**Water Quality Assessment Report Content and Recommended Format**

December 2022

What is A Water Quality Assessment Report and why do we do it?

The primary purpose of the Water Quality Assessment Report (WQAR) is to fulfill the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and provide information, to the extent possible, for the National Pollutant Discharge Elimination System (NPDES) permitting.

This technical study includes a discussion of the proposed project, the general environmental setting of the project area, and the regulatory framework with respect to water quality. It also provides data on surface water and groundwater resources within the project area and their water quality health, describes water quality impairments and beneficial uses, identifies potential water quality impacts/benefits associated with the proposed project, and recommends avoidance and/or minimization measures for potentially adverse impacts. The WQAR does not make conclusions regarding significance of the impacts; the determination of significance will be addressed in the NEPA/CEQA document based on information provided in the WQAR. Information from the WQAR will also be used to prepare the Stormwater Data Report (SWDR).

Deciding whether a Water Quality Assessment Report is needed

Prior to the decision to prepare a WQAR, an initial site assessment should be conducted. It is also advisable to complete the current [Scoping Questionnaire for Water Quality Issues](http://www.dot.ca.gov/hq/env/stormwater/index.htm#sw_scopeques) found on the [SER Forms and Templates page](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#water-quality) as this checklist provides a good early indicator of whether a WQAR will be necessary for NEPA/CEQA compliance. Information requested for the scoping questionnaire is typically needed during the Project Initiation Document (PID) stage of a project, to be used in the Preliminary Environmental Analysis Report (PEAR). It would be premature to prepare a WQAR at the PID stage; however, the water quality background information collected for the PID will be useful to have for inclusion in the WQAR, which, if warranted, is prepared during the Project Approval and Environmental Document (PA&ED) stage.

Projects with minimal water quality impacts would not necessarily warrant preparation of a WQAR; in such cases, a simple technical memo may suffice.

About this Water Quality Assessment Report guidance

With changing stormwater regulations and the increasing inclusion of biological measurements as part of water quality indicators, additional considerations beyond the traditional stormwater NPDES approach are necessary. This guidance reflects not only stormwater issues but also broader water quality issues, particularly as they pertain to guidance for compliance with Section 404(b)(1) of the Clean Water Act.

Section 6 of this template contains references and links that may be helpful in gathering information for the WQAR. It is recognized that any WQAR will likely require more than one individual's input. The project NPDES coordinator, biologist, project engineer, landscape architect, and hydraulics branch staff (or equivalent) may all need to be involved in crafting the assessment for larger projects. Close collaboration between the various functional units will be required for the successful preparation of a WQAR. Because Districts vary in how they are resourced, it is up to each District to determine how best to implement the water quality assessment and which functional unit will take the lead in preparing the report.

The recommended format and content guide may be modified by the preparer, as appropriate, to meet the needs of a specific project. **Not every WQAR will require all of the sub-headers listed below.** The preparer should take into account factors such as the scale and scope of the project, information requirements of the regulatory agency(ies), the existing environmental setting, and the potential impacts to water quality.

Standards used in this template:

Black Text = boilerplate that can be used in the document, as appropriate.

Blue Text = instructions and guidance to be considered and deleted from the final document.

Red Text = instructions to be replaced with text.

Color coding is to assist in instructions only and will be deleted on the final accessible document. Instructions will be prefaced in such a way as to indicate an instruction.

***Note: these introductory guidance pages are to be deleted for the final document.***

Water Quality Assessment Report

[Replace with Project Title]

[*Project Name and County(ies) Name(s)*]

[*General location information*]

[*General location information*]

[*District*]-[*county*]-[*route*]-[*PM*]

[*EA*]/[*PN*]

**[*Month YEAR*]**



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Water Quality Assessment Report

[*Project Name and County(ies) Name(s)*]

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[*General location information*]

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**[*Month YEAR*]**

STATE OF CALIFORNIA

Department of Transportation

Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Name/Title

Phone Number

Office Name

District/Region

Approved By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

District Environmental Branch Chief

Phone Number

Office Name

District/Region

**Water Quality Assessment Report**

[*Project Name and County(ies) Name(s)*]

[*General location information*]

[*General location information*]

[*District*]-[*county*]-[*route*]-[*PM*]

[*EA*]/[*PN*]

**[*Month YEAR*]**

STATE OF CALIFORNIA

Department of Transportation

Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Title

Phone Number

Office Name and address

Agency or Firm Name

Approved By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Professional Content Reviewer, Title

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Office Name

Partner Agency Name

Approved By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Management Content Reviewer, Title

Phone Number

Office Name

Partner Agency Name

This page is used for documents that are not prepared by Caltrans (remove this line on final).

Executive Summary

1. Brief introduction and purpose of the water quality document
2. General project description
3. Summary of existing water quality conditions
4. Summary of potential impacts to water quality
5. Summary of coordination with agencies
6. Summary of water quality associated permits required
7. Summary of Post Construction Control Runoff control requirements (Treatment Best Management Practices/Alternative Compliance)

NOTE: **the term “significant” should not be used** in the water quality technical document. The determination of significance will be addressed in the NEPA/CEQA document. Impacts should be described and quantified (more on this in Section 4).

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ACRONYMS (Edit for Specific Project)

| **Acronym** | **Definition** |
| --- | --- |
| **ADL** | Aerially Deposited Lead |
| **ASBS** | Areas of Special Biological Significance |
| **ATA** | Additional Treatment Area |
| **Basin Plan** | Water Quality Control Plan for the XXXX Region |
| **BMP** | Best Management Practice |
| **Caltrans** | California Department of Transportation |
| **CCC** | California Coastal Commission |
| **CEQA** | California Environmental Quality Act |
| **CFR** | Code of Federal Regulations |
| **CGP** | Construction General Permit |
| **COI** | Change of Information |
| **CWA** | Clean Water Act |
| **DSA** | Disturbed Soil Area |
| **DWP** | District Work Plan |
| **FTC** | Full Trash Capture |
| **LEDPA** | Least Environmentally Damaging Practicable Alternative |
| **MS4** | Municipal Separate Storm Sewer System |
| **NAL** | Numeric Action Level |
| **NEL** | Numeric Effluent Limit |
| **NIS** | New Impervious Surface |
| **NNI** | Net New Impervious |
| **NOI** | Notice of Intent |
| **NOT** | Notice of Termination |
| **NPDES** | National Pollutant Discharge Elimination System |
| **NRCS** | Natural Resources Conservation Services |
| **Ocean Plan** | Water Quality Control Plan for Ocean Waters of California |
| **PA&ED** | Project Approval and Environmental Document |
| **PE** | Project Engineer |
| **PEAR** | Preliminary Environmental Analysis Report |
| **Permit** | Caltrans MS4 Permit |
| **PF** | Project Feature |
| **pH** | Potential of Hydrogen |
| **PID** | Project Initiation Document |
| **PM** | Post Mile |
| **PPDG** | Project Planning and Design Guide |
| **PRD** | Permit Registration Document |
| **Project** | Project Name |
| **PS&E** | Plans, Specifications, and Estimates |
| **QPE** | Qualifying Precipitation Event |
| **QSD** | Qualified Stormwater Developer |
| **QSP** | Qualified Stormwater Practitioner |
| **R factor** | Rainfall-runoff erosivity factor |
| **RIS** | Replaced Impervious Soil Area |
| **RL** | Risk Level |
| **RUSLE** | Revised Universal Soil Loss Equation |
| **RWQCB** | Regional Water Quality Control Board |
| **SER** | Standard Environmental Reference |
| **SHS** | State Highway System |
| **SMARTS** | Stormwater Multiple Application and Report Tracking System |
| **STGA** | Significant Trash Generating Areas |
| **SWMP** | Stormwater Management Plan |
| **SWPPP** | Stormwater Pollution Prevention Plan |
| **SWRCB** | State Water Resources Control Board |
| **TMDL** | Total Maximum Daily Load |
| **U.S. EPA** | United States Environmental Protection Agency |
| **USACE** | United States Army Corps of Engineers |
| **WDID** | Waste Discharge Identification Number |
| **WDR** | Waste Discharge Requirement |
| **WMI** | Watershed Management Initiative |
| **WPCP** | Water Pollution Control Plan (or Program) |
| **WQ** | Water Quality |
| **WQAR** | Water Quality Assessment Report |
| **WQO** | Water Quality Objective |

# INTRODUCTION

## Approach to Water Quality Assessment

The purpose of the Water Quality Assessment Report (WQAR) is to fulfill the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and to provide information for National Pollutant Discharge Elimination System (NPDES) permitting. The document includes a discussion of the proposed project, the general environmental setting of the project area, and the regulatory framework with respect to water quality. It also provides data on surface water and groundwater resources within the project area and the water quality of these waters, describes water quality impairments and beneficial uses, identifies potential water quality impacts/benefits associated with the proposed project, and recommends avoidance and/or minimization measures for potentially adverse impacts.

Overview of the document and the general approach taken for this particular water quality assessment.

## Project Description

* Discuss the scope of the project. The Project Engineer (PE) should have this information.
* Include existing drainage information and the proposed conceptual drainage information and/or plan; cut/fill slope acreages (greater than 2H:1V and greater than 4H:1V); Disturbed Soil Area (DSA), proposed New Impervious Surface (NIS) which includes Net New Impervious (NNI), Replaced Impervious Surface (RIS) and Additional Treatment Area (ATA) associated with each alternative (below).
* A Risk Level Assessment, as prescribed in Construction General Permit (Order 2022-0057-DWQ, approved on September 8, 2022, and effective on September 1, 2023 (hereafter CGP)), should be provided by the Project Engineer. According to the Caltrans Stormwater Quality Handbooks – Project Planning and Design Guide (PPDG), a Risk Level Assessment for a project should begin at the Project Initiation Document (PID) stage and be reevaluated during Project Approval and Environmental Document (PA&ED) and Plans, Specifications, and Estimates (PS&E).
* List Total Maximum Daily Load (TMDL) pollutants in the project limits with waste load reduction requirements listed in Attachment D of the Caltrans MS4 Permit.
* List TMDL pollutants subject to CGP requirements for NAL/NEL sampling when there is a discharge of a non-visible TMDL, listed on Tables H1 to H3 of Attachment H of the 2022 CGP, due to lack of installation of a BMP, failure of a BMP or spill. For non-visible TMDLs, site sampling is needed. This sampling needs to be at the same stage when soil sample is analyzed for Aerially Deposited Lead (ADL).
* List and discuss plan for addressing Significant Trash Generating Areas (STGA).
* List the project features and briefly discuss the standardized measures that will be implemented as part of the project. Cross reference Section 4.2 as appropriate.

### No Project Alternative

Describe the “no build” alternative.” The Project Engineer should provide this information.

### Alternative 1

Describe the “build” alternative 1. The Project Engineer should provide this information.

### Other Alternatives

Add or delete additional Alternative sub-headers, as necessary, and describe as per Alternatives 1 above.

# REGULATORY SETTING

Include information about any additional laws and regulations, such as the Wild and Scenic Rivers Act, the California Coastal Act of 1976, and California Fish and Game Code Section 1602, etc., as applicable to the project.

## Federal Laws and Requirements

### Clean Water Act

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a NPDES permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit program. Important CWA sections are:

* Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
* Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S., to obtain certification from the State that the discharge will comply with other provisions of the act. (Most frequently required in tandem with a Section 404 permit request, see below).
* Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. The Federal Environmental Protection Agency delegated to the California State Water Resources Control Board (SWRCB) the implementation and administration of the NPDES program in California. The SWRCB established nine Regional Water Quality Control Boards (RWQCBs). The SWRCB enacts and enforces the Federal NPDES program and all water quality programs and regulations that cross Regional boundaries. The nine RWQCBs enact, administer and enforce all programs, including NPDES permitting, within their jurisdictional boundaries. Section 402(p) requires permits for discharges of stormwater from industrial, construction, and Municipal Separate Storm Sewer Systems (MS4s).
* Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S, including wetlands. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are also two types of Individual permits: Standard Individual permit and Letter of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE’s Individual permits. For Standard Individual permit, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations (CFR) 40 Part 230) and whether permit approval is in the public interest. The 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only when there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have less effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures have been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

## State Laws and Requirements

### Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the State. It predates the CWA and regulates discharges to waters of the State. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this definition is broader than the CWA definition of “pollutant”. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards as required by the CWA and regulating discharges to protect beneficial uses of water bodies. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set standards necessary to protect these uses. Consequently, the water quality standards developed for particular water body segments are based on the designated use and vary depending on such use. Water body segments that fail to meet standards for specific pollutants are included in a Statewide List in accordance with CWA Section 303(d). If a Regional Board determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-source point controls (NPDES permits or Waste Discharge Requirements), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed. The SWRCB implemented the requirements of CWA Section 303(d) through Attachment D of the Caltrans Statewide MS4 (Order No. 2022-XXXX-DWQ NPDES No. CAS000003), as it includes specific TMDLs for which Caltrans is named a responsible party.

### State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB adjudicates water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

### National Pollutant Discharge Elimination System (NPDES) Program

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. The U.S. EPA defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that are designed or used for collecting or conveying stormwater.” The SWRCB has identified the California Department of Transportation (Caltrans) as an owner/operator of an MS4 pursuant to federal regulations. Caltrans’ MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

#### Municipal Separate Storm Sewer System (MS4)

The text below is applicable only to projects on the State Highway System (SHS). For local agency transportation projects off the SHS, the local agency (as owner of the land where the construction activity is occurring) is responsible for obtaining the NPDES permit if required and for signing certification statements (when necessary). Local agencies should contact the appropriate RWQCB to determine what permits are required for their construction activity. The local agency is also responsible for ensuring that all permit conditions are included in the construction contract and fully implemented in the field.

Caltrans’ MS4 Permit, NPDES No. CAS000003, SWRCB Order No. 2022-XXXX-DWQ (adopted on June 22, 2022, and effective on January 1, 2023) (Permit) regulates stormwater and non-stormwater discharges from Caltrans properties and facilities associated with operation and maintenance of the State highway system. It contains four basic requirements:

1. Caltrans must comply with the requirements of the CGP (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control stormwater and non-stormwater discharges; and
3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs) and other measures deemed necessary by the SWRCB and/or other agency having authority reviewing the stormwater component of the project.
4. Caltrans shall comply with the prohibition of discharge of trash to surface waters of the State or deposition of trash where it may be discharged into surface waters of the State through compliance with the requirements of Attachment E of the Permit. With a demonstration of full compliance by December 2, 2030.

Caltrans’ 2022 MS4 Permit incorporated the requirements of the State Water Board Resolution 2015-0019, which amended the Water Quality Control Plan for Ocean Waters of California and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California to include trash-related requirements, referred to in the Order as the “Trash Provisions.” Implementation of the Trash Provisions includes the following:

* Caltrans shall install, operate, and maintain any combination of full capture systems, other treatment controls, and/or institutional controls for all storm drains that capture runoff from Significant Trash Generating Areas (where trash accumulates in substantial amounts as defined in section E4). Caltrans shall develop and implement monitoring plans that demonstrate that such combinations achieve full capture system equivalency.
* Caltrans shall coordinate efforts with municipal separate storm sewer system permittees subject to NPDES permits that implement the Trash Provisions, to install, operate, and maintain full capture systems, other treatment controls, and/or institutional controls in Significant Trash Generating Areas and/or Priority Land Uses.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan (SWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes Caltrans’ stormwater management program and the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

At the time of the posting of this template, the SWMP is being updated to meet the requirements of the 2022 Caltrans MS4 and CGP permits. Until the new SWMP is posted, revise the last sentence to “At the time of the preparation of this WQAR, the SWMP is being updated to meet the requirements of the adopted 2022 Caltrans MS4 and CGP permits. The project will follow the guidelines in 2016 SWMP except where the 2022 permit requirements differ from the 2016 SWMP.”

#### Construction General Permit

The Construction General Permit (NPDES No. CAS000002, SWRCB Order No. 2022-0057-DWQ, was adopted on September 8, 2022) and effective on September 1, 2023. The permit regulates stormwater discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development.

* For all projects subject to the CGP, the applicant is required to hire a Qualified Stormwater Pollution Prevention Plan (SWPPP) Developer (QSD) to develop and implement an effective SWPPP. A Qualified SWPP Practitioner (QSP) may be hired as well to assist in field work. All Project Registration Documents (PRDs), including the SWPPP, Risk Level (RL) Determinations, Site map and post-construction treatment documents are required to be uploaded into the SWRCB’s on-line Stormwater Multiple Application and Report Tracking System (SMARTS). A Waste discharge Identification (WDID) number will be issued within 10 business days after the State Waterboard receives a complete Notice of Intent (NOI) package.
* The 2022 CGP requires post-construction treatment permit registration documents to be submitted in SMARTS with the NOI to include: (1) An attachment or web-source containing the NPDES MS4 post-construction requirements and (2) the post-construction plans and calculations (Preliminary post-construction plans and calculations may be submitted as a Permit Registration Document, as long as the approved plans and calculations are submitted within 14 days of approval by the municipal stormwater permittee, through a Change of Information (COI) in SMARTS). Additionally, a COI in SMARTS must be submitted for any revisions to post-construction plans and calculations prior to submitting the Notice of Termination (NOT).

##### Waiver From Construction General Permit

Projects that disturb over 1.0 acre but less than 5 acres of soil, may qualify for waiver of CGP coverage. This occurs whenever the Rainfall Erosivity, (R) in the Revised Universal Soil Loss Equation (RUSLE) is less than 5. When the R factor is below the numeric value of 5, projects can be waived from coverage under the CGP, and are instead covered by the Caltrans Statewide MS4 permit. Refer to the CGP, Attachment D1, Risk Determination Worksheet of the CGP, link provided in Section 6.

In accordance with the SWMP, a Water Pollution Control Plan (WPCP) is necessary for construction of a Caltrans project not covered by the CGP.

Construction activity that results in soil disturbances of less than one acre is subject to this CGP if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop a SWPPP, to implement soil erosion and pollution prevention control measures, and to obtain coverage under the CGP.

##### Risk Level Inspection and Sampling Requirements

The CGP contains a risk-based permitting approach by establishing three levels of risk possible for a construction site. Risk levels are determined during the planning, design, and construction phases, and are based on project risk of generating sediments and receiving water risk of becoming impaired. Requirements apply according to the Risk Level (RL) determined, with additional monitoring and reporting requirements for higher risk projects with detailed requirements listed in Attachment D of the CGP. Requirements include:

* Visual inspections weekly, prior to Qualifying Precipitation Events (QPEs), during QPEs (every 24 hours) and post QPEs. A qualifying Storm Event (QPE) is defined as a forecasted 50% probability of precipitation of 0.5” or more within a 24-hour period and continues on subsequent 24-hour periods when 0.25 inches or more is forecast.
* RL 2 and 3 projects have sampling requirement for pH and Turbidity.
* Additionally, sampling for Numeric Action Levels (NALs) and Numeric Effluent Limits (NELs) is required for all risk level projects for TMDL-related non-visible pollutants listed in Attachment H of the CGP, if there is a discharge due to failure to implement a BMP, a container spill or leak, or a BMP breach or malfunction.

Note revisions from the 2009 to the 2022 CGP include elimination of rain event action plans and biological assessments; changes to definition of a qualifying precipitation event and sampling requirements including the addition of TMDL NALs and NELs; refer to Attachments D and H of the 2022 CGP for details.

#### California Ocean Plan (Include section if applicable)

This Project discharges to coastal watersheds within one mile of the Pacific Ocean, and, as such, the Project is subject to the [Water Quality Control Plan for Ocean Waters of California](https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/oceanplan2019.pdf). Goals and policies, beneficial uses, and water quality objectives that apply to the Pacific Ocean are contained in the Ocean Plan.

The Ocean Plan also includes implementation provisions for Areas of Special Biological Significance (ASBS) designated by the SWRCB as requiring special protection of species or biological communities to the extent that maintenance of natural water quality is assured. The implementation provisions are as follows:

1. Waste shall not be discharged to areas designated as ASBS. Discharges shall be located at a sufficient distance from such designated areas to assure maintenance of natural water quality condition in these areas.
2. RWCQBs may approve waste discharge requirements and recommend certification for limited-term (i.e., weeks or months) activities in ASBS. Limited-term activities include activities such as maintenance/repair of existing boat facilities, restoration of sea walls, repair of existing stormwater pipes, and replacement/repair of existing bridges. Limited-term activities may result in temporary and short-term changes in existing water quality. Water quality degradation shall be limited to the shortest possible time. The activities must not permanently degrade water quality or result in water quality lower than that necessary to protect existing uses, and all practical means of minimizing such degradation shall be implemented.

### Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with State water quality standards. The most common federal permit triggering 401 Certification is a CWA Section 404 permit, issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may prescribe a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act). WDRs may specify the inclusion of additional project features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

### California Coastal Commission (Include if applicable)

The California Coastal Commission (CCC) plans and regulates the use of land and water in the coastal zone. The CCC’s planning and regulatory responsibilities fall under the California Coastal Act, which mandates the protection of public access and recreation along the coast as well as the protection of coastal habitats and other sensitive resources and provides priority visitor-serving and coastal-dependent or coastal-related development while simultaneously minimizing risks from coastal hazards.

The CCC and local governments (through their Local Coastal Programs or LCPs) have jurisdiction in the Coastal Zone to protect water quality when permitting new development including transportation projects that could have water quality impacts. The California Coastal Act Section 30601 states that, prior to the certification of the local coastal program and, where applicable, in addition to a permit from the local government pursuant to subdivision (b) or (d) of Section 30600, a coastal development permit shall be obtained from the CCC for any of the following:

1. Developments between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tide line of the sea where there is no beach, whichever is the greatest distance.
2. Developments not included within paragraph (1) located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream or within 300 feet of the top of the seaward face of any coastal bluff.
3. Any development which constitutes a major public works project or a major energy facility.

With respect to water, relevant sections of the Coastal Act (Sections 30250, 30254, and 30412) address development and coordination with the Water Boards directly. Specifically, Water Boards have primary responsibility for the coordination and control of water quality, and the Coastal Commission may not take actions that are in conflict with determinations of the Water Boards related to water quality or the administration of water rights. However, the Coastal Commission and local governments, through their LCPs, otherwise retain their control over development pursuant to the Coastal Act, including by ensuring that development does not harm water quality. The main water quality protection policy of the Coastal Act Section 30231 is stated here:

“The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.”

Notably, this goal is consistent with the goal of the NPDES Program to improve water quality, including by limiting and monitoring discharges.

It should be noted, per Public Resources Code 30412 “… (b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission [California Coastal Commission] shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.” However, the Coastal Commission and local governments, through their LCPs, otherwise retain control over development pursuant to the Coastal Act, including by ensuring that development does not harm water quality as articulated in PRC Section 30231.

## Regional and Local Requirements

### Regional Water Quality Control Board (RWQCB) Basin Plan

Summarize relevant sections of the appropriate Regional Water Quality Control Board Basin Plan. Include Individual Basin Plan(s) and Municipal Separate Storm Sewer Systems (MS4s).

Reference relevant requirements of the local agency’s NPDES permit(s), Water Quality Management Plans, and the CGP requirements. Be sure to include anti-degradation rules for federal and state waters of high quality (note: the anti-degradation policy applies to all groundwater that is potentially useable for drinking water).

# AFFECTED ENVIRONMENT

This section should provide an overview of the general environmental setting, including population (include any equity or environmental justice issues, consult with the Environmental Generalist/Coordinator) and land use (when 404(b)(1) is triggered), topography, hydrology, geology/soils, and biological communities as applicable. DO NOT discuss potential environmental consequence in this section (See Section 4 for further instruction).

## General Environmental Setting

* Description of the geography, topography and receiving water bodies, groundwater conditions, and major aquifers, high risk receiving water bodies and drinking water sources within the project area to provide overall context.
* Identify wellhead protection areas, if any.
* When 404(b)(1) is triggered, define water quality and its characteristics, including its biological, physical/chemical, and human use constituents (40 CFR § 230).

### Population and Land Use

Include information about parks, wildlife refuges, ecological reserves, etc., since changes to water quality might affect certain land uses (the project Environmental Generalist/Coordinator should have this information).

### Topography

Describe the general topography of the project area. Identify steep slopes and existing slopes prone to erosion listed in the District Work Plan (DWP) which might be affected by construction of the project (i.e., deep cut or high embankment).

### Hydrology

#### Regional Hydrology

#### Local Hydrology

##### Precipitation and Climate

##### Surface Water

Describe characteristics and locations. Summarize water quality objectives and beneficial uses for potentially affected surface waters. Describe and list aquatic species and/or aquatic habitat (including wetlands) resources supporting any listed species that have been identified in potentially affected surface waters and that could be affected by water quality-related impact of the project, if any.

##### Total Maximum Daily Loads (TMDL)

Refer to Attachment D of the Caltrans Statewide MS4 NPDES Permit to determine if Caltrans is identified as a responsible party for a TMDL pollutant in the project limits and the compliance requirements. You may choose to present this information as a table. Include summaries of analyses and consultations with federal, state, and/or local agencies responsible for water quality. Include sufficient information to describe the ambient conditions of streams and water bodies that are likely to be impacted. Existing data, where available, should be used to describe ambient conditions, and the inclusion of water quality data spanning several years is encouraged to reflect trends. Information from entities outside Caltrans may be used and qualified, if and when necessary, for this analysis.

List TMDLs subject to the CGP Non-Visible Pollutant Monitoring Requirements. See Attachment H, Tables H-1, 2 & 3 of the 2022 CGP for TMDL pollutants subject to NEL sampling requirements in the event the pollutants are discharged due to failure to implement BMPs, a container spill or leak, or a BMP breach, failure, or malfunction.

##### Areas of Special Biological Significance (ASBS)

List Areas of Special Biological Significance, pollutants and monitoring results and treatment requirements (if any). If not applicable, state not applicable. Refer to Section C4 of the 2022 Caltrans MS4 permit, link provided in Section 6.

##### Floodplains

Identify if there is any floodplain within or adjacent to the project. Provide information on current or future flood prevention projects proposed by others (if applicable).

##### Municipal Supply

Describe drinking water and water recharge facilities

#### Groundwater Hydrology

Characterize quality, location, depth, etc. Summarize water quality objectives and beneficial uses of potentially impacted ground waters, if any.

### Geology/Soils

“Erosion potential” may be generalized information based on soil type, using a geotechnical report, talking with the PE and/or Maintenance, and/or reviewing the pertinent U.S. Department of Agriculture Web Soil Survey for the project area.

### Biological Communities

#### Aquatic Habitat

If applicable, include any wildlife and wildlife passage issues related to water conveyance and water quality in each of the following categories.

##### Special Status Species

##### Stream/Riparian Habitats

##### Wetlands

##### Fish Passage

## Water Quality Objectives/Standards and Beneficial Uses

### Surface Waters

Discuss watersheds, beneficial uses, and water quality objectives, reference the regional board basin plans.

### List of Impaired Waters

Include Impaired water bodies from the 303(d) list and/or TMDLs within the project limits.

### Groundwater

List beneficial uses including groundwater re-charge.

# ENVIRONMENTAL CONSEQUENCES

## Introduction

This section should provide an overview of the proposed conceptual stormwater drainage system, including post-construction BMPs, the use of any existing system, and any proposed Low-Impact Development (LID) concepts. Impact to water quality can be temporary and/or long-term effect. Generally, temporary impact applies to the construction phase of a project. Projects involving 1.0 acre or more of Disturbed Soil Area (DSA) soil are required to obtain coverage under Construction General NPDES Permit Number CAS000002 (CGP). Projects disturbing less than 1.0 acre are covered by Caltrans Statewide Municipal Separate Storm Sewer System (MS4) NPDES Permit Number CAS000003 (Caltrans’ Statewide MS4 NPDES). Long-term impact is usually caused by addition of NIS (see instruction in Section 1.2 of this template). Caltrans projects are not subject to CGP Post Construction Treatment Requirements. Instead, Caltrans projects that create one 10,000 square foot (SF) or more of NIS are subject to ‘Post-Construction Treatment control’ requirements of Caltrans’ Statewide MS4 NPDES Permit Number CAS000003.

## Project Features/Standardized Measures

Include a discussion of the project’s features and standardized measures if not included in the project description. See the [Mitigation Under CEQA Guidance](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#ceqa) for additional information. Sample language is provided below:

The following project features/standardized measures implemented by the project to address permit requirements will minimize temporary or permanent water quality (WQ) impacts created by the project. These measures are taken into consideration prior to determining project impacts:

**PF-WQ-1** The project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the State of California, Department of Transportation, Order No. 2022-XXXX-DWQ, NPDES No. CAS000003 and any subsequent permits in effect at the time of construction.

**PF-WQ-2** The project will comply with the provisions of the NPDES Construction General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2022-0057-DWQ, NPDES No. CAS000002 and any subsequent permits in effect at the time of construction.

**PF-WQ-3** The project will comply with the Construction General Permit by preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP or WPCP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the Stormwater Quality Handbooks: Construction Site Best Management Practices Manual to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.

**PF-WQ-4** Design Pollution Prevention Best Management Practices (BMPs) will be implemented such as preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes, and swales, over side drains, flared end sections, and outlet protection/velocity dissipation devices.

## Potential Impacts to Water Quality

This discussion should examine the biological, physical/chemical, and human use constituents when determining whether or not the discharge of stormwater from the proposed facility/activity will cause or contribute to the violation (i.e., be unable to meet) of water quality standards or water quality objectives and will, therefore, have the potential to affect the beneficial uses of the water body. Stormwater runoff from highway facilities should be characterized (use monitoring data if available). Current Caltrans MS4 Permit mandates that a Rapid Stability Assessment (RSA) be conducted during planning and design for all projects that will include 10,000 SF or more of new impervious surface and for which any new impervious portion of the project drains to a stream crossing located within the project limits. The Project Engineer and/or District Hydraulic/Stormwater Design should be able to provide project specific RSA information.

It will be necessary to work with project biologists, hydrologists, NPDES coordinators, environmental generalist/coordinators, and possibly other functional staff to collect the pertinent information. According to 40 CFR § 230 et seq., impacts are identified as described below. The following Sections 4.3.1 – 4.3.3 are applicable when 404(b)(1) is triggered**.**

### Anticipated changes to the Physical/Chemical Characteristics of the Aquatic Environment

#### Substrate

#### Currents, Circulation or Drainage Patterns

In addition to existing drainage patterns, this section should address changes to flow, volume, rate, depth, and seasonal changes.

#### Suspended Particulates (Turbidity)

#### Oil Grease and Chemical Pollutants

#### Includes metals and pesticides

#### Temperature, Oxygen Depletion and Other Parameters

#### Includes litter

#### Flood Control Functions

#### Storm, Wave and Erosion Buffers

Wetlands may serve as buffer zones, shielding upland areas from wave actions, storm damage, and erosion, per 40 CFR § 230.41.

#### Erosion and Accretion Patterns

#### Aquifer Recharge/Groundwater

#### Baseflow

### Anticipated Changes to the Biological Characteristics of the Aquatic Environment

#### Special Aquatic Sites

In addition to wetlands, special aquatic sites include sanctuaries and refuges, mudflats, vegetated shallows, coral reefs, and riffle and pool complexes. See 40 CFR Subpart E § 230.40-45.

#### Habitat for Fish and Other Aquatic Organisms

##### Fish Passage (Beneficial Uses)

#### Wildlife Habitat

##### Wildlife Passage (Beneficial Uses)

#### Endangered or Threatened Species

#### Invasive Species

### Anticipated Changes to the Human Use Characteristics of the Aquatic Environment

#### Existing and Potential Water Supplies; Water Conservation

#### Recreational or Commercial Fisheries

#### Other Water Related Recreation

#### Aesthetics of the Aquatic Ecosystem

#### Parks, National and Historic Monuments, National Seashores, Wild and Scenic Rivers, Wilderness Areas, etc.

#### Traffic/Transportation Patterns

#### Energy Consumption of Generation

#### Navigation

#### Safety

### Temporary Impacts to Water Quality

#### No Build Alternative

#### Build Alternative(s)

### Long-term Impacts During Operation and Maintenance

Cite potential pollutant sources (oil, grease, fuel, lubricant, metals, and chemicals) as well as sediments, floating materials, turbidity, toxic materials, temperature, etc.

#### No Build Alternative

#### Build Alternative(s)

## Impact Assessment Methodology

Assess and summarize common and unique potential impacts of each alternative, including construction (short-term) and operation/maintenance (long-term) impacts.

## Cumulative Impacts

Discuss the addition of impervious surface in each watershed and the impacts of promoting further development in a watershed, if applicable. Other potential cumulative impacts could include temperature, nutrients, litter, invasive species, etc. You may want to refer to the [RWQCB Watershed Management Initiative (WMI)](https://www.waterboards.ca.gov/water_issues/programs/watershed/).

# AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

List and discuss water quality measures, including recommended avoidance, minimization, and/or mitigation measures for construction, and for operation and maintenance. Do not include standardized measures which are considered to be part of the project or project features in this discussion. These features should have already been taken into account in the “Environmental Consequences” discussion. For additional information, please refer to the [Mitigation Under CEQA Guidance](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#ceqa) and the Environmental Document Annotated Outlines. Numbering the measures and giving them a distinct name (WQ-1, WQ-2, WQ-3, etc.) facilitates tracking and will help ensure inclusion in the Environmental Commitments Record as well as subsequent follow-through in construction.

# REFERENCES

The following references and links may help with gathering information for WQARs:

* [Caltrans Division of Design Stormwater homepage](https://dot.ca.gov/programs/design/hydraulics-stormwater) for guidance and tools (Project Risk Level, Estimating for CGP, Erosion Prediction software, etc.)
* [Caltrans Division of Environmental Analysis Homepage](https://dot.ca.gov/programs/environmental-analysis)
* For wetlands, hydromorphic method and water assessment information, see [SER, Volume 1, Chapter 15 - Waters of the U.S. and the State](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state)
* For hydraulic studies and floodplain encroachment information, see [SER, Volume 1, Chapter 17 - Floodplains](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-17-floodplains)
* For Coastal Zone permits information, see [SER Volume 5 - Coastal Requirements](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-5-coastal-requirements)
* For Wild and Scenic Rivers information, see [SER Volume 1, Chapter 19 - Wild and Scenic Rivers](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-19-wild-scenic-rivers)
* Groundwater – [California Department of Water Resources Groundwater Data Library](https://wdl.water.ca.gov/waterdatalibrary/Map.aspx)
* [Caltrans Stormwater Quality Handbook Project Planning and Design Guide (PPDG)](https://dot.ca.gov/programs/design/manual-project-planning-design-guide)
* Caltrans Stormwater Quality Practice Guidelines: [Caltrans Stormwater Management Program](https://dot.ca.gov/programs/environmental-analysis/stormwater-management-program)
* [Caltrans Water Quality Planning Tool](http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx)
* [Regional Water Quality Control Board website and Basin Plans](https://www.waterboards.ca.gov/plans_policies/)
* CGP - State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit For Stormwater Discharges Associated with Construction and Land Disturbance Activities, ORDER WQ 2022-0057-DWQ, NPDES No. CAS000002 (CGP Permit): [Statewide Construction General Permit](https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0057-dwq.pdf)
* Caltrans Permit - State Water Resources Control Board ORDER 2022-XXXX-DWQ, NPDES No. CAS000003, Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation: [Caltrans (MS4) Program](https://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.html)
* [State Water Resources Control Board Watershed Management](https://www.waterboards.ca.gov/water_issues/programs/watershed/)
* [United States (U.S.) Environmental Protection Agency Section 404(b)(1) guidelines](https://www.epa.gov/cwa-404/cwa-section-404b1-guidelines-40-cfr-230)
* [U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), Web Soil Survey](https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm)

## Works Cited

List all references/citation sources

## Preparer(s) Qualifications

Generally, the preparer(s)’s name, degree and any specialized training/experience (e.g., number of years worked in Environmental Analysis or Engineering).

Also include the name(s) and title(s) of any additional specialists who contributed to the report.