

Nutrient Criteria Development Plan for West Virginia

(Revised May 2004)

Proposed by the Nutrient Criteria Committee to the Environmental Quality Board

I General Goals/Objectives

- 1) All West Virginia Waters (except shared waters):
 - a) To define the level/extent of Nutrient related use impairment within WV waters and assign appropriate scientifically based nutrient criteria with an understanding of natural background levels of nutrients.
 - b) To use information concerning the downstream effects of nutrient loads to set criteria for surface waters, as necessary.

- 2) All Shared Waters:
 - a) To collaborate with the State of Kentucky in an effort to develop appropriate and consistent nutrient criteria for the Tug Fork and Big Sandy Rivers. This collaboration will include a review of Kentucky's Nutrient Plan – particularly those provisions addressing the Tug Fork and Big Sandy - and initiation of discussions with appropriate state representatives.
 - b) To participate in the development of scientifically based nutrient criteria with ORSANCO and the Compact States on agreed upon criteria for the Ohio River.
 - c) To collaborate with the State of Maryland on the development of consistent nutrient criteria for the North Branch and Potomac Rivers. This collaboration will include a review of Maryland's Nutrient Plan – particularly those provisions addressing the North Branch and the Potomac Rivers - and initiation of discussions with appropriate state representatives.
 - d) The committee intends to participate in the multi-state periphyton study supported by EPA and coordinated by the State of Maryland.

II Approach

- 1) Define impairment.
- 2) Depending on the availability of data of sufficient quantity and quality, and funds for research and model development, the state will consider the following methods, in the following order of preference:
 - Empirical and/or cause and effect analyses based on West Virginia data.

- Empirical and/or cause and effect analyses based on other data.
- Alternatives to the first two approaches are to define when and under what circumstances reference-based or other methods might be appropriate.

III Criteria Development

1) Selection of Parameters

West Virginia will consider where appropriate for rivers and streams, lakes and reservoirs, and wetlands setting criteria for P, N, turbidity, chlorophyll *a*, and Secchi Depth. The State also will consider setting criteria for other response parameters where appropriate (e.g. biological community measures, aesthetic/qualitative/narrative standards, and standing stocks of nutrients.)

West Virginia will evaluate parameters from other inter-state and partnership agreements and incorporate them into nutrient criteria, as appropriate.

2) Regionalization

- a) Waters draining to the Potomac River
- b) Waters draining to the Ohio River
- c) West Virginia Level IV Ecoregions

Different criteria may be developed for different groups of waters, to the extent that data are available to support the distinctions. In some instances, geology and terrain may be used to refine regionalization.

3) Classifications

Classes of waters for which criteria will be developed include:

- a) Shared Waters
 - i) Mainstem Ohio River
 - ii) Mainstem Potomac River
 - iii) Mainstem North Branch Potomac River
 - iv) Mainstem Tug Fork River
 - v) Mainstem Big Sandy River
- b) All Other Waters
 - i) Lakes & Reservoirs
 - ii) Wetlands
 - iii) Streams & Rivers (considering size, order, and gradient)

Criteria may be extrapolated from a data rich watershed to similar watersheds that are not data rich, but that share similar geology, topography, and waterbody characteristics.

- 4) Prioritization
 - a) Lakes & Reservoirs
 - b) Streams & Rivers
 - c) Wetlands

Note that this “consecutive” approach has been chosen based on limitations in data, funding and technical resources. We intend to develop criteria as data becomes available.

- 5) Inventory of Existing Data

Accumulate and evaluate data from the following sources:

- a) DEP large river and wadeable stream data
- b) WV Department of Agriculture data
- c) ORSANCO data
- d) Cacapon Institute information
- e) USGS data
- f) WV Bureau of Public Health information
- g) US Army Corps of Engineers data
- h) NPDES data
- i) Volunteered monitoring data
- j) WV DNR data
- k) Lake Study data
- l) USEPA data (e.g. EMAP)
 - USEPA National Database
 - USEPA Regional Database (Region 3)
- m) US Forest Service data (e.g. Fernow Experimental Forest)
- n) NRCS data (e.g. National Resource Inventory)
- o) University data
- p) Other States’ shared water data
- q) US Fish & Wildlife Service

Data will first be analyzed to determine where data gaps exist in order to define subsequent sampling and analysis needs. Data will then be used according to the approach outlined in Section II.

- 6) Data Needs

Additional data requirements will be determined, and funding will be sought to collect these additional data. Projections are to establish a collaborative and coordinated effort amongst point/nonpoint sources and other interested stakeholders in the collection of data from approximately 30 watersheds to evaluate cause and effect relationships. In addition, data analysis may shift to developing criteria based on the other methods mentioned in Item II above.

7) Assessing Progress
Quarterly progress reports will be prepared and submitted to EPA.

8) Deviations and Revisions

Significant changes to the plan will be formally recommended for approval by EQB's Nutrient Criteria Committee to the EQB. EQB will submit approved changes to Region III EPA. Additionally, as a participant in the committee, EPA will have advanced knowledge of necessary changes to the work plan and schedule for criteria development.

IV Specific Near-Term Objectives (1-2 years)

The NCC will:

- 1) Define impairment
- 2) Develop Work Plan and budget
- 3) Examine and analyze existing data and identify data gaps
- 4) Review literature
- 5) Secure funding.

To meet this objective a subcommittee has been established to consider the plan of work and to identify and quantify the resources needed to complete the tasks outlined in the plan. The committee will evaluate available "in kind" contributions from the stakeholders on the committee. The committee will report to the Board on a regular basis regarding funding needs. The Board will continue to work toward securing funding from all appropriate sources.

The Board and the NCC understand that although USEPA is working to provide funding to assist West Virginia's efforts in developing nutrient criteria, all funding necessary to complete the development of criteria will not necessarily be provided by that agency.

V Intermediate-Term Objectives (2-5 years)

The NCC will:

1) Recommend and participate in collection and analysis of new data as required to fill data gaps as noted in section III.6, above. In the unlikely event that no data gaps are discovered, this step may be bypassed. However, the NCC considers paramount the need for producing scientifically defensible criteria and will take all steps necessary to produce such criteria. Given that many sources of nutrients are non-point, it will be necessary to collect data to fill data gaps across a range of hydrologic conditions. This will likely require several years of field collections followed by data analysis prior to the development of defensible criteria.

- 2) Present nutrient criteria recommendations to EQB

VI Long-Term Objectives (5-7 years)

The EQB will:

- 1) Review nutrient criteria recommendations from the Nutrient Criteria Committee and, if necessary, consult with the NCC for corrections and clarifications
- 2) Approve nutrient criteria, conduct appropriate rulemaking activities and submit proposed criteria to the state legislature for adoption. Upon approval by the legislature, complete final promulgation of nutrient criteria. Note that the legislative rulemaking process in West Virginia is somewhat lengthy and may extend a year or 18 months after the completion of the criteria development by the NCC and the Environmental Quality Board. See the flow chart outlining the West Virginia Rulemaking Process – included herein as “Attachment 1.”

VII The EQB conducts triennial reviews of water quality standards and will make adjustments as appropriate.

PROCESS FLOW DIAGRAM FOR DEVELOPMENT OF NUTRIENT CRITERIA

(*Note: The work plan and budget will more specifically define the tasks and the order in which they are taken up to accomplish the near-term objectives)

