



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

**Santa Ana Regional Water Quality Control Board**

July 11, 2018

Chris Crompton  
2301 North Glassell Street  
Orange, CA 92865

Mohcine Chirar  
77 Fair Drive  
Costa Mesa, CA 92626

Thomas Lo  
1 Civic Center Plaza  
Irvine, CA 92623

Ken Rosenfield  
24035 El Toro Road  
Laguna Hills, CA 92653

Chris Macon  
24264 El Toro Road  
Laguna Woods, CA 92637

Devin Slaven  
25550 Commercentre Drive, #100  
Lake Forest, CA 92630

John Kappeler  
100 Civic Center Drive  
Newport Beach, CA 92660

Craig Foster  
20 Civic Center Plaza  
Santa Ana, CA 92702

Alex Waite  
300 Centennial Way  
Tustin, CA 92780

**CALIFORNIA WATER CODE SECTION 13267 INVESTIGATIVE ORDER NO. R8-2018-0075:  
AN ORDER DIRECTING COUNTY OF ORANGE AND DISCHARGERS TO THE NEWPORT  
BAY WATERSHED TO SUBMIT TECHNICAL REPORTS PERTAINING TO AN  
INVESTIGATION OF NARRATIVE SEDIMENT QUALITY IN UPPER NEWPORT BAY AND  
LOWER NEWPORT BAY**

Dear Messrs. Crompton, Chirar, Lo, Rosenfield, Macon, Slaven, Kappeler, Foster, and Waite:

Enclosed is Order No. R8-2018-0075, which is an Order requiring an investigation of narrative sediment quality in upper and lower Newport Bay. This Order, pursuant to California Water Code Section 13267, requires the submission of a sediment quality assessment work plan, the implementation of the work plan, and the submission of a sediment quality assessment report to investigate sediment quality in upper and lower Newport Bay. Table 2 of the Order summarizes the compliance dates of each of the required Directives.

If you have any questions, please contact Jason Freshwater via phone at (951) 321-4576 or via email at [Jason.Freshwater@waterboards.ca.gov](mailto:Jason.Freshwater@waterboards.ca.gov).

Sincerely,

Hope A. Smythe  
Executive Officer  
Santa Ana Regional Water Quality Control Board

enclosure: Order No. R8-2018-0075

cc (w/encl): State Water Resources Control Board, Office of Enforcement – Julie Macedo

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**  
**SANTA ANA REGION**  
**INVESTIGATIVE ORDER NO. R8-2018-0075**  
**AN ORDER DIRECTING**  
**COUNTY OF ORANGE AND DISCHARGERS TO THE NEWPORT BAY WATERSHED**  
**TO SUBMIT TECHNICAL REPORTS PERTAINING TO AN INVESTIGATION OF**  
**NARRATIVE SEDIMENT QUALITY IN**  
**UPPER NEWPORT BAY AND LOWER NEWPORT BAY**

**The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Santa Ana Water Board) finds:**

- 1. Legal and Regulatory Authority.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7 of the Water Code, commencing with section 13000) including (1) section 13267 ; (2) applicable State and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plan for the Santa Ana Basin (Basin Plan)* adopted by the Santa Ana Regional Water Quality Control Board (Regional Board), including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304*, Resolution No. 2008-0070, *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Bays and Estuaries Plan)*, and California Code of Regulations title 23, chapter 16, article 11, and title 23, section 3890 et seq.; and (5) relevant standards, criteria, and advisories adopted by other State and federal agencies.
  
- 2. Geographic Extent of the Investigation Area.** The Upper Newport Bay is bounded on the north by Jamboree Road, and on the south by the crossing of Pacific Coast Highway. Lower Newport Bay is bounded on the north by Pacific Coast Highway, and on the south by the navigational entrance channel to the Bay. These two waterbodies in combination are hereinafter referred to as the “investigation area”. Although the Upper Newport Bay and Lower Newport Bay are contiguous, they are considered independently in the Basin Plan for the purposes of beneficial use designations and beneficial use impairment assessments. Additional data are needed to delineate and characterize the spatial extent and magnitude of beneficial use impairment in each of these waterbodies to determine if cleanup and abatement activities are required to restore the beneficial uses of Upper Newport Bay and/or Lower Newport Bay.
  
- 3. County of Orange and dischargers to the Newport Bay Watershed.** Permitted Dischargers to the Newport Bay Watershed include: City of Costa Mesa, City of Irvine, City of Laguna Hills, City of Laguna Woods, City of Lake Forest, City of Newport Beach, City of Santa Ana, and City of Tustin, and the County of Orange (collectively, Dischargers). There are three major tributaries contributing flow to the Upper Newport Bay: San Diego Creek, Santa Ana Delhi Channel, and Big Canyon Wash. Discharge into Newport Bay is regulated under NPDES Permits including, but not limited to, Regional Board

Order No. R8-2009-0030 (hereinafter “Orange County MS4 permit”). In addition to discharges regulated under the Orange County MS4 permit, there are multiple storm water outfalls around the perimeter of the investigation area draining non-permeable surfaces from the adjacent residential and commercial areas. These local outfalls discharge surface runoff (storm water and non-storm water) collected from adjacent drainage areas. Orange County MS4 permittees are required to effectively prohibit non-storm water discharges to its MS4 and reduce pollutants in storm water discharges from its MS4s to receiving waters, including Upper Newport Bay and Lower Newport Bay to the maximum extent practicable (40 CFR 122.26(d)(2)(i)).<sup>1</sup>

- 4. Presence of Pollutants in the Investigation Area.** In 2002 USEPA established a TMDL that named potentially toxic pollutants (metals, PCBs, and pesticides) in Upper Newport Bay and Lower Newport Bay. A TMDL for diazinon and chlorpyrifos in San Diego Creek and Upper Newport Bay was adopted by the Regional Board in 2003 (Resolution No. R8-2003-0039) and a TMDL for organochlorine compounds (PCBs and pesticides) in Upper Newport Bay and Lower Newport Bay was adopted by the Regional Board in 2007 (Resolution No. R8-2007-0024) and amended in 2011 (Resolution No. R8-2011-0037). These TMDLs are still in effect. In 2017, the Regional Board adopted Order No. 2017-0013, approving recommendations for the Clean Water Act 303(d) list. Potentially toxic pollutants that are currently listed in Upper Newport Bay are chlordane, copper, DDT, malathion, and PCBs. Potentially toxic pollutants that are currently listed in Lower Newport Bay are chlordane, copper, DDT, and PCBs.

The *Bays and Estuaries Plan* states that pollutants in sediments in California’s bays and estuaries shall not be present in quantities that, alone or in combination, are toxic to benthic communities or will bioaccumulate in aquatic life at levels that are harmful to human health. This narrative objective shall be implemented using the integration of multiple lines of evidence.

In accordance with the above narrative objectives, these pollutants may be contributing to the degradation of sediment quality in Upper Newport Bay and Lower Newport Bay. However, there is no conclusive evidence linking the degradation in narrative sediment quality to any one of these pollutants directly. Table 1 shows historical assessments in the investigation area, indicating the categorical ranking of narrative sediment quality at each station (shown in Figure 1) using the multiple line of evidence approach outlined in the *Bays and Estuaries Plan*. The data in Table 1 was taken from the Unified Annual Reports that have been submitted in compliance with MS4 monitoring and reporting requirements.<sup>2</sup>

---

<sup>1</sup> 40 CFR 122.26(d)(2)(i) requires permittees to control the discharge of pollutants into the MS4s to the maximum extent practicable. Section IV.1 of the Orange County MS4 Permit states that "Discharges from the MS4s shall not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) for surface waters or groundwaters."

<sup>2</sup> Data was confirmed in an email “Newport Bay SQO results 2009-16” sent to the Regional Board from Stuart Goong, Orange County Public Works on June 14<sup>th</sup>, 2018 with an attached Excel document.

**Table 1: Historical MS4 reporting of narrative sediment quality in Newport Bay**

STATION	LNBTUB	LNHIR	LNBRIN <sup>3</sup>	UNBCHB	UHBNSB	UNBSDC	UNBJAM
2009	Possibly Impacted	Possibly Impacted	-	Likely Unimpacted	Possibly Impacted	Clearly Impacted	Likely Impacted
2010	Likely Impacted	Possibly Impacted	-	Possibly Impacted	Possibly Impacted	Likely Impacted	Possibly Impacted
2011	Likely Impacted	Possibly Impacted	Likely Impacted	Unimpacted	Likely Unimpacted	Possibly Impacted	Possibly Impacted
2012	Possibly Impacted	Possibly Impacted	-	Unimpacted	Possibly Impacted	Possibly Impacted	-
2014	Possibly Impacted	Possibly Impacted	Likely Impacted	Unimpacted	Unimpacted	Possibly Impacted	-
2015	Likely Impacted	Likely Impacted	-	Unimpacted	Possibly Impacted	Likely Impacted	Possibly Impacted
2016	Possibly Impacted	Likely Unimpacted	-	Unimpacted	Unimpacted	Possibly Impacted	Likely Unimpacted

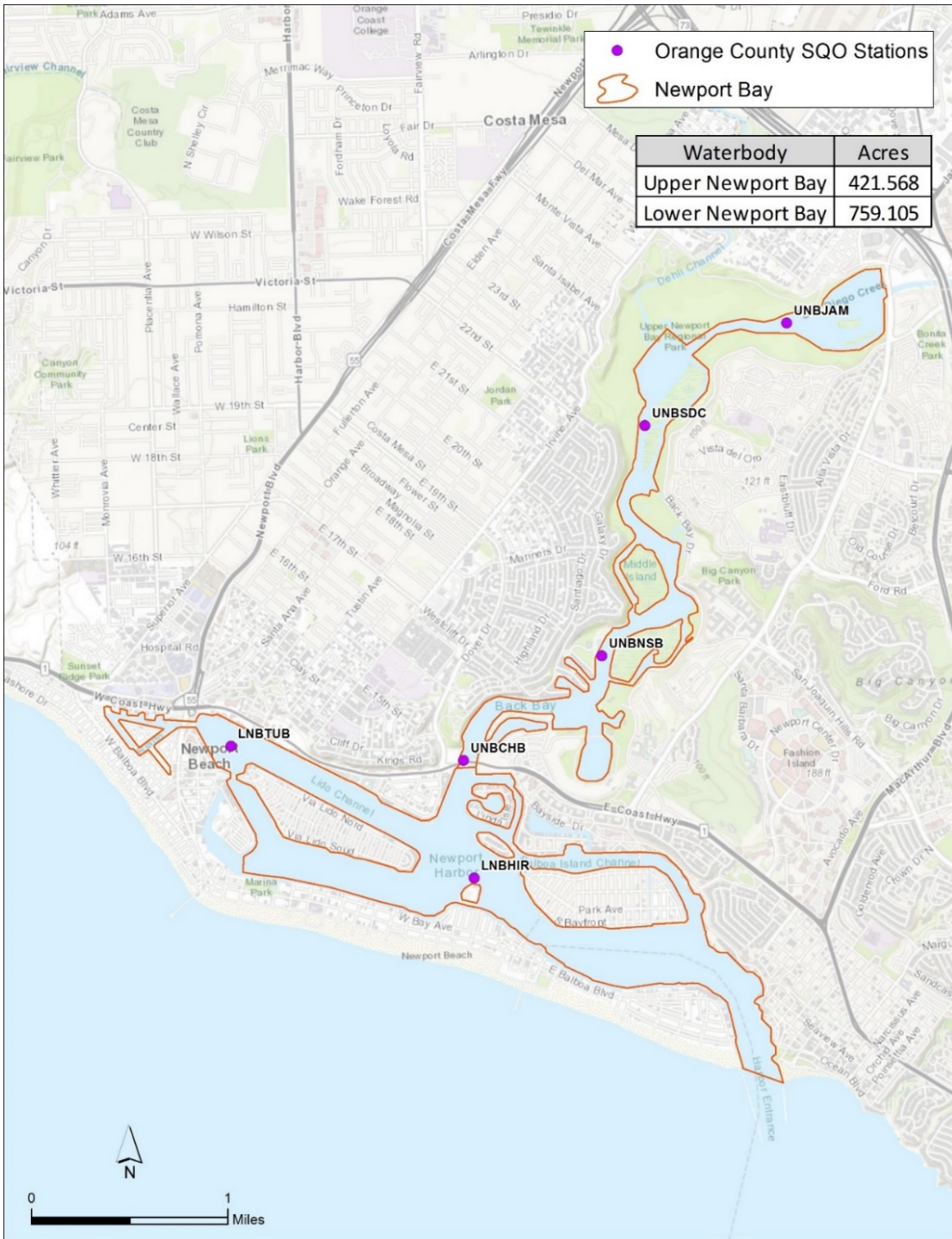
Narrative sediment quality monitoring station assessments reported by Dischargers in annual MS4 reports to the Regional Board. Assessments in bold text represent a degraded condition of sediment quality that is not considered protective of benthic infauna.

---

<sup>3</sup> Although the Rhine Channel (LNBRIN) is currently part of the Lower Newport Bay 303(d) State Water Quality assessment unit, efforts are underway by Regional Board Basin Planning staff to define this location independently for both impairment assessments and potential remediation measures.



**Figure 1: Approximate Investigational Area of this Order**



**Map depicts the delineation of the investigation area. Dots represent the current bay and estuary sediment quality monitoring stations approved in the MS4 permit monitoring plan.<sup>4</sup>**

<sup>4</sup> Station locations were provided in an email "OC SQO Stations.docx" sent to the Regional Board from Jian Peng, Orange County Public Works on January 30<sup>th</sup>, 2018 with an attached Word document.

5. **Designated Beneficial Uses in Upper Newport Bay.** The *Basin Plan* and the *Bays and Estuaries Plan* have the following beneficial uses applicable to Upper Newport Bay that are threatened or potentially threatened by pollutants discharged to the Bay and present in bay sediments:

**a) Human Health**

Water Contact Recreation (REC1: Primary Contact Recreation<sup>5</sup>) waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs.

Non-contact Water Recreation (REC2: Secondary Contact Recreation<sup>2</sup>) waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing and aesthetic enjoyment in conjunction with the above activities.

Commercial and Sportfishing (COMM<sup>2</sup>) waters are used for commercial or recreational collection of fish or other organisms, including those collected for bait. These uses may include, but are not limited to, uses involving organisms intended for human consumption.

Shellfish Harvesting (SHEL<sup>2</sup>) waters support habitats necessary for filter feeding shellfish (e.g., clams, oysters, and mussels) collected for human consumption, commercial, or sport purposes.

**b) Aquatic Life – Benthic Community**

Marine Habitat (MAR) waters support marine ecosystems that include, but are not limited to, preservation and enhancement of marine habitats, vegetation (e.g., kelp), fish and shellfish and wildlife (e.g., marine mammals and shorebirds).

Estuarine Habitat (EST) waters support estuarine ecosystems, which may include, but are not limited to, preservation and enhancement of estuarine habitats, vegetation, fish, and shellfish, and wildlife, such as waterfowl, shorebirds, and marine mammals.

**c) Aquatic – Dependent Wildlife**

Preservation of Biological Habitats of Special Significance (BIOL) waters support designated areas or habitats, including, but not limited to, established refuges, parks, sanctuaries, ecological

---

<sup>5</sup> The REC 1, REC 2, COMM, and SHEL beneficial use designations assigned to surface waterbodies in the Santa Ana Region's Basin Plan should not be construed as encouraging or authorizing these activities. In some cases, access to the waterbodies is prohibited by other agencies because of potentially hazardous conditions and/or because of the need to protect other uses, such as sensitive wildlife habitat. Where REC 1, REC 2, COMM, and SHEL are indicated as beneficial uses in the Upper Newport Bay Estuarine Reserve, the designations are only intended to indicate that such uses may occur or that the water quality of the waterbody may be capable of supporting these beneficial uses unless a Use Attainability Analysis demonstrates otherwise and the Regional Board amends the Basin Plan accordingly.

reserves or preserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.

Wildlife Habitat (WILD) waters support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

Rare, Threatened or Endangered Species (RARE) waters support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered.

Spawning, Reproduction and Development (SPWN) waters support high quality aquatic habitats necessary for reproduction and early development of fish and wildlife.

## 6. Beneficial Use Impairment in Upper Newport Bay

- a) **Threat to Human Health.** Upper Newport Bay is listed in the 2014/2016 California Integrated Report (Clean Water Act Section 303(d) list and 305(b) report) as impaired due to the presence of elevated levels of DDTs and PCBs in sportfish fillet tissue. The listing is based on fish tissue samples from the Upper Newport Bay that exceeded the Office of Environmental Health Hazard Assessment's (OEHHA's) 2008 fish tissue contaminant goals for DDTs and PCBs<sup>6</sup>.
- b) **Threat to Benthic Community.** The reported narrative sediment quality assessments in Table 1 shown in bold text are above the categorical threshold designated in the Bays and Estuaries Plan to be protective of benthic wildlife. The data used as a basis for the current (2014/2016) 303(d) listing determinations for the Upper Newport Bay did not use the multiple line of evidence approach described in the Bays and Estuaries Plan. Assessment of sediment quality using only single lines of evidence in isolation does not conclusively demonstrate a risk to benthic infauna.
- c) **Threat to Aquatic-Dependent Wildlife.** Contact with and consumption of pollutants in sediments by the benthic community and plankton can be transferred through the food web to fish and other wildlife. Elevated levels of PCBs and pesticides have been measured in bivalve, fish, and bird egg tissue. The levels have exceeded published wildlife risk thresholds. The pollutant concentrations in the sediment within the investigation area may not be protective of the benthic community, and can directly or indirectly have an adverse impact on aquatic-dependent wildlife.<sup>7</sup>

7. **Designated Beneficial Uses in Lower Newport Bay.** The *Basin Plan* and the *Bays and Estuaries Plan* have the following beneficial uses applicable to Lower Newport Bay that are threatened or potentially threatened by pollutants discharged to the Bay and present in bay sediments:

---

<sup>6</sup> The OEHHA 1999 screening values that were used in the development of the organochlorine compounds TMDL have been superseded by OEHHA's 2008 screening values.

<sup>7</sup> USEPA 2002 TMDL "Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California" (June 14, 2002) and 2007 R8-2007-0024 (amended in 2011 R8-2011-0037) "Total Maximum Daily Loads for Organochlorine Compounds"

#### **a) Human Health**

Navigation (NAV) waters are used for shipping, travel or other transportation by private, commercial or military vessels.

Water Contact Recreation (REC1: Primary Contact Recreation) waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs.

Non-contact Water Recreation (REC2: Secondary Contact Recreation) waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing and aesthetic enjoyment in conjunction with the above activities.

Commercial and Sportfishing (COMM) waters are used for commercial or recreational collection of fish or other organisms, including those collected for bait. These uses may include, but are not limited to, uses involving organisms intended for human consumption.

Shellfish Harvesting (SHEL) waters support habitats necessary for filter feeding shellfish (e.g., clams, oysters, and mussels) collected for human consumption, commercial, or sport purposes.

#### **b) Aquatic Life – Benthic Community**

Marine Habitat (MAR) waters support marine ecosystems that include, but are not limited to, preservation and enhancement of marine habitats, vegetation (e.g., kelp), fish and shellfish and wildlife (e.g., marine mammals and shorebirds).

#### **c) Aquatic – Dependent Wildlife**

Wildlife Habitat (WILD) waters support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

Rare, Threatened or Endangered Species (RARE) waters support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered.

Spawning, Reproduction and Development (SPWN) waters support high quality aquatic habitats necessary for reproduction and early development of fish and wildlife.

### **8. Beneficial Use Impairment in Lower Newport Bay**

- a) Threat to Human Health.** Lower Newport Bay is listed in the 2014/2016 California Integrated Report (Clean Water Act Section 303(d) list and 305(b) report) as impaired due to the presence of elevated levels of DDTs and PCBs in sportfish fillet tissue. This listing did not change from the previous listing and is based on fish tissue samples from the Lower Newport Bay that were



collected prior to 2006 that exceeded OEHHA's 1999 fish tissue screening values for DDTs and PCBs.

- b) Threat to Benthic Community.** The reported narrative sediment quality assessments in Table 1 shown in bold text are above the categorical threshold designated in the Bays and Estuaries Plan to be protective of benthic wildlife. The data used as a basis for the current 303(d) listing determinations for the Lower Newport Bay did not use the multiple line of evidence approach described in the Bays and Estuaries Plan. Assessment of sediment quality using only single lines of evidence in isolation does not conclusively demonstrate a risk to benthic infauna.
- c) Threat to Aquatic-Dependent Wildlife.** Contact with and consumption of pollutants in sediments by the benthic community and plankton can be transferred through the food web to fish and other wildlife. Elevated levels of PCBs and pesticides have been measured in bivalve, fish, and bird egg tissue. The levels have exceeded published wildlife risk thresholds. The pollutant concentrations in the sediment within the investigation area may not be protective of the benthic community, and can directly or indirectly have an adverse impact on aquatic-dependent wildlife.<sup>8</sup>
- 9. Persons Responsible for the Discharge of Waste.** County of Orange and other Dischargers within the Newport Bay watershed (as identified in Finding 3) are responsible for discharges of wastes to the investigation area. As described in Findings 4 through 8, discharges have occurred or may occur in Upper Newport Bay and Lower Newport Bay where they cause or threaten to cause a condition of pollution or nuisance. Through the course of the investigation, additional information may become available that identifies additional potential dischargers or warrants naming additional persons as dischargers. The Santa Ana Water Board reserves and retains the right to name additional persons. The Santa Ana Water Board has the right to issue a 13267 order to any entity who has discharged or is suspected of discharging wastes within the watershed. The above descriptions of activities, actual, threatened or potential discharges, and/or actions giving rise to potential liability under Water Code Section 13304 are not intended to be weighted for allocation purposes. The Water Boards do not generally allocate liability between parties, and there is not a *de minimis* defense or exception under Water Code section 13304. To achieve maximum efficiency and economy of resources, the Water Board encourages the regulated community to establish monitoring coalitions. Monitoring coalitions enable the sharing of technical resources, trained personnel, and associated costs and create an integrated sediment-monitoring program within each major water body.
- 10. Basis for Requiring Reports.** Water Code section 13267 provides that the Santa Ana Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the Santa Ana Water Board may specify, provided that the burden, including costs, of these reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

---

<sup>8</sup> USEPA 2002 TMDL "Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California" (June 14, 2002) and 2007 R8-2007-0024 (amended in 2011 R8-2011-0037) "Total Maximum Daily Loads for Organochlorine Compounds"

**11. Need for and Benefit of Reports.** Available sediment data has not adequately delineated the spatial extent and magnitude of the narrative sediment quality impairment in the investigation area. An assessment of the sediment using the categorical classifications described in the *Bays and Estuaries Plan* is needed to determine the spatial extent and magnitude of sediment quality impairment in bay sediments and to determine if cleanup and abatement activities are required. Technical and monitoring reports are needed to provide information to the Santa Ana Water Board regarding the nature, spatial extent, and magnitude of pollutants discharged to, and present in Upper Newport Bay and Lower Newport Bay sediments. The reports will enable the Santa Ana Water Board to ascertain the spatial extent and magnitude of narrative sediment quality impairment within the investigation area that potentially threatens benthic organisms, resident wildlife, and human health. The level of impairment of sediment quality in Newport Bay can then be evaluated with consideration to Phase I Sediment Quality Objectives<sup>9</sup> through direct effects on benthic organisms and the State Listing Policy<sup>10</sup>. In addition, the reports can be used to reassess sediment quality waste load allocations and sediment concentration targets in the USEPA 2002 TMDL for Toxic Pollutants in San Diego Creek and Newport Bay, and the 2007 (amended in 2011) TMDL for Organochlorine Compounds<sup>11</sup>. This then translates to exposure and potential risk to wildlife in the local food-web. There is also the potential to impact human health through bioaccumulation and biomagnification in sport fish taken for human consumption. This information will be used to determine if cleanup and abatement activities are warranted. Based on the nature and possible consequences of discharges and existing pollutants (as described in the Findings above) the burden of providing the required reports, including the costs, bears a reasonable relationship to the need for the reports, and the benefits to be obtained from the reports.

**12. California Environmental Quality Act Compliance.** The issuance of this Order is an enforcement action taken by a regulatory agency and is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15321(a) (2), chapter 3, title 14 of the California Code of Regulations. This action is also exempt from the provisions of CEQA pursuant to section 15061(b)(3), chapter 3, title 14 because it can be seen with certainty that there is no possibility the activities undertaken to comply with this Order will have a significant effect on the environment.

**13. Qualified Professionals.** The Dischargers' reliance on qualified professionals promotes proper planning, implementation, and long-term cost-effectiveness of investigations. Professionals should be qualified, licensed where applicable, and competent and proficient in the fields pertinent to the required activities.

---

<sup>9</sup> Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (2009), State Water Resources Control Board Resolution 2008-0070

<sup>10</sup> Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (2004), State Water Resources Control Board Resolution 2004-0063 (amended in Resolution 2015-0005)

<sup>11</sup> USEPA 2002 TMDL "Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California" (June 14, 2002) and 2007 R8-2007-0024 (amended in 2011 R8-2011-0037) "Total Maximum Daily Loads for Organochlorine Compounds"

**IT IS HEREBY ORDERED**, pursuant to Water Code sections 13267 that Co-permittees of the County of Orange MS4 Permit (collectively Dischargers) must comply with the following directives:

- A. Sediment Quality Assessment Work Plan.** The Dischargers (as defined in Finding 3) must submit a Sediment Quality Assessment Work Plan (Work Plan) to assess the extent and magnitude of narrative sediment quality impacts in Upper Newport Bay and Lower Newport Bay. The Work Plan must be received in final form by the Santa Ana Water Board **no later than 60 days after the Dischargers receive comments on the draft Work Plan from the Regional Board staff.**

The Work Plan must include the following:

- 1. Study Questions.** Provide study questions that the Dischargers will answer to adequately assess the nature, extent, and magnitude of the contaminated sediments in Upper Newport Bay and Lower Newport Bay. Answers to the study questions will be provided through the implementation of the Work Plan, or through subsequent investigations that may be required by the Santa Ana Water Board or recommended by the Dischargers, as warranted. The Dischargers may propose any study questions the Dischargers would like to answer by the data to be collected through the implementation of the Work Plan, but the study questions must include, at a minimum, the following:

**a. Nature and Extent**

- i. What is the current nature, spatial extent, and magnitude of pollutants discharged to, or existing in sediments in Upper and Lower Newport Bay?
- ii. If existing data are not sufficient to understand the current nature, extent, and magnitude of pollutants discharged or present using the adopted multiple line-of-evidence approach in the *Bays and Estuaries Plan*, what sampling strategy is needed to fill that data gap?
- iii. What activities are needed to identify the data to characterize the nature, extent, and magnitude of pollutants discharged in the area discussed above? This could include historical data review, or expansion of ongoing sediment quality monitoring programs.

**b. Potential Sources**

- i. What are the potential historical and current sources that have discharged or are currently discharging to Upper and Lower Newport Bay?
- ii. If existing data are not sufficient to understand potential historical and current sources, what sampling strategy is needed to provide the necessary data?
- iii. What activities are needed to identify the data to characterize the potential historical and current sources within the investigation area?

**c. Pathways and Pollutant Transport**

- i. If pollutants and ongoing sources are identified, what are the pathways for pollutant transport to and within the investigation area?
- ii. If existing data are not sufficient to understand the transport of potential historical and current sources of pollutants, what sampling strategy is needed to fill that deficiency?
- iii. What activities are needed to obtain the data necessary to characterize the transport of potential historical and current sources of pollutants to and within the investigation area?

2. **Map.** Provide one or more maps of the watershed area in the Dischargers' permitted jurisdiction that discharged or potentially discharged to the investigation area, showing the following:
  - a. Locations of all current and historical industrial process waste discharge points (with associated WDR permit identification) and agricultural runoff zones from the Dischargers' facilities and/or jurisdiction;
  - b. Locations of all current and historical storm water conveyance features, including inlets and discharge points from industrial facilities and/or watershed sources; and,
  - c. Locations and information that can be provided on a map, where appropriate, for the Work Plan requirements below.
  
3. **Historical Waste Discharges Assessment.** Provide an assessment of the potential pollutants that may have been discharged to and/or removed from the investigation area. The assessment must include the following information and specify explicitly whether the information refers to the Upper Newport Bay or the Lower Newport Bay. Where it is possible, data from Upper Newport Bay and Lower Newport Bay must be separated for independent assessments.
  - a. For the locations of the current and historical waste discharge points from the Dischargers' jurisdiction, specifically those that discharge pollutants that could conceivably contribute to any narrative sediment quality degradation (e.g. metals and organochlorine compounds), identify potential flow pathways that could result in a discharge of the potential pollutants to the investigation area.
  - b. Identify and enumerate the structural and non-structural BMPs that have been implemented, and the date those BMPs were initiated to prevent or minimize the discharge of potential pollutants to the investigation area, and an assessment of their effectiveness.
  - c. Provide descriptions of any operations, including agriculture operations, that occurred near the investigation area, and the chemicals, materials, and wastes that are known or suspected to have been spilled, aurally transported, or exposed to storm water and discharged or potentially discharged to the investigation area.
  - d. Provide data collected by or available to the Dischargers for industrial process waste discharged directly or indirectly to the Upper Newport Bay or the Lower Newport Bay.
  - e. Provide data collected by or available to the Dischargers for agricultural storm water runoff or irrigation tailwaters discharged directly or indirectly to the Upper Newport Bay or the Lower Newport Bay.
  - f. Provide data collected by or available to the Dischargers for storm water and non-storm water discharged directly or indirectly to the Upper Newport Bay or the Lower Newport Bay.



- c. A discussion of existing monitoring data interpretations;
  - d. Data deficiencies identified in the existing monitoring and the preliminary Conceptual Site Model; and,
  - e. Level of uncertainty in the preliminary Conceptual Site Model based on identified data deficiencies.
- 6. Sediment Sampling and Analysis Plan.** Sediment sampling and narrative categorical ranking shall occur in conformity with the provisions and processes in the *Bays and Estuaries Plan*. The Sediment Sampling and Analysis Plan (SAP) shall include the following:
- a. Identify the proposed sediment sampling locations that will be used to determine the current extent, magnitude, and concentration gradients of contaminated sediments in the investigation area. Sampling sites will be selected using a stratified random sampling design, in consultation with Regional Board Staff. Proposed sediment sampling locations must be identified on a map, and approximate latitude and longitude coordinates must be provided. Proposed locations must be capable of characterizing the extent of contaminated sediment from the shoreline into the Bay, including within the pier line in the Lower Newport Bay, and as close as possible to the intertidal mudflats in the Upper Newport Bay. Proposed sediment sampling locations in the investigation area shall be consistent with the *Bays and Estuaries Plan* and guidance recommended by the Regional Board.
  - b. The sediment samples taken from the investigation area must be analyzed in accordance with the procedures outlined in the *Bays and Estuaries Plan*. The samples must also be analyzed for the following:
    - i. Grain size;
    - ii. Total organic carbon;
    - iii. All of the chemical analytes that are required to correctly calculate the Chemistry Line of Evidence (LOE) using the Chemical Score Index (CSI) and California Linear Regression Model (CA LRM) methods; and,
    - iv. Any additional pollutants identified by the Dischargers or the Santa Ana Water Board for analysis during the development of the Work Plan. If necessary, measurement of additional parameters may be required to complete a stressor identification (e.g. acid-volatile sulfides, ammonia).
  - c. If the Dischargers determine additional information (e.g. bioavailability of pollutants, stressor identification analysis) is warranted at this time to eliminate data deficiencies in the preliminary Conceptual Site Model or to answer the study questions, include as activities in the Work Plan any additional data collection, special studies, or monitoring that will be included and implemented as part of the Work Plan.



7. **Quality Assurance Project Plan.** Provide a Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and the quality assurance / quality control (QA/QC) protocols for the monitoring and laboratory analyses to be conducted in accordance with the Sediment SAP.
8. **Schedule.** Provide a detailed schedule of activities for completion of the Work Plan. At a minimum, the schedule must specify the following:
  - a. Dates by which the sediment sampling activities for the investigation area are expected to begin and be completed;
  - b. Dates by which any additional data collection, special studies, or monitoring proposed by the Dischargers pursuant to Directive A.6.e are expected to begin and be completed;
  - c. Date by which laboratory analysis of the sediment samples are expected to be completed; and,
  - d. Date by which laboratory analysis for any additional data collection, special studies, or monitoring proposed by the Dischargers pursuant to Directive A.6. are expected to be completed.

**B. Implementation of Sediment Quality Assessment Work Plan.** The Dischargers must implement the Work Plan in compliance with the schedule in the Work Plan as approved by the Santa Ana Water Board, unless otherwise directed in writing by the Executive Officer. If Dischargers are unable to complete the implementation of the Work Plan **within three years from the approval of the final Work Plan**, Dischargers shall provide an itemized justification of their inability to do so. If unforeseen circumstances arise that cause delays, the Dischargers shall request modifications to the Work Plan schedule. Any proposed changes to the compliance dates must have prior approval from the Executive Officer.

**C. Sediment Quality Assessment Report.** The Dischargers must prepare a Sediment Quality Assessment Final Report (Report) describing the results from implementing the Work Plan. The Report must be received by the Santa Ana Water Board **no later than 60 days after the Dischargers receive comments on the draft Report from the Regional Board staff**. The Report must contain the following:

1. **Sampling Locations.** For each sediment sampling location, provide the latitude and longitude, date collected, and the location shown on a map.
2. **Analytical Results.** Provide the results of all analyses performed, and summarize in tabular format and on maps, as appropriate. Provide the laboratory analytical method used for each analysis.
3. **Conclusions.** Provide conclusions for the Santa Ana Water Board to consider based on the analytical results from implementation of the Work Plan in the context of the Work Plan study questions, historical waste discharges assessment, and data from existing monitoring. The

Dischargers must provide data interpretations and study conclusions for which there is agreement by all Dischargers, if any. Each Discharger is also encouraged to provide its own alternative data interpretations and study conclusions for which there is not agreement by all Dischargers, if any, for the Santa Ana Water Board to consider. The data interpretations and study conclusions must include the following:

- a. Maps and discussion of the sediments with categorical sediment quality assessments of “possibly impacted” or worse;
- b. Identification of areas that may require additional investigation (e.g. stressor identification) and/or remedial action;
- c. Updated Conceptual Site Model;
- d. Answers for each of the study questions;
- e. Identification of remaining data deficiencies in updated Conceptual Site Model; and,
- f. Level of uncertainty of conclusions based on remaining data deficiencies.

**4. Recommendations.** Provide recommendations for the Santa Ana Water Board to consider based on the conclusions. The Dischargers must provide recommendations for which there is agreement by all Dischargers, if any. Each Discharger is also encouraged to provide its own alternative recommendations for which there is not agreement by all Dischargers, if any, for the Santa Ana Water Board to consider. The recommendations must include the following:

- a. Criteria for determining where cleanup activities may be warranted;
- b. Changes to the study questions, if any;
- c. Studies or data for filling data deficiencies in the updated Conceptual Site Model, if any;
- d. Studies or data needed to better answer study questions, if any;
- e. Studies or data that may be needed to determine where cleanup activities are warranted, if any; and,
- f. Studies or data that may be needed to establish appropriate cleanup levels, if cleanup is warranted.

**D. Compliance Dates.** The compliance dates for the requirements of this Order are summarized in Table 2. In accordance with Water Code Section 13268, failure to meet those deadlines could result in administrative civil liabilities. Any proposed changes to the compliance dates provided in Table 2 must have prior approval by the Executive Officer.

**Table 2. Compliance Dates**

<b>REQUIREMENT</b>	<b>DUE DATE</b>
<b>DIRECTIVE A. Submission and Completion of Sediment Quality Assessment Work Plan (Work Plan)</b>	
1. Submit a detailed outline of the Work Plan to Regional Board staff for review	45 days after the issuance of this Order
2. Submit a draft Work Plan to Regional Board staff for review	120 days after the receipt of comments on the Work Plan outline from the Regional Board staff
3. Submit the final Work Plan incorporating Regional Board staffs' comments for final Executive Officer approval	60 days from the receipt of comments on the draft Work Plan from the Regional Board staff
<b>DIRECTIVE B. Submission of Monitoring and Assessment Reports</b>	
1. Submit Semi-annual Reports summarizing progress towards completion of Work Plan implementation	Every 180 days after approval of the final Work Plan by the Executive Officer
2. Submit a draft Report and Assessment of the first set of sampling results	2 years from the date of this order
3. Submit a draft Report and Assessment of an additional set of sampling results	18 months following the second sampling event
<b>DIRECTIVE C. Submittal of the Final Report</b>	
1. Submit a detailed outline of the Final Report to Regional Board staff for review	45 days after completion of the last scheduled Work Plan activity
2. Submit a draft Final Report to Regional Board staff for review	120 days after receipt of comments on the Final Report outline from Regional Board staff
3. Submit the Final Report incorporating Regional Board's comments for final Executive Officer approval	60 days after receipt of comments on the draft Final Report from Regional Board staff <sup>12</sup>

**E. Penalty of Perjury Statement.** All reports must be signed by the Dischargers' corporate officers or duly authorized representatives, and must include the following statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

---

<sup>12</sup> Reports submitted in compliance with this order are to be prepared as stand-alone documents. The information requested in this order cannot be submitted as a part of any other unrelated technical reports or annual reports.

**F. Document Submittals.** The Dischargers must submit the required documents as follows:

1. All information submitted to the Santa Ana Regional Water Quality Control Board in compliance with this Order is required to be submitted electronically to [santaana@waterboards.ca.gov](mailto:santaana@waterboards.ca.gov) with the subject line "Investigation Order R8-2018-0075 (July 9, 2018)." The Dischargers must submit the following minimum information:
  - a. **Reports.** A complete copy of all work plans, assessment, monitoring, and cleanup reports, including the signed transmittal letters, professional certifications, and all data presented in the reports in PDF format, and converted to text searchable format. Reports larger than 100 megabytes (MB) need to be divided into separate files at logical places in the report to keep the file sizes under 100 MB.
  - b. **Site Maps.** A site map, as a stand-alone document, including notes, legends, north arrow, and other data as appropriate to ensure that the site map is clear and understandable in GIF, JPG, TIF, or PDF formats. When appropriate, the Dischargers should provide required information on multiple site maps.
  - c. **Laboratory Analytical Data.** Analytical data for all Bay sediment and water samples in Electronic Data File (EDF) format.
2. **California Environmental Data Exchange Network.** The Dischargers must upload the applicable data collected from the implementation of the Work Plan in the required format into the California Environmental Data Exchange Network database (<http://www.ceden.org/>), or if directed by the Executive Officer, to an alternative State database.
3. **Other Submittals.** The Santa Ana Water Board may also request hard copy and/or electronic copies on CD or other appropriate media.
  - a. If requested by the Santa Ana Water Board, the Dischargers must also provide any or all of the following to the Board: a hard copy of the complete document, a hard copy of the cover/transmittal letter, a hard copy of oversized drawings or maps, and an electronic copy (on a CD or other appropriate media) of the complete document. If requested, documents must be sent to the following address:

Attention: Jason Freshwater  
Subject: Investigation Order R8-2018-0075 (July 9, 2018)  
3737 Main Street, Suite 500  
Riverside, CA 92501
  - b. If requested by the Santa Ana Water Board, the Dischargers must also submit a copy (in a text-searchable PDF file) of all documents including signed transmittal letters, professional certifications, and all data presented in the documents to: [santaana@waterboards.ca.gov](mailto:santaana@waterboards.ca.gov).

**4. Compliance Determination for Document Submittals.** Upon receipt of the documents, the Santa Ana Water Board will use the email date and time, upload date and time, and/or receipt date and time to determine compliance with the regulatory due dates specified in this Order.

**G. Violation Reports.** If the Dischargers violate any requirement of this Order, then the Dischargers must notify the Executive Officer in writing as soon as practicable once the Dischargers have knowledge of the violation. The Executive Officer may, depending on violation severity, require the Dischargers to submit a separate technical report on the violation within five working days of the notification.

#### **H. Provisions**

**1. Waste Management.** The Dischargers must properly manage, store, treat, and dispose of contaminated sediments in accordance with applicable federal, State, and local laws and regulations. The storage, handling, treatment, or disposal of sediment associated with the assessment required by this Order must not create conditions of nuisance as defined in Water Code section 13050(m).

**2. Contractor/Consultant Qualifications.** All reports, plans, and documents required under this Order must be prepared under the direction of appropriately qualified professionals. A statement of qualifications and license numbers, if applicable, of the responsible lead professional and all professionals making significant and/or substantive contributions must be included in the report submitted by the Dischargers.

**3. Laboratory Qualifications.** All samples must be analyzed by California State-certified laboratories using methods approved by the United States Environmental Protection Agency (USEPA) for the type of analysis to be performed. Taxonomic identification and enumeration of benthic infauna shall be performed by a qualified taxonomist using the SCAMIT taxonomic database.

**4. Laboratory Analytical Reports.** Any report presenting new analytical data is required to include the complete Laboratory Analytical Report(s). The Laboratory Analytical Report(s) must be signed by the laboratory director and contain:

- a. Complete sample analytical reports;
- b. Complete laboratory QA/QC reports;
- c. A discussion of the sample and QA/QC data; and,
- d. A transmittal letter that indicates whether or not all the analytical work was supervised by the director of the laboratory, and contains the following statement:

*“All analyses were conducted at a laboratory certified for such analyses by the State Water Resources Control Board, Division of Drinking Water’s Environmental Laboratory Accreditation Program in accordance with USEPA procedures.”<sup>13</sup>”*

5. **Analytical Methods.** Specific methods of analysis must be identified in the technical and monitoring reports. If the Dischargers propose to use methods or test procedures other than those included in the most current version of USEPA’s “Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-486” or Code of Federal Regulations (CFR), title 40, part 136 “Guidelines Establishing Test Procedures for the Analysis of Pollutants,” the exact methodology must be submitted for review and must be approved by the Santa Ana Water Board prior to use.
6. **Submittals and Schedules.** All final submittals and schedules are subject to the approval of the Executive Officer.
7. **Petitions.** Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at: [https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) or will be provided upon request.

## I. Notifications

1. **All Applicable Permits.** The Dischargers must obtain all permits and access agreements needed to implement the requirements of this Order. This Order does not relieve the Dischargers of the responsibility to obtain permits or other entitlements to perform necessary assessment activities. This includes, but is not limited to, actions that are subject to local, State, and/or federal discretionary review and permitting.
2. **Enforcement Discretion:** The Santa Ana Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
3. **Enforcement Notification.** Failure to comply with requirements of this Order may subject the Dischargers to enforcement action, including but not limited to administrative enforcement orders requiring the Dischargers to cease and desist from violations, imposition of administrative civil liability, pursuant to Water Code section 13268 in an amount not to exceed \$1,000 for each day in which the violation occurs, referral to the State Attorney General for injunctive relief, and referral to the District Attorney for criminal prosecution. The Dischargers are jointly and severally

---

<sup>13</sup> The statement would not apply to methods, such as taxonomic identification, where there have been no standard methods approved by USEPA or by CDPH.



liable for the entire amount of the administrative civil liability. The Santa Ana Water Board reserves the right to seek administrative civil liability from any or all of the Dischargers.

**IT IS HEREBY ORDERED** pursuant to Water Code section 13267, on behalf of the California Regional Water Quality Control Board, Santa Ana Region.

*Hope A. Smythe*

\_\_\_\_\_  
Hope A. Smythe, Executive Officer

*07/11/2018*

\_\_\_\_\_  
Date