Appendix B

Revised Self-Monitoring Program
For Order No. 01-036

Attachment 6 to Order No. 01-036

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED SELF-MONITORING PROGRAM
FOR
ORDER NO. 01-036 AS AMENDED BY ORDER NO. R2-2009-XXXX

SANTA CLARA VALLEY WATER DISTRICT
U.S. ARMY CORPS OF ENGINEERS

GUADALUPE RIVER PROJECT
And
GUADALUPE CREEK RESTORATION PROEJCT

SAN JOSE, SANTA CLARA COUNTY

I. General

A. Basis

Reporting responsibilities of the Dischargers and as "waste dischargers" are specified in Sections 13225(a), 13267(b), 13268, 13883, 13387(b) of the California Water Code and this Board's Resolution No. 73-16.

B. Purpose

The principal purposes of a monitoring program by a discharger, also referred to as a Self-Monitoring Program (SMP), are to document compliance with effluent requirements and prohibitions established by this Board; facilitate self-policing by the discharger in the prevention and abatement of pollution arising from improper effluent; to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and to prepare water and wastewater quality inventories.

C. Sampling and Methods

Sample collection, storage and analysis shall be performed according to 40 CFR, Section 136, or other methods approved by the Executive Officer.

Water analyses conducted on samples collected for laboratory analysis shall be performed by a laboratory approved by the Department of Public Health or a laboratory approved by the Executive Officer.

All monitoring instruments and equipment, including instruments and equipment used in field sampling and analysis, shall be properly calibrated and maintained to ensure accuracy of measurements.

Routine sampling shall follow Quality Assurance/Quality Control procedures including the use of field, equipment and laboratory blanks and laboratory surrogate samples.

All Quality Assurance/Quality Control measures and results shall be reported along with the data.

II. DEFINITION OF TERMS

Grab sample is defined as an individual sample collected in a short period of time not exceeding 15 minutes. They are to be used primarily in determining compliance with receiving water limits. Grab samples only represent the condition that exists at the time the water and effluent are collected.

100 feet from the point of discharge is defined as 100 feet downstream of the point at which water diverted around an area of construction is discharged into a water of the State or 100 feet downstream of the point at which water is reintroduced into the stream following construction completion.

Duly Authorized Representative is one whose:

a. authorization is made in writing by a principal executive officer, or

b. authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity (e.g., field supervisor, project manager, chief engineer).

III. SPECIFICATIONS FOR SAMPLING AND ANALYSIS

This monitoring plan includes the following components: (1) Monitoring associated with discharges from diversion and dewatering operations, (2) Monitoring associated with evaluating Mitigation Plan Success, (3) Monitoring associated with mercury releases.

o Monitoring Associated with Discharges from Diversion and Dewatering Operations

The Dischargers are required to perform sampling and analyses as found in accordance with the following conditions and requirements:

A. Receiving Waters

1. Diverted water discharge sampling shall be conducted on the first two days of the commencement of diversion, one week later, and monthly thereafter. Frequency

shall be increased to daily if visual observations indicate that the discharge is resulting in obviously increased turbidity.

2. Reintroduced flow discharge sampling shall be conducted daily for two days upon commencement of discharge.

3. Prior to start of diversion or reintroduction of flow, background water samples shall be collected from 100 feet from the point of discharge. Samples must be representative of typical undisturbed conditions. In addition, the Dischargers may collect background samples on a daily basis a minimum of 500 feet upstream of the active site. Background data generated by analyses of samples collected daily will be valid for discharges occurring in the same day.

4. Receiving water samples shall be collected, at least two samples within every 24-hour period, evenly spaced during the work hours each day. The location of each sampling site shall be 100 feet from the point of discharge. These samples shall be immediately analyzed on site for the following constituents:

Constituents	Type of Sample	Units
Turbidity	Grab	NTUs
PH	Grab	Not Applicable
Dissolved Oxygen	Grab	mg/l

5. Samples shall be taken at least one foot below the surface of the water body when possible.

6. Duplicate samples shall be collected a minimum of once per month, with one set of samples analyzed on site and one set of samples sent to a laboratory for analysis of the same constituents analyzed for on site.

7. If analytical results for constituents analyzed on-site show that any grab sample exceeds any receiving water limit, confirmation samples shall be taken within two hours and every subsequent two hours, and analyzed for all constituents for which on-site analysis is required. Sampling at this higher frequency shall continue until the exceedance has been corrected.

8. If any receiving water limit for a constituent or constituents is exceeded, then the Dischargers shall follow the following process to address the exceedance:

    a. Identify source of exceedance.

    b. Correct source of exceedance.

    c. Resample to determine whether exceedance has been corrected.

9. If any receiving water limit for a constituent or constituents is exceeded for a 12-hour period, then the Dischargers shall immediately notify the Board by telephone and email of the exceedance and of how they are correcting or will correct the exceedance.

10. If any receiving water limit for a constituent or constituents is exceeded for a 24-hour period, then a violation shall have occurred. The discharge that is causing the violation shall be terminated until corrective action is taken and sampling demonstrates that the exceedance has been corrected or when the Dischargers have provided the Board with a corrective action plan, acceptable to the Executive Officer, that provides alternative methods of compliance.

11. For other violations, the Dischargers shall notify the Board immediately whenever violations are detected and discharge shall not resume until the Dischargers have provided the Board with a corrective action plan, acceptable to the Executive Officer, that provides alternative methods of compliance.

12. It is expected that the placement of fill material for coffer dams may result in the unavoidable exceedance of instantaneous maximum limits. Therefore, as long as BMPs have been implemented to minimize sediment discharge, corrective action shall not be required for exceedances that occur within eight hours of the initial placement and removal of fill material for coffer dams.

B. Standard Observations

The following observations shall be recorded on every day of operation:

1. Receiving Waters:
    a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source and size of affected area.
    b. Discoloration and turbidity: description of color, source and size of affected area.
    c. Odor: presence or absence, characterization, source, distance of travel and wind direction.
    d. Hydrographic condition including: time and height of corrected low and high tides; and depth of water columns and sampling depths.
    e. Weather conditions including: air temperature, wind direction and velocity and precipitation.
2. Decant Water: Evidence of decant water discharge from excavated material stockpile and storage area to any drainage.
3. Progress and location of diversion or reintroduction of flow, noted on a map of the site.

C. Records to be Maintained.

1. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained by the Dischargers and accessible at all times. Records shall be kept for a minimum of three years. Records shall include notes and observations for each sample as follows:
    a. Identify of each sampling and observation station by number.
    b. Date and time of sampling.
    c. Date and time analyses are started and completed and the name of the person conducting analyses.
    d. Complete procedure used, including method of preserving or analyzing sample and identity and volumes or reagents used. A reference to a specific section of Standard Methods is satisfactory.
    e. Calculations of results.
    f. Results of analyses and/or observations, including a comparison of the laboratory and field results for duplicate samples.
2. Records shall include a map or maps of the site showing the location of sediment sampling locations, coffer dams, discharge pipes, access ramps, etc.
3. If any receiving water limit for a constituent or constituents is exceeded, or a violation of the permit occurs, then the Dischargers shall maintain a tabulation during the period the exceedance occurs showing the following flow data for effluent stations and for the reach to be desilted:
    a. Total flow or volume on a daily basis.
    b. Maximum and minimum flows for each month, if applicable.

D. Effluent Monitoring

Grab samples for turbidity and pH shall be collected daily for decant water and runoff from stockpiles and storage areas where there is a discharge to surface waters.

- **Monitoring Associated with Evaluating Mitigation Plan Success**

The type, location, frequency, and time of initiation of monitoring shall be as described in the Dischargers' Mitigation and Monitoring Plan (MMP), as summarized in Table 4-2 of the MMP and attached to this SMP as Attachment 1, and in Table 4-18 of the MMP and attached to this SMP as Attachment 2.

- **Monitoring Associated with Mercury Releases**

The monitoring program shall monitor mercury loads from the Guadalupe River watershed to the San Francisco Bay to assess progress in attaining the legacy and urban

stormwater runoff mass load allocations assigned by the San Francisco Bay mercury TMDL and the Guadalupe River Watershed TMDL.

With respect to mercury monitoring elements of the SMP, the Dischargers shall comply with the following:

1. Sampling Stations: ~~for Chemical Sampling: Establish eight stations within the Guadalupe Creek Restoration Project reaches, four stations upstream of the Restoration Project, and two stations in the Guadalupe River between Trimble Road and Montague Expressway. At least one station shall be immediately behind Masson Dam. The specific sites shall be selected in pools, vegetated areas or zones of sediment deposition where conditions favorable to methylation are likely. The Dischargers shall submit a map showing sampling locations with each monitoring report.~~Two gauge stations that meet United States Geological Service (USGS) standards will be established as flow and suspended sediment monitoring stations. The USGS will operate both the upstream gage (23b) and the downstream gage at Highway 101 (USGS Gage 1169025). The gauge stations (23b and 1169025) will collect continuous flow and turbidity data (for the period described in Item 2 below). The collected turbidity data will be used as a surrogate measurement for suspended sediment concentration when converted using LOESS regression. Additionally, grab samples will be collected at these stations.

2. ~~Parameters~~Frequency and Duration: ~~Parameters to be monitored shall include: total (unfiltered) mercury in water, sediment and porewater; dissolved (filtered) mercury in porewater; total (unfiltered) methylmercury in water, sediment, and porewater, dissolved (filtered) methylmercury in water and porewater; flow and Total Suspended Solids.~~ Water (grab) samples will be collected at the sampling stations during multiple storm events and dry periods in the wet season (October 1st to April 30th) for five years. In addition to the continuous flow and turbidity data collected, storm water samples will be collected during:

    a. Peak storms in 4 out of 5 years, and both small and peak storms in at least 1 out of 5 years,

    b. First seasonal flush runoff (runoff from first storm event of the season),

    c. Both rising and falling flow stages,

    d. 1-2 hours before an expected rise,

    e. Peak flow,

    f. After base flow is reached, and

    g. Base flow in dry periods.

    The Board may require grab sampling at other locations, on occasion, to assess the contribution from specific areas and /or sources.

3. ~~Frequency~~Parameters: ~~Quarterly for chemical parameters, continuously for flow, and continuously for Total Suspended Solids.~~ Parameters to be monitored shall include: total (unfiltered) mercury in water; dissolved (filtered) mercury in water;

total (unfiltered) methylmercury in water; dissolved (filtered) methylmercury in water; general water quality parameters (including but not limited to dissolved oxygen, pH and temperature); and suspended sediment concentration (or total suspended solids). The samples will be analyzed by a qualified laboratory for the established parameters. The Board may require analysis for other parameters (e.g., nutrients) on occasion to assess the contribution from specific areas, sources and/or relation to methylation of mercury.

4. ~~The Dischargers shall establish a continuous monitoring program for flow and Total Suspended Solids, and develop calibration data to calculate total mercury loads based on continuous flow and suspended solids data~~Load Calculations: The Dischargers shall estimate total mercury, dissolved mercury, total methylmercury, and dissolved methylmercury loads based on correlations between the stream gage data and grab sample data (Items 1 & 2).

IV. REPORTS TO BE FILED WITH THE REGIONAL WATER BOARD

A. Report of Permit Violations

In the event that this permit is violated, the Dischargers shall notify the Board by telephone immediately and shall notify the Board in writing within seven calendar days. A written report shall included time and date of incident, duration and estimated volume of discharge or bypass. The report shall include a detailed discussion of the reasons for the non-compliance and what steps were taken to correct the failure and prevent it from occurring again.

B. Self-Monitoring Reports

1. During construction operations, written reports shall be filed regularly for each calendar month that water diversions, reintroduction of flow, or discharges of decant water from excavated material stockpiles and storage areas occur, and filed no later than the fifteenth of each month. The reports shall include the following:

    a. A transmittal letter that includes identification of changes to the project design and any unplanned releases or failures that have occurred since the last reporting period.

    b. A monitoring report which details: the magnitude of the releases or failures; any discharge limit exceedance; dates of all exceedances; cause of the failures, releases or other violations; any corrective actions taken or planned; and the schedule for completion of corrective action.

    c. Reports and the letter transmitting reports shall be signed by a principal executive officer(s) of one or both of the Dischargers or by duly authorized representatives of those persons.

2. **Mitigation Monitoring Program**: By March 31 of each year, the Dischargers shall submit a technical report, acceptable to the Executive Officer, containing an analysis of results of mitigation monitoring program for the previous year.

3. **Mitigation Success Status Report**: By June 30 of each year, the Dischargers shall submit a technical report, acceptable to the Executive Officer, containing the results of an assessment of mitigation program monitoring results, and recommendations for monitoring program modifications or corrective measure implementation, if appropriate. It is anticipated, as described in the Dischargers' MMPs, that the assessments and corrective measure proposal will be the product of the Adaptive Management Team.

4. **Plans and Reports for Mercury Monitoring**: ~~By June 30 of each year, the Dischargers shall submit a technical report, acceptable to the Executive Officer, containing the results of the previous year's sampling and monitoring for mercury~~The Dischargers shall submit an annual sampling plan by August 15th for Executive Officer review and approval. The Dischargers shall submit an annual report summarizing the monitoring results by August 15th each year for Executive Officer review and approval. The Dischargers may propose for Executive Officer approval changes to the sampling program, including reduction of sampling effort, or suspension of sampling for a season. Unless the Executive Officer approves the Dischargers' proposed changes, sampling will continue as described herein for the remainder of the five year period.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16, in order to obtain data and document compliance with waste discharge requirement established in this Board's Order No. 01-036 as amended by Order No. R2-2009-XXXX.

2. Was originally adopted by the Board on March 21, 2001, and revised by the Board on May 13, 2009.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Dischargers, and revisions will be ordered by the Executive Officer or Board.

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Bruce H. Wolfe
Executive Officer

Attachments:

1. Table 4-2 of Mitigation and Monitoring Plan: “Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project”
2. Table 4-18 of Mitigation and Monitoring Plan: “Schedule of Monitoring Activities and Achievement Dates for Measurable Objectives”

Attachment 1

Table 4-2 of Mitigation and Monitoring Plan: “Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project”

Revised Attachment 1 to Self-Monitoring Plan:

Table 4-2. Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project. Although specific periods are indicated for "Duration of Monitoring," the need for monitoring of each indicator will be reassessed by the AMT throughout the life of the Project.

	Monitoring Plan				
Indicator	**Monitoring Activity**	**Location of Monitoring**	**Begin Monitoring**	**Frequency of Monitoring**	**Duration of Monitoring**
Riparian Vegetation					
Survival	Counts of planted trees and shrubs with minimum health and vigor rating of fair	Permanent plots in Project area	August/September following planting	Annual	3 years from planting
Health and vigor	Visual assessment of foliage, wood, and root crown	Permanent plots in Project area and reference sites	August/September following planting	Annual	5 years from planting
Natural recruitment	Visual counts of naturally recruited native woody species	Permanent plots in Project area and reference sites	August/September in year 5 after planting	Once	5 years from planting
Cover	Percentage cover along a line intercept transect, aerial photographs	Permanent transects in Project area and reference sites	August/September in year 4 after planting	Annual for years 4 and 5, then every 6th year	40 years from planting
Nonnative species	Percentage cover by nonnative species along a line intercept transect, aerial photographs	Project area	August/September following planting	Annual for first 5 years after planting, then every 6th year	40 years from planting
Tree height	Stadia rod measurement of young trees, then measurement by clinometer	Permanent plots in Project area and reference sites	5 years after planting	Every 5th year	40 years from planting
Tree basal area	Tree diameter measured at breast height	Permanent plots in Project area and reference sites	5 years after planting	Every 5th year	40 years from planting
Shaded Riverine Aquatic (SRA) Cover					
Survival	Counts of planted trees and shrubs	Project area, Guadalupe Creek, Reach A	August/September following planting	Annual	3 years from planting
Health and vigor	Visual assessment of foliage, wood, and root crown	Permanent plots in Project area, Guadalupe Creek, Reach A, and reference sites	August/September following planting	Annual	5 years from planting

Revised Attachment 1 to Self-Monitoring Plan:

Table 4-2. Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project. Although specific periods are indicated for "Duration of Monitoring," the need for monitoring of each indicator will be reassessed by the AMT throughout the life of the Project.

	Monitoring Plan				
Indicator	**Monitoring Activity**	**Location of Monitoring**	**Begin Monitoring**	**Frequency of Monitoring**	**Duration of Monitoring**
Natural recruitment	Visual counts of naturally recruited native woody species	Permanent plots in Project area, Guadalupe Creek, Reach A, and reference sites	August/September n year 5 after planting	Once	5 years from planting
Nonnative species	Percentage cover by nonnative species along a line intercept transect, aerial photographs	Project area, Guadalupe Creek, Reach A	August/September following planting	Annual for first 5 years after planting, then every 6th year	40 years from planting
Shaded stream surface	Evaluation of aerial photographs; field verified	Adjacent to permanent plots in Project area, Guadalupe Creek, Reach	August/September following planting	Every 3rd year	40 years from planting
Bank Stability	Field surveys; evaluation of aerial	Project area, Guadalupe Creek, Reach A	Between April-October following	Annual for four years, then every 3rd year	10 years from construction
Instream cover	Measured within 10-foot wide transect bands perpendicular to the stream channel	Project area, Guadalupe Creek, Reach A	Between April-October immediately after construction	Every 3rd year	10 years from construction
Channel bed stability	Measure channel depth at permanent cross sections	Project area	Between April-July for preproject and immediately after construction	Annual	10 years from construction
Water Temperature					
Monthly thermal suitability	Hourly water temperature simulation	Project area, Guadalupe Creek, Reach A	Preproject	Annual	40 years from construction
	Hourly water temperature	Project area, Guadalupe Creek, Reach A	Preproject	Hourly	40 years from construction
	Measure heat transfer	Project area, Guadalupe Creek, Reach A	Preproject	Pre- and Post-project then every 5th year for March, June, and September	40 years from construction
	Measure stream channel geometry	Project area, Guadalupe Creek, Reach A	Preproject	Pre- and post-project, then every 5th year for normal winter and summer flow conditions	40 years from construction

Revised Attachment 1 to Self-Monitoring Plan:

Table 4-2. Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project. Although specific periods are indicated for "Duration of Monitoring," the need for monitoring of each indicator will be reassessed by the AMT throughout the life of the Project.

	Monitoring Plan				
Indicator	**Monitoring Activity**	**Location of Monitoring**	**Begin Monitoring**	**Frequency of Monitoring**	**Duration of Monitoring**
Short-term thermal suitability	Hourly water temperature simulation	Project area, Guadalupe Creek, Reach A	Preproject	Monthly	10 years from construction
	Hourly water temperature	Project area, Guadalupe Creek, Reach A	Preproject	Hourly	40 years from construction
	Measure heat transfer	Project area, Guadalupe Creek, Reach A	Preproject	Pre- and post-project, then every 5th year for March, June, and September	40 years from construction
	Measure stream channel geometry	Project area, Guadalupe Creek, Reach A	Preproject	Pre- and post-project, then every 5th year for normal winter and summer flow conditions	40 years from construction
Anadromous Fish Spawning Habitat					
Spawning gravel abundance	Measure gravel patches	Project area, Guadalupe Creek, Reach A	Between March - October	Annual for 5 years, then every 5th year	10 years from construction
Spawning gravel quality	Visual assessment of particle size and fine sediment occurrence	Project area, Guadalupe Creek, Reach A	Between March - October	Annual for 5 years, then every 5th year	10 years from construction
Anadromous Fish Passage and Rearing Habitat					
Depth and velocity	Visual assessment of critical stream reaches	Project area, Guadalupe Creek, Reach A	October; immediately after construction	Every 2 weeks and within 3 days ofmajor storm events through March	Throughout the life of the Project
	Measure depth and velocity	Project area, Guadalupe Creek, Reach A	October	Annual; October and when needed	10 years from construction
Vertical barrier	Visual assessment of critical stream reaches	Project area, Guadalupe Creek, Reach A	October, immediately after construction	Every 2 weeks and within 3 days ofmajor storm events through March	Throughout the life of the Project
	Measure barrier; height, length, and staging pool depth	Project area, Guadalupe Creek, Reach A	October	Annual; October and when needed	10 years from construction
Rearing habitat diversity	Enumerate and measure length of riffles, pools, runs, and backwater areas	Project area, Guadalupe Creek, Reach A	Between May - September for preproject	Annual during first 5 years following construction, then every 5th year	10 years from construction

Revised Attachment 1 to Self-Monitoring Plan:

Table 4-2. Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project. Although specific periods are indicated for "Duration of Monitoring," the need for monitoring of each indicator will be reassessed by the AMT throughout the life of the Project.

	Monitoring Plan				
Indicator	**Monitoring Activity**	**Location of Monitoring**	**Begin Monitoring**	**Frequency of Monitoring**	**Duration of Monitoring**
Anadramous Fish Occurrence					
Adult migration and spawing	Visual observation of adult fish and spawning activity	Project area, Guadalupe Creek, Reach A	October for preproject	Four times each year; October, November, February, and March	10 years from construction
Juvenile rearing	Method developed cooperatively by NMFS, SCVWD, the Corps, and CDFG	Project area, Guadalupe Creek, Reach A	September/October for preproject	Three times each year; September/October, March/April, and June/July	10 years from construction
Juvenile migration	Method developed cooperatively by NMFS, SCVWD, the Corps, and CDFG	Downstream from Interstate 101	March for preproject	Continuous from March to May, may be extended into June	10 years from construction
Mercury Transport and Potential for Methylation					
~~Segments 1, 2, and 3 and Reach A: methyl mercury concentrations in riverbed and suspended sediments~~	~~Specific monitoring activities will be developed by the RWQCB in coordination with the Corps and SCVWD~~	~~In freshwater, wetland, and riparian environments in Segments 1, 2, and 3 and Reach A at sites approved by the RWQCB~~	~~2001~~	~~In accordance with RWQCB requirements~~	~~5 years~~
~~Guadalupe River Watershed: Total suspended solids, total and bioavailable mercury, and methy mercury concentrations in riverbed and suspended solids~~	~~Specific monitoring activities will be developed by the RWQCB in coordination with SCVWD~~	~~In freshwater, seasonal wetland, and riparian environments in the Guadalupe River Watershed at site approved by the RWQCB~~	~~2001~~	~~In accordance with RWQCB requirements~~	~~One year~~

Revised Attachment 1 to Self-Monitoring Plan:

Table 4-2. Monitoring of Indicators for Ecological Functions and Habitat Values Required to Assess Mitigation Success for the Guadalupe River Project. Although specific periods are indicated for "Duration of Monitoring," the need for monitoring of each indicator will be reassessed by the AMT throughout the life of the Project.

	Monitoring Plan				
Indicator	**Monitoring Activity**	**Location of Monitoring**	**Begin Monitoring**	**Frequency of Monitoring**	**Duration of Monitoring**
Guadalupe River Watershed: total (unfiltered) mercury in water; dissolved (filtered) mercury in water; total (unfiltered) methymercury in water; dissolved (filtered) methylmercury in water; general water quality parameters (including but not limited to dissolved oxygen, pH, temperature, nutrients (on occasion as required by the Board)); suspended sediment concentrations (or total suspended solids); and continuous flow.	Water (grab) samples will be collected at the sampling stations during the period of October 1st to April 30th.	Two guage stations: 1.) 23b 2.) USGS gage 1169025 (downstream gage at Highway 101).	2009	Water (grab) samples shall be collected at the sampling stations during: 1.) Peak storms in 4 out of 5 years, and both small and peak storms in at least 1 out of 5 years, 2.) First seasonal flush runoff (runoff from first storm event of the season), 3.) Both rising and falling flow stages, 4.) 1-2 hours before an expected rise, 5.) Peak flow, 6.) After bsae flow is reached, and 7.) Base flow in dry periods.	Five years

Attachment 2

Table 4-18 of Mitigation and Monitoring Plan: “Schedule of Monitoring Activities and Achievement Dates for Measurable Objectives”

Revised Attachment 2 to Self-Monitoring Plan: Schedule of Monitoring Activities and Achievement Dates for Measurable Objectives

Table 4-18. Schedule of Monitoring Activities for Preproject and the 10 Years Following Implementation of Mitigation Actions, Guadalupe River Project
Numbers shown for the "Month of Monitoring" columns indicate repetition of monitoring activity during the shaded period. A "?" indicates that monitoring may be required depending on the findings of other monitoring activities. An "M" under "Year of Monitoring" columns indicates that the measurable objectives must be met or that the measured value for the indicator must be progressing toward the measurable objective.

	Month of Monitoring													Year of Monitoring								
Indicator	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**P[a]**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Riparian Vegetation																							
Survival								1						M	M	M							
Health and vigor								1						M	M	M	M	M					
Natural Recruitment								1										M					
Cover								1															M
Nonnative species								1						M	M	M	M	M					M
Tree height	1																						M
Tree basal area	1																						
SRA Cover																							
Survival								1						M	M	M							
Health and vigor								1						M	M	M	M	M					
Natural Recruitment								1										M					
Nonnative species								1						M	M	M	M	M					M
Shaded stream surface								1												M			M
Bank stability				1										M	M	M	M			M			M
Instream cover				1													M			M			M
Channel bed stability				1										M	M	M	M	M	M	M	M	M	M
Water Temperature[b]																							
Measured water temperature[c]	Hourly																						
Heat transfer			1			1			1														
Stream channel geometry	2																						
Simulated water temperature	1	1	1	1	1	1	1	1	1	1	1	1											
Monthly thermal suitability	1																						M
Short-term thermal suitability	M	M	M	M	M	M	M	M	M	M	M	M		M	M	M	M	M	M	M	M	M	M
Anadromous Fish Spawning Habitat[d]																							
Spawning gravel abundance			1											M	M	M	M	M					M
Spawning gravel quality			1											M	M	M	M	M					M
Anadromous Fish Passage and Rearing Habitat																							
Depth and velocity	2	2	2							2	2	2		M	M	M	M	M	M	M	M	M	M
Vertical barrier	2	2	2							2	2	2		M	M	M	M	M	M	M	M	M	M
Rearing habitat diversity					1									M	M	M	M	M					M
Anadramous Fish Occurrence																							
Adult migration and spawing	2	2	2							2	2	2		M	M	M	M	M	M	M	M	M	M
Juvenile rearing			1			1			1					M	M	M	M	M	M	M	M	M	M
Juvenile migration			Contiuous[d]											M	M	M	M	M	M	M	M	M	M

Revised Attachment 2 to Self-Monitoring Plan: Schedule of Monitoring Activities and Achievement Dates for Measurable Objectives

Table 4-18. Schedule of Monitoring Activities for Preproject and the 10 Years Following Implementation of Mitigation Actions, Guadalupe River Project
Numbers shown for the "Month of Monitoring" columns indicate repetition of monitoring activity during the shaded period. A "?" indicates that monitoring may be required depending on the findings of other monitoring activities. An "M" under "Year of Monitoring" columns indicates that the measurable objectives must be met or that the measured value for the indicator must be progressing toward the measurable objective.

	Month of Monitoring													Year of Monitoring									
Indicator	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**P[a]**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
~~**Mercury Transport and Potential for Methylation in Segments 1, 2, and 3 and Reach A**~~																							
~~Methylmercury concentrations in riverbed and suspended sediments[f,g]~~																							
~~**Mercury Transport and Potential for Methylation in the Guadalupe River Watershed**~~																							
~~Total suspended solids[f,g]~~																							
~~Total and bioavailable mercury[f,g]~~																							
~~Methylmercury concentrations in riverbed and suspended sediments[f,g]~~																							
Mercury Transport and Potential for Methylation in the Guadalupe River Watershed and the San Francisco Bay																							
Total suspended solids[f,g]																							
Total and dissolved mercury in water[f,g]																							
Total and dissolved methymercury in water[f,g]																							
Water Quality parameters (including but not limited to dissolved oxygen, pH, temperature, and nutrients)[f,g]																							
Continuous flow[f,g]																							
Special-Status Species Habitat (at Alviso Slough)																							
Surface-water level and flow	Continuous													Until Guadalupe River Project is operational[h]									
Dominant plant species and habitat types						1								Until Guadalupe River Project is operational[i]									
Salinity	Continuous													Until Guadalupe River Project is operational[h]									

[a] Preproject monitoring.

[b] Measured water temperature is used for model calibration and confirmation. Heat transfer and stream channel geometry are conditions used in simulation of the water temperature. Simulated water temperature is used to calculate the monthly thermal suitability and short-term suitability indicators.

[c] Hourly water temperature will be recorded continuously, although measurement may be discontinued at some locations during high flow conditions to minimize loss of equipment and already-recorded temperature data.

[d] Preproject surveys will be conducted only in Guadalupe Creek and Reach A mitigation areas.

[e] Surveys in June will depend on occurrence in May.

[f] ~~Specific measurable objectives will be identified for these indicators by SCVWD in coordinatin with the RWQCB.~~ Specific measurable objectives for total mercury loading and/or particulate mercury concentrations were identified in the San Francisco Bay mercury TMDL; the other parameters support bioavailability assessment in the Guadalupe River watershed TMDL, and analysis of methylmercury loads to the San Francisco Bay.

Revised Attachment 2 to Self-Monitoring Plan: Schedule of Monitoring Activities and Achievement Dates for Measurable Objectives

Table 4-18. Schedule of Monitoring Activities for Preproject and the 10 Years Following Implementation of Mitigation Actions, Guadalupe River Project
Numbers shown for the "Month of Monitoring" columns indicate repetition of monitoring activity during the shaded period. A "?" indicates that monitoring may be required depending on the findings of other monitoring activities. An "M" under "Year of Monitoring" columns indicates that the measurable objectives must be met or that the measured value for the indicator must be progressing toward the measurable objective.

Indicator	Month of Monitoring													Year of Monitoring								
	J	F	M	A	M	J	J	A	S	O	N	D	P[a]	1	2	3	4	5	6	7	8	9	10

[g] ~~Monitoring is shown as quarterly;~~ Actual monitoring frequency ~~will be in accordance with RWQCB requirements~~ has been identified in the Revised Self-Monitoring Program.

[h] Measurable objective must be met monthly.

i Measurable objective must be met annual.