VIA EMAIL: commentletters@waterboards.ca.gov
HARD COPY TO FOLLOW

September 18, 2017

The Honorable Felicia Marcus, Chair
and Members of the State Water Resources Control Board
c/o Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Re: STATEWIDE PROCEDURES FOR DISCHARGES OF DREDGED OR FILL MATERIALS INTO WATERS OF THE STATE

Dear Chair Marcus:

Our organizations thank you for the opportunity to comment on the revised draft State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State creating a new permitting and regulatory program for such discharges (Proposed Regulatory Program), as well as the Draft Staff Report Including the Substitute Environmental Documentation (Staff Report) for the Proposed Regulatory Program. These comments have been prepared and submitted by the City of San Buenaventura (Ventura Water), the San Bernardino Valley Water Conservation District (SBVWCD), and the Santa Clara Valley Water District (SCVWD), and have been endorsed by the Association of California Water Agencies, the California Municipal Utilities Association, and the California Water Association, which collectively represent 465 California water agencies/utilities.

Our comments focus on the Proposed Regulatory Program's effects on our water agencies' ability to sustainably, reliably, and in an environmentally sensitive manner provide for augmentation of water supply, storage, and capture, as well as natural treatment of urban runoff, storm water, wastewater treatment plant discharges, and impaired surface waters. Specifically, our comments address and provide relevant examples of the substantial costs and permitting and project implementation delays associated with the Proposed Regulatory Program's new permitting requirements for activities related to Multi-benefit Constructed Facilities, which are artificial, man-made, or improved facilities operated to provide water supply/quantity, water storage, water conveyance, water quality treatment, and/or storm water, runoff or flood protection functions, while also providing other environmental benefits, such as: groundwater recharge; natural beds, banks, soils, or substrates; and wetland, riparian, or other habitat and vegetation, including, without limitation, naturalized surface water, runoff, or storm water quality treatment facilities or structural best management practices; naturalized surface water, runoff, storm water, or flood management swales, conveyance channels, or basins;

naturalized percolation ponds and percolation channels; bio-filtration and bio-retention basins, ponds, and wetlands; and naturalized groundwater and surface water storage facilities.

Accordingly, we are requesting the State Water Resources Control Board (SWRCB) to *exempt Multi-benefit Constructed Facilities from permitting under the Proposed Regulatory Program* by excluding, for purposes of the Proposed Regulatory Program only, such facilities from jurisdictional waters of the state (WOTS). Alternatively, we ask the SWRCB to *exempt Multi-benefit Constructed Facilities from the Proposed Regulatory Program's permit application requirements*. At a minimum, we urge the SWRCB to *exempt Multi-benefit Constructed Facilities from the Proposed Regulatory Program's new, more burdensome alternatives analysis and compensatory mitigation related requirements* that should apply only to permanent net losses of waters of the state. Suggested revisions and modifications to the text of the Proposed Regulatory Program consistent with these recommended revisions are shown in redline/strikethrough in the attached **Exhibit 1**.

This comment letter summarizes and provides an overview of our more detailed Discussion and Recommendations pertaining to the Proposed Regulatory Program, which is attached as **Exhibit 2**.

I. NEW AND SUBSTANTIAL REGULATORY BURDENS WILL INTERFERE WITH WATER AGENCIES' MISSIONS AND ARE INCONSISTENT WITH STATE POLICY.

A. Multi-benefit Constructed Facilities and Related Activities are Critical to Water Agencies' Missions.

Our organizations are committed to the development, management, treatment, provision, and use of high quality water at the lowest practical cost and in an environmentally sensitive manner. We are submitting these comments because the Proposed Regulatory Program, if adopted without significant revisions, will significantly impact the creation, restoration, enhancement, operations, management and maintenance of our Multi-benefit Constructed Facilities in a manner that substantially interferes with our ability to fulfill that commitment, without a demonstrable incremental benefit to water quality or the environment. Unfortunately, in the vast majority of situations, application of the Proposed Regulatory Program's new permitting regime mandates waste discharge requirements (WDR) for Multi-benefit Constructed Facilities. With certain changes described in this letter and more fully explained in **Exhibit 2**, the impacts of the Proposed Regulatory Program's new permitting requirements on our Multi-benefit Constructed Facilities can be avoided.

B. State Policies Encouraging the Use of Multi-benefit Constructed Facilities.

Multi-benefit Constructed Facilities are encouraged by a variety of SWRCB, EPA, and California Department of Water Resources (DWR) policy statements and reports, including the California Water Action Plan,[1] California's Strategy to Optimize Resource Management of Storm

[1] California Natural Resources Agency. California Water Action Plan 2016 Update, 2016.

Water (STORMS),[2] and DWR's Urban Stormwater Runoff Management: Resource Management Strategy of the California Water Plan.[3]

California's Water Action Plan is the State's roadmap to sustainable water management, with the specific objective of encouraging practices that meet ecological and human needs, respond to the conditions of climate change, and respond to the water needs of a growing population.[4] The Water Action Plan establishes the following three broad objectives developed to advance California toward more sustainable water management:

- Development of more reliable water supplies;
- Development of more resilient, sustainably managed, multi-benefit water resource systems, including water supply and water quality facilities that better enhance the environment, and better withstand inevitable and unforeseen pressures; and
- Restoration of important species and habitat.[5]

Multi-benefit Constructed Facilities such as those described in **Table 1 below** are precisely the types of projects contemplated by the Water Action Plan because they cost effectively provide essential water supply, water quality treatment and/or flood protection functions, while at the same time providing wetland or riparian habitat that may also be used by sensitive fish and wildlife species.[6]

The Water Action Plan also includes several measures to encourage multi-benefit projects to attain sustainable and reliable water supplies using a multi-pronged, "all of the above" approach to water supply development and management, including, without limitation, the following water supply development and management strategies:

- Full utilization of existing surface reservoir capacity;
- Increased groundwater recharge to improve management and water quality in groundwater basins; and
- Urban storm water capture and natural treatment, including both larger-scale and incidental infiltration to groundwater basins.[7, 8]

---

[2] California Water Boards. STORMS: Strategy to Optimize Resource Management of Storm Water, Jan. 6, 2016.
[3] CDWR. Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan.
[4] California Natural Resources Agency. California Water Action Plan 2016 Update, 2016, p. 1.
[5] *Id.,* p. 4.
[6] *Id.,* pp. 7-8.
[7] *See* Public Policy Institute of California. Building Drought Resilience in California's Cities and Suburbs, Jun. 2017, pp. 43-44.
[8] California Water Boards. STORMS: Strategy to Optimize Resource Management of Storm Water, Jan. 6, 2016, p. 10.

Both surface and subsurface storage are also identified as critical components of the Water Action Plan's water supply reliability strategy.[9]

Multi-benefit Constructed Facilities such artificial wetland and in-channel water recharge and percolation facilities (*e.g.*, SBVWCD's recharge and spreading facilities summarized below) materially increase the quantity and quality of local groundwater supplies through water infiltration, while also providing wildlife habitat, parks, and open space.[10] Further, bio-retention treatment facilities designed to infiltrate all captured storm water, and bio-detention and filtration facilities (*e.g*., Irvine Ranch Water District's (IRWD's) Natural Treatment System (NTS) and SCVWD's flood protection facilities) improve groundwater quality and supply by smaller scale infiltration of flows.

With respect to water quality, both the California STORMS: Strategy to Optimize Resource Management of Storm Water and DWR's Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan encourage and emphasize that capture, natural treatment, and infiltration of runoff and storm water are integral to treating surface waters, runoff, and storm water, thereby improving long-term water supply reliability. Storm water collection and treatment facilities and surface water diversion and treatment facilities that mimic natural bio-filtration and wetland treatment processes reduce surface water pollution while improving flood protection, increasing wetland, riparian and other habitat and vegetation, and increasing water supply through capture and infiltration. Multi-benefit storm water treatment facilities also provide additional environmental benefits such as wildlife habitat, parks, and open space.[11]

For example, artificial treatment wetlands, *e.g*., IRWD's San Joaquin Marsh and NTS and Ventura Water's wildlife/water quality ponds remove nutrients and sediment, pollutants that adhere to sediment (including heavy metals), and other pollutants that are transformed, absorbed, and volatilized by natural wetland processes. Such Multi-benefit Constructed Facilities are considered the best strategy for addressing regional water quality treatment needs because they implement a proven, naturalized pollutant reduction technology that can be opportunistically and cost-effectively implemented to address pollutants from point sources, storm water, in-stream flows, and nonpoint sources.[12, 13]

Consistent with the Water Action Plan, STORMS, and the Public Policy Institute of California's *Building Drought Resilience in California's Cities and Suburbs* (*see* note 7), all of which recognize that increased regulatory burdens discourage integrated water management projects and implementation and operation of Multi-benefit Constructed Facilities, we request that the SWRCB exempt Multi-Benefit Constructed Facilities from the Proposed Regulatory

[9] California Water Action Plan 2016 Update, p. 15.
[10] CDWR. Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan, p. 6.
[11] *Ibid*.
[12] CDWR. Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan, Jul. 29, 2016, p. 6.
[13] USEPA. Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat, Oct. 2000, p. 1.

Permitting Program to streamline permitting and eliminate regulatory hurdles to the implementation, operation, management, and maintenance of such facilities.

C. The Proposed Regulatory Program Mandates Water Boards Implement a New Permitting Program, Resulting in Additional Costs and Delays.

We recognize staff's position is that the scope of "WOTS" that are subject to regulation is not expanded by the Proposed Regulatory Program. That said, as a practical matter the Proposed Regulatory Program mandates that the SWRCB and the Regional Water Quality Control Boards (collectively, Water Boards) implement a new and greatly expanded permitting program for discharges of dredge or fill material to WOTS. From our "on-the-ground" perspective, the scope of the Proposed Regulatory Program's new permitting requirements and the stringency of the new permit application analysis requirement, without modification, will add tremendous cost, permit processing burdens, and delays for our Multi-benefit Constructed Facilities. Unfortunately, these new and significant burdens are not offset by any additional environmental benefit the Proposed Regulatory Program might offer due to the significant degree to which the new permitting program duplicates regulation of resources already protected under section 404 of the Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) and section 1600 of the California Fish and Game Code by the California Department of Fish and Wildlife (CDFW). Specifically, the Proposed Regulatory Program imposes new and supplemental permitting requirements – all of which are different than – and in some cases conflict with – existing federal and State requirements – as summarized in **Table 1**, below.

Table 1 Summary of New/Supplemental Permitting Requirements

New/Supplemental Permitting Requirement	New/Increased Regulatory Burden	Consistent with USACE and CDFW regulation?
Delineation Report for wetland and non-wetland WOTS	*For wetland WOTS*: New definition and new Wetlands Jurisdictional Framework substantially increases the number of Multi-benefit Constructed Facilities deemed jurisdictional wetland WOTS compared to existing regulation	No
	For non-wetland WOTS: no guidance regarding features that are jurisdictional, leaving it to each Water Board's discretion, and resulting in inconsistent application across regions	No
Prepare and submit application, including an alternatives analysis	Includes O&M, which by definition cannot be conducted in another location	No
	Includes activities that under current rules would be performed pursuant to a Nationwide Permit and CWA section 401 water quality certification	No
	Potential conflicts between USACE's and Water Boards' Least Environmentally Damaging Practicable Alternative (LEDPA) determinations	
Analyze and provide compensatory mitigation	Use of watershed profiles, which do not now exist and encompass all lands within a watershed, including those privately owned and not publicly accessible	No
	Prioritizes in-watershed mitigation, which is different from USACE prioritization of mitigation banks, and results in different compensatory mitigation requirements	No
	Unspecified, but different methodology for calculating mitigation obligations: declines to adopt USACE's California Rapid Assessment Method and Standard Operating Procedure, used to determine compensatory mitigation requirements, but does not propose an alternative	No
	With a broader, more inclusive definition of "wetlands," a corresponding increase in compensatory mitigation obligation	No
	Requires compensatory mitigation necessary to address permanent, net loss of aquatic resources for temporal impacts that are addressed by restoration, particularly if restoration effort takes more than 1 year	

The Proposed Regulatory Program, as drafted, will impose cost, delay, and related burdens on water agencies that will negatively impact regular management, maintenance, repair and operation of existing Multi-benefit Constructed Facilities. It will also deter investments into the creation, enhancement, and restoration of new Multi-benefit Constructed Facilities. The additional information and analysis requirements and the conflicting standards that govern them will require more support from technical consultants and permitting experts, and additional legal review, creating delays and significantly increasing applicants' permitting costs.

II. MULTI-BENEFIT CONSTRUCTED FACILITIES SUBJECT TO THE NEW PERMITTING REQUIREMENTS.

This section is a brief summary of the Multi-benefit Constructed Facilities owned/operated by the signatory water agencies. The use of Multi-benefit Constructed Facilities is critical to implementing our agencies' broad commitment to the provision of high-quality water and water quality treatment services in a cost-effective, environmentally sensitive manner and consistent with State policies as discussed in Section I of this letter. See **Table 1** and **Attachment A** of **Exhibit 2** for a detailed description of these facilities and the related activities necessary to operate and maintain them at capacity and optimal function.

- IRWD's San Joaquin Marsh (Marsh) is a series of constructed water quality treatment facilities that use natural processes to receive and treat flows from the San Diego Creek before reaching environmentally sensitive waters. The Marsh reduces nutrients and other pollutants as a part of the San Diego Creek and Upper Newport Bay Total Maximum Daily Load (TMDL) implementation programs for nutrients, sediment, toxics, metals, and pathogens. Annually, the Marsh typically achieves 85% removal of nitrogen loads and 99% reduction of total coliform bacteria, in addition to high levels of reduction of other pollutants. Besides enhancing water quality, the Marsh serves as home to over 250 species of birds and other wildlife, including several State and federally listed species, in a park-like setting.

- IRWD's region-wide Natural Treatment System (NTS) is a series of constructed water quality treatment facilities that benefit the San Diego Creek watershed by enhancing water quality and providing additional neighborhood open space and wildlife habitat. The NTS uses natural ecosystems to remove sediment, nutrients, pathogens, and other contaminants from urban runoff and storm flows and prevents these contaminants from reaching sensitive receiving waters such as the Upper Newport Bay.

- Ventura Water's wildlife/water quality ponds are sited on a 20-acre system, which includes three wildlife/water quality ponds that polish tertiary treated wastewater flows from the Ventura Water Reclamation Facility before they are discharged into the Santa Clara River Estuary. The ponds were constructed by the City of Ventura in 1977 to both provide additional treatment and enhance wetland and riparian habitat and beneficial uses within the Santa Clara River Estuary watershed.

- SBVWCD's Santa Ana River Recharge Facility consists of 14 large percolation basins at the base of the San Bernardino Mountains. These critical facilities provide more than 100 wetted acres of percolation basins storing 940 acre-feet, which percolate an average of 5 feet per day. The Santa Ana facility is also managed to provide habitat for San Bernardino

kangaroo rat, coastal California gnatcatcher, cactus wren, Los Angeles pocket mouse, least Bell's vireo, and other special status species.

- SBVWCD currently maintains three sand ponds for sediment management and 56 percolation basins as part of its Mill Creek Spreading Facility, for a total of 66 acres of wetted basin area. The Mill Creek recharge facilities percolate very high quality native water into the groundwater, thereby improving salt balance in the aquifer. The Mill Creek Spreading Facility provides sustainable water to approximately 1 million residents as well as riparian habitat, including habitat for least Bell's vireo, San Bernardino kangaroo rat, coastal California gnatcatcher, and other sensitive species on the edges of the sand ponds.

- SCVWD's Managed Recharge Facilities are comprised of 393 acres of recharge ponds, 91 miles of controlled in-stream recharge, 17 miles of canals and three surface reservoirs. While these facilities serve essential water supply functions, many of them also provide other environmental benefits such as percolation and recharge of groundwater; riparian, wetland and other habitat for wildlife species; and recreational and educational opportunities.

- SCVWD's natural flood protection projects are designed using an integrated planning and management approach which considers the physical, hydrologic, and ecological functions and processes of streams and creeks within the community setting. This "natural flood protection" approach result in project benefits to natural resources including water quality, riparian/wildlife habitat, and recreational beneficial use.

III. RECOMMENDED REVISIONS TO THE PROPOSED REGULATORY PROGRAM.

We request the SWRCB make one or more of the following revisions to the Proposed Regulatory Program to exclude/exempt Multi-benefit Constructed Facilities from the requirements of the new permitting program. Our recommendations are presented in order of preference in this section below, and are reflected in color-coded redlined revisions to the Proposed Regulatory Program in **Exhibit 1**.

A. Preferred: Exclude Multi-benefit Constructed Facilities from Jurisdictional WOTS.

1. For Wetlands WOTS.

The Staff Report states that the intent of the Wetlands Jurisdictional Framework is to exclude artificially created and/or temporary features that meet the technical definition of a wetland from regulation as wetland WOTS. However, as drafted and applied, the framework sweeps all artificial, Multi-benefit Constructed Facilities into the wetland WOTS designation.[14]

[14] Several of the Multi-benefit Constructed Facilities outlined in Section II, including SCVWD and SBVWCD manmade percolation ponds, IRWD's Marsh and NTS facilities, and Ventura Water's wildlife/water quality ponds provide excellent examples of Multi-benefit Constructed Facilities that concurrently improve local water supply volume, groundwater quality, and/or water quality and provide for habitat that supports sensitive and listed species. However, SWRCB staff has confirmed

As discussed in Section I above, the cost, delay and other impacts associated with the Proposed Regulatory Program's mandate to obtain permits by the designation of such facilities as artificial, wetland WOTS will discourage and deter implementation of new such facilities, as well as negatively impact the management and maintenance of existing facilities.

For these reasons, we urge the SWRCB to revise the Proposed Regulatory Program to exclude such facilities from the proposed permitting requirements by excluding them from designation as wetland WOTS for purposes of the Proposed Regulatory Program.

2. For Non-wetland WOTS.

The Proposed Regulatory Program does not provide definitions, descriptions, or guidance regarding identification of non-wetland WOTS. This, combined with the current inconsistency among Water Boards in defining such WOTS (with some Water Boards defining puddles, riffles, and certain swimming pools as WOTS), and the new Class I Priority violation status assigned by the recent updates to the Water Quality Enforcement Policy to discharges of dredged or fill material to WOTS without obtaining WDRs, create an untenable situation for applicants that must operate, maintain, repair, restore, or enhance Multi-benefit Constructed Facilities. We therefore urge the SWRCB to revise the Proposed Regulatory Program to exclude Multi-benefit Constructed Facilities from designation as (non-wetland) WOTS and permitting jurisdiction for purposes of the Proposed Regulatory Program.

B. Alternatively: Exclude Multi-benefit Constructed Facilities from Permit Application Requirements.

If the SWRCB does not adopt the preferred recommendation, we request in the alternate that the SWRCB expand the exclusions from the Proposed Regulatory Program's permit application requirements to Multi-benefit Constructed Facilities. The activities excluded from permit application requirements under Section IV.D.2.b should be expanded and clarified. In addition, a new category of activities related to Multi-benefit Constructed Faculties should also be excluded from the Proposed Regulatory Program's permit application requirements. This approach provides less certainty for water agencies as compared to our preferred recommendation, but might also attain consistency with the State policies discussed in Section I.

C. At a Minimum: Exempt Multi-benefit Constructed Facilities from the Alternatives Analysis and Certain Mitigation Requirements.

The Proposed Regulatory Program's required alternatives analysis is time-consuming and costly. In addition, as summarized in **Table 1**, new mitigation requirements that are inconsistent with existing State and federal requirements will increase costs, and may create delay. If the SWRCB does not adopt either of the above recommendations in Section III.A

---

that – as a result of the Proposed Regulatory Program's elimination of the vegetation requirement from the definition of "wetland" and/or application of the Wetlands Jurisdictional Framework – these facilities (and countless others like them), many of which do not constitute WOTUS due to their constructed nature, would now be categorized as artificial wetlands that constitute WOTS.

(exclude from permitting requirements as WOTS) or Section III.B (exempt from permit application requirements) Multi-benefit Constructed Facilities, we urge the SWRCB *at a minimum* to exempt Multi-benefit Constructed Facilities from the alternatives analysis requirement and certain mitigation requirements.

IV. CONCLUSION.

Thank you for the opportunity to provide comments on the Proposed Regulatory Program. If you have any questions, please contact Mary Lynn Coffee at (949) 477-7675.

Sincerely,

Mark D. Watkins
City Manager
City of San Buenaventura

Daniel B. Cozad
General Manager
San Bernardino Valley Water Conservation District

Norma J. Camacho
Chief Executive Officer
Santa Clara Valley Water District

David E. Bolland
Director of State Regulatory Relations
Association of California Water Agencies

Jonathan Young
Regulatory Advocate
California Municipal Utilities Association

Jack Hawks
Executive Director
California Water Association

Enc.

cc (by e-mail): Honorable Members of the State Water Resources Control Board
Eileen Sobeck, Executive Director
Jonathan Bishop, Chief Deputy Director
Karen Larsen, Deputy Director, Division of Water Quality

EXHIBIT 1

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

PRELIMINARY DRAFT

State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State

[Proposed for Inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California]

STATE WATER RESOURCES CONTROL BOARD

July 21, 2017

Final Draft

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

PRELIMINARY DRAFT

LEGEND

Procedures for Discharges of Dredged or Fill Materials into Waters of the State

I. Introduction

The mission of the State Water Resources Control Board and the Regional Water Quality Control Boards (Water Boards) includes the preservation, enhancement, and restoration of the quality of California's water resources for the protection of the environment and all beneficial uses for the benefit of present and future generations. In accordance with the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.), the Water Boards are authorized to regulate discharges of waste that may affect the quality of waters of the state. As described below, waters of the state include some, but not all, features that are defined as wetlands, as well as other features, including the ocean, lakes, and rivers, but, for purposes of these Procedures for the Discharges of Dredged or Fill Materials to Waters of the State, do not include features defined as Multi-benefit Constructed Facilities. These wetlands provide environmental and economic benefits to the people of this state, including flood and storm water control, surface and ground water supply, fish and wildlife habitat, erosion control, pollution treatment, nutrient cycling, and public enjoyment. Wetlands ameliorate the effects of global climate change by providing floodwater storage, sequestering carbon, and maintaining vulnerable plant and animal communities. Many of these invaluable areas statewide have been lost to fill and development. Presently, wetlands are threatened by impacts from increasing population growth, land development, sea level rise, and climate change. These Procedures for the Discharges of Dredged or Fill Materials to Waters of the State (Procedures) conform to Executive Order W-59-93, commonly referred to as California's "no net loss" policy for wetlands. In accordance with Executive Order W-59-93, the Procedures ensure that the Water Boards' regulation of dredged or fill activities will be conducted in a manner "to ensure no overall net loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and values..." The Water Boards are committed to increasing the quantity, quality, and diversity of wetlands that qualify as waters of the state.

These Procedures contain a wetland definition in section II and wetland delineation procedures in section III, both of which apply to all Water Board programs. The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands. These Procedures also include procedures for the review and approval of activities that could result in the discharge of dredged or fill material to any waters of the state in section IV. However, for purposes of these Procedures, features defined as Constructed Water Supply/Water Quality Treatment Facilities are not considered waters of the state under section II or section IV. The Procedures include elements of the Clean Water Act Section 404(b)(1) Guidelines, thereby bringing uniformity to Water Boards' regulation of discharges of dredged or fill material to all waters of the state.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

II. Wetland Definition

The Water Boards define an area as wetland as follows:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." The following wetlands are waters of the state unless they are Multi-benefit Constructed Facilities, in which case they are excluded as waters of the state for purposes of these Procedures:

1. Natural wetlands,
2. Wetlands created by modification of a water of the state,[1]
3. Wetlands that meet current or historic definitions of "waters of the United States,"[2] and
4. Artificial wetlands[3] that meet any of the following criteria:
    a. Approved by an agency as mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
5. Artificial wetlands[3] that are greater than or equal to one acre in size
    a. Specifically identified in a water quality control plan as a wetland or other water of the state;
    b. Resulted from historic human activity and has become a relatively permanent part of the natural landscape;
    ~~c.~~ Unless the artificial wetland was constructed and is currently used and maintained primarily for one or more of the following purposes (i.e., the

[1] "Created by modification of a water of the state" means that the wetland that is being evaluated must have been directly converted from a water of the state, and does not include a situation where the water of the state was completely eliminated.

[2] This includes features that have been determined by the U.S. Environmental Protection Agency or the U.S. Army Corps of Engineers to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in a preliminary jurisdictional determination upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S."

[3] Artificial wetlands are wetlands that result from human activity.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

following artificial wetlands are not waters of the state unless they also satisfy another one of the above criteria):

i. Industrial or municipal wastewater treatment or disposal,

ii. Settling of sediment,

iii. Storm water detention, infiltration, or treatment,

iv. Agricultural crop irrigation or stock watering,

v. Fire suppression,

vi. Cooling water,

vii. Active surface mining – even if the site is managed for interim wetlands functions and values, or

viii. Log storage.

III. Wetland Delineation

The permitting authority shall rely on any wetland area delineation from a final aquatic resource report with a preliminary or approved jurisdictional determination issued by the United States Army Corps of Engineers (Corps) for the purposes of determining the extent of wetland waters of the U.S. A delineation of non-federal wetland areas potentially impacted by the project shall be performed using the methods described in the three federal documents listed below (collectively referred to as "1987 Manual and Supplements") to determine whether the area meets the state definition of a wetland as defined above. As described in the 1987 Manual and Supplements, "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not preclude the determination of such an area that meets the definition of wetland. Terms as defined in these Procedures shall be used if there is conflict with terms in the 1987 Manual and Supplements.

- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

- U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

IV. Procedures for Regulation of Discharges of Dredged or Fill Material to Waters of the State

The purpose of this section is to establish application procedures for discharges of dredged or fill material to waters of the state, which includes both waters of the U.S. and non-federal waters of the state, except for purposes of these Procedures, Multi-benefit Constructed Facilities are not considered waters of the state. This section supplements existing state requirements for discharges of dredged or fill material to waters of the U.S.[4] These Procedures include Appendix A, which contains relevant portions of the U.S. EPA's Section 404(b)(1) "Guidelines for Specification of Disposal Sites for Dredge or Fill Material"[5] (Guidelines), 1980, with minor modifications to make them applicable to the state dredged or fill program (hereafter State Supplemental Dredge or Fill Guidelines).[6] This section applies to all applications for discharges of dredged or fill material to waters of the state submitted after [insert the effective date of the Plan Amendment].

Project Application Submittal for Individual Orders

Unless excluded by Section IV.D, applicants must file an application to the Water Boards for any activity that could result in the discharge of dredged or fill material to waters of the state in accordance with California Code of Regulations, title 23, section 3855.[7] The applicant may consult with the Water Boards to determine whether a project could result in impacts to waters of the state and/or discuss submittals that would meet the application requirements listed below.

A. Project Application Submittal

Applicants must submit the items listed in subsection 1 to the permitting authority. In addition, applicants shall consult with the permitting authority about the items listed in subsection 2. Within 30 days of receiving the items listed in subsection 1, the permitting authority may require the applicant to submit one or more of the items in subsection 2 for a complete application. Within 30 days of receiving all of the required items, the permitting authority shall determine whether the application is complete and notify the applicant accordingly. If the applicant's federal license or permit application includes any of the information required in subsections 1 or 2 below, the applicant may submit the federal application materials to satisfy the corresponding state application information. If federal application materials are submitted as part of the state application, the applicant shall indicate where the corresponding state application information can be found in the federal application materials.

---

[4] 4 California Code of Regulations, title 23, sections 3830-3869 (state's Clean Water Act (CWA) section 401 (33 USC § 1341) water quality certification program)

[5] 40 C.F.R. § 230.

[6] The State Supplemental Dredge and Fill Guidelines are included as Appendix A. Because Appendix A is derived directly from the 404(b)(1) guidelines, it uses slightly different terms than terms used in sections I through V of these Procedures. Appendix A will be applied in a manner consistent with sections I through V of these Procedures.

[7] Note that California Code of Regulations, title 23, section 3855 applies only to individual water quality certifications, but these Procedures extend the application of section 3855 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

1. Items Required for a Complete Application

a. All items listed in California Code of Regulations, title 23, section 3856 "Contents of a Complete Application."[8]

b. If waters of the U.S. are present, a final aquatic resource delineation report, with a preliminary or approved jurisdictional issued by the Corps.

c. If waters of the state outside of federal jurisdiction are present, a delineation of those waters, including wetlands delineated as described in section III.

d. The dates upon which the overall project activity will begin and end; and, if known, the date(s) upon which the discharge(s) will take place.

e. Map(s) with a scale of at least 1:24000 (1" = 2000') and of sufficient detail to accurately show (1) the boundaries of the lands owned or to be utilized by the applicant in carrying out the proposed activity, including the grading limits, proposed land uses, and the location, dimensions and type of any structures erected (if known) or to be erected and (2) all aquatic resources that may qualify as waters of the state, within the boundaries of the project, and all aquatic resources that may qualify as waters of the state outside of the boundary of the project that could be affected by the project. A map submitted for a Corps' preliminary jurisdictional determination may satisfy this requirement if it includes all potential waters of the state. The permitting authority may require that the map(s) be submitted in electronic format (e.g., GIS shapefiles).

f. A description of the waters proposed to receive a discharge of dredged or fill material, including the beneficial uses as listed in the applicable water quality control plan. The description should also include: a description of discharge at each individual impact location; quantity of impact at each location rounded to the nearest one-thousandth (0.001) of an acre, nearest linear foot, and nearest cubic yard (as applicable); assessment of potential direct and indirect impacts to listed beneficial uses and potential mitigation measures for those potential impacts to beneficial uses, identification of existing water quality impairment(s); the source of water quality impairment(s), if known; and the presence of rare, threatened or endangered species habitat.

g. An alternatives analysis,[9] unless any of the following exemptions apply.

---

[8] Note that California Code of Regulations, title 23, section 3856 applies only to individual water quality certifications, but these Procedures extend the application of section 3856 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state.

[9] "Alternatives analysis" as used in these Procedures refer to the analysis required by Section IV.A.(h) and Appendix A, State Supplement Dredged or Fill Guidelines, section 230.10(a). An alternatives analysis also may be required in order to comply with other statutory or regulatory requirements, such as CEQA. The exemptions and the tiers set

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

i. The project includes discharges to waters of the state outside of federal jurisdiction, but the project would meet the terms and conditions of one or more Water Board certified Corps' General Permits, if all discharges were to waters of the U.S. The permitting authority will verify that the project would meet the terms and conditions of the Corps' General Permit(s) if all discharges were to waters of the U.S. based on information supplied by the applicant.

ii. The project would be conducted in accordance with a watershed plan that has been approved by the permitting authority and analyzed in an environmental document that includes an alternatives analysis, monitoring provisions, and guidance on compensatory mitigation opportunities.

iii. The project is an Ecological Restoration and Enhancement Project.

iv. The project has no permanent impacts to aquatic resources and no impacts to any bog, fen, playa, seep, wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat , or habitat for rare, threatened or endangered species, and all implementation actions in the restoration plan can reasonably be concluded within one year.

v. The project is a **Multi-benefit Constructed Facility**.

h. If none of the above exemptions apply, the applicant must submit an alternatives analysis consistent with the requirements of 230.10 of the State Supplemental Dredge or Fill Guidelines that allows the permitting authority to determine whether the proposed project is the Least Environmentally Damaging Practicable Alternative (LEDPA). If the applicant submitted a draft alternatives analysis to the Corps, the applicant shall provide a copy to the permitting authority. Such alternatives analyses may satisfy some or all of the following requirements in accordance with Section IV.B.3. Alternatives analyses shall be completed in accordance with the following tiers, unless the permitting authority determines that a lesser level of analysis is appropriate. The level of effort required for an alternatives analysis within each tier shall be commensurate with the significance of the project's potential threats to water quality and beneficial uses[10].

---

forth below do not affect any alternatives analysis conducted pursuant to another statutory or regulatory requirement. To the extent that the permitting authority is acting as the lead agency under CEQA, it may be necessary for the permitting authority to conduct further analysis to comply with CEQA.

[10] As used below, "impacts" include both permanent and temporary impacts.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

i. Tier 3 projects include any project that directly impacts more than two-tenths (0.2 0.5) of an acre or 300 linear feet of waters of the state, or directly impacts a bog, fen, playa, seep wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species; and is not a project that inherently cannot be located at an alternate location. Tier 3 projects shall provide an analysis of off-site and on-site alternatives.

ii. Tier 2 projects include any project that directly impacts more than one tenth (0.1) and less than or equal to two five-tenths (0.2) of an acre or more than 100 and less than or equal to 300 linear feet of waters of the state, or any project that inherently cannot be located at an alternate location (unless it meets the size requirements set forth in Tier 1). Tier 2 projects shall provide an analysis of only on-site alternatives.

iii. Tier 1 projects include any project that directly impacts less than or equal to one tenth (0.1) of an acre or less than or equal to 100 linear feet of waters of the state. Tier 1 projects shall provide a description of any steps that have been or will be taken to avoid and minimize loss of, or significant adverse impacts to, beneficial uses of waters of the state.

2. Additional Information Required for a Complete Application, except for Multi-benefit Constructed Facilities.

a. If required by the permitting authority on a case-by-case basis, if the wetland area delineations were conducted in the dry season, supplemental field data from the wet season to substantiate dry season delineations.

b. If required by the permitting authority on a case-by-case basis, an assessment of the potential impacts associated with climate change related to the proposed project and any proposed compensatory mitigation, and any measures to avoid or minimize those potential impacts.

c. If compensatory mitigation is required by the permitting authority on a case-by-case basis, an assessment of the overall condition of aquatic resources proposed to receive a discharge of dredged or fill material and their likely stressors, using an assessment method approved by the permitting authority and a draft compensatory mitigation plan developed using a watershed approach containing the items below. Compensatory mitigation shall not be required for Ecological Restoration and Enhancement Projects or activities related to creating, restoring, enhancing, operating, managing, or maintaining function or value of **Multi-benefit Constructed Facilities**. For permittees who intend to fulfill

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items i and ii, as described below, as well as information required in Appendix A, section 230.94 (c)(5) and (c)(6), and the name of the specific mitigation bank or in-lieu fee program proposed to be used.

Draft compensatory mitigation plans required by this subsection shall comport with the State Supplemental Dredge or Fill Guidelines, Subpart J, and include the elements listed below.

i. A watershed profile for the project evaluation area for both the proposed dredged or fill project and the proposed compensatory mitigation project.

ii. A description of how the project impacts and compensatory mitigation would not cause a net loss of the overall abundance, diversity, and condition of aquatic resources, based on the watershed profile. If the compensatory mitigation is located in the same watershed as the project, no net loss will be determined on a watershed basis. If the compensatory mitigation and project impacts are located in multiple watersheds, no net loss will be determined considering all affected watersheds. The level of detail in the plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to a project.

iii. Preliminary information about ecological performance standards, monitoring, and long-term protection and management, as described in State Supplemental Dredge or Fill Guidelines.

iv. A timetable for implementing the compensatory mitigation plan.

v. If the compensatory mitigation plan includes buffers, design criteria and monitoring requirements for those buffers.

vi. If the compensatory mitigation involves restoration or establishment as the form of mitigation, applicants shall notify state and federal land management agencies, airport land use commission, fire control districts, flood control districts, local mosquito-vector control district(s), and any other interested local entities prior to initial site selection. These entities should be notified as early as possible during the initial compensatory mitigation project design stage.

d. If required by the permitting authority on a case-by-case basis, if project activities include in-water work or water diversions, a proposed water quality monitoring plan to monitor compliance with water quality

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

objectives of the applicable water quality control plan. At a minimum, the plan should include type and frequency of sampling for each applicable parameter.

e. In all cases where temporary impacts are proposed, a draft restoration plan that outlines design, implementation, assessment, and maintenance for restoring areas of temporary impact to pre-project conditions. The design components shall include the objectives of the restoration plan; grading plan of disturbed areas to pre-project contours; a planting palette with plant species native to the area; seed collection locations; and an invasive species management plan. The implementation component shall include all proposed actions to implement the plan (e.g., re-contouring, initial planting, site stabilization, removal of temporary structures) and a schedule for completing those actions. The maintenance and assessment components shall include a description of performance standards used to evaluate attainment of objectives; the timeframe for determining attainment of performance standards; and maintenance requirements (e.g., watering, weeding, replanting and invasive species control). The level of detail in the restoration plan shall be sufficient to accurately evaluate whether the restoration offsets the adverse impacts attributed to a project.

Prior to commencement of permitted activities that would impact waters of the state ~~issuance of the Order~~, the applicant shall submit a final restoration plan that describes the restoration of all temporarily disturbed areas to pre-project conditions.

f. For all Ecological Restoration and Enhancement Projects, a draft assessment plan including the following: project objectives; description of performance standards used to evaluate attainment of objectives; protocols for condition assessment; the timeframe and responsible party for performing condition assessment; and assessment schedule. A draft assessment plan shall provide for at least one assessment of the overall condition of aquatic resources and their likely stressors, using an appropriate assessment method approved by the permitting authority, prior to restoration and/or enhancement and two years following restoration and/or enhancement to determine success of the restoration and/or enhancement.

B. Permitting Authority Review and Approval of Applications for Individual Orders

1. The permitting authority will evaluate the potential impacts on the aquatic environment from the proposed project and determine whether the proposed project complies with the applicable provisions of the Procedures including sections IV.A.1.g and IV.A.2. The permitting authority has the discretion to approve a project only if the applicant has demonstrated the following:

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

a. A sequence of actions has been taken to first avoid, then to minimize, and lastly compensate for adverse impacts to waters of the state;

b. The potential impacts will not contribute to a net loss of the overall abundance, diversity, and condition of aquatic resources in a watershed;

c. The discharge of dredged or fill material will not violate water quality standards and will be consistent with all applicable water quality control plans and policies for water quality control; and

d. The discharge of dredged or fill material will not cause or contribute to significant degradation of the waters of the state.

2. The permitting authority shall rely on any final aquatic resource report with a preliminary or approved jurisdictional determination issued by the Corps to determine boundaries of waters of the U.S. For all other wetland area delineations, the permitting authority shall review and approve delineations that are performed using the methods described in Section III.

3. Alternatives Analysis Review Requirements:

a. The purpose of the alternatives analysis is to identify the LEDPA. The permitting authority will be responsible for determining the sufficiency of an alternatives analysis except as described in 3(b) below. In all cases, the alternatives analysis must establish that the proposed project alternative is the LEDPA in light of all potential direct, secondary (indirect), and cumulative impacts on the physical, chemical, and biological elements of the aquatic ecosystem.

b. Discharges to waters of the U.S.

In reviewing and approving the alternatives analysis for discharges of dredged or fill material that impact waters of the U.S., the permitting authority shall defer to the Corps' determinations on the adequacy of the alternatives analysis, or rely on a draft alternatives analysis if no final determination has been made, unless the Executive Officer or Executive Director determines that (1) the permitting authority was not provided an adequate opportunity to collaborate in the development of the alternatives analysis, (2) the alternatives analysis does not adequately address issues identified in writing by the Executive Officer or Executive Director to the Corps during the development of the alternatives analysis, or (3) the proposed project and all of the identified alternatives would not comply with water quality standards.

If the project also includes discharges to waters of the state outside of federal jurisdiction, the permitting authority shall require the applicant to supplement the alternatives analysis to include waters of the state outside of federal jurisdiction unless the project is exempt under Section IV.A.1.g.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

If an alternatives analysis is not required by the Corps for waters of the U.S. impacted by the discharge of dredged or fill material, the permitting authority shall require an alternatives analysis for the entire project in accordance with the State Supplemental Dredge or Fill Guidelines, unless the project is exempt under Section IV.A.1.(g) above.

4. Prior to issuance of the Order aquatic resources, the permitting authority will review and approve the final restoration plan for temporary impacts.

5. Compensatory Mitigation

Except as set forth in Section IV.A.2.c.,

a. Compensatory mitigation, in accordance with the State Supplemental Dredge or Fill Guidelines, Subpart J, may be required to ensure that an activity complies with these Procedures.

b. Where feasible, the permitting authority will consult and coordinate with any other public agencies that have concurrent mitigation requirements in order to achieve multiple environmental benefits with a single mitigation project, thereby reducing the cost of compliance to the applicant.

c. Amount: The amount of compensatory mitigation will be determined on a project-by-project basis in accordance with State Supplemental Dredge or Fill Guidelines, section 230.93(f). The permitting authority may take into account recent anthropogenic degradation to the aquatic resource and the potential and existing functions and conditions of the aquatic resource. A minimum of one-to-one acreage or length of stream reach replacement is necessary to compensate for wetland or stream losses unless an appropriate function or condition assessment method clearly demonstrates, on an exceptional basis, that a lesser amount is sufficient. A reduction in the mitigation ratio for compensatory mitigation will be considered by the permitting authority if buffer areas adjacent to the compensatory mitigation are also required to be maintained as part of the compensatory mitigation management plan. The amount of compensatory mitigation required by the permitting authority will vary depending on which of the following strategies the applicant uses to locate the mitigation site within a watershed.

Strategy 1: Applicant locates compensatory mitigation using a watershed approach based on a watershed profile developed from a watershed plan that has been approved by the permitting authority and analyzed in an environmental document, includes monitoring provisions, and includes guidance on compensatory mitigation opportunities;

Strategy 2: Applicant locates compensatory mitigation using a watershed approach based on a watershed profile developed for a project evaluation area, and demonstrates that the mitigation project will contribute to the

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

sustainability of watershed functions and the overall health of the watershed area's aquatic resources.

Generally, the amount of compensatory mitigation required under Strategy 1 will be less than the amount of compensatory mitigation required under Strategy 2 since the level of certainty that a compensatory mitigation project will meet its performance standards increases if the compensatory mitigation project complies with a watershed plan as described above. Certainty increases when there is a corresponding increase in understanding of watershed conditions, which is increased when using a watershed plan as described above to determine compensatory mitigation requirements.

d. Type and Location: The permitting authority will evaluate the applicant's proposed mitigation type and location based on the applicant's use of a watershed approach based on a watershed profile. The permitting authority will determine the appropriate type and location of compensatory mitigation based on watershed conditions, impact size, location and spacing, aquatic resource values, relevant watershed plans, and other considerations.

In general, the required compensatory mitigation should be located within the same watershed as the impact site, but the permitting authority may approve compensatory mitigation in a different watershed. For example, if a proposed project may affect more than one watershed, then the permitting authority may determine that locating all required project mitigation in one area is ecologically preferable to requiring mitigation within each watershed.

e. Final Compensatory Mitigation Plan: The permitting authority will review and approve the final compensatory mitigation plan submitted by the applicant to ensure mitigation comports with the State Supplemental Dredge or Fill Guidelines, Water Code requirements, applicable water quality standards, and other appropriate requirements of state law. The level of detail in the final plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to a project considering the overall size and scope of impact. The compensatory mitigation plan shall be sufficient to provide the permitting authority with a reasonable assurance that replacement of the full range of lost aquatic resource(s) and/or functions will be provided in perpetuity.

The permitting authority may include as a condition of an Order-that the applicant receive approval of a final mitigation plan prior to discharging dredged or fill materials to waters of the state. In this case, the permitting authority will approve the final mitigation plan by amending the Order.

f. Financial Security: Where deemed necessary by the permitting authority, provision of a financial security (e.g., letter of credit or performance bond)

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

shall be a condition of the Order. In this case, the permitting authority will approve the financial security to ensure compliance with compensatory mitigation plan requirements.

g. Term of Mitigation Obligation: The permitting authority may specify in the Order the conditions that must be met in order for the permitting authority to release the permittee from the mitigation obligation, including compensatory mitigation performance standards and long-term management funding obligations.

6. The permitting authority shall provide public notice in accordance with Water Code section 13167.5 for waste discharge requirements. The permitting authority shall provide public notice of an application for water quality certification in accordance with California Code of Regulations, title 23, section 3858. If the permitting authority receives comments on the application or there is substantial public interest in the project, the permitting authority shall also provide public notice of the draft Order, or draft amendment of the Order, unless circumstances warrant a shorter notice period.

7. The permitting authority will review and approve the final monitoring and reporting requirements for all projects. Monitoring and reporting may be required to demonstrate compliance with the terms of the Order.

C. General Orders

The permitting authority may issue general orders for specific classes of dredged or fill discharge activities that are similar; involve the same or similar types of discharges and possible adverse impacts requiring the same or similar conditions or limitations in order to alleviate potential adverse impacts to water quality; and are determined by the permitting authority to more appropriately be regulated under a general order rather than under an individual Order.

General orders shall be reviewed, noticed, and issued in accordance with the applicable requirements of division 7 of the Water Code and the California Code of Regulations, division 3 of title 23.

Applicants applying to enroll under a general order shall follow the instructions specified in the general order for obtaining coverage.

D. Activities and Areas Excluded from the Application Procedures for Regulation of Discharges of Dredged or Fill Material to Waters of the State

The application procedures specified in sections IV.A and IV.B do not apply to proposed discharges of dredged or fill material to waters of the state from the following activities, or to the following areas. ~~These exclusions do not, however, affect the Water Board's authority to issue or waive waste discharge requirements (WDRs) or take other actions for the following activities or areas to the extent authorized by the Water Code.~~

1. Activities excluded from application procedures in sections IV.A and IV.B:

Comment [1]: We've stricken this because the exception swallows the exclusion. Perhaps what staff intended here is Exclusions from these Procedures for purposes of discharging dredged or fill material do not affect the statutory definition of WOTS.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

a. Activities that are exempt under CWA section 404(f) (33 USC § 1344(f)). The following federal regulations (Table 1), guidance letters (Table 2), and memoranda (Table 3), that have been adopted pursuant to CWA section 404(f) or that are used to interpret or implement section 404(f) shall be used when determining whether certain activities are excluded from these procedures. These documents are hereby incorporated by reference and shall apply to all waters of the state. Consistent with CWA section 404(f)(2) and 40 CFR section 232.3, any discharge of dredged or fill material to a water of the state incidental to any of these activities is not exempt under CWA section 404(f) and shall be subject to the application procedures sections IV.A and IV.B, if (1) the purpose of the activity is bringing a water of the state into a use to which it was not previously subject, where the flow or circulation of water of the state may be impaired or the reach of such waters be reduced, or (2) the discharge contains any toxic pollutant listed in CWA section 307.

b. **Table 1: CFR References**[11]

Title	Section	Name
33 CFR	323.4	Discharges not requiring permits (1986)
40 CFR	232.3	Activities not requiring permits (1988)

Table 2: Applicable U.S. Army Corps of Engineers (Corps) Regulatory Guidance Letters (RGLs)[12]

RGL	Title
82-03	Irrigation Exemption in Section 404(F)(1)(C) of the Clean Water Act
84-01	Regulatory Jurisdiction Over Vegetative Operations
84-05	Fifth Circuit Decision in *Avoyelles vs. Marsh*
85-04	Agricultural Conversion
86-01	Exemptions to Clean Water Act - Plowing
86-03	Exemption of Farm and Forest Roads
87-07	Exemption for Drainage Ditch Maintenance
87-09	Exemption for Construction or Maintenance of Farm or Stock Ponds

[11] The documents in Table 1 are available at the U.S. Government Printing Office, Code of Federal Regulations webpage: http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=C.F.R.

[12] The documents in Table 2 are available at the U.S. Army Corps of Engineers, Regulatory Program and Permits, Related Resources, Regulatory Guidance Letters webpage: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

92-02	Water Dependency and Cranberry Production
93-03	Rescission of RGL's 90-5 and 90-8
96-02	Applicability of Exemptions under Section 404(f) to "Deep Ripping" Activities in Wetlands
07-02	Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act

Table 3: Memoranda[13]

Memorandum for the Field: Clean Water Act Section 404 Regulatory Program and Agricultural Activities (1990)

c. Suction dredge mining activities for mineral recovery regulated under CWA section 402.

2. Areas excluded from application procedures in sections IV.A and IV.B:

a. Discharges of dredged or fill material that occur within wetland areas that have been certified as prior converted cropland (PCC) by the Natural Resources Conservation Service. The PCC exclusion will no longer apply if: (1) the PCC changes to a non-agricultural use, or (2) the PCC is abandoned, meaning it is not planted to an agricultural commodity for more than five consecutive years and wetland characteristics return, and the land was not left idle in accordance with a USDA program.

i. For purposes of D.2.(a), agricultural commodity means any crop planted and produced by annual tilling of the soil, including tiling by one-trip planters, or sugarcane.[14]

ii. For purposes of D.2.(a), agricultural use means open land planted to an agricultural crop, used for the production of (1) food or fiber, (2) used for haying or grazing, (3) left idle per a USDA program, or (4) diverted from crop production to an approved cultural practice by NRCS that prevents erosion or other degradation.[15]

b. Discharges of dredged or fill material that are associated with routine operation and maintenance of storm water facilities ~~regulated under~~ implemented in compliance with another Water Board Order, such as, but

[13] These documents are available at the U.S. Army Corps of Engineers Regulatory Program and Permits, Related Resources, Memoranda of Understanding/Agreement webpage: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/ MOUMOAs.aspx

[14] Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005.

[15] Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

not limited to, low impact development best management practices and sedimentation/storm water detention basins.

c. Activities related to creating, restoring, enhancing, operating, managing, or maintaining **Multi-benefit Constructed Facilities.**

For activities associated with (1) an appropriation of water subject to Part 2 (commencing with section 1200) of Division 2 of the Water Code, (2) a hydroelectric facility where the proposed activity requires a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license, or (3) any other diversion of water for beneficial use, the Division of Water Rights will inform the applicant whether the application procedures in sections IV.A and IV.B will apply to the application.

V. Definitions

The following definitions apply to these Procedures, including the State Supplemental Dredge or Fill Guidelines. Unless otherwise indicated, any term that is not defined in these Procedures shall have the same meaning as defined in Water Code section 13050, and title 23, section 3831 of the California Code of Regulations.

Abundance means an estimate of the amount of aquatic resources by type in a watershed area, and what types of aquatic resources are most and least prevalent.

Alternatives Analysis is the process of analyzing project alternatives, including the proposed project, to determine the alternative that is both practicable and the least environmentally damaging.

Application means a written request, including a report of waste discharge or request for water quality certification, for authorization of any activity that may result in the discharge of dredged or fill material and is subject to these Procedures.

Multi-benefit Constructed Facilities means artificial, man-made, or improved facilities that are operated to provide water supply/quantity, water storage, water conveyance, water quality treatment, and/or storm water, runoff or flood control functions, while also providing other environmental benefits, such as: groundwater recharge; natural beds, banks, soils, or substrates; wetland, riparian, or other habitat and vegetation, including, without limitation, naturalized surface water, runoff, or storm water quality treatment facilities or structural best management practices; naturalized surface water, runoff, storm water, or flood management swales, conveyance channels, or basins; naturalized percolation ponds and percolation channels; bio-filtration and bio-retention basins, ponds, and wetlands; and naturalized groundwater and surface water storage facilities.

Comment [2]: Needed for all revisions, preferred, alternate, and at a minimum

Wetland Delineation means the application of a technical and procedural method to identify the boundary of a wetland area within a specified study site by identifying the presence or absence of wetland indicators at multiple points at the site and by establishing boundaries that group together sets of points that share the same status as wetland versus non-wetland.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

Discharge of Dredged Material means addition of dredged material, material that is excavated or dredged from waters of the state, including redeposit of dredged material other than incidental fallback within, to the waters of state.

Diversity means the relative proportion of aquatic resource types, classification, connectivity, and spatial distribution in a watershed area.

Discharge of Fill Material means the addition of fill material where the material has the effect of replacing any portion of a water of the state with dry land or changing the bottom elevation of any portion of a water of the state.

Ecological Restoration and Enhancement Project means the project is voluntarily undertaken for the purpose of assisting or controlling the recovery of an aquatic ecosystem that has been degraded, damaged or destroyed to restore some measure of its natural condition and to enhance the beneficial uses, including potential beneficial uses of water. Such projects are undertaken: 1) in accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Farm Service Agency, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Forest Service, U.S. Bureau of Land Management, California Department of Fish and Wildlife, California Wildlife Conservation Board, California Coastal Conservancy, or other federal or state resource agency or non-governmental conservation organization; or 2) by a state or federal agency. These projects do not include the conversion of a stream or natural wetland to uplands or stream channelization. It is recognized that ecological restoration and enhancement projects may require filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during rehabilitation activities are not considered a conversion to another aquatic habitat type. These projects also do not include actions required under a Water Board order (e.g., WDRs, waivers of WDRs, or water quality certification) for mitigation, actions to service required mitigation, or actions undertaken for the primary purpose of land development.

Environmental Document means a document prepared for compliance with the California Environmental Quality Act or the National Environmental Policy Act.

Hydrophyte means any macrophyte that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats.

LEDPA means the least environmentally damaging practicable alternative. The determination of practicable alternatives shall be consistent with the State Supplemental Guidelines, section 230.10(a).

Normal Circumstances is the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed. The determination of whether normal circumstances exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation and consideration of the purpose and cause of the physical alterations to hydrology and vegetation.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

Order means Waste Discharge Requirements, waivers of Waste Discharge Requirements, or water quality certification.

Permitting Authority means the entity or person issuing the Order (i.e., the applicable Water Board, Executive Director or Executive Officer, or his or her designee).

Project Evaluation Area means an area that includes the project impact site, and/or the compensatory mitigation site, and is sufficiently large to evaluate the effects of the project and/or the compensatory mitigation on the abundance, diversity, and condition of aquatic resources in an ecologically meaningful unit of the watershed. The size and location of the ecologically meaningful unit shall be based on a reasonable rationale.

Water Boards mean any of the nine Regional Water Quality Control Boards, the State Water Resources Control Board, or all of them collectively.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

Watershed Approach means an analytical process for evaluating the environmental effects of a proposed project and making decisions that support the sustainability or improvement of aquatic resources in a watershed. The watershed approach recognizes that the abundance, diversity, and condition of aquatic resources in a watershed support beneficial uses. Diversity of aquatic resources includes both the types of aquatic resources and the locations of those aquatic resources in a watershed. Consideration is also given to understanding historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources. The watershed approach can be used to evaluate avoidance and minimization of direct, indirect, secondary, and cumulative project impacts. It also can be used in determining compensatory mitigation requirements.

Watershed Plan means a document developed in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation within a watershed. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans should include information about implementing the watershed plan. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans. The permitting authority may approve the use of HCPs and NCCPs as watershed plans.

Watershed Profile means a compilation of data or information on the abundance, diversity, and condition of aquatic resources in a project evaluation area. The watershed profile shall include a map and a report characterizing the location, abundance and diversity of aquatic resources in the project evaluation area, assessing the condition of aquatic resources in the project evaluation area, and describing the environmental stress factors affecting that condition.

The watershed profile shall include information sufficient to evaluate direct, secondary, and cumulative impacts of project and factors that may favor or hinder the success of compensatory mitigation projects, and help define watershed goals. It may include such things as current

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

trends in habitat loss or conservation, cumulative impacts of past development activities, current development trends, the presence and need of sensitive species, and chronic environmental problems or site conditions such as flooding or poor water quality.

The scope and detail of the watershed profile shall be commensurate with the magnitude of impact associated with the proposed project. Information sources include online searches, maps, watershed plans, and possibly some fieldwork if necessary. In some cases, field data may need to be collected in the project evaluation area to confirm the reported condition. Some or all of the information may be obtained from a watershed plan. Watershed profiles for subsequent projects in a watershed can be used to track the cumulative effectiveness of the permitting authority's decisions.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

Appendix A: State Supplemental Dredge or Fill Guidelines

When an alternatives analysis is required under the Procedures, It is the intent of the Water Boards to be consistent with the EPA's 404(b)(1) Guidelines where feasible. Due to jurisdictional and procedural differences, some modifications to the EPA's Guidelines were necessary. Generally, these changes or deletions were made to reduce redundancy (especially where sufficiently described elsewhere in these Procedures) and to account for other state requirements. Note that the numbering scheme of the EPA's 404(b)(1) Guidelines has been retained in these State Supplemental Dredge or Fill Guidelines for the benefit of practitioners who are familiar with the federal Guidelines. The State Supplemental Dredge or Fill Guidelines describe how the Water Boards will implement the 404(b)(1) Guidelines under these Procedures. The definitions contained herein apply to these Procedures, including the State Supplemental Dredge or Fill Guidelines.

Comment [3]: Note: no more revisions beyond this point.

Subpart A – General[16]

§ 230.3 Definitions.

For purposes of these Procedures, the following terms shall have the meanings indicated:

(c) The terms aquatic environment and aquatic ecosystem mean waters of the state, including wetlands, that serve as habitat for interrelated and interacting communities and populations of plants and animals.

(h) The term discharge point means the point within the disposal site at which the dredged or fill material is released.

(i) The term disposal site means that portion of the "waters of the state" where the discharge of dredged or fill material is permitted and involves a bottom surface area and any overlying volume of water. In the case of wetlands or ephemeral streams on which surface water is not present, the disposal site consists of the wetland or ephemeral stream surface area.

(k) The term extraction site means the place from which the dredged or fill material proposed for discharge is to be removed.

(n) The term permitting authority means as defined above in the main text of these Procedures.

(q) The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

(q1) Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as

[16] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. (See § 230.10 (a)(3))

§ 230.6 Adaptability[17]

(a) The manner in which these Guidelines are used depends on the physical, biological, and chemical nature of the proposed extraction site, the material to be discharged, and the candidate disposal site, including any other important components of the ecosystem being evaluated. Documentation to demonstrate knowledge about the extraction site, materials to be extracted, and the candidate disposal site is an essential component of guideline application. These Guidelines allow evaluation and documentation for a variety of activities, ranging from those with large, complex impacts on the aquatic environment to those for which the impact is likely to be innocuous. It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how complex. It is anticipated that substantial numbers of applications will be for minor, routine activities that have little, if any, potential for significant degradation of the aquatic environment. It generally is not intended or expected that extensive testing, evaluation or analysis will be needed to make findings of compliance in such routine cases.(b) The Guidelines user, including the agency or agencies responsible for implementing the Guidelines, must recognize the different levels of effort that should be associated with varying degrees of impact and require or prepare commensurate documentation. The level of documentation should reflect the significance and complexity of the discharge activity.

(c) An essential part of the evaluation process involves making determinations as to the relevance of any portion(s) of the Guidelines and conducting further evaluation only as needed. However, where portions of the Guidelines review procedure are “short form” evaluations, there still must be sufficient information (including consideration of both individual and cumulative impacts) to support the decision of whether to specify the site for disposal of dredged or fill material and to support the decision to curtail or abbreviate the evaluation process. The presumption against the discharge in § 230.1 applies to this decision-making.

Subpart B – Compliance with Guidelines[18]

§ 230.10 Restrictions on Discharge

(a) No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:

[17] Note that the numbering scheme of the Corps’ 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps’ 404(b)(1) Guidelines.

[18] Note that the numbering scheme of the Corps’ 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps’ 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(i) Activities which do not involve a discharge of dredged or fill material to waters of the state or ocean waters;

(ii) Discharges of dredged or fill material at other locations in waters of the state or ocean waters;

(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.

(3) Where activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.

(b) No discharge of dredged or fill material shall be permitted if it:

(1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard;

(2) Violates any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act;

(c) No discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the state. Under these Guidelines, effects contributing to significant degradation considered individually or collectively, include:

(1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites;

(2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes.

(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(4) Significantly adverse effects of the discharge of pollutants on recreational, aesthetic, and economic values.

(d) No discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Subpart H identifies such possible steps.

Subpart E – Potential Impacts on Special Aquatic Sites

§ 230.40 Sanctuaries and refuges[19]

(a) Sanctuaries and refuges consist of areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources.

§ 230.41 Wetlands.

(a)(1) Wetlands are as defined above in the main text of these Procedures.

§ 230.42 Mud Flats.

(a) Mud flats are broad flat areas along the sea coast and in coastal rivers to the head of tidal influence and inland lakes, ponds, and riverine systems. When mud flats are inundated, wind and wave action may resuspend bottom sediments. Coastal mud flats are exposed at extremely low tides and inundated at high tides with the water table at or near the surface of the substrate. The substrate of mud flats contains organic material and particles smaller in size than sand. They are either unvegetated or vegetated only by algal mats.

§ 230.43 Vegetated shallows.

(a) Vegetated shallows are permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as turtle grass and eel grass in estuarine or marine systems as well as a number of freshwater species in rivers and lakes.

§ 230.45 Riffle and Pool Complexes.

(a) Steep gradient sections of streams are sometimes characterized by riffle and pool complexes. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower stream velocity, a streaming flow, a smooth surface, and a finer substrate. Riffle and pool complexes are particularly valuable habitat for fish and wildlife.

[19] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

Subpart H – Actions to Minimize Adverse Effects

Note: There are many actions which can be undertaken in response to 230.10(d) to minimize the adverse effects of discharges of dredged or fill material. Some of these, grouped by type of activity, are listed in this subpart. Additional criteria for compensation measures are provided in subpart J of these procedures.

§ 230.70 Actions concerning the location of the discharge.

The effects of the discharge can be minimized by the choice of the disposal site. Some of the ways to accomplish this are by:

(a) Locating and confining the discharge to minimize smothering of organisms;

(b) Designing the discharge to avoid a disruption of periodic water inundation patterns;

(c) Selecting a disposal site that has been used previously for dredged material discharge;

(d) Selecting a disposal site at which the substrate is composed of material similar to that being discharged, such as discharging sand on sand or mud on mud;

(e) Selecting a disposal site, the discharge point, and the method of discharge to minimize the extent of any plume;

(f) Designing the discharge of dredged or fill material to minimize or prevent the creation of standing bodies of water in areas of normally fluctuating water levels, and minimize or prevent the drainage of areas subject to such fluctuations.

§ 230.71 Actions concerning the material to be discharged[20]

The effects of a discharge can be minimized by treatment of, or limitations on the material itself, such as:

(a) Disposal of dredged material in such a manner that physiochemical conditions are maintained and the potency and availability of pollutants are reduced.

(b) Limiting the solid, liquid, and gaseous components of material to be discharged at a particular site;

(c) Adding treatment substances to the discharge material;

(d) Utilizing chemical flocculants to enhance the deposition of suspended particulates in diked disposal areas.

[20] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

§ 230.72 Actions controlling the material after discharge.

The effects of the dredged or fill material after discharge may be controlled by:

(a) Selecting discharge methods and disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or methods include, but are not limited to:

(1) Using containment levees, sediment basins, and cover crops to reduce erosions:

(2) Using lined containment areas to reduce leaching where leaching of chemical constituents from the discharged material is expected to be a problem;

(b) Capping in-place contaminated material with clean material or selectively discharging the most contaminated material first to be capped with the remaining material;

(c) Maintaining and containing discharged material properly to prevent point and nonpoint sources of pollution;

(d) Timing the discharge to minimize impact, for instance during periods of unusual high water flows, wind, wave, and tidal actions.

§ 230.73 Actions affecting the method of dispersion.

The effects of a discharge can be minimized by the manner in which it is dispersed, such as:

(a) Where environmentally desirable, distributing the dredged material widely in a thin layer at the disposal site maintain natural substrate contours and elevation;

(b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the water current or circulation pattern, and utilizing natural bottom contours to minimize the size of the mound;

(c) Using silt screens or other appropriate methods to confine suspended particulate/turbidity to a small area where settling or removal can occur;

(d) Making use of currents and circulation patterns to mix, disperse and dilute the discharge;

(e) Minimizing water column turbidity by using a submerged diffuser system. A similar effect can be accomplished by submerging pipeline discharges or otherwise releasing materials near the bottom;

(f) Selecting sites or managing discharges to confine and minimize the release of suspended particulates to give decreased turbidity levels and to maintain light penetration for organisms;

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(g) Setting limitations on the amount of material to be discharged per unit of time or volume of receiving water.

§ 230.74 Actions related to technology.

Discharge technology should be adapted to the needs of each site. In determining whether the discharge operation sufficiently minimizes adverse environmental impacts, the applicant should consider:

(a) Using appropriate equipment or machinery, including protective devices, and the use of such equipment or machinery in activities related to the discharge of dredged or fill material;

(b) Employing appropriate maintenance and operation on equipment or machinery, including adequate training, staffing, and working procedures;

(c) Using machinery and techniques that are especially designed to reduce damage to wetlands. This may include machines equipped with devices that scatter rather than mound excavated materials, machines with specially designed wheels or tracks, and the use of mats under heavy machines to reduce wetland surface compaction and rutting;

(d) Designing access roads and channels spanning structures using culverts, open channels, and diversions that will pass both low and high water flows, accommodate fluctuating water levels, and maintain circulation and faunal movement;

(e) Employing appropriate machinery and methods of transport of the material for discharge.

§ 230.75 Actions affecting plant and animal populations.[21]

Minimization of adverse effects on populations of plant and animals can be achieved by:

(a) Avoiding changes in water current and circulation patterns which would interfere with the movement of animals;

(b) Selecting sites or managing discharges to prevent or avoid creating habitat conducive to the development of undesirable predators or species which have a competitive edge ecologically over indigenous plants or animals;

(c) Avoiding sites having unique habitat or other value, including habitat of threatened or endangered species;

(d) Using planning and construction practices to institute habitat development and restoration to produce a new or modified environmental state of higher ecological value by displacement of some or all of the existing environmental characteristics. Habitat

[21] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

development and restoration techniques can be used to minimize adverse impacts and to compensate for destroyed habitat. Additional criteria for compensation measures are provided in subpart J of this part. Use techniques that have been demonstrated to be effective in circumstances similar to those under consideration wherever possible. Where proposed development and restoration techniques have not yet advanced to the pilot demonstration stage, initiate their use on a small scale to allow corrective action if unanticipated adverse impacts occur;

(e) Timing discharge to avoid spawning or migration seasons and other biologically critical time periods;

(f) Avoiding the destruction of remnant natural sites within areas already affected by development.

§ 230.76 Actions affecting human use.

Minimization of adverse effects on human use potential may be achieved by:

(a) Selecting discharge sites and following discharge procedures to prevent or minimize any potential damage to the aesthetically pleasing features of the aquatic site (e.g. viewscapes), particularly with respect to water quality;

(b) Selecting disposal sites which are not valuable as natural aquatic areas;

(c) Timing the discharge to avoid the seasons or periods when human recreational activity associated with the aquatic site is most important;

(d) Following discharge procedures which avoid or minimize the disturbance of aesthetic features on an aquatic site or ecosystem;

(e) Selecting sites that will not be detrimental or increase incompatible human activity, or require the need for frequent dredge or fill maintenance activity in remote fish and wildlife areas;

(f) Locating the disposal site outside of the vicinity of a public water supply intake.

§ 230.77 Other actions.

(a) In the case of fills, controlling runoff and other discharges from activities to be conducted on the fill;

(b) In the case of dams, designing water releases to accommodate the needs of fish and wildlife;

(c) In dredging projects funded by Federal agencies other than the Corps of Engineers, maintain desired water quality of the return discharge through agreement with the Federal funding authority on scientifically defensible pollutant concentration levels in addition to any applicable water quality standards;

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(d) When a significant ecological change in the aquatic environment is proposed by the discharge of dredged or fill material, the permitting authority should consider the ecosystem that will be lost as well as the environmental benefits of the new system.

Subpart J – Compensatory Mitigation for Losses of Aquatic Resources[22]

§ 230.91 Purpose and general considerations.

(a) Purpose.

(1) The purpose of this subpart is to establish standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the state authorized through the issuance of Orders.

(d) Accounting for regional variations. Where appropriate, the permitting authority shall account for regional characteristics of aquatic resource types, functions and services when determining performance standards and monitoring requirements for compensatory mitigation projects.

§ 230.92 Definitions.[23]

For the purposes of this subpart, the following terms are defined:

Adaptive management means the development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems.

Buffer means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with waters of the state from disturbances associated with adjacent land uses.

Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

---

[22] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

[23]

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

Compensatory mitigation project means compensatory mitigation implemented by the permittee as a requirement of an Order (i.e., permittee-responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Condition means the relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region.

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

Days means calendar days.

Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.

Enhancement means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.[24]

Establishment (creation) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.

Functional capacity means the degree to which an area of aquatic resource performs a specific function.

Functions means the physical, chemical, and biological processes that occur in ecosystems.

Impact means adverse effect.

In-kind means a resource of a similar structural and functional type to the impacted resource.

In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Orders. Similar to a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor. However, the rules governing

[24] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

the operation and use of in-lieu fee programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu fee program are governed by an in-lieu fee program instrument.

In-lieu fee program instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.

Instrument means mitigation banking instrument or in-lieu fee program instrument.

Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by Orders. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument.

Mitigation banking instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.

Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a parcel of land contiguous to the parcel containing the impact site.

On-site means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site.

Out-of-kind means a resource of a different structural and functional type from the impacted resource.

Performance standards are observable or measurable physical (including hydrological), chemical and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.[25]

Permittee-responsible mitigation means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former

[25] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances.

Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: reestablishment and rehabilitation.

Riparian areas are lands adjacent to waters of the state. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.

Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.

Services mean the benefits that human populations receive from functions that occur in ecosystems.

Sponsor means any public or private entity responsible for establishing, and in most circumstances, operating a mitigation bank or in-lieu fee program.

Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the permitting authority may determine that compensation for temporal loss is not necessary, unless the resource has a long development time.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.[26]

Watershed approach is defined above in the main text of these Procedures.

Watershed plan is defined above in the main text of these Procedures.

§ 230.93 General compensatory mitigation requirements.

[26] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(a) General Considerations.

(1) The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the state authorized by Orders. The permitting authority must determine the compensatory mitigation to be required in an Order, based on what would be environmentally preferable. In making this determination, the permitting authority must assess the likelihood for ecological success and sustainability, and the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project. In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success. Compensatory mitigation requirements must be commensurate with the amount and type of impact that is associated with a particular Order. Applicants are responsible for proposing an appropriate compensatory mitigation option to offset unavoidable impacts.

(2) Compensatory mitigation may be performed using methods or restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.

(3) Compensatory mitigation projects may be sited on public or private lands. Credits for compensatory mitigation projects on public land must be based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place. All compensatory mitigation projects must comply with the standards in section IV of these Procedures, if they are to be used to provide compensatory mitigation for activities authorized by Orders, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

(b) Type and location of compensatory mitigation.[27]

(1) In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. When compensating for impacts to marine resources, the location of the compensatory mitigation site should be chosen to replace lost functions and services within the same marine ecological system

[27] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(e.g., reef complex, littoral drift cell). Compensation for impacts to aquatic resources in coastal watersheds (watersheds that include a tidal water body) should also be located in a coastal watershed where practicable. Compensatory mitigation projects should not be located where they will increase risks to aviation by attracting wildlife to areas where aircraft-wildlife strikes may occur (e.g., near airports).

(2) Mitigation bank credits. When permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved, thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the permitting authority should give preference to the use of mitigation bank credits when these considerations are applicable. However, these same considerations may also be used to override this preference, where appropriate, as, for example, where an in-lieu fee program has released credits available from a specific approved in-lieu fee project, or a permittee-responsible project will restore an outstanding resource based on rigorous scientific and technical analysis.

(3) In-lieu fee program credits. Where permitted impacts are located within the service area of an approved in-lieu fee program, and the sponsor has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Where permitted impacts are not located in the service area of an approved mitigation bank, or the approved mitigation bank does not have the appropriate number and resource type of credits available to offset those impacts, in-lieu fee mitigation, if available, is generally preferable to permittee-responsible mitigation. In-lieu fee projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. They also devote significant resources to identifying and addressing high-priority resource needs on a watershed scale, as reflected in their compensation planning framework. For these reasons, the permitting authority should give preference to in-lieu fee program credits over permittee-responsible mitigation, where these considerations are applicable. However, as with the preference for mitigation bank credits, these same considerations may be used to override this preference where appropriate. Additionally, in cases where permittee-responsible mitigation is likely to successfully meet performance standards before advance credits secured from an in-lieu fee program are fulfilled, the permitting

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

authority should also give consideration to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

(4) Permittee-responsible mitigation under a watershed approach. Where permitted impacts are not in the service area of an approved mitigation bank or in-lieu fee program that has the appropriate number and resource type of credits available, permittee-responsible mitigation is the only option. Where practicable and likely to be successful and sustainable, the resource type and location for the required permittee-responsible compensatory mitigation should be determined using the principles of a watershed approach as outlined in paragraph (c) of this section.

(5) Permittee-responsible mitigation through on-site and in-kind mitigation. In cases where a watershed approach is not practicable, the permitting authority should consider opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory mitigation. The permitting authority must also consider the practicability of on-site compensatory mitigation and its compatibility with the proposed project.

(6) Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If, after considering opportunities for on-site, in-kind compensatory mitigation as provided in paragraph (b)(5) of this section, the permitting authority determines that these compensatory mitigation opportunities are not practicable, are unlikely to compensate for the permitted impacts, or will be incompatible with the proposed project, and an alternative, practicable off-site and/or out-of-kind mitigation opportunity is identified that has a greater likelihood of offsetting the permitted impacts or is environmentally preferable to on-site or in-kind mitigation, the permitting authority should require that this alternative compensatory mitigation be provided.

(c) Watershed approach to compensatory mitigation.[28]

(1) The permitting authority must use a watershed approach to establish compensatory mitigation requirements in Orders as described in the main text of the Procedures. Where a watershed plan is available, the permitting authority will determine whether the plan meets the definition of watershed plan in the Procedures and therefore is appropriate for use in the watershed approach for compensatory mitigation. In cases where the permitting authority determines that an appropriate watershed plan is available, the watershed approach should be based on that plan. Where no such plan is available, the watershed approach should be based on information provided by the project sponsor or available from other sources. The ultimate goal of a watershed approach is to maintain and improve the abundance, diversity, and condition of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.

(2) Considerations.

[28] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(i) A watershed approach to compensatory mitigation considers the importance of condition, landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed. Such an approach considers how the condition, types, and locations of compensatory mitigation projects will provide the desired aquatic resource functions, and will continue to function over time in a changing landscape. It also considers the habitat requirements of important species, habitat loss or conversion trends, sources of watershed impairment, and current development trends, as well as the requirements of other regulatory and non-regulatory programs that affect the watershed, such as storm water management or habitat conservation programs. It includes the protection and maintenance of terrestrial resources, such as non-wetland riparian areas and uplands, when those resources contribute to or improve the overall ecological functioning of aquatic resources in the watershed. Compensatory mitigation requirements determined through the watershed approach should not focus exclusively on specific functions (e.g., water quality or habitat for certain species), but should provide, where practicable, the suite of functions typically provided by the affected aquatic resource.

(ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of compensatory mitigation for impacted habitat functions and may lead to siting of such mitigation away from the project area. However, consideration should also be given to functions and services (e.g., water quality, flood control, shoreline protection) that will likely need to be addressed at or near the areas impacted by the permitted impacts.[29]

(iii) A watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation.

(iv) A watershed approach to compensatory mitigation should include, to the extent practicable, inventories of historic and existing aquatic resources, including identification of degraded aquatic resources, and identification of immediate and long-term aquatic resource needs within watersheds that can be met through permittee-responsible mitigation projects, mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize aquatic resource restoration, establishment, and enhancement activities, and preservation of existing aquatic resources that are important for maintaining or improving ecological functions of the watershed. The identification and prioritization of resource needs should be as specific as possible, to enhance the usefulness of the approach in determining compensatory mitigation requirements.

(v) A watershed approach is not appropriate in areas where watershed boundaries do not exist, such as marine areas. In such cases, an appropriate spatial scale

[29] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

should be used to replace lost functions and services within the same ecological system (e.g., reef complex, littoral drift cell).

(3) Information Needs.

(i) In the absence of a watershed plan determined by the permitting authority under paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the permitting authority will use a watershed approach based on analysis of information regarding watershed conditions (as identified in the watershed profile) and needs, including potential sites for aquatic resource restoration activities and priorities for aquatic resource restoration and preservation. Such information includes: Current trends in habitat loss or conversion; cumulative impacts of past development activities, current development trends, the presence and needs of sensitive species; site conditions that favor or hinder the success of compensatory mitigation projects; and chronic environmental problems such as flooding or poor water quality.

(ii) This information may be available from sources such as wetland maps; soil surveys; U.S. Geological Survey topographic and hydrologic maps; aerial photographs; information on rare, endangered and threatened species and critical habitat; local ecological reports or studies; and other information sources that could be used to identify locations for suitable compensatory mitigation projects in the watershed.

(iii) The level of information and analysis needed to support a watershed approach must be commensurate with the scope and scale of the proposed impacts requiring an Order, as well as the functions lost as a result of those impacts.

(4) Watershed Scale. The size of watershed addressed using a watershed approach should not be larger than is appropriate to ensure that the aquatic resources provided through compensation activities will effectively compensate for adverse environmental impacts resulting from activities authorized by Orders. The permitting authority should consider relevant environmental factors and appropriate locally-developed standards and criteria when determining the appropriate watershed scale in guiding compensation activities.

(d) Site selection.[30]

(1) The compensatory mitigation project site must be ecologically suitable for providing the desired aquatic resource functions. In determining the ecological suitability of the compensatory mitigation project site, the permitting authority must consider, to the extent practicable, the following factors:

(i) Hydrological conditions, soil characteristics, and other physical and chemical characteristics;

[30] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and other landscape scale functions;

(iii) The size and location of the compensatory mitigation site relative to hydrologic sources (including the availability of water rights) and other ecological features;

(iv) Compatibility with adjacent land uses and watershed management plans;

(v) Reasonably foreseeable effects the compensatory mitigation project will have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature forests), cultural sites, or habitat for federally- or state-listed threatened and endangered species; and

(vi) Other relevant factors including, but not limited to, development trends, anticipated land use changes, habitat status and trends, the relative locations of the impact and mitigation sites in the stream network, local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern), water quality goals, floodplain management goals, and the relative potential for chemical contamination of the aquatic resources.

(2) Permitting authorities may require on-site, off-site, or a combination of on-site and off-site compensatory mitigation to replace permitted losses of aquatic resource functions and services.

(3) Applicants should propose compensation sites adjacent to existing aquatic resources or where aquatic resources previously existed.

(e) Mitigation type.

(1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to compensate for the functions and services lost at the impact site. For example, tidal wetland compensatory mitigation projects are most likely to compensate for unavoidable impacts to tidal wetlands, while perennial stream compensatory mitigation projects are most likely to compensate for unavoidable impacts to perennial streams. Thus, except as provided in paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type to the affected aquatic resource.

(2) If the permitting authority determines, using the watershed approach in accordance with paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic resource needs of the watershed, the permitting authority may authorize the use of such out-of-kind compensatory mitigation. The basis for authorization of out-of-kind compensatory mitigation must be documented in the administrative record for the Order action.

(3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, vegetated seasonal wetlands, slope and seep wetlands, vernal pools, and wet meadows) if further avoidance and minimization is not practicable, the required compensation should be

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

provided, if practicable, through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that these methods of compensation will successfully offset permitted impacts.

(f) Amount of compensatory mitigation.

(1) If the permitting authority determines that compensatory mitigation is necessary to offset unavoidable impacts to aquatic resources, the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be used.

(2) The permitting authority must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the Order action.

(3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and the appropriate number and resource type of released credits are not available, the permitting authority must require sufficient compensation to account for the risk and uncertainty associated with in-lieu fee projects that have not been implemented before the permitted impacts have occurred.

(g) Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee programs may be used to compensate for impacts to aquatic resources authorized by general Orders and individual Orders in accordance with the preference hierarchy in paragraph (b) of this section. Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an enforcement action, such as supplemental environmental projects.

(h) Preservation.[31]

(1) Preservation may be used to provide compensatory mitigation for activities authorized by Orders when all the following criteria are met:

(i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;

[31] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the permitting authority must use appropriate quantitative assessment tools where available;

(iii) Preservation is determined by the permitting authority to be appropriate and practicable;

(iv) The resources are under threat of destruction or adverse modifications; and

(v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).

(2) Where preservation is used to provide compensatory mitigation, to the extent appropriate and practicable the preservation shall be done in conjunction with aquatic resource restoration, establishment, and/or enhancement activities. This requirement may be waived by the permitting authority where preservation has been identified as a high priority using a watershed approach described in paragraph (c) of this section, but compensation ratios shall be higher.

(i) Buffers. The permitting authority may require the restoration, establishment, enhancement, and preservation, as well as the maintenance, of riparian areas and/or buffers around aquatic resources where necessary to ensure the long-term viability of those resources. Buffers may also provide habitat or corridors necessary for the ecological functioning of aquatic resources. If buffers are required by the permitting authority as part of the compensatory mitigation project, compensatory mitigation credit will be provided for those buffers, as provided in section IV B.5 (c).

(j) Relationship to other federal, tribal, state, and local programs.

(1) Compensatory mitigation projects for Orders may also be used to satisfy the environmental requirements of other programs, such as tribal, state, or local wetlands regulatory programs, other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil works projects, and Department of Defense military construction projects, consistent with the terms and requirements of these programs and subject to the following considerations:

(i) The compensatory mitigation project must include appropriate compensation required by the Order for unavoidable impacts to aquatic resources authorized by that Order.

(ii) Under no circumstances may the same credits be used to provide mitigation for more than one permitted activity. However, where appropriate, compensatory mitigation projects, including mitigation banks and in-lieu fee projects, may be designed to holistically address requirements under multiple programs and authorities for the same activity.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(2) Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by Orders. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project.

(3) Compensatory mitigation projects may also be used to provide compensatory mitigation under the federal and state Endangered Species Act or for Natural Community Conservation Plans and Habitat Conservation Plans, as long as they comply with the requirements of paragraph (j)(1) of this section.

(k) Order conditions.

(1) The compensatory mitigation requirements for an Order, including the amount and type of compensatory mitigation, must be clearly stated in the special conditions of the individual Order or authorization to use the general Order. The special conditions must be enforceable.[32]

(2) For an Order that requires permittee-responsible mitigation, the special conditions must:

(i) Identify the party responsible for providing the compensatory mitigation;

(ii) Incorporate, by reference, the final or draft mitigation plan approved by the permitting authority;

(iii) State the objectives, performance standards, and monitoring required for the compensatory mitigation project, unless they are provided in the approved final mitigation plan; and

(iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan.

(4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program will be used, and specify the number and resource type of credits the permittee is required to secure. In the case of an individual Order, the special condition must also identify the specific mitigation bank or in-lieu fee program that will be used. For authorizations to use a general Order, the special conditions may either identify the specific mitigation bank or in-lieu fee program, or state that the specific

[32] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

mitigation bank or in-lieu fee program used to provide the required compensatory mitigation must be approved by the permitting authority before the credits are secured.

(l) Party responsible for compensatory mitigation.

(1) For permittee-responsible mitigation, the special conditions of the Order must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project.

(3) If use of a mitigation bank or in-lieu fee program is approved by the permitting authority to provide part or all of the required compensatory mitigation for an Order, the permittee retains responsibility for providing the compensatory mitigation until the appropriate number and resource type of credits have been secured from a sponsor and the permitting authority has received documentation that confirms that the sponsor has accepted the responsibility for providing the required compensatory mitigation. This documentation may consist of a letter or form signed by the sponsor, with the Order number and a statement indicating the number and resource type of credits that have been secured from the sponsor. Copies of this documentation will be retained in the administrative records for both the Order and the instrument. If the sponsor fails to provide the required compensatory mitigation, the permitting authority may pursue measures against the sponsor to ensure compliance.[33]

(m) Timing. Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of or concurrent with the activity causing the authorized impacts. The permitting authority shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

(n) Financial assurances.

(1) The permitting authority shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority) the permitting authority may determine that financial assurances are not necessary for that compensatory mitigation project.

(2) The amount of the required financial assurances must be determined by the permitting authority, in consultation with the project sponsor, and must be based on the size and complexity of the compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the project sponsor, and any other factors the permitting authority deems appropriate. Financial assurances may be in the form of performance bonds, escrow

[33] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

accounts, casualty insurance, letters of credit, legislative appropriations for government sponsored projects, or other appropriate instruments, subject to the approval of the permitting authority. The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the Order or the instrument. In determining the assurance amount, the permitting authority shall consider the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring.

(3) If financial assurances are required, the Order must include a special condition requiring the financial assurances to be in place prior to commencing the permitted activity.[34]

(4) Financial assurances shall be phased out once the compensatory mitigation project has been determined by the permitting authority to be successful in accordance with its performance standards. The Order or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions.

(5) A financial assurance must be in a form that ensures that the permitting authority will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the permitting authority at least 120 days before the assurance is revoked or terminated.

(6) Financial assurances shall be payable at the direction of the permitting authority to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the permitting authority's instructions.

(o) Compliance with applicable law. The compensatory mitigation project must comply with all applicable federal, state, and local laws. The Order, mitigation banking instrument, or in-lieu fee program instrument must not require participation by the permitting authority in project management, including receipt or management of financial assurances or long-term financing mechanisms, except as determined by the permitting authority to be consistent with its statutory authority, mission, and priorities.

§ 230.94 Planning and documentation.

(a) Pre-application consultations. Potential applicants for Orders are encouraged to participate in pre-application meetings with the permitting authority and appropriate agencies to discuss potential mitigation requirements and information needs.

[34] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(c) Mitigation plan.

(1) Preparation and Approval.

(i) For individual Orders, the permittee must prepare a draft mitigation plan and submit it to the permitting authority for review prior to certification. After addressing any comments provided by the permitting authority, the permittee must prepare a final mitigation plan, which must be approved by the permitting authority prior to commencing work in waters of the state. The approved final mitigation plan must be incorporated into the individual Order either as an attachment or by reference. The final mitigation plan must include the items described in paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. As an alternative, the permitting authority may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as Order conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.[35]

(ii) For general Orders, if compensatory mitigation is required, the permitting authority may approve a conceptual or detailed compensatory mitigation plan to meet required time frames for general Order enrollments, but a final mitigation plan incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the scale and scope of the impacts, must be approved by the permitting authority before the permittee commences work in waters of the state. As an alternative, the permitting authority may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as Order conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and either the name of the specific mitigation bank or in-lieu fee program to be used or a statement indicating that a mitigation bank or in-lieu fee program will be used (contingent upon approval by the permitting authority).

(2) Objectives. A description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.

[35] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(3) Site selection. A description of the factors considered during the site selection process. This should include consideration of watershed needs, on-site alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See § 230.93(d).)

(4) Site protection instrument. A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 230.97(a)).[36]

(5) Baseline information. A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for an Order, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the state on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site, not the mitigation bank or in-lieu fee project site.

(6) Determination of credits. A description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See § 230.93(f).)

(i) For permittee-responsible mitigation, this should include an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.

(ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.

(7) Mitigation work plan. Detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.

(8) Maintenance plan. A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.

[36] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(9) Performance standards. Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives. (See § 230.95.)

(10) Monitoring requirements. A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the permitting authority must be included. (See § 230.96.)[37]

(11) Long-term management plan. A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management. (See § 230.97(d).)

(12) Adaptive management plan. A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See § 230.97(c).)

(13) Financial assurances. A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see § 230.93(n)).

(14) Other information. The permitting authority may require additional information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project.

§ 230.95 Ecological performance standards.

(a) The approved mitigation plan must contain performance standards that will be used to assess whether the project is achieving its objectives. Performance standards should relate to the objectives of the compensatory mitigation project, so that the project can be objectively evaluated to determine if it is developing into the desired resource type, providing the expected condition or functions, and attaining any other applicable metrics (e.g., acres).

(b) Performance standards must be based on attributes that are objective and verifiable. Ecological performance standards must be based on the best available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity or condition as described in assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use

[37] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource development process, in order to allow early identification of potential problems and appropriate adaptive management.

§ 230.96 Monitoring.[38]

(a) General.

(1) Monitoring the compensatory mitigation project site is necessary to determine if the project is meeting its performance standards, and to determine if measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. The submission of monitoring reports to assess the development and condition of the compensatory mitigation project is required, but the content and level of detail for those monitoring reports must be commensurate with the scale and scope of the compensatory mitigation project, as well as the compensatory mitigation project type. The mitigation plan must address the monitoring requirements for the compensatory mitigation project, including the parameters to be monitored, the length of the monitoring period, the party responsible for conducting the monitoring, the frequency for submitting monitoring reports to the permitting authority, and the party responsible for submitting those monitoring reports to the permitting authority.

(2) The permitting authority may conduct site inspections on a regular basis (e.g., annually) during the monitoring period to evaluate mitigation site performance.

(b) Monitoring period. The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following project implementation, the permitting authority may reduce or waive the remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. Conversely the permitting authority may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them. The permitting authority may also revise monitoring requirements when remediation and/or adaptive management is required.

(c) Monitoring reports.

[38] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(1) The permitting authority must determine the information to be included in monitoring reports. This information must be sufficient for the permitting authority to determine how the compensatory mitigation project is progressing towards meeting its performance standards, and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

(2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the Order or the terms of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the permitting authority.

(3) Monitoring reports must be provided by the permitting authority to interested federal, tribal, state, and local resource agencies, and the public, upon request.

§ 230.97 Management.[39]

(a) Site protection.

(1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate. Long-term protection may be provided through real estate instruments such as conservation easements held by entities such as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or private land managers; the transfer of title to such entities; or by restrictive covenants. For government property, long-term protection may be provided through state or federal facility management plans or integrated natural resources management plans. When approving a method for long-term protection of non-government property other than transfer of title, the permitting authority shall consider relevant legal constraints on the use of conservation easements and/or restrictive covenants in determining whether such mechanisms provide sufficient site protection. To provide sufficient site protection, a conservation easement or restrictive covenant should, where practicable, establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections.

(2) The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

[39] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(3) The real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60–day advance notification to the permitting authority before any action is taken to void or modify the instrument, management plan, or long-term protection mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.

(4) For compensatory mitigation projects on public lands, where state or Federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the permitting authority for any loss in functions resulting from the incompatible use.[40]

(5) A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the permitting authority in advance of, or concurrent with, the activity causing the authorized impacts.

(b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary. Where needed, the acquisition and protection of water rights must be secured and documented in the Order conditions or instrument.

(c) Adaptive management.

(1) If the compensatory mitigation project cannot be constructed in accordance with the approved mitigation plans, the permittee or sponsor must notify the permitting authority. A significant modification of the compensatory mitigation project requires approval from the permitting authority.

(2) If monitoring or other information indicates that the compensatory mitigation project is not progressing towards meeting its performance standards as anticipated, the responsible party must notify the permitting authority as soon as possible. The permitting authority will evaluate and pursue measures to address deficiencies in the compensatory mitigation project. The permitting authority will consider whether the compensatory mitigation project is providing ecological benefits comparable to the original objectives of the compensatory mitigation project.

[40] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

- **Preferred revisions**
- **Alternative revisions**
- **At a minimum revisions**

(3) The permitting authority, in consultation with the responsible party (and other federal, tribal, state, and local agencies, as appropriate), will determine the appropriate measures. The measures may include site modifications, design changes, revisions to maintenance requirements, and revised monitoring requirements. The measures must be designed to ensure that the modified compensatory mitigation project provides aquatic resource functions comparable to those described in the mitigation plan objectives.[41]

(4) Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the compensatory mitigation project. Performance standards may also be revised to reflect changes in management strategies and objectives if the new standards provide for ecological benefits that are comparable or superior to the approved compensatory mitigation project. No other revisions to performance standards will be allowed except in the case of natural disasters.

(d) Long-term management.

(1) The Order conditions or instrument must identify the party responsible for ownership and all long-term management of the compensatory mitigation project. The Order conditions or instrument may contain provisions allowing the permittee or sponsor to transfer the long-term management responsibilities of the compensatory mitigation project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the permitting authority. The land stewardship entity need not be identified in the original Order or instrument, as long as the future transfer of long-term management responsibility is approved by the permitting authority.

[41] Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

EXHIBIT 2

DISCUSSION AND RECOMMENDATIONS: STATE WETLAND DEFINITION AND PROCEDURES FOR DISCHARGES OF DREDGED OR FILL MATERIALS TO WATERS OF THE STATE (JULY 21, 2017)

This Discussion and the Recommendations that follow focus on the new regulatory burdens that the Proposed Regulatory Program would impose on the ongoing activities of environmentally sensitive and progressive agencies, like ours, to sustainably, reliably, and in an environmentally sensitive manner provide for augmentation of water supply and storage, capture and natural treatment of urban runoff and storm water, flood protection, and natural treatment of wastewater treatment plant discharges and impaired surface waters.

We propose for your consideration three "fixes" to avoid or reduce the new and substantial regulatory burdens of the Proposed Regulatory Program on activities related to Multi-benefit Constructed Facilities, which are: artificial, man-made, or improved facilities operated to provide water supply/quantity, water storage, water conveyance, water quality treatment, and/or storm water, runoff, or flood protection functions, while also providing other environmental benefits, such as: groundwater recharge; natural beds, banks, soils, or substrates; and wetland, riparian, or other habitat and vegetation, including, without limitation, naturalized surface water, runoff, or storm water quality treatment facilities or structural best management practices; naturalized surface water, runoff, storm water, or flood management swales, conveyance channels, or basins; naturalized percolation ponds and percolation channels; bio-filtration and bio-retention basins, ponds, and wetlands; and naturalized groundwater and surface water storage facilities. In order of preference, our recommendations are:

1. Preferably, exempt Multi-benefit Constructed Facilities from permitting under the Proposed Regulatory Program by excluding such facilities from designation as jurisdictional waters of the state (WOTS) for purposes of the Proposed Regulatory Program only;

2. Alternatively, exempt Multi-benefit Constructed Facilities from the Proposed Regulatory Program's permit application requirements; or

3. At a minimum, exempt Multi-benefit Constructed Facilities from the Proposed Regulatory Program's alternatives analysis requirements.

Recommended revisions to the Proposed Regulatory Program are shown in color-coded redline/strikethrough in **Exhibit 1**, which accompanies this letter.

I. INTRODUCTION.

A. Overview of Concerns about the Proposed Regulatory Program.

Our organizations are committed to the development, management, treatment, provision, and use of high quality water at the lowest practical cost and in an environmentally responsible manner. We are submitting these comments because the Proposed Regulatory Program, if adopted without considerable revisions, will significantly impact water agencies' and utilities' creation, restoration, enhancement, operations, management, and maintenance activities related to Multi-benefit Constructed Facilities in a manner that substantially interferes

with our ability of to fulfill that commitment. With certain changes, which are discussed below, the substantial new regulatory impacts of the Proposed Regulatory Program on Multi-benefit Constructed Facilities can be avoided.

While we recognize staff's position is that the scope of the "WOTS" that are subject to regulation under the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 *et seq*.) (Porter-Cologne) is not expanded by the Proposed Regulatory Program, as a practical matter, the Proposed Regulatory Program mandates that the State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Boards (collectively, Water Boards) implement a new and greatly expanded permitting program for discharges of dredged and fill material to WOTS. Further, while the debate over the appropriate legal definition and scope of the jurisdictional term "WOTS" is important, our primary concerns are the "on-the-ground" impacts of the new permitting program for discharges of dredged or fill material that the Proposed Regulatory Program mandates the Water Boards implement upon adoption.

From the "on-the-ground" perspective, without changes, and separate from the scope of the Water Boards' legal jurisdiction, the expansive scope of the Proposed Regulatory Program's newly imposed permitting obligations, and the stringency of new permit application and certain mitigation requirements will:

- Negatively impact water agencies' ability to implement State policies encouraging integrated water resources management, including Multi-benefit Constructed Facilities that contribute to State, regional, and local water supply development, water quality protection, and flood protection;

- Add tremendous costs, permit processing burdens, and delays for Multi-benefit Constructed Facilities; and

- Increase the regulatory burdens on Multi-benefit Constructed Facilities, which integrate the provision of aquatic and wetland and riparian habitat, the infiltration and replenishment of groundwater through soft beds and banks, and the use of natural elements and processes (*e.g.*, the removal of pollutants via soils filtration and vegetative uptake).

However, these new significant burdens are offset by any additional environmental benefit the Proposed Regulatory Program might offer due to the significant degree to which the program:

- Duplicates regulation of resources already protected under the federal Clean Water Act (CWA) (33 U.S.C. §§ 1251 *et seq*.) by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA), and under the California Fish and Game Code by the California Department of Fish and Wildlife (CDFW); and

- Discourages the construction, use, operation, and maintenance of man-made, artificial, but naturalized wetland treatment facilities, conveyance ditches, percolation ponds, groundwater storage facilities, surface water supply storage (reservoir), and flood protection facilities that integrate natural bed, bank, and substrate materials, as well as wetland and riparian vegetation to mimic the natural functions, and provide habitat and other ecological values of waters.

Therefore, the signatories to this comment letter urge the SWRCB to incorporate the specific amendments discussed below to extend certain exemptions and/or exceptions to the Proposed Regulatory Program to Multi-benefit Constructed Facilities. This may reduce or eliminate the program's regulatory burdens on our continued cost-efficient practice of providing high quality water supply and treatment to Californians in a manner that protects and enhances the environment.

B. Commenting Water Agencies and Multi-benefit Constructed Facilities Burdened Under the Proposed Regulatory Program.

1. Ventura Water.

The City of Ventura's water and wastewater department (Ventura Water) provides drinking water to more than 113,500 people through approximately 31,000 water service connections in the City of Ventura, which is a community that highly values the region's natural and water resources, including its beaches, estuaries, and rivers, for both their ecological attributes, as well as the scenic and recreational amenities they provide to residents and visitors from around the world. Ventura Water is committed to protecting and enhancing the environment within the watersheds that comprise its service area and the region. Ventura Water's system includes three water treatment plants, 23 pump stations, 31 reservoirs, and a wildlife/water quality pond complex.

2. San Bernardino Valley Water Conservation District.

The San Bernardino Valley Water Conservation District (SBVWCD) is a special district whose primary mission is to ensure recharge of the Bunker Hill Groundwater Basin in an environmentally and economically responsible way with native surface water and available State Project Water. SBVWCD has for decades operated groundwater recharge facilities in two areas of the Upper Santa Ana River Watershed. SBVWCD recharges the critically important Bunker Hill Groundwater Basin, an adjudicated and actively managed urban basin, which serves as the primary water source for over 1 million people in the cities of Redlands, Highland, Loma Linda, San Bernardino, Riverside, and others. SBVWCD manages approximately 3,650 acres for recharge operations, balancing recharge activities and maintenance with preservation of natural Riversidean alluvial fan sage scrub, which is home to many endangered, threatened, and special status species.

3. Santa Clara Valley Water District.

Founded in 1929, the Santa Clara Valley Water District (SCVWD) is a special district that manages an integrated water resources system that includes the supply of safe, clean water; flood protection; and stewardship of streams on behalf of Santa Clara County's 1.9 million residents. SCVWD effectively manages 10 dams and surface water reservoirs, three water treatment plants, a state-of-the-art water quality laboratory, an advanced recycled water purification center, nearly 400 acres of groundwater recharge ponds, and more than 275 miles of streams. SCVWD provides wholesale water and groundwater management services to local municipalities and private water providers who deliver drinking water directly to homes and businesses in Santa Clara County.

4. The Water Agencies' Multi-benefit Constructed Facilities.

To provide a better understanding of the types of facilities that would be burdened by the Proposed Regulatory Program if it is adopted as currently drafted, we have provided in **Table 1** examples of the types of Multi-benefit Constructed Facilities and related activities that will be negatively impacted by the Proposed Regulatory Program. *See also* materials and photographs in **Attachment A** to this letter for additional information about Ventura Water, SBVWCD, and SCVWD Multi-benefit Constructed Facilities.

Table 1. Multi-benefit Constructed Facilities

Agency/Facility	Multi-benefit Constructed Facility Description	Water Supply/Water Quality Treatment Functions and Environmental Benefits	Typical O&M Activities
IRWD *San Joaquin Marsh*	• 274-acre man-made marsh owned and maintained by IRWD • Constructed by IRWD in 1997 in accordance with USACE Permit No. 97-00057-MFS • System of ponds with open water, mudflat, island, and emergent vegetation (*e.g.*, bulrush) habitats • Adjacent to San Diego Creek, and just upstream of the location where the creek outlets to the Upper Newport Bay • Receives and treats flow from San Diego Creek	• Treats over 1 billion gallons of urban runoff annually • Removes 85% of nitrogen • Removes 100% of phosphorus loads and 59% reduction of copper loads into the Newport Bay State Ecological Reserve • Reduces 99% of coliform bacteria • Reduces 79% of selenium • Creates major riparian and wetland habitats, which supports over 282 species of migratory birds, including several State and federally listed species	• Pond berm and pump station maintenance and repair, including but not limited to: vegetation control, fill activities to maintain berms and weir structures, and repair leaks, and vegetation removal • Periodic dredging and removal of accumulated sediment in ponds and streams • Invasive weed control of exotic species, and pond and stream emergent vegetation control using physical and approved chemical control methods • Irrigation system repair and maintenance to maintain delivery of water to various parts of the Marsh, including minor vegetation removal, trenching, and backfilling • Dewatering portions of o minimize vector control problems, and to provide access for vegetation maintenance, structure repair, and shorebird habitat

Agency/Facility	**Multi-benefit Constructed Facility Description**	**Water Supply/Water Quality Treatment Functions and Environmental Benefits**	**Typical O&M Activities**

IRWD
 	
Natural Treatment System (NTS)
	• Regionwide network of artificial wetlands that treat storm water and urban runoff
	
	• Constructed between 2006 and 2017 in accordance with the "Irvine Ranch Water District, San Diego Creek Watershed Natural Treatment System Master Plan"
	
	• Individual NTS facilities range in size from approximately 40,000 square feet to 17 acres
	
	• Each NTS facility is an "offline" facility, *i.e.*, treats first flush storm water flows prior to entering the public storm drain system, or after discharge from the storm drain system but prior to discharge in to water of the U.S. (*e.g.*, Quail Hill NTS) or a facility within existing storm water detention basins (*e.g.*, Trabuco NTS and Marshburn NTS)
		• Addresses water quality impairments and improves the quality of surface waters within the San Diego Creek and Upper Newport Bay watersheds
		
		• Since 1999, the San Joaquin Marsh and NTS have removed pollutants from impaired surface waters that flow into Newport Bay State ecological reserve:
		
		  • 906,000 lbs of nitrogen
		  • 1,350 lbs of selenium
		  • 2,046 lbs of copper
		  • 99% reduction in total coliforms
		  • 19,000 lbs of trash annually
		  • 474 tons of sediment captured
		
		• Provides habitat for species that include the listed least Bell's vireo, California least tern, and orange-throated whiptail
			• Maintain and repair concrete and graded earthen structure, inlet, outlet, berm, embankment, and weir structures via fill and/or patching
			
			• Remove sediment and debris from constructed wetlands, related conveyances, and other structures to preserve design treatment capacity
			
			• Remove non-native vegetation, and harvest and replace wetlands and riparian species of plants necessary for maximizing pollutant treatment through natural processes
			
			• Maintain and repair slopes and banks from rodent damage
			
			• Maintain and replace irrigation system components, including removal of vegetation and excavation and replacement of piping
			
			• Emergency response actions, including addressing major erosion and sedimentation from heavy rainfall

Agency/Facility	**Multi-benefit Constructed Facility Description**	**Water Supply/Water Quality Treatment Functions and Environmental Benefits**	**Typical O&M Activities**
Ventura Water *Wildlife/Water Quality Ponds*	• 20-acre system consisting of three wildlife/water quality ponds • Constructed by the City of Ventura in 1977 • Polishes tertiary treated wastewater flows from the Ventura Water Reclamation Facility before discharge into the Santa Clara River Estuary • Uses natural treatment processes	• Enhances wetland and riparian habitat and beneficial uses within the Santa Clara River Estuary watershed • Provides open water, mudflat, island, and emergent vegetation (*e.g*., bulrush) habitats • Provides habitat for listed and sensitive fish and bird species, including steelhead trout, tidewater goby, snowy plover, and California least tern • Reduces metals such as copper, nutrients such as nitrate (NO3), and non-point source pollutants such as Total Suspended Solids (TSS) • Potentially reduces constituents of emerging concern through sorption and biotransformation • Provides recreational and educational opportunities for natural walking trails and bird observations • Protects and provides source water for the Santa Clara River Estuary	• Maintain and repair pond berm, piping, and pump station, including but not limited to, vegetation control and backfill activities to maintain berms and weir structures, repair leaks, and vegetation removal • Invasive weed control of exotic species and pond and stream emergent vegetation control using physical and approved chemical control methods • Dewater portions of the ponds to minimize vector control problems and to provide access for vegetation maintenance, structure repair, and shorebird habitat

Agency/Facility	**Multi-benefit Constructed Facility Description**	**Water Supply/Water Quality Treatment Functions and Environmental Benefits**	**Typical O&M Activities**
SBVWCD *Santa Ana River Recharge Facility*	• 14 large percolation basins at the base of the San Bernardino Mountains, including a 100-acre pit left after the Army Corps of Engineers' construction of the Seven Oaks Dam • Located in the adjudicated Bunker Hill Groundwater Basin in the Upper Santa Ana River Watershed • Provides more than 100 wetted acres of percolation basins storing 940 acre-feet • Gravity-fed system through unlined canals and channels • Water directed through the use of overflows and weir gates	• Provides habitat for San Bernardino kangaroo rat, coastal California gnatcatcher, cactus wren, Los Angeles pocket mouse, least Bell's vireo, and other special status species • O&M included as a Covered Activity in the Draft Upper Santa Ana River Wash Habitat Conservation Plan, which includes Santa Ana River woolly star, slender-horned spineflower, and Parry's spineflower as Covered Species	• Remove vegetation from canals and basins • Basin restructuring for sediment removal to increase percolation capacity • Repair and replace weir gates and overflows • General debris removal

Agency/Facility	**Multi-benefit Constructed Facility Description**	**Water Supply/Water Quality Treatment Functions and Environmental Benefits**	**Typical O&M Activities**
SBVWCD *Mill Creek Spreading Facility*	• 3 sand ponds for sediment management and 56 percolation basins, for a total of 66 acres of wetted basin area • SBVWCD and its predecessors began spreading water for recharge in 1910 • Diverse collection of constructed weirs, diversion structures, gates, canals, recharge basins and overflows	• Recharges a critical groundwater supply that provides sustainable water to approximately 1 million residents • Percolation of very high quality native water into the groundwater aquifer, thereby improving salt balance in the aquifer • Provides riparian habitat on the edges of the sand ponds, including habitat for least Bell's vireo, San Bernardino kangaroo rat, coastal California gnatcatcher, and other sensitive species	• Remove sand and sediment from percolation ponds and earthen ditches to maintain percolation capacity and conveyance • Maintain and repair percolation pond berm, including vegetation control and removal of invasive grasses and plants, as well as various activities to maintain berms and repair leaks • Earthen ditch maintenance and repair, including weir maintenance and replacement, vegetation control, and removal of vegetation • Creation of temporary rock and sand berms within the Mill Creek channel to direct flows to the diversion structure

Agency/Facility	**Multi-benefit Constructed Facility Description**	**Water Supply/Water Quality Treatment Functions and Environmental Benefits**	**Typical O&M Activities**
SCVWD *Managed Recharge Facilities*	• 393 acres of recharge ponds • 91 miles of controlled in-stream recharge • 17 miles of canals • 10 surface water reservoirs	• Percolation and recharge of critical groundwater supplies throughout the valley • Provides habitat for various sensitive and listed aquatic species, including California red-legged frog, California tiger salamander, and steelhead • Provides open water, riparian, and wetland habitats for listed and native bird species including tricolored blackbird, bald and golden eagles, and various waterbird, raptor and riparian bird species • Recreational and educational opportunities including trails, bird watching, and fishing	• Dewater • Remove accumulated sediment • Remove trash and debris • Maintain, repair, or replace infrastructure and equipment • Repair infrastructure and slopes • Manage vegetation and burrowing rodents • Polymer application

Agency/Facility	Multi-benefit Constructed Facility Description	Water Supply/Water Quality Treatment Functions and Environmental Benefits	Typical O&M Activities
SCVWD *Flood Protection Facilities*	• Overflow and bypass channels • Creek/stream waterways and surrounding areas • Detention basins	In designing flood protection projects, SCVWD adopts a "Natural Flood Protection" methodology, which incorporates integrated planning and management that balances the need to provide flood protection with the need to protect streams and natural resources. This approach results in improvements and other benefits to resources such as the following: • Water quality • Riparian and wildlife habitat • Recreational and educational opportunities	• Remove sediment • Remove trash and debris • Maintain, repair, or replace infrastructure • Repair erosion and stabilize slopes • Manage vegetation and burrowing rodents

The examples in **Table 1** represent highly respected, state-of-the art Multi-benefit Constructed Facilities, and provide an authentic and relevant factual context to understand the impacts and additional regulatory burden proposed to be placed on these types of environmentally beneficial projects under the Proposed Regulatory Program.

II. THE PROPOSED REGULATORY PROGRAM INCREASES REGULATORY BURDENS ON MULTI-BENEFIT CONSTRUCTED FACILITIES IN CONTRAVENTION OF STATE POLICIES ENCOURAGING THEIR USE.

We appreciate that the SWRCB staff has been willing to engage with us to help us understand the requirements of the Proposed Regulatory Program as they are intended to apply to water agency activities. In the vast majority of situations, application of the Proposed Regulatory Program's new permitting would mandate waste discharge requirements (WDRs) for Multi-benefit Constructed Facilities. The anticipated increased permitting and compliance costs and delays for Multi-benefit Constructed Facilities will in turn negatively affect activities related to their operation, management, and maintenance, and discourage future investments in creation, restoration, and enhancement of these types of facilities, which are encouraged by State policies.

A. State Policy Encourages the Use of Multi-benefit Constructed Facilities.

Multi-benefit Constructed Facilities are encouraged by a variety of SWRCB, EPA, and California Department of Water Resources (DWR) policy statements and reports, including the California Water Action Plan,[1] California's Strategy to Optimize Resource Management of Storm Water (STORMS Policy),[2] and DWR's Urban Stormwater Runoff Management: Resource Management Strategy of the California Water Plan (DWR's Stormwater Runoff Management).[3]

California's Water Action Plan is the State's roadmap to sustainable water management, with the specific goals of encouraging practices that meet ecological and human needs, responding to the conditions of climate change, and responding to the water needs of a growing population.[4] The Water Action Plan establishes the following three broad objectives developed to advance California toward more sustainable water management:

- Development of more reliable water supplies;

---

[1] California Natural Resources Agency. California Water Action Plan 2016 Update, 2016 [available at http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan pdf , visited on Aug. 16, 2017].

[2] California Water Boards. STORMS: Strategy to Optimize Resource Management of Storm Water, Jan. 6, 2016 [available at http://www.swrcb.ca.gov/water_issues/programs/stormwater/storms/docs/storms_strategy.pdf , visited Sept. 7, 2017].

[3] CDWR. Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan, Jul. 29, 2016 [available at http://www.water.ca.gov/waterplan/docs/rms/2016/19_Urban_Stormwater_Runoff_Mgt_July 2016.pdf , visited Sept. 15, 2017].

[4] California Natural Resources Agency. California Water Action Plan 2016 Update, p. 1.

- Development of more resilient, sustainably managed, multi-benefit water resource systems, including water supply and water quality facilities that better enhance the environment, and better withstand inevitable and unforeseen pressures; and

- Restoration of important species and habitat.[5]

Multi-benefit Constructed Facilities such as those described in **Table 1** are the types of projects contemplated by the Water Action Plan because they provide essential water supply, water quality treatment, and/or flood protection functions while at the same time providing wetland or riparian habitat that may also be used by sensitive fish and wildlife species.[6] As such, these Multi-benefit Constructed Facilities contribute to the State's objectives for the protection of fish and wildlife species' habitat, as well as integrated management of multi-benefit projects: "[A]ctivities to protect and restore the resiliency of our ecosystems will help support fish and wildlife populations, improve water quality, and restore natural system functions."[7]

In addition to water supply, water quality, and/or flood protection and environmental benefits, Multi-benefit Constructed Facilities generally have the advantage of relatively low operation and maintenance (O&M) costs when compared with other technologies because they employ energies from gravity, sun, wind, water, plants and microbes for percolation and pollutant degradation.[8] However these cost advantages are lost when new policies or programs, such as the Proposed Regulatory Program, increase the costs of constructing, operating, and maintaining the facilities.

The Water Action Plan also includes several measures to encourage multi-benefit projects that incorporate integrated water management practices to achieve a resilient, sustainably managed, high quality water supplies.[9] Storage is also identified as a critical component of the Water Action Plan's water supply reliability strategy:

> "The bottom line is that we need to expand our state's storage capacity, whether surface or groundwater, whether big or small. Today, we need more storage to deal with the effects of drought and climate change on water supplies for both human and ecosystem needs."[10]

In general, the development of more reliable water supplies requires a multi-pronged, "all of the above" approach to water supply development and management pursuant to which a wide variety of strategies must be deployed, including:

- Full utilization of existing surface reservoir capacity;

- Increased groundwater recharge to improve management and water quality in groundwater basins; and

---

[5] *Id.,* p. 4.
[6] *Id.,* pp. 7-8.
[7] *Id.,* p. 10.
[8] For example, constructed or artificial treatment wetlands remove nutrients, sediment, pollutants that adhere to sediment (including heavy metals), and other pollutants that are transformed, absorbed, and volatilized by natural wetland processes.
[9] *Id.,* pp. 7-8.
[10] *Id.,* p. 15.

- Urban runoff and storm water capture and natural treatment, including incidental infiltration to groundwater basins.[11, 12]

The State's surface reservoirs are a flexible form of storage that can be filled and emptied quickly to meet water supply; however the useful lifetime of a reservoir decreases over time from accumulated sediment, which diminishes capacity. Modeling of the California water supply system demonstrates that reservoir re-operation to stretch the existing surface storage capacity has been shown to better address the water supply implications of climate change while being less costly than building new surface storage.[13, 14]

Groundwater aquifers constitute California's largest source of storage – on average, groundwater aquifers supply about a third of the water cities and farms use annually, and during droughts, groundwater can supply more than half of statewide water.[15] Percolation and recharge assure utilization of groundwater aquifer storage capacity, reducing future dependence on outside sources of water and avoiding expensive alternatives like desalination of seawater. Groundwater recharge is both an economically and politically feasible method by which the water supply can be increased, and as such, it may be the key to improving the State's water portfolio.[16]

Multi-benefit Constructed Facilities such artificial wetland and in-channel water recharge and percolation facilities (*e.g.*, SBVWCD's and SCVWD's recharge and spreading facilities) materially increase the quantity and quality of local groundwater supplies through water infiltration, while also providing wildlife habitat, parks, and open space.[17] Further, bio-retention treatment facilities designed to infiltrate all captured storm water, and bio-detention and filtration facilities (*e.g*., Irvine Ranch Water District's (IRWD's) Natural Treatment System (NTS) and SCVWD's flood protection facilities) improve groundwater quality and supply by smaller scale infiltration of flows. Similarly, artificial multi-benefit surface water reservoirs, (*e.g.*, SCVWD's surface water reservoirs) provide storage that is critical to sustainable supply, while providing wildlife habitat, parks, open space, and recreational opportunities.

---

[11] *See* PPIC. Building Drought Resilience in California's Cities and Suburbs, Jun. 2017, pp. 43-44 [available at http://www.ppic.org/content/pubs/report/R_0617DMR.pdf, visited Aug. 17, 2017].

[12] California Water Boards. STORMS: Strategy to Optimize Resource Management of Storm Water, p. 10 ("This Storm Water Strategy assists in achieving many of the actions identified in the California Water Action Plan by promoting multiple benefit projects where storm water is treated as a resource to be captured and used; therefore resulting in increased flood protection, integrated water management, protection of important ecosystems, and improvement of groundwater management.")

[13] PPIC. Adapting California's Water Management to Climate Change, Nov. 2008, p. 22 [available at http://www.ppic.org/content/pubs/report/R_1108JLR.pdf, visited Aug. 16, 2017].

[14] *See* SB 1259 (2013-14) (Pavley).

[15] PPIC. Storing Water, Oct. 2016 [available at http://www.ppic.org/content/pubs/report/R_1016JLR.pdf, visited Aug. 17, 2017].

[16] DeVinny, J., et al. Alternative Approaches to Stormwater Quality Control (Prepared for the Los Angeles Regional Water Quality Control Board), Jun. 2004, p. 46 [available at http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/reissuance/usc%20ucla%20final%20report%202004.pdf, visited Sept. 13, 2017].

[17] CDWR. Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan, p. 6.

With respect to water quality, both the STORMSPolicy and DWR's Stormwater Runoff Management encourage and emphasize that capture, natural treatment, and infiltration of runoff and storm water are integral to treating surface waters, runoff, and storm water, thereby improving long-term water supply reliability. Storm water collection and treatment facilities and surface water diversion and treatment facilities that mimic natural bio-filtration and wetland treatment processes reduce surface water pollution while improving flood protection, increasing wetland, riparian, and other habitat and vegetation, and increasing water supply through capture and infiltration. Multi-benefit storm water treatment facilities also provide additional environmental benefits such as wildlife habitat, parks, and open space.[18]

For example, SCVWD's flood protection facilities, Ventura Water's wildlife/water quality ponds, and IRWD's San Joaquin Marsh (Marsh) and NTS are Multi-benefit Constructed Facilities are considered the best strategy for addressing regional water quality treatment needs because such facilities:

- Implement a proven, but naturalized pollutant reduction technology;
- Can be opportunistically implemented to address pollutants from point sources, storm water, in-stream flows, and nonpoint sources; and
- Enhance habitat and natural resources in the watersheds where they are deployed.

These facilities all utilize treatment wetlands technologies as recommended by the EPA:

> "[T]reatment wetlands offer opportunities to regain some of the natural functions of wetlands and offset some of the significant losses in wetland acreage. In arid regions and communities reaching the limits of water availability, water reuse via these systems is an attractive option that may help achieve water conservation and wildlife habitat goals."[19]

Although water agencies are often at the forefront of designing, developing, implementing, and maintaining Multi-benefit Constructed Facilities, the State's regulatory role plays an important part in shaping the economic and technical constraints that water agencies must take into consideration when deciding whether to undertake, prioritize, or continue maintenance of a particular project. Recognizing the role that increased regulatory burdens can have on the initial and continued viability of integrated water management projects such as Multi-benefit Constructed Facilities, the Water Action Plan recommends permit streamlining to further encourage their use:

> The administration will review and propose measures to streamline permitting for local projects that make better use of local water supplies such as recycling, stormwater capture, and desalination of brackish and ocean water as well as projects that provide multiple benefits, such as enhancing local water supplies while improving wildlife habitat.[20, 21]

---

[18] *Ibid*.

[19] USEPA. Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat, Oct. 2000, p. 1 [available at https://nepis.epa.gov/Exe/ZyPDF.cgi/2000536S.PDF?Dockey=2000536S.PDF, visited Sept. 13, 2017].

[20] California Water Action Plan 2016 Update, p. 8.

Consistent with the Water Action Plan, the STORMS Policy, and the Public Policy Institute of California's *Building Drought Resilience in California's Cities and Suburbs* (*see* note 11), all of which recognize that increased regulatory burdens discourage integrated water management projects and implementation and operation of Multi-benefit Constructed Facilities, we request that the SWRCB exempt Multi-Benefit Constructed Facilities from the Proposed Regulatory Program to streamline permitting and eliminate regulatory hurdles to the implementation, operation, maintenance, and management of such facilities.

B. The Proposed Regulatory Program as Drafted Would Result in Increased Application Costs and Permit Delays.

The Proposed Regulatory Program will substantially increase project applicants' expenses not only with respect to obtaining WDRs, but also with respect to completing existing permit processes, including for USACE under section 404 of the Clean Water Act and for CDFW under section 1600 *et seq*. of the California Fish and Game Code (Section 1600). Increased costs and delays in permitting will be due to the fact that the Proposed Regulatory Program's newly required permit application and analysis are not required under currently applicable federal or State laws. In some cases, such as IRWD's Marsh, the Proposed Regulatory Program's required WDRs will be new permits, but duplicative of USACE section 404 permits and CDFW streambed alteration agreements under Section 1600 for Multi-benefit Constructed Facilities. In other cases, such as Ventura Water's wildlife/water quality ponds and IRWD's NTS facilities, these WDRs will be entirely new permits now mandated, notwithstanding the fact that USACE section 404 permits and CDFW streambed alteration authorizations are *not* required for Multi-benefit Constructed Facilities.

The Proposed Regulatory Program will now require applicants to:

- Prepare and obtain regulatory agency review of three different, but redundant delineation reports for the USACE, Water Boards, and CDFW
    - Three reports will be necessary because of each agency's different wetland and non-wetland waters definitions;
    - Based on the Proposed Regulatory Program's new wetlands definition and Wetlands Jurisdictional Framework, which would substantially expand the number of Multi-benefit Constructed Facilities deemed jurisdictional wetlands WOTS compared to existing regulation; and
    - Even though the Proposed Regulatory Program does not include a definition of or guidance regarding features that are jurisdictional non-wetland WOTS, thus leaving it to each Water Board's discretion and resulting in inconsistency across regions.
- Prepare and submit an application, including two different, but redundant alternatives analyses for the USACE and Water Boards

[21] *See also* California Water Boards. STORMS: Strategy to Optimize Resource Management of Storm Water, pp. 15-16 for a discussion of the role of regulation in supporting multi-benefit, integrated storm water management.

- The Proposed Regulatory Program would require an alternatives analysis for O&M, which *ipso facto* cannot be conducted at an alternate site;

- The Proposed Regulatory Program would require an alternatives analysis for activities authorized under a Nationwide Permit (NWP) and section 401 of the CWA that under current rules would not be required;[22] and

- Potential conflicts between the USACE's and Water Boards' respective Least Environmentally Damaging Practicable Alternative (LEDPA) determinations.

- Prepare three different mitigation analyses and proposals, each complying with different regulatory agency priorities for onsite versus offsite, in-watershed versus out-of-watershed, and in-bank or fee program versus permittee responsible mitigation

    - Three different mitigation analyses required because each agency prioritizes compensatory mitigation differently, *e.g.*, the Proposed Regulatory Program prioritizes in-watershed but USACE prioritizes the use of banks (which may be out-of-watershed);

    - Despite the Proposed Regulatory Program's lack of an alternative methodology to the California Rapid Assessment Methodology (CRAM) and Standard Operating Procedure (SOP), the USACE methodologies for calculating the compensatory mitigation obligation;

    - Proposed Regulatory Program requires use of watershed profiles, which do not now exist and encompass all lands within a watershed, including those privately held but publicly inaccessible; and

    - Increased compensatory mitigation requirements based on the Proposed Regulatory Program's new more inclusive definition of "wetlands."

- Submit required supplemental application information, including wet season data for delineation reports, watershed profiles, and the use of a watershed approach for analysis of proposed compensatory mitigation, and additional detail in State law alternatives analyses.

These additional information and analysis requirements and the conflicting standards that govern them will require more support from technical consultants and permitting experts, and additional legal review, significantly increasing permitting application time and costs. In addition, the potential for direct conflicts between the USACE and the Water Boards regarding their respective LEDPA determinations and compensatory mitigation demands (which are

[22] Water agencies rely on NWPs to reduce O&M costs because federal law does not require applicants to prepare a separate alternatives analysis for each activity authorized by the NWPs. However, the Proposed Regulatory Program denies water agencies the cost savings they can attain by the use of NWPs to authorize O&M activities by requiring a State law alternatives analysis for all activities authorized by NWPs, unless the SWRCB has issued a Section 401 pre-certification for the NWP. Historically, the SWRCB has not issued pre-certifications for NWPs that authorize O&M activities, and the Staff Report confirms that because California Environmental Quality Act review would be required for precertification of such NWPs, the SWRCB is unlikely to pre-certify them in the future (Staff Report, p. 84).

subject to conflicting requirements under each applicable regulatory scheme) will require additional time to sort out, and will delay issuance of permits.

Also, the expansive scope of the new permitting program will substantially increase application review, analysis, and approval time, as well as the resources necessary for the Water Boards' staff to assure adequate technical support, regulatory compliance, and legal review. No plan has been recommended in the Staff Report or elsewhere to add staff and technical expertise to handle the substantial additional workload the Proposed Regulatory Program will require of the Water Boards. These problems will – to the extent left unaddressed – increase delays to complete the Proposed Regulatory Program's new permitting process and/or add extra costs for permit applicants (particularly to the extent that applicants are asked to fund Water Board staff time for review).

Multi-benefit Constructed Facilities are already regulated by other State and federal agencies, including USACE, CDFW, U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Coastal Commission, and Bay Conservation and Development Commission, and the above-listed requirements of the Proposed Regulatory Program are largely duplicative of USACE regulatory requirements. As such, the Proposed Regulatory Program offers little or no additional environmental benefit or protection over and above that already provided by such Multi-benefit Constructed Facilities, including habitat, wildlife, and open space benefits, and current regulation thereof under, *e.g.*, section 404 of the CWA and the State and federal Endangered Species Acts.

III. PREFERABLY, EXCLUDE MULTI-BENEFIT CONSTRUCTED FACILITIES FROM PERMITTING UNDER THE PROPOSED REGULATORY PROGRAM BY EXEMPTING THEM FROM DESIGNATION AS WETLAND AND NON-WETLAND WOTS.

The Proposed Regulatory Program would, as drafted, regulate wetland and non-wetland Multi-benefit Constructed Facilities as WOTS. In this section, we recommend excluding Multi-benefit Constructed Facilities from permitting under the Proposed Regulatory Program by exempting such facilities from designation as wetland and non-wetland WOTS. Corresponding suggested changes to the Proposed Regulatory Program are provided in redline/strikeout in **Exhibit 1**, which accompanies this letter.

We appreciate staff's willingness at the September 6, 2017 hearing to consider excluding Multi-benefit Constructed Facilities from the Proposed Regulatory Program's permitting jurisdiction. In further support of such exclusion, it is not necessary for the Proposed Regulatory Program to regulate all WOTS to the full extent of authority provided by Porter-Cologne in order to avoid narrowing the statutory jurisdiction of the Water Boards; the scope of statutory authority provides an upper limit on the legally permissible scope of regulatory programs such as the one at issue here. Regulatory agencies need not consider the scope of statutory authority as a regulatory floor, and have no obligation to adopt regulatory programs to the fullest extent of their statutory authority to avoid jeopardizing that authority. Indeed, there are a plethora of examples in which regulatory agencies only adopt and enforce regulatory programs that implement a subset of their statutory jurisdiction based on policy concerns such as comity and prioritization of resource deployment for maximum impact and efficiency.

A. Multi-benefit Constructed Facilities Classified as Wetland WOTS Trigger the Proposed Regulatory Program's Requirement for WDRs.

The Proposed Regulatory Program's new wetlands definition and Wetlands Jurisdictional Framework sweep in certain Multi-benefit Constructed Facilities such as IRWD's Marsh and NTS, Ventura Water's wildlife/water quality ponds, and SBVWCD's Mill Creek percolation ponds (and countless others like them) as "artificial wetlands" that constitute WOTS unless one of a handful of narrow exemptions (discussed in Section III.B) applies.[23] *See* Proposed Regulatory Program, pp. 1-2; Staff Report, p. 62.

SBVWCD's manmade percolation ponds provide an excellent example of a constructed, artificial, multi-benefit groundwater recharge facility that concurrently improves local water supply volume and groundwater quality, while at the same time providing adjacent riparian habitat that supports sensitive and listed species, such as the least Bell's vireo. However, SWRCB staff has confirmed that as a result of the Proposed Regulatory Program's elimination of the vegetation requirement from the definition of "wetland" WOTS, together with the application of its Wetlands Jurisdictional Framework, these artificial, constructed groundwater recharge facilities (and countless others like them), which do not constitute waters of the U.S. (WOTUS) due to their constructed nature, would now be categorized as artificial wetlands that constitute WOTS. Unless exempted, Multi-benefit Constructed Facilities, newly classified as artificial wetland WOTS, will be subject to the full panoply of permitting requirements, and related costs and delays under the Proposed Regulatory Program even though these wetland Multi-benefit Constructed Facilities were:

- Designed, permitted, and constructed to constitute artificial wetlands that would be managed and maintained in perpetuity for water quality treatment, water supply/storage and/or flood protection; and

- Any potential significant adverse impacts to State or federally listed species already require water agencies to obtain incidental take authorization under the State and federal Endangered Species Acts from CDFW, and USFWS and/or NMFS, respectively.

B. The Proposed Regulatory Program Does Not Effectively Exempt Multi-benefit Constructed Facilities from Regulation as Artificial Wetland WOTS.

The Staff Report states that the intent of the Wetlands Jurisdictional Framework is to exclude from regulation as wetland WOTS artificially created and/or temporary features that meet the technical definition of a wetland (p. 55). However, the framework broadly sweeps in all wetland Multi-benefit Constructed Facilities for regulation as artificial wetland WOTS. This is because the application of the Wetlands Jurisdictional Framework hierarchical analysis to artificial wetlands yields an exception to the artificial wetland WOTS exemption that is exceptionally narrow (*see* Staff Report, Fig. 3). For example, we researched, but could not identify *any* Multi-benefit Constructed Facilities larger than one acre in the State that could qualify for that exemption from jurisdiction as an artificial wetland WOTS.

Application of the Wetlands Jurisdictional Framework would result in increased regulation through the Proposed Regulatory Program's new permitting requirements all wetland

[23] IRWD's Quail Hill NTS Facility may be an exception to this statement. It is not entirely clear if the Wetlands Jurisdictional Framework as currently drafted would sweep that NTS facility into WOTS.

Multi-benefit Constructed Facilities, including those larger than one acre, which are most likely to provide the greatest environmental benefits (*e.g*., habitat, open space, and recreation) in addition to their water supply, water quality, and flood protection functions.

C. Exempt Multi-benefit Constructed Facilities from Designation as Artificial Wetland WOTS.

The cost, delay and other burdens associated with the Proposed Regulatory Program's mandate to obtain permits for Multi-benefit Constructed Facilities delineated as artificial wetland WOTS will discourage and delay implementation, creation, restoration, and enhancement of new such facilities, as well as management and O&M of existing constructed facilities. Disincentives for implementation of such Multi-benefit Constructed Facilities are contrary to the variety of State policies encouraging their use. For this reason, we urge the SWRCB to revise the Proposed Regulatory Program to exempt Multi-benefit Constructed Facilities from permitting under the Proposed Regulatory Program by excluding them from designation as artificial wetland WOTS.

D. Exempt Multi-benefit Constructed Facilities from Designation as WOTS.

With respect to non-wetland Multi-benefit Constructed Facilities, we urge the SWRCB to revise the Proposed Regulatory Program to exclude such facilities from permitting under the Proposed Regulatory Program by exempting them from designation as WOTS for the reasons provided below.

1. The Proposed Regulatory Program Lacks Definitions or Guidance for Identification of Non-wetland WOTS.

The Proposed Regulatory Program currently mandates that Water Boards adopt and implement a permitting program for all WOTS, including non-wetland WOTS. However, neither the Proposed Regulatory Program nor the Staff Report provides definitions, descriptions, or guidance for identification of features that, on one hand, most certainly do qualify as WOTS, and, on the other hand, are most certainly exempted from designation as WOTS, at least for purposes of implementing a permitting program for discharges of dredged or fill materials. Instead, the Proposed Regulatory Program instructs applicants to engage in pre-application consultations with Water Boards so that the Boards can make case-by-case determinations as to whether particular Multi-benefit Constructed Facilities that do not meet the technical definition of a wetland should be delineated as WOTS subject to permitting under the Proposed Regulatory Program.

We understand staff's position is that this case-by-case determination approach is not a change from existing practices with respect to the identification of WOTS. However, under existing practices, there is no existing regulatory program that *mandates* a permitting program must be applied to regulate all, as of today, undefined non-wetland WOTS features. Moreover, given the proposed permitting mandate and the potential for an enforcement action under the SWRCB's recently adopted amendments to the Water Quality Enforcement Policy (2017), the lack of definitions and guidance to facilitate both applicant recognition of, and consistent Water Board regulatory determinations regarding non-wetland WOTS, creates a new and significant enforcement risk for applicants.

The Proposed Regulatory Program's lack of definitions, descriptions, or guidance regarding identification of non-wetland WOTS, combined with the current inconsistency among

Water Boards in defining such WOTS (with some Water Boards defining puddles, riffles, and certain swimming pools as WOTS, as noted by staff in the August 4, 2017 workshop), and the new Class I Priority violation status assigned by the recent updates to the Water Quality Enforcement Policy to discharges of dredged or fill material to WOTS without obtaining WDRs, create an untenable situation for applicants that must conduct, *e.g.*, O&M and management activities, for Multi-benefit Constructed Facilities. Without clear and consistent direction and guidance, the Proposed Regulatory Program should be revised to exempt non-wetland Multi-benefit Constructed Facilities from designation as non-wetland WOTS.

2. Follow SWRCB Resolution 2008-0026, Which Limits Phase 1 of the Proposed Regulatory Program to Wetland WOTS.

The policy framework for development and adoption of the Proposed Regulatory Program is established by SWRCB Resolution 2008-0026 (April 2008) (Staff Report, p. 49). SWRCB Resolution 2008-0026 directs the development of a regulatory and permitting program for WOTS in three phases. The Proposed Regulatory Program is being developed under Phase 1, which Section 6 of Resolution 2008-0026 expressly limits to the development of a wetland definition and a regulatory permitting program solely for discharges to wetland WOTS (Reso. No. 2008-0026, p. 3). During Phase 2, the Policy Resolution directs development of additional regulatory protections, but again solely for protection of wetland WOTS. It is not until Phase 3 that the Policy Resolution contemplates the expansion of a regulatory permitting program that protects non-wetland WOTS. However, Phase 3 of the Policy Resolution *does not* contemplate or direct expansion of a regulatory program to all WOTS, including Multi-benefit Constructed Facilities. Instead, Section 6 of the Policy Resolution directs the development of a regulatory and permitting program during Phase 3 that protects other non-wetland WOTS *comprised of "riparian areas"* (Reso. No. 2008-0026, p. 4).

The Proposed Regulatory Program, as drafted, will impose additional and significant permitting cost, delay and related burdens on water agencies' Multi-benefit Constructed Facilities, even those that do not exhibit wetland characteristics or benefits. For example, SCVWD implements Multi-benefit Constructed Facilities to the maximum extent possible for storm water and flood protection. These facilities, consistent with design and management, provide habitat and related values, allow for bio-filtration and groundwater recharge, and promote natural treatment processes and functions. To maintain these Multi-benefit Constructed Facilities, SCVWD has undertaken a Stream Maintenance Program (SMP), which includes activities such as thinning and removal of vegetation to maintain flood capacity, removal of sediment, focused fills to protect and repair berms, banks and conveyance structures, and various other activities. Because SCVWD has elected to use Multi-benefit Constructed Facilities to achieve its flood protection mission to the maximum extent possible, the SMP required permits from various regulatory agencies including USACE, CDFW, and the Regional Water Quality Control Board. Pursuant to the permits, additional compensatory mitigation, including preservation/creation of approximately 17 acres of wetlands, was imposed as "mitigation" for O&M activities conducted under the SMP.

Requiring additional compensatory mitigation -- which should only be required for permanent impacts -- to address temporary impacts associated with Multi-benefit Constructed Facilities under the SMP is an example of a practice that discourages implementation of such facilities. When subject to these types of burdens, water agencies would do better to construct traditional facilities for which compensatory mitigation must only be provided once — at the time of construction. Discouraging Multi-benefit Constructed Facilities is contrary to State policies and results in the loss of an opportunity to improve watersheds. Therefore, we recommend that,

rather than codifying a disincentive for implementation of Multi-benefit Constructed Facilities in SWRCB regulations, the Proposed Regulatory Program should be modified to exclude Multi-benefit Constructed Facilities from designation as non-wetland WOTS, consistent with adopted SWRCB Resolution 2008-0026.

3. In Any Event, the Wetlands Jurisdictional Framework Should Not be Applied to Determinations Regarding the Jurisdictional Nature of Non-Wetland WOTS.

It is critical that the Proposed Regulatory Program state that the Wetlands Jurisdictional Framework cannot function as a substitute for the scientific or technical evidence necessary to determine the jurisdictional nature of non-wetland WOTS. *See* Proposed Regulatory Program, pp. 1-2; Staff Report, p. 55. This clarification is important to the continued implementation of creation, restoration, enhancement, operations, management, and maintenance activities for non-wetland Multi-benefit Constructed Facilities because, as explained above, the Proposed Regulatory Program does not include a jurisdictional definition of WOTS. Consequently, the Water Boards are likely to refer to the Wetlands Jurisdictional Framework as guidance to determine whether a non-wetland feature is a WOTS. Application of the Wetlands Jurisdictional Framework to non-wetland waters would be technically and scientifically inappropriate.

For this reason, we urge the SWRCB to revise the Proposed Regulatory Program to *expressly* caution that the Wetlands Jurisdictional Framework is not appropriate for application to a determination of whether features that do not meet the technical definition of wetlands are jurisdictional and subject to the mandated permitting program.

IV. ALTERNATIVELY, EXCLUDE MULTI-BENEFIT CONSTRUCTED FACILITIES FROM THE PROPOSED REGULATORY PROGRAM'S PERMIT APPLICATION REQUIREMENTS.

If the SWRCB declines to exempt Multi-benefit Constructed Facilities from permitting under the Proposed Regulatory Program by excluding them from designation as wetlands and non-wetland WOTS, we respectfully request the SWRCB expand the exclusions from the Proposed Regulatory Program's permit application requirements to exclude Multi-benefit Constructed Facilities. Multi-benefit Constructed Facilities' essential contribution to the State's dual goals of reliable water supply and high quality water and their benefits as naturalized features that offer wildlife habitat and open space make these facilities ideal candidates for exclusion from the permit application requirements. A new category of activities excluded from the Proposed Regulatory Program's permit application requirements should be added. Text defining this new category of excluded activities is shown in redline/strikethrough in **Exhibit 1**.

A. Excluding Multi-benefit Constructed Facilities from the Permit Application Requirements is Consistent with the Exclusions Already Provided in the Proposed Regulatory Program.

The Proposed Regulatory Program excludes from the permit application procedures (i) activities that are exempt under section 404(f) of the Clean Water Act (the so-called "routine farming, ranching, silviculture exemptions"), and (ii) discharges of dredged/fill material associated with routine maintenance of storm water facilities regulated under another Water Board Order (pp. 11-13). Among the activities exempt from regulation under CWA section 404 and the permit application requirements as routine farming, ranching, and silviculture activities is

construction and maintenance of irrigation ditches. The USACE defines an "irrigation ditch" as follows:

> "[A]n irrigation ditch is a man-made feature and/or an upland swale that either conveys water to an ultimate irrigation use or place of use, or that moves and/or conveys irrigation water (e.g., "run-off" from irrigation) away from irrigated lands."[24]

Similarly, maintenance of drainage ditches is exempt under section 404(f) of the Clean Water Act and the permit application requirements. A "drainage ditch" is defined as:

> "[A] ditch that conveys water (other than irrigation related flows) from one place to another."[25]

The revision of the current Proposed Regulatory Program to extend the exclusions from the permit application requirements to Multi-benefit Constructed Facilities would reduce the regulatory burden of the Proposed Regulatory Program on water agency water supply, water quality treatment, and flood protection operations. Application of the exclusions to Multi-benefit Constructed Facilities is consistent with, and would provide equivalent protection to wetland and non-wetland WOTS compared to the existing exclusions in the Proposed Regulatory Program because:

- Only Multi-benefit Constructed Facilities would be excluded; and
- Only activities related to creating, restoring, enhancing, operating, or maintaining function or value of Multi-benefit Constructed Facilities would be excluded.

In other words, excluding Multi-benefit Constructed Facilities such as reservoirs (*e.g.,* IRWD's NTS), percolation ponds/ groundwater recharge basins (*e.g.,* SBVWCD's Recharge Facilities and SCVWD's flood protection facilities), soft-bottom channels and ditches, constructed treatment wetlands, and water quality polishing ponds (*e.g*., Ventura Water's wildlife/water quality ponds and IRWD's Marsh) would not result in loss of wetlands or otherwise cause adverse water quality impacts to WOTS. As such, excluding Multi-benefit Constructed Facilities to address and reduce the additional regulatory burden imposed by the permit application requirements under the Proposed Regulatory Program is appropriate and warranted.

B. Clarify the Exclusion for Routine Maintenance of Storm Water Facilities to Make the Permit Application Exclusion Effective.

The Proposed Regulatory Program also excludes from the permit application requirements routine maintenance of storm water facilities such as sedimentation or storm water detention basins regulated under another Water Board Order (p. 13). This exemption is of critical importance to water agencies that have O&M responsibility for Multi-benefit Constructed Facilities that address storm water, such as constructed conveyance channels and ditches (*e.g*.,

[24] USACE. Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of the Clean Water Act, RGL 07-02, Jul. 4, 2007, p. 3.

[25] USACE. Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of the Clean Water Act, RGL 07-02, Jul. 4, 2007, p. 4.

SCVWD's Permanente Creek Flood Protection Project (*see* **Attachment A**)) and constructed treatment wetlands. Storm water facilities include far more types of facilities than sedimentation and storm water detention basins, and there is a risk that the examples provided in this section could be interpreted to narrow the application of this exclusion.

In addition, storm water facilities such as detention basins, bio-filtration basins, bio-retention basins, and other natural treatment system wetlands are not actually regulated by "other Water Board Orders." *See* Proposed Regulatory Program § IV.D.2.b. Instead, such storm water facilities are typically implemented as structural best management practices (BMPs) to treat discharges pursuant to conditions and effluent limitations of Water Board Orders/NPDES Permits, *e.g*., Construction General NPDES Permit, MS4 NPDES permit, or individual discharge Water Board Order. Therefore, BMPs (and the discharges from BMPs) are not "regulated under other Water Board Orders," but instead are *required by* other Water Board Orders. As currently drafted, the exclusion for storm water facilities would never be triggered for such storm water quality treatment BMPs. The agencies responsible for O&M of those Multi-benefit Constructed Facilities would be required to obtain WDRs pursuant to the permit application procedures, including preparation of a delineation report, alternatives analysis, and compensatory mitigation.

The above-recommended revision of the current Proposed Regulatory Program to clarify that the section IV.D exclusions from the permit application requirements apply to Multi-benefit Constructed Facilities that address storm water would reduce the burden of the Proposed Regulatory Program on water agency water supply, water quality treatment, and flood protection operations. Clarifying the application of the exclusion also supports the imposition in Water Board Orders/NPDES permits of conditions and effluent limitations that require implementation of structural treatment BMPs, and better reflects the regulatory scheme applicable to such BMPs.

V. AT A MINIMUM, EXEMPT MULTI-BENEFIT CONSTRUCTED FACILITIES FROM THE REQUIREMENT TO SUBMIT AN ALTERNATIVES ANALYSIS AND COMPLY WITH CERTAIN MITIGATION REQUIREMENTS.

The Proposed Regulatory Program's required alternatives analysis is time-consuming and costly and the introduction of a tiered alternatives analysis does little to mitigate this regulatory burden. If the SWRCB chooses not to adopt either the preferred recommendation in Section III to exempt Multi-benefit Constructed Facilities from designation as wetland and non-wetland WOTS or the alternative recommendation in Section IV to exclude Multi-benefit Constructed Facilities from the permit application requirements, we urge the SWRCB to expand the exemptions from the requirements to submit an alternatives analysis and provide compensatory mitigation to exclude Multi-benefit Constructed Facilities. Suggested revisions to the text of the Proposed Regulatory Program reflecting this recommendation are provided in **Exhibit 1**.

A. An Alternatives Analysis and Certain Compensatory Mitigation Requirements Should Not be Mandated for Multi-benefit Constructed Facilities.

Agencies that make the additional investment in the construction of new Multi-benefit Constructed Facilities and those that assume responsibility for operating and maintaining these facilities in perpetuity should not be penalized with additional and duplicative permitting alternatives analyses and compensatory mitigation requirements.

Operation, management, enhancement, restoration, and enhancement of Multi-benefit Constructed Facilities by their very nature cannot be located at an alternate location. Multi-benefit Constructed Facilities are operated and maintained to provide environmental benefits, including (for many) sensitive habitat. On one hand, the Proposed Regulatory Program defines the scope of projects subject to the Tier 3 alternatives analysis to exclude projects that inherently cannot be located at an alternate location (p. 6). On the other hand, the Tier 1 language implies, consistent with the Tier 3 text, that only a Tier 3 alternatives analysis is appropriate for projects that directly impact sensitive habitat:[26] "Tier 1 projects include any project that directly impacts [size limit defined], unless it is a Tier 3 project *because it impacts a specified habitat type*." *Ibid* (emphasis added). However, a project that inherently cannot be located at an alternate location is not properly analyzed at the Tier 3 level – even if it directly impacts sensitive habitat – because consideration of offsite alternatives is inapplicable. As we learned at the September 6, 2017 hearing, it is not clear even to staff that the Proposed Regulatory Program would allow a Tier 2 analysis for a location-dependent project with impacts to sensitive habitat; yet Tier 1 is excluded and Tier 3 does not apply. At most, Multi-benefit Constructed Facilities, including those where permitted activities would impact sensitive species, should be required to perform a Tier 1 analysis.

B. It is Outside of the Water Boards' Jurisdiction to Require the Submission of an Alternatives Analysis Based Solely on the Potential to Impact Listed Species Habitat.

The Proposed Regulatory Program contains four exemptions to the permit application requirement to submit an alternatives analysis, including projects that have no permanent impacts to aquatic resources and no impacts to any "sensitive habitat" (p. 5). Discharge of dredged or fill material within Multi-benefit Constructed Facilities that have the potential to impact sensitive habitat would be excluded from taking advantage of this exemption from the permit application requirement to submit an alternatives analysis.

Multi-benefit Constructed Facilities may contain sensitive habitat, including listed species habitat – in many cases, as a result of design and/or management. Despite implementation of BMPs and avoidance measures, discharge of dredged or fill material within Multi-benefit Constructed Facilities may result in impacts to sensitive habitat, including listed species' habitat, notwithstanding these facilities' environmental benefits, including the provision of habitat. Nonetheless, based on a potential of an impact on listed species habitat alone, a project in a Multi-benefit Constructed Facility would be excluded from using the alternatives analysis exemption.

Projects in Multi-benefit Constructed Facilities with listed species habitat are already subject to the prohibitions and requirements of the federal and State Endangered Species Acts, which prohibit take of listed species without an incidental take permit or other authorization.[27] CDFW also regulates impacts to listed species and their habitat through Cal. Fish & Game Code section 1600. Permit applicants whose projects may take listed species (and their habitat) are required to demonstrate avoidance and minimization of impacts to listed species, and

[26] The term "sensitive habitat" is used herein to refer to the following habitat types listed in the Proposed Regulatory Program: bog, fen, playa, seep, wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species. Habitat for rare, threatened or endangered species is referred to as "listed species habitat."

[27] 16 U.S.C. §§ 1536(o), 1538(a)(1)(B), 1539(a); Cal. Fish & G. Code §§ 2080, 2080.1, 2081(b).

provide compensatory mitigation for all unavoided impacts; projects under the federal Endangered Species Act must also analyze alternatives to the take.[28] Additional regulation of Multi-benefit Constructed Facilities based solely on the potential to affect listed species habitat is outside the Water Boards' jurisdiction, and duplicative. This is further evidenced by the fact that restoration, enhancement, management, and O&M of Multi-benefit Constructed Facilities:

- Necessarily cannot be located at an alternate location (*i.e.*, not Tier 3); and
- Typically implement required BMPs to avoid and minimize any temporary adverse water quality effects, which obviates the need to examine alternative practices and renders a Tier 2 analysis unnecessary.

For these reasons, the SWRCB should add Multi-benefit Constructed Facilities to the exemptions to the requirement to complete an alternatives analysis.

VI. CONCLUSION.

As leaders in water resource management and environmental stewardship, we are committed to implementing innovative water supply, water quality treatment, and flood protection programs that integrate multiple environmental benefits into our Multi-benefit Constructed Facilities. We request that the SWRCB structure the Proposed Regulatory Program so that there are continued incentives for the water agencies to develop, implement, operate, manage, and maintain Multi-benefit Constructed Facilities in a manner that integrates natural soils, vegetation, and treatment processes and enhances the environment, without imposing significant additional costs and regulatory burdens. These Multi-benefit Constructed Facilities provide water supply, water quality, and flood protection benefits to all Californians.

[28] *See* 16 U.S.C. § 1539(a)(2); Cal. Fish & G. Code § 2081(b).

Attachment A

Information Regarding Ventura Water, SBVWCD, SCVWD, and IRWD Multi-benefit Constructed Facilities

Irvine Ranch Water District

Possible Impacts to Constructed Water Quality Treatment Facilities from the Proposed State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

September 6, 2017

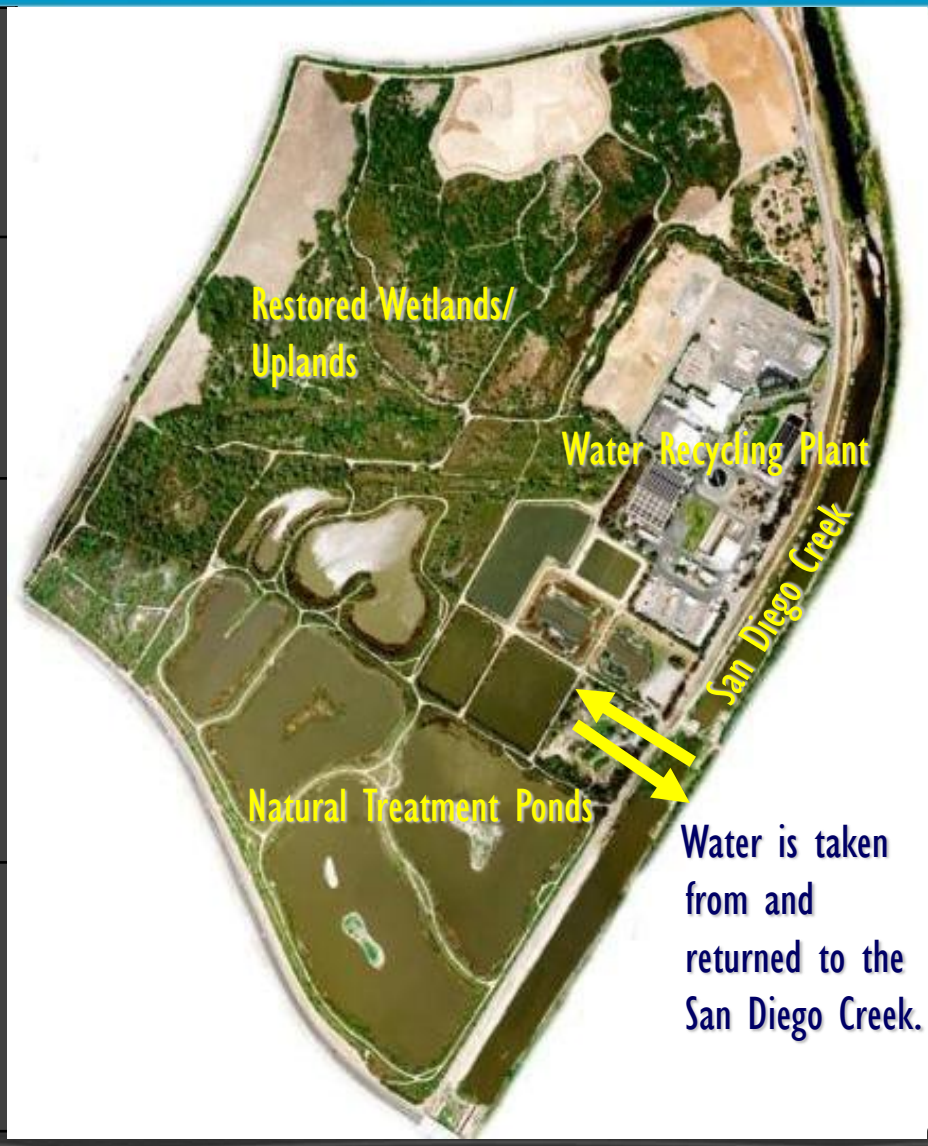
IRWD's San Joaquin Marsh

San Joaquin Marsh
is a critical component of IRWD's Natural Treatment System.

Effective water quality treatment
through the use of artificial constructed treatment wetlands.

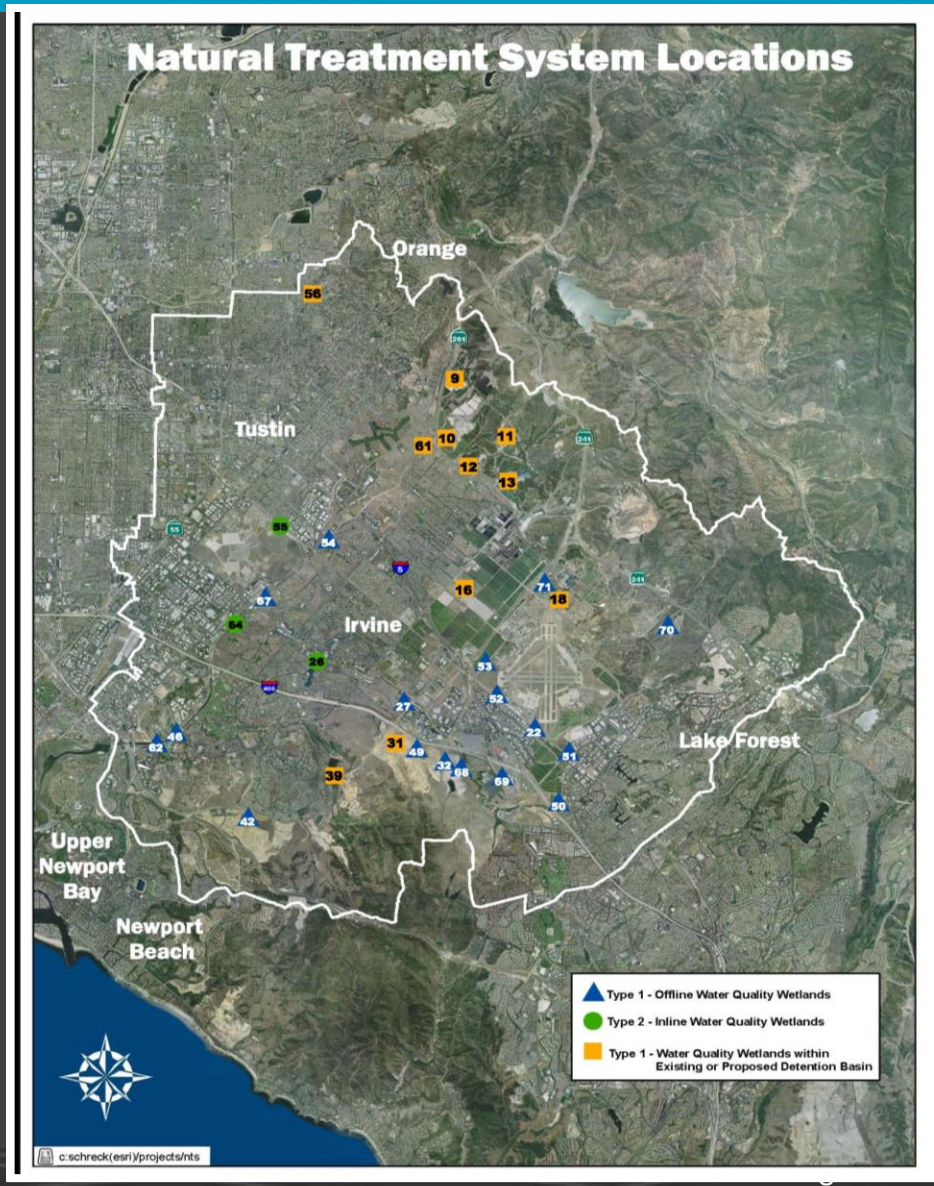
Water from the San Diego Creek
is put through a series of natural treatment ponds for seven to ten days, to reduce nutrients and other pollutants as part of Newport Bay TMDL implementation programs.

Result is cleaner water
that is returned to the creek to continue its journey to the Upper Newport Bay and the ocean.



IRWD Natural Treatment System

- Expands wetlands treatment throughout the San Diego Creek watershed.
- 31 sites selected; 27 sites constructed.
- Water quality BMPs integrated with city and county Clean Water Act compliance programs (MS4 and NPDES permits).
- Partnerships with government, private, regulatory and environmental entities.



Natural Treatment System: Multiple Benefits

- Water quality BMPs
- Efficient use of joint public facilities
  - Some facilities constructed within existing storm water detention basins
- Enhance habitat, aesthetics and open space
  - Several state and federally listed species
- Recreational opportunities

Constructed Treatment Facilities: Required O&M

- Pond berm and pump station maintenance and repair, fill activities to maintain berms, and removal of vegetation
- Dewatering portions of the Marsh to:
  - minimize vector control problems
  - provide access for vegetation maintenance and structure repair
  - to provide shorebird habitat
- Periodic dredging and removal of accumulated sediment in treatment ponds and streams
- Resources protected under other regulations

San Joaquin Marsh: Open from dawn until dusk Partnership with Sea and Sage Audubon coastal Society

IRWD Natural Treatment System Benefits

- Treatment of over 1 billion gallons of urban runoff annually
- Since 1999, the San Joaquin Marsh and NTS have removed pollutants from impaired surface waters that flow into Newport Bay State ecological reserve:
  - 906,000 lbs of Nitrogen
  - 1,350 lbs of Selenium
  - 2,046 lbs of Copper
  - 99% Reduction in Total Coliforms
  - 19,000 lbs of Trash annually
  - 474 Tons of Sediment Captured
- Provides major riparian and wetland habitat
  - Supports over 282 species of migratory birds
  - Several state and federally listed species
- Creates open space and recreational opportunities

Possible Impacts to Multi-Benefit Treatment Facilities

- Prioritized application of Wetlands Delineation Framework defines San Joaquin Marsh as wetland waters of the state
- Framework also defines many NTS facilities and perhaps entire system as waters of the state
- Significant increased regulatory permit and cost burdens to operate and maintain the facilities
- Potential for other regulations to be imposed:
  - Water Quality Standards/TMDLs?
  - Discharge requirements/waste load allocations?

Summary

- Artificially constructed treatment facilities provide multiple benefits
- High level of protection needed for natural wetlands, leads to unnecessary cost and restriction for critical maintenance activities when applied to artificially constructed treatment wetlands
- Definition and procedures should focus on sources of pollution and encourage construction of artificial wetlands to remove the pollution
- Definition and procedures should not regulate constructed treatment facilities designed to remove pollutants from impaired waters

Recommendation

- Exclude multi-benefit constructed water quality treatment wetlands from permitting jurisdiction under the Proposed Regulatory Program

Questions

Fiona Sanchez
Director of Water Resources
Email: sanchezf@irwd.com
Phone: (949) 453-5325

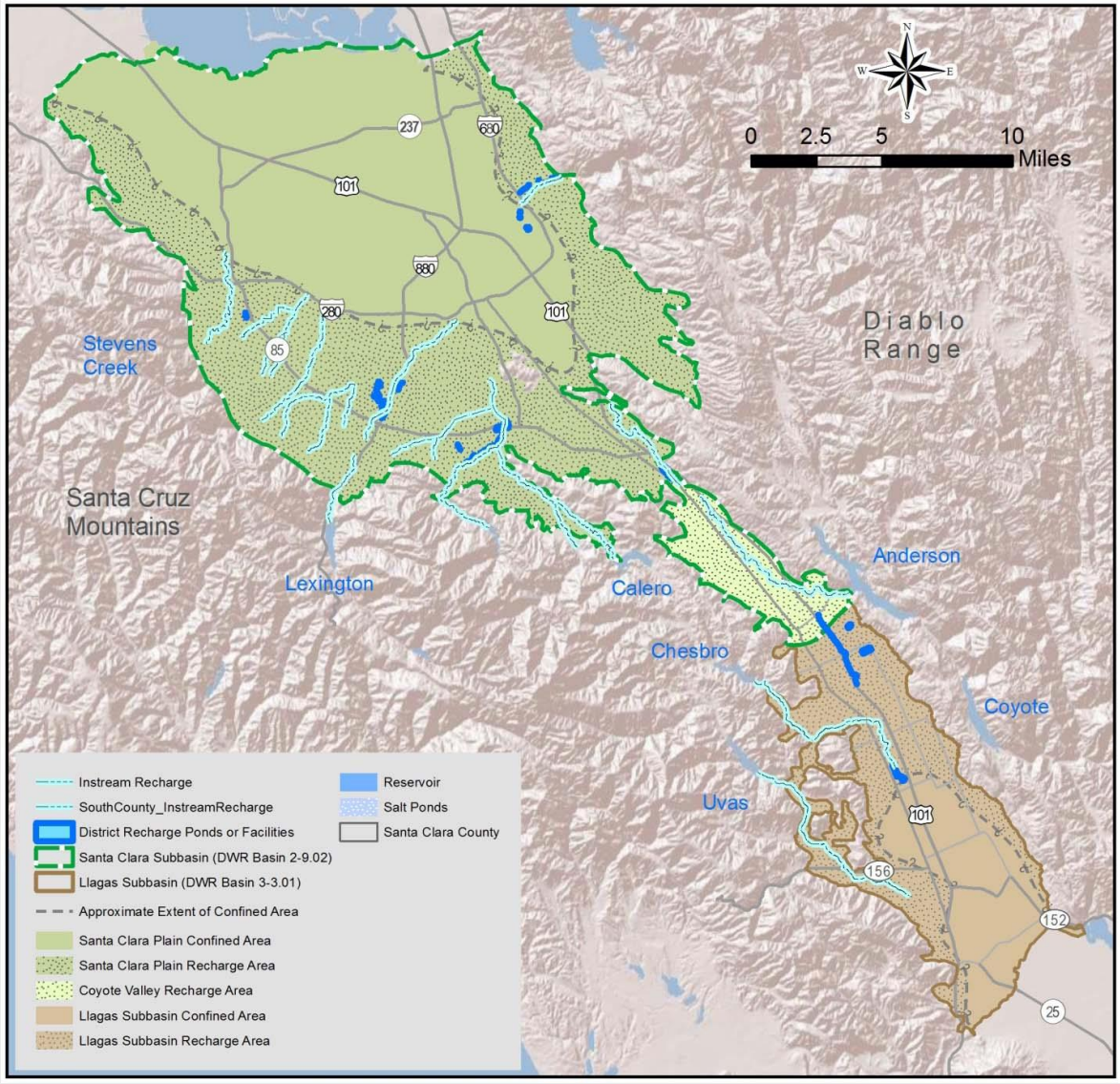
Statewide Wetland Definition and Procedures

Valleywater.org

Santa Clara Valley Water District

Managed Recharge Facilities

SWRCB Public Hearing



- 393 acres of recharge ponds
- 91 miles of controlled in-stream recharge
- 17 miles of canals
- 10 surface water reservoirs

Santa Clara Valley Water District

Groundwater Recharge Ponds

◀ Alamitos, San Jose

McClellan, Cupertino ▶

City Park, San Jose ▶

Santa Clara Valley Water District

Santa Clara Valley Habitat Plan Covered Species


California red-legged frog


California tiger salamander


Western pond turtle


Foothill yellow-legged frog


Tricolored blackbird

Santa Clara Valley Water District

Managed Recharge Facilities O&M

- Dewater
- Clean and groom
- Remove trash and debris
- Repair infrastructure and slopes
- Manage vegetation and burrowing rodents
- Polymer application

Santa Clara Valley Water District

Natural Flood Protection

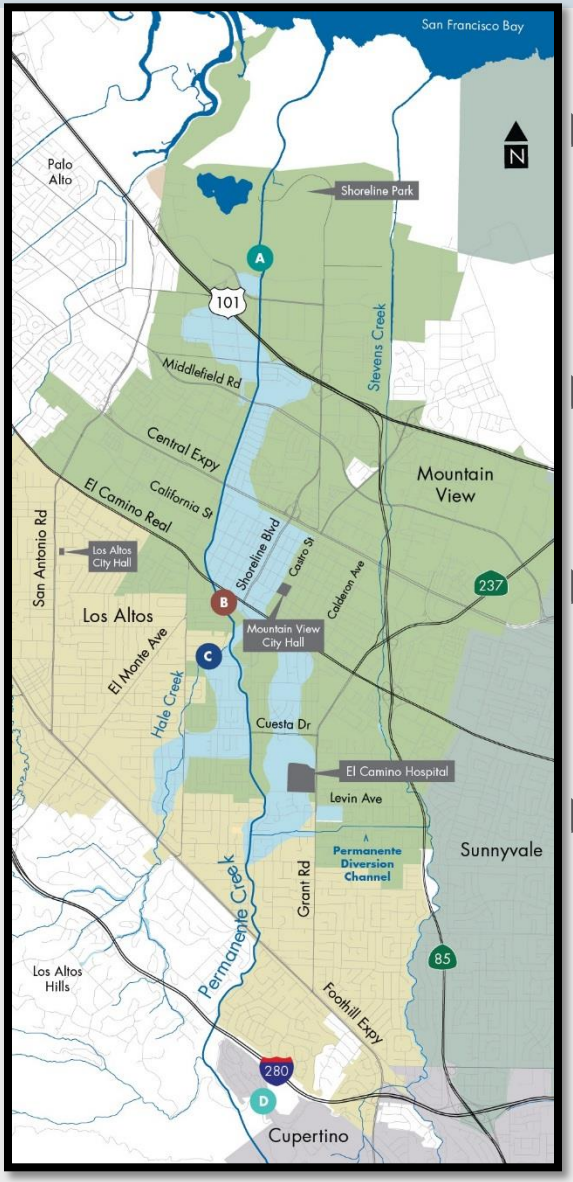
A multi-objective approach to providing environmental quality, community benefit, and protection from creek flooding in a cost-effective manner through integrated planning and management that considers the physical, hydrologic, and ecological functions and processes of streams within the community setting

Santa Clara Valley Water District

Permanente Creek Flood Protection Project

SWRCB Public Hearing

- Watershed-wide, multi-jurisdictional effort spread over 10.6 miles of creek waterways
- Protects 2,200 parcels in Mountain View and Los Altos



- A – Levees and floodwalls
- B – McKelvey Park Flood Detention Facility
- C - Channel widening and deepening
- D – Rancho San Antonio Flood Detention Facility

Santa Clara Valley Water District

Rancho San Antonio Flood Detention Facility

SWRCB Public Hearing

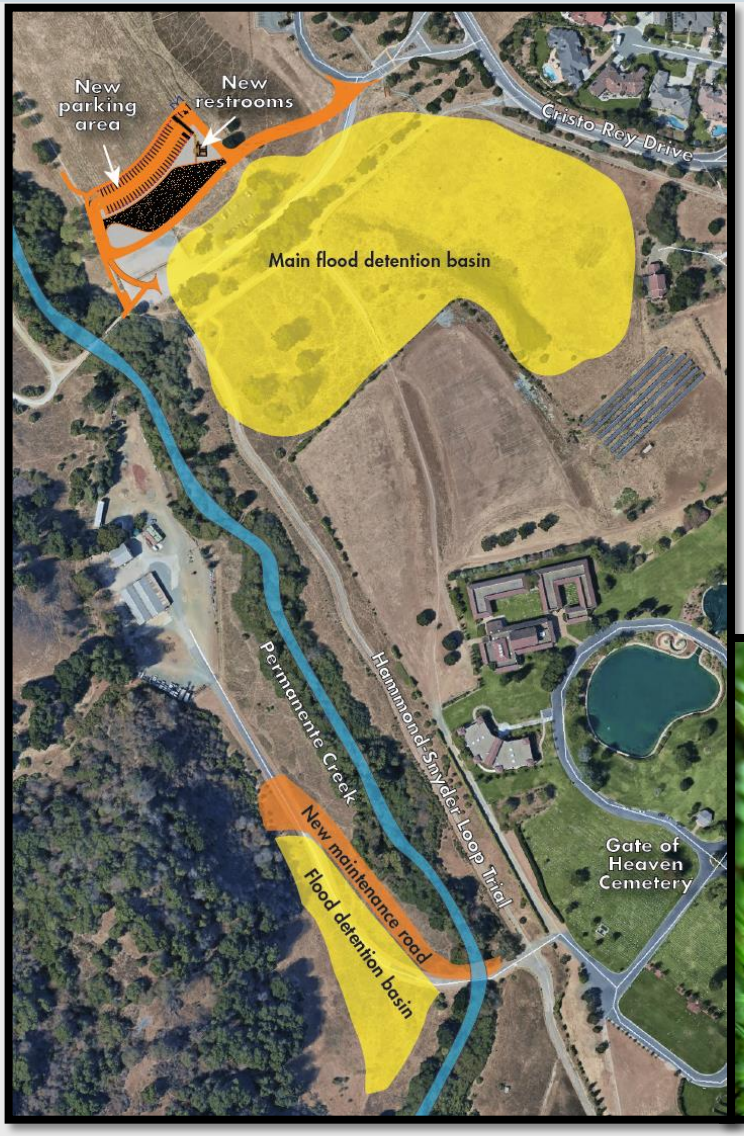
Preconstruction Conditions

Conceptual Basin Design with seasonal wetland floor and oak woodland perimeter

Santa Clara Valley Water District

Rancho San Antonio Detention Facility O&M

SWRCB Public Hearing



- Remove sediment
- Remove trash and debris
- Repair infrastructure and slopes
- Manage vegetation and burrowing rodents

Santa Clara Valley Water District

Case Study: Alternatives Analysis

Permanente Project Permitting Timeline

Application Submitted	USACE LEDPA Determination	RWQCB LEDPA Determination	Certification Issued
Sep 23, 2013	Dec 9, 2013	Mar 11, 2015	Dec 8, 2015

- 15 month delay between federal and state LEDPA determinations

- Primary Issues:
  - Water Board determinations based on potential beneficial uses versus federal determinations based on actual existing conditions
  - Late introduction of previously undisclosed alternative concept
  - Interpretations of feasibility

Santa Clara Valley Water District

Key Considerations

- Fostering consistency among federal and state agencies can be accomplished without expanding the scope of regulation

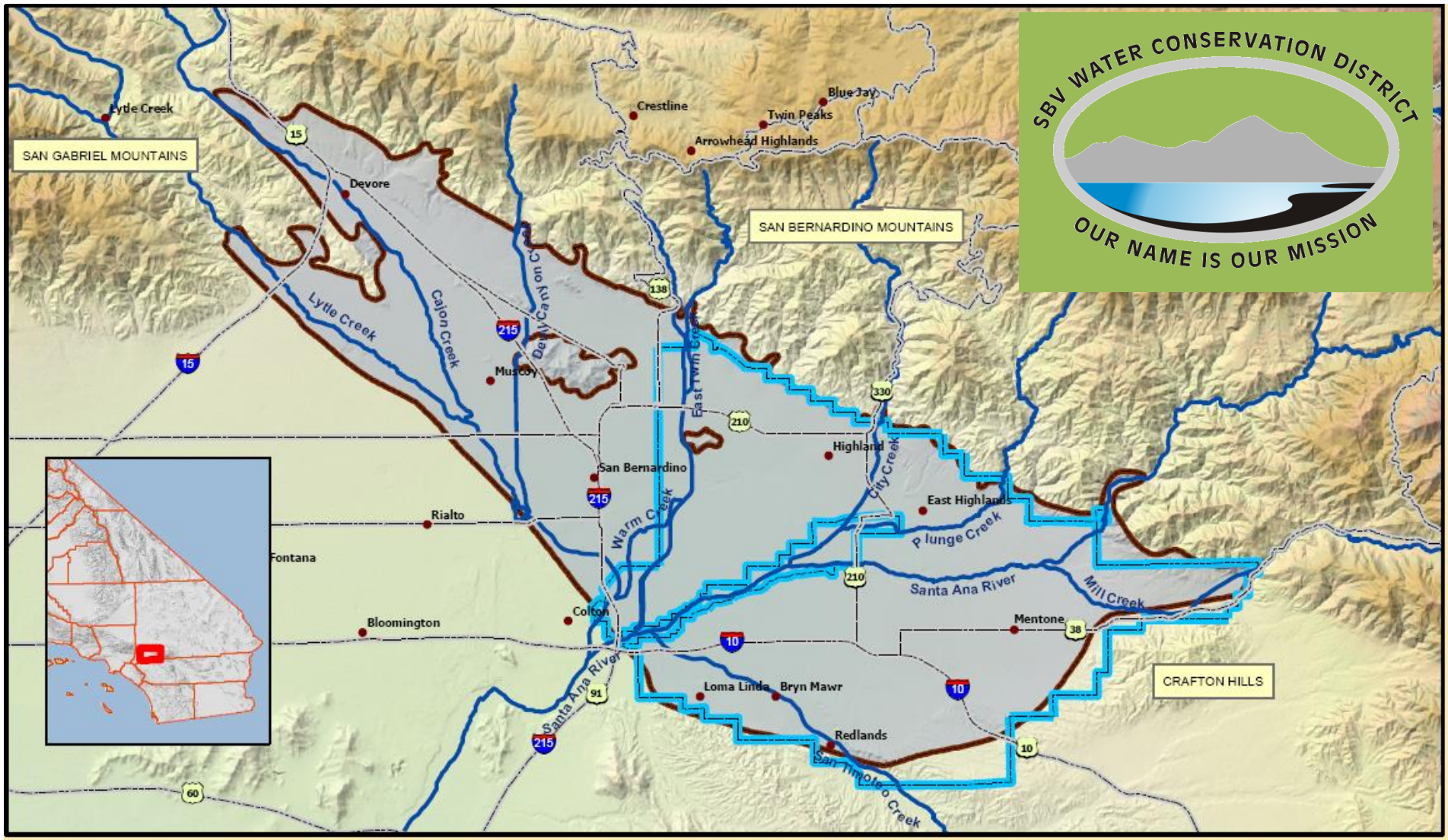
- Additional regulatory burdens are a disincentive to construct, manage, and maintain multi-benefit constructed facilities

- Ramifications of Water Board alternatives analysis process need to be carefully considered

Thank you.

Santa Clara Valley Water District

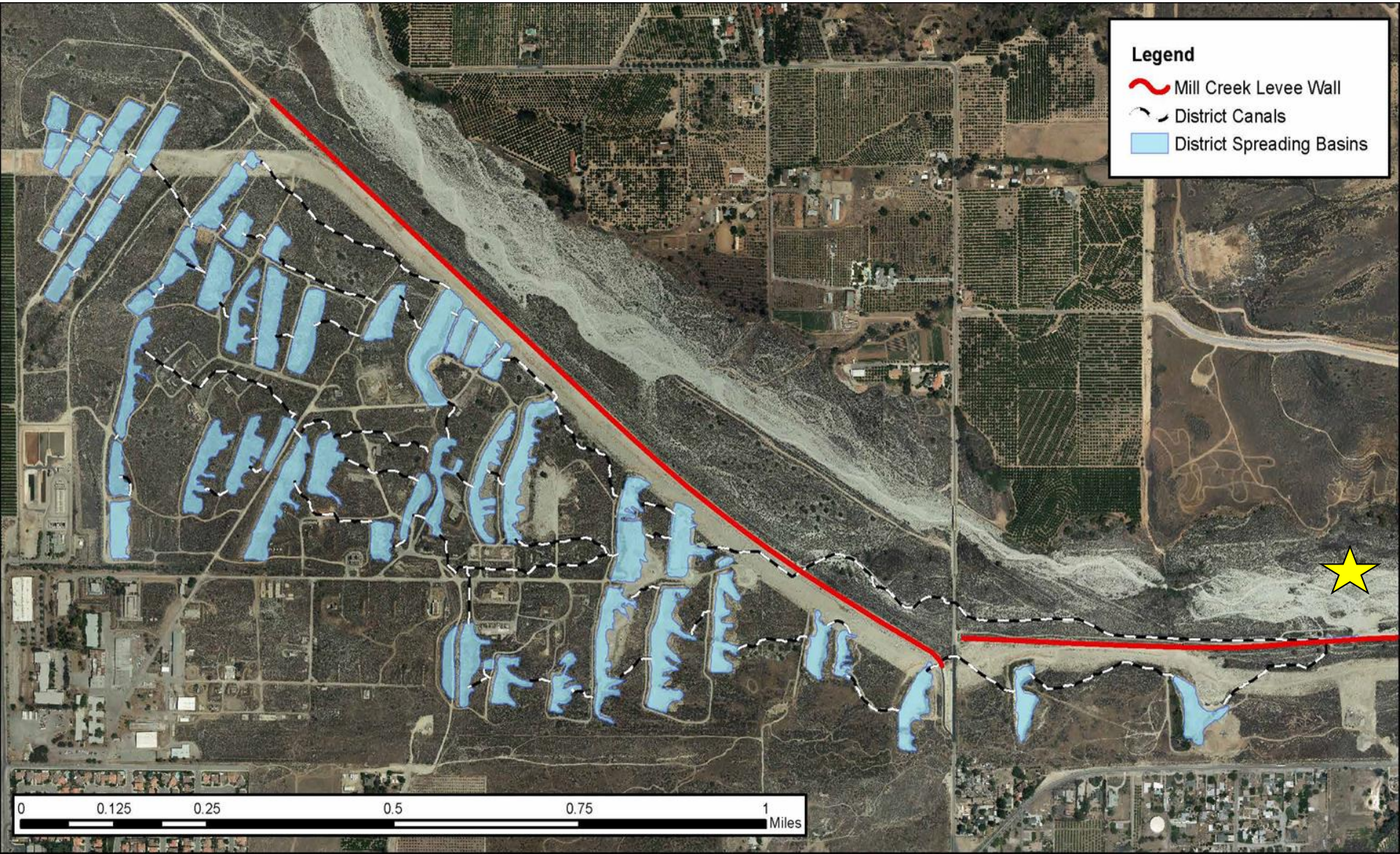
San Bernardino Valley Water Conservation District Recharges the Bunker Hill Groundwater Basin



Permanent Weir and Gates in Santa Ana River Spreading Grounds Dedicated November 1930

Still Working Today

Mill Creek Spreading Grounds



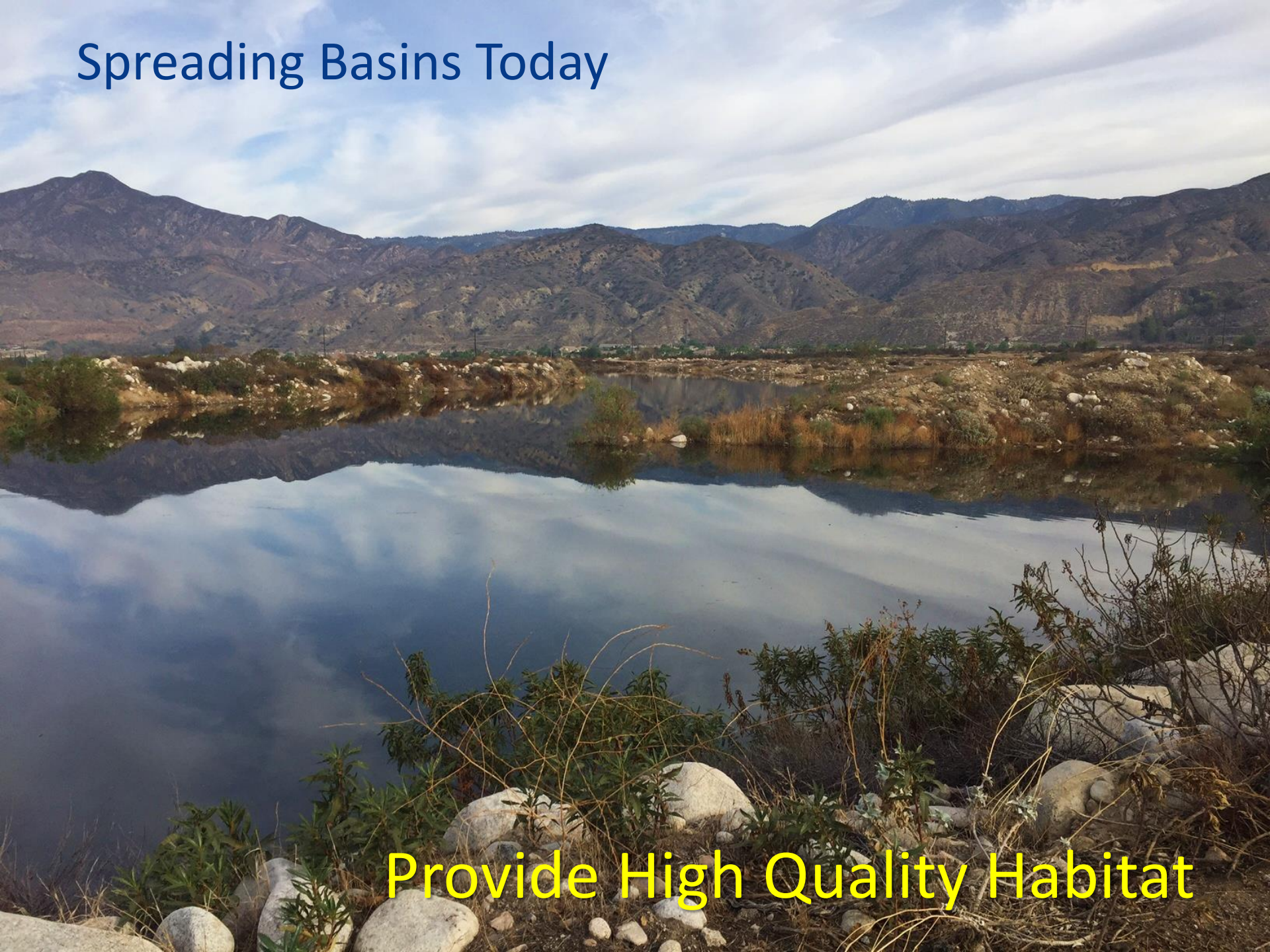
Mill Creek Diversion Structure

Mill Creek Spreading Grounds

- Since 1935 District and predecessors have been recharging very high quality runoff
- Reduces high winter flows and improves groundwater quality for TDS and Nitrate
- Comprised of a diversion two main canals, four sand basins and 51 recharge basins

Spreading Grounds in 1930s

Spreading Basins Today

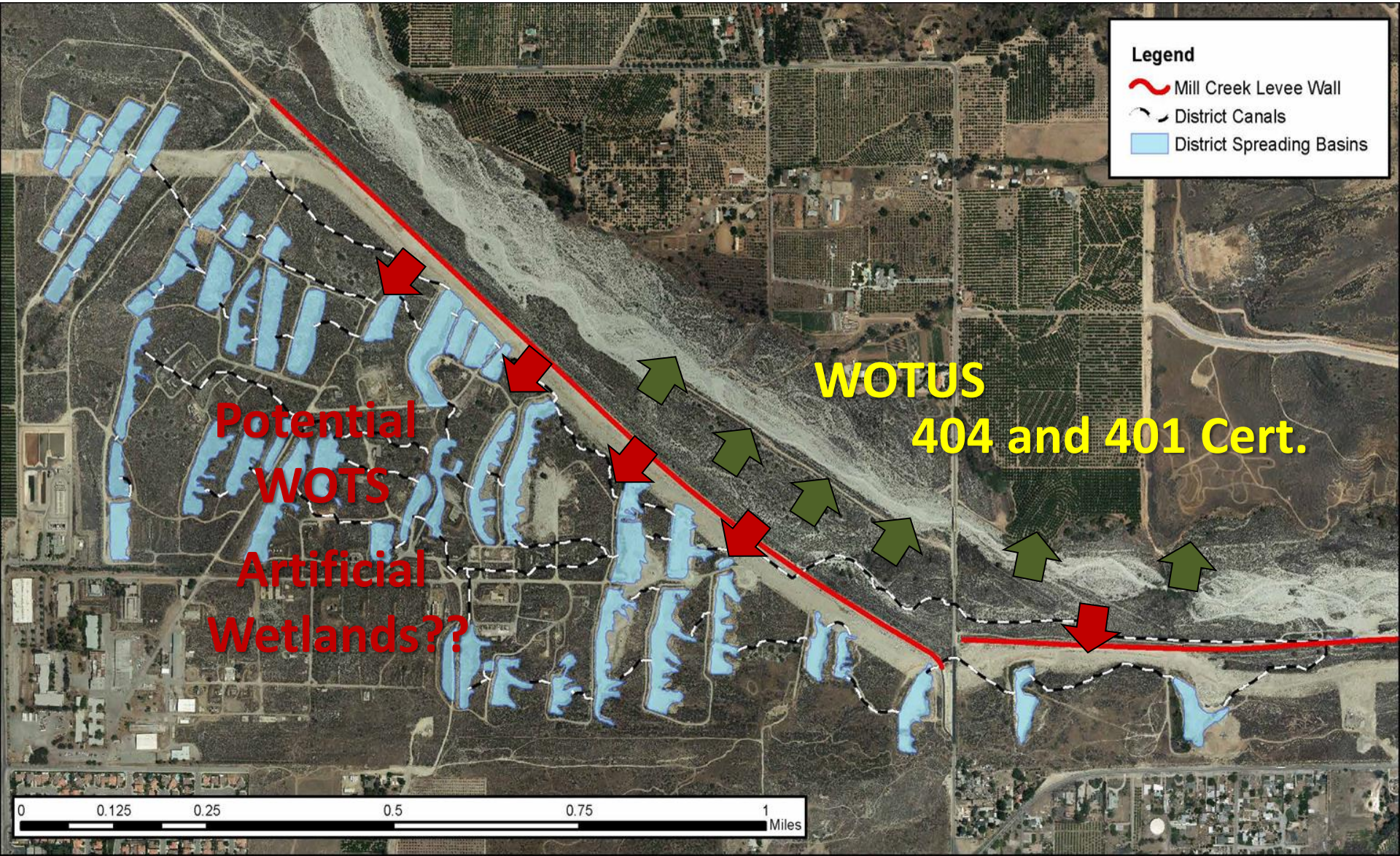


Mill Creek Recharge Basin 3

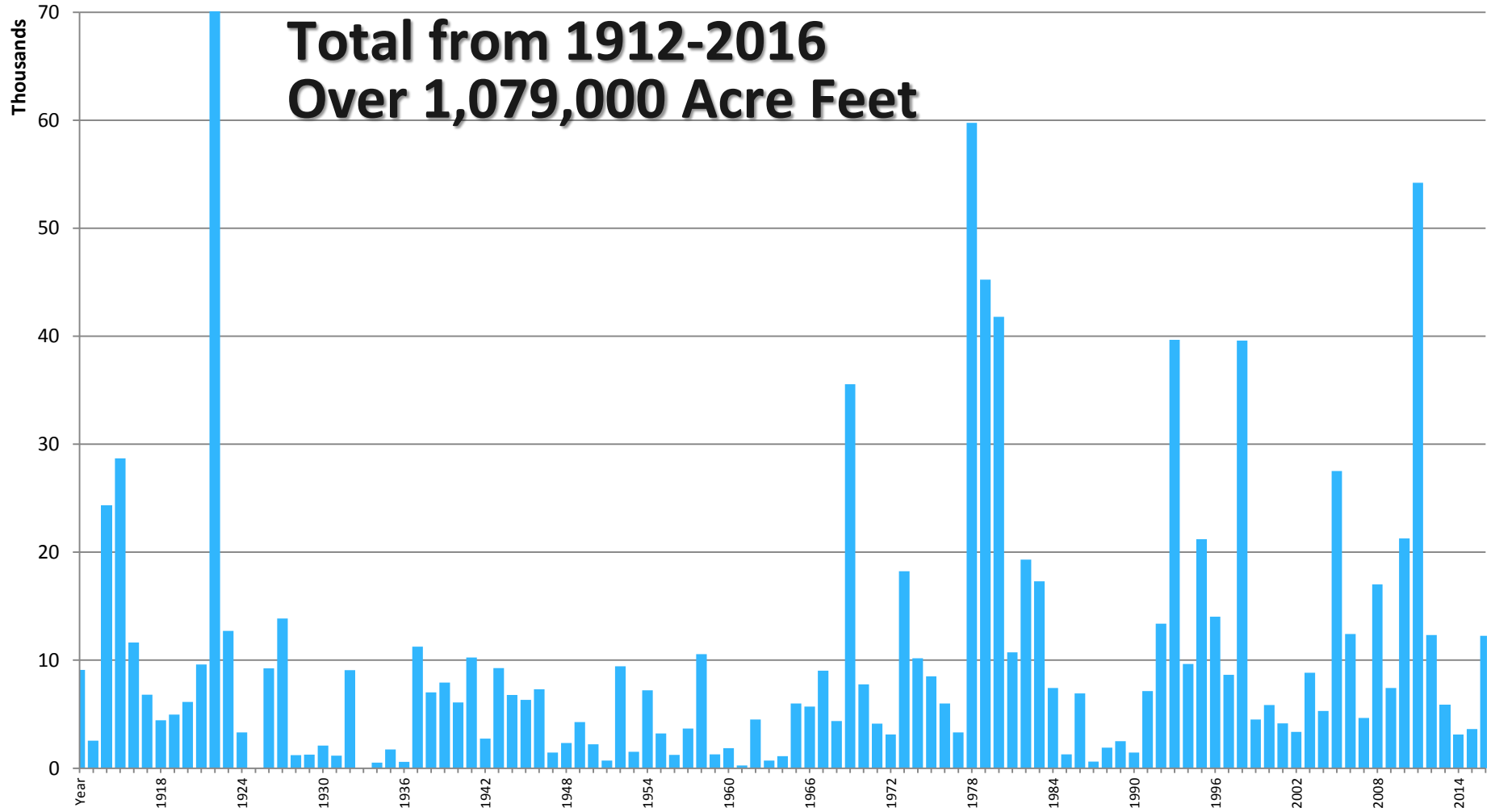
Sand Basins Require Seasonal Cleaning

Recharge Basins Require Less Cleaning

Jurisdictional Delineation



Acre Feet of Conserved Water Recharge to the Bunker Hill Basin



City of San Buenaventura

Ventura Water

Miles P. Hogan
Assistant City Attorney II

Figure 1
AERIAL SHOWING THE CITY OF SAN BUENAVENTURA, VWRF, AND SANTA CLARA RIVER ESTUARY
TREATMENT WETLANDS FEASIBILITY STUDY
CITY OF VENTURA

Tertiary Treated Effluent

Ventura Water
Reclamation Facility

Santa Clara River Estuary

Wildlife / Water Quality Ponds

Three pond, 20-acre system that provides additional treatment to tertiary treated flows before they are discharged to the Santa Clara River Estuary

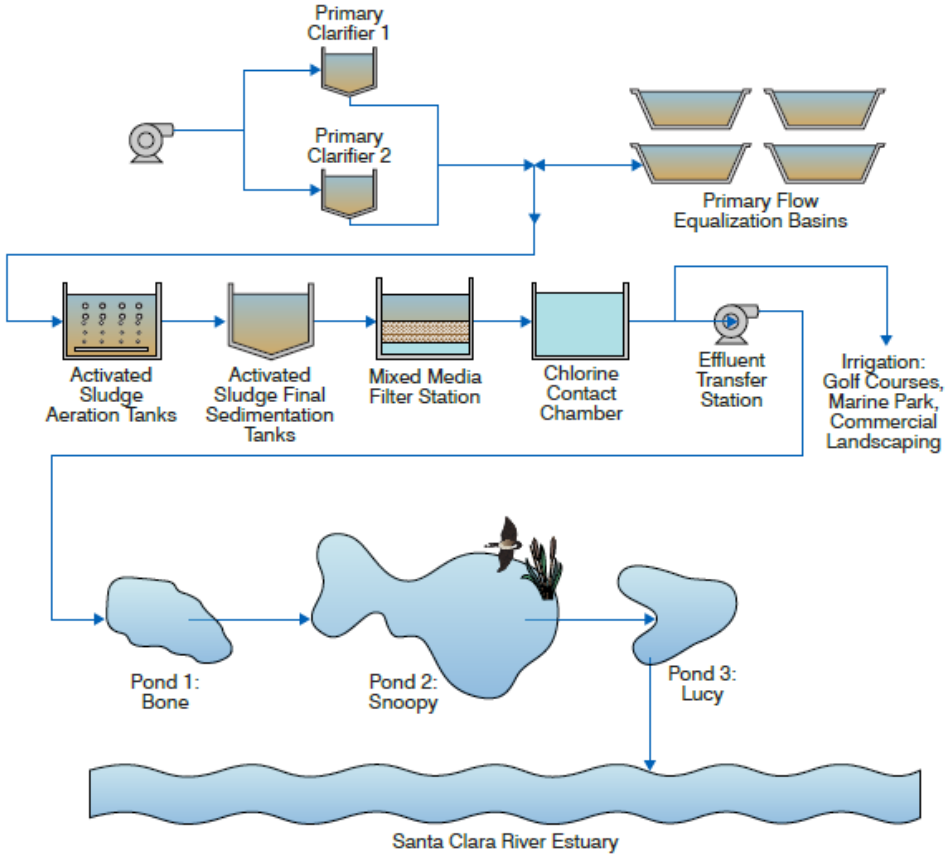


Figure 2
PROCESS FLOW SCHEMATIC OF THE EXISTING TREATMENT PLANT PROCESSES AT VWRF
TREATMENT WETLANDS FEASIBILITY STUDY
CITY OF VENTURA

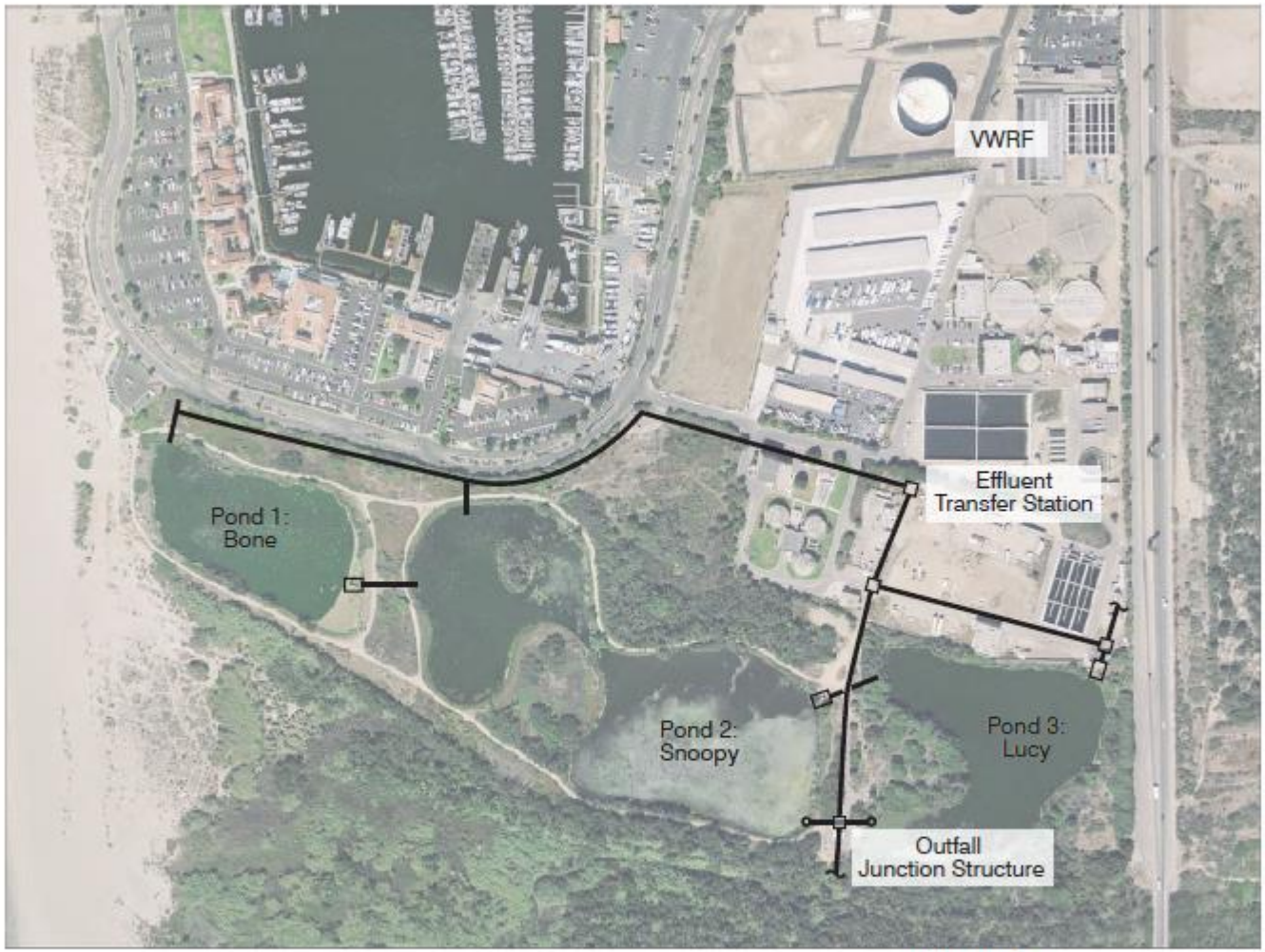


Figure 3
AERIAL SHOWING VWRF, WILDLIFE PONDS, EFFLUENT TRANSFER STATION AND OUTFALL JUNCTION STRUCTURE
TREATMENT WETLANDS FEASIBILITY STUDY
CITY OF VENTURA

Environmental Water Quality and Habitat Benefits

- Habitat for listed and sensitive fish and bird species
- Reductions in metals such as copper, nutrients such as nitrate (NO3), and non-point source pollutants such as Total Suspended Solids (TSS)
- Potential reduction in constituents of emerging concern (CECs) through sorption and biotransformation occurring within the ponds
- Recreational and educational opportunities for natural walking trails and bird observations
- Protection and provision of source water for the Santa Clara River Estuary

Figure 5
AERIAL SHOWING POTENTIAL ONSITE AND OFFSITE TREATMENT WETLAND OPPORTUNITIES FOR CONSIDERATION IN ALTERNATIVE DEVELOPMENT
TREATMENT WETLANDS FEASIBILITY STUDY
CITY OF VENTURA

Contact Information

- Joe McDermott, Acting General Manager
  - jmcdermott@cityofventura.ca.gov
- Gina Dorrington, Wastewater Utility Manager
  - gdorrington@cityofventura.ca.gov
- Miles P. Hogan, Assistant City Attorney II
  - mhogan@cityofventura.ca.gov