



Protecting Children's Health With Better Decision Making

12/10/2008



Overview

- Introduction of Partners
- Cross-Boundary Situational Awareness
- Environmental Decision Support Center Concept
- Arizona DEQ Exchange Network Challenge Grant
- “Having a *bad air* day?”
- Overview of Project Milestones & Next Steps
- Q & A



XB Situational Awareness

- Kennedy School Cross-Boundary Situational Awareness Executive Session
 - May 2008 session with senior leadership from Federal, State, Local, Not for Profit and Private sectors
 - Issues of technology (including geospatial), governance, policies, innovation and collaboration were discussed over the course of the two day session
 - Focus on how we might specify a framework for situational awareness and requirements; and to develop tests for its value and accuracy
 - Call for pilot / test bed projects to allow for development of a reusable methodology that enables assessment and measurement of situational awareness for local decision makers
 - Focus on multi-agency response and information sharing
 - Identification of barriers to be removed and the need for additional information to improve decision making



EDSC Concept

- Shortly after the Session, a team began to form with the idea of collaborating on a test-bed initiative:
 - Harvard Kennedy School
 - Arizona Department of Environmental Quality
 - EPA
 - OEI
 - OAR
 - NOAA
- Realization that each organization had independently been working on highly complimentary initiatives



EDSC Concept

- EPA's Information Access Strategy Recommendations
 - Enable People to Find Environmental Data and Information at EPA and Other Federal Agencies
 - Improve People's Understanding of EPA Data and Information to Promote Appropriate Use
 - Organize EPA Information and Data into Formats that Promote Better Understanding and Facilitate Desired Users
 - Use New Web Technologies to Empower People to Find, Understand and Use Environmental Information and Data



EDSC Concept

- “Implement As We Go” Activity:
Environmental Decision Support Center (EDSC)
 - Collaborative workspace through which EPA staff can discover, access, use and share environmental data and tools
 - Pilot testing to ensure that services respond to known decision making needs



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AZ DEQ Challenge Grant

- Investigating the use of NEIN to address a growing asthma epidemic among children
- **Goal:** Create a predictive model associating asthma episodes with air quality episodes in the Phoenix metropolitan area
- The Challenge Grant research affirmed the suspected relationship and has resulted in a quantitative model associating children's asthma incidence with certain air quality events



AZ DEQ Challenge Grant

- Now focus turns to how air quality forecasts can be fused with health and other data to:
 - Make tactical decisions about protecting children’s health on a day-to-day, hour-to-hour basis
 - Reduce the risk to at-risk children, optimizing for cost, risk and impact
 - Assess the key decisions local decision makers are faced with and to determine what information they need to make optimal decisions
- An environment where data can be integrated and used to create a common operating picture
- Conflation of the EDSC ideas and the next steps of the AZ DEQ Challenge grant...



“Having a *bad air day*?”

- Whitepaper on cross-boundary environmental data for tactical adaptation to local weather extremes
- <http://www.harvard.edu/??????>
- Lays out proposal for a specific initiative:
 - To demonstrate a methodology for proving the value of usefully available information to policy makers at the local, tactical level
 - Specific use case is air quality observations to improve decision making and to provide measurable social benefit from reduced health risk.



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“Having a *bad air day*?”

- This exercise will identify:
 - Specific information requirements for the key choices decision makers are faced with
 - Gaps in data and information needed to make those decisions
 - Readiness and capabilities for information sharing among environmental and health partners
 - Measurable local outcomes from investments in improved integration of environmental information and health data
- Goal is to “leave behind” an information sharing capability with analytical capacity



Milestones & Next Steps

- Infrastructure Development
 - EPA Earth Prototype (see it tomorrow @ noon in the Demo Theater or at the OEI Geospatial Booth!): Pilot now, next rev. April
 - Other EDSC components for re-usable analytics: TBD
- Design of Exercise
 - Refinement of whitepaper to develop test cases and scenarios for the air quality problem: 31 January
- Exercise
 - Two phases, second focused on addressing gaps identified in first phase: 30 April
- Assessment
 - Lessons Learned, documentation of benefits: 30 May
- Reporting
 - Academic papers / Conference presentations, etc.: TBD
 - Documentation to make extensible and reusable: TBD



Questions?

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