STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

SUPPLEMENTAL SHEET FOR REGULAR MEETING OF SEPTEMBER 10, 2004
Prepared on September 3, 2004

ITEM NUMBER: **20**

SUBJECT: **New NPDES Permit for the Existing South County Regional Wastewater Authority, Gilroy-Morgan Hill Municipal Wastewater Facility, the Cities of Gilroy and Morgan Hill, and Indirect Dischargers of Santa Clara County, Board Order No. R3-2004-0099, NPDES No. CA0049964**

SUMMARY

The proposed Order and staff report for this item were distributed to interested parties for comment on July 13, 2004. Comments received by August 16, 2004, were addressed in the comments section of the staff report. This Supplemental Sheet includes comments received after August 16, 2004, with staff responses as appropriate. Comment letters received after August 16 are attached to this Supplemental Sheet for reference and the record.

DISCUSSION

Two additional letters and one electronic message commenting on the proposed Order were received after August 16, 2004. The attached electronic "no comments" message from Monterey County Health Department, Division of Environmental Health and August 31, 2004, letter from SCRWA (Discharger) conveying its full support of the proposed Order do not necessitate a response from staff.

We forwarded a second round of comments from the Santa Cruz County Health Services Agency received on September 1, 2004 (see attachment 3) to the Discharger for reference. The Discharger chose to address these comments in addition to Regional Board staff.

The Discharger's response to the second round of Santa Cruz County comments was received on September 3, 2004, and was submitted by Montgomery Watson Harza on the Discharger's behalf (see attachment 4).

Mr. Jim Schaaf, of Schaaf and Wheeler Consulting Civil Engineers, also submitted a letter on the Discharger's behalf on September 3, 2004, regarding flooding issues (see attachment 5). Mr. Schaaf is one of the primary authors of the Pajaro River Watershed Study for the Pajaro River Watershed Flood Prevention Authority.

The following are staff responses to the second round of Santa Cruz County comments received on September 1, 2004 (see attachment 3):

Comment: "The Board (County Board of Supervisors) believes that downstream Pajaro Valley residents should not be impacted by upstream discharges which have the potential to incrementally increase flood waters or further degrade water quality in the Pajaro River."

Staff Response: Staff concurs with this statement and believes the proposed Order is sufficiently protective and will not contribute to downstream flooding or water quality degradation.

Comment: "The County does not want to see Pajaro River Discharge(s) as a routine means of sewage disposal to accommodate growth in upstream areas at the expense of downstream residents and farmers."

Staff Response: As with land or ocean discharges, surface water discharges such as the one proposed for the Pajaro River are appropriate and allowable as viable discharge alternatives under controlled circumstances. The Discharger and Regional Board staff have evaluated potential downstream impacts and the proposed Order contains discharge specifications, effluent limits and receiving water limits protective of downstream beneficial uses and stakeholders.

Comment: "Santa Cruz County is also concerned about impacts from a spill or treatment accident that could result in a discharge violation of any standards set by the Regional Board."

Staff Response: The proposed Pajaro River discharge of tertiary effluent will only occur under controlled and limited conditions as specified in the proposed Order and is intended to eliminate potential uncontrolled releases of secondary effluent or controlled emergency releases of tertiary effluent to Llagas Creek. In the absence of an approved Pajaro River discharge the Discharger will not have the luxury of controlling the timing of emergency Llagas Creek discharges to prevent breaching or failure of the land disposal ponds that could also potentially result in discharges to Llagas Creek during future extreme storm events. Therefore, the risk of contributing to downstream flooding or water quality impacts will be greater in the event the proposed surface water discharge is not available in the relatively near future.

The SCRWA facility has demonstrated a high level of treatment and operational consistency. Although significant violations are not anticipated, treatment system upsets and spills are inherent risks to all wastewater treatment facilities. The treatment system performance is closely monitored and potential upsets of significant concern would likely be limited to portions of the facility prior to tertiary treatment and surface water disposal. Sufficient alarms and operational controls are in place and will facilitate the timely shutdown of the tertiary treatment (reclamation) facility and cessation of the surface water discharge in the event of any potential problems.

Any spills of wastewater or effluent less than tertiary quality will likely be restricted to areas around the collection system and within the treatment facility. Releases of tertiary effluent to areas other than the proposed Pajaro River outfall will constitute no additional risks or impacts other than potential erosion or localized flooding in the immediate vicinity of the release, which would occur even if the proposed surface water discharge is not available.

Furthermore, the Discharger will be subject to enforcement action by the Regional Board for discharge violations.

Comment: "Nitrogen Discharge" (see letter)

Staff Response: As discussed within the proposed Order and associated staff report, the SCRWA facility achieves a consistently high level of total nitrogen removal through nitrification and denitrification processes. Total nitrogen or organic nitrogen (Total Kjeldahl Nitrogen [TKN]) within the effluent was not addressed as part of the proposed Order as is consistent for treatment facilities exhibiting high levels of nitrogen removal because of the incidental and relatively insignificant levels of organic nitrogen present in high quality domestic wastewater effluent.

Organic nitrogen in raw domestic wastewater is primarily present in the form of undigested proteins, amino acids and urea. A majority of organic nitrogen is chemically or biologically reduced to ammonia within the collection system prior to the wastewater treatment facility. Organic nitrogen, if not reduced within the collection system or biological treatment process, is assimilated into the

treatment system biosolids (sludge) for cell growth and is settled out in the secondary clarifiers. Small portions of residual dissolved and suspended organic nitrogen are generally present in domestic effluent and are assumed to be present as a portion of residual BOD and TSS in the form of various organic acids and biomass, respectively.

Average monthly SCRWA secondary effluent TKN and total nitrogen concentrations for 2000 to 2003 were 1.25 mg/L and 3.57 mg/L, respectively. Please note that the total nitrogen value includes nitrate concentrations presented in Table 2 of the proposed Order and relatively insignificant concentrations of nitrite. Monthly secondary effluent total nitrogen concentrations are consistently below the tertiary effluent limits presented in Table 16 of the proposed Order. Although no tertiary effluent data for TKN or total nitrogen is available it is reasonable to assume that the conversion of a portion of residual organic nitrogen and ammonia present in the secondary effluent may be attributable to the increase in nitrate concentration observed between the secondary and tertiary effluent samples (see Table 2 of the proposed Order). Therefore, residual organic nitrogen concentrations in the tertiary effluent are likely less than 1.25 mg/L and will not constitute a significant contribution of total nitrogen loading to the Pajaro River. Furthermore, nitrogen cycling will not increase total nitrogen in the effluent and total nitrogen concentrations in the tertiary effluent will be virtually identical to, or less than total nitrogen concentrations in the secondary effluent.

The nitrate and ammonia effluent limits within the proposed Order are sufficiently protective of the receiving water beneficial uses given the high level of nitrogen removal achieved by the SCRWA facility. Changing the effluent limits as proposed would not be consistent with waste discharge requirements for similar facilities and would provide no additional benefit to water quality. Changing the nitrogen limits would, however, put the Discharger at risk (unnecessarily) of effluent limitation violations as a result of normal process variability.

Future nutrient load allocations and effluent limitations are dependent on the development of a Total Maximum Daily Load (TMDL) for the Pajaro River. Although a Regional Board staff level draft of this document is forthcoming at the end of this year, it will still need to go through a lengthy public and administrative review process that is estimated to take an additional two to five years before finalization. Given the Discharger's anticipated need for the proposed surface water discharge by 2007, withholding approval of the proposed Order pending promulgation of the Pajaro River TMDL is not prudent. In addition, the proposed effluent limits are sufficiently restrictive and are anticipated to meet the future TMDL based nutrient limitations, including the absence of total nitrogen and organic nitrogen limitations. However, if the proposed nutrient limitations do not meet the TMDL waste load allocation, the permit will be reopened and revised as appropriate and will be subject additional public comment. The proposed Order contains a re-opener clause (see finding 106) to address this issue. In addition, the language in General Provision No. 8 of the proposed Order has also been changed as follows to clarify this.

> This Permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions or limits based on newly available information, ~~or~~—to implement any new State water quality objectives that are approved by the U.S. EPA, or to comply with applicable TMDLs or TMDL implementation plans.

Comment: "Flood Impacts" (see letter)

Staff Response: Staff addressed these issues in its previous response to Santa Cruz County's concerns regarding flooding (please see page 29 of the staff report), but wishes to clarify the statement regarding the

Discharger's intent to cease discharges at the warning trigger flow level of 4,300 cfs. The Discharger intends to evaluate whether to continue discharging at this level based on forecasted weather and storm reports. The Discharger intends to cease discharging, or not begin discharging, if storms are forecasted with the potential for significant rainfall within the Pajaro River watershed that may result in significant peak flows in downstream portions of the Pajaro River. The Discharger intends to time its Pajaro River discharges primarily on the tail end of small to moderate storm events within the prescribed Pajaro River flow limitations and following peak flows. The Discharger does not need or intend to discharge to the Pajaro River prior to or in the midst of significant storm events with the potential to cause downstream flooding. The proposed warning trigger level is intended to provide the Discharger with an operational tool in determining the timing of appropriate discharge events and to ensure the discharge does not occur at Pajaro River flows above the high level trigger and does not contribute to downstream flooding. The proposed discharge will be limited to Pajaro River flows of less than 6,004 MGD (9,300 cfs), and discharges occurring when Pajaro River flows exceed this limit will subject the Discharger to enforcement. Furthermore, limiting the proposed upper discharge limit to the warning trigger level will significantly decrease the operational window in which discharger can feasibly discharge.

Based on information reported in the Pajaro River Watershed Study, commissioned by the Pajaro River Watershed Flood Prevention Authority, water flow velocities in the Pajaro River can be estimated to range between 0.4 and 1.5 miles per hour (mph), while a flood peak is found to move downstream as a wave with a velocity of about 2 to 4 mph. Given that the proposed discharge location is about seven miles upstream of the Chittenden River gauge, water from the discharge could theoretically continue to pass the gauge for up to four hours after the discharge is ceased. On a theoretical basis it is arguable how much of measurable effect this lag time will have on potential contributions to downstream flooding. Given the relative flow of the proposed discharge it will be virtually impossible to discern any potential contribution from the discharge within the range of background noise for flow measurements within the Pajaro River.

Santa Cruz County concerns over flooding during "low flow periods when the river mouth may be closed by the sand bar" are unclear. It is unlikely any flooding will occur as a result of the proposed discharge during low Pajaro River flows regardless of whether the river mouth is open or closed. Staff assumes this comment refers to the issue of sandbar breaching as stated in the previous comment letter (see staff report attachment 7) and not flooding. To reiterate the sandbar breaching discussion contained within the staff report (see page 13), the proposed discharge will have no significant impact on breaching of the river mouth. Discharges will occur well after the regular mechanical breaching of the river mouth in the fall or early winter. In the event the river mouth closes naturally again during the rainy season it will likely open again naturally prior to any discharge and the relatively low flow contribution of the proposed discharge will not require mechanical breaching of the sandbar to prevent flooding.

As with our previous discussion regarding potential flooding concerns we feel that the proposed flow triggers are sufficiently protective and that the relatively insignificant discharge flow contribution along with upstream attenuation within Soap Lake will not contribute to downstream flooding, or effect sandbar breaching at the mouth of the Pajaro River. This determination is supported by the fact that Pajaro River Watershed Flood Management Authority studies have not considered operation of the SCRWA facility a significant factor in Pajaro River flood management.

Comment: "Effluent Limitations" (see letter)

Staff Response: The effluent limits in question for TDS, sodium, chloride, sulfate

and boron are consistent with our Basin Plan surface water quality objectives as is standard with other waste discharge requirements and are sufficiently protective of receiving water beneficial uses.

Although effluent concentrations for TDS, sodium and chloride tabulated in Table 11 of the proposed Order are greater than receiving water concentrations, the effluent contribution will result in overall concentration increases in the Pajaro River that are within the range of analytical accuracy for measuring those constituents. The following table shows the estimated relative increases, and decreases, in Pajaro River concentrations for the proposed 9 MGD discharge at the low flow and high flow triggers and average wet season flows. The mass balance calculation for this analysis used average effluent concentrations (see Table 11 of the proposed Order) and average Pajaro River data for March 2002 and February 2003 (see Table 6 of the proposed Order).

Conc. mg/L	Eff.	Pajaro River	Combined		
			Low Flow	Avg Flow	High Flow
Flow MGD	*9*	-	*180*	*519*	*6,004*
TDS	634	520	525	522	520
Na	115	53	56	54	53
Cl	155	66	70	68	66
SO_4	63	135	132	134	135
B	0.6	0.27	0.28	0.27	0.27

A maximum theoretical increase in TDS concentration of 5 mg/L is estimated for the low flow trigger case. Estimated increases for all other parameters under the various flow conditions will be less than 5 mg/L. Based on this evaluation, concentration increases/decreases within the Pajaro River as a result of the proposed discharge will be virtually undetectable and will not contribute to surface or groundwater quality degradation to any measurable extent.

In addition, SCRWA effluent TDS, sodium, chloride, sulfate and boron concentrations are relatively moderate compared to other wastewater treatment facilities and there is no reasonable way to further reduce them, or dispose of brine generated by the required treatment. Furthermore, the establishment of more stringent effluent limits will have no immediate effect on effluent quality and will only result in the increased likelihood of the Discharger being in needless violation of the proposed Order.

ATTACHMENTS

1. August 30, 2004, email from Monterey County Health Department
2. August 31, 2004, letter from South County Regional Wastewater Authority
3. September 1, 2004, letter from County of Santa Cruz Health Services Agency
4. September 3, 2004, letter from Montgomery Watson Harza
5. September 3, 2004, letter from Jim Schaff, Schaaf & Wheeler Consulting, Civil Engineers

S:\WDR\WDR Facilities\Santa Clara Co\SCRWA\SCRWA Pajaro Discharge\R3-2004-0099\Supp Sheet 090204.doc

From: "Lawrence, Laura x755-4557" <lawrencel@co.monterey.ca.us>
To: "'Matt Keeling'" <Mkeeling@rb3.swrcb.ca.gov>
Date: 8/30/04 11:19AM
Subject: RE: South County Regional Wastewater Authority WWTP

Matt:

Thanks for the link. I have reviewed the documents. You have done a very thorough job. We have no comments.

Laura Lawrence, R.E.H.S.
Monterey County Health Department
Division of Environmental Health, Land Use Program
1270 Natividad Rd., Room #109
Salinas, CA 93906-3198
Voice: 831.755.4557 Fax: 831.755.8929

-----Original Message-----
From: Matt Keeling [mailto:Mkeeling@rb3.swrcb.ca.gov]
Sent: Tuesday, August 24, 2004 9:40 AM
To: lawrencel@co.monterey.ca.us
Cc: Harvey Packard
Subject: Re: South County Regional Wastewater Authority WWTP

Laura:

A copy was sent to your office to the attention of Allen Stroh on July 14. You can view the item electronically at http://www.swrcb.ca.gov/rwqcb3/

The public comment period officially ended August 16. You can send me comments, but there is no guarantee I can get them to the Board prior to the hearing let alone respond to them. You will also have the opportunity to express your comments verbally during the hearing. You will need to fill out a public comment card at the hearing and will get three minutes before the Board.

Sorry for the late response. I was out last Friday and this Monday for a long weekend.

Matthew Keeling, P.E.
CRWQCB - Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
(805) 549-3685
Fax (805) 788-3542

Item #20 Supplemental Sheet
Attachment #1
September 10, 2004 Meeting
Email, Monterey County Health

>>> "Lawrence, Laura x755-4557" <lawrencel@co.monterey.ca.us> 08/20/04 08:22AM >>>
Matt:

I see that his item is on the agenda for September 10th. Is there any way for us to get a copy of the document to comment on? An electronic version will suffice.

Laura Lawrence, R.E.H.S.
Monterey County Health Department
Division of Environmental Health, Land Use Program
1270 Natividad Rd., Room #109
Salinas, CA 93906-3198
Voice: 831.755.4557 Fax: 831.755.8929

SOUTH COUNTY REGIONAL

WASTEWATER AUTHORITY

7351 ROSANNA ST.

GILROY, CA 95020

(408) 846-0400

August 31, 2004

California Regional Water Quality Control Board, Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

By Fax: 805-788-3542

Attn: Matthew Keeling

Re: Waste Discharge Requirements Order No. R3-2004-0099
NPDES Permit No. CA0049964
South County Regional Wastewater Authority,
Cities of Gilroy and Morgan Hill

Dear Mr. Keeling:

The South County Regional Wastewater Authority (SCRWA) has reviewed the proposed permit along with the associated staff report and monitoring and reporting program. SCRWA accepts the proposed permit in its current form, and we look forward to its favorable review by the Regional Board.

We appreciate the level of effort Regional Board staff has expended in preparation of the proposed permit, and we will have technical support available at the hearing on September 10, 2004, to assist in answering any questions that may arise during permit review.

Yours truly,

James A. Gasser
Senior Sanitary Engineer

c: Jim Ashcraft, City of Morgan Hill
Rick Smelser, City of Gilroy
Andy Faber, Berliner Cohen
Linda Callon, Berliner Cohen
Christopher Cain, Montgomery Watson Harza

Item #20 Supplemental Sheet
Attachment #2
September 10, 2004 Meeting
Letter from SCRWA

County of Santa Cruz

HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073
(831) 454-2022 FAX: (831) 454-3128 TDD: (831) 454-4123
www.co.santa-cruz.ca.us/eh/ehhome.htm

ENVIRONMENTAL HEALTH

September 1, 2004

Matthew Keeling, P.E.
CRWQCB – Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

RE: New NPDES Permit for the Existing South County Regional Wastewater Authority, Gilroy-Morgan Hill Municipal Wastewater Facility, the Cities of Gilroy and Morgan Hill, and Indirect Dischargers of Santa Clara County, Board Order No. R3-2004-0099, NPDES No. CA0049964

Dear Mr. Keeling,

I am writing to provide additional information for your Board's consideration of this matter. As previously stated in our August 11, 2004, letter, the Santa Cruz County Board of Supervisors directed staff to voice the Board's opposition to the above referenced permit. The Board believes that downstream Pajaro Valley residents should not be impacted by upstream discharges which have the potential to incrementally increase flood waters or further degrade water quality in the Pajaro River. The County does not want to see Pajaro River discharge as a routine means of sewage disposal to accommodate growth in upstream areas at the expense of downstream residents and farmers. Santa Cruz County is also concerned about impacts from a spill or treatment accident that could result in a discharge in violation of any standards set by the Regional Board.

While the County does not believe that your Board should approve the discharge to the Pajaro River, if your Board does approve the discharge, we would request further modifications to the order to provide a higher level of protection with regard to nitrogen discharge, flooding potential and effluent limitations.

Nitrogen Discharge

We believe additional measures are needed to ensure that there is no adverse impact from discharge of nitrogen compounds to the Pajaro River. The River is already designated as impaired due to elevated nutrient levels, with a Total Maximum Daily Load (TMDL) in preparation. It is expected that the TMDL will recommend various targets and implementation measures for reduction of current nitrogen levels. Additional discharge of

nitrogen should not be approved until those targets are identified and it is ensured that the additional discharge will be constituent with the TMDL. Effluent standards should also apply to total nitrogen levels in the effluent, not just nitrate nitrogen. Although the secondary treatment process includes nitrification and denitrifciation, there can still be a significant component of organic nitrogen in the effluent, that could be converted to nitrate after discharge to the River. Organic nitrogen (Total Kjeldahl Nitrogen) data should be included in the background discussion of proposed order. Characterization of background nitrate levels in the River should be based on more than 3 samples. Table 6 in the order cites nitrate levels of 25, 15, and 5.9 mg-N/L. Santa Cruz County water quality data for the Pajaro River at Chittenden shows an average nitrate nitrogen level of 5.1 mg-N/L for 24 samples collected from 1990-2003. We request that if the order is adopted that it include the following:

1. Defer adoption of this order until it is shown to be consistent with an established nitrogen TMDL for the Pajaro River, or state explicitly that the order will be subject to modification once the TMDL is adopted.
2. Modify the findings in the order to include data on total nitrogen levels in the effluent.
3. Pending completion of the TMDL, modify the nitrate standard in the effluent (Table 16) to a standard for total nitrogen not to exceed 5 mg-N/L as a 30 day average or 10 mg-N/L as a daily maximum. Adjust the monitoring plan to include testing for Total Kjeldahl Nitrogen at the same frequency as nitrate and ammonia.

Flood Impacts

Santa Cruz County continues to be concerned about impacts on the flooding in the Pajaro River during high flows or during low flow periods when the river mouth may be closed by the sand bar. We appreciate that the Regional Board and the Authority recognize these issues and intend to minimize those impacts. However, because of the potential for significant delays in the time of transport of flood waters in the Pajaro River, we believe additional margins of safety need to be explicitly included in the order. The staff report states that the discharger intends to cease discharging when the Pajaro River flow reaches a level of 4300 cfs. We request that if the order is adopted that it include the following:

4. Modify provison E. 3. in the Order to specify that discharge will be discontinued when the flow in the Pajaro River at Chittenden reaches a level of 4300 cfs (2779 MGD), and to specify that no discharge shall take place when the Pajaro River mouth is closed or constricted by a sandbar.

Effluent Limitations

Santa Cruz County continues to be concerned that the effluent limits are not adequately protective of general water quality. We support use of the effluent for reclamation and reuse to the greatest extent possible, but recognize that such reuse generally requires blending with groundwater or imported water to lower the salt content to levels suitable

for use on Pajaro Valley crops. It is also important to maintain the level of salts and other constituents as low as possible in the Pajaro River, which recharges the Pajaro groundwater basin as it enters Santa Cruz County. Table 11 of the proposed Order shows that dissolved solids levels in the River and in the effluent are both considerably lower than the limits proposed in the Order. Table 6 shows even lower levels in the Pajaro River during February and March, the period during which the discharge would take place. We request that if the order is adopted that it include the following:

5. Modify Table 17 to establish the following limits (mg/L, 30-day mean):
   a. Total Dissolved Solids: 750
   b. Chloride: 200
   c. Sodium: 150
   d. Sulfate: 150
   e. Boron 1.0

We want to reiterate that the Santa Cruz County Board of Supervisors is opposed to approval of the proposed discharge to the Pajaro River. If your Board does approve the discharge, we hope that you will modify the order to address and mitigate our concerns as outlined above.

Thank you for your consideration.

Sincerely,

John a Ricker for

Robert L. Kennedy, R.E.H.S.
Environmental Health Director

cc: CAO
Board of Supervisors
HSA Administration
County Counsel
Planning Department
Monterey County Environmental Health
City of Watsonville
Pajaro Valley Water Management Agency
AMBAG
Monterey Water Resources Agency

MWH

September 3, 2004

California Regional Water Quality Control Board, Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Attention: Mr Matthew Keeling

Subject: Santa Cruz County FAX dated September 1, 2004
Comments on Tentative Draft WDR Order No. R3-2004-0099, NPDES Permit No. CA0049964, South County Regional Wastewater Authority.

Dear Mr. Keeling:

On behalf of the South County Regional Wastewater Authority (SCRWA) we have reviewed the FAX dated September 1 from Santa Cruz County presenting three comments on the subject draft Order. Our responses are as presented below. Please distribute this letter to the Board Members in advance of the meeting.

1. **Nitrogen Discharge:** Santa Cruz County comments that additional measures are needed to avoid nitrogen impacts on the Pajaro, cites ongoing efforts to develop a nitrogen TMDL, and states that more data is needed to characterize the River. The County asks the that the order be delayed, modified to include total nitrogen data, and modified to apply a 5 mg/l limit to Total Kjeldahl Nitrogen (TKN) instead of nitrate-nitrogen.

Response: SCRWA has long recognized the significance of nitrogen loadings on receiving waters in the Pajaro watershed and therefore has proactively constructed a nitrogen-removal treatment plant. SCRWA routinely monitors TKN, and the average effluent concentration is 1.2 mg/L based on four years of data reported to the RWQCB.

SCRWA would expect to be subject to any future TMDL program, recognizing that it would be scientifically developed and justified, and applied fairly to all nitrogen sources. While no potential implementation measures have been proposed that would affect SCRWA, any such measures could be incorporated in permits during the normal renewal process, because implementation of such programs takes many years.

Considering the measures already taken by SCRWA to control nitrogen, the modifications proposed by Santa Cruz County are unnecessary. To defer adoption of the order pending the possibility of a TMDL program would be unreasonable. The addition of total nitrogen data to the findings of the order can be done at the option of the RWQCB, as this would have no effect on SCRWA. The imposition of a total nitrogen limit instead of a nitrate limit would be an arbitrary change to the effluent limits, unjustified on technical grounds. The Basin Plan contains a nitrate-N objective for the

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groundwater and does not set any nitrogen objective for the Pajaro River. While SCRWA would not expect to change treatment technology or operating practice to meet the limit requested by Santa Cruz, it would expose SCRWA to increased risk of effluent limitation violation as a result of normal process variability. SCRWA is therefore opposed to this change.

2. **Summary of Comment:** Santa Cruz County expresses continued concern over flood impacts, and requests that the order be modified to prohibit discharge above a Pajaro River flowrate of 4300 cfs or when the river mouth "is closed or constricted by a sandbar."

Response: Although SCRWA will cease discharging during flooding events to avoid the perception of any contribution to flooding, the actual potential effect of discharge on flooding is negligible because the wastewater flow rate handled by the SCRWA plant is insignificant compared to Pajaro flood flows. While the potential for contribution to major flooding events may provide a basis for theoretical discussions, objective technical evaluation shows that it is not a significant issue relative to this discharge. Arbitrary reduction of the trigger flow rate is unjustified, and unnecessarily constrains the proposed discharge.

Santa Cruz County also expresses a concern about flooding "during low flow periods when the river mouth may be closed by the sand bar" and implies a connection between the sandbar and the proposed discharge. The County does not explain why flooding is expected during low flows. The County does not comment on or take issue with the discussion of sandbar breaching presented in the RWQCB Staff report. Based on the Staff Report discussion, the SCRWA discharge is not expected to affect or be affected by the presence or absence of a sandbar at the river mouth. While SCRWA staff can be expected to work cooperatively with all flood control agencies along the Pajaro River, any permit requirement related to sandbars would be unjustified.

3. **Summary of Comment:** Santa Cruz County expresses concern over dissolved solids concentrations in water used to recharge irrigation aquifers and requests that the order be modified to include more stringent limitations on total dissolved solids, chloride, sodium, and sulfate.

Response: The general concern expressed by Santa Cruz County regarding dissolved solids is shared by the RWQCB, and is consequently reflected in the proposed order both in the form of effluent limitations and in a requirement for a Salt Management Program. The numerical values of the effluent limitations in the proposed Order are derived from the Basin Plan. They are also comparable to limits imposed for other surface discharges in the Central Coast Region, as well as for other land disposal systems in South Santa Clara Valley. Although they were not included in the discharge permit proposed in 1998, SCRWA is prepared to accept these limitations. SCRWA intends to rely on continued diligent implementation of its Pretreatment program to promote compliance, in spite of the relatively high dissolved solids levels naturally present in the local potable water supply.

The arbitrarily reduced effluent limitations requested by Santa Cruz county are not technically justified.

We appreciate the opportunity to provide input during the response to comments on the tentative draft Order. SCRWA looks forward to participating in the September 10 hearing and to the granting of a discharge permit consistent with the draft Order as received by SCRWA on August 26, 2004.

Very Truly Yours,
MWH Inc

Christopher Cain, PE

cc: A. Faber (Berliner Cohen)
J. Gasser (SCRWA)
S. Heart (MWH)

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

James R. Schaaf, PE
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Offices in
Monterey Bay Area
Puget Sound Area
San Francisco

September 3, 2004

Mr. Jay Baksa, Authority Manager
South County.Regional Wastewater Authority
7351 Rosanna Street
Gilroy, CA 95020

Re: Flooding concerns along the lower Pajaro River with respect to an NPDES permit to discharge tertiary-treated effluent into an upstream reach of that river.

Dear Mr. Baksa:

I have been asked to review the proposed River Discharge Permit by the SCRWA and the comments received from a downstream agency in Santa Cruz County. As you know, Schaaf & Wheeler completed a comprehensive review of the historic and expected build-out flooding impacts of the Pajaro Watershed as a sub-consultant for RMC, Inc., who was under contract to the PRWFPA.

The September 1, 2004 letter from the Santa Cruz County Health Services Agency voices concern about flooding impacts of the proposed release schedule and asks for a modification of the permit so that discharge would cease at an upper limit of flow in the river of 4,300 cfs instead of the proposed limit of 9,300 cfs. The proposed maximum discharge from the proposed project is 9 MGD (million gallons per day) which is equivalent to 14 cfs. There is no backup justification for the requested, reduced upper limit to discharge the 14 cfs.

The letter also requests a condition be added to cease discharge when the mouth of the river is "closed or constricted" by a sandbar.

A concern is raised in a subsequent letter dated August 11, 2004 about the timing of the flows and the time of travel. If the worst case is assumed, that is, that the proposed discharge always adds directly to the discharge at the gage, then at most the discharge would increase by a maximum of just fewer than 5 percent at the low flow limit and by 0.1 percent at the upper flow limit.

It must be noted that at the lower limit the 300 cfs is well within the channel banks and flooding is not an issue. At the upper end, the 9,300 cfs is well below the 18,000 cfs

Item #20 Supplemental Sheet
Attachment #5
September 10, 2004 Meeting
Letter from Jim Schaff

design discharge of the Pajaro River flood control project and therefore is not a flood issue.

In short, the range of flows for which discharge of tertiary-treated effluent would be allowed is not a flood issue with respect to the safety provided by the Pajaro River flood protection project.

The issue of the mouth opening needs to be viewed with respect to the total flow in the river system and not just the discharge of the tertiary-treated water.

As proposed, effluent flow is allowed only when the natural flow in the Pajaro River at the Chittenden gage is in excess of 300 cfs. There must have been rainfall in the watershed to create such a discharge in the river. By extension there most likely would have been rainfall in the watershed downstream of Chittenden. The storm drainage from the City of Watsonville and the community of Pajaro and the runoff from the agricultural areas in between have not been included in the Chittenden discharge. The consideration of these discharges would make the percentage of flow from the effluent discharge even smaller than the minimum of 5 percent calculated under low flow conditions using the Chittenden gage. In fact, the 14 cfs contributed by the effluent discharge is small compare to the runoff that comes from any number of storm drains that serve the urbanized areas of the lower Pajaro River watershed. The opening of the mouth of the river would be dictated by the much larger discharges at Chittenden and the downstream storm drainage inflows and not by the smaller amount added by the tertiary-treated effluent.

The amount of flow added by this proposed project is so small compared to the overall flow that the issue is <u>not</u> one of flooding or impacts to flood control systems in the Pajaro River watershed.

Very truly yours,
SCHAAF & WHEELER

James R. Schaaf, PhD, PE

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