### Amendment to the Water Quality Control Plan – Los Angeles Region

#### to Incorporate the

## Total Maximum Daily Load for PCBs, Pesticides and Sediment Toxicity in McGrath Lake

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on [Insert Date]

#### Amendments:

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Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries Add:

7-37 McGrath Lake PCBs, Pesticides and Sediment Toxicity TMDL

This TMDL was adopted by:

The Regional Water Quality Control Board on [Insert date].

This TMDL was approved by:

The State Water Resources Control Board on [Insert date]. The Office of Administrative Law on [Insert date]. The U.S. Environmental Protection Agency on [Insert date].

This TMDL is effective on [Insert Date].

The elements of the TMDL are presented in Table 7-37.1 and the Implementation Plan in Table 7-37.2.

# Table 7-37.1. McGrath Lake PCBs, Pesticides and Sediment Toxicity TMDL: Elements

| TMDL Element         | I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Regulatory Provisio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ons                                                                                                       |                                                                                       |  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Problem<br>Statement | McGrath Lake was placed o<br>2002, and 2006 as impaired<br>DDT and derivatives) and po<br>sediment toxicity. These toxi<br>in the fat tissue of exposed<br>impairments. Past studies of<br>Lake was likely due to the o<br>sediment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | l for organochlorine<br>lychlorinated bipher<br>c organic chemicals<br>d organisms, and c<br>concluded that foun                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | pesticides (chlord<br>nyls (PCBs) in sec<br>bind to soil particl<br>reate long term<br>d sediment toxicit | dane, dieldrin,<br>liment and for<br>es, are stored<br>environmental<br>cy in McGrath |  |
|                      | Applicable Water Quality Objectives for this TMDL are narrative water quality objectives for Chemical Constituents, Bioaccumulation, Pesticides and Toxicity contained in Chapter 3, the numeric water quality objective for PCBs contained in Chapter 3 and the numeric water quality criteria promulgated in 40 CFR 131 (California Toxics Rule (CTR)).<br>The exposure of the McGrath Lake ecosystem to chlordane, DDT, dieldrin, and PCBs in amounts exceeding the objectives and criteria has impaired the beneficial uses of the lake, including aquatic life uses (rare, threatened or endangered species and estuarine, wildlife, and wetland habitat) and recreation uses (contact and non-contact recreation and commercial and sport fishing). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                           |                                                                                       |  |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                           |                                                                                       |  |
| Numeric<br>Targets   | water quality criteria for prote-<br>column target for PCBs is bas<br>of human health. These criter<br>for the protection of aquatic lif<br>consumption beneficial uses.<br>Effects Range-Low (ER-Ls) g<br>and Atmospheric Administrati                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Water column targets for chlordane, DDT, and dieldrin are based on the CTR water quality criteria for protection of human health (organisms only). The water column target for PCBs is based on the water quality objective for the protection of human health. These criteria and this objective are more stringent than those for the protection of aquatic life and thus will protect both aquatic life and fish consumption beneficial uses. The sediment numeric targets are derived from the Effects Range-Low (ER-Ls) guidelines compiled by the National Oceanographic and Atmospheric Administration (NOAA). The sediment toxicity impairment is addressed by these numeric targets, which are protective of aquatic life in |                                                                                                           |                                                                                       |  |
|                      | Pollutant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Water Column<br>Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Sediment<br>Targets                                                                                       | ]                                                                                     |  |
|                      | r onatant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (μg/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (ng/dry g)                                                                                                |                                                                                       |  |
|                      | Chlordane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00059                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.5                                                                                                       |                                                                                       |  |
|                      | Dieldrin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.00014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.02                                                                                                      |                                                                                       |  |
|                      | 4,4'-DDT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.00059                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1                                                                                                         |                                                                                       |  |
|                      | 4,4'-DDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.00059                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2.2                                                                                                       | _                                                                                     |  |
|                      | 4,4'-DDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.00084                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2                                                                                                         | _                                                                                     |  |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 50                                                                                                      |                                                                                       |  |
|                      | Total DDT<br>Total PCBs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.00007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.58<br>22.7                                                                                              | _                                                                                     |  |

| TMDL Element        | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source<br>Analysis  | The major source of the pesticide and PCB loading is contaminated surface water<br>and sediments flushing into McGrath Lake from agriculture parcels and other<br>lands in the subwatershed. All of the contaminants included in this TMDL are<br>legacy pollutants. While they are no longer legally sold or used, they remain<br>ubiquitous in the environment, bound to fine-grained particles. Irrigation and<br>rainfall in the watershed mobilize these particles, which are loaded to McGrath<br>Lake. Surface water (stormwater and agricultural drainage) accounts for almost<br>half of the total recharge of the lake, while groundwater accounts for the rest of<br>the recharge. Pesticides and PCBs have been detected in the surface water inlet<br>to the lake (Central Ditch) but not in the groundwater from local monitoring wells.<br>There are no point sources of pesticides or PCBs to McGrath Lake. Atmospheric<br>deposition may be contributing PCBs.                                                                                                            |
|                     | In addition to external loading, the in-situ sediments are likely a source of contaminants to the lake water column due to the high concentrations of contaminants in the sediment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Linkage<br>Analysis | A conceptual model identifies the assimilative capacity of McGrath Lake and links<br>the source loading information to the numeric targets. The chemical properties of<br>the pesticides and PCBs result in strong binding to particulate matter, therefore<br>most of the incoming contaminants from the Central Ditch to the lake are bound<br>to suspended solids. However, pesticide exceedances are observed in the<br>Central Ditch even in low-flow conditions, indicating that some of the<br>contaminants are transported to the lake in the water fraction. Therefore, there<br>are water column and suspended sediment allocations for the Central Ditch.<br>Once the suspended sediment settles to the lake bottom, desorption is possible<br>due to the high contaminant concentrations, favorable environmental conditions<br>and extended contact time (between the sediment and water). The contaminated<br>lake sediments are toxic to benthic organisms and may also be taken up through<br>bioturbation and feeding processes. Therefore, both external loading sources |
|                     | from the lake subwatershed and internal loading from contaminated lake sediments are assigned load allocations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| TMDL Element                                         | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                             |                                            |                                                                                |                                                                                       |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Load<br>Allocations                                  | assigne<br>from the<br>main bo                                                                                                                                                                                                                                                                                                                                                                                                                                                       | bad allocations (LAs) addressing non-point sources of pesticides and PCBs assigned to discharges from the Central Ditch to the lake and internal source om the lake sediments. The lake sediments are defined as bed sediments in lain body of the lake and the riparian corridor west of Harbor Boulevard. |                                            |                                                                                | he lake and internal sources<br>fined as bed sediments in the<br>of Harbor Boulevard. |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lake Sedi                                                                                                                                                                                                                                                                                                   | ment Load<br>- Responsible                 | Pollutant Event only.                                                          |                                                                                       |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                             | alifornia - Dept.<br>Recreation,<br>amily. | Chlordane<br>Dieldrin<br>4,4'-DDT                                              | 0.5<br>0.02                                                                           |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Agricultura                                                                                                                                                                                                                                                                                                 | al Dischargers,<br>watershed               | 4,4'-DDE<br>4,4'-DDD<br>Total DDT                                              | 2.2<br>2<br>1.58                                                                      |
|                                                      | The Ce                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ntral Ditch                                                                                                                                                                                                                                                                                                 | I As are for co                            | Total PCBs                                                                     | 22.7<br>oth suspended sediment and                                                    |
|                                                      | water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | entral Ditch                                                                                                                                                                                                                                                                                                |                                            |                                                                                | ·<br>                                                                                 |
|                                                      | Lc<br>Al<br>Re                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ad<br>location -<br>esponsible<br>arties                                                                                                                                                                                                                                                                    | Pollutant                                  | Water Column<br>Load Allocation<br>(µg/L)                                      | Load Allocation for<br>Concentration in<br>Suspended Sediment<br>(µg/dry kg)          |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | gricultural<br>schargers                                                                                                                                                                                                                                                                                    | Chlordane<br>Dieldrin                      | 0.00059                                                                        | 0.5                                                                                   |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                             | 4,4'-DDT<br>4,4'-DDE                       | 0.00014         0.02           0.00059         1           0.00059         2.2 |                                                                                       |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                             | 4,4'-DDD<br>Total DDT<br>Total PCBs        | 0.00084         2            1.58           0.00007         22.7               |                                                                                       |
|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                             |                                            |                                                                                | due to limited data on the                                                            |
| Safety                                               | amount and media by which PCBs and pesticides are entering the lake and the extent to which these contaminants are already in the lake. The seasonal and annual variability in the hydrologic budget also creates uncertainty. To address these uncertainties, an implicit margin of safety is applied. Conservative assumptions were used to calculate the loading to the lake and more the protective ER-L sediment quality guidelines were used for the sediment numeric targets. |                                                                                                                                                                                                                                                                                                             |                                            |                                                                                |                                                                                       |
| Seasonal<br>Variations and<br>Critical<br>Conditions | As the contaminants of concern for this TMDL are transported to the lake by the mobilization of sediment, it is expected that the greatest influx of PCBs and pesticides occurs during periods of increased runoff from the watershed. Due to the artificial interference in the watershed hydrologic cycle due to agricultural                                                                                                                                                      |                                                                                                                                                                                                                                                                                                             |                                            |                                                                                |                                                                                       |

| TMDL Element | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
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|              | activities, peak runoff may not correspond to the southern California wet season.                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|              | Seasonal variations and critical conditions are addressed by the use of concentration-based load allocations. However, due to the bioaccumulative                                                                                                                                                                                                                                                                                                                                                                            |  |
|              | properties of the pollutants, effects occur over extended time periods, which                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|              | minimizes the importance of seasonal variations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Monitoring   | Manitaving Dragger                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|              | Monitoring Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|              | The monitoring program shall measure the progress of pollutant load reductions<br>and improvements in water and sediment quality. The monitoring program shall:                                                                                                                                                                                                                                                                                                                                                              |  |
|              | <ul> <li>Determine attainment of numeric targets for PCBs and pesticides;</li> <li>Determine compliance with the load allocations for PCBs and pesticides; and</li> <li>Monitor the effect of implementation actions on lake water and sediment quality.</li> </ul>                                                                                                                                                                                                                                                          |  |
|              | The monitoring program shall consist of two phases. The first phase will focus of<br>sampling the Central Ditch (for the first 10 years of the TMDL implementation<br>schedule) and will be conducted by the responsible parties for the Central Ditch<br>LAs. For the remaining portion of the TMDL implementation schedule, water an<br>sediment samples will be collected from the Central Ditch and the lake and will be<br>conducted by the responsible parties for the lake sediment LAs and the Central<br>Ditch LAs. |  |
|              | Phase 1<br>Phase 1 requires the development of a monitoring and reporting plan (MRP) to<br>comply with the TMDL requirements. The MRP shall propose a monitoring<br>frequency for water and sediment sampling that will characterize the variability in<br>water and sediment quality observed in the Central Ditch. Water samples will be<br>analyzed for the following constituents:                                                                                                                                       |  |
|              | Total Organic Carbon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|              | <ul><li>Total Suspended Solids</li><li>Total PCBs</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|              | <ul> <li>DDT and Derivatives</li> <li>Dieldrin</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|              | <ul> <li>Total Chlordane</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|              | Sediment samples will be analyzed for the following constituents:                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|              | Total Organic Carbon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|              | <ul> <li>Total PCBs</li> <li>DDT and Derivatives</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|              | <ul> <li>Dieldrin</li> <li>Total Chlordane</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|              | The annual monitoring reports will summarize proposed changes to the MRP based on the results of the previous year's monitoring. Sampling frequency may                                                                                                                                                                                                                                                                                                                                                                      |  |

| TMDL Element | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|              | be reduced during future years once characterization of the variability in water<br>and sediment quality has been achieved. In addition to the constituents above,<br>general water chemistry (temperature, dissolved oxygen, pH and electrical<br>conductivity) and a flow measurement will be required at each sampling event.                                                                                                                                                                                                                                                                                                                                                                                                          |
|              | Responsible parties for phase 1 monitoring shall submit a MRP plan to assess<br>compliance with LAs and a Quality Assurance Project Plan (QAPP). The MRP<br>and QAPP must be submitted to the Executive Officer for approval within six<br>months of the effective date of the TMDL. The QAPP shall include protocols for<br>sample collection, standard analytical procedures, and laboratory certification. All<br>samples shall be collected in accordance with Surface Water Ambient Monitoring<br>Program (SWAMP) protocols, where available or alternative protocols proposed<br>by dischargers and approved by the Executive Officer. Monitoring shall begin 90<br>days after the Executive Officer has approved the MRP and QAPP. |
|              | At the time of TMDL adoption, several of the constituents of concern had numeric targets lower than the laboratory detection limits. As analytical methods and detection limits continue to improve (i.e. development of lower detection limits) and become more environmentally relevant, responsible parties shall incorporate new analytical methods with lower detection limits in the MRP and the QAPP.                                                                                                                                                                                                                                                                                                                              |
|              | A monitoring report shall be prepared and submitted to the Regional Board<br>annually within three months after the completion of the final sampling event of<br>the year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|              | Phase 2<br>Phase 2 of the monitoring program shall commence following the remediation of<br>the lake sediments to monitor the effect of implementation actions. The sampling,<br>analysis and flow measurements begun in Phase 1 will continue. Additionally,<br>samples will be collected from within the lake. Water column and surficial<br>sediment (top 2 cm) samples will be collected at the northern end of the lake and<br>from the deepest portion of the lake. All samples will be collected in accordance<br>with SWAMP protocols.                                                                                                                                                                                            |
|              | Water samples will be analyzed for the following constituents:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|              | <ul> <li>Total Organic Carbon</li> <li>Total Suspended Solids</li> <li>Total PCBs</li> <li>DDT and Derivatives</li> <li>Dieldrin</li> <li>Total Chlordane</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              | Sediment samples will be analyzed for the following constituents:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|              | <ul> <li>Total Organic Carbon</li> <li>Total PCBs</li> <li>DDT and Derivatives</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| TMDL Element | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                        |  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|              | <ul><li>Dieldrin</li><li>Total Chlordane</li></ul>                                                                                                                                                                                                                                                                                                                                                           |  |
|              | Samples from the lake will be collected annually. The annual reports required for Phase 1 will continue during Phase 2. Additional monitoring may be required depending on which implementation option is chosen.                                                                                                                                                                                            |  |
|              | Three years from the effective date of the TMDL, responsible parties must submit<br>the McGrath Lake Work Plan (MLWP) as discussed in the implementation section<br>below. The MLWP shall include any additional monitoring needed to assess the<br>effectiveness of the chosen implementation option. The MLWP shall include a<br>MRP and QAPP for the Phase 2 monitoring.                                  |  |
|              | At the time of TMDL adoption, several of the constituents of concern had numeric targets lower than the laboratory detection limits. As analytical methods and detection limits continue to improve (i.e. development of lower detection limits) and become more environmentally relevant, responsible parties shall incorporate new analytical methods with lower detection limits in the MRP and the QAPP. |  |
|              | A monitoring report shall be prepared and submitted to the Regional Board<br>annually within three months after the completion of the final sampling event of<br>the year.                                                                                                                                                                                                                                   |  |

| TMDL Element           | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Implementation<br>Plan | Compliance with this TMDL will require the elimination of toxic pollutant loads from the subwatershed to the lake and implementation of lake management activities to remediate the contaminated sediments at the bottom of the lake. Table 7-37.2 contains a schedule for responsible parties to implement the MLWP and BMPs to achieve the TMDL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                        | I. Implementation and Determination of Compliance with the Central Ditch LAs for Agricultural Non-point Source Discharges                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                        | The Central Ditch load allocations assigned to agriculture non-point source dischargers will be implemented through the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver) or other appropriate Regional Board Orders. The load allocations for the Central Ditch shall be incorporated into the Conditional Waiver or other appropriate Regional Board Orders.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                        | It is likely that a combination of implementation measures will be needed to achieve the LAs. The Central Ditch implementation actions may include, but are not limited to the following:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                        | <ul> <li>On-Farm BMPs</li> <li>Regional Sub-Watershed BMPs</li> <li>Regional Treatment System</li> <li>Redirect Agriculture Discharge</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        | II. Implementation and Determination of Compliance with LAs for Contaminated Lake Sediments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        | The contaminated lake sediment LAs may be implemented through a memorandum of agreement (MOA), which the Executive Officer is authorized to negotiate and execute, provided it is consistent with the following: The MOA shall detail the voluntary efforts that will be undertaken to attain the load allocations. The MOA shall comply with the <u>Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options</u> ("Policy"), including part II, section 2 (c)(ii) and related provisions, and shall be consistent with the requirements of this TMDL. If the MOA is timely adopted in accordance with the implementation schedule below, the program described in the MOA shall be deemed "certified", pursuant to the Policy, subject to the conditions of Policy section 2 (e). The MOA shall include development of the MLWP, which must be approved by the Executive Officer, and may be amended with Executive Officer approval, as necessary. If a MOA is not established with responsible parties within two years of the effective date of the TMDL or if responsible parties do not comply with the terms of the TMDL, a cleanup and abatement order pursuant to Cal. Water Code section 13304, or another appropriate regulatory order, shall be issued to implement the load allocations. Implementation of the MCA shall be reviewed annually by the Executive Officer as part of the MRP annual reports. |

| TMDL Element | Regulatory Provisions                                                                                                                                                                                                                                                                                     |
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|              | To be a valid non-regulatory implementation program adopted by the Regional Board, the MOA shall include the following requirements and conditions:                                                                                                                                                       |
|              | The MOA shall direct development of a MLWP that addresses the impaired water as approved by the Executive Officer.                                                                                                                                                                                        |
|              | The MOA shall outline the roles and responsibilities of each responsible party.                                                                                                                                                                                                                           |
|              | The MOA shall contain conditions that require trackable progress on<br>attaining load allocations and numeric targets. A timeline shall be<br>included that identifies the point(s) at which Regional Board regulatory<br>intervention and oversight will be triggered if the pace of work lags or fails. |
|              | The MOA shall contain a provision that it shall be revoked based upon<br>findings that the program has not been adequately implemented, is not<br>achieving its goals, or is no longer adequate to restore water quality.                                                                                 |
|              | The MOA shall be consistent with the <u>California Policy for Implementation</u><br>and <u>Enforcement of the Non-point Source Pollution Control Program</u> ,<br>including but not limited to, the "Key Elements of a Non-point Source<br>Pollution Control Implementation Program".                     |
|              | To the satisfaction of the Executive Officer, the MLWP shall meet the following criteria:                                                                                                                                                                                                                 |
|              | Three years from the effective date of the TMDL responsible parties shall<br>submit a MLWP for approval by the Executive Officer.                                                                                                                                                                         |
|              | <ul> <li>The MLWP shall include identification of implementation measures that<br/>will achieve lake sediment LAs.</li> </ul>                                                                                                                                                                             |
|              | <ul> <li>The MLWP shall include a MRP and QAPP for phase 2 monitoring described above.</li> </ul>                                                                                                                                                                                                         |
|              | <ul> <li>The MLWP shall include a strategy to secure funds to remediate the lake<br/>sediments.</li> </ul>                                                                                                                                                                                                |
|              | The MLWP shall include tasks and a clear timeline for task completion<br>leading to attainment of lake sediment LAs. The roles and responsibilities<br>of each responsible party shall also be outlined in the MLWP.                                                                                      |
|              | The MLWP shall include a description of how remediation of McGrath<br>Lake sediments will complement other restoration efforts currently<br>ongoing at McGrath State Beach and the implementation of the McGrath<br>Beach Bacteria TMDL.                                                                  |
|              | The MLWP shall achieve compliance with the load allocations through the                                                                                                                                                                                                                                   |

| TMDL Element | Regulatory Provisions                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | implementation of lake management strategies to reduce and manage<br>internal pesticide and PCBs sources from lake bed sediments. The lake<br>management implementation actions may include, but are not limited to<br>the following:                                                                                                                                                         |
|              | <ul> <li>Sediment Capping</li> <li>Dredging/Hydraulic Dredging</li> <li>Monitored Natural Attenuation</li> </ul>                                                                                                                                                                                                                                                                              |
|              | The Executive Officer may require a revised MLWP to reflect the results of data obtained through TMDL implementation.                                                                                                                                                                                                                                                                         |
|              | III. APPLICATION OF ALLOCATIONS TO RESPONSIBLE PARTIES                                                                                                                                                                                                                                                                                                                                        |
|              | Responsible parties for the Central Ditch LAs are the agricultural dischargers in the McGrath Lake sub-watershed.                                                                                                                                                                                                                                                                             |
|              | <ul> <li>Responsible parties for the lake sediment LAs are:</li> <li>State of California Department of Parks and Recreation</li> <li>McGrath Family (owners of the Central Ditch west of Harbor Blvd and the northern end of the lake)</li> <li>Agricultural Dischargers in the McGrath Lake sub-watershed</li> <li>Ventura County Regional Sanitation District (Bailard Landfill)</li> </ul> |
|              |                                                                                                                                                                                                                                                                                                                                                                                               |
|              |                                                                                                                                                                                                                                                                                                                                                                                               |
|              |                                                                                                                                                                                                                                                                                                                                                                                               |

| Task   | Task                                                                                                                                                                                                                  | Responsible Party                                                                                                                                                                                                                           | Deadline                                                 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Number |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                             |                                                          |
| 1      | TMDL Load Allocations (LAs)<br>for Chlordane, Dieldrin, 4,4'-<br>DDT, 4,4'-DDE, 4,4'-DDD,<br>Total DDT, and Total PCBs<br>apply.                                                                                      | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family (owners of the<br>Central Ditch west of<br>Harbor Blvd and the<br>northern end of the<br>lake), Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners | Effective Date<br>of TMDL                                |
| 2      | Responsible parties assigned<br>Central Ditch LAs shall submit<br>a Monitoring and Reporting<br>Plan (MRP) to the Executive<br>Officer for review and approval<br>to address Phase 1 monitoring.                      | Agriculture<br>Dischargers                                                                                                                                                                                                                  | 6 months from<br>the effective<br>date of the<br>TMDL    |
| 3      | Responsible parties assigned<br>Central Ditch LAs shall begin<br>monitoring as outlined in the<br>approved MRP.                                                                                                       | Agriculture<br>Dischargers                                                                                                                                                                                                                  | 90 days from<br>the date of<br>MRP approval              |
| 4      | Responsible parties assigned<br>Central Ditch LAs shall submit<br>annual monitoring reports.<br>Reports shall be submitted<br>within three months after the<br>completion of the final sampling<br>event of the year. | Agriculture<br>Dischargers                                                                                                                                                                                                                  | Annually                                                 |
| 5      | Responsible parties shall enter<br>into a Memorandum of<br>Agreement (MOA) with the<br>Regional Board to implement<br>the lake sediment LAs.                                                                          | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners                                                                                                | Two years<br>from the<br>effective date<br>of the TMDL   |
| 6      | Responsible parties subject to<br>the MOA shall submit a<br>McGrath Lake Work Plan<br>(MLWP) for review and<br>approval by the Executive<br>Officer.                                                                  | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners                                                                                                | Three years<br>from the<br>effective date<br>of the TMDL |
| 7      | Responsible parties subject to the MOA shall submit annual progress reports.                                                                                                                                          | State of California<br>Dept. of Parks and<br>Recreation, McGrath                                                                                                                                                                            | Annually from<br>the date of<br>MLWP                     |

| Table 7-37.2 McGrath Lake PCBs and Pesticides | TMDL: Implementation Schedule |
|-----------------------------------------------|-------------------------------|
|-----------------------------------------------|-------------------------------|

| Task   | Task                                                                                                                                                                                 | Responsible Party                                                                                                                            | Deadline                                                                                                                                                         |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number |                                                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                                  |
|        |                                                                                                                                                                                      | Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners                                                                     | approval                                                                                                                                                         |
| 8      | Responsible parties shall attain<br>Central Ditch LAs.                                                                                                                               | Agriculture<br>Dischargers                                                                                                                   | 10 years from<br>the effective<br>date of the<br>TMDL                                                                                                            |
| 9      | Responsible parties shall begin<br>implementation of McGrath<br>Lake sediment remediation<br>actions as outlined in the<br>MLWP.                                                     | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners | As soon as<br>possible, but<br>no later than<br>10 years from<br>the effective<br>date of the<br>TMDL                                                            |
| 10     | Responsible parties shall begin<br>Phase 2 monitoring as outlined<br>in the MLWP. The results shall<br>be included as part of the<br>annual progress reports<br>initiated in Task 8. | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners | 13 years from<br>the effective<br>date of the<br>TMDL or at the<br>time lake<br>sediment<br>remediation<br>actions are<br>completed,<br>whichever is<br>earlier. |
| 11     | Responsible parties shall achieve lake sediment LAs.                                                                                                                                 | State of California<br>Dept. of Parks and<br>Recreation, McGrath<br>Family, Agriculture<br>Dischargers, Other<br>sub-watershed<br>landowners | 14 years from<br>the effective<br>date of the<br>TMDL                                                                                                            |