

Monthly Report for December 2003

EPA Region 10 Air Toxics Meeting: Nearly 90 participants attended this meeting from state and local air agencies, Tribes, and EPA's Office of Air Quality Planning and Standards. The meeting was subtitled "Collaborating During Tight Times". I attended to learn more about current air toxics monitoring projects in the NW and to develop opportunities to partner. A primary focus of the workgroup was discussion of the first National Air Toxics Assessment (NATA - a nationwide modeling of health risk from toxics), the progress of work on the second assessment, and ongoing monitoring to validate the model results. Diesel particulate is, by far, the most significant pollutant from a health standpoint and will be the focus of emission reduction projects.

Lake Roosevelt Water Quality Council Meeting: Jerald Weaver and Gina Pearson, both with the **Lake Roosevelt NRA**, and I attended the quarterly meeting of the water quality council. We provided an update on our funding efforts and listened to a presentation on the Columbia River Integrated Environmental Monitoring Program being conducted by a consortium of Canadian agencies and businesses to characterize contamination north of the border. TeckCominco and EPA both gave updates on the status of their negotiations and next steps in the CERCLA (Superfund) process.

Georgia Basin/Puget Sound International Airshed Strategy Development Subgroup Meeting: The focus of this meeting was to lay the groundwork for developing the airshed strategy. Participants discussed the plans and documents, key issues, challenges, and planning initiatives relevant to development of the strategy.

Clean Cities Coalition Annual Meeting: The purpose of this consortium funded by the Department of Energy is to encourage the use of alternative fuel vehicles to improve air quality and reduce our dependence on foreign oil. Members presented their accomplishments for the year and plans for the future. I spoke briefly about our grant from EPA to retrofit the diesel equipment at **Mount Rainier NP** and our movie animation showing the movement of transportation related pollutants from the I-5 corridor over Mount Rainier. The Port of Seattle is working with the Air and Waste Management Association to conduct a conference in April on marine emissions and asked for my assistance in presenting ecosystem impacts (modeling shows that increasing ship emissions may degrade visibility in NW parks).

Washington New Source Review Revisions Advisory Committee Meeting: Issues discussed at this meeting included the development of a list of source exemptions, the respective role of Ecology and the local air agencies in PSD applicability determinations and ambient impact analysis, the transferability between jurisdictions of permits for portable sources, and the options for creating an exemption from SEPA for minor NSR. Industry representatives again lobbied

the state to immediately delete the existing state PSD rules (which are based on the "old" federal program) so that only the new federal PSD program would be in effect in Washington. Since all sources subject to PSD or minor NSR are subject to BACT in Washington, industry claimed this would have little environmental effect. The state expressed concern that, although all sources are subject to BACT, the new federal rules create the potential for sources with impacts to avoid PSD permitting with its additional requirements for ambient impacts analysis and increment consumption (and a special role for the FLM). In addition, the state's definition of modification is different under minor NSR than under PSD, potentially allowing some large sources to avoid permitting altogether if the old PSD rules were deleted.

Mount Rainier NP Activities and Priorities: I met with Barbara Samora and Rebecca Doyle to discuss the activities and priorities for the upcoming year for the park and for the North Coast and Cascades Network and my potential role. The three top activities that the park would like me to focus on are: (1) update the 1994 Status Report for NW Parks; (2) develop partnerships with researchers to improve our knowledge and monitoring technology for fog and cloud chemistry inputs to park ecosystems; and (3) provide support to Rebecca in the development of network monitoring protocols.

NUCOR PSD Permit Pre-Application Meeting: This is a steel mill in West Seattle. The project will result in "de-bottlenecking" the electric arc furnace (EAF) resulting in increased capacity. An ambient impact analysis for class 1 areas is required but the source is exempt from the class 2 increment consumption analysis.

Relating USGS Mercury Testing in Fish to Airflow Patterns: I met with Patrick Moran, Gary Turner, Allan Haggland, and Frank Voss, all of USGS, to discuss their work on mercury and POPs in fish in **Olympic NP, North Cascades NP, and Mount Rainier NP**. We discussed a number of ideas on how to relate the fish data to potential regional sources of airborne mercury and windflow patterns without doing expensive modeling.

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WEBSITES

Global Climate Change: Buying Time: A User's Manual for Building Resistance and Resilience to Climate Change in Natural Systems – World Wildlife Fund

I found this document to be useful only as an introduction to the issues. Although broken down into ecosystems, the recommendations are basically the same for each – conduct monitoring, work towards providing buffer zones and migration corridors, and reduce other stresses on the ecosystem (e.g., invasive species, air pollution, etc.) Each section has an extensive bibliography, though, and this may be useful in pursuing more substantive information. Finally, the last chapter provides a couple of thought provoking examples of management choices and a warning that normal management plans with 3 to 10 year horizons are insufficient to allow for anticipatory responses to climate change. You can download this report from WWF's website:

http://www.panda.org/news_facts/publications/climate_change/publication.cfm?uNewsID=8678&uLangId=1

Ozone Sensitive Plants: Ozone Sensitive Plant Species on National Park Service and U. S. Fish and Wildlife Service Lands

This ARD report summarizes the results of a June 2003 workshop at which a group of ozone effects scientists reviewed, revised, and updated lists of sensitive plant species. Copies of the report can be obtained from ARD (contact: Ellen Porter at 303-969-2617) and an electronic version will soon be available at: www2.nature.nps.gov/air/pubs. ARD can also provide lists of park-specific ozone sensitive species and users of NPSpecies will soon be able to generate lists of sensitive species in real-time.

Transport of Asian Dust: The 2001 Asian Dust Events – Transport and Impact on Surface Aerosol Concentrations in the U. S.

This is Dan Jaffe's work on what appears to be the largest Asian dust event ever observed in the U. S. Its effects provide evidence that air pollution issues must be viewed in a global context. Published in EOS. <http://faculty.washington.edu/djaffe/Jaffe2003c.pdf>

Consolidated Federal Grants Website: This website includes information about more than 800 grant programs from 26 federal agencies. www.grants.gov

INTERESTING RESEARCH:

Urban Heat and Aerosol Pollution Affects Local/Downwind Weather: Using the first space-based rain radar and a network of ground based rain gauges, scientists with NASA's Goddard Space Flight Center determined there are higher rainfall rates during the summer months downwind of large cities like Houston and Atlanta and that these rainfall patterns have changed from a period of pre-urban growth. Warming from urban heat islands, the varied heights of urban structures that alter winds, and interactions with sea breezes are believed to be the primary causes. Aerosols, added by human activity to those naturally occurring, also alter local rainfall rates around cities. The tiny particles provide many surfaces upon which water can collect, preventing droplets from condensing into larger drops and slowing conversion of cloud water into precipitation. In summer, rain and thunder increases downwind of big cities, as rising air from urban heat islands combines with "delayed" rainfall resulting from the presence of aerosols creating bigger clouds and heavier rain downwind. In winter, the effect is the opposite. Moist air flows off the ocean and rises over the hills downwind of a coastal city, dropping its rain and snow mainly as it ascends the hills. As pollution from the city is pushed into the clouds by the hills downwind of the city, it interferes with droplet formation in the clouds and makes them smaller, as observed by NASA's satellites. The smaller cloud droplets convert more slowly into precipitation. Instead of precipitating, much of the water in the clouds evaporates, reducing the net rainfall downwind of the urban area by up to 15% to 25% on a seasonal basis. **In California, this effect induces a precipitation deficit across the Sierra Nevada mountain range equal to about 1 trillion gallons of water a year** - another reason to reduce aerosol pollution which reduces visibility. Check out NASA's website for more details and especially for information about the satellite systems used in this research which may be useful for network monitoring:

<http://www.gsfc.nasa.gov/topstory/2003/1211urban.html>

COURT CASES OF THE MONTH:

Yellowstone Snowmobile Rule Overturned: Calling the Bush administration rule "completely politically driven and result oriented", U.S. District Judge Emmet Sullivan ruled that the NPS should not have set aside the Clinton-era plan to phase out snowmobile use in Yellowstone and Grand Teton. In the same ruling, Judge Sullivan ordered the NPS to respond, by February 17, 2004, to the Bluewater Network's 1999 petition to ban snowmobiles and road grooming in ALL national parks. The judge's decision is interesting reading, strongly supporting the NPS's conservation mandates: <http://www.dcd.uscourts.gov/02-2367.pdf>

NSR "Reform" Rule on Routine Repair and Maintenance Stayed: The U.S. Court of Appeals for the District of Columbia Circuit ruled that opponents to the U.S.

EPA's rule changes "demonstrated the irreparable harm and likelihood of success" of their case, thereby overcoming the threshold that is required to stop a regulation from taking effect. EPA finalized its second set of NSR changes last October, allowing U.S. industry a 20 percent annual margin for routine repair and replacement activities before triggering PSD permitting. Until the court order, implementation of the routine maintenance provisions had been set to begin December 26th for about a dozen states (including Washington) and local air districts that have handed their NSR authority over to the federal government.

REGULATORY UPDATE

Clear Skies Morphed into Two Proposed Rules: Mercury Cap and Trade rule proposed under Section 111 of the CAA to limit mercury emissions from electric utilities to 34 tons by 2010 and 15 tons by 2015 and the Interstate Air Quality Rule or "Transport" rule covering 29 states and D. C. will cap SO₂ and NO_x from utilities at 3.9 million tons and 1.6 million tons, respectively, by 2010, lowering to 2.7 and 1.3 million tons by 2015.

Mercury MACT Proposed: EPA was under a court-ordered deadline to propose a MACT (section 112) standard for mercury from power plants and did so in conjunction with the mercury and cap and trade rule discussed above. However, EPA argued that the Clinton administration was wrong in concluding that the rules had to be issued under the more stringent section 112 of the CAA and indicated a preference for the section 111 cap and trade rulemaking. The MACT standard would result in emissions limits equivalent to 34 tons by 2007 – a 29% reduction from current levels.