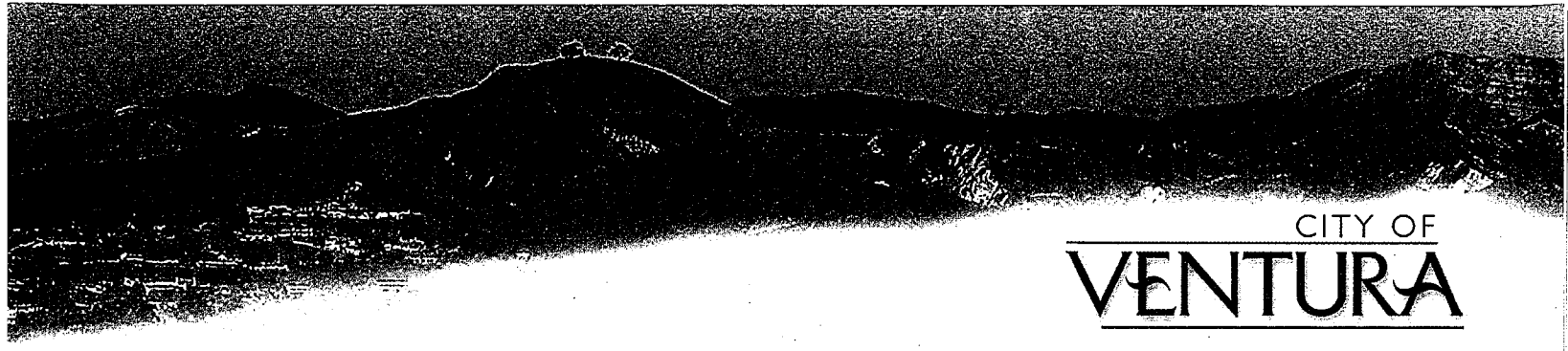

CITY OF
VENTURA

May 30, 2007

T. Don Tsai, Ph.D., Environmental Specialist III
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013-1105

RE: City of San Buenaventura Response to Tentative Waste Discharge Requirement (Order No. Order No. R4-2007-XXXX, NPDES NO. CA0053651) for the Ventura Water Reclamation Facility

The City of Ventura submits the attached comments regarding the Tentative Permit referenced above and requests this response letter be included in the administrative record. The letter is organized as follows:

- Introduction
- Response to Permit Statements
- Summary
- Conclusions and Recommendations
- Literature Reference

I. INTRODUCTION

Twice, once in 1976 and again beginning in 1995, the City of San Buenaventura (Ventura) has evaluated the impacts of reclaimed water discharge from the Ventura Water Reclamation Facility (VWRF) to the Santa Clara River Estuary (Estuary). In both instances the evaluation searched for evidence of potential harm to the estuarine habitat resulting from the discharge and searched for evidence of potential benefits to the habitat resulting from the discharge. In both instances the conclusions of the evaluation have been that there is no evidence of harm and that there is substantial evidence of benefit, including specific water quality and quantity benefits that would not be available in the absence of the reclaimed water discharge.

In the Tentative Permit the most recent studies of the Estuary environment (see attached reports) have been described as "inconclusive" and even "highly inconclusive." The City believes the evidence of the studies is clearly conclusive. To the best of our knowledge none of this evidence has been questioned and no evidence to the contrary has ever been offered by any commenting party. Certainly none has been shared with the City that supports the opinion that the studies were "inconclusive".

The Los Angeles Regional Water Quality Control Board (Board), in the Tentative Permit, cites the Enclosed Bays and Estuaries Policy of November 1995 that reads:

> *"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

The consequences of implementing the first sentence of the Enclosed Bays and Estuaries Policy statement above without considering this evidence will be an estuary with poorer water quality, a reduced habitat extent and fewer opportunities for threatened species to thrive. The potential for such an outcome is precisely the circumstance that led the State Board to include it in the Policy the second sentence above. Therefore, the Regional Board has the authority and the opportunity to avoid an action that will result in damaging an estuary with degraded environmental quality.

II. RESPONSE TO PERMIT STATEMENTS

A. Chapter 1 part A of the Enclosed Bays and Estuaries Policy.

Pursuant to Chapter 1 part A of the Enclosed Bays and Estuaries Policy, the discharge of treated wastewater to the estuary is prohibited after December 1, 2018, unless there has been a determination from responsible resource agencies that sustenance flow is required to support endangered species habitat.

The end goal of zero discharge to the Estuary, 365 days per year, can never be achieved through reclaimed water irrigation.

Seasonal demands for reclaimed water typically peak in summer-fall periods and are at minimum levels during winter and early spring. If a user base could be developed which would use 100% of effluent volumes available in the winter-spring period, increased need during dryer seasons would result in harm to the customers who have committed to reclaimed water use.

Conversely, if a user base could be developed which had dry season demands equal to the available reclaimed supply, reduced wet season demands would result in average use of approximately half the total annual reclaimed water output. The implications are that maximum safe reclaimed market development would have to occur by year 5 in order to achieve the 50% removal milestone set for that year.

The alternative of developing a customer base that would use all of the reclaimed water volume available (10 MGD, 3.6 billion gallons annually) would require significant storage. Discounting annual variability in demand, the storage volume required would be 2 billion gallons. No such storage capacity exists or can be developed.

Equally important, no market exists for such a volume of reclaimed use and no such market can be developed nor can facilities necessary to deliver these volumes be developed in the time frame outlined in the tentative permit.

Therefore to comply with the estuary discharge prohibition the City would have to permit, design, and construct an ocean outfall at an estimated cost of more than $80 million. Such a project might be executed within the 10-year time frame of the permit, but will not result in the gradual annual decreases envisioned.

B. pg. 6; II. FINDINGS; A. Background; paragraphs 6.

This NPDES renewal proposes to lift the requirement of maintenance flows of 5.6 MGD to the Estuary so that reclamation can be increased and discharge to the Estuary incrementally decreased by 1 MGD each year.

The City cannot achieve annual incremental 1 MGD flow reductions as prescribed. As noted in A., the completed reclaimed water market survey indicates a maximum potential for 2 MGD total irrigation reuse demand. No industrial or other reuse options with a 10 MGD demand are locally available making the reduction through increased reclamation impracticable. Moreover, the best available data predicts that such reductions will at some point have a negative impact on the estuary function, particularly for species of concern such as tidewater goby and southern steelhead.

C. pg. 7; II. FINDINGS; A. Background; paragraphs 7.

The conclusions of the Study were largely inconclusive. However there was concern expressed that a swift reduction in the volume of fresh wastewater to the Estuary could result in loss of habitat and adverse impacts on the Tidewater Goby.

Board staff has dismissed the findings of the enhancement study without documenting conclusions that lead to this determination. These are declarative statements and not findings of fact. In fact, the enhancement study was a scientific investigation into both impacts and benefits of the discharge that was conducted by experts at great cost, and its findings have not been refuted in a meaningful way by any of the participants in the workshops. Briefly, the enhancement study noted that the discharge replaces dry weather surface flows in the Santa Clara River that have been lost to upstream diversions, and improves habitat and water quality in the Estuary for tidewater goby and southern steelhead.

Since this study was conducted with Board approval and Board staff's concurrent input and evaluation and in fact did influence the direction of the ongoing study during it's execution. It is reasonable to conclude that Board staff could have shared any further concerns about the direction of the study during it's execution and could have shared any misgivings about the conclusions of the report before promulgating a new permit that dismisses the study's findings. This did not occur.

Board staff's determination that the report is inconclusive would appear to be based on the fact that there was no written support from Resource Agencies but one non-governmental organization (NGO) was opposed. While the particular opposing organization was offered opportunities to participate in the process of developing the scope of the study and to comment on the results of the study, this did not occur. Further, no factual evidence supporting opposition has been provided by the NGOs to the City's knowledge.

Conversely, it should be clearly noted that none of the Resource Agencies actively supported removing the discharge, which would have been very easy for them to do given the circumstances involved. Nonetheless, the Resource Agencies deserve a detailed explanation of where the study was considered deficient, and a further opportunity for consultation.

D. pg. 7; II. FINDINGS; B. Facility Description.

The Facility Description should read:

The treatment system consists of screenings and grit removal, primary sedimentation, flow equalization, activated sludge nitrification and partial denitrification, tertiary filters, chlorination and dechlorination, primary sludge thickener, dissolved air flotation (DAF) secondary sludge thickening, anaerobic digestion, and dewatering (using plate and frame filter presses). All of the Class B anarobically digested sludge is dewatered and composted to class A at Lost Hills, Kern County and then land applied to a cotton farm in Kings County. Screenings and grit are disposed of at the Toland Road landfill.

Compliance with this order's incremental discharge reduction and eventual elimination, as required by the Enclosed Bays and Estuary Policy will necessitate the construction of an alternative discharge facility, most likely an ocean outfall. The cost of an ocean outfall would force the City to contemplate alternative treatment unit processes as a new level of service.

The City further considers the requirement to move the effluent from the Estuary as an unfunded mandate. The requirement to relocate the effluent discharge results in a new service, most likely an ocean outfall, and therefore is subjected to the unfunded mandates provisions of The Constitution of California Article XIII B, Section 6, which requires the State to provide a subvention of funds to reimburse the local government for the costs of increased level of service. The City proposes to allow the current litigation and anticipated appeals process, which involves this Regional Board, to proceed with the application of resulting case law as appropriate in the future.

Additionally, the design scope for the Upgrades Phase II project for VWRF was based in part on projected continuation of discharge to the Estuary. The City will re-evaluate the current scope elements considering the potential relocation of the discharge from the Estuary to the ocean through an outfall. The process for re-evaluation of the elements of Upgrades Phase II would be based on current state of the art for ocean discharge, which includes secondary treatment without nitrification or chlorination.

E. pg. 14; II. FINDINGS; P. Endangered Species Act; paragraphs 1.

This order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code

sections 2050 to 2097) or the Federal Endangered Species Acct (16 U.S.C.A. sections 1531 to 1544)...The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

These statements would seem to acknowledge that if, as predicted by studies, reducing the discharge induces stress through loss of habitat and poorer water quality, this would be considered take and should result in stopping further flow reduction. No such language is included in the permit. At the very least, the proposed discharge permit should include language indicating that the phased reduction of the discharge be contingent upon receipt of a take permit from the appropriate resource agencies. This language would trigger constructive review by those agencies.

Potentially, the City is being mandated by the Board to violate provisions of law administered by other agencies. Elsewhere in the tentative permit the City is required to monitor tidewater goby populations to determine if there is a "negative" impact to the tidewater goby as the discharge is being ratcheted down (note that southern steelhead will respond adversely to reduced water quality much more quickly than will the tidewater goby). Any evidence of negative impact would be defined as "take", which puts the City at risk without a permit.

In 2006, the City proposed a monitoring program with periodic reporting intended to evaluate impacts of reduction over a period sufficient to assess these impacts during a minimal range of local climatic conditions. This proposed program suggested that the period between incremental changes would be 3 to 5 years to achieve a valid assessment, since annual variations in goby populations can be large and could obscure the presence of actual impacts. Conversely, since the cumulative change at the end of a 5-year period under the language of the draft permit would be a 50% reduction in flow augmentation, adequate evaluation of incremental impacts across even small climatic variation would not be possible.

Some projection of impacts to estuary function was made through modeling and professional judgment as part of the estuary water balance study completed in April 2007 and represent the best information currently available regarding what the Estuary might look like at different stages of effluent discharge. While no further modeling work is contemplated, this study indicated that shallow groundwater and local surface run-off would dominate the Estuary as effluent flows were reduced. Moreover, circulation would also be affected as the frequency of breaching events would be reduced and ultimately eliminated.

Even given that monitoring will be carried out, it is not possible for the City to make any assurances that a determination of no impact made over the short term will adequately predict that no impact will occur under a different set of conditions over a longer time frame and, consequently the risk of potentially significant impacts will be increased. Thus the Board should not require the City to make any significant alterations to the discharge volume without reasonable opportunity to evaluate long-term impacts of such change.

F. pg. 16, IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS; A. Effluent Limitations; 1. Final Effluent Limitations-Effluent Transfer Station; paragraph a.

The Discharger shall maintain compliance with the following effluent limitations with compliance measured at the Effluent Transfer Station as described in the attached MRP...The Discharger shall monitor the discharge of tertiary-treated effluent at the Effluent Transfer Station as follows.

Table 3 on page E-7 delineates the measurement parameters including Total Waste Flow and Total Chlorine Residual.

Moving the point of compliance to upstream of the wildlife ponds coupled with the construction of an ocean outfall could eliminate these ponds entirely. It is a commonly held community value that these ponds are a beneficial resource that deserves consideration. Once effluent is diverted to an ocean outfall the water level in the ponds will recede through percolation, which will eliminate the ponds. The City recommends retaining the compliance and sampling points that have been in place since 1978.

The City will deliver reclaimed water from the Effluent Transfer Station as soon as practicable. If enacted, in order to comply with the flow volume measurement the City proposes to use an existing total flow meter located after tertiary filters and before chlorination as satisfactorily adjacent to the Effluent Transfer Station. Subtracting effluent flow diverted for reclamation will calculate the total flow released to the wild life pond system.

At this time, there are no provisions available to monitor Total Chlorine Residual at the ETS. A monitoring system will have to be designed, equipment purchased, and constructed. To complete this project and meet the requirements by September 1st, 2007 is not possible. There would also be a considerable cost that has not been budgeted for. Because all of these facilities were constructed and built to achieve

compliance in accordance to the existing Discharge Permit, they exist at the Effluent Lagoon discharge to the Estuary.

The Board Staff reasoning for changing the monitoring point is mainly to produce a recycle water flow to our users that is consistent with the water quality measured at our existing MRP.

Interim measures that would achieve the same goal, that can be used until a permanent solution can be adopted is possible.

The receiving waters of concern for this tentative NPDES permit, is the Santa Clara River Estuary. We have been completely successful in meeting the 0.1 ppm, with the monitoring and dechlorination equipment now in use. The effluent chlorine residual is dissipated as it passes through the wildlife ponds, requiring less Sulfur Dioxide to be released into the Estuary.

Recycle water can be delivered to our users without going through the wildlife ponds. The recycled water used to supply our reclaimed water users can be drawn from the Effluent Transfer Station, completely bypassing the wildlife ponds. This would eliminate the possibility of bacterial recontamination as it passes through the wildlife ponds.

The newly proposed Discharge Permit should allow us to continue to monitor for Total Chlorine Residual and dechlorinate at the existing Dechlorination Facility. Flow monitoring to the Estuary can remain at the existing location or we can implement the proposed alternative method. All other sampling parameters, as specified on Table 6. Effluent Limitations would be sampled at the Effluent Transfer Station.

G. pg. 29; VI. PROVISIONS; C. Special Provisions; 2. Special Studies, Technical Reports and Additional Monitoring Requirements; a. Special Studies; paragraph ii.

The monitoring aspects of this work Plan should cover the following:

(a). The level of impact on the tidewater goby's population as a result of incremental decrease in the discharge from the Facility of 1 MGD per year;
(b). The population and number trends from the "Fish Survey";
(c). The influences of groundwater on the Estuary; and,
(d) Evaluations of different discharge volume scenarios, which may affect breaching frequency, ground water influence, and water quality.

On April 30, 2007 the City submitted a water balance study in the Estuary, which fulfills (c) and (d) of the section. The water balance demonstrated that flow reduction would eliminate breaching during summer months and the resulting water quality would resemble McGrath Lake.

To serve as a baseline the City completed a fish survey on May 21, 2007 and will complete another in October 2007 with the results and analysis compiled into a report to be included with the 2007 Annual Report. Until flow reduction is achieved no further fish surveys are contemplated.

H. ATTACHMENT E – MONITORING AND REPORTING PROGRAM

The following comments are in reference to the tables included in Attachment E:

Page E-5; Table 1- Monitoring Station Locations - Receiving water station R-005 was labeled station L-5 in the previous permit. Clarification needs to be provided with regards to the labeling of this station to distinguish labeling proposed from labeling in permits prior to 2000 that were labeled R-5.

Page E-7; Table 3 – Effluent Monitoring – Due to changes made to effluent disinfection in 2004, there has been a significant decrease in Dibromochloromethane (43.3 UG/L) and Dichlorobromomethane (91.1 UG/L). Dibromochloromethane ranged from .84 – 1.56 UG/L in 2005 and 1.2 – 3.3 UG/L for 2006, well below the effluent limitation of 34 UG/L. Similar reduction were noted for Dichlorobromomethane ranging from 2.5 –5.5 UG/L in 2005 and 5.0 – 8.6 UG/L in 2006. The effluent limitation is 46 UG/L.

It was discovered in 2005, that Bis(2-Ethyhexyl)Phthalate was being performed on the 24 hour composite sample and not the grab. In November 2005, analysis was performed on both samples with the following results 11.3 UG/L for the composite and ND (non-detect) for the grab. The value of 36.7 UG/L listed was in February 2004. In 2006, all samples were below the detection limit.

All cyanide analyses for 2005 and 2006 were below detection limit of 5.0 UG/L.

Based on the reduction of the above constituents we do not understand the Board required increase from quarterly to monthly monitoring. Also, the complete list for 624

and 625 would have to be analyzed to monitor for Dichlorobromomethane, Dibromochloromethane and Bis(2-EthylHexyl)Phthalate.

Department of Health Services has not approved any methods for Pharmaceutical or Emerging Chemicals (EC). The monitoring of EC is set for August 2007.

Page E-17; Table 4a – Receiving Water Monitoring – It will cost over $24,000, for the analyses alone, for the changes made in the receiving water program. Past data does not support the findings for increasing the monitoring of Dichlorobromomethane, Dibromochloromethane and Bis(2-Ethylhexyl)Phthalate or changing 2,3,7,8-TCDD (Dioxins) to the analyses of the 16 dioxins congeners.

Page F-35; Table 7- Summary of Reasonable Potential Analysis – It shows a maximum Dibromochloromethane of 40.7 UG/L and 2.9 UG/L for Dichlorobromomethane. From 2002-2006, our records do not show a value over 2.9 UG/L for Dibromochloromethane. During the same period of time Bis(2-EhtylHexyl)Phthalate was found in only one sample with a concentration of 2.92 UG/L below the effluent limitation of 5.9 UG/L.

During the chronic toxicity frequency-testing period from 2002-2006, Selenastrum (algae) was most susceptible to the outfall effluent. The effluent had no effect on Ceriodaphnia or Fathead Minnow. The receiving water had the greatest effect on reproduction and growth for Ceriodaphnia and equal effects on growth for Fathead and Algae. Chronic toxicity failures at receiving water stations from 2002-2006 suggest something other than the discharged effluent is contributing the toxicity in the receiving water. The receiving waters had 14 Ceriodaphnia, 6 Fathead, 7 algae and the outfall effluent had 3 failed algae.

Based on the above information the effluent and receiving water monitoring should be quarterly for these constituents.

IV. SUMMARY

The discharge prohibition actions considered in this permit may put the Estuary environmental values at risk, which triggers the need for a responsible resource agency consultation before taking this action. The Board should enter into consultation with resource agencies to obtain their expert opinion on the effects of discharge reduction on protected species before requiring actions that available evidence suggests may be detrimental.

The statements declaring the May 2005 Estuary Enhancement Study as inconclusive and highly inconclusive do not include supporting documentation. In the face of the available evidence the Board should not make the decision to remove the discharge from the estuary without such supporting information.

Increasing reclamation cannot achieve this tentative permit's goals of incremental ratcheting down the effluent discharge volume to the Estuary and eventual discharge elimination over a period of time. Incremental reduction essentially necessitates construction of alternative discharge facilities, most likely an ocean discharge through an outfall. An outfall cannot be permitted, designed, and constructed within the time period of this permit. The Board should instead require reasonable steps to achieve a discharge goal supported by scientific research, expert opinion, and realistic timelines. The City is submitting as an attachment to these comments an engineer's estimate work plan to permit, design and construct an ocean outfall.

Two of the special studies required by this permit, a Reclamation Market Survey, and Estuary Water Balance are complete. The permit should reference the Technical Memorandums that discuss the results of this research and sections implying ongoing additional efforts should be removed or amended to discuss specific goals and time frames. These documents are available to the Regional Water Board as of April 30, 2007 as required by TSO R4-2006-0093. These studies are included as part of the administrative record by attachment to these comments.

The fish survey is intended to provide the Board with baseline information on the quantity of the Tidewater Goby utilizing the current outfall and adjacent lagoon area as preferred habitat. The first survey was conducted on May 29, 2007 with the second scheduled for October 2007. The results will be included as part of the City's 2007 Annual Report. Sections implying additional fish surveys beyond 2007 should be eliminated.

Finally moving the point of compliance to upstream of the wildlife ponds coupled with the construction of an ocean outfall could eliminate these ponds entirely. It is a commonly held community value that these ponds are a beneficial resource that deserves consideration. Once effluent quality is reduced to secondary standards and diverted to an ocean outfall the water level in the ponds will likely recede to that of the Estuary, which will eliminate the ponds. The City recommends retaining the compliance and sampling points that have been in place since 1978. The City agrees to deliver reclaimed water from the Effluent Transfer Station as soon as practicable.

V. CONCLUSIONS AND RECOMMENDATIONS

The provisions of this permit as written will require the City to construct an ocean outfall at an estimated cost exceeding $80 million; an action that available evidence strongly suggests will detrimentally impact protected Estuary environmental values. To comply the City must discontinue the current improvement program and investigate all available alternatives.

The Santa Clara River Estuary is a dynamic highly modified system that currently demonstrates the ability to sustain desirable environmental values. Before the Board implements further significant modification to this system, exposing these values to unknown risk in the process, it should accumulate all available information. The fact that permit renewal process precedes the ability to compile the information to improve understanding should not force permit provisions that the best available evidence suggests are detrimental.

The City believes the Board should instead renew this permit with provisions that provide Board staff direction to complete the stakeholder involvement process by seeking resource agency consultation, which includes expert scrutiny of the available evidence before taking action. Acting in this conservative manner will protect environmental values and obtain an outcome based on the best science available.

VI. LITERATURE REFERENCE – (Copies of the following studies are attached)

Nautilus Environmental, May 2005. *Comprehensive Analysis of Enhancements and Impacts Associated with Discharge of Treated Effluent from the Ventura Water Reclamation Facility to the Santa Clara River Estuary.* Prepared for City of San Buenaventura.

Kamman Hydrology & Engineering, Inc., April 2007. *Memorandum: Santa Clara River Estuary Water Budget and Salinity Assessment.* Prepared for City of San Buenaventura.

Kennedy/Jenks Consultants, April 2007. *Technical Memorandum: City of San Buenaventura Recycled Water Market Assessment.* Prepared for City of San Buenaventura.

Kennedy/Jenks Consultants, May 2007. *Technical Memorandum: Anticipated Requirements for Planning, Design, Permitting and Constructing a New Ocean Outfall.* Prepared for City of San Buenaventura.

Please contact me at (805) 677-4133 if you have any questions.

Sincerely,

FOR

Dan Pfeifer
Interim Utilities Manager

cc: Ron Calkins, Director of Public Works