Heal the Bay

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June 6, 2007

Deborah Smith
Interim Executive Officer
Los Angeles Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Re: Comments on the Tentative Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System Permit (NPDES) – City of San Buenaventura Ventura Water Reclamation Facility (NPDES Permit No. CA0053651) and Tentative Time Schedule Order (TSO) for the Ventura Water Reclamation Facility

Dear Ms. Smith:

On behalf of Heal the Bay, we submit the following comments on the *Tentative WDRs and NPDES Permit for the City of San Buenaventura Ventura Water Reclamation Facility* ("Tentative Permit" or "Permit") and the *Tentative TSO for the Ventura Water Reclamation Facility* ("TSO"). We appreciate the opportunity to provide these comments.

Although 11 years is a long time to achieve compliance, Heal the Bay strongly supports the Regional Board's decision to incrementally decrease the Ventura Water Reclamation Facility ("VWRF") discharge to the Santa Clara River Estuary ("SCRE" or "Estuary") by 1 mgd annually until there is zero discharge to the Estuary in 2018. The VWRF discharge to the Estuary must be removed in accordance with the *Water Quality Control Policy for Enclosed Bays and Estuaries of California*, as enhancement was not demonstrated. By removing the discharge, the Estuary will return to more "natural" conditions and water quality will increase. In turn, this will greatly improve species habitat. Also eliminating the discharge will be beneficial from a Chumash cultural resources perspective.

However, we do have some concerns with the Tentative Permit and TSO as written. For instance, the interim limits provided in the Tentative Permit and TSO perpetuate the long cycle of interim limits and the discharge not meeting water quality standards. These comments and others are outlined in further detail below.

I. SANTA CLARA RIVER ESTUARY DISCHARGE

A. Regional Board staff appropriately deny an exception to the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* for the VWRF discharge.

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The VWRF has discharged to the Santa Clara River Estuary for approximately forty-five years. This discharge is in direct conflict with the State Water Quality Control Board's *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* ("EBE Policy"), passed in 1974, which mandates that wastewater discharges to estuaries be phased out as soon as practicable. SWRCB Resolution No. 74-43. According to the EBE Policy, exceptions may be granted *only* in the rare circumstance where a regional board finds that the discharge enhances the estuary. Of note, the discharge from the VWRF is the only remaining permitted point source discharge to an estuary in the State of California.

The discharger conducted numerous studies over the past several years with the goal of demonstrating enhancement to the Estuary. However, the studies do not indicate that the discharge is enhancing the Estuary. In fact, monitoring data provided in the reports show that the VWRF discharge is negatively impacting water quality in the Estuary. As outlined in Cleanup and Abatement Order No. R4-2006-0012 ("CAO"), the VWRF has chronically exceeded both permit limits and monitoring and reporting requirements – with at least 255 violations of effluent limits alone – under Order Nos. 00-143, R4-2003-0059, and R4-2004-0095. CAO at 4. Although we acknowledge that the City has made improvements to the treatment process over the last few years, the Tentative Permit and TSO indicate that the VWRF cannot consistently meet final effluent limits for mercury, silver, cyanide, copper, lead, nickel, zinc, chlorodibromomethane, dichlorobromomethane, bis(2-ethylhexyl)phthalate and nitrogen species even under the modified treatment process. Tentative Permit at 19. Thus, the Estuary is negatively impacted by these elevated discharges of metals and nutrients. In addition, the un-natural hydrologic conditions created by the discharge likely negatively impact resident species. For instance, more frequent breaching may impact the tidewater goby by decreasing their rearing habitat and washing individuals out to sea.

Appropriately, the Regional Board concludes that the burden of proof that the discharge is enhancing the Estuary was not met. In fact in response to the discharger's studies, the Regional Board found that "[t]he results were highly inconclusive on whether the discharge is beneficial to the Estuary, or if there was enhancement." Tentative Permit at 29. Thus, the Tentative Permit does not provide for an exemption to the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. Instead, the Tentative Permit calls for a phased removal of the discharge from the Estuary. Heal the Bay is in full support of this approach.

B. Species, including the federally endangered tidewater goby, are negatively impacted by VWRF's direct discharge to the Estuary.

At the May 8, 2007 stakeholder meeting, several stakeholders raised concerns about potential impacts to the tidewater goby from a decrease in flow to the Estuary. They hold that removing the wastewater discharge may lead to less frequent breaching and algal

growth that could impact the tidewater goby. However, stakeholders such as the Fish and Wildlife Service have not provided studies or other evidence that support this hypothesis. In fact based on monitoring data collected over the last permit cycle, we are concerned that continuing the direct discharge to the Estuary will actually **negatively** impact resident species. These impacts are discussed in detail below. Further, the Regional Board proposes extensive monitoring that will "…ensure that endangered species residing in the Estuary are not adversely impacted by the incremental decrease in flow." Tentative Permit at 7. This monitoring will act as a "safety net" in the event that impacts occur.

i. High nutrient loadings from the VWRF to the Estuary likely impact resident species by spurring algal growth and lowering DO levels.

The City's own monitoring data show that the VWRF is a major source of nutrients to the Estuary. For instance, between 2001 and 2005 the annual average nitrate concentrations in the effluent were 11.3, 12.8, 13.9, 14.7 and 16 mg/l, respectively. In 2005, the nitrate effluent concentration reached 23.8 mg/l. These numbers are very high compared to nitrate limits of 8 mg/l set in neighboring watersheds (Malibu Creek and LA River). Notably, this level is intended to address the drinking water standard of 10 mg/l nitrate plus nitrite, which is necessary to prevent toxicity to human infants (methemoglobinemia, also known as blue baby syndrome). **It is not adequate to address aquatic life uses.** This is illustrated by the current Nutrient TMDL for Malibu Creek, adopted by USEPA in 2003, which provides a summer season water quality objective of 1.0 mg/l total nitrogen. One of the reasons the Tapia Water Reclamation Facility NPDES permit prohibits dry weather discharge from April 15 to November 15 is because of nutrient impacts on Malibu Creek and Lagoon. Moreover, Heal the Bay studied threshold values for nutrients and algal cover in Malibu Creek using an empirical reference site approach and found that "[p]eriphyton cover exceeded nuisance levels (*i.e*. 30% cover) whenever average nitrate concentration was greater than 0.1 mg/l or average phosphate concentration was greater than about 0.15 mg/l." S. Luce and M. Abramson, *Periphyton and Nutrients in Malibu Creek* (2004). In comparing the VWRF data to the 8 mg/l limit, and even more appropriately the 0.1 to 1 mg/l objectives, it is evident that VWRF is discharging nutrients at levels which are very likely causing negative impacts to the estuarine environment.

Based on Heal the Bay's extensive monitoring experience in the Malibu Creek Watershed over the last eight years, the final nitrate and nitrite effluent limit of 10 mg/l is far too high. The Regional Board should closely evaluate SCRE monitoring data over the life of the current permit and assess, based on ambient nutrient concentrations and ecological assemblage analysis, what a protective nitrate and nitrite effluent limit should be.

Elevated nutrient concentrations in POTW discharges can be extremely problematic in these types of stream systems. For instance, high levels of nutrients and slow moving water can lead to eutrophication and excess algal growth. In addition, elevated nutrient

levels can lead to low dissolved oxygen concentrations that can negatively impact aquatic life. *See, e.g.*, Richard Ambrose and Antony Orme, *Lower Malibu Creek and Lagoon Resource Enhancement and Management* (May 2000) at 8-16. ("Elevated nutrient and freshwater inputs are the primary anthropogenic causes of eutrophication. As described earlier, the lower [Malibu] creek and lagoon receive unnaturally high nutrient inputs from point and nonpoint sources within the watershed. Coupled with elevated freshwater flows and resulting low salinity levels, these nutrients promote conditions favorable to the growth of algae and other macrophytes. When these organisms die and decay, they consume dissolved oxygen in the lower creek and lagoon, completing the eutrophication cycle.").

In this case, existing water quality data indicate that DO levels are low during certain sampling events in the Estuary. For instance, Table 4-1a of the Resident Species Study provides average DO data from nine sampling stations throughout the Estuary. The lowest average DO values are 3.81 and 0.28 mg/l at sites B-1 and B-2, respectively. Resident Species Study at 4-1a.[1] Interestingly, these locations are the closest sampling sites to the VWRF discharge. It is also unlikely that these DO measurements were taken during the pre-dawn, critical conditions. A study in Malibu Creek performed by the Southern California Coastal Water Research Project found that high nutrient levels in Malibu Lagoon led to DO levels of 0 mg/l in the pre-dawn conditions. Obviously, low DO levels in the SCRE can have deadly impacts to the resident species such as the tidewater goby.

ii. Un-natural beaching will likely negatively impact the tidewater goby.

As acknowledged in the Resident Species Study, "[t]he SCRE…is unique among southern California estuaries owing to the constant freshwater influx from the VWRF." Resident Species Study at 7-1.[23] Given this, there can be little doubt that the VWRF discharge has altered the seasonal variation in hydrology. The discharge in the dry season likely represents an un-natural condition. As acknowledged in the SCRE Report, "…it appears the existing Santa Clara River lagoon is experiencing more frequent

[1] Of note, much of the DO data in Tables 2-6, 2-7 and 2-9 are very suspect as levels above 20 mg/l are rarely found in Southern California estuaries. SCRE Report at 30. For instance, Heal the Bay has amassed many years of DO monitoring in Malibu Creek and has never even once found DO concentrations at these elevated levels. Concentrations ranging as high as 322 mg/l are completely unrealistic.

[2] The SCRE Report compares the Santa Clara River Estuary to Malibu Lagoon because they are the only estuaries in the Southern California BIGHT that have freshwater contribution from a wastewater treatment facility. Resident Species Study at 5-7. In contrast, the Tapia wastewater treatment facility has a discharge prohibition to Malibu Creek in the dry season between April 15 and November 15. Order No. R4-2005-0074. One reason behind the summer discharge prohibition is that the discharge creates an un-natural hydrologic condition in the Lagoon that could possibly lead to summer breaching of the berm.

[3] Of note, Section 5.0 of the Resident Species Study does not include the most recent data. For instance, Batiquitos Lagoon has been dredged and restored and is open year-round. Also, there are several reports and peer-reviewed papers authored by Dr. Richard Ambrose at UCLA on Malibu Lagoon that were not included in the review presented in the Study.

breaching events than under natural conditions, especially during the summer periods due to treated effluent inflows." SCRE Report at 167.

The more frequent breaching events likely negatively impact resident species such as the tidewater goby. In fact, the discharger's 2004 study entitled *VWRF Discharge Beneficial uses on the Distribution and Utilization of Santa Clara River Estuary Tidewater Goby* ("Goby Report") alludes to this fact. Monitoring efforts associated with the Goby Report and other studies conducted in the SCRE found that tidewater gobies were abundant and widespread in the Estuary when it had been closed to the ocean for a long time. Goby Report at 2-10. Further, the Goby Report states that the amount of goby spawning and rearing usable area decreases dramatically when the SCRE is open to the ocean, and the breaching events can leave the goby breeding burrows completely dewatered. Goby Report at 5-2. In Malibu Lagoon, more frequent breaching during sensitive periods led to significant tidewater goby mortality. These impacts have been well documented by State Parks and the Santa Monica Mountains Resources Conservation District. Thus, the less frequent breaching that will result from the removal of the discharge to the Estuary will likely have a positive impacts on the tidewater goby population.

C. The discharger should explore water re-use and upstream discharge alternatives in greater detail.

Many stakeholders including Heal the Bay have indicated that a water re-use alternative should be aggressively pursued. At the May 8, 2007 meeting, the discharger presented the findings of a recycled water market assessment. The report concludes that the demand for recycled water market is a maximum of 1.9 mgd. Thus, they found that expanding this market alone will not use all of the treated water. The assessment makes several assumptions that are limiting. First, the water market is only evaluated within the City limits. There may be a sizeable market for recycled water in the surrounding unincorporated areas where these are enormous tracts of farm land, including farms that produce non-food chain crops such as sod farms. In addition the discharger should explore advanced treatment and water storage, as this could increase the market demand for recycled water. Expanding the recycled water market in combination with enhanced water conservation efforts could be a viable alternative to Estuary discharge.

Another alternative to Estuary discharge that has not been explored in much detail is upstream discharge. Upstream discharge of denitrified effluent would allow time for the water to percolate into the ground and cause less direct impact to the SCRE. In addition, this alternative would allow for continued freshwater flows into the Estuary.

An ocean outfall discharge is another alternative that has been discussed during various stakeholder meetings. While this would bring the discharger into compliance with the EBE Policy, this alternative is less preferable than those discussed above. Heal the Bay is a big proponent of beneficially re-using water to the greatest extent possible before ocean discharge is pursued.

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Although it is important for the discharger to be evaluating alternatives for disposal of the treated water, an alternatives analysis is only applicable to the current permit renewal if the Regional Board requires the completion of an alternatives analysis as a special study. We support such a requirement

D. The current VWRF discharge degrades the Estuary from a Chumash cultural resources perspective.

The Santa Clara River is the crossroads of the Chumash Nation, which extends from Malibu to Morro Bay, and from Kern County to the Pacific coast. Two Chumash village settlements have been identified with the Santa Clara River--Kanapueteqnon and Muwu. Within the Santa Clara River watershed, tribal members continue to harvest natural resources including grasses for basket materials, ceremonial plants and stones, willow plants, sage, tule (cattail) plants, soapstone for making beads, bowls, and ceremonial pipes. The tribes have traditionally used the deer and steelhead as sources of food and trade among the villages that once spanned the length of the watershed. "Many village sites are located on stream levees that form high ground on the plains…Such locations were chosen by people for village and camp sites. Wetland areas are rich in resources. Lagoons and marshes are often ringed by a series of prehistoric sites."[4]

The River watershed is home to a condor population released by the Chumash Nation fourteen years ago. The condor symbolizes a sacred bond, a lifting of the spirits of the Chumash ancestors. Development that threatens the continued existence of the condor also threatens the sacred relationship between the Chumash and the condor that has existed for thousands of years. Natural open lands, not yet influenced by the impending development, along the River continue to play an important role in the ceremonial and religious practices of tribal members.

Reburials and naming and healing ceremonies are still conducted along the river and pictographs and rock paintings close by illustrate the historical and cultural importance of the waterway to indigenous peoples. Three traditional cultural sites listed on the state of California's Sacred Lands Inventory maintained by the Native American Heritage Commission are located within one or two miles of the river and the watershed is home to over four hundred known archaeological sites.

This river is a network of villages, gathering areas and ceremonial places. It has been a life source of survival for Native people for thousands of years. Thus the discharge to the SCRE over the last forty-five years has impacted this cultural resource of the Chumash Nation by greatly modifying its natural hydrology and the resident species composition.

[4] Parsons, Jeff, "Ormond Beach Paleo-Environments and their Archaeological Significance," prepared for Topanga Anthropological Consultants, 2004.

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II. SPECIFIC TENTATIVE PERMIT AND TSO COMMENTS

A. The TSO and Interim Limits inappropriately perpetuate the cycle of non-compliance.

The proposed TSO provides interim limits for ammonia, total nitrogen, nitrite and nitrate. TSO at 2. Regional Board staff reason that the discharger cannot meet final effluent limitations since the full NDN process is not yet installed. Of note, full NDN has been in place for many local POTWs in Ventura and Los Angeles counties for years. Further, the Tentative Permit provides interim effluent limitations for mercury, silver, cyanide, copper, lead, nickel, zinc, chlorodibromomethane, dichlorobromomethane, bis(2-ethylhexyl)phthalate. Tentative Permit at 19. Four of these constituents (silver, chlorodibromomethane, dichlorobromomethane, and bis (2-ethylhexyl)phthalate) are new interim limits that were not in the current NPDES permit. Also a less stringent interim limit for zinc than was previously permitted is provided in the Tentative Permit.

Heal the Bay has significant concerns that the proposed TSO and Tentative Permit allow yet another excessive length of time for the City of San Buenaventura to achieve compliance with final effluent limitations that it has been subject to, and in violation of, for many years. At this juncture, the Permittee has had sufficient time to obtain compliance with permit limits. In fact, the Regional Board has already extended the compliance deadline an astounding five times since 2000 (see Order Nos. 00-144, 02-0195, 03-0059, 06-0034, 06-0093). Sequential compliance schedule exceedances are a chronic problem throughout the State and are one of the strongest arguments being considered by the State Board in their efforts to potentially modify statewide compliance schedule policy. The most recent Time Schedule Order, TSO No. R4-2006-0093 adopted in December 2006, gave the Permittee until December 31, 2007 to meet final effluent limitations for copper and nickel. The proposed TSO now provides another extension of these limits. When will the Permittee finally be held accountable for complying with a TSO and meeting final effluent limits? With this precedent, how will any discharger take a TSO seriously? How will receiving waters as critical as Santa Clara River Estuary ever be protected? Given the City's record of non-compliance and ineffectiveness during previous efforts to achieve full compliance, the Regional Board should require the Permittee to meet *final* effluent limits immediately. Expanding and weakening the interim limits is particularly inappropriate.

B. The Regional Board appropriately uses saltwater criteria in calculating effluent limitations.

The Regional Board appropriately uses saltwater criteria in calculating effluent limits, as the Santa Clara River Estuary is a ***saline*** environment. The Estuary supports numerous marine species and freshwater species. As stated in the VWRF's NPDES permit, "[i]n order to protect the beneficial uses, the limits for both fresh and salt water were

compared, and the more stringent of the two was used to set each effluent limit within this permit. In this manner, the Regional Board is protecting the most sensitive environmental beneficial use." Order No. 00-143 at 3. This is an appropriate approach to take in the Tentative permit as well. The bottom line is that an Estuary is ***not*** a freshwater environment, so the more stringent saltwater criteria should be maintained in order to meet water quality standards and protect the estuarine environment.

C. The Tentative Permit should include a daily maximum toxicity trigger.

The Tentative Permit includes a monthly median toxicity trigger of 1.0 TUc. Tentative Permit at 19. Other recently adopted NPDES permits include a monthly median toxicity trigger **and** a daily maximum trigger of 1.0 TUc (i.e. Burbank Water Reclamation Plant NPDES Permit at 36) Why is the Tentative Permit different than the others in regards to a toxicity trigger? This is unconscionable in light of the critical ecological resources in the SCRE and the Santa Clara River Watershed. Toxicity testing is the safety net for NPDES permits because permits do not require monitoring or have limits for all constituents that can cause receiving water toxicity. Thus, it is important to have a daily maximum trigger as well as a monthly median trigger. Regional Board staff should include a daily maximum toxicity trigger of 1.0 TUc in the Tentative Permit.

D. The Regional Board should include an actual toxicity limit.

The Tentative Permit provides a 1 TUc "trigger" in accordance with State Board Order NO. WQO 2003-0012 which defers the issue of numeric chronic toxicity limits until a later date. The Regional Board should encourage the State Board to develop an appropriate numeric chronic toxicity limit as soon as possible. Too many major NPDES permits have gone forward without numeric effluent limits for chronic toxicity. As you would likely agree, toxicity limits are the safety net for NPDES permits because permits do not require monitoring or have limits for all constituents that can cause receiving water toxicity. An effluent limit of 1 TUc would protect beneficial uses and meets the narrative toxicity objective set forth in the Basin Plan.

E. The Monitoring and Reporting Program should include extensive ecological monitoring.

Appropriately, the Regional Board proposes extensive monitoring to "…ensure that endangered species residing in the Estuary are not adversely impacted by the incremental decrease in flow." Tentative Permit at 7. The monitoring should include fish and macroinvertebrate assessment. An Index of Biological Integrity score should be calculated from annual macroinvertebrate surveys.

This monitoring will act as a "safety net" in the event that impacts occur. If the monitoring indicates a major problem that the Regional Board and Resources Agencies

determine is a direct result of reduction in effluent discharges, then and only then, shall the permit terms be revisited.

F. The Regional Board should maintain the frequency of monitoring for priority pollutants.

The Tentative Permit reduces the frequency of monitoring for numerous priority pollutants from monthly or quarterly to semiannually. Tentative Permit at F-52. Regional Board staff reason that these constituents did not demonstrate reasonable potential to exceed water quality standards, so more frequent monitoring is not necessary. Although reasonable potential was not triggered for these pollutants, semiannual monitoring is too infrequent to capture any changes or upsets in the system. Thus, the Regional Board should maintain quarterly monitoring for these priority pollutants.

G. Miscellaneous

- Mass emission limitations are based on the plant design flow rate of 14 mgd. Tentative Permit at F-22. This is not protective of receiving waters. The Regional Board should use the average effluent discharge flow, as this number represents the actual flow volume. By utilizing the design flow, the Regional Board is allowing much higher mass emissions than is merited based on plant operation.

- The Tentative Permit requires that the discharger submit an "interim" Spill Clean-up Contingency Plan. Tentative Permit at 31. Why is this plan "interim"? When is the final plan to be submitted?

- Regional Board staff use a hardness value of 400 mg/L to calculate several of the metal effluent limits. The Tentative permit states that the discharger provided receiving water hardness data ranging from 250-7500 mg/L and that 400 mg/L was used since "most" of the values were greater than 400. Tentative Permit at F-33. What is meant by "most"?

- The Tentative Permit states that "[t]he addition of iron salt improved removal of copper (18.0 ug/L to 26.5 ug/L)…." Tentative Permit at 8. This appears to be a typographical error, as this represents an increase in the concentration of copper.

III. <u>CONCLUSION</u>

The Santa Clara River Estuary is part of a natural preserve and is an important ecosystem. As such, it should not continue to be altered by wastewater effluent discharges. Given the high probability that the VWRF discharge has negatively impacted and continues to impact the Estuary habitat and water quality, the discharger has failed to meet the threshold for an exception set forth in the EBE Policy – that the discharge is enhancing the Santa Clara River Estuary. Thus, in the Tentative Permit **appropriately requires**

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the discharge to be incrementally removed from the Estuary in order to comply with the *Water Quality Control Policy for Enclosed Bays and Estuaries of California*.

Simply put – two wrongs do not make a right. While upstream diversions and runoff may decrease natural flows and worsen water quality, this is not a valid reason for the VWRF to continue to impact the Santa Clara River system. This is not consistent with Porter-Cologne or the overall intent of the EBE Policy. The Regional Board should explore upstream impacts and require a flow characterization study in the lower part of the watershed to better understand the impacts of river diversions on downstream flows to the SCRE.

Regardless, species such as the tidewater goby will likely be more impacted by maintaining the status quo due to water quality impacts and more frequent breaching events than under the scenario where the discharge is eliminated. Further, the Regional Board is requiring extensive monitoring of the goby population to identify any issues that may result. In 1998 the Regional Board required Tapia to remove its discharge to Malibu Creek during the summer season (April – Nov). Yet there is no indication that the tidewater goby population was impacted in Malibu Lagoon (Dagit and Swift 2005). Maintaining the status quo in SCRE will allow for continued water quality and habitat degradation. Thus, it is imperative that the discharge be removed as recommended by the Regional Board.

If you have any questions or would like to discuss any of these comments, please feel free to contact us at (310) 451-1500.

Thank you for your consideration of these comments.

Sincerely,

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Heal the Bay

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