeting in June since the remedial project managers are the EPA staff who manage and direct cleanup and restoration of Superfund Sites.

H. Henry, N. Basta, Z. Cheng , G. M. Hettiarachchi, M. Maddaloni, M. Naujokas, C.W. Schadt, K. G. Scheckel, "In Situ Amendments to Reduce Lead Hazards in Urban Soils and Gardens" In preparation for Environmental Science and Technology.

Pacific Basin Consortium (<http://www.pacificbasin.org/blog/>)

September 23-27, 2013

Honolulu, HI

Introduction/Background

The Pacific Basin Consortium for Environment and Health (PBC) provides a forum for scientists and engineers to facilitate dialogue and cooperation among industry, governments, and academia to tackle problems associated with hazardous waste production, management, and remediation in the Pacific Basin. This group of diverse professional experts from around the world come together approximately 1 time per year at a meeting forum to discuss the most pressing environment and health issues of our time, engage in cooperative research, and develop and disseminate innovative, sustainable, and affordable strategies for addressing issues affecting the Pacific Basin region. This year, in collaboration with The East-West Center, the PBC brought together distinguished speakers from 19 countries to present their work at the 15th International Conference of the Pacific Basin Consortium for Environment and Health. This conference, "Environmental Exposure in Indigenous Communities", was held from September 24-27, 2013 at the East-West Center, Honolulu, Hawaii.

Meeting Highlights

NIEHS's Drs. Danielle Carlin, Michelle Heacock, Bill Suk, and Gwen Collman participated and gave presentations at the meeting. Scientific sessions included: reducing exposures to arsenic, bioremediation of hazardous wastes, air pollution, WHO programs and emerging issues in the Pacific Basin, nanotechnology and toxicology, water reuse and remediation, environmental exposures in Indigenous Communities, and developing a framework for socially responsible mining. Particular highlights included: (1) Professor Dr. Princess Chulabhorn Mahidol provided a presentation in the opening plenary session entitled "The potential health impact of exposure to environmental pollutants in children." (2) Dr. Bill Suk was honored with the PBC's Inaugural Chairman's Award to recognize his long-standing efforts with the PBC. The award recognized his enormous contribution to reshaping the PBC to focus more on global environmental health, with particular emphasis on children's health. Dr. Suk played a special role in the development of the PBC, helping to transform the organization's mission over time from focusing just on remediation to also include consideration of health effects. (3) This meeting was also the official launch of the WHO project on e-waste. More information about the project can be found at: <http://www.qcmri.uq.edu.au/chep/e-waste-network.aspx>; (4) A specific effort was made to engage and attract students and Post-Docs by offering three training workshops on:

Children's Environmental Health; Integrated Environmental Health Risk Assessment; and Water Systems, Rural Areas and Indigenous Peoples, and a special student oral presentation competition was held and students also presented in a poster session.

Recommendations/Outcomes

A special issue of Reviews on Environmental Health # 15 (Pacific Basin Consortium for Environment and Health) will be made available soon with specific recommendations and outcomes from each of the scientific sessions presented at this meeting.

Networking Meeting for Effective Collaboration in Children's Health - East-West Center

September 28, 2013

Honolulu, HI

Introduction/Background

The principal investigators of the World Health Organization Children's Environmental Health Collaborating Centers (WHO CEH CC) met at a Satellite meeting following the 15th International Conference of the Pacific Basin Consortium in September.

Meeting Highlights

The meeting was hosted by the East-West Center, the Children's Health and Environment Program (CHEP) and the National Institute of Environmental Health Sciences (NIEHS). The meeting was co-chaired by Maria Neira, Department of Public Health and Environment, World Health Organization (WHO) and Gwen Collman, National Institute of Environmental Health Sciences (NIEHS) and marked the official appointment of the NIEHS as an official WHO Collaborating Center. The meeting gathered representatives from formal WHO Collaborating Centers as well as representative from informal collaborating centers in Children's Environmental Health (CEH).

The meeting objectives were to: 1) Identify groups that may be interested in further involvement in the network and their roles; 2) Plan for WHO Children's Environmental Health projects and upcoming events; 3) Discuss the development of the updated Framework of Action on Children's Environmental Health; 4) Plan for the 4th International WHO Conference on Children's Health and the Environment; and 5) Identify funding needed to complete future projects and the next steps for the network.

Recommendations/Outcomes

With input from all the representatives, several recommendations and follow on activities were proposed. These included identification of data gaps in areas such as prenatal risk assessment, the need to establish, conduct and coordinate training workshops, and the development and strategic placement of thought pieces on CEH to raise awareness. Rising as a top priority were strategies to facilitate networking among the WHO CEH CCs, a term of reference in the Designation of the NIEHS as a WHO CC. These discussions led to the development of a post-meeting draft NIEHS WHO CEHC CC Work Plan to support networking activities to improve communication and build capacity.

10th International Phytotechnologies Society Meeting

Sept. 30 – Oct 2, 2013

Syracuse, NY

Introduction/Background

The International Phytotechnology Society (IPS) is a nonprofit, worldwide professional society comprised of individuals and institutions engaged in the science and application of using plants to deal with environmental problems. IPS's mission is to promote research, education, training, and application of those technologies that use plants to deal with problems of environmental contamination, carbon sequestration, alternative fuels, and ecological restoration.

Meeting Highlights

The meeting attracted 220 attendees from 20 countries. Half of the attendees were students (up from 20%) which made for high-quality, cutting-edge presentations. NIEHS funding provided travel support for 33 "Phytoscholars" a record number for this training/mentoring program. The meeting topics include phytotechnology research areas such as fate and transport of contaminants; ecorestoration and habitat creation; biofuels; health benefits; lessons from the field; nanoparticles; greenroof technology; and carbon sequestration. In addition, workshops were given to provide practical training on "Selection of Phytotechnology Remedies: knowing when to use phytotechnologies" (organized by David Tsao and Walt Eifert) as well as a Green Roof Workshop organized by Dr. Clayton Rugh, Xero Flor America LLC.

As this was the 10-year retrospective of the IPS meetings, video clips were broadcast throughout the plenary sessions providing the perspectives of phytotechnologists at various stages in their career (students, mid-career, retirement age). A recurring comment from the current and retiring investigators was their gratification in hearing the enthusiasm of the graduate students in the potential growth areas for the field of phytotechnologies.

The 2013 annual meeting of the IPS included a session on health and exposure risk, co-chaired by Dr. Heather Henry and Dr. Stephen Ebbs. The Health and Exposure Risk session was initiated with a mini-plenary talk (Dr. Ebbs) as a general overview of the relevance of this session to the conference and to the field of phytoremediation in general. The session was standing room-only and featured five oral presentations by authors from three countries. One of the talks focused on how plants can serve as passive sensors for VOCs, and therefore act as monitors for indoor air quality. Three talks focused on metal or metalloid uptake into crop plants, all of which touched on the potential influence of that accumulation on human dietary exposure. The final talk pushed the boundaries of the session by extending the concept of phytotechnologies with a discussion of phyto-therapy as a rehabilitation tool.

Recommendations/Outcomes

Lessons learned for this retrospective meeting was that broadening the scope of the IPS from strictly phytoremediation to other plant-based technologies has helped the society meet growing demands of sustainability and public health. A particular area of emphasis that SRP envisions is the urban gardening angle, which has received a lot of attention particularly with our EPA colleagues in light of CDC lowering

the safe level of lead. Phytotechnologists have much to contribute to prevention of metals uptake into plants both in terms of sciences and communication/community engagement. In addition, in terms of exposure science, there is much potential for further exploration of biomonitoring with plants and remediation.

Epigenomics: A Roadmap to the Living Genome Meeting

October 20-21, 2013

Boston Park Plaza Hotel in Boston, MA

Introduction/Background

This was the final all-hands investigators meeting for the Common Fund supported Roadmap Epigenomics Program. This has been an annual meeting for all PIs and staff with projects supported in this program. As this was the last year of funding for the Roadmap Epigenome Mapping Consortium, this was a last opportunity to bring this group of scientists together in a meeting that was supported by CF resources. The meeting agenda was developed by Astrid Haugen, Lisa Chadwick, Kim McAllister and Frederick Tyson from NIEHS and John Satterlee from NIDA. This purpose of this meeting was to bring all of the RM Epigenomic Program together to discuss recent finding and discuss future directions. The meeting was also open to the public and approximately 180 people participated.

Meeting Highlights

The first session chaired by John Satterlee (NIDA) was entitled, New Tools and Technologies and featured talks on novel technologies developed by this program for imaging chromatin and establishing epigenetic map connectivity through chromatin signatures. The second session, Epigenomic Processes in Normal Cells and Tissues, chaired by Fred Tyson, featured talks on epigenomics analysis of pluripotency and lineage speciation and prediction of human epigenomes by DNA motifs. (The third session was a poster session.) The fourth session chaired by Lisa Chadwick was the first of two sessions on Epigenomics and Disease and featured talks addressing topics such as the epigenomics and transcriptomics associated with insulin resistance, epigenomics profiles of monocytes in human obesity, as well as talks highlighting epigenomic changes associated with environmental/occupational exposures and epigenomic patterns and processes associated with cancer. The fifth session was chaired by Mike Pazin (NHGRI) and focused on epigenomic diversity and analysis. Its talks were highlighted by a discussion of the integrative analysis of 100 complete epigenomes and higher order chromatin organization of the inactive X chromosome. Kim McAllister chaired the final session of the meeting which was the second session focused on epigenomic profiles associated with disease outcomes. The highlights of this session included talks on genomic and epigenomic profiles of neurodegenerative diseases.

Recommendations/Outcomes

The major recommendation to come out of this meeting was based on the tremendous exchange of information and data shared amongst the various components of the multi-faceted Roadmap Epigenomics Program. That recommendation was to continue convening this meeting with these

investigators because the program's data production and analysis is continuing, despite the fact that the dedicated funding for this meeting has terminated. The outcome, based on this recommendation, is that two PIs from the Roadmap Epigenome Mapping Consortium will submit a U13 application to support convening this meeting over the next few years to facilitate the interaction of these investigators supported by the RM Epigeonomics Program.

The NIEHS/NIH Deepwater Horizon Academic-Community Research Consortium

October 22-23, 2013

NIEHS, NC

Background/Introduction

Since 2011, NIEHS has led an NIH-funded research consortium to study the after effects of the Deepwater Horizon oil spill on Gulf of Mexico coastal residents. The consortium consists of four academic sites – Louisiana State University, Tulane University, University of Florida and University of Texas Medical Center, Galveston – and over 45 community organizations who have partnered with the academic sites as active participants in the studies. The consortium is examining physical and mental health outcomes among women of child bearing age, children, and other coastal residents; individual and community resilience in a variety of ethnic and socioeconomic settings; and is measuring and evaluating the health effects of petrogenic PAHs to determine if Gulf seafood is safe.

Meeting Highlights

The October grantee meeting involved over fifty people representing the research scientists, community members, and NIH program staff from NTP, NCI, NHLBI and OBBSR. The first day of the meeting focused on discussions within the Consortium's established working groups (WGs) to address issues of collaboration, joint publications and overarching topics that transcend working group boundaries. The second day of the meeting consisted of updates on scientific progress, community engagement, and future directions. The second day also included talks by representatives of the Gulf of Mexico Research Institute (GOMRI) and the National Academy of Sciences on their respective programs focused on Gulf oil spill research. Symma Finn, Claudia Thompson and Allen Dearry (OSD) lead the DWH Program.

Recommendations/Outcomes

Each of the WGs discussed cross-consortium activities and coordination including development of joint publications. A consensus was then reached in a plenary session with all participants on several common themes for the entire Consortium moving forward. This included discussion of future opportunities for collaboration and data sharing among Consortium members. Another common thread across the Consortium was the recognition that, when appropriate, there needs to be consistency of messaging to the public and research participants, and that the Consortium should develop a process to ensure this. Related to this, was the need to understand the role of media, particularly when study results begin to be publicized. This led to a suggestion that consortium members and community partners participate in media training. The final theme identified was the issue of sustainability and the importance of maintaining the networks and academic-community partnerships developed through the Consortium.

This might entail continuing to provide training and capacity building for community members to raise their environmental health literacy regarding environmental exposures and to promote resilience in a region that has experienced many natural and manmade disasters.

Society of Environmental Toxicology and Chemistry (SETAC)

November 17-22

Nashville, TN

Introduction/Background

Two sessions at the Society of Environmental Toxicology and Chemistry (SETAC) North America meeting were chaired by SRP staff and grantees. One session, "Bioavailability Tools for Assessing Effectiveness of Contaminated Sediment Remediation," was chaired by SRP Program Administrator Heather Henry with EPA Superfund and Technology Liaison (STL) Kira Lynch. Another session, "Communities, Ecology, and Health: Making the Connection," was chaired by UK SRP grantee Anna Hoover with Henry, Beth Anderson, Michelle Heacock, and EPA STL Felicia Barnett.

The "Communities, Ecology, and Health – Making the Connection" session highlighted the importance of engaging communities in bi-directional partnerships for communicating the linkages between the environment and human health. This session was a repeat of a successful session of the same title from the 2010 Portland SETAC meeting. The session continues to be a collaboration between academics, government regulators (EPA), and government research (NIEHS). Because the NIEHS Superfund Research Program funds approximately 30 research translation and community engagement research projects – as well as ecological based research - the SETAC meeting was a natural fit for advancing the concept of the importance of community engagement related to environmental toxicology.

Meeting Highlights

The Communities session had 15 speakers and covered topics such as urban gardening/agriculture; fish consumption advisories; community outreach near Superfund sites; and new communication strategies for engaging communities. Presentations explored success stories and learning experiences for working with communities to communicate risks exposures to hazardous substances. Presentations introduced new tools and strategies for risk communication and for evaluating the effectiveness of working with communities. A highlight of the meeting was discourse related to how those most affected by contamination make sense of risk. Several models were presented, including an integrated health and social psychology theories, measuring the RANAS (Risk, Attitude, Norms, Ability, Self-regulation) factors that influence testing and treatment behavior (Columbia University); as well as multi-theme model comparing and contrasting sensemaking constraints across five themes: 1) The Government; 2) The Public; 3) Delays; 4) Secrecy, Deception, and Manipulation; and 5) Competing Risk Perceptions (University of Kentucky). Presentations on the intersection of urban gardening/agriculture and mechanisms of contaminant uptake and/or toxicity revealed how important connecting science to human behavior is for exposure prevention. Among the examples were Pb concentrations in eggs in

NYC, nutritional interventions in PCB-exposed communities; as well as several fish consumption community based projects.

Recommendations/Outcomes

The Communities Session was well-received, and it is recommended that SRP do this again for the 2015 SETAC meeting. To date SRP has really taken a lead in bringing community engagement practices to the SETAC researchers as well as giving community-based SETAC researchers a chance to speak more about the “human” side of their environmental toxicology projects. Of note, SRP grantees received awards during the meeting: Peter J Cadmus from the Colorado State University; won the SETAC North America Endowment Fund Award; John Geisy, former MSU PI, won the Global Partners Capacity Building Award; and Mark Borsuk, leader of the Dartmouth SRP CEC, received the IEAM Journal Best Paper Award. In addition, numerous SRP trainees received travel awards to attend the meeting.

CLARITY-BPA Grantee Webinar

February 4, 2014

Participants: DERT (Thad Schug, Jerry Heindel, Claudia Thompson, Linda Birnbaum) , DNTP (John Bucher, Nigel Walker, Retha Newbold) FDA/NCTR and FDA/CFSAN program staff; NIEHS grantees from the CLARITY-BPA U01 Consortium.

The Consortium Linking Academic and Regulatory Insights on BPA Toxicity (CLARITY–BPA) research program held a webinar meeting on February 4, 2014. The meeting was coordinated by Thad Schug and Jerry Heindel from DERT along with John Bucher, Retha Newbold and Nigel Walker from DNTP and FDA/NCTR staff. The meeting was a progress update on the core GLP and CLARITY-BPA study animals housed at NCTR in Jefferson, AK. FDA scientist Luisa Camacho reported that all CLARITY-BPA animal studies have been completed and final tissue shipment of tissues will be completed within 2 weeks. The 2-year core GLP portion of the study will be completed during the next year. FDA scientist Barry Delclos followed with a presentation on pharmacokinetic findings from the subchronic (90 day) BPA study. Dr Delclos also reported that there was minimal unintended BPA exposure (contamination) in the core GLP and CLARITY-BPA animals. Next, NTP contractor Carolyn Favaro explained procedures for data management using the chemical effects in biological systems (CEBS) database. This was followed by updates from the 14 U01 grantees conducting studies on tissues from the CLARITY-BPA study animals. The meeting ended with a Steering Committee (SC) session lead by Jodi Flaws, the newly elected SC Chair. A separate meeting of the External Advisory Committee, which includes members of the Steering Committee, DERT/DNTP/FDA program staff and expert scientists (Mike Gallo and Dan Casciano) was held immediately following the webinar.

Overall the SC agreed that the study was progressing well, however the group decided to postpone the next face-to-face meeting of the consortium in order to give grantees more time to gather and analyze data. The group also decided to create a new method of tracking use of shared tissue between grantees

to prevent unnecessary delays in data uploading and decoding. The next meeting of the consortium is planned for early Fall of 2014 (September/October).

Upcoming Meetings

Toxicology and Risk Assessment Conference (TRAC)

April 7-11, 2014

Cincinnati, OH

<http://www.cdc.gov/niosh/conferences/TRAC/>

Toxicology and Risk Assessment Conference is the training meeting for EPA and CDC for risk assessment. It includes representatives from NIOSH and EPA and this year we have been invited to put together a session about how molecular approaches can be used in risk assessment titled "Integration of "-Omic" Technologies in Metal Toxicity Studies: Contributions and Complexities in Risk Assessment Exposure". Four SRP grantees have been invited to give the training classes in this session. Dr. Heather Henry is chairing a session with EPA's Dr. Anu Mudipalli.

National Association of Remedial Project Managers (NARPM)

June 16-20, 2014

Atlanta, GA

<http://www.epanarpm.org/>

National Association of Remedial Project Managers (NARPM) Annual Training Program meeting for the Remedial Project Managers, EPA's staff who direct the clean-up of Superfund sites. Dr. Heather Henry and Dr. Matthew Lambert are co-chairing a session on Bioavailability Assays for Contaminated Sediments, working closely with EPA Remedial Project Managers. In addition, Heather Henry and Beth Anderson (along with a few others from MDB and EPA) are presenting posters on Soil Amendments for Immobilization of Lead and Emerging Contaminants.