APPENDIX 1

MINIMUM ELEMENTS FOR WATERSHED-BASED PLANS PER CWA SECTION 319(H)

Beginning in 2002, the U.S. Environmental Protection Agency (USEPA) promoted increased use of CWA Section 319(h) (CWA 319) funds to develop and implement nonpoint source (NPS) total maximum daily loads (TMDLs) or the NPS components of mixed-source TMDLs (hereafter, both of these types of TMDLs will be referred to as "NPS TMDLs" (Supplemental Guidelines for CWA 319 Award for FY 2002 and Subsequent Years). NPS TMDLs, together with watershed-based plans designed to implement the NPS TMDLs, provide the necessary analytic link between actions on the ground and the water quality results to be achieved. In the absence of such an analytic framework, it is difficult to develop and implement watershed projects that will achieve water quality standards.

As such, all projects supported with CWA 319 funds in California must be located in a watershed that has an approved or nearly approved NPS TMDL and a watershed-based plan that meets the comprehensive watershed planning elements described in USEPA'S "Handbook for Developing Watershed Plans to Restore and Protect Our Waters" (USEPA Handbook).The USEPA Handbook is based on the premise that significant environmental results are more likely to occur where plans provide detailed information for decision makers. This will help to ensure that watershed projects are prioritized and that the activities that are taken will lead to achieving water quality objectives and restoring beneficial uses within a specific time frame. This is important for a wide range of reasons including the need to: (1) ensure that limited resources address significant pollutant sources; (2) accelerate the pace of restoration; (3) provide information to leverage related resources; and (4) establish feedback mechanisms for adjustments to ensure ongoing progress.

Watershed-based plans are holistic documents that are designed to provide a guide for the protection and/or restoration of a watershed. These plans provide a careful analysis of the sources of water quality problems, their relative contributions to the problems, and alternatives to solve those problems. Watershed-based plans should also provide proactive measures to protect waterbodies. In watersheds where NPS TMDLs have been developed and approved or are in the process of being developed, watershed-based plans should be designed to achieve the load reductions called for in the NPS TMDL.

The USEPA Handbook states that all projects implemented with CWA Section 319(h) funds should be directed to projects that are identified in watershed plans that address the following nine key elements, as described in Chapter 2 of the USEPA Handbook:

Element 1: Identification of Causes and Sources

Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation).

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What does this mean?

The watershed plan should include a map of the watershed that locates the major causes and sources of impairment. To address these impairments, the watershed plan establishes goals that will include (at a minimum) meeting the appropriate water quality standards for pollutants that threaten or impair the physical, chemical, or biological integrity of the watershed covered in the plan.

This element will usually include an accounting of the significant point and nonpoint sources in addition to the natural background levels that make up the pollutant loads causing problems in the watershed. If TMDLs exist, this element may be adequately addressed. The analytical methods may include mapping, modeling, monitoring, and field assessments to make the link between the sources of pollution and the extent to which they cause the water to exceed relevant water quality standards.

Element 2: Expected Load Reductions

An estimate of the load reductions expected from management measures.

What does this mean?

On the basis of the existing source loads estimated from Element 1, the watershed plan provides an estimate of the reductions needed to meet the water quality standards. Various management measures (see Element 3 below) will then be identified that will help to reduce the pollutant loads and estimate the load reductions expected as a result of the management measures to be implemented, recognizing the difficulty in precisely predicting the performance of these management measures over time.

Estimates should be provided at the same level as that required in the scale and scope component in Element 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks). For waters for which USEPA has approved or established TMDLs, the plan should identify and incorporate the TMDLs. Applicable loads for downstream water should be included so that water delivered to a downstream or adjacent segment does not exceed the water quality standards for the pollutant of concern at the water segment boundary. The estimate should account for reductions in pollutant load from point and nonpoint sources identified in the TMDL as necessary to attain the applicable water quality standards.

Element 3: Management Measures

A description of the management measures or management practices and associated costs that will need to be implemented to achieve the load reductions in Element 2, and a description (using a map or a description) of the critical areas where those measures are needed to implement the plan.

What does this mean?

The watershed plan should describe the management measures or management practices that need to be implemented to achieve the load reductions estimated under Element 2, as well as to achieve any additional pollution prevention goals called out in the plan (e.g., habitat conservation and protection). Pollutant loads will vary even within land use types, so the watershed plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices.

Element 4: Technical and Financial Assistance

An estimate of the amount of technical and financial assistance needed with associated costs, and /or the sources and authorities that will be relied upon to implement the plan.

What does this mean?

The watershed plan should estimate the financial and technical assistance needed to implement the entire plan. This includes implementation and long-term operation and maintenance of management measures, information and education (I/E) activities, monitoring, and evaluation activities. It should also document which relevant authorities might play a role in implementing the plan. Plan sponsors should consider the use of federal, state, local, and private funds or resources that might be available to assist in implementing the plan. Shortfalls between needs and available resources should be identified and addressed.

Element 5: Information/Education

An information/education (I/E) component that will be used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.

What does this mean?

The watershed plan should have an I/E component that identifies the education and outreach activities or actions that will be used to implement the plan. These I/E activities may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.

Element 6: Schedule

A schedule for implementing management measures identified in this plan that is reasonably expeditious.

What does this mean?

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The plan should include a schedule for implementing the management measures outlined in Element 3. The schedule should reflect the milestones developed in Element 7.

Element 7: Measurable Milestones

A description of interim, measurable milestones for determining whether nonpoint source management measures, management practices, or other control actions are being implemented.

What does this mean?

The watershed plan should include interim, measurable milestones to assess progress in implementing the management measure/management practices for the plan. These milestones will measure the implementation of the management measures, such as whether they are being implemented on schedule, whereas Element 8 will measure the effectiveness of the management measures, for example, by documenting improvements in water quality.

Element 8: Evaluation of Progress

A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards.

What does this mean?

As projects are implemented in the watershed, the watershed plan should provide water quality benchmarks to track progress. The *criteria* in Element 8 *(*not to be confused with *water quality criteria* in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). The plan should also indicate how the implementers will determine that the watershed plan needs to be revised if interim targets are not met. The revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment.

Element 9: Monitoring

A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established in Element 8.

What does this mean?

The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim

milestones criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring is particularly relevant to the project.

The level of detail needed to address the nine key elements of watershed management plans listed above will vary in proportion to the homogeneity or similarity of land use types and variety and complexity of pollution sources. Urban and suburban watersheds will therefore generally be planned and implemented at a smaller scale than watersheds with large areas of a similar rural character. Similarly, existing watershed plans and strategies for larger river basins often focus on flood control, navigation, recreation, and water supply but contain only summary information on existing pollutant loads. They often generally identify only source areas and types of management practices. In such cases, smaller sub-basin and watershed plans and work plans developed for nonpoint source management grants, point sources, and other stormwater management can be the vehicles for providing the necessary management details. Additional information is included in the Federal CWA Section 319(h) Guidelines.

WATERSHED-BASED PLANS IN CALIFORNIA

In California, a wide range of plans are being used to comply with the nine key elements, often in combination with each other. Examples of plans that are being used to comply with the key elements include local watershed plans, coordinated resource management plans, TMDL implementation plans, comprehensive conservation and management plans, Regional Water Quality Control Plans (Basin Plans), and their Regional Water Boards Watershed Management Initiative (WMI) Chapters under the WMI Integrated Plan, and combinations thereof. Applicants that need assistance may work with their Regional Water Boards to verify that the combination of plans has the nine elements. Those elements that are not included in existing plans will need to be incorporated into the plans, as appropriate, to be eligible for CWA 319 funds. During the full proposal stage of the grant selection process, applicants for CWA 319 funds will complete a table (See Table F-1 under Appendix 1 on the CWA 319(h) Grant Solicitation webpage) to indicate where each key watershed plan element is addressed. Grant awards may be withdrawn if all nine key elements are not adequately addressed.

Regional Water Board WMI chapters can be accessed at the following websites:

Region1

http://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_management.shtml

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Region 2

http://www.waterboards.ca.gov/sanfranciscobay/watershedmanagement.shtml

Region 3

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/wmi/index.shtml

Region 4

http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/index.shtml#Watershed

Region 5

http://www.waterboards.ca.gov/centralvalley/water_issues/watershed_management/index.shtml

Region 6

http://www.waterboards.ca.gov/lahontan/water_issues/programs/watershed_management/index.shtml

Region 7

http://www.waterboards.ca.gov/coloradoriver/water_issues/programs/wmi/

Region 8

http://www.waterboards.ca.gov/santaana/water_issues/programs/wmi/index.shtml

Region 9

http://www.waterboards.ca.gov/sandiego/water_issues/programs/wmc/index.shtml