

National Atmospheric Deposition Program

- ❑ *“The **National Atmospheric Deposition Program** provides an example of an effective monitoring network where data are delivered because a specific design objective (i.e., loads of air pollutants in wet deposition) was adopted. Many Federal agencies including USGS, NOAA, EPA, NPS, BLM, USDA, TVA, private companies, State, and local government agencies, working in a collaborative partnership, operate this network. Sample collection protocols and quality assurance plans have been established, and the data are considered authoritative by the environmental community.”*

Clean Air Action Plan Federal Partners (U.S. Departments of Agriculture, Interior, Defense, Commerce, Energy, Transportation, Justice; U.S. Environmental Protection Agency, Tennessee Valley Authority). 2000. *Clean Water Action Plan: Coastal Research and Monitoring Strategy*. p 27. (<http://www.cleanwater.gov/coastalresearch/H2Oofin.pdf>)

- ❑ *“The **National Atmospheric Deposition Program (NADP)** provides one of the best and most comprehensive long-term records of wet deposition chemistry in the U.S.”*

USDA-Forest Service. 2000. *Federal Land Managers’ Air Quality Related Values Workgroup (FLAG) Phase I Report*. p 120. (Http://www.fs.fed.us/r6/aq/natarm/Flag_final.pdf)

- ❑ *“**NADP** data have been crucial to the development of national models, including the regional acid deposition model and the Spatially Referenced Regressions on Watersheds (SPARROW) Model.”*

The National Academy of Sciences, Commission on Geosciences, Environment and Resources. 2000. *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution*. National Academy Press. p 363. (<http://books.nap.edu/books/0309069483/html/>)

- ❑ *“How important is the current monitoring infrastructure in addressing emerging issues?...One example of the synergy between new and existing air-quality monitoring activities was the recent initiation of a monitoring program to measure atmospheric deposition of mercury. In this effort the existing infrastructure of the long-established **NADP/NTN** facilitated a quick and successful start-up for the new **NADP Mercury Deposition Network**.”*

National Science and Technology Council, Committee on the Environment and Natural Resources. 1999. *The Role of Monitoring Networks in the Management of the Nation’s Air Quality*. Office of Science and Technology Policy, Washington, D.C. p 12. (<http://www.al.noaa.gov/AQRS/reports/Monitoring.pdf>)

- ❑ *“As the emissions of acid precursors are reduced, it is critical that a comprehensive observing system be maintained to determine if the expected environmental responses are indeed occurring and to identify confounding factors.”*

National Science and Technology Council, Committee on the Environment and Natural Resources. 1998. *Air Quality Subcommittee Strategic Plan*. NOAA Office of Policy and Strategic Planning, Washington, DC. p 8. (<http://www.al.noaa.gov/AQRS/reports/StrategicPlan.html>)

- ❑ *“WHEREAS, the acid deposition phenomenon in the New England states and Eastern Canadian provinces is largely a function of the long-range transport of precursor pollutants such as sulphur dioxide (SO₂) and nitrogen oxides (NO_x); ...BE IT FURTHER RESOLVED THAT the Conference of New England Governors and Eastern Canadian Premiers agrees that state and provincial atmospheric deposition monitoring efforts and monitoring data analysis remain a high priority within their respective programs, and urge their federal governments to continue support for these activities.”*

New England Governors / Eastern Canadian Premiers. 1997. *Resolution Concerning Acid Deposition and its Impact on the Environment*. (<http://www.tiac.net/users/negc/acidrain.html>)

- ❑ *“By far the greatest single source of potentially relevant data for this study is available through the **National Atmospheric Deposition Program**.
“Continue current program to monitor nutrients from atmospheric wet deposition in the Mississippi - Atchafalaya River Basin.”*

NOAA Coastal Ocean Program. 1999. *Flux and Sources of Nutrients in the Mississippi-Atchafalaya River Basin, Topic 3, Report for the Integrated Assessment on Hypoxia in the Gulf of Mexico*. NOAA Coastal Ocean Program, Silver Spring, MD. pp 95 & 127. (<http://www.cop.noaa.gov/pubs/das/das17.html>)

- ❑ *“Where methods for measuring atmospheric deposition for pollutants of concern do not exist, EPA, working with NOAA and other federal colleagues and key institutions such as the **National Atmospheric Deposition Program**, will continue to lead and support efforts to develop technology and establish standard methods.”*

U.S. Environmental Protection Agency. 2000. *Deposition of Air Pollutants to the Great Waters - Third Report to Congress*. EPA-453/R-00-005. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC. P V-10. (<http://www.epa.gov/ncepihorn/Catalog/EPA453R00005.html>)

National Trends Network

- *“For nearly 20 years, the NADPNTN has provided scientific information on spatial and temporal changes in the chemistry of precipitation throughout the nation...This continuous, uninterrupted record represents the only reliable source of critical data and information for: monitoring precipitation chemistry as required under the Bilateral Air Quality Agreement between the Government of the United States and the Government of Canada; verifying the effectiveness of the Clean Air Act Amendments of 1990; determining degradation and recovery of air quality in Class I Wilderness Areas and National Parks; identifying geographical patterns and temporal trends in acid deposition; estimating the atmospheric component of the biogeochemical cycles of important mineral elements; providing data for more than 600 scientific studies of the health of terrestrial and aquatic ecosystems; developing cost-effective recovery plans for estuaries such as Chesapeake Bay; serving more than 500 school and college science-education projects annually throughout the nation; and providing industry with data to assess materials damage from chemical deposition.*

International Joint Commission. 1997. *International Air Quality Advisory Board Progress Report 23 to the International Joint Commission*. International Joint Commission, Washington, DC. p 6. (<http://www.ijc.org/boards/iaqab/r23.html>)

- *“The NADP/NTN is the only long-term deposition monitoring program in the United States with national coverage.”*

National Science and Technology Council, Committee on the Environment and Natural Resources. 1999. *The Role of Monitoring Networks in the Management of the Nation’s Air Quality*. Office of Science and Technology Policy, Washington, D.C. p 7. (<http://www.al.noaa.gov/AQRS/reports/Monitoring.pdf>)

- *“In eastern states, sulfur deposition declined, but nitrogen deposition changed little, and in environmentally sensitive areas, trends were generally similar...Data on wet deposition come from the **National Atmospheric Deposition Program’s National Trends Network**, which consists of over 200 monitors throughout the country.”*

U.S. General Accounting Office. 2000. *ACID RAIN, Emissions Trends and Effects in the Eastern United States*. Report GAO/RCED-00-47, U.S. General Accounting Office, Washington, D.C. p 10. (<http://www.gao.gov/archive/2000/rc00047.pdf>)

- ❑ *“Hosted by the University of Illinois at Urbana-Champaign, The **National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** is an excellent resource for precipitation data. Network collaborators include the State Agricultural Experiment Stations, U.S. Geological Survey, U. S. Department of Agriculture, along with other government agencies, universities and private organizations..”*

National Science Foundation. *Scout Report for Science and Engineering* (September 1, 1999). (<http://scout.cs.wisc.edu/archives>)

- ❑ *Under Article VII of the U.S. & Canada Air Quality Agreement: “For the purpose of determining and reporting on air pollutant concentrations and deposition, the government of the United States and the government of Canada agree to coordinate their air pollutant monitoring activities through the exchange of monitoring data.”
“These analyses are based on measurements of precipitation chemistry from the **NADP/NTN** in the United States.”*

Agreement Between the Government of the United States of America and the Government of Canada on Air Quality. (<http://www.epa.gov/airmarkets/usca/agreement.html#aqa>)

International Joint Commission. 2000. *Air Quality Agreement 2000 Progress Report*. International Joint Commission, Washington, DC. p 20. (<http://www.epa.gov/airmarkets/usca/airus00.pdf>)

Mercury Deposition Network

- *“The EPA will encourage expansion of the **National Atmospheric Deposition Program’s Mercury Deposition Network** to support assessment of the contribution of long-range transport to deposition of Great Waters pollutants of concern in the U.S. and to evaluate the impacts of urban sources.”*

U.S. Environmental Protection Agency. 2000. *Deposition of Air Pollutants to the Great Waters - Third Report to Congress*. EPA-453/R-00-005. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC. P V-10.
(<http://www.epa.gov/ncepihorn/Catalog/EPA453R00005.html>)

- *“Mercury is of special concern to state and local governments because of health advisories for the consumption of game fish with excessive mercury levels...The **MDN** has grown to be the largest network in the United States measuring total mercury in precipitation.”*

National Science and Technology Council, Committee on the Environment and Natural Resources. 1999. *The Role of Monitoring Networks in the Management of the Nation’s Air Quality*. Office of Science and Technology Policy, Washington, D.C. p 8.
(<http://www.al.noaa.gov/AQRS/reports/Monitoring.pdf>)

- *“Deposition monitoring is integral to understanding the relationships between air emission sources of mercury and the concentration of mercury in water bodies. A **Mercury Deposition Network**, coordinated through the **National Atmospheric Deposition Program**, has been designed to study and quantify long-term trends associated with atmospheric fate and deposition of mercury.”*

U.S. Environmental Protection Agency. 2000. *Workshop on Source Emission and Ambient Air Monitoring of Mercury*. EPS/625/R-00/002. U.S. Environmental Protection Agency, Center for Environmental Research Information, Cincinnati, OH. p 15.

Atmospheric Integrated Research Monitoring Network

- ❑ “ *AIRMoN sites are chosen to optimize the probability for detecting projected changes and to serve related measurement needs of researchers studying the effects of atmospheric deposition..* ”

National Science and Technology Council, Committee on the Environment and Natural Resources. 1999. *The Role of Monitoring Networks in the Management of the Nation's Air Quality*. Office of Science and Technology Policy, Washington, D.C. p 10.
(<http://www.al.noaa.gov/AQRS/reports/Monitoring.pdf>)

- ❑ *Among the research goals of NOAA's Health of the Atmosphere program is to “document trends in air quality that help evaluate predicted atmospheric responses to changes in emissions, i.e., the **Atmospheric Integrated Research Monitoring Network (AIRMoN)** and the ozone profiling network.”*

National Oceanic and Atmospheric Administration. 1999. *Health of the Atmosphere, Progress Report, The First Five Years 1995-1999*. National Oceanic and Atmospheric Administration, Air Resources Laboratory, Silver Spring, MD. p 1.