Section A6. Program/Task Description

SWAMP was proposed as a new comprehensive program which will (1) integrate the existing water quality monitoring of the SWRCB and RWQCB's and (2) coordinate with monitoring programs of other agencies, dischargers, and citizens groups. To ensure that the Program is coordinated and integrated, the monitoring efforts shall be overseen centrally by the SWRCB. The RWQCB's will establish monitoring priorities for the water bodies within their jurisdictions, in coordination with the SWRCB. This monitoring will be done in accordance with protocols and methodologies laid out in the program, and through the statewide SWAMP Quality Assurance Management Plan herein.

SWAMP is intended to meet four goals as follows:

1. Create an ambient monitoring program that addresses all hydrologic units of the State using consistent and objective monitoring, sampling and analytical methods; consistent data quality assurance protocols; and centralized data management. This will be an umbrella program that monitors and interprets that data for each hydrologic unit at least one time every five years.

2. Document ambient water quality conditions in potentially clean and polluted areas. The scale for these assessments ranges from the site-specific to statewide.

3. Identify specific water quality problems preventing the SWRCB, RWQCB's, and the public from realizing beneficial uses of water in targeted watersheds.

4. Provide the data to evaluate the overall effectiveness of water quality regulatory programs in protecting beneficial uses of waters of the State.

Additionally, the SWAMP program is essential to the success of the Total Maximum Daily Load (TMDL) program. Extensive monitoring data and information on the quality of the waters of the State are the backbone of the TMDL program. The SWRCB's SWAMP program, once fully implemented, is intended to produce water quality data to improve RWQCB's abilities to list and delist 303(d) waters.

Quality Assurance

SWAMP has been and will continue to be developed and implemented with the objective of collecting high quality monitoring data that could be of the most use to the SWRCB and RWQCB programs. One of the primary focuses of the Roundtable's 2002 meetings has been the development of this QAPP, which is critical to ensure high quality of data. The SWAMP Roundtable sponsored scientific workshops on quality assurance in 2002. SWAMP has organized an external scientific panel, the Scientific Planning and Review Committee (SPARC),

to review study design, approaches, indicators, and other relevant topics. SPARC members are representatives from federal and state agencies and academics with expertise in the fields that include monitoring program management, fish habitat, invertebrates, sediment, organic chemistry, metals chemistry, quality assurance, pathogens, toxicology, and statistics, etc. SPARC held a two-day meeting in May 2002, at which staff from the nine RWQCB's gave presentations on past and future SWAMP activities within each Region. One major comment from SPARC members at the meeting was that statewide data comparability needs to be the first step towards statewide consistency for SWAMP. Statewide data comparability means that ambient water quality measurements taken in one part of the state can be directly compared with like measurements taken in other parts of the state. Data comparability in SWAMP is being achieved through requirements in the SWAMP QAPP. Statewide data comparability issues and other comments and recommendations in SPARC report will be the subject of future Roundtable meetings. Lastly, a significant external 3rd party (referee) QA program is a major component of the Quality Assurance Program for SWAMP, with Frontier Geosciences, Inc (Seattle, WA) contracted to provide external QA services such as QA planning and review assistance, conducting of and documenting the annual interlaboratory calibration exercise program, and conducting/assisting with laboratory performance audits, as well as data validation and verification efforts.

Data Management, Data Evaluation, and Reporting

SWAMP was developed with the objective of collecting high quality monitoring data to be used by SWRCB and RWQCB programs. Data management, evaluation, and reporting will be high priorities of SWAMP. The SWAMP database is being developed through a contract with the San Jose State University Foundation (through subcontract from DFG). Once in full operation, this database will be the central depository of all data collected by SWAMP with links to other available databases. This database will eventually be included in SWRCB's 'Water Information Network (WIN)'. It is the goal of the SWAMP data management program to ultimately provide standardized data management, evaluation, and reporting. It is also a goal of SWAMP to be as "paperless" as possible, and to develop a database that will allow internet web access to all parties interested in the data and findings and technical reports produced through SWAMP studies. SWAMP will include the use of existing data to the extent it can be verified and placed or linked into centralized locations, but such "outside data" shall not be a part of the official SWAMP database at this time. Any data that are collected as part of SWAMP will be made available to all stakeholders centrally along with accompanying metadata. A summary of the SWAMP Information Management System is provided in **Section B10** of this QAPP, and **Appendix J** contains the Interim SWAMP Information Management System Plan.

Anticipated SWAMP Cost Considerations

Water Code Section 13192 also requires the SWRCB to estimate the costs of implementing the proposed comprehensive surface water quality monitoring program. Financial information is not

normally documented within a QAMP, but for these start-up years of SWAMP, a brief outline of the anticipated costs of the program, as well as anticipated staffing needs that SWAMP will ultimately require, a brief review of financial and staffing issues is merited. It is estimated that the annual cost to implement fully the SWAMP Program, as outlined in the November 2000 Legislative Report, ranges from approximately $59 million to $115 million. These cost estimates also include 87 to 132 additional staff at the SWRCB and RWQCB's. As SWAMP is gradually implemented, the actual costs of the efforts may differ from the estimates due to increased costs to perform the monitoring and other factors. The majority of funding will be used for regional monitoring and sufficient funding will be allocated to implement site-specific monitoring as proposed. To ensure that SWAMP is coordinated and integrated, the monitoring efforts shall be overseen centrally by the SWRCB. The RWQCB's shall establish monitoring priorities for the water bodies within their jurisdictions.

The unmet funding need to fully implement SWAMP is anticipated to be approximately $44 million to $87 million per year. In Fiscal Year 2000-01, the Governor's budget included the SWRCB's Water Quality Initiative (WQI) to support and expand the implementation of ambient monitoring. The WQI is consistent with the approach proposed for SWAMP. As monitoring efforts are further developed and refined through the evolving SWAMP Program, additional funding requests may be made. The SWRCB anticipates SWAMP will be phased in over several years.

AB-982 Advisory Group Review

The AB 982 Public Advisory Group (PAG) and AB 982 Scientific Advisory Group (SAG) reviewed the Draft of what became in final format the November 2000 Legislative Report, and provided significant comments. The comments of the AB 982 PAG and the AB 982 SAG were incorporated into the November 2000 Legislative Report proposal for a comprehensive surface water monitoring program, and have likewise been incorporated to the extent possible into this SWAMP QAMP. The PAG and SAG comments are available for review from the SWRCB SWAMP Program staff.

SPECIFIC MONITORING AND ANALYSIS WORK TO BE PERFORMED FOR SWAMP

Because of the budget constraints during 2001-02, the SWRCB and RWQCB's began implementing SWAMP by primarily focusing on site-specific monitoring to better characterize problem sites or clean locations (reference sites) to meet each RWQCB's needs for 303(d) listing, TMDL development, and other core regulatory programs. Some of the monitoring activities under SWAMP for FY 2002-03 are conducted through contracts and interagency agreements with a number of organizations, such as DFG and USGS.

Another major component of SWAMP– the overall status and trends of the state's surface water quality–will be implemented in the future as additional funds are made available. Until then, RWQCB's will continue to use SWAMP resources to address high priority water quality issues in each region, while following SWAMP protocols to ensure statewide data comparability.

Because there is not currently a consistent statewide routine monitoring program for SWAMP, there is no one single monitoring and analysis approach that can be described in this QAMP. However, **Appendix B** (RWQCB SWAMP Work Plans for FY02-03) outlines overall goals for SWAMP for each RWQCB, with details of specific monitoring objectives for the year, a summary description of existing and known information regarding waterbodies to be sampled during the year, site-specific lists of all planned monitoring site locations, with specific planned measurement parameters for monitoring at each site, as well as a summary of planned sampling frequencies for each site for the year. A summary of the guidance for preparing the annual SWAMP Work Plan is provided at the beginning of **Appendix B.**

Through the preparation of annual SWAMP Regional Work Plans, the SWAMP Program is planning to develop and maintain a web-based SWAMP Monitoring Schedule each year, although this is still under development. The website address for the SWAMP calendar (for field sampling, for lab analyses, and for SWAMP programmatic events) is: http://crete.mlml.calstate.edu/cgi-bin/publish/webevent.pl.

This monitoring schedule will ultimately be made available to all SWAMP participating entities each year on the SWRCB=s SWAMP web page. This schedule will contain links to the specific site locations, sampling frequencies, and measurement parameters for the fiscal year, to the extent they are provided in an appropriate format, as provided by the RWQCB's in their annual SWAMP Work Plans.

A schedule of tasks for state Fiscal Years 2002/2003 and 2003/2004 is found in Table 3.

TABLE 3. ANTICIPATED SWAMP WORK SCHEDULE - FY 2002/2003

TASKS	Jl '02	Au '02	Se '02	Oc '02	No '02	De '02	Ja '03	Fe '03	Mr '03	Ap '03	My '03	Jn '03
Prepare & submit SWAMP FY02-03 RWQCB Work Plans	*	*	*									
Prepare Contracts, Task Orders 02-03	*	*	*	*	*	*						
Water Quality Monitoring Coord. Committee Meetings	*	*	*	*	*	*	*	*	*	*	*	*
Surface Water Quality Monitoring	*	*	*	*	*	*	*	*	*	*	*	*
Qtrly Progress Rpts	*			*			*			*		
Annual SWAMP Scientific Summit											*	
SWAMP Annual External Scientific Review Committee Meeting(s)											*	
Incorp. comments, revise QAMP; submit Final QAMP					*	*	*					
QA visits to labs & RWQCB offices; start field audits												*
Prepare & submit SWAMP FY03-04 RWQCB Work Plans										*	*	*
Prepare Contracts, Task Orders 03-04											*	*

TABLE 3 (Continued). ANTICIPATED SWAMP WORK SCHEDULE - FY 2003/2004

TASKS	Jl '03	Au '03	Se '03	Oc '03	No '03	De '03	Ja '04	Fe '04	Mr '04	Ap '04	My '04	Jn '04
Finalize SWAMP FY03-04 RWQCB Work Plans	*	*										
Prepare Contracts, Task Orders 03/04	*	*	*	*	*							
Water Quality Monitoring Coord. Committee Meetings	*	*	*	*	*	*	*	*	*	*	*	*
Surface Water Quality Monitoring	*	*	*	*	*	*	*	*	*	*	*	*
Qtrly Progress Rpts	*			*			*			*		
Annual SWAMP Scientific Summit											*	
SWAMP Annual External Scientific Review Committee Meeting											*	
Submit Draft of 1st revision SWAMP QAMP to SWRCB; 60-day intern. review											*	*
Incorp. comments & revise 1st revision QAMP												*
QA visits to labs & regional offices/field audits	*			*				*				*
Prepare & submit SWAMP FY04-05 RWQCB Work Plans									*	*	*	*
Prepare Contracts, Task Orders 04/05											*	*