

of water pollution in the following subject areas:

#### *CAFO Permitting Support*

Demonstration of treatment/reuse/disposal technologies and controls that are designed to reduce CAFO-based nutrients in watersheds, with a demonstration of amount of loading reductions from those technologies, *e.g.*, handling phosphorus-rich poultry litter in northwest Arkansas/northeast Oklahoma; efficacy of wetlands to polish runoff or overflow from ponds and/or land application processes.

The following specific criteria will be used to evaluate this priority area:

- Demonstrate treatment/reuse/disposal technologies and controls through testing and/or modeling.
- Report on the efficiencies.

Demonstration of nutrient indicator tracing in CAFO dominated, nutrient impaired watersheds, *e.g.*, ribo-typing study to determine source of bacteria and pathogens, or nitrogen-ion study to determine source of nitrogen in waters, or hormone or antibiotic study to determine sources of excreted waste material.

The following specific criteria will be used to evaluate this priority area:

- Demonstrate nutrient indicator tracing in CAFO dominated, nutrient impaired watersheds, with identification and differentiation of sources of animal/CAFO wastes from human wastes.

#### *Sanitary Sewer Overflow Studies*

Impact studies and/or innovative implementation processes to control SSOs. Innovative pilot projects associated with collection systems and treatment facilities at the headworks for POTWs, to demonstrate the impact to water quality in receiving waters from control technologies on SSOs, *e.g.*, control technologies to reduce pollutant loads from SSOs with emphasis on innovation.

The following specific criteria will be used to evaluate this priority area:

- Overall cost analysis of technologies or controls to implement on a full or larger scale, estimated O&M costs, and a technical evaluation of treatment, based on mass and volume. Biochemical oxygen demand, total suspended solids, and pathogen evaluations are essential, along with other pertinent pollutant identification and evaluation.

#### *Watershed Integration of Water Programs Under the CWA Through NPDES*

Development of innovative permit tool(s) supporting watershed-based

permitting activities for specific parameters. Establish a technique for identifying all dischargers and their respective contribution levels for parameter(s) of concern within an impaired watershed. Should determine the overall impact of point and non-point dischargers on receiving waters. Pollutant data for water quality parameters, such as nutrients, dissolved oxygen, fecal coliform, etc., could be used in the development of a model (such as self-implementing general permits) for permitting activities. The model may incorporate unique permitting approaches including effluent trading scenarios (in accordance with the Water Quality Trading Policy, January 13, 2003), which may be implemented in the general permit for specific water quality parameters.

The following specific criteria will be used to evaluate this priority area:

- Include consideration of all waterbodies in a watershed.
- Include consideration of all point sources.
- Consider net contribution of non-point sources in aggregate effects.
- Provide aggregate water quality modeling which determines aggregate affects in the watershed.

#### *Homeland Security for NPDES*

Studies of ability of conventional or innovative wastewater treatment plant processes to effectively treat, remove, or render harmless biological, chemical, or radiological agents, which could be introduced into the collection or treatment system.

Development of models for hardening of collection systems, lift stations, and wastewater treatment plant processes to prevent introduction of harmful biological, chemical, or radiological agents.

The following specific criteria will be used to evaluate this priority area:

- Actual performance data of processes vs. technical predictions of performance.
- Enhanced security procedure models and development of model emergency operating plans.

#### *Promotion of "Good Data" Efforts of EPA and State Agencies To Support NPDES Decisions*

Survey of laboratories to identify inconsistencies, errors, and adherence to appropriate QA/QC for whole effluent toxicity (WET) testing and test organism culturing.

The following specific criteria will be used to evaluate this priority area:

- Surveying a sampling of the major laboratories in Region 6, which perform whole effluent toxicity (WET) testing for NPDES permittees.

- A minimum of six laboratories shall be surveyed/audited.

Investigation shall be performed in accordance with "Manual for the Evaluation of Laboratories Performing Aquatic Toxicity Testing EPA/600/4-90/031", all sampling and testing conditions normally required in NPDES permits issued in EPA Region 6, and requirements contained in 40 CFR part 136 for purposes of ensuring compliance with State narrative criteria for the protection of aquatic life.

#### *Indicators of Ecological Condition*

Estimation of the extent of waters supporting their designated beneficial uses, and determination of causes of impairment, based on a core set of indicators of ecological condition and environmental stressors. Biological measures should form the primary basis for assessing attainment of the aquatic life use with chemical, physical, and watershed measurements used to assess and rank the relative importance of stressors.

The following specific criteria will be used to evaluate this priority area:

- Mechanisms to evaluate the interrelationships between biological assemblages, ambient water chemistry, fish tissue contaminants, physical habitat, and/or watershed characteristics.
- Offer the potential to improve a State's approaches to make decisions about whether or not water quality standards are being attained.
- Apply a probabilistic approach to site selection to support estimates of conditions across an entire study area.
- Result in the ability to compare environmental indicator data across State and regional boundaries for ambient and reference conditions.
- Offer the potential to improve a State's approach to estimate the extent of waterbody impairment statewide.

#### *Nutrient Criteria*

Development of effects based nutrient criteria and assessment methods, based on the relationship(s) between evidence of impairment of biological integrity, and/or other response indicators, and instream nutrient concentrations observed at reference waterbodies.

The following specific criteria will be used to evaluate this priority area:

- Demonstrate approaches or provide tools that may be applied in other areas.
- Apply the latest scientific approaches or innovative techniques to establish and validate the relationship(s) between elevated nutrient concentrations and indicator response.
- Result in recommendations for numeric water quality criteria standards