Understanding Your NPDES Permit

Mary Cousins, Ph.D., P.E.

July 20, 2022

BACWA
BAY AREA
CLEAN WATER
AGENCIES

Housekeeping

Welcome!

- Please “rename” yourself to your full name and affiliation
- We have lots of time for Q&A
- Please mute yourself if you’re not asking a question
- A link to the slide deck is in the chat
- This meeting will be recorded

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Outline

Regulatory Background

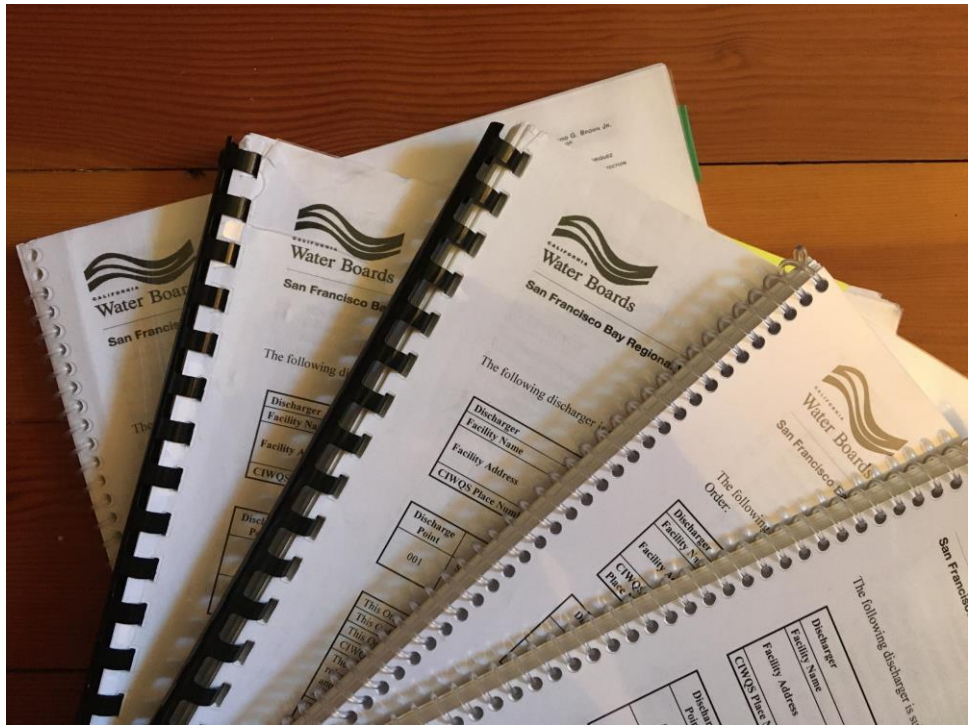
Beneficial Uses and Basin Planning

Permit Contents Including:

- Prohibitions
- Effluent Limits & Specifications
- Receiving Water Limits
- Permit Provisions
- Monitoring & Reporting

NPDES Permit Reissuance

Reference Materials



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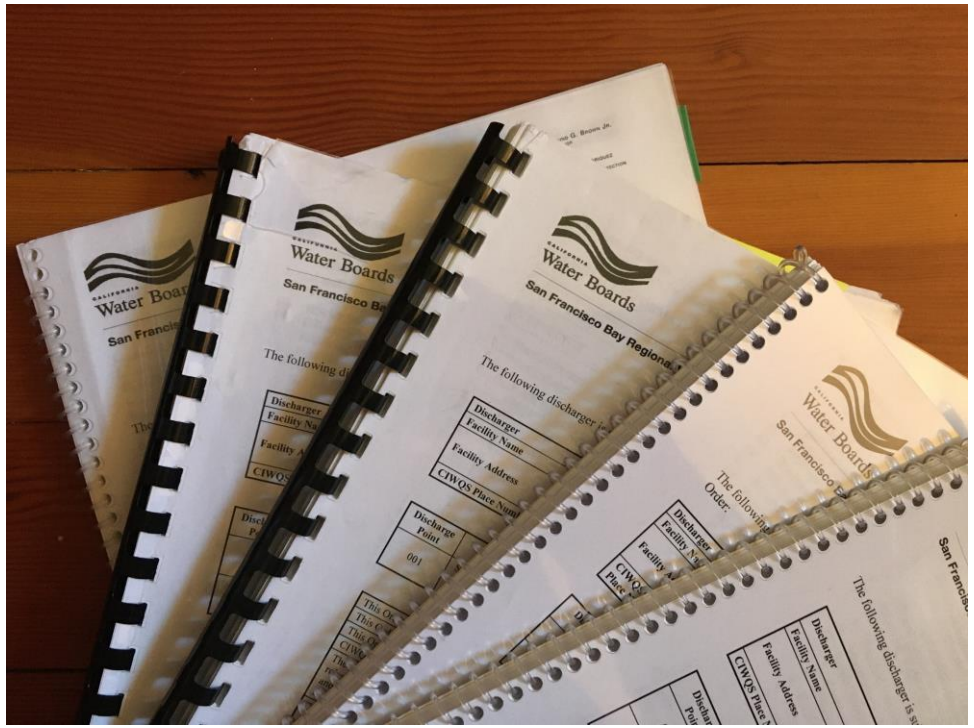


Learning Objectives

Understand rationale for requirements in your NPDES permit

Understand similarities and differences among California wastewater NPDES permits

Use this knowledge to empower you in the permitting process

Regulatory Background

Porter-Cologne Water Quality Control Act (1969)

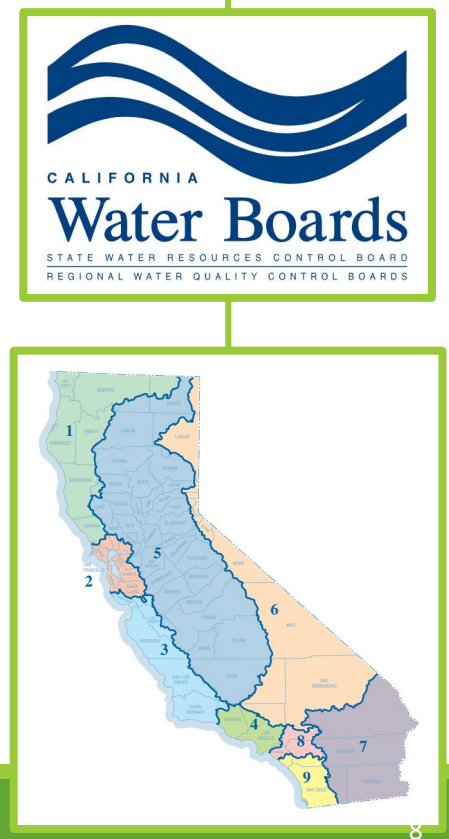
CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

9
Regional Water
Quality Control
Boards

Regulatory Background

Federal Water Pollution Control Act "Clean Water Act" (1972)

- National Pollutant Discharge Elimination System (NPDES) Permits
- **Required states to adopt water quality standards**
- Listing of "impaired" waterways and Total Maximum Daily Loads
- Funding through State Revolving Fund

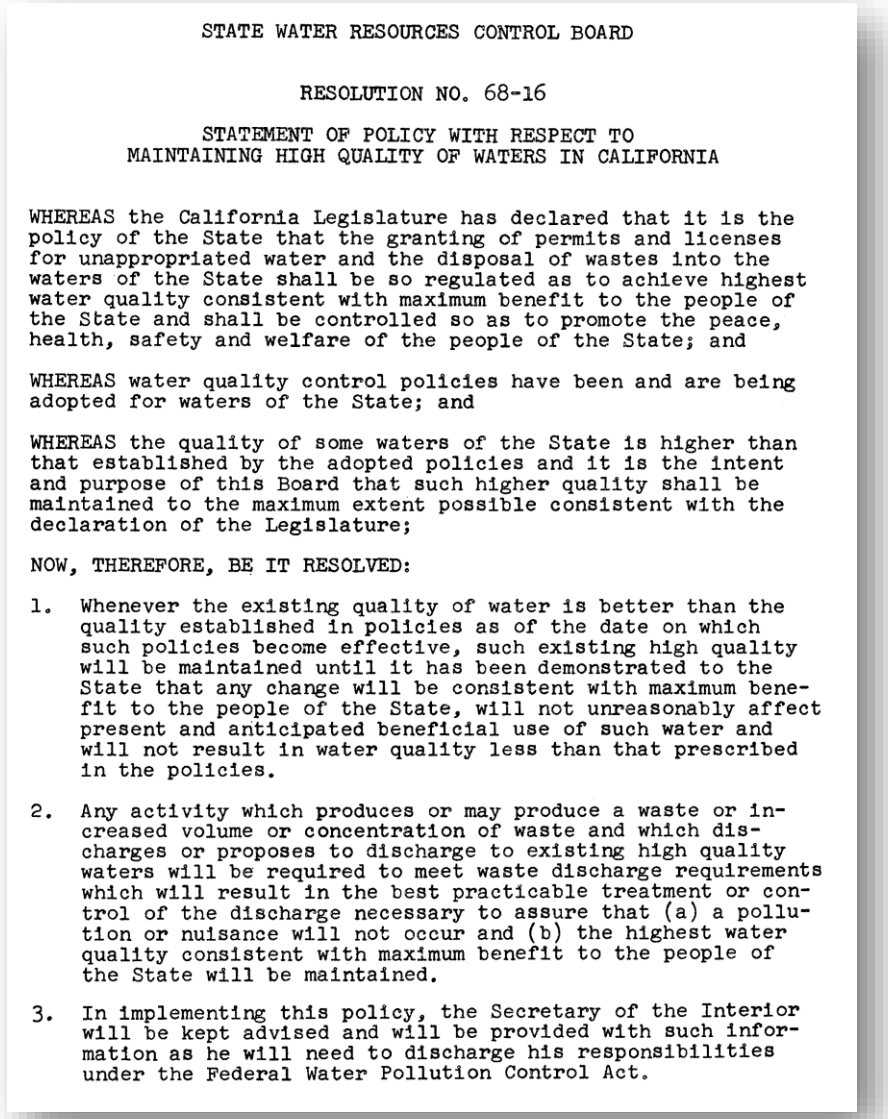


Regulatory Background

Antidegradation Policy

- Found in both state and federal policy
- Water quality shall be preserved

  "… the highest water quality consistent with maximum benefit to the people of the State will be maintained."



STATE WATER RESOURCES CONTROL BOARD

RESOLUTION NO. 68-16

STATEMENT OF POLICY WITH RESPECT TO
MAINTAINING HIGH QUALITY OF WATERS IN CALIFORNIA

WHEREAS the California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the waters of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, safety and welfare of the people of the State; and

WHEREAS water quality control policies have been and are being adopted for waters of the State; and

WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;

NOW, THEREFORE, BE IT RESOLVED:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

3. In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.

Regulatory Background

The Porter-Cologne Act and Clean Water Act regulate wastewater as a **waste**

Wastewater is also a **resource**

State Water Board

- Water Recycling Criteria – Non-Potable and Potable Reuse
- Surface Water Rights

Department of Water Resources:

- Integrated Regional Water Management
- Water Use Efficiency Targets
- Sustainable Groundwater Management Act (SGMA)

State and Regional Water Boards

State Water Resources Control Board

- Water Quality
- Water Rights
- Financial Assistance
- Enforcement

Regional Water Quality Control Boards

- Wastewater
- Stormwater
- Groundwater Cleanup
- Basin Planning
- …and more!
- Enforcement

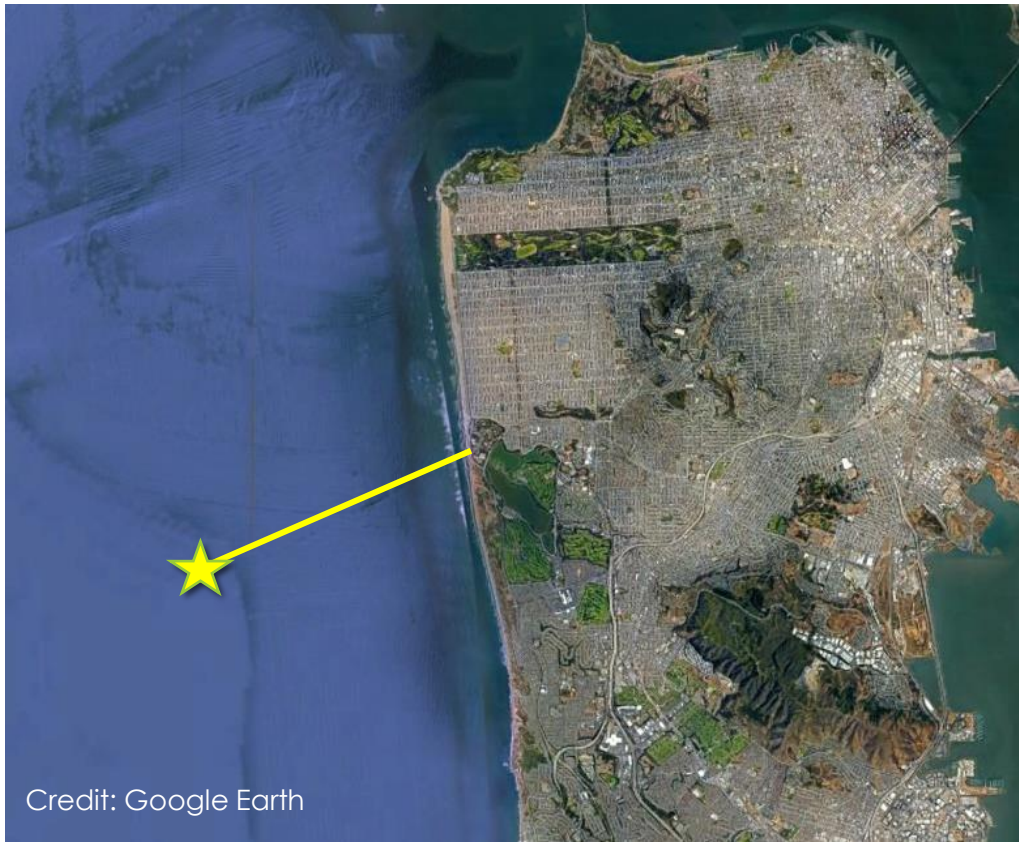
EPA Role

Oversight and review of all NPDES permits

Oversight of federal pretreatment program

Issues Tribal discharge permits (6)

With Regional Water Board, issues NPDES Permits for discharge into Federal waters (5)



Discharge Permits

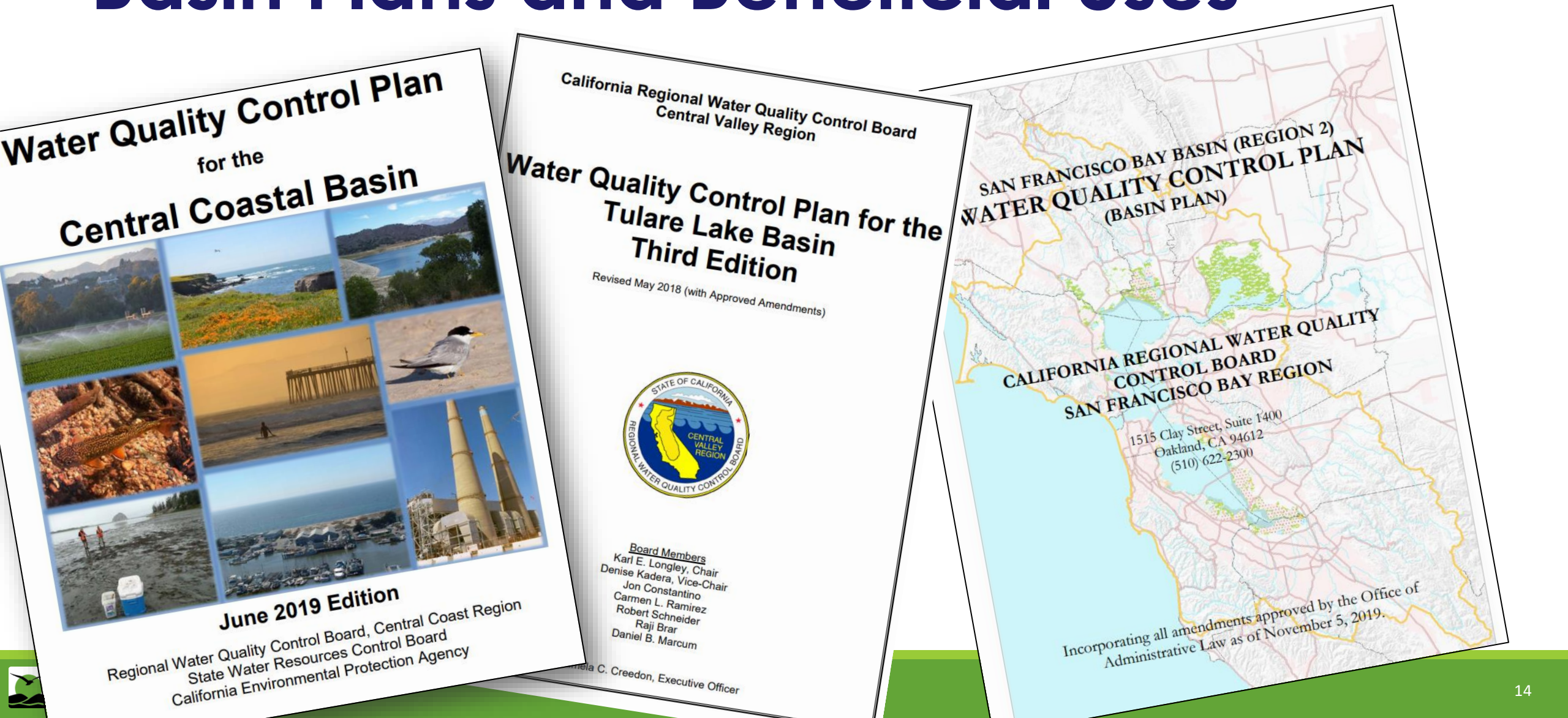
NPDES – Discharge to Surface Water

- **Discharger-Specific**
- **Regional** (e.g., Municipal Regional Permit for Stormwater; Mercury & PCBs Watershed Permit for Wastewater)
- **General** (e.g., statewide drinking water permit)

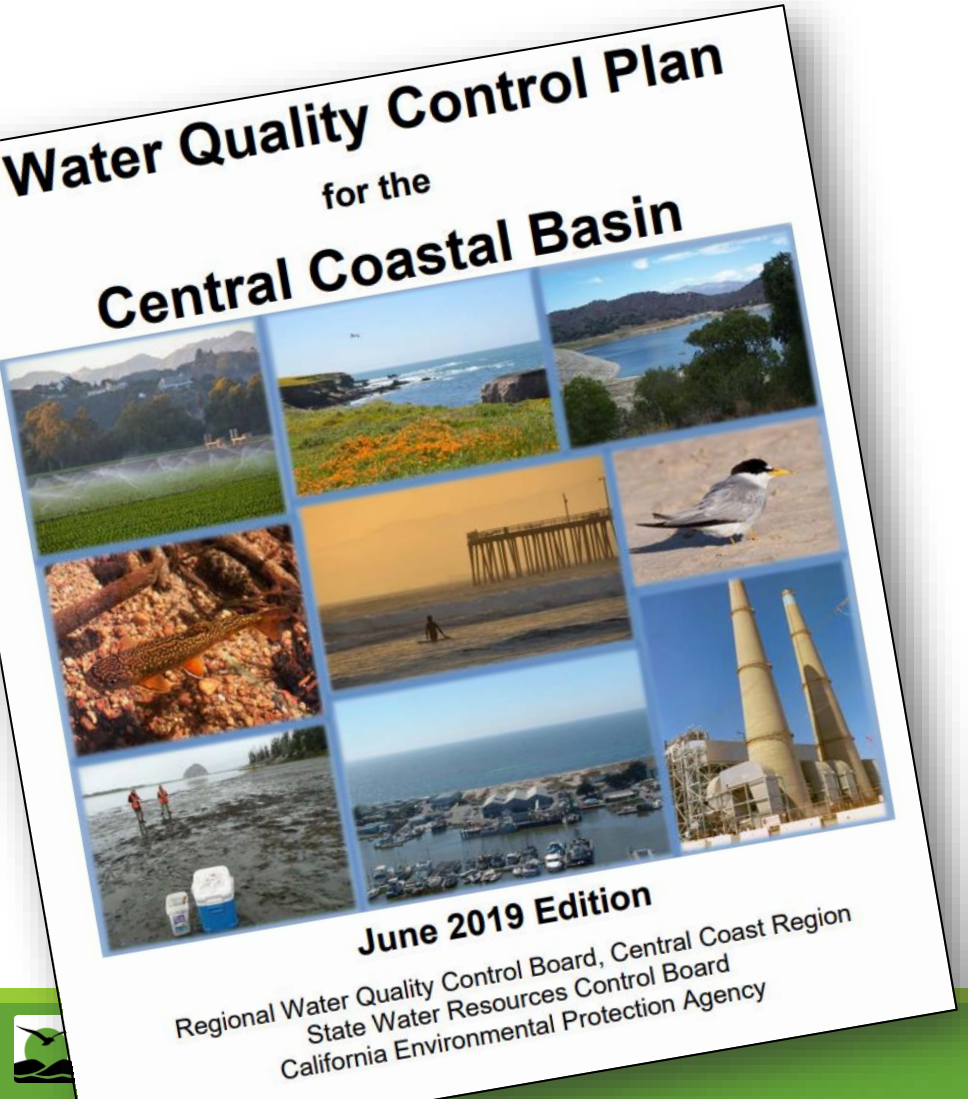
Waste Discharge Requirements (WDR) – Discharge to Land

- **Discharger-Specific**
- **Regional**
- **General** (e.g., statewide WDR for sanitary sewer systems; construction and small MS4 stormwater permits; many regional examples)

Basin Plans and Beneficial Uses



Basin Plans and Beneficial Uses



Beneficial uses for:

- Surface Waters
- Groundwater basins

- Identify **water quality objectives** to support those beneficial uses

Beneficial Uses

Municipal (MUN)

Agricultural Supply (AGR)

Water Contact Recreation (REC-1)

Cold Fresh Water Habitat (COLD)

…and more!

Waterbody Names	MUN	AGR	PROC	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIOL	RARE	EST	FRSH	NAV	POW	COMM	AQUA	SAL	SHELL
Pajaro River Hydrologic Unit 305																						
Corralitos Lagoon						X	X	X	X										X			
Palm Beach Pond	X					X	X	X		X				X					X			
Pinto Lake	X	X			X	X	X	X		X		X							X			
Kelley Lake	X	X			X	X	X	X		X		X							X			
Drew Lake	X	X			X	X	X	X		X		X							X			

Beneficial Uses → Water Quality Objectives

Municipal (MUN) → Drinking water limits ("MCLs") apply

Agricultural Supply (AGR) → Salinity and minerals

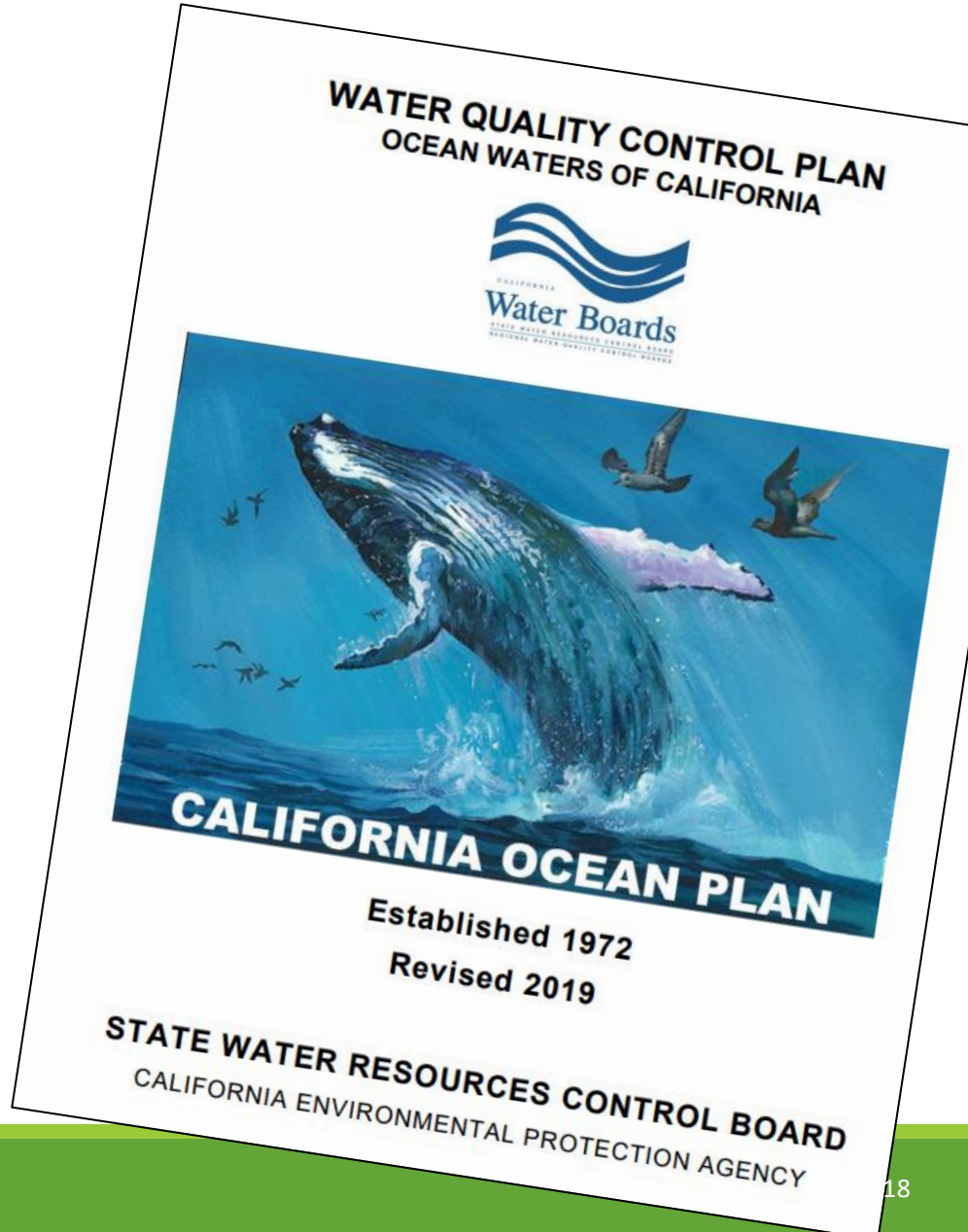
Water Contact Recreation (REC-1) → Bacteria

Cold Fresh Water Habitat (COLD) → DO and Temperature

California Ocean Plan

Like a Basin Plan … for the Ocean!

Water quality objectives based on **Marine Aquatic Life** and **Water Contact Recreation** beneficial uses



Q&A

Permit Contents

Prohibitions

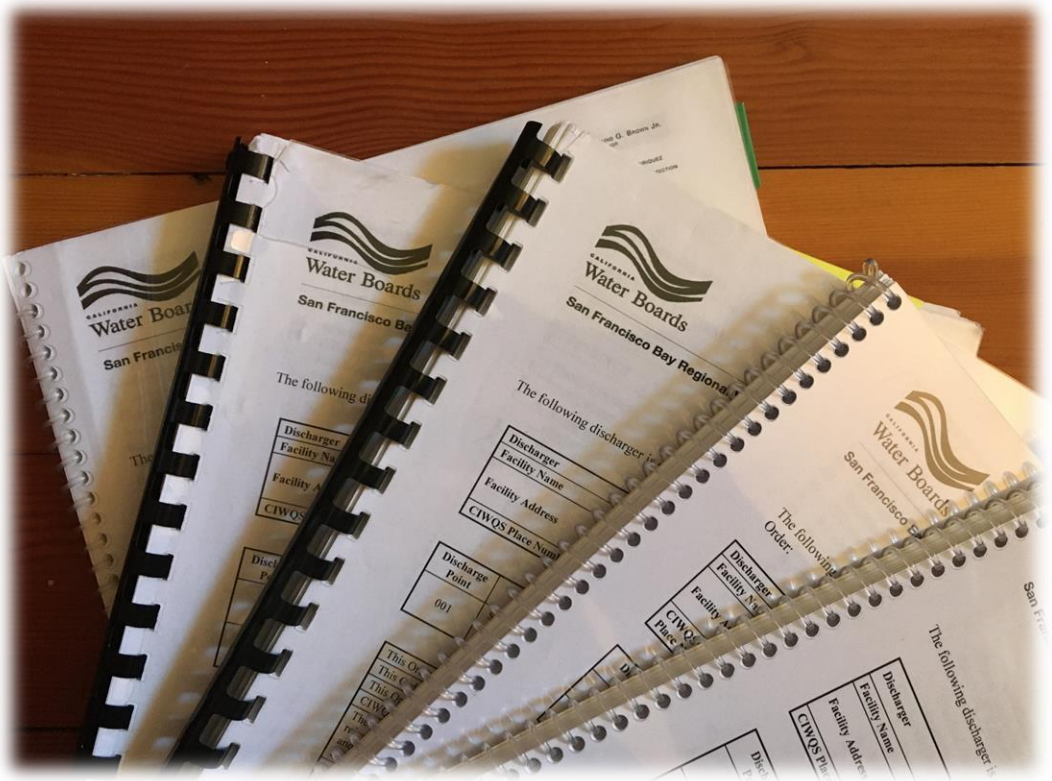
Effluent Limits

Receiving Water Limits

Provisions

Attachments

- A, B, C Definitions, Maps, Diagrams
- D. Federal Standard Provisions
- **E. Monitoring and Reporting Program**
- F. Fact Sheet



Permit Contents

Basic Prohibitions found in POTW Permits

- Don’t discharge wastewater except as described in the Order
- Don’t bypass treatment – exceptions in Attachment D
- Don’t discharge untreated wastewater

Permit Contents

Prohibitions on Flow, Dilution, and Discharge Dates

- **Dry Weather Flow**

  "Effluent average daily dry weather flow shall not exceed 7.64 MGD" R3-2017-0021

- **Dilution Conditions – Modeled or Monitored**

  "Discharge to the Feather River at Discharge Point 001 when the depth of water over the diffuser is below an average of 0.8 feet is prohibited." R5-2019-0017

  "Discharge to the Sacramento River is prohibited when there is less than a 14 to 1 (river to effluent) flow ratio over a rolling 1-hour period available in the Sacramento River at RSWU-001." R5-2021-0019

  "Discharge at Discharge Point No. 001 is prohibited when treated wastewater does not receive an initial dilution of at least 75:1, as modeled." R2-2017-0034

- **Allowable Discharge Dates**

  "Discharge to Miller Creek at Discharge Point Nos. 001 and 002 is prohibited during the dry season each year, from June 1 through October 31…" R2-2020-0022

Effluent Limitations

Technology-Based Effluent Limits	Water Quality-Based Effluent Limits
Goal: Limit the discharge of pollutants	Goal: Protect Beneficial Uses

Effluent Limitations

Technology-Based Effluent Limits	Water Quality-Based Effluent Limits
Goal: Limit the discharge of pollutants	Goal: Protect Beneficial Uses
Required. Secondary treatment required by Clean Water Act Limits in 40 CFR § 122.44 for BOD (or CBOD), TSS, and pH	Required only for pollutants with **reasonable potential** to exceed an objective
Standardized (but may be more stringent than federal law)	Different for each unique pair of discharger and receiving water

Technology-Based Effluent Limits

Table 4. Effluent Limitations

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand (BOD), 5-day @ 20°Celsius	milligrams per liter (mg/L)	10	15	--
Total Suspended Solids (TSS)	mg/L	10	15	--

Source: R5-2021-0003

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Carbonaceous Biochemical Oxygen Demand, 5-day @ 20°C ($CBOD_5$)	mg/L	25	40	---	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---

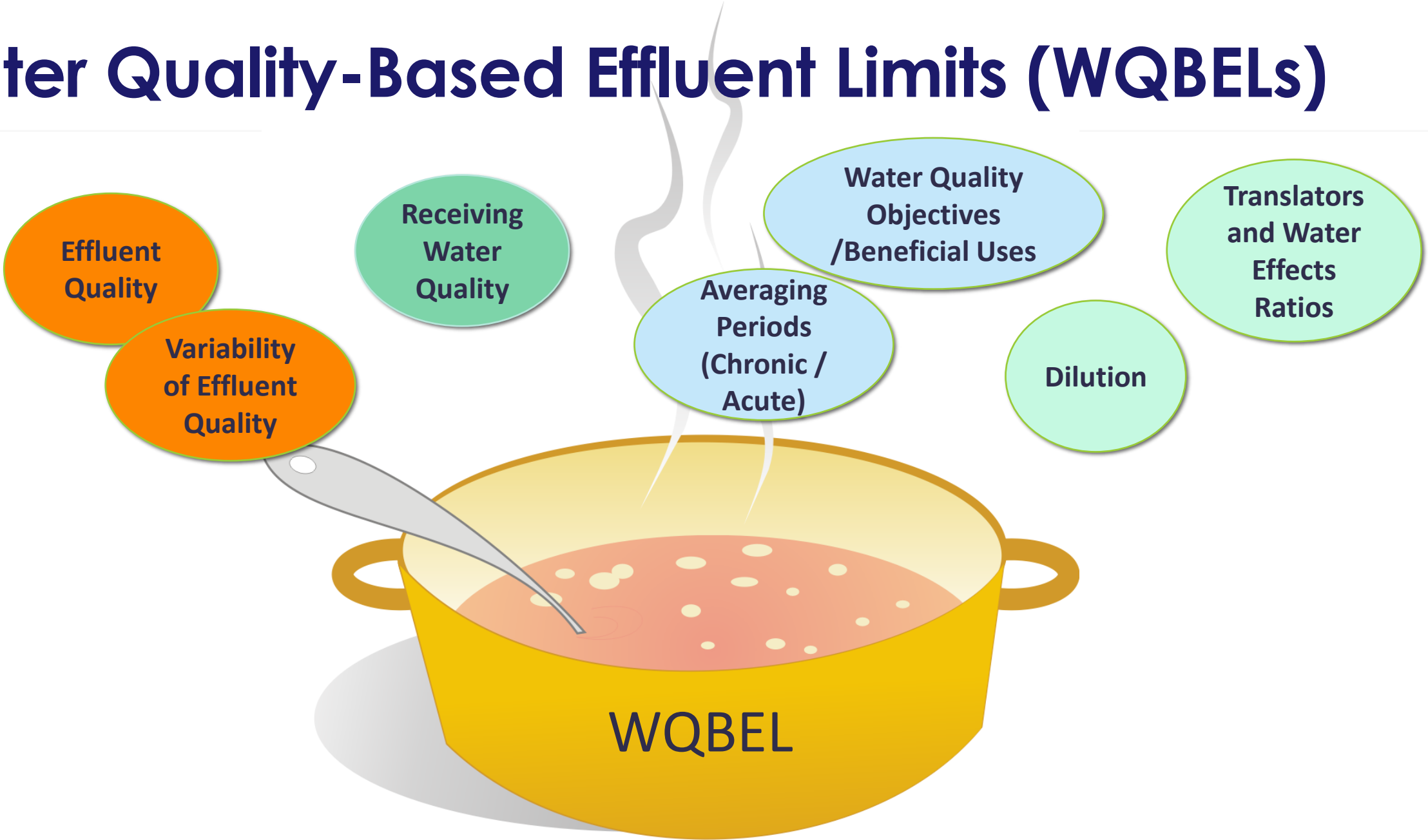
Source: R2-2017-0035

Table 4. Effluent Limitations – Discharge Points

Parameter	Units	Effluent Limit			
		Average Monthly	Average Weekly	Maximum Daily	
Conventional Pollutants					
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	60	
	lbs/day[2]	2,600	3,900	5,300	
pH	standard units	--	--	--	
Total Suspended Solids	mg/L	30	45	60	
	lbs/day[2]	2,600	3,900	5,300	

Source: R5-2019-0017

Water Quality-Based Effluent Limits (WQBELs)



Water Quality Objectives

Protect Beneficial Uses

Numeric Criteria for Specific Chemicals

- Aquatic life
  - Acute (1 hour) and Chronic (4-day) Freshwater and Saltwater organisms
- Human health
  - Recreation
  - Drinking water
  - Fish and shellfish consumption

- **Other Numeric Criteria**
  - Whole Effluent Toxicity
    - Coming Soon in California!
  - Biological
    - Not as common

Water Quality Objectives

Protect Beneficial Uses

Narrative Criteria - "free from" statements

- "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms."

- "Waters shall be free of coloration that causes nuisance or adversely affects beneficial use"

References for Water Quality Objectives

Sources of Water Quality Objectives /Beneficial Uses

Drinking Water Regulations

The most stringent objective applies!

California Toxics Rule

Ocean Plan

Basin Plan

Examples of Drinking Water MCLs as WQBELs

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Nitrate Plus Nitrite (as N)	mg/L	10	15.3	--

Source: R5-2021-0003

j. **Electrical Conductivity @ 25°C.** The effluent calendar year annual average electrical conductivity shall not exceed 1,300 µmhos/cm.

Source: R5-2021-0019

Table 4. Effluent Limitations – Discharge Points 001 and 002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrate Plus Nitrite (as N)	mg/L	10	21	--	--	--

Source: R5-2019-0017

Examples of California Toxics Rule Criteria as WQBELs

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily	Discharge Point(s)
Chlorodibromomethane	micrograms per liter (µg/L)	43	--	73	001
Dichlorobromomethane	µg/L	46	--	74	001

Source: R5-2021-0005 Basis: Human Health Objective for Water Consumption

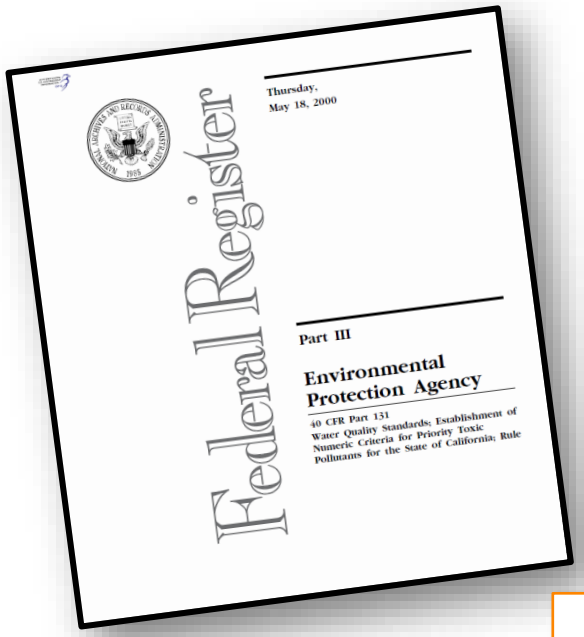


Table 5. Effluent Limitations – Discharge Points 002 (Monitoring Location EFF-002)

Parameter	Units	Effluent Limitations				
		Average Monthly[1]	Average Weekly[1]	Maxi-mum Daily[1]	Instantaneous Minimum[1]	Instantaneous Maximum[1]
Cyanide, Total (as CN)	µg/L	4.3	--	8.5	--	--

Source: R1-2020-0010 Basis: Freshwater Aquatic Life

Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Heptachlor	µg/L	2.1×10^{-3}	-	4.1×10^{-3}	-	-

Source: R2-2020-0024 Basis: Human Health Objective for Consumption of Organisms

Examples of Basin & Ocean Plan Criteria as WQBELs

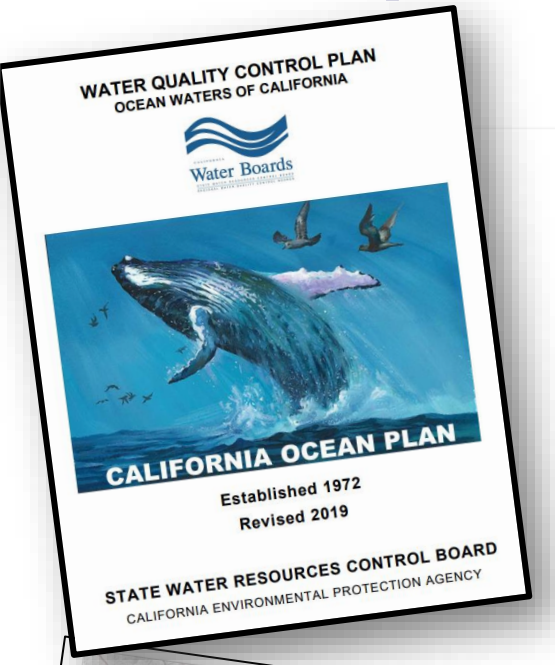


Table 5. Effluent Limitations – Protection of Marine Aquatic Life

Parameter	Units	Effluent Limitation		
		6-Mo Median[1]	Maximum Daily[2]	Instantaneous Maximum[3]
Selenium	µg/L	1,845	7,348	18,450
Cyanide[4]	µg/L	123	492	1,230
Total Chlorine Residual	µg/L	246	984	7,380
Phenolic Compounds (non-chlorinated)	µg/L	3,690	14,760	36,900
Phenolic Compounds (chlorinated)	µg/L	123	492	1,230
Endosulfan[5]	µg/L	1.107	2.214	3.321
Endrin	µg/L	0.246	0.492	
HCH[6]	µg/L	0.492	0.984	
Radioactivity			[7]	

Source: R3-2017-0021

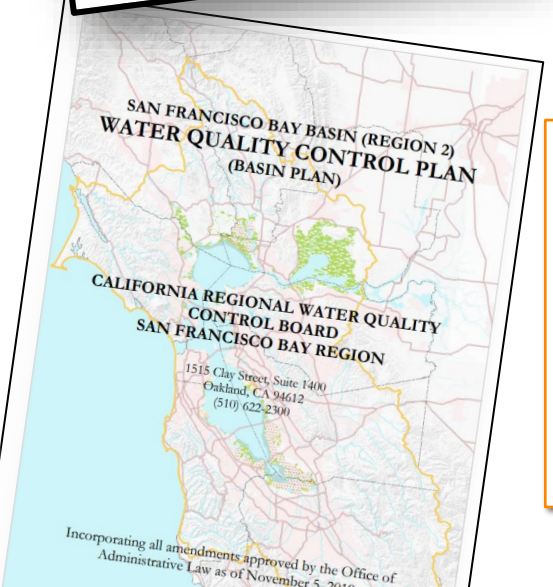


Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia, Total	mg/L as N	80	-	110	-	-
Chlorine, Total Residual	mg/L	-	-	-	-	0.0
Copper, Total Recoverable	µg/L	47	-	85	-	-
Cyanide, total	µg/L	19	-	39	-	-

Source: R2-2020-0024

i. **Average Monthly Effluent Limitation (AMEL)**

$$S_{AMEL} = \frac{C_{D\ M-AVG}}{0.079} + \frac{C_{C\ M-AVG}}{0.012} \leq 1.0$$

$C_{D\ M-AVG}$ = average monthly diazinon effluent concentration in µg/L.

$C_{C\ M-AVG}$ = average monthly chlorpyrifos effluent concentration in µg/L

Source: R5-2021-0003

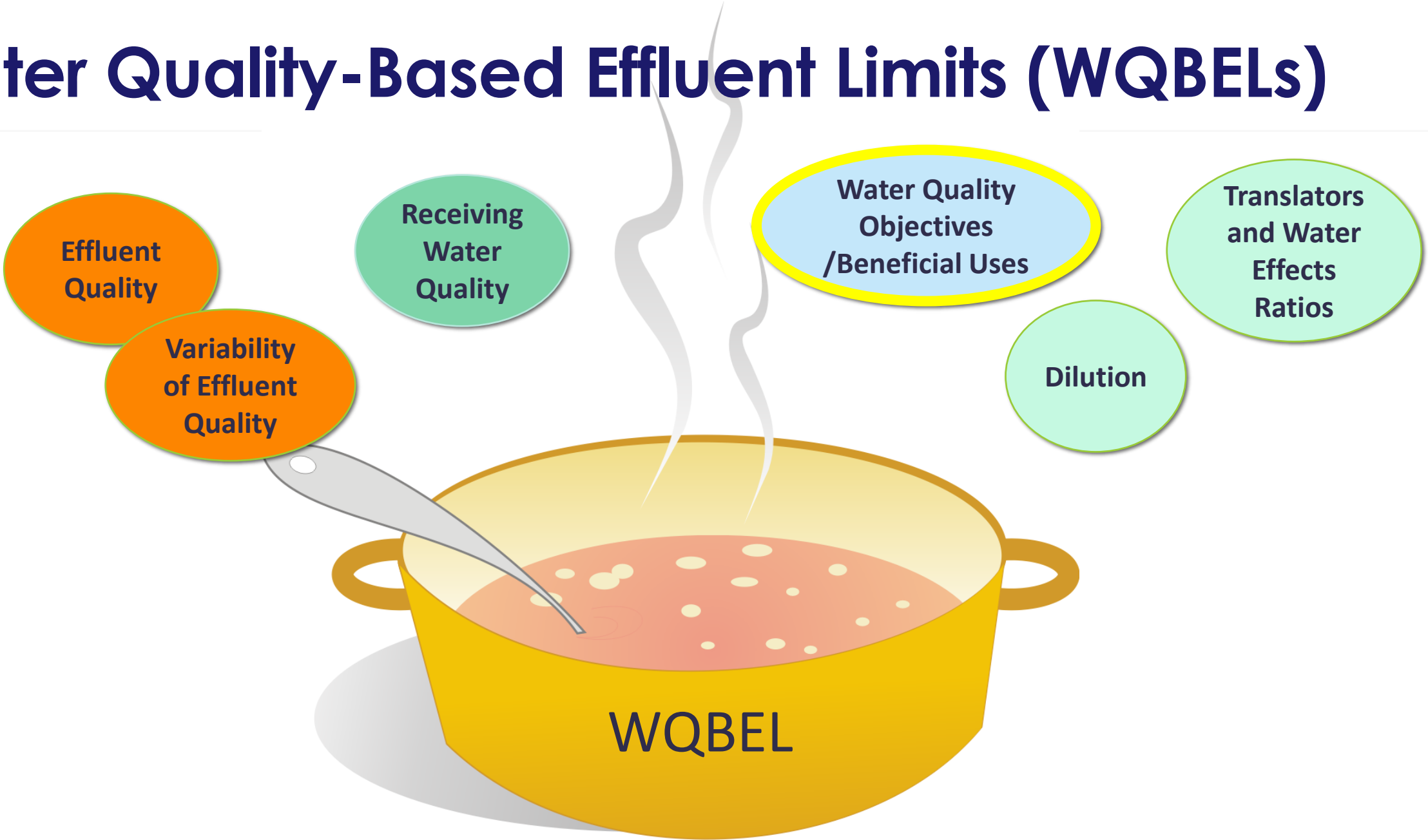
Example of Summary Table for Water Quality Objectives

Table F-11. WQBEL Calculations for Discharge Points 001 and 003

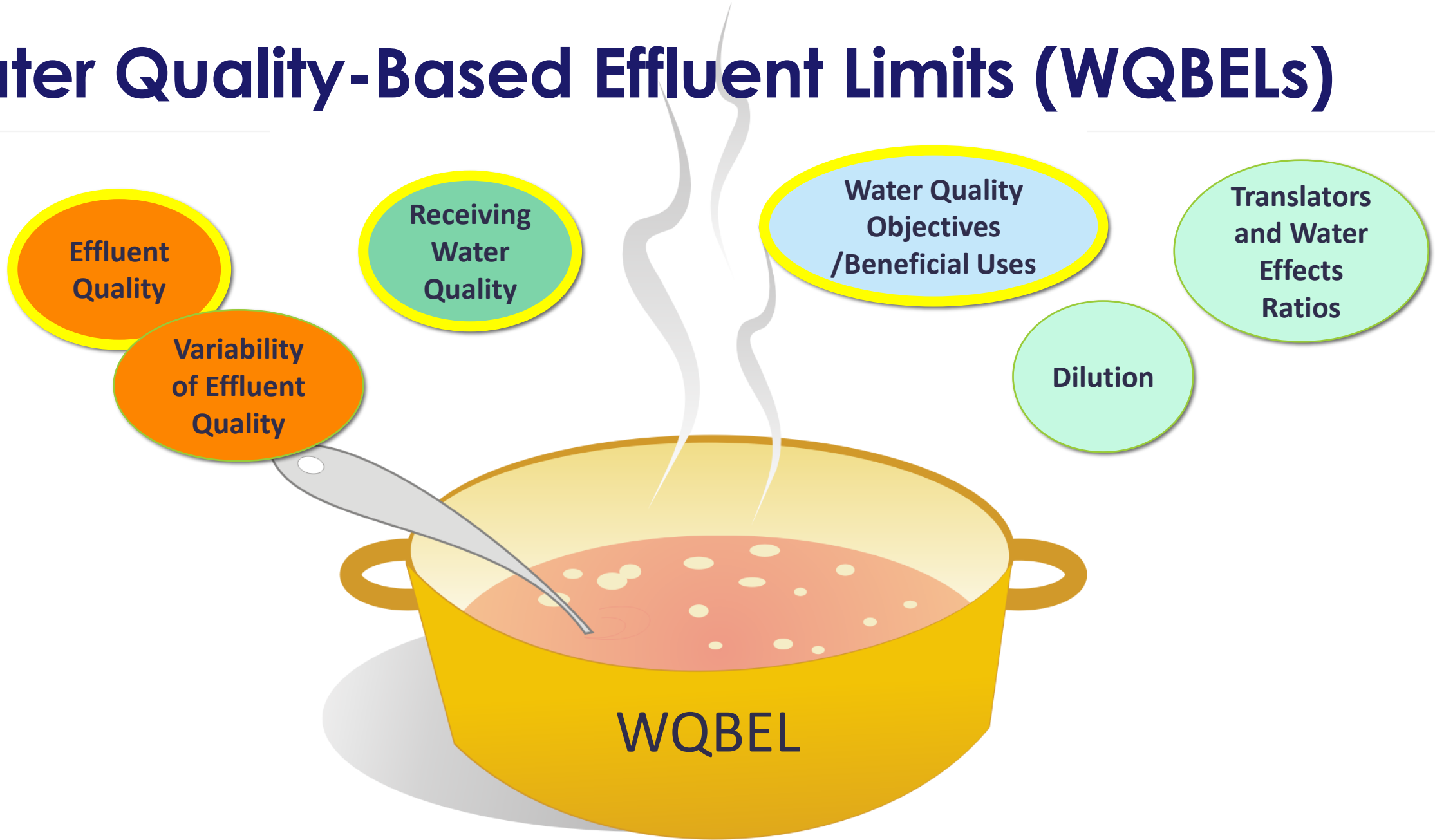
Parameter	Antimony	Arsenic	Copper	Chloro-dibromo-methane	Aldrin	Boron	Nitrate + Nitrite (mg/L as N)	Ammonia (acute)	Dichloro-bromo-methane
Basis and Criteria type	CTR (Human Health) and Title 22 Secondary MCL	CTR (Aquatic Life) and Title 22 Secondary MCL	CTR (Aquatic Life), Title 22 Primary MCL and Basin Plan Agricultural Supply	CTR (Human Health)	CTR (Aquatic Life and Human Health)	Basin Plan Agricultural Supply	Title 22 Secondary Supply and Basin Plan Agricultural Supply	Basin Plan Objectives for Surface Waters	CTR (Human Health)
CTR Aquatic Life Criteria - Acute	---	340	8.3	---	3.0	---	---	13	---
CTR Aquatic Life Criteria - Chronic	---	150	5.8	---	---	---	---	---	---
CTR Human Health Criteria - Organisms Only	14	---	---	0.41	0.00013	---	---	---	0.56
CTR Human Health Criteria - Water & Organisms	4,300	---	---	34	0.00014	---	---	---	46
Title 22 Municipal Supply - Primary MCL	6.0	10	---	---	---	---	10	---	---
Title 22 Municipal Supply - Secondary MCL	---	---	1,000	---	---	---	---	---	---
Basin Plan Agricultural Supply	---	2,000	5,000	---	---	2,000	30	---	---
Water Effects ratio (WER)	1	1	1	1	1	1	1	1	1
Lowest WQO	6.0	10	5.8	0.41	0.00013	2000	10	13	0.56

Source: R2-2020-0024

Water Quality-Based Effluent Limits (WQBELs)

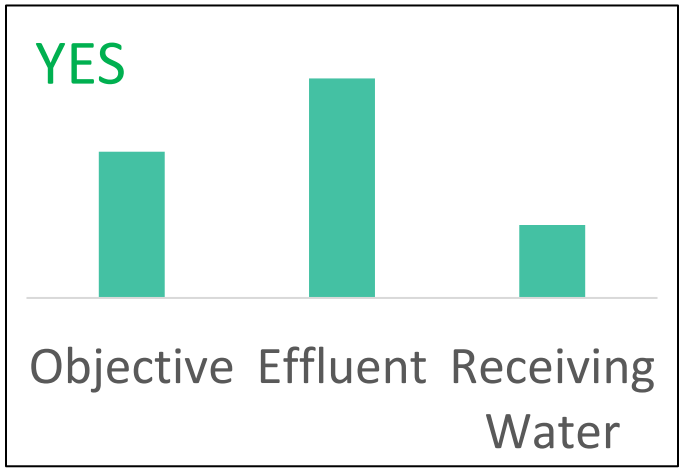


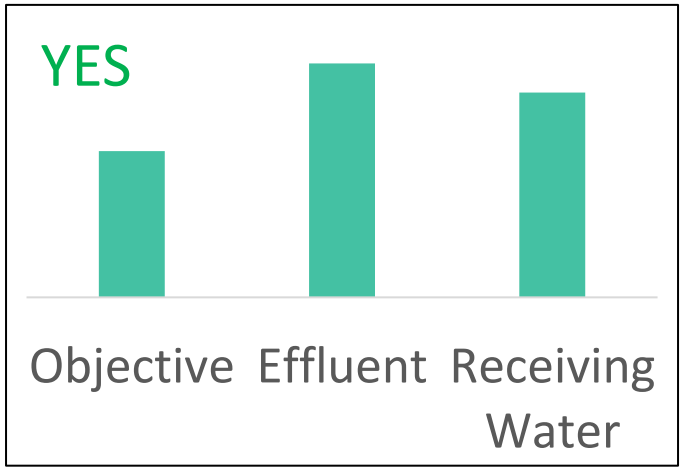
Water Quality-Based Effluent Limits (WQBELs)

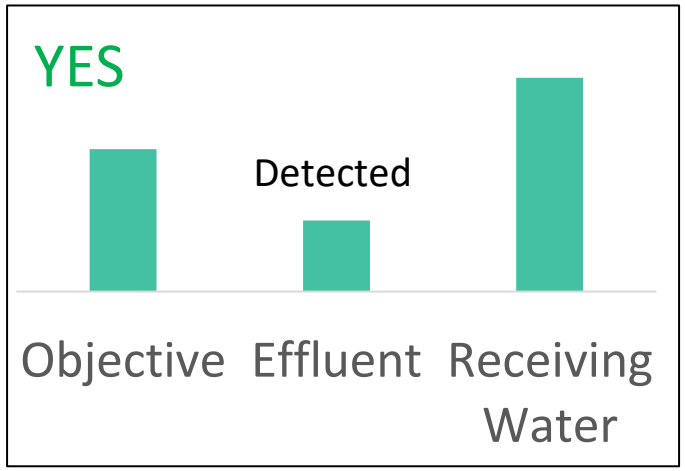


Reasonable Potential Analysis

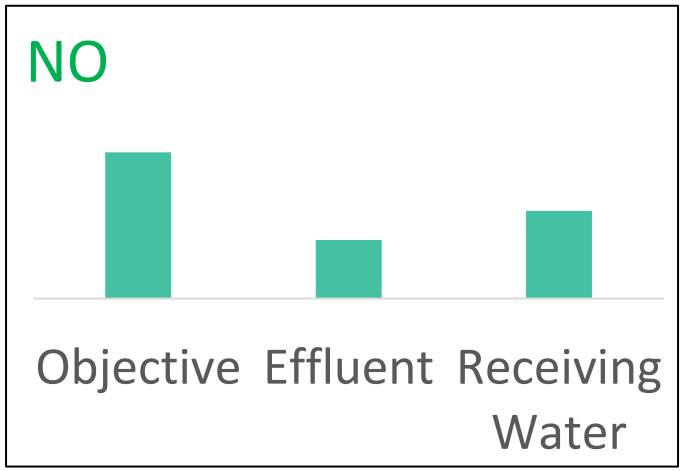
Does the discharge have "reasonable potential" to cause an exceedance of the water quality objective?

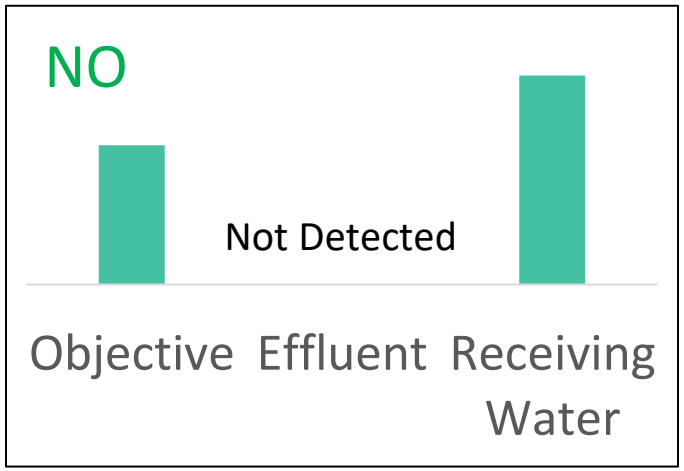






Effluent Limit Needed!

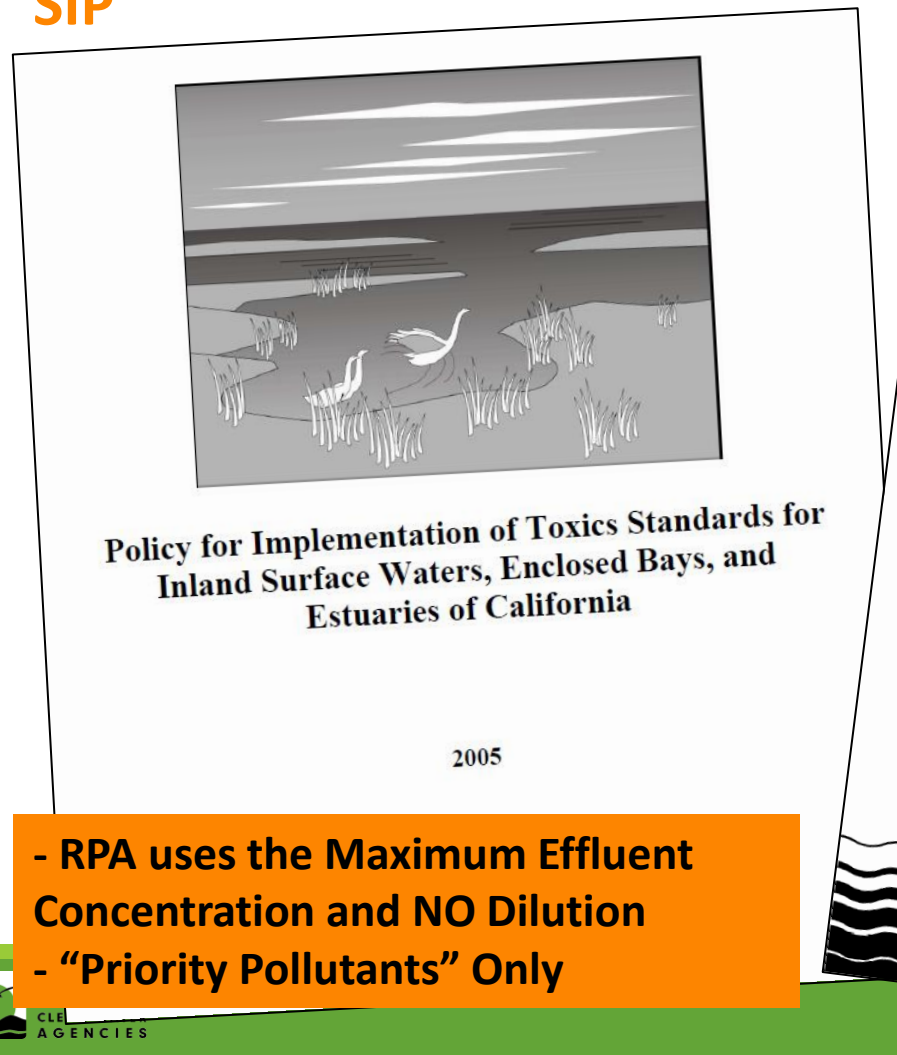




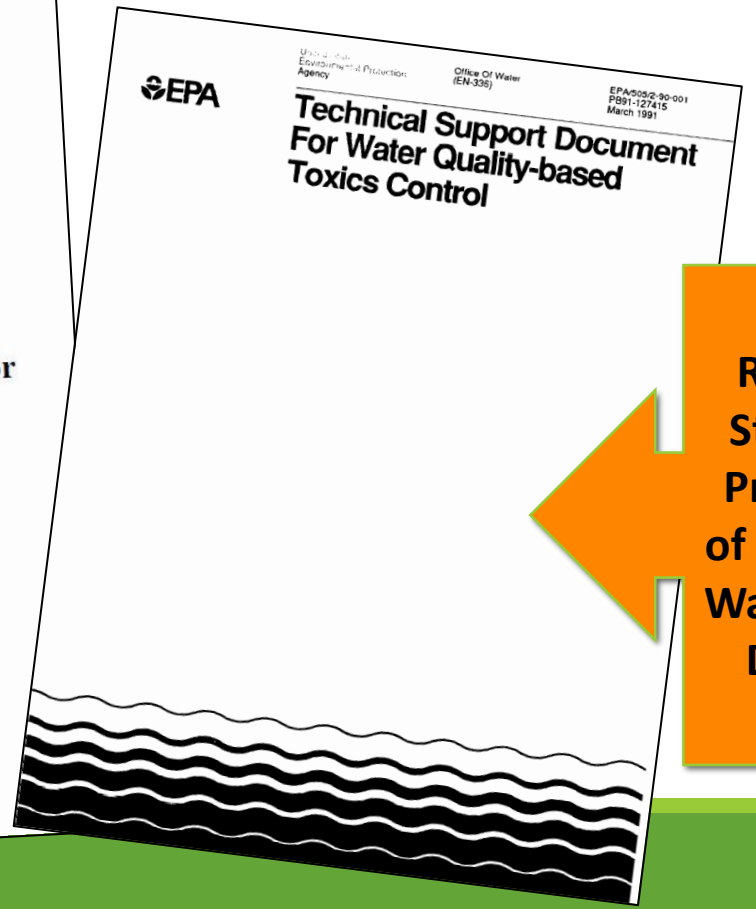
No Effluent Limit Required

Turning Objectives into WQBELs

SIP



EPA Technical Support Document



Ocean Plan

RPA uses Statistical Projection of Receiving Water WITH Dilution

- RPA uses the Maximum Effluent Concentration and NO Dilution
- "Priority Pollutants" Only

State Implementation Policy WQBEL Example

Beneficial Uses for a Water Body

Water Quality Objectives for a Water Body

Water Quality Limits for a Specific Discharge

CTR Human Health Objective for Consumption of Organisms in San Francisco Bay

Bis(2-Ethylhexyl) Phthalate Objective of 5.9 µg/L

Maximum Effluent Concentration of 6.2 µg/L

Average Monthly Effluent Limit of 53 µg/L with Dilution Credit of 10:1

Source: R2-2020-0020

State Implementation Policy WQBEL Example

Beneficial Uses for a Water Body

Water Quality Objectives for a Water Body

Water Quality Limits for a Specific Discharge

Stays in Permit Until…

- Maximum Effluent Concentration could be lower than the objective (No more limit)
- Dilution factor could increase (increased limit)


Credit: KQED

Source: R2-2020-0020

Antidegradation

- Antidegradation analysis required for increases in concentration or mass discharged
- Consider receiving water impacts and other benefits

Anti-backsliding

Effluent limits will always be as stringent as the previous permit…

Unless there is new data, a new regulation, new dilution study, etc., documented in the Fact Sheet

Antidegradation

- **Flow increase**
- **New outfall location**
- **Higher effluent limits needed**
  - RO Concentrate
  - Biosolids return streams

Anti-backsliding

Effluent Limits removed when there is no "Reasonable Potential"

Effluent Limits retained from a previous permit to ensure performance (e.g., nitrification or denitrification)

Q&A

Receiving Water Limits

Closely tied to Basin Plan Objectives

5.3. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder beyond any mixing zone established through this Order. If more stringent water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.

Order R2-2022-0020

Receiving Water Limits

Closely tied to Basin Plan Objectives

Not always tied to frequent monitoring

But sometimes it is!

- Bacteria – Recreational areas (beaches)
- Dissolved Oxygen – Sensitive habitat

Credit: North Coast Regional Water Board

Provisions

Standard Provisions in Attachment D include basic federal requirements such as:

- Duty to Comply
- Duty to Mitigate
- Proper Operation and Maintenance
- Inspections by Regional Water Board
- Record-keeping and certification
- Bypass and Upset provisions

Provisions

Monitoring and Reporting

Industrial Pretreatment Program

Pollution Prevention

Climate Change Adaptation Planning

O&M

Biosolids

Monitoring and Reporting Program

Influent and Effluent- flow and water quality

Whole effluent toxicity testing

Process Control, e.g., UV disinfection and storage

Recycled water

Biosolids – disposal and pretreatment

Receiving water

Monitoring and Reporting Program

Influent and Effluent- flow and water quality

Whole effluent toxicity testing

Process Control, e.g., UV disinfection and storage

Recycled water

Biosolids – disposal and pretreatment

Receiving water

*"The Discharger shall continue to participate in the **Regional Monitoring Program**, which collects data on pollutants and toxicity in San Francisco Bay water, sediment, and biota"*

RMP
REGIONAL MONITORING PROGRAM FOR WATER QUALITY IN SAN FRANCISCO BAY
sfei.org/rmp

Since 1992

Uses of data from the RMP:

RMP
REGIONAL MONITORING PROGRAM FOR WATER QUALITY IN SAN FRANCISCO BAY
sfei.org/rmp

- **Determine if the Bay is meeting water quality objectives** (or is impaired, and a 303(d) listing required)
- **Evaluate compliance with receiving water limitations**
- **Providing background concentrations for use in WQBELs** (if dilution credits are granted)
- **Provide salinity, pH, and temperature, and other partitioning data** to adjust water quality objectives for ammonia and metals

Monitoring and Reporting Program

Table E-1. Monitoring Locations

Discharge Point	Monitoring Location	Monitoring Location Description
Influent	INF-001	A point in the treatment plant headworks at which all waste tributary to the treatment system is present and preceding any phase of treatment.
Effluent	EFF-001	A point in the treatment plant outfall between the point of discharge and the point at which all waste tributary to the outfall is present. This location may be the same as Monitoring Location EFF-001D.
Effluent (disinfection system)	EFF-001D	A point in the disinfection system at which adequate contact with the disinfectant is assured.
Effluent (recycled water)	REC-001	Any point after full treatment, including disinfection, that represents all wastewater directed offsite for recycled water distribution and thus not discharged to Central San Francisco Bay.

Source: R2-2021-0017

Table E-1. Monitoring Station Locations

Monitoring Location Name	Distance from Diffuser Center (m)	Monitoring Location Description
INF-001	---	Influent wastewater prior to treatment, where representative samples of raw wastewater can be obtained (formerly M-INF).
EFF-001	---	Location where representative sample of effluent, to be discharged through the ocean outfall, can be collected, after final treatment and disinfection steps and before contact with receiving water. Latitude: 34° 24' 19" N Longitude: 119° 49' 56" W
Surf Zone Monitoring Locations		
A	---	Goleta Point.
A1	---	500 meters downcoast of Goleta Point.
A2	---	1,000 meters west of outfall.
B	---	300 meters west of outfall.
C	---	Onshore at outfall.
D	---	300 meters east of outfall.
E	---	1,000 meters east of outfall.
Benthic Monitoring Locations		
B-1	1,500	1,500 meters west and at same depth as diffuser. Latitude: 34° 24' 17" N Longitude: 119° 50' 31" W
B-2	500	500 meters west and at same depth as diffuser. Latitude: 34° 24' 25" N Longitude: 119° 49' 72" W
B-3	250	250 meters west and at same depth as diffuser. Latitude: 34° 24' 27" N Longitude: 119° 49' 55" W
B-4	25	25 meters west and at same depth as diffuser. Latitude: 34° 24' 36" N Longitude: 119° 49' 36" W
B-5	25	25 meters east and at same depth as diffuser. Latitude: 34° 24' 40" N Longitude: 119° 49' 29" W
B-6	3,000	3,000 meters east and at same depth as diffuser. Latitude: 34° 24' 45" N Longitude: 119° 47' 54" W
Plume Monitoring Stations		
WC-ZID		25 meters from the outfall in the wastewater plume
WC-100M		In the plume, 100 meters from the outfall on the same heading as WC-ZID.

Source: R3-2017-0021

Monitoring and Reporting Program Tips

Summary tables

Table F-11. Monitoring Requirements Summary

Parameter[1]	Influent INF 001[2]	Effluent EFF 001[2]	Effluent EFF 001B	Effluent EFF-001D[2]	Alternate Effluent EFF 001[2][3]	Effluent EFF 002[2]	Biosolids BIO 001[2]
Flow	Continuous/ D	Continuous/ D	Continuous/ D	-	Continuous/ D	Continuous/ D	-
Volume of Partially-Treated Wastewater	-	-	1/Blending Event	-			
Duration of Blending Event	-	-	1/Blending Event	-			
Carbonaceous Biochemical Oxygen Demand (CBOD)	2/Week	2/Week	1/Day	-	2/W		
Total Suspended Solids	2/Week	4/Week	1/Day	-	4/W		
Oil and Grease	-	1/Quarter	-	-	1/Qu		

Source: R2-20202-0024

Table E-13. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
	Standard Reporting Requirements		
1	Report of Waste Discharge	1 April 2025	MRP X.D.3
2	Analytical Methods Report	18 April 2021	MRP X.D.1
3	Analytical Methods Report Certification	1 January 2022	MRP IX.C.3
4	Annual Operations Report	1 February 2022	MRP X.D.2
5	Annual Operations Report	1 February 2023	MRP X.D.2
6	Annual Operations Report	1 February 2024	MRP X.D.2

Source: R5-2021-0005

Monitoring and Reporting Program Tips

Summary tables

Don't forget special studies from the Provisions!

c. Receiving Water Special Study. By August 1, 2014, the Permittee shall submit, for approval by the Regional Water Board Executive Officer, a work plan describing a monitoring study to assess the effects of the discharge on Mark West Creek in regard to dilution and creek dissolved oxygen concentrations. The study work plan captures the effect of the

Source: R1-2013-0042

2. Effluent Characterization Study and Report

a. Study Elements

The Discharger shall continue to characterize and evaluate discharge from the following discharge points to verify that the "no" or "cannot determine" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples of the discharges as set forth below, with locations as defined in the MRP:

Discharge Point	Monitoring Station	Minimum Frequency
001	EFF-001	Once per calendar year

Source: R2-2013-0011

Monitoring and Reporting Program Tips

Summary tables

Don’t forget special studies from the Provisions!

Changes are possible if there are errors

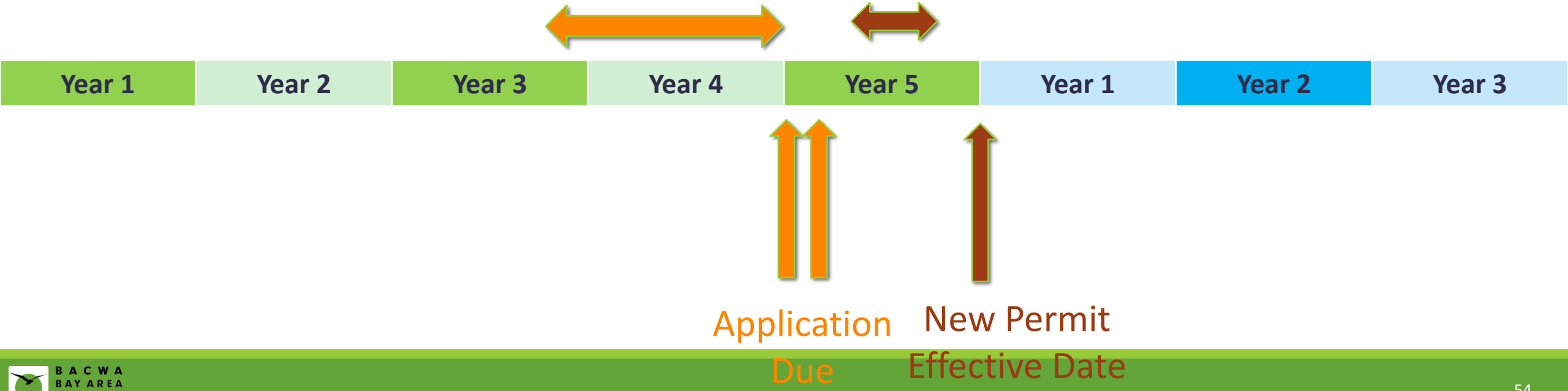
NPDES Permit Reissuance Process

Determine Goals for next Permit cycle

Prepare Permit application
(Report of Waste Discharge)

Talk to your Permit Writer!

Draft Permit Review
and Negotiations



NPDES Permit Reissuance Process

Determine your goals at least 6-12 months before the Permit application is due

Talk with your permit writer

Spend quality time with your effluent and receiving water data

Be ready to review the draft permit (Tentative Order)

Where flexibility is possible [if you plan ahead!]

Mixing zones and dilution ratios used to develop WQBELs

Monitoring frequencies

Adjusting water quality objectives to account for hardness, translators, water effects ratios

Censoring water quality data used to develop WQBELs

Major changes with an **Antidegradation Analysis**

Special Studies

Summary

Your NPDES permit is a mysterious document with illogical requirements

Summary

~~Your NPDES permit is a mysterious document with illogical requirements~~

Every requirement in your NPDES permit has a rationale you can understand

You can participate in the permitting process

Resources

Basin Plans for the 9 Regional Water Boards

California Ocean Plan (State Water Board, 2019)

Technical Support Document for Water Quality-Based Toxics Control (EPA, 1991)

Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) (State Water Board, 2005)

NPDES Permit-Writer's Manual and Training Materials (EPA)

Layperson's Guide to California Wastewater (Water Education Foundation, 2013)

Municipal Wastewater: Regulator Perspective (Video of Presentation by Bill Johnson at RMP 2019Annual Meeting)

Q&A

Thank you!