APPENDIX 1

MINIMUM ELEMENTS FOR WATERSHED-BASED PLANS PER CLEAN WATER ACT SECTION 319(h)

All projects supported with Clean Water Act section 319(h) funds must implement activities based on sound watershed-based plans as defined by the United States Environmental Protection Agency (U.S. EPA) in its "Handbook for Developing Watershed Plans to Restore and Protect Our Waters (U.S. EPA's Handbook)". U.S. EPA's Handbook is based on the idea that significant environmental results are more likely where plans provide detailed information to ensure that priority activities are being undertaken to achieve water quality objectives and 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 protect and restore 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 deliver proactive measures to protect waterbodies. In watersheds where a total maximum daily load (TMDL) has been developed and approved or is in process of being developed, watershed-based plans should be designed to achieve the load reductions called for in the TMDL.

U.S. EPA's Handbook states that all project implemented with Clean Water Act Section 319(h) funds are directed to projects that are identified in watershed plans that address the following nine key elements that are in Chapter 2 of the Handbook:

Element 1: Identification of Causes and Sources
Identification of caused 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 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).

What does this mean?

Your watershed plan should include a map of the watershed that locates the major causes and sources of impairment. To address these impairments, you swill set 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 a TMDL exists, 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 the mean?

On the basis of the existing source loads estimated for element (1), you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance 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 U.S. EPA has approved or established TMDLs, the plan should identify and incorporated 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 the mean?

The plan should describe the management measures 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 watershed plan (e.g., habitat conservation and protection). Pollutant loads will vary even within land use types, so the 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.

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Element 4: Technical and Financial Assistance

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

What does this mean?

You 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, I/E activities, monitoring, and evaluation activities. You 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 in the plan.

Element 5: Information/Education (I/E)

An information/education 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 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?

You should include a schedules for implementing the management measures outlined in you watershed plan. The schedule should reflect the milestones you develop in Element 7.

Element 7: Measurable Milestones

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

What does this mean?

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You will develop interim, measurable milestones to measure progress in implementing the management measure for your watershed 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 measure, 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, you will need 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). You should also indicate how you'll determine 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 remainder of the Handbook proceeds through the watershed planning process, addressing these elements in detail to show you how to develop and implement watershed plans that will achieve water quality and other environmental goals.

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 Clean Water Act section 319(h) Guidelines.

WATERSHED-BASED PLANS IN CALIFORNIA

In California, wide ranges 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 the Regional Water Boards Watershed Management Initiative Chapters under the Watershed Management Initiative 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 Clean Water Act 319(h) funds. During the full proposal stage of the grant selection process, applicants will complete a table (see Table F-1 under Appendix 1 on the Clean Water Act 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 Watershed Management Initiative chapters can be accessed at the following websites:

North Coast Regional Water Board (Region1):
http://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_management.shtml

San Francisco Regional Water Board (Region 2):
http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/watershed/watershed.shtml

Central Coast Regional Water Board (Region 3):
http://www.waterboards.ca.gov/centralcoast/water_issues/programs/wmi/index.shtml

Los Angeles Regional Water Board (Region 4):
http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/index.shtml#Watershed

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Central Valley Regional Water Board (Region 5):
http://www.waterboards.ca.gov/centralvalley/water_issues/watershed_management/index.shtml

Lahontan Regional Water Board (Region 6):
http://www.waterboards.ca.gov/lahontan/water_issues/programs/watershed_management/index.shtml

Colorado River Basin Regional Water Board (Region 7):
http://www.waterboards.ca.gov/coloradoriver/water_issues/programs/wmi/

Santa Ana Regional Water Board (Region 8):
http://www.waterboards.ca.gov/santaana/water_issues/programs/wmi/index.shtml

San Diego Regional Water Board (Region 9):
http://www.waterboards.ca.gov/sandiego/water_issues/programs/wmc/index.shtml