FINAL FUNCTIONAL EQUIVALENT DOCUMENT

CONSOLIDATED TOXIC HOT SPOTS CLEANUP PLAN

INTRODUCTION

In 1989, the California State Legislature established the Bay Protection and Toxic Cleanup Program (BPTCP). The BPTCP has four major goals: (1) to provide protection of present and future beneficial uses of the bays and estuarine waters of California; (2) identify and characterize toxic hot spots; (3) plan for toxic hot spot cleanup or other remedial or mitigation actions; (4) develop prevention and control strategies for toxic pollutants that will prevent creation of new toxic hot spots or the perpetuation of existing toxic hot spots in the bays and estuaries of the State. Among other things, the BPTCP is required to develop Statewide and Regional Toxic Hot Spots Cleanup Plans and site ranking criteria.

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) have used a three phase process for adoption of the Regional and Consolidated Toxic Hot Spots Cleanup Plans. The three phases are:

1. The SWRCB adopted a policy outlining the toxic hot spot definition, ranking criteria and other factors needed for the consistent development of the BPTCP cleanup plans.

   The SWRCB developed formal guidance on the development of toxic hot spot cleanup plans. This document is a Water Quality Control Policy (California Water Code Section 13140, 13142) that contains a specific definition of a toxic hot spot, ranking criteria to assist the SWRCB and the RWQCBs in establishing priorities for addressing toxic hot spots in the plans, and other measures necessary to facilitate the plans' completion. The Policy was accompanied by a functional equivalent document (FED) to help with California Environmental Quality Act (CEQA) and Administrative Procedure Act (APA) compliance and to provide technical justification to withstand peer review (as required by law).

The SWRCB used the procedures for adopting and revising Water Quality Control Plans. The Policy and FED were adopted by the SWRCB on September 2, 1998. OAL approved the regulatory provisions of the Policy on November 9, 1998.

2. The RWQCBs adopted the Regional Toxic Hot Spots Cleanup Plans (Regional Cleanup Plans).

   Each RWQCB first developed proposed Regional Toxic Hot Spots Cleanup Plans in 1997 (RWQCB, 1997a; 1997b; 1997c; 1997d; 1997e; 1997f; 1997g). Subsequent to approval of the Guidance Policy the RWQCBs redeveloped their Cleanup Plans. Each RWQCB has held at least one public hearing or workshop on the revised Regional Cleanup Plan.

   The North Coast, Central Coast, Central Valley, Santa Ana and San Diego RWQCBs adopted their Regional Cleanup Plans using the normal procedures for RWQCB action (i.e., the public was given an opportunity to comment on the draft plan, the plan was revised in response to the comments received, and the plan was adopted by the RWQCB).

   The San Francisco Bay and Los Angeles RWQCBs did not adopt their Regional Cleanup Plans because they did not have the required number of Board Members to convene a meeting and adopt their cleanup plans. The Executive Officers of these RWQCBs submitted their cleanup plans to the SWRCB after RWQCB public hearings or workshops.

3. The SWRCB ~~will~~ compile[d] and adopt[ed] the Consolidated Toxic Hot Spots Cleanup Plan (Consolidated Cleanup Plan) [in 1999].

   ~~The SWRCB is now undertaking completion of this phase.~~ The Consolidated Cleanup Plan consists of the consolidated list of toxic hot spots as well as the Water Code-mandated requirements for addressing the toxic hot spots. The SWRCB was~~is~~ required to make specific findings in the Statewide plan (Water Code Section 13394; SWRCB, 1998a).

   The SWRCB used the same procedures used for adoption of the Policy in Phase 1 for adoption of the Consolidated Cleanup Plan. The Consolidated Cleanup Plan was ~~will be~~ submitted to the Legislature[, and] ~~before~~ the regulatory provisions of the Plan were~~are~~ submitted to [and approved by] OAL.

The SWRCB is now undertaking amendment of the Consolidated Cleanup Plan. The amendments consists of replacing three Central Valley RWQCB pesticide toxic hot spots cleanup plans with new plans. Like the original plan, the amended Consolidated Cleanup Plan will be submitted to the Legislature and to OAL, once it is adopted.

Purpose

The purpose of this Functional Equivalent Document (FED) is to present (1) alternative approaches for developing provisions of the Consolidated Plan, (2) SWRCB staff recommendations for the development of the Consolidated Plan, and (3) an assessment of the potential adverse environmental impacts of the recommended Plan. The topics addressed in the FED include: approaches for consolidating and compiling the Regional Cleanup Plans, remediation of known toxic hot spots, removing locations from the list of known toxic hot spots, guidance on waste discharge requirement reevaluation, and mechanisms to fund implementation of the consolidated plan.

This FED does not address issues related to the definition of a toxic hot spot, site ranking criteria and other issues addressed in the guidance policy (SWRCB, 1998a; 1998b). These issues were addressed in the adoption process for the Policy and were used as the foundation for the development of the Regional and Consolidated Cleanup Plans.

Necessity for the Regulatory Provisions of the Consolidated Toxic Hot Spots Cleanup Plan

The SWRCB and the RWQCBs are required to (1) identify and characterize toxic hot spots, (2) plan for the cleanup or other appropriate remedial or mitigating actions at sites, and (3) amend plans and policies to incorporate strategies to prevent the creation of new toxic hot spots and the further pollution of existing toxic hot spots (California Water Code Section 13392). The SWRCB is required to adopt a statewide Consolidated Cleanup Plan (Water Code Section 13394). The Consolidated Cleanup Plan must include: (1) a priority listing of all known toxic hot spots covered by the Plan; (2) a description of each toxic hot spot including a characterization of the pollutants present at the site; (3) an assessment of the most likely source or sources of pollutants; (4) an estimate of the total costs to implement the Cleanup Plan; (5) an estimate of the costs that can be recovered from parties responsible for the discharge of pollutants that have accumulated in sediments;

(6) a preliminary assessment of the actions required to remedy or restore a toxic hot spot; (7) a two-year expenditure schedule identifying State funds needed to implement the plan; and (8) findings and recommendations concerning the need for establishment of a toxic hot spots cleanup program.

The regulatory provisions of the Consolidated Cleanup Plan are required to comply with California Water Code Sections 13392 and 13394).

CEQA Compliance

The SWRCB must comply with the requirements of CEQA and the APA when adopting a plan, policy or guideline. CEQA provides that a program of a State regulatory agency is exempt from the requirements for preparing Environmental Impact Reports (EIRs), Negative Declarations, and Initial Studies if certain conditions are met. The process the SWRCB used ~~is using~~ to develop and to amend the Consolidated Cleanup Plan has received certification from the Resources Agency to be "functionally equivalent" to the CEQA process [Title 14 California Code of Regulations Section 15251(g)]. Therefore, this FED fulfills the requirements of CEQA for preparation of an environmental document.

Agencies qualifying for this exemption must comply with CEQA's goals and policies, evaluate environmental impacts, consider cumulative impacts, consult with other agencies with jurisdiction by law, provide public notice and allow public review, respond to comments on the draft environmental document, adopt CEQA findings, and provide for monitoring of mitigation measures. SWRCB regulations (California Code of Regulations [CCR], Title 23, Chapter 27, Section 3777) require that a document prepared under its certified regulatory programs must include:

1. A brief description of the proposed activity;

2. Reasonable alternatives to the proposed activity; and

3. Mitigation measures to minimize any significant adverse environmental impacts of the proposed activity.

This FED is very similar to the "program" environmental approach that is described in Title 14 CCR (CEQA Guidelines) Section 15168. That section provides that a program environmental impact report "may be prepared on a series of actions that can be characterized as one large project and are related ... (3) In connection with the issuance of rules, regulations,

plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways." This "program" approach has enabled the SWRCB staff to examine typical effects of remediation and outline mitigation that may be used to lessen or avoid adverse effects.

However, it should be noted that this FED differs from the typical "program" environmental document approach in that it is not intended to provide CEQA compliance for the individual, site-specific remediation projects. Appropriate CEQA compliance is required when site-specific remediation plans are developed.

The environmental impacts that may occur as a result of the remediation alternatives identified in the proposed Consolidated Plan are summarized in an Environmental Checklist and analyzed in the Environmental Impacts section of the FED.

Background

California Water Code, Division 7, Chapter 5.6 established a comprehensive program within the SWRCB to protect the existing and future beneficial uses of California's enclosed bays and estuaries. SB 475 (1989), SB 1845 (1990), AB 41 (1989) and SB 1084 (1993) added Chapter 5.6 [Bay Protection and Toxic Cleanup (Water Code Sections 13390-13396.5)] to Division 7 of the Water Code.

The BPTCP has provided a new focus on the SWRCB and the RWQCBs efforts to control pollution of the State's bays and estuaries by establishing a program to identify toxic hot spots and plan for their cleanup.

Program Activities

The BPTCP is a comprehensive effort by the SWRCB and RWQCBs to programmatically link standards development, environmental monitoring, water quality control planning, and site cleanup planning. The Program includes six primary activities:

1. Development and amendment of the California Enclosed Bays and Estuaries Plan. This plan should contain the State's water quality objectives for enclosed bays and estuaries, and implementation measures for these objectives.

2. Development and implementation of regional monitoring programs designed to identify toxic hot spots. These monitoring programs include analysis for a variety of chemicals, toxicity tests, measurements of biological communities, and various special studies to support the Program.

3. Development of a consolidated database that contains information pertinent to describing and managing toxic hot spots.

4. Development of narrative and numeric sediment quality objectives for the protection of California enclosed bays and estuaries.

5. Preparation of criteria to rank toxic hot spots that are based on the severity of water and sediment quality impacts.

6. Development of Regional and Statewide Consolidated Cleanup Plans that include identification and priority ranking of toxic hot spots, identification of pollutant sources, identification of actions already initiated, strategies for preventing formation of new toxic hot spots, and cost estimates for recommended remedial actions.

Toxic Hot Spot Identification

The Water Code defines toxic hot spots as locations in enclosed bays, estuaries, or the ocean where pollutants have accumulated in the water or sediment to levels which (1) may pose a hazard to aquatic life, wildlife, fisheries, or human health, or (2) may impact beneficial uses, or (3) exceed SWRCB or RWQCB-adopted water quality or sediment quality objectives.

To identify toxic hot spots, water bodies of interest have been assessed on both a regional and site-specific basis. Regional assessments require evaluating whether water quality objectives are attained and beneficial uses are supported throughout the water body. In the past, the State Mussel Watch program, independent RWQCB studies, and other studies were used extensively to evaluate beneficial use impacts in many California enclosed bays and estuaries. The BPTCP efforts continue this work by focusing on measures of effects (such as toxicity) with the associated pollutants.

Generally, where sites were not well characterized, regional monitoring programs have been implemented. This monitoring activity has been performed by the Department of Fish and Game (DFG) under contract with the SWRCB. The consolidated statewide database required by the Water Code was planned to eventually include all data generated by the regional monitoring programs. All data collected as part of the BPTCP monitoring efforts are available on the BPTCP web page. The web page address is: http://www.swrcb.ca.gov/bptcp/bptcp.html.

A specific definition of candidate and known toxic hot spots was adopted by the SWRCB in September, 1998 (SWRCB, 1998a). This specific definition has been used by the RWQCBs in developing their lists of candidate toxic hot spots.

Ranking Criteria

The Water Code (Section 13393.5) requires the SWRCB to develop criteria for ranking toxic hot spots. The ranking criteria must consider the pertinent factors relating to public health and environmental quality. The factors include three considerations: (1) potential hazards to public health, (2) toxic hazards to fish, shellfish, and wildlife, and (3) the extent to which the deferral of a remedial action will result, or is likely to result, in a significant increase in environmental damage, health risks, or cleanup costs.

Ranking criteria were adopted by the SWRCB in September, 1998 (SWRCB, 1998a). These ranking criteria have been used by the RWQCBs in ranking their lists of candidate toxic hot spots.

Sediment Quality Objectives

State law defines sediment quality objectives as "that level of a constituent in sediment which is established with an adequate margin of safety, for the reasonable protection of beneficial uses of water or prevention of nuisances" (Water Code Section 13391.5).

Water Code Section 13393 further defines sediment quality objectives as: "...objectives...based on scientific information, including but not limited to chemical monitoring, bioassays or established modeling procedures." The Water Code requires "adequate protection for the most sensitive aquatic organisms." Sediment quality objectives can be either numerical values based on scientifically defensible methods or narrative descriptions implemented through toxicity testing or other methods.

Toxic Hot Spot Cleanup Plans

The Water Code requires that each RWQCB must complete a toxic hot spots cleanup plan and the SWRCB must prepare a Statewide Consolidated Cleanup Plan.

Each cleanup plan must include: (1) a priority listing of all known toxic hot spots covered by the plan; (2) a description of each toxic hot spot including a characterization of the pollutants present at the site; (3) an assessment of the most likely source or sources of pollutants; (4) an estimate of the total costs to implement the cleanup plan; (5) an estimate of the costs that can be recovered from parties responsible for the discharge of pollutants that have accumulated in sediments; (6) a preliminary assessment of the actions required to remedy or restore a toxic hot spot; and (7) a two-year expenditure schedule identifying State funds needed to implement the plan.

Within 120 days from the ranking of a toxic hot spot in the consolidated cleanup plan, each RWQCB is required to begin reevaluating waste discharge requirements for dischargers who have contributed any or all of the pollutants which have caused the toxic hot spot. These reevaluations shall be used to revise water quality control plans wherever necessary. Reevaluations shall be initiated according to the priority ranking established in cleanup plans.

The RWQCBs first developed proposed Regional Toxic Hot Spots Cleanup Plans in late 1997. These plans were revised subsequent to the adoption of the SWRCB Guidance Policy (SWRCB, 1998a).

Program Organization

Three groups support or review the activities of the BPTCP: (1) the Monitoring and Surveillance Task Force, (2) the Scientific Planning and Review Committee, and (3) the BPTCP Advisory Committee. The functions of each of these groups follow:

1. *Monitoring and Surveillance Task Force (MSTF).* This committee was established to promote standard approaches for monitoring and assessing the quality of California's enclosed bays and estuaries [Section 13392.5(a)(1) of the Water Code]. While the primary focus of this committee has been on monitoring implementation, the committee has also developed and contributed to all other aspects of the Program including cleanup planning and ranking criteria development. The members of the task force are staff of the SWRCB, coastal RWQCBs, DFG and the Office of Environmental Health Hazard Assessment (OEHHA).

2. *Scientific Planning and Review Committee (SPARC).* Although not legislatively mandated, SPARC brings together independent experts in the fields of toxicology, benthic ecology, organic and inorganic chemistry, program implementation and direction, experimental design, and statistics to review the approaches taken by the BPTCP. The committee has provided comments on the Program's monitoring approach(es), given input on the scientific merit of the approach(es) taken, and provided suggestions for monitoring improvement.

3. *BPTCP Advisory Committee.* This committee was established to assist the SWRCB in the implementation of the BPTCP (Section 13394.6(a) of the Water Code). The major purpose of the committee is to review the Program activities and provide its views on how the products of the BPTCP should be interpreted and used. The committee has members from (a) trade associations; (b) dischargers; and (c) environmental, public interest, public health and wildlife conservation organizations.

Legislative Deadlines

The BPTCP is required to complete several tasks using deadlines established in the Water Code (Table 1).

TABLE 1: WATER CODE-MANDATED DEADLINES FOR THE BPTCP

Activities	Deadline
Sediment Quality Objectives Workplan	July 1, 1991
Consolidated Database	January 30, 1994
Ranking Criteria	January 30, 1994
Progress Report	January 1, 1996
Regional Toxic Hot Spots Cleanup Plans	January 1, 1998
Consolidated Toxic Hot Spots Cleanup Plan	June 30, 1999

Court Mandated Deadlines

In 1999, a lawsuit was filed by San Francisco Baykeeper and Bill Jennings (petitioners) challenging among other things the site specific variances for the three hot spots. On October 11, 2001, Sacramento County Superior Court entered a judgment in favor of the petitioners and issued a writ of mandate directing the SWRCB to vacate and set aside the variances and directed the RWQCB to amend the cleanup plan for those sites. The SWRCB vacated the site specific variances on November 15, 2001. Under a court approved compliance schedule the SWRCB has until September 1, 2003 to amend the Consolidated Hot Spots Cleanup Plan and submit the amended Plan to the Office Administrative Law.

Scope of FED

The FED was developed with the consideration of: (1) existing State statute, regulations, and policies; (2) the Water Quality Control Policy for Development of Regional Toxic Hot Spots Cleanup Plans (SWRCB, 1998a); (3) revised Regional Toxic Hot Spots Cleanup Plans; and (4) the recommendations of the BPTCP Advisory Committee.

The final FED contains ten major sections: Introduction, Project Description, Policy Issue Analysis, Environmental Setting at Toxic Hot Spots, Proposed Remediation Alternatives at Toxic Hot Spots, Environmental Benefits of the proposed Plan, Adverse Environmental Effects of the Proposed Plan, Environmental Checklist, Comments and Responses, and References. Policy issues are considered separately from the remediation alternatives and the potential environmental impacts of implementing the remediation.

This FED is a program environmental document that is more specific that the FED developed for the SWRCB Guidance Policy

(SWRCB 1998b). The FED for the Consolidated Toxic Hot Spots Cleanup Plan addresses: (1) broad policy issues that address Statewide concerns about the remediation and prevention of toxic hot spots, and (2) the remediation alternatives at specific sites or water bodies that have been identified by the RWQCBs as candidate toxic hot spots. While the Consolidated Plan presents options for the remediation of toxic hot spots, no specific funding has been identified to fully implement the Plan. Also, since the SWRCB and RWQCBs are prevented from prescribing means of compliance (Water Code Section 13360), the specific actions that will be implemented will be developed when sites are actually remediated.