

Breakout Group #6: Integrated Reactive Nitrogen Policies Updated Summary as of October 27, 2008

1. What are recommendations for policies on integration and multimedia management of Nr?

- Influence of air on water runoff must be considered
- Agricultural and energy requirements must be sustainable
- Work from an endpoint or effects based approach – bottom up
- Good communication is essential – an integrated effort with other major environmental issues is needed to raise awareness
- An integrated endpoint is a key, such as a critical loads approach
- Politics and Policy must cross agencies – USDA, BLM, USFS, NOAA, States – must all intervene and collaborate. An interagency review forum may be one approach
- Policies may be built around Nr as a “constant in the equation” as Sox and NO_x are combined under the CAA, i.e., Consistent Endpoint; Sector based; whole farm plans; utility effects on water as well as air; integrate policies (not seen in white paper); outside perspectives can help agency direction; protect water resources under NAAQA (and ecosystem effects); account for geographic variability; add ammonia to air management standards
- Make a better case for the need to manage Nr in an integrated manner, e.g., effects-based approach related to hypoxia
- Consider good environmental management practices that may be counterproductive from an Nr standpoint, e.g., ecosystems that require periodic burning.
- Integrating across media (air, land water) within the EPA is hard because of legal and structural hurdles under existing authorities
- Dependence on fossil fuel and fertilizer coupled with the loss of natural treatment features in the landscape make enlightened, integrated policy difficult
- CW and CA laws were developed independently, making integration difficult. Citizen lawsuits may help push in the right direction though adjustments in the CWA and CAA may be required. Many definitions are broad, which may facilitate integration of management.
- Coordination of existing programs may benefit through better use of price supports and use of taxes for motivation.
- Operationally to coordinate across Gov. Departments something like the interagency committee on climate change
- A sound energy policy would help solve the Nr excess problem
- Disconnect between regulatory and nonregulatory particularly with respect to agriculture and air
- Need to build a relationship to energy policy – what are the real problems causing Nr management issues?

2. Is there a widely perceived need for an integrated Nr policy?

- The need is not widely perceived. An issue paper coming out of a broad inter agency and stakeholder review may help build awareness and identify need.
- A well written INC report will help increase public perception of this need.
- NO

3. Are the INC suggestions for initially decreasing Nr entering the environment by 25% appropriate (i.e. too little, too much, wrong apportionment)?

- Need end point other than just target of total % decrease of Nr— Critical load concept—watershed approach and local needs
- Problems and effects need to be linked to management to identify problem urgency and management attainability.
- TMDLs identify needs in the range of 30% reduction and higher. Reductions may be achieved on a “per acre” basis.
- There are many knowledge gaps on Nr management. Adaptive approach – here’s what can be done today (e.g., 25%) but here’s what’s needed, what we need to know, and how will we get there?
- May need a tiered (or adaptive) approach to deal with what existing authorities can provide and both research and incentive funding to move it beyond the existing authorities
- Most significantly impacted areas should be targeted for priority management efforts – the only way to start to achieve a goal.
- Management actions are often “hijacked”, e.g., nitrogen removal at treatment plants pay a cost in increased energy usage and NOx emissions
- A 25% reduction will depend on the watershed endpoint as to its effectiveness, but it is a key statement of progress if attained.
- Agriculture is the largest source of Nr to the atmosphere – statutory fixes as have been accomplished in Europe are needed. Management should be adaptive.
- Need to address the large pool of Nr in the environment – costs of management; global marketplace and its role; shift the cost of environmental gains to management; improve accounting of all sources, i.e., research and monitoring.
- Purely voluntary approaches are not working.

4. Are there appropriate technical and regulatory mechanisms in place to facilitate an integrated Nr management policy? If not, what is needed create such a policy?

- Analytical tools and management tools need to be refined – a “climate change” type science program is needed for Nr. Climate change interest may be leaving Nr behind.
- Mechanisms are probably not in place – need to be founded on good monitoring and research, interagency collaboration and discussion, and take advantage of major policy and regulatory initiatives such as NAAQS secondary criteria review
- Agriculture is not responsive to “command and control” – voluntary incentive programs need public/sector buy in
- Education programs are essential in the mix, but will take time, e.g. Gulf of Mexico underway for 8 years and finally some growing awareness
- Level of general knowledge and communication are problem areas
- Beware of overloading the public with environmental management needs – climate change, energy, Nr, etc. Perhaps use energy as an integrating factor and communication approach to meet several needs.
- Public responses may drive agricultural community, e.g, demands for certain products and services that are beneficial to Nr management
- Consider growing population effects
- Farm Bill policies do not always fit Nr management needs. Farmers need to be competitively (with crop values) compensated for their activities that provide for ecosystem services.
- Paying for treatment may help, but only if “opting out” of management is not allowed.
- Take advantage of biomass energy and carbon management programs as they often manage Nr as well.
- Look to restoration/mitigation as primary mechanisms and tie in with greenhouse gas management.
- Look to market forces, such as trading and price effects on supply and demand. High cost of meat may drive demand down, thus benefitting Nr control in fertilizer usage
- Market-based instruments that include agriculture is a very slow process.
- Section 319 CWA (nonpoint program) targets sources but is a small player in the grand scheme, but without targeting results would be even less.
- Would ambient air quality standards work as a driver? It’s a stretch for water quality and agriculture.
- Vacating of CAIR – what will replace it?
- Manure can be regulated, but commercial fertilizer regulation will require a statutory change
- PM related to farm activities is not regulated under the CAA. In general, regulations may not be far reaching enough to meet Nr management goals. Regulation of agriculture may be necessary if goals are to be attained

- The bottom up approach may help define policy and regulatory needs, and should be highlighted in the report
- A process or framework for proceeding is essential and missing from the report. Needs to be directed at policy change and aimed at the big policy questions that need to be answered.
- The problem is challenging, but solvable with regulatory and policy change that allows better control of key sources, especially agriculture. Current policy of cheap and secure food sources is compelling, as are cheap and secure energy, and an overriding need.
- The discussion will need to be continued, especially to deal with the more difficult issues of air-water relationships and agricultural and air management.