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FEDERAL/STATE ACTIVITIES

Southern Appalachian Mountains Initiative (SAMI) Update: The third semi-annual meeting was held December 5-6 in Atlanta, Georgia. The major emphasis of the meeting was to conduct committee work sessions. The Policy Committee (PC) continued to revise and assess nearly 100 identified emission management options (EMOs), using agreed to criteria. The PC "voted out" to the Governing Body, on full consensus basis, seven policy-oriented EMOs (including improving dialogue with permitting authorities and Federal Land Managers and asking local agencies to consider emissions in land use plans). In addition, the majority of the PC "voted out" five more controversial, concrete EMOs, including one encouraging offsets for PSD sources impacting Class I areas. The Technical Oversight Committee continued to discuss their Statements of Work for the initial data gathering stage of the workplans. This stage will establish the extent of current knowledge regarding emission inventories, air impact models, ambient air monitoring, and impacts to air quality related values (AQRVs). Critical gaps in information will be identified, and recommendations will be made regarding how gaps can be filled. Bill Malm also attended this meeting and discussed the latest results of the NPS visibility research and monitoring program in the East. The Governing Body will next meet on March 3 in Raleigh, North Carolina, to discuss the EMOs "voted out" by the PC and other pressing matters. (John Bunyak, Karen Malkin, Cathy Rhodes, Bill Malm)

Regional Haze Program: As promised by EPA Assistant Administrator for Air and Radiation, Mary Nichols, at a Congressional oversight hearing last spring, EPA staff are moving forward on a plan to develop a regional haze program to help ensure that "reasonable progress" is made toward achieving the national visibility goal contained in Section 169A of the Clean Air Act of no "manmade" impairment of visibility in mandatory Class I areas. Since EPA is currently under a court order to review both the primary and secondary particulate matter (PM) National Ambient Air Quality Standards (NAAQS), with a **proposed rule out by June 1996 and a final rule by January 1997**, the staff plan calls for substituting the secondary NAAQS review with the regional haze program, so that the health standard for fine particles and the haze program will be promulgated concurrently. Components of the regional haze program will include: 1) definition of visibility transport regions, based on models incorporating meteorology, air transport patterns, source-receptor impact assessments; 2) definition of "reasonable program," using a metric such as deciview and determining the rate of improvement needed over a certain time period; and 3) a monitoring plan, using IMPROVE protocols, with the likely expansion of the IMPROVE network, and establishing reporting requirements and data analysis techniques. After January 1997, a separate rule will be promulgated to address the regional planning process for State Implementation Plans (SIPs) and EPA enforcement. In addition, timed concurrently with the PM guidance, during 1997, EPA will issue guidance on monitoring, modeling, regional planning, SIP submittals, and emission reduction strategies to achieve reasonable progress. (Karen Malkin)

OUTREACH ACTIVITIES

Western Regional Office Request for Air Quality Photographs: At the request of Judy Rocchio (Western Region Air Quality Coordinator), the Air Quality Division (AQD) provided three 35-

mm slides (good, medium, and poor visibility) and data information for each of the following areas: Chiricahua NM, Death Valley NP, Grand Canyon NP, Great Basin NP, Hawaii Volcanoes NP, Joshua Tree NP, Lake Mead NRA, Lassen Volcanic NP, Lava Beds NM, Petrified Forest NP, Pinnacles NM, Point Reyes NS, Redwood NP, and Yosemite NP. Judy will use the slides in preparing air quality briefings for the regional office.

FY 1995 Air Quality Exhibit Projects: The budget for FY 1995 air quality interpretive projects has been finalized. Regional Air Quality Coordinators should contact Dee Morse if they have any new projects identified for FY 1995. Otherwise, only uncompleted projects in FY 1994 will be eligible for funding in FY 1995. Servicewide air quality funds for interpretive projects are distributed on a first-come, first-served basis, and as usual the number of projects eligible for FY 1995 funding far exceeds the amount budgeted. Before funds for these projects can be transferred to a park area, the AQD must receive a memorandum from the Superintendent requesting the division's financial and technical assistance for the development of the proposed project. Next, a layout plan for the proposed project must be reviewed and approved by the AQD.

PERMIT REVIEW AND TECHNICAL SUPPORT

During December the Policy, Planning, and Permit Review Branch reviewed permit applications for the new air pollution sources listed in Table 1 which are proposed near NPS/FWS areas. Please contact the staff person identified for more specific information regarding these projects.

MONITORING AND DATA ANALYSIS

Fort Scott National Historic Site Data Request: David Joseph provided Mike Gallager of MWRO ambient air quality and air pollutant emission data and maps for the region around Fort Scott National Historic Site. Data were obtained from the U.S. Environmental Protection Agency Aerometric Information and Retrieval System (AIRS) and the Toxic Chemical Release Inventory System (TRIS). The AQD can very quickly obtain information from these databases and prepare graphical or tabular summaries.

Site Visit Schedules: Tables 2, 3, 5 and 6 provide the current and future schedules for site visits by contractor personnel to NPS gaseous pollutant and visibility monitoring stations.

Table 4 lists the schedule for the EPA NPAP audits. The audit equipment will be shipped directly to the parks by ManTech Environmental Technology, the EPA contractor, sometime during the quarter listed. Site operators should do a multi-point calibration/audit according to the instructions provided with the equipment. Questions about this program should be directed to the Quality Assurance Coordinator, John D. Ray, via cc:mail or telephone (303-969-2820).

NBS/NPS/FWS BIOLOGICAL EFFECTS

Staff Participate in Meeting on Amphibian Decline in the Southern Rocky Mountains: Tonnie Maniero (NPS) participated in a 1-day meeting to exchange ideas regarding possible causes of amphibian decline in Colorado and Wyoming. The Wyoming Toad and the Boreal Toad have both experienced dramatic population declines in the past several years. John Turk (U.S. Geological Survey) presented data on snowpack chemistry collected in the Rockies, and discussed implications for surface water acidification. Herpetologists have observed that adult Boreal Toads often fail to emerge from hibernation in the Spring, and one theory is that pulses of low-pH snowmelt and/or associated metals may be killing the toads in their hibernacula. Other possible stressors discussed include pesticides, estrogenic compounds, viruses, and parasites. Researchers with the Colorado Division of Wildlife, U.S. Fish and Wildlife Service, National Biological Service, University of Colorado, and Colorado State University will census Boreal Toads this summer and collect data on environmental variables. (Maniero)

NBS Reviews Deposition Report for Mount Rainier (MORA) Staff: Kathy Tonnessen reviewed a draft report authored by researchers at MORA and Central Washington University summarizing several seasons of precipitation collection in the Paradise area of the park. During 1992-93 researchers collected both rain and snow samples during 12 months to determine the loading of major ions in wet deposition. They compared these deposition estimates with those calculated for other park units and other locations within the State of Washington. Because of the large volume of precipitation, mainly as snow, falling at higher elevations in the park, the total deposition of sulfate and nitrate is higher than recorded at lower elevation sites in the vicinity of MORA. However, the current loadings are not as large as those observed in other parts of the U.S. where surface-water acidification has been linked to deposition. These data can be used to help park scientists plan for long-term deposition monitoring and experiments to establish sensitive ecological parameters that might respond to increasing loads of acidic compounds in deposition.

Program Review for NBS-Environmental Science and Technology Center, Fort Collins: In December the NBS-Midcontinent Ecological Science Center organized a review of one of the national research programs transferred from the Bureau of Land Management, Wyoming State Office, to the National Biological Survey. The Environmental Science and Technology Center (ESTC) is a cooperative program between the NBS and Colorado State University. The objectives of the program include: development of natural resource inventory data bases, development of smoke management models, and development of a network of aerometric stations operated in remote wilderness areas in the western U.S. and Russia. These climate and meteorological measurements are tied to ecological monitoring to establish baseline conditions and detect changes that could be linked to air pollution and global change. The review panel included: Kathy Tonnessen (NBS-Air Quality Program), Lou Pitelka (Electric Power Research Institute), Jan van Wagtendonk (NBS-Yosemite NP Field Station), and Bob Krech (BLM-Service Center). The panel spent 3 days listening to presentations by the ESTC staff, discussing project areas with the researchers, and then framing a report on how to improve the program in light of waning budget allocations. Kathy Tonnessen spent additional time working with aquatic effects researchers helping to define the hydrologic and biota parameters that should be measured at the wilderness monitoring sites. (Tonnessen)

Staff Attends American Geophysical Union Meeting: Kathy Tonnessen attended a week of meetings on an array of hydrologic and geophysical topics including sessions on: (1) the intensive ozone study in the Fraser Valley in British Columbia, (2) the Gulf of Maine transport study, (3) use of isotopes to study watershed processes, and (4) stream watershed process studies in the southeastern U.S., including sites in Great Smoky Mountains NP. Researchers from the University of Colorado, Boulder and U.S. Geological Survey reported on recent results from NBS-sponsored projects. The researchers are investigating how nitrogen in deposition is processed in high-elevation watersheds of the Rockies. Titles of the presentations are:

Williams, M, P. Brooks, S. Schmidt, and A. Mosier, 1994, Evaluation of Isotopically-Labelled Nitrogen and Salt Tracers to Understand the Origin of Nitrate in Surface Waters of High-Elevation Catchments, EOS Transactions p 279.

Kendall, C., D. Campbell, D. Burns, and J. Shanley, 1994, Use of Oxygen and Nitrogen Isotopes to Trace Sources of Nitrate in Hydrologic Systems, EOS Transactions, p. 279.

Silva, S., C. Kendall, C. Chang, J. Radyk, and D. Wilkison, 1994, A New Method of Preparing Dissolved Nitrate for Nitrogen and Oxygen Isotopic Analysis, EOS Transactions, p. 280.

Interagency Agreement Between NPS-AQD and NBS-MESC: Kathy Tonnessen and Bruce Nash prepared a list of projects to be funded during FY 95 as part of the NBS- National Air Quality Research Program. This funding is now being transferred from the NBS-MESC to the NPS-AQD to allow us to use existing cooperative agreements. The focus of our research activity this year is (1) to synthesize and analyze field data collected on ozone injury to eastern hardwoods and western pines, (2) to continue development of a plant bioassay to determine ozone effects on eastern species, (3) complete development of the ForestHealth System to help field personnel in the identification of injury to bioindicator species, (4) further investigation of snow deposition and snowmelt processes in high-elevation ecosystems of the Rocky Mountains, and (5) to analyze stream water and deposition data collected in Shenandoah NP in an effort to explain episodes of pH and ANC depression. These projects will be funded following peer-review of proposals and pending resolution of possible budget difficulties. (Tonnessen)

TABLE 1
PERMIT REVIEWS CONDUCTED IN DECEMBER

PROJECT	LOCATION	MAJOR COMMENTS	CONTACT
Union Carbide (facility modification)	107 km SW of MACA	Significant increase in SO_2, NO_x, and CO; no significant impacts expected at the park.	Rhodes
ARCO Cherry Point (refinery modification)	85 km NW of NOCA	Significant increase in H_2SO_4; at our request, ARCO has agreed to monitor dry sulfate deposition at the park; however, we informed the State that ARCO's monitoring plan should be better defined and the amount they agreed to fund should be included in the permit.	Morse
U.S. Agrichem (phosphate fertilizer plant modifications)	130 km SE of Chassahowitzka Wilderness Area	Two separate permits; significant increase in PM and fluorides; requested clarification regarding PSD applicability and asked for more stringent fluoride emission limit.	Porter

TABLE 2
GASEOUS POLLUTANT SCHEDULED CALIBRATION AND MAINTENANCE VISITS

SITE LOCATION	TO BE VISITED BY	DATES
December		
Craters of the Moon NP	Mike Bagby (ARS)	December 5-8
Voyageurs NP	Dave Meisters (ARS)	December 12-14
Denali NP	John Faust (ARS)	December 19-22

TABLE 3
GASEOUS POLLUTANT SCHEDULED CALIBRATION AND MAINTENANCE VISITS

SITE LOCATION	TO BE VISITED BY	DATES
January		
Olympic NP	Dave Meisters (ARS)	January 10-12
Mount Rainer NP	Dave Meisters (ARS)	January 12-13
Mesa Verde NP	John Faust (ARS)	January 9-11, and 14-15
Canyonlands NP	John Faust (ARS)	January 12-13
(West) Yellowstone NP	Mark Tigges (ARS)	January 9-18
Craters of the Moon NM	Mike Bagby (ARS)	January 30-31
Sequoia NP	Dave Meisters (ARS)	January 30-February 3
February		
Glacier NP (NDDN install)	Mike Bagby and John Faust (ARS)	February 1-3
Mammoth Cave NP	Mark Tigges (ARS)	February 6-8
Indiana Dunes NL	Mark Tigges (ARS)	February 9-11
Death Valley NP	Mike Bagby & Dave Meisters (ARS)	February 6-8
Joshua Tree NP (NDDN install)	Mike Bagby and Dave Meisters (ARS)	February 9-11
Denali NP	John Faust (ARS)	February 23-25
March		
Chiricahua NM	Mike Bagby (ARS)	March 13-14
Grand Canyon NP	Mike Bagby (ARS)	March 15-17
Shenandoah NP	John Faust (ARS)	March 20-24
Great Smoky Mountains NP (CC, CD, CM, LR)	Dave Meisters	March 27-31
West Yellowstone NP	Mark Tigges	March 27-31
April		
Yosemite NP	Robert Lehman	April 3-7
Pinnacles NM	Mark Tigges	April 17-19
Great Basin NP	Mike Babby	April 20-22
May		
Yellowstone NP	Dave Meisters	May 15-18
Hawaii Volcanoes/Haleakala NP	John Faust (ARS)	Schedule pending EPA Audit

TABLE 4
1995 NATIONAL PERFORMANCE AUDIT PROGRAM SCHEDULE

PARK UNIT	POLLUTANT MONITOR	AUDIT DATE	CONTACT
Hawaii Volcanoes NP	Ozone, SO_2	1st Quarter	Tamar Elias
Haleakala NP	Ozone	1st Quarter	Ross Hart
Acadia NP	Ozone	2nd Quarter	Bob Breen
Big Bend NP	Ozone	2nd Quarter	Betty Alex
Great Smoky Mountains NP (Look Rock)	Ozone	2nd Quarter	Jim Renfro
Mesa Verde NP	Ozone	2nd Quarter	Linda Towle
Sequoia NP (Grants Grove)	Ozone	2nd Quarter	Diane Ewell
Voyageurs NP	Ozone	2nd Quarter	Steve Blair
Great Basin NP	Ozone	3rd Quarter	Vidal Davila
Olympic NP	Ozone	3rd Quarter	Shelly Sparhawk
Rocky Mountain NP	Ozone	3rd Quarter	Sue Williams
Grand Canyon NP	Ozone	3rd Quarter	Carl Bowman
Canyonlands NP	Ozone	3rd Quarter	Steve Swanky
Lassen Volcanic NP	Ozone	3rd Quarter	Nicole Tancreto
Mammoth Cave NP	Ozone	3rd Quarter	Bob Carson
Mount Rainier NP	Ozone	3rd Quarter	Roy Zipp
Shenandoah NP (Big Meadows)	Ozone	3rd Quarter	Shane Spitzer
Yellowstone NP	Ozone	3rd Quarter	Alice Siebecker
Yosemite NP (Camp Mather)	Ozone	3rd Quarter	Eric Snyder
Craters of the Moon NM	Ozone	4th Quarter	Natalene Cummings
Death Valley NM	Ozone	4th Quarter	Dave Brenner
Everglades NP	Ozone	4th Quarter	Raoul Rehrer
Indiana Dunes NL	Ozone, SO_2	4th Quarter	Lou Brennan

TABLE 5
FIELD SERVICE VISITS - IMPROVE MONITORING SITES
JANUARY - MARCH 1995

SITE NAME	PURPOSE	DATES
Canyonlands National Park	Annual Site Servicing - Transmissometer Transmitter Shelter Replacement	02/20 - 02/24
Jarbidge Wilderness	Annual Site Servicing - Nephelometer	01/10 - 01/13
Mount Rainier National Park	Annual Site Servicing - Nephelometer	02/13 - 02/17

TABLE 6
FIELD SERVICE VISITS - IMPROVE PROTOCOL MONITORING SITES
JANUARY - MARCH 1994

SITE NAME	PURPOSE	DATES
Great Basin National Park	Annual Site Servicing - Transmissometer	03/06 - 03/10