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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
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PUBLIC COMMENTS AND STAFF RESPONSE

Public comments were received from the City of San Luis Obispo in a letter dated October 14, 2004 and from Cal Poly in a letter dated October 8, 2004.

Comments and Responses-City of San Luis Obispo.

The following are staff's response to comments made by the City of San Luis Obispo (City). The City raised recurring issues that were used as a basis to make several requests. Staff organized the issues brought forward by the City into the responses presented below. Each request presented by the City is addressed.

Comment-1: The City of San Luis Obispo requests that only standard methods be used for the source analysis and that the DNA data and analysis be withdrawn from the TMDL analysis.

Staff response: Staff appreciates the City's concern regarding accuracy, verification, and adherence to Standard Methods. However, staff believe the results of the DNA analysis are accurate and verifiable, and therefore retains use of the DNA data.

The City's comment stems from the fact that staff utilized two basic approaches for the source analysis: a) multiple tube fermentation, and b) DNA ribotyping for microbial source tracking. Multiple tube fermentation (MTF) analysis yields coliform concentration, expressed as most probable number of organisms per volume of sample. MTF is an approved standard method. DNA ribotyping is a newer method of analysis (relative to MTF) that is not yet approved as a standard method. DNA ribotyping results in identification of the source of the coliform, e.g. a dog, cat, human, etc. The City is concerned that the results of the DNA analysis: a) may not be accurate, b) may not be verifiable.

With respect to accuracy, microbial source tracking through DNA ribotyping is a cutting edge technology. Staff utilized the ribotyping technology developed by Dr. Mansour Samadpour of the University of Washington. Dr. Samadpour's work is highly regarded in the scientific community. The Environmental Protection Agency, California Resources Control Board, and the Southern California Coastal Water Research Project (Project), sponsored a workshop to evaluate current tracking techniques. The Project concluded that Dr. Samadpour's methods ranked above all other methods currently available in terms of accuracy and repeatability. Dr. Samadpour has a library of over 120,000 DNA isolates. As such, his method results in one of the most accurate analyses available. The Central Coast Regional Water Quality Control Board have utilized results of Dr. Samadpour's work to implement the Morro Bay Pathogen TMDL, which has subsequently been approved by the Office of Administrative Law. Morro Bay DNA study, available on the Regional Board website, http://www.swrcb.ca.gov/rwqcb3/TMDL/SpecialStudies.htm , discusses the Quality Assurance plan where double blind samples were sent to Dr. Samadpour and all were identified correctly.

With respect to verification, the DNA analysis is repeatable. Dr. Samadpour continues to lead the scientific community in microbial source tracking. His library of DNA isolates continues to grow. He

is eager to take on new projects, and can be reached at the University of Washington, or at www.iehinc.com. If the City desires to repeat the study or add to the existing body of information characterizing sources, staff suggests the City contact Dr. Samadpour and enters into a contract to repeat the DNA study during the implementation phase of the TMDL.

Comment-2: The City of San Luis Obispo has commented that "…has no information regarding the DNA analysis, other than the results."

Staff Response: There are numerous publications referencing Dr. Samadpour's work. An Internet search will yield multiple results.

Comment-3: The City of San Luis Obispo requests that the DNA analysis be withdrawn from the TMDL analysis as well as all implications of using the DNA data. The City makes this request because of an existing second and conflicting DNA analysis.

Staff Response: Staff believe the DNA data analysis by Dr. Samadpour used to develop the TMDL is accurate, and did not withdraw the data from the analysis. The City points out that staff utilized a second laboratory, Source Molecular Laboratory, to determine sources of *E. coli* through DNA analysis. Staff chose not to rely on this DNA analysis. The results of the second analysis occurred after Dr. Samadpour's analysis. The results of the two analyses were not consistent; results from Source Molecular Laboratory indicated a significantly lower human component. Staff utilized Source Molecular Laboratory because this laboratory would accept fewer samples; Dr. Samadpour requires many more samples in order to draw more scientifically significant conclusions from the data. Staff could not utilize Dr. Samadpour's laboratory a second time because funds for the project were limited. Staff then chose not to utilize data obtained from Source Molecular because staff determined that sample preparation was flawed. The DNA data was consequently questionable, and the data withdrawn from the dataset. Staff shared the Source Molecular data with the City before it was determined that the data was flawed, but failed to later inform the City that the data was withdrawn. It is therefore reasonable that the City is concerned about this second dataset. An explanation of the flawed data is provided in the following paragraph.

Dr. Samadpour's laboratory required that staff send the water sample to his laboratory. Dr. Samadpour would in turn culture *E. coli* from the sample, and then perform DNA analysis on the cultured *E. coli*. Source Molecular required only that cultured *E. coli* plates be sent. Source Molecular offered to culture the water sample for *E. coli*, but staff was concerned that sending water samples to Source Molecular (located in Florida) may pose a mortality problem due to temperature differences during transport. Staff, therefore, chose to have a different laboratory prepare the samples by culturing *E. coli*. The lab would then forward the cultured *E. coli* plates to Source Molecular for DNA analysis. Staff later determined that two of the nine plates were unsuccessful at culturing *E. coli*, with other plates yielding minimal *E. coli* colonies, yet staff drew samples from monitoring stations along the tunnel that consistently carried high levels of coliform. Because the sampling sites used consistently carried high coliform levels, it was necessary for the laboratory to dilute the samples in order to achieve distinct *E. coli* colonies on the plate. Staff believes an over-dilution occurred, resulting in minimal and in some cases negative presence of *E. coli* colonies. Staff therefore considered the resulting DNA analysis flawed, and withdrew the results from the dataset. Dr. Samadpour's laboratory was able to consistently culture *E. coli* colonies from every water sample sent. In addition, at the time of the DNA analysis, Dr. Samadpour had a DNA library of over 100,000 fingerprints, and could therefore often identify the microbe to a source organism. In contrast, Source Molecular had less than 2000 fingerprints in their library, and could at best identify the source as animal or human. Finally, not only are the number of isolates in the library important to consider, but the geographic location of where the samples came from. Dr. Samadpour's library is made up of *E.*

coli from the west coast, which is presumably much more similar to San Luis Obispo than a library that originated from *E. coli* on the east coast.

Comment-4: The City of San Luis Obispo (City) requests that the source category "sewage" not be used, particularly as an identified point source. The City bases the request on: a) that there is not an established correlation between the identified *E. coli* (through DNA analysis) and viable fecal coliform, b) that the sewage category discounts other human sources, e.g. from homeless encampments, which is not a point source, and c) that there exists limited paired DNA and concentration data.

Staff Response: Staff renamed the source category from "sewage" to "human." By making the following revisions: staff changed the stated "sewage" category to the "human" source category in the source analysis section in the Final Project Report in Attachment B; staff deleted the discussion of allocations to these former source categories in the Final Project Report in Attachment B; staff deleted the references to "sewage" categories in the implementation plan and in the implementation section in the resolution. This change will not alter the anticipated achievement of the TMDL because the resolution includes allocations to geographic locations of problems and responsible parties. Therefore, the City will retain responsibility for reducing loading from the human source in the tunnel area of the Creek.

The City's comment is, in part, justified. The frequency for *E. coli* source categories identified in the DNA analysis (expressed in percent identified) is used to determine the source loading, which in turn is in units of most probable number of fecal coliform. In addition, staff have made the assumption that all *E. coli* identified in the DNA analysis remain viable in the stream environment. With respect to viability, the source analysis assumes that the bacteria will remain viable for a distance of 3100-4700 feet of stream length. This distance corresponds to the distance where the DNA samples were taken in the tunnel, to the monitoring point downstream where loading was calculated. Although *all* fecal coliform may not survive this distance in the stream environment, staff used this assumption as a conservative approach to assure the allocations would achieve the numeric target. With respect to a correlation between *E. coli* and fecal coliform, all *E. coli* are fecal coliform, but not all fecal coliform are *E. coli*. In humans, greater than 87% of the fecal coliform from are *E. coli*. In livestock, over 95% of the fecal coliform are *E. coli*. However, staff appreciates the City's concern that a 1:1 relationship between the identified *E. coli* and fecal coliform in sewage does not exist.

With respect to the comment that the sewage category discounts other human sources, e.g. from homeless encampments. The sewage source occurs within the tunnelized portion of the Creek in the downtown area of San Luis Obispo. Although it is possible that homeless, or other people, could enter the tunnel, the environment of the tunnel is not suitable for an encampment; the tunnel is dark, cold, wet, and requires waders to walk through. There are very few sand bars within the tunnel to establish a camp. However, staff appreciates the City's concern regarding the use of sewage to describe a source category. Strictly speaking, the sewage category does discount the human source from people entering the tunnel.

With respect to limited paired DNA and concentration data, staff used nine separate sampling days in June 2002 to gather samples for DNA analysis. Results from this analysis were used to determine loading using concentration data gathered throughout the data period from March 2001 to March 2003. The underlying assumption is that the frequencies developed from the DNA analysis are representative throughout the entire data period. Staff used this assumption for several reasons. Review of the concentration data led staff to conclude that a significant and *consistent* fecal coliform source exists in the tunnel; arithmetic and log means of fecal coliform concentration are significantly higher at the downstream end of the tunnel, relative to the upstream end of the tunnel. In addition, fecal coliform concentration is significantly higher at the downstream end of the tunnel in low flows

during the summer months, relative to higher flows during winter. This information led staff to conclude that DNA analysis within the tunnel system itself would help identify fecal coliform sources consistently occurring within the tunnel, i.e., that identification of the sources during low flows would shed light on the sources also occurring during high flows. To be sure, a more accurate analysis would be to obtain paired concentration and DNA data. An analysis of this nature, even through a single year of sampling, would require far more resources than are presently available.

Comment-5: The City of San Luis Obispo requests that the identified CSO source (combined sewer overflow) from the DNA analysis not be considered a sewer source.

Staff response: Per the City's request, staff changed the references to the CSO source as sewage source in the Final Project Report, and added it to the "urban" source category. This change will not alter the anticipated achievement of the TMDL because the resolution includes allocations to geographic locations of problems and responsible parties. Therefore, the City will retain responsibility for reducing loading from this source as part of the urban source. The CSO source results from *E. coli* that are consistently found in municipalities' overflow systems. The CSO isolate was identified in the tunnel area through DNA analysis. Staff originally concluded that the isolates identified as CSO were likely from human sources. Staff made this conclusion because this isolate is only found in overflow systems. Since storm drains in the Creek were not discharging storm water at the time of sampling, and a human source was previously identified, staff concluded that the CSO source was likely a human source. However, as the City points out, although the CSO source is present and identified in the Creek, the particular isolate has yet to be associated with a specific organism. Staff therefore recommends that this source be identified simply as a CSO source. This change will not alter the anticipated achievement of the TMDL because the City will retain responsibility for reducing loading from the CSO source in the tunnel area of the Creek.

Comment-6: The City requests that monitoring site 12.5 should be included in the monitoring plan. The City states that monitoring site 12.5 is impaired, as demonstrated by existing data using listing guidelines expressed in the September 2004 State Board's Functional Equivalent Document. The City further states that monitoring at site 12.5 would shed light on sources upstream of sources occurring within the City. Finally, the City points out that the exceedences occurred during the low flow period of August-September 2001, and no data is available for 2002.

Staff response: Monitoring site 12.5 has an allocation, but monitoring will not be required. Staff encourages the City to include site 12.5, located within the City at Cuesta Park, in their monitoring plan. Staff will consider all data the City presents as evidence of sources occurring upstream that could be contributing to potential impairment.
Staff agrees with the City that monitoring data from 12.5 during implementation and monitoring of the TMDL would provide a better understanding of the sources entering the Creek, which in turn would aid in achieving the TMDL. However, staff does not believe further investigation into additional sources at site 12.5 is warranted at this time. Furthermore, staff disagrees that according to current listing policy, this section of the stream should be listed on the 303(d) list. The Functional Equivalent Document (FED) referred to by the City is not yet policy. In addition, the FED will be used to list streams as impaired for the 2004 listing, which has not yet occurred. Staff, therefore, compare the existing data to the Basin Plan objectives in place to protect the REC-1 beneficial use. The current objective describes exceedence as a fecal coliform concentration greater than 200 MPN/100mL using 5 samples drawn in a 30-day period. Using this objective, staff on two occasions drew 5 samples in a 30-day period from site 12.5. Once in March-April 2001, and again in March-April 2003. The fecal coliform log mean for the 2001 data is 162 MPN/100mL, and for 2003 is 124 MPN/100mL. The corresponding log mean for the same time period at site 10.3, located within the City and downstream of site 12.5 were 545 MPN/100mL and 948 MPN/100mL. Finally, no data is available for the low

flow months of August-September of 2002 and 2003 because site 12.5 runs dry during the summer months of most years; in 2002, flow ceased at this site in July.

Comment-7: The City of San Luis Obispo requests that all allocations and numeric targets be revised. The City makes this request based on their belief that the DNA analysis cannot be repeated, and/or may be inaccurate.

Staff response: Staff discussed the question of accuracy and repeatability of the DNA analysis in the comments above. However, staff is sensitive to the City's concern that some of the allocations are less than the proposed numeric target, and therefore may be difficult to achieve. Staff has revised the allocations in the Final Project Report and the Resolution to be consistent with the numeric target of 200 MPN/100 mL of fecal coliform. In short, all allocations in the watershed will be equal to the numeric target. Staff has further deleted the sections containing Tables 8.1 and 8.2, describing the allocations in terms of sources, which are not a necessary component of the TMDL, but were provided simply for information. Finally, staff also deleted Tables 8.4 and 8.5, describing the reductions necessary to achieve the TMDL, as they are not a necessary component of the TMDL. Note that these changes do not alter the anticipated achievement of the TMDL because the implementing parties are still responsible for meeting the numeric target of the TMDL.

Comment-8: The City of San Luis Obispo requests that more formal and impartial stakeholder meetings occur to ensure stakeholders concerns are expressed. The City supports this request by stating that they "consistently expressed concern regarding the use of DNA because of the lack of standard methods." The City also states that they requested that the DNA data not be used, and that their (the City's) "input and issues were not considered."

Staff response: Staff believe that stakeholder involvement with the City was in the spirit of mutual concern for improving water quality. Staff believe the methods and activities employed throughout the project were transparent and consistently open to comment. Staff believe that in some cases, staff went above and beyond the norm to ensure that the City's concerns were considered, and responded to these concerns with sensitivity.
With respect to stakeholder meetings, Regional Board staff met with City staff on the following dates: 23May 2001, 8November 2001, 12March2002, 7May2002, 16September 2002, 26September2002, 31October2002, and 01April2003. In addition to these meetings, many emails were exchanged between Regional Board staff and City staff. The City received the draft TMDL before it was submitted for scientific review early in January 2004. The City has been kept up to date and has had numerous opportunities to comment throughout the life of the project. Requests by the City included: a) for Regional Board staff to accompany City staff into the tunnel area to identify locations where fecal coliform levels were greatest, b) for Regional Board staff to accompany City staff into the tunnel to identify DNA monitoring sites (second visit) c) for Regional Board staff to sample sites other than the sites in the current monitoring plan, d) for staff to present data, findings, and methods to the City Council in a public forum, e) for staff to email results of monitoring when received. Regional Board staff accommodated all of the City's requests. The City was aware the DNA sampling and analysis was being pursued. At no time did the City request that the sampling or analysis not be performed, nor did the City request that the results not be considered. Rather, Regional Board staff understood the sensitivity of the results, and afforded City staff a "first look" at the DNA data. This "first look" occurred at the meetings on 26September 2002 and 31October 2002 upon which time Regional Board and City staff organized a field reconnaissance together into the tunnel area in order to help locate potential fecal coliform sources. Regional Board staff accompanied City staff into the field. Subsequent correspondence from the City stated that the City had mailed seven notices of violation to property owners, six of which had made required repairs to "sewer laterals." Regional Board staff interpret this action as a step forward in the direction of meeting the proposed numeric target, and

point out that without the DNA analysis and stakeholder involvement, this step forward may not have been accomplished

Comment-9: The City has requested that more time be allowed to acquire the necessary resources to implement and monitor the TMDL. The request is supported by the City's comment that the necessary funds do not yet exist and must be budgeted.

Staff response: The target date of achieving the TMDL will remain at 10 years as outlined in the Resolution. Staff believe this is a reasonable goal that is sensitive to the City's concerns. Note that the ten-year goal does not contain interim milestones, e.g. target concentrations. Rather, the City simply needs to demonstrate reasonable progress towards achieving the TMDL and compliance with any new requirements in the MS4 General Permit Storm Water Management Plan as those requirements become effective. Start up costs would be initial implementation and monitoring. Note that the implementation activities outlined in the Resolution follow closely the requirements already in place by existing permits. The monitoring required of the City is required through amendment of existing Monitoring and Reporting Plans (M&RP). The Executive Officer will amend the M&RP. As such, Regional Board and City staff will work together to ensure monitoring is required at a reasonable point in time.

Comments and Responses-Cal Poly State University.

The comment letter received from Cal Poly State University is a compilation of comments by several Cal Poly staff. Some of the issues broached by Cal Poly staff were brought forward by more than one commenter. Regional Board staff have responded to these issues with the intent of addressing each commenter's concern. In addition, Regional Board staff met with Cal Poly staff twice during the comment period. The objective of the meetings was to clarify Cal Poly's concerns in order to reach a mutually agreeable solution to issues raised. Regional Board staff have compiled the issues brought forward by Cal Poly and have addressed them below.

Comment-10: Cal Poly states that neither Stenner nor Brizzolara Creeks are listed as impaired on the 303(d) list, and should therefore not have allocations more strict than the listed waterbody of San Luis Obispo Creek.

Staff response: Staff has revised the allocations in the Final Project Report and the Resolution to be consistent with the numeric target of 200 MPN/100 mL of fecal coliform, i.e., the allocations in Brizzolara and Stenner Creeks have changed to 200 MPN/100 mL of fecal coliform. Cal Poly's concern is regarding the geographically referenced allocations, and is similar to the issue addressed in the City's comment no. 6 above. The proposed allocations, expressed geographically in Brizzolara and Stenner Creeks (Table 8.3 of Attachment B) are more stringent than the numeric target proposed for the TMDL. As with the allocations within the City, Regional Board staff intended the allocations to inform the stakeholders of target concentrations to reach to achieve the eventual numeric target in downstream waters. However, staff is sensitive to Cal Poly's concern that the allocations are in fact less than the numeric target. Therefore, like the allocations within the City, staff will amend the allocations to levels consistent with the numeric target.

Comment-11: Cal Poly has raised concerns about how the background level was established, and whether it truly reflects true background throughout the watershed.

Staff response: Cal Poly's concern stems from the fact that data from two monitoring stations were chosen to estimate the background level. The two monitoring stations are located in upper

subwatersheds of the larger watershed of San Luis Obispo Creek. One of the monitoring stations is in upper Prefumo watershed, and the other is in San Miguelito watershed. Neither of these two monitoring stations are within the Stenner or Brizzolara Creek watersheds, which are situated on Cal Poly lands. Cal Poly is concerned that the estimated background level may not be representative of background levels of other watersheds, particularly the watersheds Cal Poly is responsible for. As a result, Cal Poly could potentially be being attributed source loading for which they have no control. Staff agrees that the background level of one subwatershed does not necessary reflect the background level of another, even if the two subwatersheds are within a larger but relatively small watershed. Staff utilized monitoring data from sites to derive background levels that: a) had little or no apparent source loading other than background, b) were accessible to staff. It can be argued that few sites in the watershed meet these criteria. Staff chose to use data from the Upper Prefumo and San Miguelito watershed because they best met the criteria and the observed data indicated consistent levels of fecal coliform. With respect to whether the utilized background level of 81 MPN/100mL, and subsequent source loading analysis, could potentially burden Cal Poly unnecessarily: note that staff have agreed to amend the allocations in Stenner and Brizzolara Creeks to levels equivalent to the numeric target (see comment-1 above). These allocations represent the least stringent concentration of fecal coliform allowable. Allocations higher than the stated numeric target would require amending the Basin Plan objective in place for the protection of REC-1, which would require a use attainability analysis, which is beyond the scope of this project. Staff invites Cal Poly to monitor fecal coliform levels in undisturbed areas within Stenner and Brizzolara Creek watersheds in an effort to refine the background level. Staff can then make adjustments to the estimated loading from various sources based on the new background level. However, doing so will not change numeric target and allocations.

Comment-12: Cal Poly suggests that landowners in the upper portions of the watershed should be considered responsible parties, particularly those landowners who potentially could be providing source loading from livestock.

Staff response: Cal Poly refers to landowners in the Upper Stenner Creek subwatershed as well as the upper extent of San Luis Obispo Creek watershed. Staff did not include private landowners in these subwatersheds because data from monitoring sites downstream of these areas do not indicate exceedence of the Basin Plan objective for fecal coliform protecting REC-1. Staff, therefore, cannot justify requiring landowners in these watersheds to implement and monitor. Staff discussed this topic with Cal Poly in the two meetings during the comment period where mutually agreeable wording was formulated and incorporated in the TMDL.

Comment-13: Cal Poly comments that the justification for not requiring the County of San Luis Obispo to monitor is not well justified in the Project Report (Attachment-B). The comment stems from a statement in the Final Report in Attachment B stating that the County is not required to monitor because the "majority" of the sources identified originate on Cal Poly and City lands. Cal Poly further questions where the evidence is to support this statement.

Staff response: The evidence to support this statement is in the "Source" worksheet of the MS Excel spreadsheet model that accompanied the documents for public review. However, as Cal Poly states, the statement in question needs clarification.

Comment-14: Cal Poly has questioned why 25% of the estimated cost to implement the TMDL has been attributed to Cal Poly, yet 5% of the watershed is on Cal Poly lands. Cal Poly further asks whether grant money will be available to help implement.

Staff response: The estimate of cost to implement the TMDL is an estimate only. Few pathogen TMDLs have been implemented in the state, none of which have had an extended history with which to help staff estimate costs. None of the implementing parties are required to spend all or a fraction of the estimate. It is the hope of Regional Board staff that the TMDL can be achieved with a minimum amount of expense. With respect to how the estimate was calculated: Staff used the population of Cal Poly and the City to estimate the cost to implement. Staff believe this is an acceptable approach because the urban source category represents the majority of the identified load. With respect to grant money available to help Cal Poly implement: the TMDL program does not fund implementation. However, staff encourage Cal Poly to apply for funds from whatever implementation grant sources might be available (e.g. Clean Water Act Section 319 and Proposition 40).

Comment-15: Cal Poly has questioned how it was determined that livestock sources are contributing to Brizzolara Creek.

Staff response: Staff used a weight of evidence approach to determine that livestock sources are contributing to Brizzolara Creek. A livestock pen is located on Cal Poly lands adjacent to Brizzolara Creek. The pen is located up-grade of a concrete apron constructed by Cal Poly. The apron directs flow from the surrounding area to Brizzolara Creek. Staff collected samples up and downstream of the apron and found a consistent increase in fecal coliform concentration at the downstream monitoring site. Staff conducted reconnaissance at the pen and apron site and found that rills had formed through and around the animal pen, draining to the concrete apron, and finally into Brizzolara Creek. Cal Poly and Regional Board staff have discussed the animal pen and probable source. Cal Poly has plans to remove the pens and construct housing units at the site.

Comment-16: Cal Poly questions why the 3-tiered approach of non-point source (NPS) pollution control was not considered.

Staff response: Cal Poly refers, and cites, to the implementation strategy utilized in the Morro Bay Pathogen TMDL. The Morro Bay Pathogen TMDL utilized the 3-tiered approach to NPS control to implement the TMDL. However, the State Water Resources Control Board was already well into the process of revising California's Policy on Implementation of the Nonpoint Source Control Program, which originally included the 3-tiered approach, when the implementation plan for San Luis Obispo Creek Pathogen TMDL was being developed. Furthermore, Cal Poly's facilities and land area that are identified as sources in this TMDL are already regulated by Waste Discharge Requirements or Municipal NPDES Stormwater General Permit, hence operating in the third tier of the 3-tiered approach. The California Office of Administrative Law recently approved the revised Policy on Implementation of the Nonpoint Source Control Program, eliminating the 3-tiered approach as an option for NPS control and explicitly requiring regulatory control of nonpoint source pollution discharges. At any rate, the NPS Plan does not apply to point source discharges, including stormwater discharges. Voluntary compliance has never been acceptable for point source discharges.

Comment-17: Cal Poly has requested that data from monitoring site 2.0A not be used in the TMDL analysis. The request is based on the fact that this monitoring site is a tributary to Stenner Creek, and is therefore not representative of fecal coliform "levels in Stenner Creek."

Staff response: Staff did not use data from site 2.0A for loading analysis. Data from this monitoring point was not used in any quantitative way. The data is within the entire dataset, along with many other data points from tributaries throughout the watershed. Finally, staff does not conclude, nor imply, that data from site 2.0A represents "levels in Stenner Creek." Staff will retain data from monitoring site 2.0A in the dataset.

Comment-18: Cal Poly questioned how monitoring sites were chosen.

Staff response: Staff refer Cal Poly to the Final Project Report in Attachment B. Section 3.1 illustrates a map of the monitoring sites, as well as an explanation of how the monitoring sites were chosen.

Comment-19: Cal Poly questions when and where DNA samples were taken, and whether livestock sources were identified.

Staff response: Staff refer Cal Poly to the "DNA Fingerprinting" section of the Final Project Report in Attachment B. The complete results of the DNA analysis are illustrated in Section-4 of this report. The raw data is too numerous to illustrate here, but can be viewed in the spreadsheet provided in the public review documents. No livestock sources were identified in the tunnel area of San Luis Obispo Creek.

Comment-20 : Cal Poly notes that language in the implementation section of the Final Report in Attachment B states that Cal Poly's WDR will be 'amended' to include monitoring and implementation requirements. Since these changes have already been made to the WDR, Cal Poly concludes that the word 'amend' is unnecessary. In addition, Cal Poly notes that their Storm Water Management Plan is designed to address all
stormwater pollutant issues, which includes fecal coliform. As such, it is not necessary for Cal Poly to 'amend' their plan to specifically address fecal coliform sources.

Staff response: With respect to amending Cal Poly's WDR to incorporate monitoring: Cal Poly is currently monitoring fecal coliform concentration in Stenner and Brizzolara Creeks, as required by the WDR. Therefore the word "amend" will be removed when referring to monitoring requirements. However, the current WDR does not require reporting of implementation measures that specifically address fecal coliform. Therefore, the word amend will be retained when referring to reporting. With respect to Cal Poly's Storm Water Management Plan (Plan), as Cal Poly has noted, the Plan identifies measurable goals designed to address all storm water pollutant issues. However, data indicate that fecal coliform loading on Cal Poly lands is, in part, contributing to the impairment in San Luis Obispo Creek (a 303(d) listed waterbody) by fecal coliform. As such, Regional Board staff request that Cal Poly identify *specific measures* taken to reduce *fecal coliform* loading. As such, the current reporting requirements need to be amended to incorporate reporting on these specific actions.

Comment-21: Cal Poly has requested that the Staff report contain information regarding existing efforts regarding implementation, as well as should provide a summary of the Resolution.

Staff response: Staff notes Cal Poly's comment.