

# ORD Update

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**EPA Science Advisory Board Meeting**



## Events Since July 2012

### ORD

- August and September 2012, held ORD Program updates and AA-level meetings
- NPD Leadership Changes:
  - John Vandenberg, Director for Human Health Risk Assessment
  - Greg Sayles, Acting Director for Homeland Security
- Internal Research Management System
- Communications
  - <http://www.epa.gov/ord/annualreport/2012/index.htm>

## Events Since July 2012 (cont'd)

### **Budget**

- Sequestration Impacts
- Continuing Resolution for FY13 ends March 27, 2013
- No President's Budget for 2014 yet
- Planning for FY15 underway
  - solution-oriented; innovative; systems-based; relevant to EPA mission/partners; high impact

# From Planning to Implementing



- Implementing research plans
- FY13 – Budget “continuing resolution” means no new starts
- Continuing emphasis on outreach and communication with partners
- Focusing on meeting product commitments



# **SAB & BOSC Report**

## **July 2012**

- **Appreciate comments supporting our efforts**
- **Much credit goes to ORD staff**
- **SAB/BOSC Report provides clear and helpful recommendations**
- **ORD takes your recommendations seriously**

# Sustainability

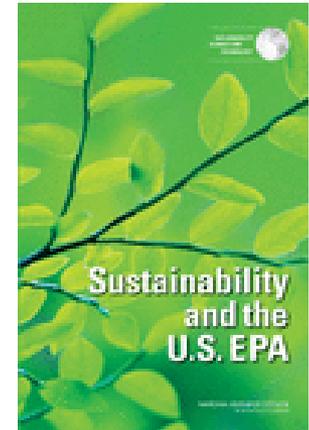
- **ORD should...define what sustainability means in each program....collaborate with others in EPA on social, behavioral and decision science...**
  - reviewing and updating current and emerging decision support tools  
<http://www.epa.gov/research/mmttd/>
  - Working with NCEE - joint workshop in June on Non-Cancer Benefits Analysis



# Sustainability

### Developing EPA Sustainability Plan

- EPA hosted over 80 listening sessions with a wide range of stakeholders.
- Drafted the EPA Sustainability Plan
  - Draft Plan reviewed by EPA offices and regions, Jan 2013.
  - Aiming for final review and approval in April.
- Major themes include
  - Incorporate sustainability principles into EPA programs (rule-making).
  - Enhance support for sustainability science, metrics, and tools.
  - Improve science for identifying and addressing social and economic impacts.
  - Enhance information to drive markets and behavioral changes.
  - Coordinate across federal agencies.
- National Advisory Council for Environmental Policy and Technology is meeting today on EPA's specific sustainability objectives



# Emerging Issues & Integration

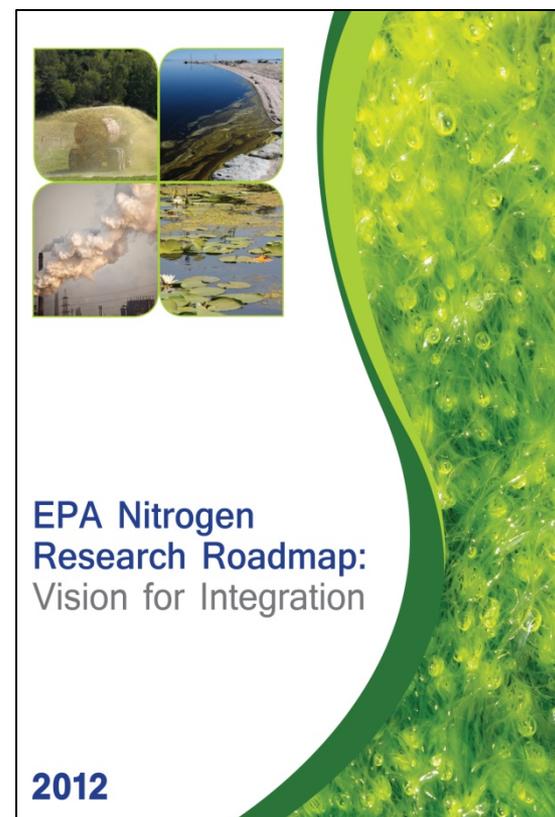
### ▪ **Balancing immediate needs and emerging issues**

ORD undertaking workforce planning effort

- Review and assess workforce needs across the research plans
- Identify vulnerabilities/gaps
- Develop recommendations

### ▪ **Integration...develop “roadmaps” similar to nitrogen...enhance communication between research programs...**

- Roadmaps under development for Global Climate Change, Children’s Health and Environmental Justice



# Innovation



- **Innovation: ...prioritize activities...identify top innovators...move the ORD culture....**
  - Focusing innovation on EPA's mission as well as transformative research
  - Recent ORD PeerOvation Workshop
  - Pathfinder Innovation Projects – supporting important EPA needs
  - Upcoming workshop on Air Sensors
  - Will request SAB review of innovation in ORD

# Air, Climate and Energy Recommendations & Response

- **Energy research – need plan and leadership**
  - ACE energy-related research portfolio is integrated with ORD's energy-related priorities as identified by Program and Regional Office partners
  - Climate, energy-water nexus, and hydraulic fracturing are key efforts crossing research programs coordinated at Associate NPD level
- **Role of ACE relative to other EPA research and other federal agencies**
  - ACE coordinates with other EPA research programs and with EPA program and Regional offices on issues of mutual interest
  - ACE focusing on air quality and ecosystem impacts of climate, understanding environmental impacts of energy technology changes
  - Multiple approaches are used, including Roadmap, US Global Research Program and CENRS Research Subcommittees (AQRS, SWAQ, SGCR)
  - Significantly strengthened interactions with DOE and DOI on energy-water, hydraulic fracturing and with CDC on public health impacts of air quality and climate

# Chemical Safety for Sustainability Recommendations & Response

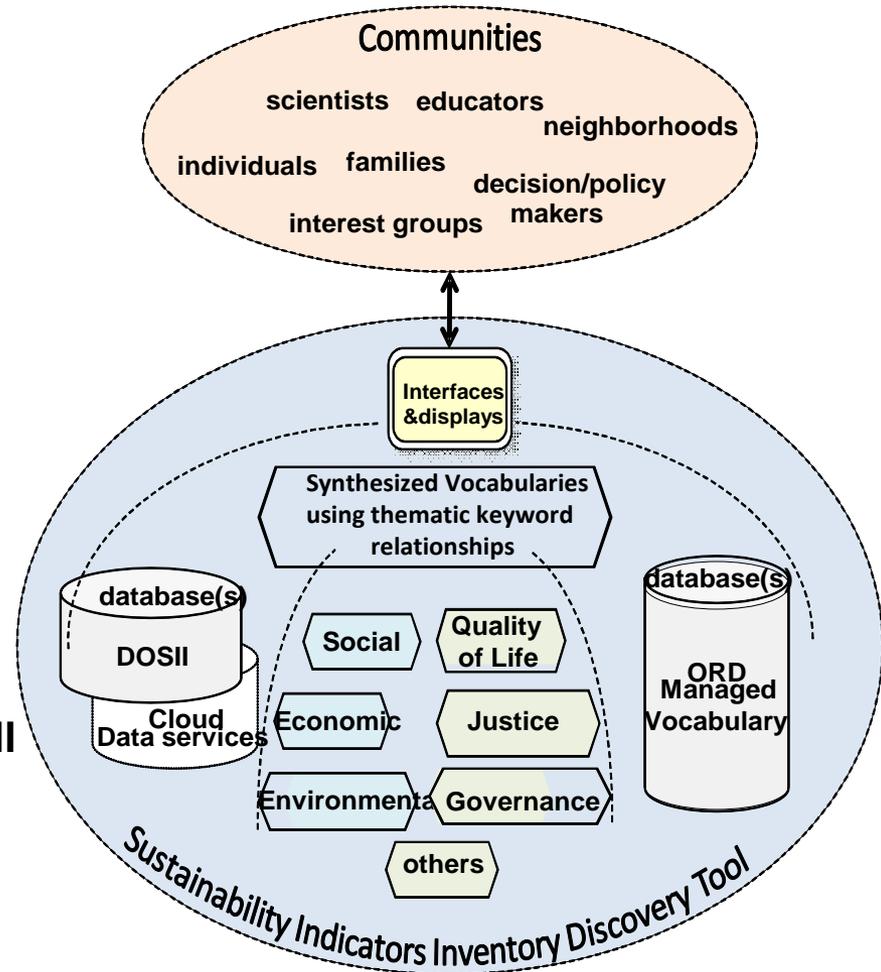
- **Clearly demonstrate how CSS research benefits end users**
  - Engaging partners to improve value of products
  - Looking forward to SAB advice on translating Comp Tox science for Agency decisions
- **Increase focus on proximal exposure models**
  - Several manuscripts now in press on considering proximal exposures to consumer products as part of assessing potential exposures to chemicals
- **Define ORD's unique niche in nanotechnology research**
  - A holistic and transdisciplinary approach to address environmental health and safety impacts of nanomaterials
  - Founded on a life cycle and comprehensive environmental assessment framework that evaluates nanomaterials from cradle to grave
  - Application of computational science to promote sustainable molecular design and benign design for nano-based and emerging materials.

# Safe and Sustainable Water Resources Recommendations & Response

- **Invest more in assessing use of market mechanisms for nutrient control and identify metrics for nutrient management**
  - Examining potential nutrient trading in southwest Ohio
  - Studying range of market- and non-market-based scenarios for implementing TMDLs for nitrogen and phosphorous in the Chesapeake Bay
  
- **Assess and encourage innovation in nutrient work**
  - Upcoming STAR Consortia for systems approach to nutrient management
  - Collaboration on Narragansett Bay addressing nutrients in sustainability context
  - ORD Pathfinder Innovation Project – mobile smart phone app for water quality
  
- **Take leadership in conducting green infrastructure research**
  - Collaborations in communities in Ohio, Nebraska, Kentucky, others
  - Stormwater modeling tools
  - Center for Green Infrastructure and Stormwater Management – STAR Center to Penn State, STAR grant to Univ of Maryland
  - Upcoming STAR grants for green infrastructure research in Philadelphia

# Sustainable and Healthy Communities Recommendations & Response

- **Expand efforts on social, behavioral and decision sciences**
  - Working to incorporate multiple drivers, including social and economic factors, into systems models
  - Will work with EPA partners on valuation of health and environmental benefits
  - Identify needed skills as part of ORD workforce planning
- **Engaging communities and building partnerships**
  - Community and tribal engagement through Regional partnerships in health and ecological goods and services research and development
- **More structured and guided methods will allow for better understanding of community values, needs, constraints**
  - Developing guidelines for community selection
  - Working with Superfund and others with experience in community engagement



# Human Health Risk Assessment Recommendations & Response

- **Enhance links with other programs and emphasize HHRA's contributions to sustainability**
  - Contributing to ORD's five cross-cutting areas
  - Planning work with SHC and CSS on sustainability tools that address exposure and ecological health
  - Focusing on epigenetics – community and multi-generational risks
- **Transform risk assessment approaches**
  - Working with CSS on new methods for risk assessment
  - Emphasizing coordination/education on new methods
- **Advance HHRA's exposure and methodology work**
  - Expanding exposure-related activities, e.g, Expo-Box
- **More efficient peer review of assessments**
  - April meeting of SAB Chemical Assessment Advisory Committee

# Homeland Security Recommendations & Response

- **Adopt an “all-hazards” approach to enhance value**
  - Currently mapping our research to identify research gaps associated with “all-hazards” and additional uses of current products by potential new partners
  - Based on mapping, will revise research plans to address high priority gaps and broaden product applications
  
- **Continue to enhance relationships with other federal agencies where there is synergy**
  - Successful recent efforts with Intelligence Community and Departments of: Homeland Security, Defense, Agricultural, Energy, Interior, Health & Human Services
  - International collaboration with Environment Canada, United Kingdom health and decontamination agencies, and with former Soviet Union thru US State Dept. program

## What's Next

- **Setting up BOSC Subcommittees**
  - Establishing 6 Subcommittees – one for each research program
  - Currently soliciting nominations for members
  - Will ask Subcommittees to advise on implementation of research programs
  
- **Future Consultation with SAB**
  - Strategic Research Action Plans are 2012–2016
  - Would like to engage with SAB next year on strategic planning for 2016–2020