CHAPTER 5
POST-PHASE II PERMITTING

5.1 CONTINUATION OF PHASE II

The permit writer's responsibilities continue even after issuance of the first Phase II permit requiring implementation of the selected combined sewer overflow (CSO) controls from the long-term control plan (LTCP). Phase II, in many cases, may extend through numerous five-year National Pollutant Discharge Elimination System (NPDES) permit cycles. The number of cycles will depend on the length of time necessary to complete construction of the selected CSO controls. In cases where construction will take more than five years, the permit writer should coordinate with the NPDES enforcement authority to ensure that a compliance schedule for implementation of CSO controls is contained in an appropriate enforceable mechanism.

The permit writer should continue to include in subsequent Phase II permits any conditions that require the permittee to implement the selected CSO controls, continue implementation of the nine minimum controls and require reassessment of overflows to sensitive areas. The requirement to implement the post-construction compliance monitoring program should be included in a Phase II permit to evaluate water quality impacts from CSOs and the effectiveness of CSO controls (in cases where some of the selected CSO controls have been completed) and in the first post-Phase II permit to determine compliance with permit conditions and ultimately the attainment of WQS. Chapter 4 provides specific information on these Phase II permit conditions.

In addition, the permit writer should continue to work closely with the permittee during these subsequent permit cycles. The permit writer should continue to require the permittee to periodically report the status of implementation of the selected CSO controls (see Section 4.8). Continued involvement by the permit writer is critical to the development of the NPDES permit following implementation of the selected CSO controls.

5.2 SUBSEQUENT CSO PERMITTING

Prior to issuing the NPDES permit for the period in which the permittee's implementation of selected CSO controls is expected to be completed, the permit writer should reach an agreement with the permittee on the implementation of a post-construction compliance monitoring program (prepared during development of the LTCP) that will generate information and data necessary to determine whether the selected CSO controls are achieving compliance with applicable State water quality standards (WQS). The permit writer should generally incorporate the requirement to conduct this post-construction monitoring program into the first NPDES permit issued following completed construction of the selected CSO controls. Additionally, when enough water quality data have been generated, the permit writer should use the data to develop numeric water quality-based effluent limits as appropriate for inclusion in subsequent NPDES permits.

When using the data and information generated by the permittee under the Phase II permit(s) to develop numeric water quality-based effluent limits, the permit writer should consider the following questions:

- Were CSO frequency, duration, and volumes estimated or measured?
- Were all pollutants of concern identified, including toxics, and were overflow concentrations/loadings for each pollutant estimated or measured?
- Did the permittee identify and monitor for pollutants addressed by applicable State water quality criteria?
- Did the permittee obtain data on ambient background concentrations of pollutants of concern?
- Were appropriate flow values for receiving water bodies used? State WQS may specify the flows under which water quality criteria must be achieved.
- If applicable, were mixing zones calculated in accordance with State standards or policies?
- Was the cumulative impact of multiple CSOs to the same receiving water body considered?

- Were other point and nonpoint sources of pollutants within the same watershed considered?
- Was the model used suitable for wet weather episodic discharges?
- Were antecedent conditions appropriately used in setting up the model?
- Was information obtained on the most sensitive and most affected areas (e.g., shellfish propagation, drinking water supply)?

The permit writer might need additional information and data depending on the policies and procedures used by the NPDES permitting authority to evaluate water quality impacts and develop numeric water quality-based effluent limits. The scientific/technical issues affecting determination of the need for water quality-based effluent limits for CSOs might be different from those commonly used by permit writers for continuous wastewater discharges from other point source categories. For example, use of chronic criteria designed for a particular low flow scenario might not apply during wet weather flow conditions when CSOs are likely to occur. In addition, State WQS might have been revised to better reflect receiving water body uses during wet weather conditions.

Therefore, the U.S. Environmental Protection Agency recommends that the permit writer involve appropriate WQS authorities in evaluating whether CSOs will achieve WQS and developing numeric water quality-based effluent limits. The *Technical Support Document for Water Quality-based Toxics Control* (EPA, 1991) might provide some insight in developing water quality-based effluent limitations. Although this EPA manual is intended to address continuous discharges, it may provide useful information for wet weather flows.

Due to the possible combined effect of pollutant sources (e.g., other point and nonpoint sources) or the existing condition of the receiving water body, chemical-specific water quality-based effluent limits established specifically for CSOs might not result in the attainment of WQS for a particular receiving water body. In these cases, the NPDES permitting authority should consider developing one or more total maximum daily loads (TMDLs) for the receiving water body for the pollutants in CSOs exceeding WQS. (See Section 3.5.1.4 for additional discussion

of TMDLs.) If a TMDL is established for a receiving water body to control all pollutant sources of a particular pollutant, the numeric water quality-based effluent limits for that pollutant in a CSO must be consistent with the wasteload allocation established for the CSOs (see 40 CFR 122.44(d)(1)(vii)(B)).

After the permittee has completed construction of the selected CSO controls, the permit writer can consider for the last Phase II permit or the first post-Phase II permit the use of biocriteria, sediment criteria, and whole effluent toxicity testing to evaluate the overall effect of CSOs on receiving water bodies. Use of these requirements will depend on the need to 1) assess toxicity in the receiving water body, 2) prevent future impacts, or 3) remediate existing receiving water body degradation. Again, the permit writer should consult with the appropriate State WQS authorities and enforcement staff to determine whether such requirements in the permit are warranted and to establish the specific requirements for the CSOs of concern.