

# **Appendix D**

## Response to Comments

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# EVALUATION OF WATER QUALITY CONDITIONS FOR THE SAN FRANCISCO BAY REGION

## PROPOSED REVISIONS TO SECTION 303(d) LIST

### RESPONSES TO COMMENTS



**February 2009**

San Francisco Bay  
Regional Water Quality  
Control Board

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This document provides Water Board staff's responses to oral and written comments on the proposed changes to the Section 303(d) list of impaired water bodies for the San Francisco Bay region.

We include responses to the twenty-six comment letters we received on the October 30, 2008, version of the proposed 303(d) list and supporting Staff Report, as well as comments made during the January 14, 2009, Board testimony hearing in Parts II and III of this document.

## **PART I: STAFF RESPONSES TO KEY COMMENTS**

A number of key issues were raised in the comment letters, some of them by multiple stakeholders. This section provides responses to these key issues, which are also referred to in responses to specific comments. The key issues are as follows:

- Spatial Representation of Data
- The Need for a Sampling Plan for Trash Data
- Photographic Evidence for Trash
- Scientific Integrity of Trash Assessment Methods
- Trash Control Actions Underway So No Need to List

### **Spatial Representation of Trash Data**

**Several commenters expressed concern that we listed entire water bodies as impaired by trash and other pollutants when the available data were from a relatively small number of lower watershed locations. Commenters stated that these data are limited, non-representative samples and that listing the entire water body is inconsistent with the Listing Policy, Section 6.1.5. They also claim that such listings will result in wasted resources as municipalities would be compelled to address trash in areas where there are no impacts. Many commenters felt that that the impairment listing should be limited to the section of stream immediately adjacent to the sampling site or to the length of the stream reach with similar land uses as those sites where data were collected.**

Response: Many of the comments that speak to consistency with the Listing Policy refer explicitly or implicitly to Sections 6.1.4 and 6.1.5, which describe data quality and data quantity assessment, respectively. Section 6.1.5 of the Policy allows the Water Boards to

“establish how data and information are to be evaluated, including the flexibility to establish water segmentation.” Section 6.1.5.4 encourages the Water Boards to “identify stream reaches or lake/estuary areas that may have different pollutant levels based on significant differences in land use, tributary inflow, or discharge input. Based on these evaluations of the water body setting, RWQCBs should aggregate the data by appropriate reach or area.”

Although we do have sufficient data to establish that trash and other pollutants exceed water quality standards in many water bodies, we do not have sufficient data or information to be certain that such exceedances only exist in the locations surveyed during SWAMP data collection, trash assessments or represented in the photos. Nor do we have the data available regarding significant differences in land uses, inflow, or discharge inputs to support decisions about water body segmentation. Rather than restrict the proposed trash listing to those discrete locations where trash surveys were conducted, our approach at this time is to list entire water bodies as impaired.

The fact that we reviewed data from dozens of creeks in the Bay Region and found problem areas on more than two dozen suggests that the trash problem is not restricted to just a few isolated areas. It is a widespread problem. Data from the few shoreline areas evaluated suggest that trash impacts along shorelines are also acute. We anticipate that as more data are collected, the scale of the shoreline trash problem will be very large. We are not claiming that every inch of Bay shoreline is impacted by trash, but trash along shoreline areas can be readily transported to other nearby shoreline areas by the action of wind, tides, and currents. Thus, it is entirely reasonable that trash impacts along one stretch of shoreline may serve as evidence of imminent impacts at other shoreline areas in the same portion of the Bay. We are confident that the data available now showing shoreline trash impacts do not represent the only shoreline areas impacted by trash in San Francisco Bay. Listing these Bay segments in their entirety, rather than the small spatial extent where data are available, is consistent with our view that trash is a widespread problem in Bay shoreline areas. By listing entire creeks or Bay segments we do not mean to suggest that every inch of a listed creek or shoreline is impaired by trash.

It also does not make practical sense to restrict listing to the 100-foot creek sections surveyed using the trash assessment or photographic methods. It is highly likely that a substantial, but currently undeterminable, portion of the trash surveyed was transported from upstream, so it is also likely that upper portions of the creek are impaired as well.

Our approach in this listing cycle was to focus on the available data from trash assessments and photos and identify trash problems comprehensively rather than so narrowly that we might erroneously or prematurely suggest that impairment is isolated to just a few small creek sections. Listing entire creeks is not expected to have a meaningful impact on the remedies employed to deal with the problem. We do not expect local governments to spend time or resources trying to solve trash problems where they do not exist.



### Sampling Plan for Trash Data

**Many commenters pointed out that Listing Policy Section 6.1.4 states that a sampling plan should be available that describes the rationale for selecting sampling sites that assures that the samples are spatially representative of the surface water. The fact sheets for trash-related listings do not mention such a sampling plan.**

Response: This section of the Listing Policy is intended to provide guidance to the Water Boards in identifying high quality data. It does not require a sampling plan be submitted for the Water Boards to use data and information.

Trash assessment data are supported by very detailed documentation of the methods prepared through SWAMP and the Santa Clara Valley Program, known as SCVURPPP (SFBRWQCB 2007a, SCVURPPP 2006), and the SWAMP method was peer reviewed (SFBRWQCB 2007b). These method description documents contain substantially all or most of the information suggested in Section 6.1.4 of the Policy. This documentation and the peer review are convincing evidence that trash assessment data are of sufficient quality to use for impairment determination. Determination of water quality standards attainment via photographic evidence was only attempted if sufficient close-up and panoramic photos were available, and the trash assessment method applied to the photos is supported by the previously mentioned method documentation. Therefore, we determined that the quality of the trash assessment and photographic data was sufficient to make determinations of water quality standards attainment.

### Photographic Evidence for Trash

**Several commenters also cited Section 6.1.4 of the Listing Policy and its requirement that photographic data must include the photographer's rationale for the area photographed. If this was not included in the submission, these photographs should not be used. Many commenters also cited Listing Policy Section 6.1.5.1 which states that "data used to assess water quality standards should be data that can be quantified, and that information that is descriptive, estimated or projected may be used as ancillary lines of evidence." These commenters claim that the process used to support the proposed listing (i.e., interpretation of photos to establish a Rapid Trash Assessment score) would fall into the category of 'descriptive, estimated, or projected' and therefore should only be used as an ancillary line of evidence and not as the sole justification.**

Response: The rationale of the photographer is self-evident in this circumstance: it is to document the presence of trash. Therefore, we can legitimately use the submitted photos as evidence to determine impairment.

We did not merely look at the photos and make an impressionistic listing call based on a gut reaction. Rather, as we described in the Staff Report, we methodically inspected every photo and applied the systematic and quantitative trash assessment methodology to the photos. The rigorous application of the trash assessment methodology to the

photos produces data that can be quantified and qualified. Therefore, our use of photographic information is not merely “descriptive, estimated, or projected” and, as such, can be used as the primary line of evidence to support listing.

### **Scientific Integrity of Trash Assessment Methods – Random Samples**

**Several commenters argue that the trash assessment methodology is contrary to section 6.1.5.2 of the Listing Policy which states that ‘samples should represent statistically or in a consistently targeted manner the segment of the water body.’ Because trash assessment sites may not have been selected randomly, the results cannot be considered statistically representative.**

Response: The Listing Policy does not require that samples be statistically representative. Trash assessments were conducted at sites where sampling was conducted for non-trash water quality parameters during the SWAMP program from 2003 to 2005. The sites chosen for field SWAMP trash assessment surveys were not intentionally chosen because the sites were impacted. SWAMP RTA sites were selected to represent the range of conditions found in the tributaries to San Francisco Bay, from rural residential areas in the foothills to dense, urbanized areas in the plains. All sites were near or within city limits, representing areas of public access (e.g., parks) or at the bottom of watersheds. This access makes them good candidates for assessing the non-contact recreation beneficial use because they represent areas where humans have access for recreation.

In the absence of evidence that indicates otherwise, we consider the trash assessment sites a reflection of the water body. That trash is transportable from upstream to downstream locations allows the reasonable presumption that trash impacts exists upstream of surveyed or photographed locations.

### **Scientific Integrity of Trash Assessment Methods – Subjective**

**The SWAMP Rapid Trash Assessment (RTA) or Santa Clara Program’s Urban Rapid Trash Assessment (URTA) qualitative level of trash score (Parameter 1) is too subjective. Interpretation of ‘high,’ ‘medium,’ and ‘low’ levels of trash is subjective and varies among different field staff conducting the assessments....The basis of establishing the impairment thresholds needs better support and definition. The number of total ‘transportable and persistent’ trash items (Parameter 3) used to define impairment is arbitrarily set at  $\geq 50$  for the RTA and  $\geq 76$  for the URTA. These thresholds are inconsistent. Furthermore, it is essential that a scientifically defensible basis be provided for relating the total number of trash items to adversely affecting aquatic life beneficial uses.”**

Response: Concerns about scientific validity were directly addressed by the authors of the RTA method. The RTA method was subjected both to a sensitivity/objectivity evaluation and to peer review. The peer reviewers did not identify any major issues that would call into question the scientific validity of the method (SFBRWQCB 2007b).

The methodology was evaluated to confirm that it was representative, sensitive, and objective (SFBRWQCB 2007a). The scores from the evaluation demonstrate that the assessment methodology is sufficiently sensitive and objective to be useful in evaluating ambient conditions and the effect of public access on trash levels. The method does not require extensive training so the test assessment results are a reasonable representation of what would be expected if a team of municipal employees or interested citizens conducted the assessment. The consistency of the scores in the test assessment underscores the confidence that Water Board staff have in the methodology. An important point is that we are not using the method to try and discriminate between sites with slight differences in impairment. We are using the method to identify highly impacted sites, which is well within the sensitivity of the method. As such, we are very confident that this method is a reliable way of determining impairment of the two beneficial uses we are evaluating, REC-2 and WILD.

The way we evaluated REC-2 was by listing those sites where the level of trash distracted the eye on first glance and stream, bank surfaces, and immediate riparian zone contain substantial levels of litter and debris (>100 pieces); this condition was also observed at multiple locations and multiple dates. We have no doubt that anyone trained in the assessment method would be able to reach the same conclusion about sites of this nature.

The WILD beneficial use was considered not attained at sites where we found a large amount (>50 pieces) of transportable, persistent, buoyant litter (such as hard or soft plastics, balloons, Styrofoam, cigarette butts); toxic items (such as batteries, lighters, or spray cans); large clumps of yard waste or dumped leaf litter; or large amount (>50 pieces) of settleable glass or metal. We reasonably conclude that trash is impairing wildlife when field assessors can find more than 50 pieces of such items known to be threats to aquatic life and other wildlife in a 100-foot section of a stream. The impacts of trash are distinct from those of other pollutants like pesticides or temperature for which it is possible to conduct experiments to determine the threshold corresponding to harm. For trash impacts on wildlife, it is not reasonable to expect that there can be such a precise threshold determination. We were counting the very types of trash whose harm to wildlife has been well established in the scientific literature (U.S. EPA 2001, McCauley and Bjorndal 1999). That our proposed listings are based on finding more than 50 such items in a 100-foot section suggests that we used a very conservative threshold to establish these impacts.

The situation is analogous to trying to determine precisely how many needles or pieces of glass, or pieces of small ingestible plastic left lying on the floor might cause harm to a child playing in that room. Even one such item could cause harm. The commenters would have us wait for a scientific study to prove that there could be harm when more than 50 such items are present in the room.

We addressed the portion of the comment concerning spatial representativeness above in the response to the "spatial representation" issue.

**Scientific Integrity of Trash Assessment Methods – No Public Review of Method**

**Several commenters note that there has not been any formal action involving public review and comment for establishing the RTA as an acceptable objective, criteria or guideline for a trash 303(d) listing decision. Therefore, the Water Board should not use this method not to list urban creeks for trash at this time.**

Response: Section 6.1.3 of the Listing Policy sets forth the requirements for using evaluation guidelines to evaluate narrative water quality objectives. We have met these requirements. We used section 3.11 of the Listing Policy and conservatively applied results from trash assessments to evaluate water bodies for trash impairment.

**Scientific Integrity of Trash Assessment Methods – Trash Above High Water Line**

**The RTA and URTA methodologies identify and give equal weight to trash items found above and below the creek high water line. These commenters claim that trash items above the high water line were not impacting the water body at the time of the assessment and therefore should not be included in evaluation of impairment.**

Response: We are using the RTA to identify extremely poor conditions rather than trying to distinguish between low and medium levels of trash. It is not reasonable to conclude that trash items above the high water line are not impacting beneficial uses. When persons are recreating at a water body, their eyes do not exclude those trash items above the high water line. In fact, that is precisely where the recreation is taking place. Thus, REC-2 can be impaired by trash above the high water line. Moreover, birds and other wildlife do not avoid toxic or injurious items simply because they are located above the high water line. Thus, WILD can be impaired by trash items above the high water line as well. Finally, trash above the high water line may be remobilized into the channel by wind or runoff so there is no rational basis for excluding these items from the assessments.

**Trash Control Actions Underway So No Need to List**

**Several commenters note there are active trash control actions already taking place in some water bodies so that conditions have already improved since evidence was gathered, or the conditions will soon improve. Therefore, there is no need to list since the problem is already being controlled, and the data being considered for listing are already outdated.**

Our task is to identify waters that are currently not meeting water quality standards based on readily available data. There is no way to determine which of the reviewed data are already outdated, even if that is the case. If conditions have changed, then data can be submitted in future listing cycles to document such changes. Moreover, the Listing Policy does allow speculation concerning how water quality conditions may change in the future after the implementation of anticipated control measures to remedy water quality impairments. Neither does the Listing Policy recommend deferring the evaluation of such waters pending the outcome of control measure implementation. We

also note that trash control programs that rely on regular creek clean-ups are probably not sustainable solutions because they have not solved the trash problem at that site. If a creek requires ongoing maintenance, there are sources of trash entering the creek that remain to be remedied.

## **PART II: STAFF RESPONSES TO WRITTEN COMMENTS**

### **Comment Letter 1: Alameda Countywide Clean Water Program**

**Comment 1.1:** “We are concerned that the proposed revisions list entire water bodies as impaired based only upon very limited and non-representative samples. Section 6.1.5.4 of the Listing Policy states that the Water Boards should identify stream reaches “that have different pollutant levels based on significant differences in land use, tributary inflow, or discharge input.” The impairment listings should be limited to the section of stream immediately adjacent to the sampling site or to the length of the stream reach with similar adjacent land uses.”

Response: See response in Part I to key comment on “Spatial Representation of Trash Data.”

**Comment 1.2:** “The actual location of the water body proposed for this listing should be clarified as ‘Old Alameda Creek.’ Please revise to indicate that the listing only applies to the original reach of Alameda Creek downstream of the federal project and not to Alameda Creek upstream of Niles Canyon.”

Response: We agree. The proposed listing recommendation will be modified to refer to Old Alameda Creek. We have revised the lines of evidence in the Fact Sheet and Table 4 of the Staff Report accordingly.

**Comment 1.3:** “The fact sheets should clarify that of the four sites sampled by SWAMP, two were on Altamont Creek...,[which] may be designated as a separate water body from Arroyo Las Positas.”

Response: Altamont Creek is a small tributary to Arroyo las Positas. The study design for the SWAMP data collection focused on assessment of the Arroyo Las Positas watershed. For this reason the data are assessed collectively for those water bodies in the watershed. There is no reason to segment these two water bodies for purpose of distinguishing impairment status. In addition, the monitoring locations within Altamont Creek were close to the confluence with Arroyo Las Positas.

**Comment 1.4:** “Biological indicators, while potentially useable as a supporting line of evidence, should not be included as a formal basis for listing. There is no narrative or numeric standard for biological indicators in the current Basin Plan, so no comparison to unimpaired reference conditions is possible.”

Response: Benthic-Macroinvertebrate bioassessment is one of four lines of evidence developed to assess water quality conditions in Arroyo Las Positas under section 3.11 of the Listing Policy. They are used here to support the impairment assessment but they do not provide the sole justification for the listing.

Biological assessments or bioassessments provide direct measures of the cumulative response of the biological community to all sources of stress; they measure the condition of the aquatic resource to be protected. Therefore, biological indicators are a more integrative assessment tool for the protection of aquatic life.

The commenter is correct that there are no specific biological objectives for macroinvertebrate community health in our Basin Plan. However, Listing Policy section 6.1.3 allows for evaluation guidelines to be used to interpret narrative water quality objectives.

Data collected by SWAMP indicate that aquatic life in Arroyo Las Positas is impacted. The measurement of very few pollution intolerant organisms (ET taxa), plus a very low cumulative number of macroinvertebrate species groups present in the creek, are indicative of impairment.

*Comments on Arroyo Mocho listing for temperature*

**Comment 1.5: “Comparison is not to a regulatory water quality objective. The fact sheet invokes a narrative objective regarding increases above natural receiving water temperature without demonstrating that such increases have occurred.”**

Response: The temperature criteria established by Sullivan, et al. (2000) meet the requirements of section 6.1.3 for use of evaluation guidelines to interpret narrative standards. These thresholds have been recommended as representative of the protection of aquatic life beneficial uses, and used throughout the State, in the absence of site-specific or region-specific temperature objectives.

**Comment 1.6a: “The temperature benchmark for Coho salmon is inappropriate for screening in Arroyo Mocho since this species is unlikely to have occurred historically in this particular tributary, per Leidy, et al. (2005b)’s assessment for this species....The Basin Plan by default assigns the same Beneficial Uses to all reaches of all tributaries of Alameda Creek. In fact [cold water habitat] and [fish migration] requirements by salmonids vary spatially and temporally, and temperature benchmarks for steelhead/rainbow trout would only be appropriate for locations and seasons when they are likely to be present.”**

Response: Staff agrees that assessing the creek for Coho salmon is inappropriate. Steelhead have been identified as being present in the creek. In *Historical Distribution and Current Status of Steelhead/Rainbow Trout (Oncorhynchus mykiss) in Streams of the San Francisco Estuary, California* (2005) page 72-73, Leidy and others documented that *O. mykiss* was collected in Arroyo Mocho as recently as in 2001. The color plate (pages 93-94 in the hard copy report) identifies the status of *Oncorhynchus mykiss* in Arroyo Mocho Creek as “Definite Run or Population.”

The fact sheet for Arroyo Mocho has been revised to state more clearly that the adverse temperature conditions observed in the creek are relevant to steelhead.

**Comment 1.6b:** Also with regard to Coho, “the risk assessment analysis cited as the basis for the benchmark was focused on rearing and presumed impacts to growth. In fact, for resident steelhead/rainbow trout optimum water temperature for a stream reach is dependent on habitat as well as on the abundance and availability of food resources, with higher temperature optima for high-productivity streams.”

Response: Other factors may also contribute to having a high-productivity stream. However, the risk assessment analysis conducted by Sullivan, et al. (2000) and the resulting temperature guidelines are appropriate to use for assessing water quality in that they apply to observed fish growth in natural systems.

**Comment 1.6c:** “Even if the screening benchmarks are treated as numerical objectives, available data are insufficient for listing under Section 3.2 of the Listing Policy. One year of data collection consisted of three discrete deployment periods with 5 sites deployed in winter and spring and 2 sites in August. Each deployment-site combination is one sampling event.”

Response: The temperature data were collected according to the SWAMP protocol and aggregated as recommended by the Listing Policy. There were 5 monitoring sites sampled continuously at 15-minute intervals in spring 2004 (4/23 – 4/30); 2 monitoring sites sampled continuously at 15-minute intervals in summer 2004 (8/20 – 4/30); and 5 monitoring sites sampled continuously at 15-minute intervals in February 2005 (2/18 – 2/24). Each deployment per site and per season is considered as one sample. Altogether we have 12 samples. The maximum weekly average temperature computed based on all recorded temperature results for each location and season exceeded the applicable temperature guidelines in 6 out of 12 samples (deployments), and this supports listing the creek as impaired according to the listing requirements of section 3.2 for conventional or other pollutants.

*Comments on San Francisco Bay, Central (shoreline) listing for trash*

**Comment 1.7:** “The fact sheet states that the data (i.e., photographs) used to support this proposed listing were collected adjacent to stormwater outfalls or public parks. This is not sufficient to support listing the entire Central Bay.”

See response to key comment in Part I under “Spatial Representation of Trash Data.”

*Comments on Lower San Leandro Creek listing for hexavalent chromium*

**Comment 1.8:** “The fact sheet should clearly state that the available SWAMP data measured total dissolved chromium, not specifically hexavalent chromium (CrVI), for which the water quality objective is written. ....since there is no information on relative contributions from anthropogenic versus natural sources in the watershed, or the CrVI fraction of anthropogenic inputs, no inference can be made from the available data regarding the proportion of total chromium that is CrVI.”



Response: We agree that the concentration of hexavalent chromium in these samples was not analyzed. We have removed this proposed revision to the proposed 303(d) list and revised Table 4 of the Staff Report accordingly.

**Comment 1.9: “A typographical error on page C-97 references the “CTR total selenium criterion.”**

Response: The typographical error has been corrected.

*Comments on Sausal Creek listing for trash*

**Comment 1.10: “The fact sheet states that the data used to support this proposed listing were collected at one location. This is not sufficient to support listing the entire creek. In fact, additional data suggest that upstream reaches are not impacted. An assessment conducted under the SWAMP program by Moore, et al. (2007) at two upstream sites found ‘remarkably low levels of trash’ at the site in Joaquin Miller Park and ‘very low levels of trash’ at the Dimond Park site. Section 6.1.5.4 of the Listing Policy states that the Water Boards should identify stream reaches “that have different pollutant levels based on significant differences in land use, tributary inflow, or discharge input.” The impairment listing should be limited to the section of stream immediately adjacent to the sampling site or to the length of the stream reach with similar adjacent land uses.**

Response: This issue is discussed in above in Part I in the key comments section under “Spatial Representation of Trash Data.” This listing is not meant to suggest that every inch of Sausal Creek is impaired by trash. However, the trash impacts at the East 22<sup>nd</sup> Street location strongly suggest that there are other impacted areas on this creek, either just upstream or downstream of this site. The Sausal Creek trash listing may be resolved or, at least, refined by collecting data demonstrating the extent of the problem. The current data are not sufficient to conclude that the East 22<sup>nd</sup> Street site is the only 100-foot section of Sausal Creek with trash problems. If this is the only problem area on the creek, then it will be straightforward to collect the data and document it in the next listing cycle.

**Comment Letter 2: Contra Costa Clean Water Program (CCCWP)**

The commenter notes that the CCCWP is committed to reducing trash impacts to local creeks and the Bay/Delta, and is a partner in the California Product Stewardship Council’s Extended Producer Responsibility Initiative, which works to “promote a new paradigm in packaging” that would significantly reduce trash in the environment. The CCCWP urges the Water Board to participate in this effort.

**Comment 2.1a: Regarding all fact sheets, “They appear to be incomplete and/or contain errors or inconsistencies. It is very difficult to evaluate and provide comments when the language in the fact sheets is vague in terms of the locations and dates of samples and assessments....Providing specific locations and dates is absolutely necessary in order for the Program to evaluate the evidence used in listing decisions**

by Water Board staff. Furthermore, inconsistencies were also uncovered in the reference reports where data was culled for the fact sheets.”

Response: The fact sheets were prepared using a State Board template. All data described in the fact sheets’ Lines of Evidence (LOEs) are referenced in the fact sheets and links to raw data are available on-line or by request to staff. The purpose of the LOEs is not to re-state the data entirely but to provide the rationale for why the data suggest impairment of beneficial uses.

**Comment 2.1b: “The Listing Policy recognizes that an impact to one or several reaches of the stream does not necessarily constitute a problem in the entire stream; and, listings should be confined to those segments or reaches where the evidence supports a listing decision. By limiting listings to the impacted creek segments, local governments will be better able to focus their efforts and resources on actual impairments resulting in faster attainment of water quality standards.”**

Response: please see the response in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 2.1c: “The RTAs and fact sheets do not document or indicate the sources of trash. If the source of trash cannot be ascertained from the RTA method, how can one determine what portion is generated within the watershed and what is generated outside...or from other watersheds outside a city’s jurisdiction? It also doesn’t [distinguish between] trash...conveyed via the municipal separate storm system versus what might have been windblown or deposited as illegal dumping.”**

Response: The Listing Policy requires that we demonstrate that beneficial uses are impaired. The Policy does not require that we distinguish sources.

**Comment 2.2: The commenter cites “Water Board staff’s review and use of outdated sample and assessment evidence in several of its proposed listing decisions. In several cases, management actions taken subsequent to the sample and assessment dates have drastically improved the condition of some water bodies proposed for listing.” (Photos submitted with comment)**

Response: We are required to use all available data submitted prior to February 28, 2007. None of the data reviewed for trash are more than 10 years old, and, in many cases, trash impacts were documented over the course of several years. Thus, having data spanning time supports the case that problems have existed through time. The commenter merely claims that data are outdated and that management actions have improved the condition. If we had to continuously consider new data throughout the course of assessment, we would be in a position where we would never be able to complete an assessment. If robust data exist demonstrating that problems have been resolved, these data can be considered in the next listing cycle.

**Comment 2.3: “The Program strongly opposes the Water Board’s intention to hold an adoption hearing on January 14, 2009. It’s simply premature. The Program**

**recommends the Water board staff correct, revise, and re-release the Draft Staff Report and proposed listings for a second round of public review and comment.”**

Response: Due to the extensive public comments, the January 14, 2009, board hearing became a testimony hearing rather than an adoption hearing. Postponing the adoption hearing has given staff the opportunity to review and respond to comments and make revisions to the staff report. The public will be able to provide additional oral testimony hearing at the February 11, 2009, hearing.

*Comments on Baxter Creek Line of Evidence #5212, Trash, Non-contact Recreation*

**Comment 2.4: “Page C-20 of Appendix C shows there were five (5) exceedances out of eight (8) total samples. However, the narrative preceding it in Decision ID 7634 states: ‘The RTA Methodology results showed that this water body had ‘level of trash’ parameter scores in the poor category (indicating impairment of non-contact water recreational beneficial uses) at two locations on five different dates.’ By referring to it in one place as ‘number of exceedances per number of samples,’ but in the narrative as ‘number of locations on number of different dates,’ it’s comparing ‘apples to oranges’ and makes it very hard to verify what the fact sheet is saying. Not only are these two statements in apparent conflict with one another, neither one is correct according to the data reference A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams, April 2007. The correct interpretation seems to be there were four (4) exceedances out of eight (8) samples for Parameter 1, ‘Level of Trash’.**

Response: The fact sheet template we are using is determined by the Listing Policy. This template calls for the identification of the total number of samples and number of exceedances of those samples. Additionally, we describe the number of locations and the number of different dates for which poor condition scores were observed because of our self-imposed data sufficiency threshold of requiring multiple locations and multiple dates for poor condition scores. There is no conflict between the two ways of describing exceedances. However, we did incorrectly list the number of samples for Baxter Creek by not counting the samples at the Baxter Creek location at Canyon Trail Park. This will have the effect of adding three additional samples. These three samples had poor condition scores for the “threat to aquatic life” RTA parameter, but not for the “level of trash” parameter. The fact sheets have been modified accordingly.

The fact sheet (5212) now states that there were 11 RTA site visits (samples) on Baxter Creek for which “level of trash” scores were determined. During 5 of these visits, the level of trash was observed as “poor condition” (exceedance). There were poor condition scores noted at two stations visited on Baxter Creek (Baxter at Booker, and Baxter below San Pablo), and the poor condition scores were noted on five unique dates (2 dates at Booker, 3 dates below San Pablo). The fact sheet (5212) is now correct in stating that there are 5 exceedances out of 11 samples. It is also correct in stating that

there were exceedances at two locations, and that exceedances (poor condition scores) occurred at 5 different dates on this water body.

**Comment 2.5a: “The link provided in the List of References refers to a report dated August 2005, not April 2007. Is April 2007 a typo or is there a different report from where this data was taken?”**

The links provided in the List of References are correct. The two references for data associated with line of evidence 5212 are reference 2453 (SWAMP RTA report from April 2007) and reference 2454, which is the database of RTA scores collected from 2002 through 2005. The final technical report is dated April 2007. The commenter may be referring to an earlier draft of the document dated August 2005.

**Comment 2.5b: “Assuming the August 2005 report is indeed the correct reference, the data in that report were examined in an attempt to validate the information in Line of Evidence (LOE) #5212; however, as previously mentioned, apparent inconsistencies were uncovered in this document as well. For example, Figure 14 does not agree with the data provided in Table 1, and Table 1 appears to be missing a number of important sample dates when compared with Appendix C of the same report where all the station IDs are shown with RTA Scores.”**

Response: Table 1 of the 2007 SWAMP RTA report shows trash dates for which trash deposition rates were computed, which is a subset of the total RTA evaluations. The table in Appendix C of the same report shows all RTA data. We evaluated the data shown in the Appendix C table.

**Comment 2.6: “It appears there are three (3) assessment sites on Baxter Creek: BAX030, BAX040 and BAX080. BAX030 was assessed on March 19, 2004, July 12, 2004, November 19, 2004 and June 8, 2005. BAX040 and BAX080 were both assessed on November 12, 2004 and June 8, 2005. So the sentence in the paragraph contained under the heading ‘Data Used to Assess Water Quality’ is incorrect (i.e., ‘These results are available for field visits/trash surveys conducted in March, July and November 2004 and June and August 2005...’). For example, assessments were never collected in August 2005.”**

Response: We disagree with the commenter. Assessments were collected for all three locations on Baxter Creek in August 2005.

**Comment 2.7: Discussion of both Parameters 1 and 3 are often combined in the fact sheets when they should be separated. This co-mingling of data for different ‘Lines of Evidence’ occurs in many of the other fact sheets as well. LOE #5212 is only supposed to relate to ‘Level of Trash,’ so the discussion of ‘Threat to Aquatic Life’ is confusing and should not be included. And conversely, LOE# 5276 is supposed to relate to ‘Threat to Aquatic Life,’ and so should not contain any discussion of ‘Level of Trash.’”**

Response: The Fact Sheet LOEs for Baxter have been corrected as indicated in the response to comment 2.4. For LOE 5212 (REC-2, RTA parameter 1), there were 11 total samples and 5 for which the poor condition was observed. There were poor condition scores noted at two stations visited on Baxter Creek (Baxter at Booker, and Baxter below San Pablo), and the poor condition scores were noted on five unique dates (2 dates at Booker, 3 dates below San Pablo). The Fact Sheet LOE 5276 has likewise been corrected as noted previously. There is no co-mingling of trash assessment data for different parameters between LOEs. The commenter is referring to the fact that all trash evaluation guidelines are cited in all trash LOEs.

**Comment 2.8: Referencing Appendix C of the Staff Report, “Of the eight (8) assessments, only four (4) scored in the ‘poor’ category for Parameter 1, ‘Level of Trash.’ This does appear to be consistent with the Listing Policy. However, at a minimum, it calls into question the listing of the entire length of Baxter Creek when evidence suggests the trash problem is limited to only a portion of it.”**

Response: There were 5 exceedances of the evaluation guideline out of 11 samples for RTA parameter 1. However, we did not use the listing factors of the Listing Policy prescribing frequency of exceedance thresholds for listing. As we described on page 12 of the staff report, in order to recommend listing, we typically required both that the water body contain two or more sites that show evidence of trash impairment (according to assessment or photo documentation) and that evidence of trash impairment existed on two or more occasions.

Regarding spatial considerations of listing, please see the response in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 2.9: Echoing the general comment that listing decisions may have been made based on outdated data, the commenter notes that “a listing decision for Baxter Creek is based upon RTAs conducted in 2004 and 2005,” and encloses photographs “taken at BAX030, which is just west of San Pablo Avenue. These photographs were taken on December 4, 2008 and reflect current conditions. This area is now cleaned daily by a citizen volunteer. Furthermore, the City of Richmond’s Parks Department, in coordination with the Watershed Project, conducts creek clean-ups along this segment of Baxter Creek.”**

Response: We cannot accept these photographs as sufficient evidence to demonstrate that the poor condition has been remedied at this site. First, as we explained in the December 4, 2006, data solicitation, the cut-off for data submission for the 2008 303(d) list was February 28, 2007. Second, the documentation consists of photos from a single date. We suggest that a more thorough documentation of this site on multiple dates before and after storm events and different seasons be submitted for consideration during the next listing round. We also note that relying on a citizen volunteer or even regular creek clean-ups to maintain this portion of creek is not a sustainable solution that has actually solved the trash problem at that site. Further, if the creek requires

ongoing maintenance, that suggests that there are sources of trash entering the creek that remain to be remedied.

*Comments on Baxter Creek Line of Evidence #5276, Trash, Wildlife Habitat*

**Comment 2.10:** “Many of the comments raised under LOE #5212 above, also apply to LOE #5276. As described above, the Program understands that there were eight (8) assessments conducted on five (5) dates at three (3) sample sites with eight (8) exceedances for Parameter 3, ‘Threat to Wildlife.’ Again, no assessments were conducted in August 2005, so the fact sheet is incorrect, if not confusing, since it mixes the discussion of Parameter 1 scores when it is only supposed to address Parameter 3 scores.”

Response: See responses to comments 2.6 and 2.7. There were 11 total assessments of the “threat to aquatic life” parameter, and all 11 assessments resulted in poor condition scores. There is no mixing of scores between the “level of trash” and “threat to aquatic life” parameters.

**Comment 2.11:** “Under ‘Spatial Representation,’ the fact sheet never explains the eight (8) exceedances for Parameter 3, ‘Threat to Aquatic Life,’ which relates to the beneficial use ‘Wildlife Habitat.’ It simply restates the exceedances for” [non-contact recreation].

Response: The “Spatial Representation Field” for LOE 5276 has been corrected to reflect that there were three locations on Baxter Creek where poor condition scores were observed for the “threat to aquatic life” parameter.

**Comment 2.12:** Referring to Comment 2.10 above, the commenter states that “the area upstream of BAX040 (east of San Pablo Avenue) referred to as the ‘Baxter Creek Gateway’ and the area downstream of Cypress Avenue should also not be listed. A restoration project, funded in part by the SWRCB, was completed in September 2006 at the Gateway site and has been a major success story. Prior to the restoration, there were trash problems and homeless encampments; since the restoration there have not been any homeless encampments. The city continually monitors the area for trash. There has been no illegal dumping. They have volunteers who focus on trash and have monthly work parties. The city’s biggest problem at the Gateway site is graffiti, which comes in waves and is usually resolved quickly.” (Photos attached for reference)

Response: We applaud the progress the city has made to address illegal dumping. See also the response for comment 2.10.

*Comment on Cerrito Creek Lines of Evidence # 5347 and 5349, Trash*

**Comment 2.13:** “As previously mentioned, the information relating to Parameter 1 exceedances should be discussed separately from Parameter 3 exceedances (i.e., in the corresponding ‘Line of Evidence’). As discussed above, the Program needs specific

**sample locations and dates in order to review and evaluate the evidence for a listing decision.**

Response: The fact sheets were prepared using a State Board template. All data described in the fact sheet Lines of Evidence (LOEs) are referenced in the fact sheets and links to raw data are available on-line or by request to staff. The purpose of the LOEs is not to re-state the data entirely but to provide the rationale for why the data suggest impairment of beneficial uses. There is no co-mingling of trash assessment data for different parameters between LOEs. The commenter is probably referring to the fact that all trash evaluation guidelines are cited in all trash LOEs.

*Comments on Grayson Creek. Line of Evidence # 5409, Trash, Wildlife Habitat*

**Comment 2.14: “Grayson Creek is one of two listings for trash in Contra Costa County where photographs are the only evidence evaluated for the listing decision. This fact sheet, unlike the others, provided the dates and locations of the photographs submitted as evidence. However, in the Decision ID 7643 discussion, when it states ‘this waterbody had “threat to aquatic life” parameter scores in the poor category (indicating threat to Wildlife Habitat beneficial use) at two different locations on two different dates,’ it does not specify which of these locations and dates was deemed poor. It would be helpful if the fact sheet specified these locations and dates. Also, since the photographs of failing sites were not included in the package, the Program does not have any opportunity to evaluate the evidence.**

Response: The information about exceedances is contained in the LOE writeup portion of the fact sheet. All photographs and the RTA scores for Grayson Creek are available through a link on the fact sheet provided on the Water Board’s website as a reference (ref2476) and (ref2461). The data supporting this and all other listings were made available to the public for review.

**Comment 2.15: “Until there has been an opportunity for public review and comment on the acceptability of photographic evidence in conducting an RTA and for supporting a listing decision, a listing for Grayson Creek should not be made at this time.”**

Response: See response in Part I to the key comments above under “Scientific Integrity of Trash Assessment Methods” and “Photographic Evidence for Trash.”

*Comment on Kirker Creek, Decision ID 7583, Water Toxicity, Line of Evidence #5340 and Sediment Toxicity, Line of Evidence #5341*

**Comment 2.16: “It is questionable whether or not the toxicity [in Kirker Creek] can be tied to pyrethroids because pyrethroids were not sampled in this study. In this fact sheet, two (2) exceedances were noted from five (5) water samples obtained by SWAMP in 2003. However, one of the exceedances was from a sample point, KIR115, located in the upper portion of the watershed that drains rangeland and East Bay Regional Park District lands. Pyrethroids were not sampled by SWAMP in**

2003....Furthermore, it is hard to imagine a source for pyrethroids in the largely undeveloped portion of the watershed. In that same sample, selanastrum growth was limited but since pyrethroids are not known to affect aquatic plants, it points to there being some other factor causing the toxicity. It is possible the toxicity to Ceriodaphnia and selanastrum growth limitations are due to another pollutant, combination of pollutants, or perhaps from naturally-occurring elements like chromium and nickel that were also detected.”

Response: We agree that pyrethroids are not likely to be responsible for the observed water column selanastrum toxicity. We have therefore revised Table 4 of the Staff Report and associated Fact Sheet to clearly identify that Kirker Creek is listed for water toxicity as a separate listing apart from the pyrethroid listing.

*Comment on Kirker Creek, Decision ID 7583, Sediment Toxicity, Line of Evidence #5341*

**Comment 2.17: “One episode of sediment toxicity in Kirker Creek was documented in this fact sheet for station KIR020 in the lower watershed close to the mouth of the creek. However, it is questionable whether or not that toxicity can be tied to pyrethroids because pyrethroids were not sampled in this study. It is possible the toxicity to Hyalella azteca is due to another pollutant, combination of pollutants, or perhaps from naturally-occurring elements like chromium and nickel. In fact, from page 3-3 of the SWAMP report *Water Quality Monitoring and Bioassessment in Four San Francisco Bay Region Watersheds in 2003-2004*, ‘Kirker Creek sediments from this site contained concentrations of arsenic, chromium, copper, nickel, and zinc that exceeded the Threshold Effect Concentrations.’ From Table 3.1-1 of the same report, exceedances of water quality benchmarks were also noted at KIR020 for chlorpyrifos and diazinon. They could have caused or contributed to the toxicity by themselves or in combination with other naturally-occurring elements.**

**“Evidence is provided to list Kirker Creek for pyrethroids. However, the existing Diazinon and Pesticide-Related Toxicity in Urban Creeks TMDL would presumably be used to cover the pyrethroids-related toxicity in Kirker creek. Because the Program is already required to address the existing pesticide toxicity TMDL, this proposed listing decision appears unnecessary.”**

For Kirker Creek we have four lines of evidence (5341, 5348, 5345 and 5340) summarizing all available toxicity information in water column and in sediments. The data include sediment and water toxicity collected by SWAMP, and pyrethroids and sediment toxicity described in Amweg, et al. (2006).

As reported in Amweg, et al. (2006), pyrethroid concentrations were measured in three sediment samples in Kirker Creek, and the sample collected in spring 2004 contained the highest concentration of any single pyrethroid measured in the East Bay: 57ng/g deltamethrin. The authors also expressed pyrethroid concentrations as toxicity units (TUs) and found them to be an excellent predictor of *H. azteca* toxicity. The results of the



TU analysis provided a clear link between toxicity in Kirker Creek and the presence of pyrethroids.

The data collected and interpretation of the toxicity tests provide a strong indication that impairment in the creek is due to pyrethroids and the number of samples exceeding the toxicity guidelines supports placement of this water body on the 303(d) list. We agree that a new TMDL will not be required. Instead, the San Francisco Bay Urban Creeks Diazinon TMDL and implementation plan approved by USEPA on 5/16/07 is expected to result in attainment of the standard(s). See Staff Report footnote to Table 4.

*Comments on Mt. Diablo Creek, Line of Evidence #8541, Toxicity*

**Comment 2.18a: “The fact sheet indicates ‘The number of samples with detected significant water toxicity exceeds the allowable frequency listed in Table 3.1 of the Listing Policy and sediment toxicity is also observed.’ Although toxicity was observed in two (2) of four (4) samples, the sediment toxicity could have been caused by high chromium and nickel concentrations, which are ‘a common occurrence due to the geology of the area’ according to page 3-10 of the reference report provided for this listing, *Water Quality Monitoring and Bioassessment in Four SF Bay Region Watersheds in 2003-2004*.**

**“On page 3-10 of the SWAMP report, the ecological significance of the toxicity results is questioned as follows: ‘Statistically-significant effects on Ceriodaphnia reproduction were observed in the two samples collected at MTD010 and MTD100 during the winter trip, but the effect may not be ecologically significant.’ ‘Selanastrum growth was significantly reduced in the sampled collected at MTD010 in winter, and fathead growth was reduced in the MTD100 spring sample; however, the ecological significance is not clear in these cases as well (see Discussion).’ Also, the data are from 2003 and may not reflect current conditions.”**

Response: The chronic toxicity tests that were used in SWAMP were developed by U.S.EPA for their environmental relevance. Sensitive, ecologically important species were chosen for these tests. In addition, endpoints were chosen (reproduction and growth) that are known to have affects on a population. In SWAMP there are two requirements that a test must meet in order to be labeled “toxic.” One is that it is statistically different than the control and the other that the results are less than 80% of the control. The additional 80% criteria was added to account for situations where low variability in test samples would result in samples being statistically different from controls when the difference was small and not thought to be relevant.

The samples designated as “toxic” for Mt. Diablo Creekmet both of these criteria. The test acceptability criteria are only applied to the control and are independent of test results.

The Listing Policy was followed to determine the impairment status of Mt. Diablo Creek rather than the SWAMP interpretive report statements.

**Comment 2.18b: The sentence under ‘spatial representation’ is misleading. As noted previously, this could be cleared up if specific sample site locations and dates were provided. The sentence reads ‘Data were collected at two sampling locations representative of the lower reach of the creek (2 samples) and the upstream tributary (2 samples).’ The sentence would be more accurate if it read: ‘Data were collected at one sample location, MTD010, on two (2) occasions, representative of the lower reach of the creek. Data were collected at one sample location, MTD100, on two occasions, representative of the upstream tributary. Two (2) of these four (4) samples demonstrated exceedances.’”**

Response: The text describing “spatial representation” has been revised as suggested.

**Comment 2.18c: Since no toxicity identification evaluations were performed, it is impossible to determine the cause of the toxicity in Mt. Diablo Creek. It could be due to any number of different pollutants or pollutant combinations, or due to naturally occurring elements such as the aforementioned chromium and nickel. To list a creek as impaired for toxicity rather than a specific chemical constituent makes it difficult to understand how a waste load allocation would even be derived, and a TMDL implemented. Would a toxicity TMDL have to be developed or would this listing fall under the ‘Diazinon and Pesticide-Related Toxicity TMDL’ that’s already in effect? The latter wouldn’t seem to apply since nothing has tied the toxicity specifically to pesticides.”**

Response: We agree that the adopted Diazinon TMDL would not apply, unless the toxicity is attributed to pesticides. The cause of the toxicity would have to be established in some manner, possibly through Toxicity Identification Evaluation protocols, as a first step in TMDL development. The Listing Policy requires that waters be placed in the Water Quality Limited Segments category of the section 303(d) list if the standard’s non-attainment is due to toxicity alone or if the observed toxicity is associated with a pollutant or pollutants.

*Comments on San Francisco Bay, Central (shoreline), Line of Evidence #5509, Trash, Non-Contact Recreation*

**Comment 2.19: For San Francisco Bay, Central (shoreline), “photographs are provided as the only evidence of a trash problem....The only location where a dated photograph was not provided was at Richmond Field Station. It indicated the date of the photograph was 2007, but in the narrative description under the heading “temporal representation” it said the photograph was taken in February 2007. It is unclear whether the date is actually unknown or whether February is correct.”**

Response: We are not certain of the date of the Richmond Field Station photograph, but it is no later than February 2007 since it was submitted by the cut-off date of the data solicitation. The “temporal representation” field will be edited so as not to imply that the Richmond Field Station photo is from February 2007.

**Comment 2.20:** *“The Program’s main issue with this listing is that...Decision ID 7654...states, ‘...this waterbody had “level of trash” parameter scores in the poor category (indicating impairment of non-contact water recreational beneficial uses) at two locations on two different dates,’ [but] it does not specify which two (2) of the eight (8) locations and dates was deemed poor. Also, since the photographs of failing sites were not included in the package, the Program does not have any opportunity to review and comment on the evidence.*

*“Since it is unclear whether the Richmond Field Station was indeed one (1) of the two (2) sites deemed poor for Parameter 1, ‘Level of Trash,’ we don’t feel the listing decision is justified at this time. Moreover, if Richmond Field Station were one of the poorly graded sites, we do not feel photographs from one unspecified day in 2007 warrant a listing.... Also, the Richmond Field Station is entirely within the tidal zone and as such, any trash deposited there may have been swept in by the tide rather than conveyed downstream. Of course, it is likely at least some of the trash originated in the City of Richmond, but photographs are not enough to parse out what part of it should be the City’s responsibility.”*

Response: The data references associated with the LOEs contain all the photographs and the assessment of the photographs with established RTA scores. Also see the response to comment 2.1a.

The Richmond Field Station photo was not characterized as poor condition for the “level of trash” parameter for this waterbody but instead for the “threat to aquatic life” parameter. There were 7 other samples with poor condition “threat to aquatic” life scores for this water body, so exclusion of the Richmond Field Station photo does not change our conclusion that the WILD beneficial use is impaired. Assigning responsibility based on the source of the trash is not required as part of the listing process.

**Comment 2.21:** *“At a minimum, if the entire Central Shoreline is to be listed, the City of Richmond should be specifically excluded from that listing, as should other cities where poor scores were not documented.”*

Response: There is no basis for excluding any particular city from the listing of this Bay segment. It is highly unlikely that the City of Richmond or other cities are unique in having shoreline areas completely unimpacted by trash. See discussion in Part I under “Spatial Representation of Trash Data” for more information about the rationale for listing entire water bodies.

*Comments on San Francisco Bay, Central (shoreline), Line of Evidence #5508, Trash, Wildlife Habitat*

**Comment 2.22:** *“The fact sheet states ‘This waterbody also had “Threat to Aquatic Life” parameter scores in the poor category (indicating threat to Wildlife Habitat beneficial uses) at eight different locations on three different dates.’ However, it does*

not indicate which sites were deemed poor and since the photos of failing sites were not included in the package, the Program does not have any opportunity to verify this claim or perform its own analysis.”

Response: See response to comment 2.1a and 2.20.

**Comment 2.23: “The listing encompasses a very large area of shoreline. The photographs provided as evidence were taken on three (3) different dates at eight (8) sites. This is a very small sample size for such an enormous listing area. We believe much more photographic and RTA evidence would be necessary to justify this listing. If a listing is made, then it should be restricted to those sites where evidence of impairment is documented.”**

Response: Please see response in Part I to the key comment on “Spatial Representation of Trash Data.”

*Comments on San Pablo Creek, Line of Evidence #5661, Trash, Non-Contact Recreation*

**Comment 2.24: “The evidence for this proposed listing decision was very difficult to evaluate because the Data Reference, *Rapid Trash Assessment (RTA) data collected by the Water Board’s SWAMP from 2002-2005 and method description* was not included in the List of References; and, no link to it could be found on the SWAMP website.”**

Response: The data references associated with the LOEs contain all the data and supporting documentation needed to review our listings. An HTML version of the fact sheets with links to the data references is available on the Water Board’s website.

**Comment 2.25: “The fact sheet indicates that RTA was conducted and data were collected on two (2) different dates, July 18 and 30, 2002 and data from both dates were in the ‘poor condition’ category for the Level of Trash Parameter. If this is true, then this is not consistent with the Listing Policy, Section 6.1.5.3 Temporal Representation, in which it states ‘In general, samples should be available from two (2) or more seasons or from two (2) or more events when effects on water quality objective exceedances would be expected to be clearly manifested.’ These two (2) events are only twelve (12) days apart and do not provide the temporal representation necessary to justify a listing.”**

Response: We agree that this is not the same degree of temporal representation demonstrated for other sites, but we considered the following facts. After the first of these two RTA surveys, **ALL** of the trash was removed from this section of creek. Then, 12 days later when staff returned to the same site, enough trash had accumulated to result in poor condition scores for the “level of trash” parameter. That is very compelling evidence that there is a serious trash problem at that location, despite the short interval between samples. That so much trash could accumulate in such a short time during the dry season is extremely troubling and justifies retaining the proposed listing.

**Comment 2.26:** *“The fact sheet indicates ‘The RTA methodology results showed this waterbody had “level of trash” scores in the poor category (indicating impairment of non-contact recreational beneficial uses) at two different locations and on two different dates.’ This conflicts with the ‘Line of Evidence’ information indicating three (3) exceedances in three (3) samples. Furthermore, without specific sample site locations and dates, it is impossible for us to evaluate the evidence supporting the proposed listing decision.”*

Response: See the response to Comment 2.24.

### **Comment Letter 3: San Mateo Countywide Water Pollution Prevention Program**

**Comment 3.1:** *“In both San Mateo Creek (proposed trash and sediment toxicity listing) and Colma Creek (proposed trash listing), the sites where the data used to support the proposed listings were collected are located near the downstream ends of these creeks. These data should not be extrapolated to upstream reaches of these creeks because pollutant levels may be site specific.”*

Response: Please see the response in Part I to the key comment on “Spatial Representation of Trash Data.”

**Comment 3.2:** *“The proposed trash impairment listings include “San Francisco Bay Lower (shoreline),” based on photographic evidence from only two locations. It is unclear what geographic area is proposed for listing under shoreline and how this area compares to the wetland areas with defined beneficial uses described in Table 2-10 and Figure 2-11 of the Basin Plan.”*

Response: The proposed listing is for all shoreline areas in Lower San Francisco Bay where trash might impact beneficial uses like REC-2 and WILD. It is not practical or necessary to specify precisely the line segments of shoreline at issue. We have not evaluated how the areas proposed for listing compare to the wetland areas with defined beneficial uses described in the Basin Plan; these wetland areas are not being listed for trash in this listing cycle.

**Comment 3.3:** *“It should...be noted that establishing the origin of trash transported by the Bay to shoreline areas would be difficult if the listing is approved and a TMDL is performed in response.”*

Response: The proposed action is to place waters on the 303(d) list rather than propose particular remedies. The commenter is pointing out the need for a regional response to the problem of trash.

**Comment 3.4: Related to the proposed sediment toxicity listing:** *“The proposed basis for listing is sediment bioassay tests that found toxicity to amphipods. The sediment samples were collected from two locations near the mouth of San Mateo Creek. The project report...indicates that one of these sites is tidally influenced and the other site*

(Gateway Park), which is further upstream, is not. However, based on SMCWPPP staff's field observations and discussions with City of San Mateo staff, both of these sites are tidally influenced. Thus it is not known whether the sediments that were associated with the toxicity originated from the creek watershed or from San Francisco Bay. Since Bay sediments have been associated with toxicity, the origin of the San Mateo Creek sediment toxicity is also uncertain. Further study should be conducted to determine [the origin of the toxicity] before deciding whether there is any value to listing the mouth of this creek for sediment toxicity."

Response: The Gateway Park sampling location might be tidally influenced for a limited time during the year. However, the Prism project sampling in November 2004 (Lowe et al., 2007) was conducted after the first rain of the winter to capture the potential effects of dry season pesticide usage in the watershed. The November 2004 sampling was performed after a rainfall event substantial enough to flush San Mateo Creek. In fact, a fresh layer of sediment resulting from runoff after the storm was observed at the time of the sampling.

The results of the Prism project showed that San Mateo Creek was toxic to both freshwater and estuarine amphipods and had the lowest percent survival and highest contaminant concentrations for important legacy and emerging pollutants. The Gateway Park station was the only location among all tributaries sampled where four of the six pyrethroids analyzed were found above detection limits of 1-2 µg/kg and where the highest concentrations of bifenthrin, and permethrin were detected (10.3 and 20.5 µg/kg respectively). Cypermethrin and cyfluthrin were only found at that one location in San Mateo Creek.

Although the Toxicity Identification Evaluation (TIE) performed on sediments from the Gateway Park station was not conclusive, it indicated that the toxicity was possibly caused by pyrethroids and/or DDT metabolites. This supports our original assessment of the impairment and points to the watershed as the origin of sediment toxicity in San Mateo Creek.

#### **Comment Letter 4: Santa Clara Valley Urban Runoff Pollution Prevention Program**

**Comment 4.1 (also in testimony at the hearing) The proposed listings are overbroad to the extent they are derived from an extrapolation of site-specific data to entire water bodies. A large majority of the data points used as lines of evidence...were taken from one spot in a creek that is part of a much larger and heterogeneous system of channels....Therefore, the proposed listing of entire water bodies based on data collected from a very limited number of sites is highly questionable and should be reconsidered.**

Response: We assume that this comment mainly refers to trash listings. Please see the response in Part I to the key comment titled "Spatial Representation of Trash Data."

**Comment 4.2a:** “The proposed listings neglect to address temporal considerations, which confound accurate understanding of whether a water body is truly impacted or impaired. Additionally, management actions taken following the date of collection of monitoring and assessment data have likely improved the condition of some water bodies proposed for listing, potentially to the point of rendering such proposed listings unnecessary....Only data representing ‘current,’ post-management action, conditions should be used in determining whether there is a degree of impairment necessitating a new 303(d) listing.”

Response: The fact that data show that several Santa Clara Valley creeks were in “poor condition” on multiple days at multiple locations suggests that trash is a persistent and widespread problem in those creeks. Temporal variability was taken into consideration by consideration of data from several dates. While the commenter suggests that water quality conditions have likely improved the condition of some water bodies, data that demonstrate this claim will need to be submitted for the next listing cycle.

**Comment 4.2b:** “We request that the trash assessment data collected during initial evaluations be removed from the dataset used to assess the conditions of creek reaches, and the proposed listings be revised accordingly.”

Response: There is no logical reason to exclude data from initial trash evaluations. The commenter suggests that implementation actions were put in place after initial evaluations to solve the problem. However, we would not have proposed listing solely based on initial assessment scores. Subsequent surveys showed poor condition scores in several creeks, so the commenter’s assertion that adequate trash management measures are in place is not credible.

**Comment 4.3:** “The proposed listings are flawed due to the omission of SCVURPPP water quality data” submitted in response to the Water Board’s Public Solicitation for Water Quality Information.... we request that: 1) SCVURPPP’s data be added to the dataset for which the proposed listings are based (and replace older, outdated data where applicable); 2) the listing recommendations be revised (as needed) based on the inclusion SCVURPPP data; and 3) the new listing recommendations be re-released for public comment.”

Response: All data provided by SCVURPPP were considered. The raw trash assessment data that form the basis of the SCVURPPP data submittal were reviewed in developing the listing recommendations. Water Board staff relied on these raw data rather than the form of the data submitted by SCVURPPP. Therefore, there is no oversight or omission of data as claimed by the commenter, and there is no need for a re-release of the listing recommendations for public comment.

**Comment 4.4:** “The proposed listings are overbroad to the extent that they fail to evaluate the effect of anticipated control measures.” They “erroneously assume that the (sometimes already outdated) measured conditions on which they are based are static and not subject to change based on the application of technology-based control

**measures to the water segments in question, such as those being contemplated for inclusion in the new Municipal Regional Permit (MRP)."**

Response: Our task is to identify waters that are currently not meeting water quality standards based on readily available data. There is no way to determine which of the reviewed data are already outdated, even if that is the case. If conditions have changed, then data can be submitted in future listing cycles to document such changes. Moreover, the Listing Policy does allow speculation concerning how water quality conditions may change in the future after the implementation of anticipated control measures to remedy water quality impairments. Neither does the Listing Policy recommend deferring the evaluation of such waters pending the outcome of control measure implementation.

**Comment 4.5: "The Water Board needs to comply with the California Environmental Quality Act (CEQA) and analyze the potential environmental impacts of the proposed listings and assess the technical feasibility and economic reasonableness of applying their associated water quality standards to stormwater before proceeding."**

Response: Our evaluation of water quality data consisted of applying water quality standards to waters of the State of California, not to stormwater discharges. The identification of impaired waters does not meet the definition given in CEQA article 20, §15357 of a discretionary project to which CEQA would apply. In this section, a project under CEQA is a process "which requires the exercise of judgment or deliberation when the public agency or body decides to *approve or disapprove a particular activity (emphasis added)*", and this is "distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations." Clearly, the identification of impaired waters is one in which our agency is merely determining whether there has been conformity with existing regulations, namely, water quality standards.

**Comment 4.6: "RTA data does not provide an accurate basis for assessing impairment and overemphasizes worst case/high problem area conditions. We therefore question the propriety and accuracy of concluding impairment exists in, and particularly throughout, the nine Santa Clara creeks proposed for listing based on RTA scores reflecting pre-selected, worst case, particularly problematic conditions (i.e., a so-called biased sample in scientific terms). The proposed listings should be limited specifically to the particular sites or reaches of the water body where trash assessments were conducted."**

Response: The RTA is a robust, quantitative, and reliable method to assess trash impacts and impairment due to trash. It has been used extensively, and it has been subjected to an evaluation of sensitivity and objectivity as well as peer review. We therefore have confidence that the results of the method are of sufficient quality to use for impairment assessment. The fact that problem areas may have been the focus of assessments does



not invalidate the use of the RTA method. See also response in Part I to the key comment “Spatial Representation of Trash Data.”

**Comment 4.7a: “The methods underlying the proposed listings have neither been scientifically validated or subject to peer and public review.”**

Response: See response to comment 4.6 as well as the responses in Part I to the key comments above regarding “Scientific Integrity of Trash Assessment Methods.”

**Comment 4.7b: “The methods and data used in the impairment evaluation need to satisfy requirements described under Section 6.1.4 (Data Quality) and Section 6.1.5 (Data Quantity) of Water Board (2004). Standards for data quality and quantity should also be developed before using these methods and data to evaluate impairment.”**

Response: The methods and data used in the impairment evaluation satisfy all requirements of the Listing Policy. See responses to relevant key comments in Part I for more details.

**Comment 4.7c: “The methods used by Water Board staff to develop RTA scores from photographic evidence should be fully evaluated by an objective third party to assess how defensible and reproducible they are. This evaluation should be conducted prior to using information rendered from these methods to determine exceedances of water quality standards.”**

Response: The procedure of applying the RTA method to photographic evidence was conservatively applied, and we described data quantity and quality requirements relative to our use of this approach. The underlying RTA method has been subjected to validation and peer review. See also the response in Part I to the key comment “Photographic Evidence for Trash.”

**Comment 4.7d: “The subjectivity in RTA/URTA Parameter #1, (Qualitative level of trash) should be fully evaluated prior to using as a line of evidence for 303(d) listings. Interpretation of “high”, “medium” and “low” levels of trash is inherently highly subjective and varies among different field staff conducting the assessments.”**

Response: Please see response in Part I to the key comment “Scientific Integrity of Trash Assessment Methods – Subjective.”

**Comment 4.7e: “It is highly likely that trash items above the high water line were not impacting the water body at the time of the assessment and therefore should not be included in evaluation of impairment. Accordingly, at a minimum, we specifically request that trash items counted above the high water line be removed from the data used to establish listings and revisions to the proposed listings be revised.”**

Response: Please see the response in Part I to the key comment “Scientific Integrity of Trash Assessment Methods – Trash Above High Water Line.”

**Comment 4.8:** "The thresholds used to define when impairment is present are arbitrary and fail to account for site specific conditions. The number of total "transportable and persistent" trash items (Parameter 3) used to define impairment is arbitrarily set at >50 for the RTA and >76 for the URTA. These thresholds are inconsistent and have no linkage to actual impacts to the water body. We request that listings based on Parameter #3 be removed until the RTA/URTA methodologies and associated criteria defining impairment conditions can be better evaluated and results can be linked to documented impacts to uses."

Response: Please see the response in Part I to the key comment "Scientific Integrity of Trash Assessment Methods – Subjective."

**Comment 4.9:** "The shoreline listings for trash are vague, overbroad and require more specific definition."

Response: Please see the response in Part I to the key comment titled "Spatial Representation of Trash Data."

**Comment 4.10a:** "The proposed listing of Coyote Creek is overbroad and premature given the limitations of existing data; at a minimum, the listing should be geographically restricted."

Response: There was ample evidence suggesting that beneficial uses are impaired due to trash in Coyote Creek. Photographic data and field trash assessments documented impairment of REC-2 and WILD on multiple locations and multiple dates. For more discussion, please see the response in Part I to the key comment titled "Spatial Representation of Trash Data."

**Comment 4.10b:** "Existing trash assessment data [on Coyote Creek], including photographic evidence, are based on a single assessment conducted at each site. Repeated assessments over time are needed to evaluate the chronic nature of trash at these sites and whether technology-based controls will be sufficient to address the potential issue at them."

Response: The commenter is not correct in stating that the trash assessment data consist of single assessments conducted at each site. For the photographic evidence, there is photographic evidence of trash impairment at the Julian St. Bridge site for March 2002, May 2006, and January 2007. There is also photographic evidence of trash impairment at the Mabry Rd. location for February 2004, and May 2006. Taking all the data together, there is evidence of trash impairment at 11 different locations and on 12 different dates for this water body.

**Comment 4.11:** "The Proposed listing of the Guadalupe River is...overbroad and should at least be geographically restricted."

Response: please see the response in Part I to the key comment titled "Spatial Representation of Trash Data."

**Comment 4.12: “The proposed listing of Lower Silver Creek is contrary to the weight of evidence and not otherwise adequately supported or geographically restricted.”**

Response: There were two sites on this water body where poor condition scores were observed for the “threat to aquatic life” parameter. Please also see the response in Part I to the key comment titled “Spatial Representation of Trash Data.”

**Comment 4.13: “The proposed listing of Matadero Creek is overbroad and based on marginal data that is too limited and unrepresentative.**

Response: There were two locations where poor condition scores were observed for the “threat to aquatic life” parameter, and these two surveys were conducted 18 months apart. There is therefore evidence that the problem both exists in more than one location in the waterbody and that the problem has persisted through time. Please also see the response in Part I to the key comment titled “Spatial Representation of Trash Data.”

**Comment 4.14: “The proposed listing of Permanente Creek is far too overbroad. Existing RTA data were collected at one location in the low gradient reach just above tidally influenced area. Water Board impairment threshold for Parameter 3 was exceeded during four assessments conducted at one site. Existing URTA data are not representative for the range of conditions found in Permanente Creek.”**

Response: The field trash surveys conducted on 4 separate occasions conducted over the course of a year noted poor condition scores in the “threat to aquatic life” parameter on every survey. This was sufficient evidence to establish beneficial use impairment. For more discussion on the spatial considerations of listing decisions, see the discussion in Part I under the key comment, “Spatial Representation of Trash Data.”

**Comment 4.15: “The proposed listing of San Francisquito Creek lacks sufficient specificity and supporting evidence for the majority of its reaches. Existing URTA data are not representative for the range of trash conditions found in San Francisquito Creek, especially in the upper non-urban reaches of the creek.**

Response: Poor condition scores in the relevant trash parameters were noted in field surveys conducted at four different locations on this waterbody and on several dates over the course of two years. This is sufficient evidence that trash impairment both exists at multiple locations on this waterbody, and the problem has persisted through time. For more discussion on the spatial considerations of listing, see the discussion in Part I under the key comment, “Spatial Representation of Trash Data.”

**Comment 4.16: “The proposed listing of Saratoga Creek requires geographical restriction based on all available evidence. Existing URTA data consist of two assessments conducted at one location in Saratoga Creek (i.e., El Camino Real), approximately 1 mile upstream of its confluence with San Tomas Aquino Creek. Additional information collected by SCVURPPP during a continuous creek walk of the 7-mile section of creek (between Bollinger Av and Highway 9 upstream of the City of Saratoga) confirms that these creek upper reaches are not impacted by trash.”**

Response: Field surveys noted poor condition scores for the “threat to aquatic life” parameter in visits conducted two years apart. The Water Board is not claiming that such conditions exist everywhere on this waterbody, but these poor condition scores at this one location imply the presence of trash at other upstream locations. That trash impacts have existed over the course of two years is also evidence that the problem is persistent. Please also see the discussion in Part I under the key comment, “Spatial Representation of Trash Data.”

**Comment 4.17: “The proposed listing of Stevens Creek is not supported by the weight of evidence. Existing URTA data were collected at six locations within approximately 12-mile reach between La Avenida and Moss Rock Park, located about 2 miles upstream of the Stevens Creek Reservoir. Water Board impairment thresholds were not exceeded for Parameter 3 during 4 assessments at three of the locations. The upper two non-urban sites received Parameter 3 scores that were just below the thresholds (8-9). The assessments sites represented a wide range of land uses and channel conditions that occur in Stevens Creek.**

Response: Field surveys observed poor condition scores for the “threat to aquatic life” parameter at three different locations on this water body and on three different dates over the course of three years. These data indicate that the trash impairment exists at multiple locations and has persisted through time. Please also see the discussion in Part I under the key comment, “Spatial Representation of Trash Data.”

**Comment 4.18: “The proposed listing of San Tomas Aquino Creek is far too overbroad. Existing URTA data were collected at three hotspot locations within approximately 9-mile reach between Highway 101 and Westmont Avenue. Water Board impairment thresholds were not met for Parameter 3 during all five assessments conducted across the three sites. URTA scores increased at 2 sites with subsequent assessments, so a high degree of uncertainty remains as to whether there is a persistent level of trash at these sites.”**

Response: Field surveys observed poor condition scores for the “threat to aquatic life” parameter at three different locations on this water body and on two different dates over the course of two years. These data indicate that the trash impairment exists at multiple locations and has persisted through time. Please also see the discussion in Part I under the key comment, “Spatial Representation of Trash Data.”

**Comment 4.19: “The proposed total selenium listing for Permanente Creek should be geographically restricted. “Twelve water samples were collected by Water Board and SCVURPP at two locations within Permanente Creek between 2002 and 2007. Six of twelve samples exceeded the NTR criterion, with total selenium concentrations ranging from 5.8 to 18.7ug/L. All of the exceedences occurred in water samples collected from the highest elevation site (PER070). This site is located within the San Antonio Open Space District land and is approximately 1 mile downstream of the**

Hansen's Cement Plant. Other than cement plant and a cemetery, the area is forested open space land protected by Mid-Peninsula Open Space District.

**“Listing of Permanente Creek for Total Selenium should apply only to the upper reaches of the creek. There is minimal amount of urban land uses in the area that drains into site PER070. Existing information also indicates that cold freshwater habitat occurs in the upper reaches of Permanente Creek, upstream of Interstate 280. During the summer dry season for most years, the creek has intermittent flow regime downstream of the freeway.”**

Response: Although selenium concentrations at the lower reach of Permanente Creek do not exceed applicable water quality criteria, there are no hydrologic controls or man-made structures in the creek that would warrant segmentation or exclusion of the lower portion of the creek from being listed as impaired.

**Comment 4.20: “The proposed toxicity listing for Permanente Creek is not supported by the weight of evidence and should be dropped. Two lines of evidence were used to assess listing under Section 3.6 Water/Sediment Toxicity of the Water Quality Control Policy (Water Board 2004). The narrative water quality objective listed in the 1995 Basin Plan states “There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate.....” Significant toxicity of water and sediment was defined as less than 80% survival or growth compared to control of test organisms. Three freshwater organisms were used for testing aquatic toxicity and one test organism (*Hyalella azteca*) was used for testing sediment toxicity. Water Board collected six water samples at two locations within Permanente Creek in 2002 and 2003, and one sediment sample was collected at lower elevation site in Permanente Creek in 2002. Only one of the seven samples exhibited acute toxicity. Similar to other data collected throughout the region, State and U.S., chronic toxicity was documented in all six water samples and the one sediment sample. Due to the ubiquitous nature of chronic toxicity in receiving waters throughout the U.S., and the issues surrounding the validity of the text with regard to impairment, we request that chronic toxicity data be removed from consideration by Water Board staff.**

Response: In the creeks that we assessed through SWAMP, chronic toxicity was not found to be ubiquitous. Listing Policy Section 3.6 was followed to determine the impairment status of Permanente Creek. All six samples collected in the creek show that toxic conditions are prevalent, leading to the need for listing.

**Comment 4.21: “The proposed listing for water temperature in Stevens Creek should be seasonally and geographically limited. Staff used benchmark guidelines (Sullivan et al. 2000) for steelhead, not narrative water quality objectives, to evaluate existing data. The commenter requests that the listing for Stevens Creek be limited to the lower reaches during the summer months, based on their evaluation of the monitoring data. The commenter states also that existing information indicates that steelhead rearing habitat in Stevens Creek is limited to a four-mile reach below**

Stevens Creek Reservoir and that Stillwater (2004) conducted a limiting factors analysis and identified a lack of over wintering habitat for juvenile steelhead as key limiting factor for steelhead population. Temperature was determined to not be a key factor limiting steelhead due to sufficiently cold water in reaches that supported steelhead spawning and rearing.

Response: When narrative water quality objectives apply, the Listing Policy recommends using evaluation guidelines, such as Sullivan, et al. The temperature criteria established by Sullivan, et al. (2000) meet the requirements of Section 6.1.3 of the Policy and have been recommended as representative of the protection of aquatic life beneficial uses, and are used throughout the State, in the absence of site-specific or region specific temperature objectives.

The limiting factors analysis conducted by Stillwater (2004) did not include the SWAMP data assessed for this listing. We considered all readily available data at this time and do not agree that the data indicate impairment only in the summer months.

Additionally, in *Historical Distribution and Current Status of Steelhead/Rainbow Trout (Oncorhynchus mykiss) in Streams of the San Francisco Estuary, California* (Leidy, 2005) the author identifies (pages 137-138 in the hard copy report) the status of *O. mykiss* in both reaches, above and below the Reservoir, as "Definite Run or Population."

#### **Comment Letter 5: Vallejo Sanitation and Flood Control District**

**Comment 5.1: "In many cases data employed as evidence of impairment were taken from a single location and used as a basis to presume that the same conditions apply to an entire water body. We are requesting that the proposed listings focus on segments where data has been collected to allow for more efficient and responsible use of fiscal resources. "**

Response: See response in Part I to key comment on "Spatial Representation of Trash Data."

**Comment 5.2: "EPA regulations at 40 CFR 130.7(b) (1) provide that States do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by Federal, State or local authority, and (3) other pollution control requirements required by State, local, or Federal authority. The District encourages the Water Board to consider the use of existing programs such as storm and wastewater pollution prevention programs and/or requirements such as 13267 letters to address water quality problems identified through the listing process."**

Response: "Section 303(d)(1) of the federal Clean Water Act (CWA) requires states to identify waters that do not meet applicable water quality standards with technology-based controls alone and prioritize such waters for the purposes of developing Total Maximum Daily Loads (TMDLs)[40 Code of Federal Regulations (CFR) 130.7(b)].

Speculation that future application of technology-based controls may remedy the impairment does not obviate the need to list a water body as being currently impaired by a pollutant. If the impairment can, indeed, be remedied by technology-based controls, and monitoring data demonstrate the efficacy of the technology-based control, then these affected water bodies may be removed from the 303(d) list. Until such a demonstration is available, the listing of water bodies as impaired is appropriate when water quality standards are not being met.

*Comments specific to the listing of Rindler Creek*

**Comment 5.3:** The District, the City of Vallejo, and community volunteers have worked to reduce visible trash along Rindler Creek in recent years. The District has “surveyed the Rindler Creek Watershed several times to identify sources of trash and develop a strategy for controlling trash..., and determined that the primary source of trash is a storm drainage system that directs runoff from nearby shopping centers. The District intends to address this source by performing assessments to identify areas where trash accumulates; this information will be used to identify management practices to remove trash at the source. The District requests that the Water Board consider the current state of Rindler Creek as evidence of improved conditions, allowing the District to continue with activities to address trash removal through the District’s Stormwater Pollution Prevention Program.”

Response: The evidence available to the Water Board suggests that substantial trash impacts are present on Rindler Creek. Water Board staff applaud and encourage the efforts being undertaken, but we must make our evaluation based on the data we have available. A narrative description of ongoing trash control efforts is not sufficient to discount the evidence indicating impairment. Our intent is not to discourage the District to continue its efforts to control trash. Evidence demonstrating improved conditions may be submitted in future listing cycles.

**Comment 5.4:** “LOE ID: 5504 lists the location of the Rindler Creek Headwaters as Benicia Road; the headwaters are actually located in the Cordelia Hills several miles east of Benicia Road. Considering that the photographic evidence identified as Benicia Road is not connected with the Rindler Creek Watershed, the District requests that the Water Board eliminate this data source and repeat the impairment assessment process.”

Response: The photographs were labeled incorrectly for the Benicia Road site, but the geodetic coordinates indicate that these photos were taken on Rindler Creek (near the intersection of Columbus Parkway and Admiral Callaghan Lane). The photographs labeled Rindler Creek at Marine World Parkway are, according to supplied geodetic coordinates, actually taken along Fairgrounds Drive near where the creek enters Lake Chabot. The Fact Sheets will be corrected as will the photograph file names. The photographic evidence indicating impairment is indeed connected with Rindler Creek.

**Comment 5.5:** “LOE ID: 5504 also lists several other areas as associated with or located within the Rindler Creek Watershed; these areas include Lemon Street Ditch, Austin Creek Pump Station, White Slough, and Lake Dalwigk. None of these areas are associated with, tributary to, or located adjacent to and/or within the Rindler Creek Watershed. The District requests that the Water Board eliminate this non-representative data source and repeat the impairment assessment process.”

Response: The Lemon Street Ditch, Austin Creek Pump Station, White Slough, and Lake Dalwigk sites were not used to establish impairment, and these photos were removed



from the Rindler Creek dataset. We also corrected some station names as noted in the response to Comment 5.4.

**Comment 5.6: “Data Point 91 in the Water Board’s assessment of trash photos is listed as having enough evidence even though there is only one close-up photograph listed for this site. We are requesting the Water Board to consider Data Point 91 invalid by removing this data from the assessment process.”**

Response: The commenter is correct in noting that we should not have established and RTA score for this site on this date without a panoramic photo. We have deleted this photo from our consideration. However, exclusion of this photo does not change the conclusion regarding beneficial use impairment of Rindler Creek.

**Comment 5.7: “The District is unsure of how the protocol for assessing photographic evidence has been applied because there appears to be a contradiction on page one of the Rindler Creek Trash decision. The trash decision worksheet (Excel spreadsheet ref 2461) lists the Rindler Creek headwaters as having two data points 5/14/03 and 4/1/06; the Water Board’s assessment of these photographs established that Data Point 99 did not have enough evidence to list, even though five photographs were available for use. Contrary to this, Data Point 91 described above lists a single close-up that was found to be enough evidence. We are requesting that the Water Board review the trash decision to ensure that the protocol for assessing photographic evidence has been applied equally in all instances.”**

Response: See response to Comment 5.6 concerning data point 91 (the photos for the site near Lake Chabot on April 18, 2005). There remain 3 valid photographic surveys for Rindler Creek showing impairment of REC-2 and WILD: the Columbus and Admiral Callaghan site on May 14, 2003, and the Fairgrounds Drive site on April 1, 2006, and May 14, 2003.

**Comment 5.8: “The report submitted by Mr. Roger James and Mr. Larry Kolb as supplementary evidence list six sites and locations under the heading of Rindler Creek; only one location (RCM) is located within the Rindler Creek Watershed, the remaining five locations are not located within the Rindler Creek Watershed. In addition, one of the pictures in the report found under the heading of Rindler Creek clearly is not located in the Rindler Creek Watershed. The District requests that the Water Board review this report for accuracy before using it as supplementary evidence.”**

Response: We confirmed that the two locations used to establish impairment are on Rindler Creek according to the geodetic coordinates supplied by the photographers. Two of the site names were not correct, however.

The Rindler Creek Headwaters site is actually near the intersection of Columbus Parkway and Admiral Callaghan Lane. The Marine World Parkway site is actually along Fairgrounds Drive near Lake Chabot. We corrected all these place name typos in

the fact sheets and their references. However, the Columbus Parkway/Admiral Callaghan and Fairgrounds Drive sites are on Rindler Creek, so our proposed listing for Rindler Creek remains valid based on the available evidence.

**Comment 5.9:** “The District is concerned that the data used to assess Rindler Creek is outdated; with the exception of one point, the remaining data points were acquired in 2001. Given this fact, it is doubtful that the data submitted to the Water Board for trash impairment is representative of current conditions. The District is requesting that the Water Board review submitted data to ensure that it is representative of current conditions.”

Response: We reviewed readily available data to assess trash conditions for this water body. These data were from 2003 and 2006. More recent data demonstrating that trash problems have been remedied were not available at the time of the February 2007 data solicitation cut-off. If the problems have been remedied, data demonstrating this fact can be submitted for consideration in the next listing cycle.

**Comment 5.10:** “We encourage the Water Board to limit the proposed revisions to tangible water quality impairments for which measurable solutions can be found, rather than addressing perceived or potential impairments that would impact limited fiscal resources.”

Response: We are required to identify all waters not meeting water quality standards.

#### **Comment Letter 6: County of Santa Clara Department of Planning and Development**

**Comment 6.1:** The County is particularly concerned about the inclusion of the entire Coyote Creek, Silver Creek, San Tomas Creek, Saratoga Creek, Stevens Creek, Matadero Creek, San Francisquito Creek, Permanente Creek and Guadalupe River as impaired waters for trash, when the data clearly shows that limited portions of the waterways were sampled for trash, and those waters that were sampled were selected because of the visible trash. Significant portions of these waterways were not sampled, which leads the County to question whether the weight of the available evidence indeed supports listing the entire waterway....

Response: See response in Part I to key comment on “Spatial Representation of Trash Data.”

**Comment 6.2:** “The County is concerned by the lack of concrete data showing how trash harms wildlife. Providing additional scientific data on this issue would allow parties to focus their limited public resources on the high-priority issues....For example, an isolated candy wrapper may have a much less deleterious effect on a water body than, for example, the ubiquitous plastic grocery store bag. The sources and impacts of these two items are also very different, and efforts to control or address them will vary greatly.”

Response: Please see response in Part I to the key comment entitled “Scientific Integrity of Trash Assessment Methods – Subjective.” We do not propose to list any creek based on an “isolated candy wrapper” or single plastic grocery bag.

**Comment 6.3: The commenter lists and describes ongoing trash reduction efforts being made by Santa Clara County’s Department of Roads and Airports, the Department of Parks and Recreation, and the Department of Agriculture and Environmental Management. The commenter states the County’s commitment to “use its voice in SCVURPPP to encourage co-permittees to dedicate resources and efforts at ‘hot spot’ areas identified in the draft staff report to assess over time, in light of trash removal efforts, whether the conditions are indeed chronic, warranting listing as an impaired system.”**

Response: Poor condition for trash assessment parameters were observed at several locations over several years in Santa Clara County creeks, suggesting that trash reduction efforts are currently not sufficient in dealing with the widespread and persistent water quality problem caused by trash. We applaud the County’s ongoing trash reduction efforts, but note that if ongoing trash removal efforts are necessary in a creek, this is evidence that there are not effective and sustainable measures in place to deal with the sources of the problem.

#### **Comment Letter 7: Town of Colma Public Works/Engineering Department**

**Comment 7.1: “For Colma Creek, it appears from Appendix C (listing recommendations) of the Public Notice that the sites where the data was collected to support this listing is located near the downstream ends of the creek (Mitchell Avenue, Utah Avenue, etc.). This exhibit does not provide any trash data or documented/photographic evidence of trash impairment in the upstream stretches of the Colma Creek channel. Trash levels may be site specific. For example, trash and litter levels in creeks vary greatly depending on the locations of homeless encampments, road overcrossings, and nearby land uses. The proposed 303(d) listing should therefore be limited to portions of the creek where evidence of impairment exists rather than listing entire creeks. Our field observations find that very little amount of trash has been visually seen in the creek section that runs through the Town.”**

Response: Please see the response in Part I to the key comment on “Spatial Representation of Trash Data.”

**Comment 7.2: “Only photographic evidence of some specific locations of [Colma] creek was used to interpret the water quality criteria of the entire creek. The entire creek was not assessed using the standard Rapid Trash Assessment methodology. We strongly object listing of the Colma creek section within the Town’s jurisdiction without substantial evidence. Please provide us a copy of the documentation that supports listing the Colma Creek section that runs through Town. We would also appreciate reviewing the standard/scientific assessment methodology that was used to**

**justify listing of the entire creek, specifically the Colma creek section that runs through the Town.”**

Response: All data supporting the listing has been available through the Water Board’s website. Please see the responses to key comments in Part I on “Spatial Representation of Trash Data” and “Scientific Integrity of Trash Assessment Methods – Subjective.”

**Comment Letter 8: City of Concord Public Works**

**Comment 8.1 “The listing is based on four water samples conducted in January and April 2003. We feel that the results of this testing do not accurately reflect current conditions in Mount Diablo Creek. Since 2003, the City of Concord and the City of Clayton have conducted vigorous programs to reduce water pollution. Last year alone, the City of Concord distributed an amazing 442, 134 educational items to residents and businesses....This is just one example of our many successful pollution prevention programs.”**

Response: We applaud the city’s efforts to reduce water pollution. Our role is to assess all readily available data that meet quality and quantity requirements and make recommendations regarding impairment. If conditions have changed, then data can be submitted in future listing cycles to document such changes.

**Comment 8.2: “Of the four samples collected in 2003, only two showed toxicity....Board staff is proposing listing all of [Mount Diablo Creek] as impaired based on two water samples that showed toxicity over five years ago.”**

Response: This recommendation meets the requirements specified in the Listing Policy. For further explanation also see response to comment 2.18a.

**Comment 8.3: Board Staff is proposing that Mount Diablo Creek be listed as impaired for ‘toxicity’ rather than a specific chemical constituent. There is no way to determine sources or assign a Total Maximum Daily Load for something as nebulous as ‘toxicity.’...It is possible that the test results were caused by naturally occurring phenomena that cannot be controlled.”**

Response: The Listing Policy requires that waters be placed in the Water Quality Limited Segments category of the section 303(d) list if the standards non-attainment is due to toxicity alone or if the observed toxicity is associated with a pollutant or pollutants. A determination of impairment can be made based on toxicity along, without knowing specifically what pollutant(s) is causing the toxicity.

**Comment Letter 9: City of Daly City**

**Comment 9.1: “Absent from staff’s weight of evidence assessment is any mention of the Colma Creek Maintenance Monitoring Program initiated in 2006 which involves**

scheduled quarterly inspections and inspections following major storm events...,[at] 8 locations along a 5 mile stretch of Colma Creek. It is also worth noting that since 2004 the San Mateo County Department of Public Works has coordinated a monthly trash cleanup program along Colma Creek conducted by the county Sheriff's Offender Program. Reliance upon outdated information in light of more recent proactive mitigation efforts leads to inaccurate conclusions about the status of trash in Colma Creek and overlooks the progress being made...."

Response: Review of available trash data strongly suggest that Colma Creek beneficial uses are impaired by trash. We cannot accept anecdotal evidence that a maintenance program is in place to solve the problem as weighing against data we have showing impairment. If the problem has been solved, then evidence will need to be submitted during the next listing round. We further note that the fact that regular maintenance is required suggests that beneficial uses are still being impaired by trash on many or most of the days between trash removal operations since there is so much trash accumulating that frequent removal is necessary.

**Comment 9.2: "It is unclear what stretches of Colma Creek are intended for designation. Figure 3 of staff's recommended action is only a graphic representation absent specific mapping of jurisdictions affected Rather than listing the entire creek, any proposed 303(d) listing should be limited solely to portions of the creek where there is current evidence of impairment."**

Response: The entire length of Colma Creek is being listed. Please see the response in Part I to the key comment on "Spatial Representation of Trash Data."

**Comment 9.3: "Should the Regional Board choose to list Colma Creek as an impaired water body, it remains unclear what criteria and process would be used to then develop an effective Total Maximum Daily Load to equitably address trash."**

Response: The action being undertaken now is identifying this water body as impaired. There is no TMDL process underway, and we cannot speculate on what form a TMDL would take or any details of that process.

**Comment 9.4: "It seems premature to list Colma Creek as a trash impaired body of water as it neglects any weight of evidence that is more current nor does it acknowledge ongoing local efforts that have made improvements. Any proposed listing should more fully take into account specific locations where impairments exist and should rely on the most current available information."**

Response: Please see the response to comment 9.1.

#### **Comment Letter 10: City of Foster City, Estero Municipal Improvement District**

The City of Foster City concurs with the comments provided by the San Mateo Countywide Water Pollution Prevention Program.

**Comment 10.1:** "The city requests that the San Francisco Bay Lower shoreline fronting the City of Foster City not be included in the proposed listing for impairment by trash." The listing is "based on the photographic evidences from two locations....It is unclear which geographic area the photographs were taken and how this area compares to the wetland areas with defined beneficial uses described in Table 2-10 and Figure 2.11 of the Basin Plan (SFBRWQCB 1995). The geographic definition and areal extent of "San Francisco Bay Lower (shoreline)" should be clarified along with the basis for proposing to list this potentially large shoreline area using the very limited available photographic evidence.

The City attaches photographs taken on November 19, 2008. "The photographs clearly show that "trash impairment" is not a problem in Foster City.

Response: We cannot accept the photos as data for this listing cycle since the submission deadline has passed. They may be submitted as evidence during the next listing round. We also note that the City should consider gathering evidence in multiple locations and multiple dates, especially following storm events, to document success in controlling trash inputs to the Bay shoreline. Listing this segment of the Bay as impaired by trash certainly does not imply that every inch of shoreline is impaired by trash. The listing does suggest that there is likely widespread trash impairment along the Bay shoreline. For more information about this issue, please see the response in Part I to the key comment under "Spatial Representation of Trash Data."

#### **Comment Letter 11: City of Oakland Community and Economic Development Agency, Design and Construction Services**

**Comment 11.1:** "We are concerned that the listing of Sausal Creek as trash-impaired is based on very limited data and is not statistically representative of the creek as a whole or of present day conditions. The listing of Sausal Creek is contrary to the Water Boards' Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (2004). Section 6.1.5.2 of the Policy states that "samples should represent statistically or in a consistently targeted manner the segment of the water body."

Response: Please see the response in Part I to the key comment on "Spatial Representation of Trash Data."

**Comment 11.2:** "Section 6.1.4 of the Listing Policy states that a sampling plan should be available that describes the rationale for selecting sampling sites that are spatially representative. The fact sheet does not describe how the sampling plan assures the representativeness of the samples. If the sampling plan does not assure the representativeness of the samples, these data should not be considered representative of the water body as a whole and should not be used to list the entire water body.

Response: Please see the response to the key comment in Part I on "Sampling Plan for Trash Data."

**Comment 11.3:** "Sausal Creek has over twelve miles of open creek and the 2004 location represents a previously unknown illegal dumping hotspot that has since been cleaned up and remains clean today. This location and time frame is not representative of the creek as a whole in 2008." "On December 2 and 3, 2008, City of Oakland staff conducted a full site walkthrough and qualitative survey of the open stretches of Sausal Creek, including the entire lower reach that passes through the urban center of Oakland. The walkthrough and the photos (attached) from the walkthrough reveal that much of Sausal Creek is remarkably trash free, especially for an open urban creek. There are short stretches with small amounts of trash that could be characterized as "sub optimal." And there have been a couple instances of illegal dumping. Once the City is informed, we clean up the debris and follow-up with enforcement and mitigation measures to prevent future dumping." The City attached photos taken at 22<sup>nd</sup> Street.

Response: As we explained in our December 2006 data solicitation, we cannot consider, for this listing cycle, evidence submitted after the cut-off date of February 2007. Trash assessments indicating poor condition at the 22<sup>nd</sup> Street location were conducted on three occasions over the course of a year. Improved conditions during a single field survey may not be persuasive in demonstrating that trash problems have been remedied. If the trash problems have been eliminated, then evidence can be gathered and submitted for the next listing cycle to demonstrate this fact.

### **Comment Letter 12: City of Orinda**

The City expresses concurrence with comments submitted by the Contra Costa Clean Water Program (CCCWP; Comment Letter 2).

**Comment 12.1:** The City notes Listing Policy 6.1.5, which gives the Regional Water Boards discretion in establishing water segmentation; and 6.1.5.4, which states that "in the absence of a Basin Plan segmentation system, the RWQCBs should define distinct reaches based on hydrology and relatively homogeneous land use." "The Listing Policy apparently recognizes the fact that for constituents like trash, an impact to one or several reaches of the stream does not necessarily constitute a problem in the entire stream and perhaps listings should be confined to only those reaches where there is a documented problem."

Response: See response in Part I to key comment on "Spatial Representation of Trash Data."

**Comment 12.2:** "The listing of San Pablo Creek for trash is difficult to evaluate (Line of Evidence #5661, Trash, Non-Contract Recreation) because the data reference (*Rapid Trash Assessment (RTA) data collected by the SF Bay Region Surface Water Ambient Water Monitoring Program from 2002-2005 and method description*) was not included in the List of References and no link to it could be found on the SWAMP website. As such, neither City nor Program staff could determine where the sample locations were

located. In addition, the temporal variation of the data may also not meet the Listing Policy criteria as indicated in the [CCCWP] letter.”

Response: Please see response to comment 2.25.

**Comment 12.3:** “If upon rectification of these data issues, a trash TMDL is still proposed for San Pablo Creek, the City proposes that [it] be limited to reaches along where sampling indicates a trash problem. Or if the data were collected...downstream of San Pablo Reservoir, the City proposes that at a minimum the listing of San Pablo Creek for trash be limited to downstream of San Pablo Reservoir...,[which] serves to isolate the upper and lower reaches of San Pablo Creek such that the trash in the lower reaches would be from a different source than trash in an upper reaches since the upstream trash would never make it past San Pablo Reservoir.”

Response: Please see response to the key comment in Part I regarding “Spatial Representation of Trash Data.”

**Comment 12.4:** “The vast majority of creeks in Orinda are located on private property. In addition, while Orinda does not have the problem of homeless encampments as other cities do, illegal dumping remains an issue. The City took action this fall against two commercial properties...regarding inadequate best management practices at trash dumpsters....One property erected a gated trash enclosure and subsequently modified it to increase its height because illegal dumping continued to be problematic.”

Response: This anecdotal information is both too late to be considered in this listing round and not specific enough for us to consider in the context of a listing decision.

### **Comment Letter 13: City of San José Environmental Services Department**

San José concurs with the comments of the Santa Clara Valley Urban Runoff Pollution Prevention Program (Comment Letters 4a and 4b).

**Comment 13.1:** “San José comments that “lines of evidence for proposing several...listings for entire watersheds were taken on too few occasions and from too few locations within several of the large watersheds, including the Coyote creek and Guadalupe River watersheds, which flow miles through changing habitats and land uses.

Response: Please see the Part I discussion under the key comment “Spatial Representation of Trash Data.”

**Comment 13.2:** “Assessments and photographs used to list Coyote Creek, Guadalupe River, Lower Silver Creek, and Saratoga creek were targeted at trash hot spots or specific land use types in urbanized areas; therefore, they do not represent an unbiased assessment of all reaches or even all urbanized reaches within those water bodies. We request that listings be made only when sufficiently comprehensive and



unbiased data are available, and that listings be limited to those sites or reaches documented to be chronically impacted by trash.”

Response: Please see the discussion in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 13.3: “Sources and pathways of trash in creeks are diverse and difficult to quantify....Each creek site where trash accumulates has its own unique set of sources and pathways which should be recognized during this listing process to ensure successful strategies to reduce trash in creeks are identified. We believe the 303(d) listing needs to appropriately acknowledge the varied and complex contributions to trash in creeks.”**

Response: The purpose of the listing process is to identify water bodies not meeting water quality standards, not to investigate the sources and pathways of pollutants causing the impairments.

**Comment 13.4: The proposed 303(d) listings penalize municipalities for preserving natural stream conditions. Trash tends to be retained by natural vegetation in creeks and so is disproportionately visible, while trash reaching concrete channels is efficiently transported directly to the Bay. It is therefore an expected outcome that RTA/URTA scores and photographic evidence would be lower in natural creeks, even though the rates of trash loading might be no different or even less than in concrete channels.**

Response: The intent of the listing process is to identify water bodies not meeting water quality standards, not to calculate loading rates of trash to receiving waters, nor to penalize municipalities for preserving natural stream conditions. If so much trash is accumulating on stream banks or vegetation that beneficial uses are impaired, then the sources of the trash are the problem, not the presence of vegetation.

#### **Comment Letter 14: Santa Clara Valley Water District**

**Comment 14.1: The District requests that the Water Board “further examine...monitoring information” submitted by the Santa Clara Valley Urban Runoff Pollution Prevention Program, “including those submitted to Ms. Sue Ma with this year’s Annual Report of Pollution Prevention Activities....In addition, and independent of SCVURPPP, the District [has conducted] a robust number of trash assessments within Santa Clara County, and [monitored] for various other potential pollutants. These data were provided to the Water Board but may not have been fully evaluated...as part of this 303(d) listing process.”**

Response: The annual report was submitted September 15, 2008. As we explained in our December 2006 data solicitation letter, we cannot consider, for this listing cycle, any data submitted after the February 28, 2007, cut-off date. Those data may be submitted for consideration in the next listing cycle.

**Comment 14.2: “We request that Water Board staff provide annual direction and comments as the primary mechanism to adjust the SCVURPPP monitoring program for more focused study.”**

Response: The current action is identifying waters not meeting water quality standards. This comment seems to be directed at our permitting function and should be submitted during a public process for permitting.

**Comment 14.3: “The NPDES program is more efficient in identifying and characterizing pollutants of concern rather than utilizing the 303(d) listing process for pollutant characterization.”**

Response: The purpose of the listing process is to identify waters not meeting water quality standards, not to perform pollutant characterization. The purpose of the NPDES program is to direct dischargers to perform actions sufficient to prevent exceedance of water quality standards. These are complementary, not substitutable endeavors.

**Comment 14.4: “We agree that, according to available data, the urban sections of the Guadalupe River and Coyote Creek, and to some degree upstream and downstream for varying distances, are impacted by trash. Accordingly, we feel an approach focusing on the more impacted sections of the two rivers through downtown San Jose and vicinity would be most cost effective. The District maintains a significant level of effort in dealing with the trash challenge.”**

Response: Please see the discussion in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 14.5: “Not all portions of the Coyote Creek and Guadalupe River watersheds are impacted to the level of impairment. In the upper portions of the Guadalupe Watershed, several Urban Rapid Trash Assessments have been completed. They indicate limited impact due to trash, well below the threshold the Water Board has used as impairment justification. We feel that the scope of the trash listings likely exceeds the impacted areas of the watershed.”**

Response: Please see the discussion in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 14.6: Aside from Coyote Creek and Guadalupe River, the commenter states that “the listing for trash in other creeks in Santa Clara County be postponed. San Tomas, Silver Creek, Matadero Creek, Permanente Creek, San Francisquito Creek, Saratoga and Stevens Creek, should not be listed and should continue to be monitored and reevaluated during the 2010 listing cycle. The listing of all these creeks will dilute our very limited financial resources and will likely reduce our effectiveness to develop and implement strategies to contain and eliminate trash. This approach of further assessment and collaboration with Water Board and stakeholder staff could provide a more robust data set that could facilitate identification of reach-specific problem locations.”**

Response: Please see the discussion in Part I under the key comment “Spatial Representation of Trash Data.”

**Comment 14.7: “We do not believe Permanente Creek should be listed for selenium at this time when there is still an opportunity to identify and achieve controls of the currently permitted sources outside the constraints of the 303(d) listing process. We feel the priority of selenium is low and it should not be listed at this time. Doing so could divert limited public resources to address this situation when they could be better utilized addressing the trash issues.”**

Response: For the purpose of developing the 303(d) list, we are required to assess all readily available data and information to determine whether water quality objectives are met in a particular water body. The SWAMP data collected in Permanente Creek and supported by the data collected by SCVURPPP meet the quality and quantity requirements of the Listing Policy for identifying Permanente Creek as impaired by selenium.

The fact that Permanente Creek is recommended to be placed on the 303(d) list does not prevent the Water Board or other agencies involved in water quality monitoring from collecting additional data and submitting new information for re-assessment of water quality in the creek during the next 303(d) listing cycle.

**Comment 14.8: “We do not believe Permanente Creek should be listed for toxicity at this time. Toxicity in creeks is an issue SCVURPPP has been investigating. We believe a more appropriate approach to determine the source or cause of the toxicity should be through the use of a Toxicity Identification Evaluation.”**

Response: As stated above (see Comment 14.7), we are required to evaluate all available data and to make a determination whether water quality standards are attained or not. In addition, a water body can be listed for toxicity without identifying its cause.

We agree that additional focused studies, including a Toxicity Identification Evaluation will provide a valuable insight and help determine necessary actions to address this impairment.

**Comment 14.9: “We do not believe that Stevens Creek should be listed for temperature when processes are already in place to manage water temperature, and all of the data from various sources have not been fully evaluated by Water Board staff. The District is very involved with the water temperature challenges associated with Stevens Creek and is currently addressing the issue through its Fisheries and Habitat Collaborative Effort (FAHCE) program. FAHCE has been working on issues related to reservoir operations and other practices that could help reduce the temperature in the waters of Stevens Creek above the dry back zone....Also, the use of Sullivan et al. 2000 may not be the best reference to evaluate steelhead limiting factors in a Mediterranean environment such as Santa Clara County. There is a debate among**

experts as to the degree that temperature is a limiting factor for steelhead within our county.

**“Adding a temperature listing to Stevens Creek via the 303 (d) listing process would further dilute limited public resources that are already focused on this issue, and could further complicate our actions by prescribing new requirements outside, and potentially inconsistent, with the existing collaborative process. Focusing on the existing implementation plan and evaluation of the results should take place prior to listing Stevens Creek for temperature.”**

Response: Further to the explanation above (see Comment 4.21) and in Part I under the key comment “Spatial Representation of Trash Data”, we do not anticipate that the listing of Stevens Creek will cause additional strain on resources. Also it is not our intention to prescribe actions or interfere with the work underway to manage and improve water temperature conditions in the creek. We support the goals of the Habitat Conservation Plan in place and the overall effort aimed at recovery of steelhead by protecting watershed functions. We are hopeful that these efforts will lead to improvement in water quality and subsequent attainment of the applicable standards that will, in turn, provide basis for taking Stevens Creek of the 303(d) list.

### **Comment Letter 15: Bay Area Stormwater Management Agencies Association**

**Comment 15.1: “The approach taken to develop proposed trash listings deviates from the Listing Policy.”**

Response: Water Board staff followed the Listing Policy in developing the impaired waters list and frequently communicated with State Board staff during this process. In fact, State Board staff has reviewed every line of evidence prepared by Water Board staff. We are confident that our approach for all listings is consistent with the Listing Policy.

See also our responses to all key comments in Part I of this document.

### **Comment Letter 16: San Francisco Baykeeper**

**Comment 16.1: Baykeeper is pleased to see that Bay Area creeks for trash and Kirker Creek for pyrethroids are proposed for listing.**

Response: comment noted.

**Comment 16.2: Baykeeper states that a 2008 listing of San Francisco Bay for PBDEs is appropriate based on all available information. To date, studies have established elevated PBDE concentrations in San Francisco Bay seals, fish, bird eggs, bivalves, sediment and water.**

**“Last year NOAA Fisheries published a paper with the first evidence that embryonic exposure to PBDE 47 can cause significant development abnormalities in fish larvae. Additionally, PBDE levels in San Francisco Bay harbor seals have been positively correlated with white blood cell counts and inversely correlated with red blood cell counts. Baykeeper believes that these new data are sufficient for the Regional Board to find that PBDEs harm existing beneficial uses.**

**“The San Francisco Bay Basin Plan clearly prohibits the detrimental bioaccumulation of toxic substances in bottom sediments or aquatic life....PBDEs are clearly present in Bay sediments, are accumulating in Bay organisms, and are known to negatively impact aquatic life. For these reasons, the Regional Board should list the Bay for PBDEs in this 2008 listing cycle.”**

Response: We share Baykeeper’s concern about polybrominated diphenyl ethers (PBDEs), which are fire retardants used predominantly in polyurethane foam and in TVs, computers etc. Some forms of PBDEs have been banned for use in the State of California (e.g., those used in foam), while other forms have not (those used in TVs). Based on the available data collected through the Regional Monitoring Program (RMP) and others, we agree that PBDEs are bioaccumulating in biota in San Francisco Bay. Through the RMP, we continue to support monitoring efforts in San Francisco Bay and to support the evaluation of the available literature on effect levels and the development of information about thresholds for effects. The new data referred by Baykeeper are important, but they do not provide benchmark or guideline levels that we can use to support a listing based on a narrative water quality objective. We will continue to work through the RMP to establish information about sources, controls and threshold levels for effects to better address these compounds.

### **Comment Letter 17: Center for Biological Diversity**

**Comment 17.1: “The overwhelming scientific evidence supports the inclusion of ocean waters on the 303(d) List because of impairment caused by ocean acidification....The [Water] Boards should place California’s ocean water segments on the 303(d) list and develop a TMDL for carbon dioxide pollution that is impairing our seawater quality.**

Response: This issue is not specific to ocean waters of this region. It is a state-wide issue that will be addressed by the State Water Board.

### **Comment Letter 18: Citizens for East Shore Parks**

**Comment 18.1: “In 2006, Stege Marsh was not listed on the 303(d) list, but “based on information that has not been updated in almost a decade, the SWRCB placed Stege Marsh instead on another list for ‘Water Quality Limited Segments Being Addressed By Actions Other Than TMDLs.’ Specifically, the Board concluded that the significant and widely known contamination in Stege Marsh would be better addressed by the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065), which was to be implemented by the Regional Board through Cleanup and**

Abatement Orders (CAOs).” Further, the commenter states that “the only CAOs ever issued for Stege Marsh were rescinded while the SWRCB was conducting its 2006 listing process and the Regional Board has not publicly indicated that it has any future plans to reinstate or reissue CAOs regarding Stege Marsh. Moreover, while the Department of Toxic Substances Control has addressed certain parts of the Marsh, the Department is not addressing other highly contaminated parts of the marsh that require remediation. There is, in short, no Action being taken under another program to cleanup and abate significant pollution in Stege Marsh.”

The commenter states that Citizens for East Shore Parks “would prefer that the Board take action to reissue CAOs regarding Stege Marsh,” and suggests that the Water Board issue Water Code §13267 letters to dischargers, in order to obtain current information required to inform the CAOs. Failing this approach, the group requests that Stege Marsh be included in the 2008 list.

Response: Listing the remaining portions of Stege Marsh would not significantly alter the actions currently being taken to address contamination in the marsh. Responsibility for cleanup oversight, both the inboard and outboard portions of the marsh, is currently under the jurisdiction of DTSC. DTSC has made it clear in conversations with Water Board staff that they intend to address all contamination at this site to be protective of human health and the environment. In addition, the San Francisco Bay TMDLs for PCBs and mercury already address these contaminants as they occur at this site.

**Comment 18.2:** The commenter requests that the Water Board “provide clearer guidance regarding the areas of Stege Marsh covered by the 303(d) listing decision. The Toxic Hot Spots Cleanup Plan and [the 1998 Bay Protection and Toxic Cleanup Program Final] Technical Report dealt with a 23 acre area of the marsh and the 2006 303(d) “Being Addressed by Another Program” listing decision applies to a 29 acre parcel. The boundaries of the covered 29 acre parcel are consequently unclear....However, the marsh is significantly larger than 29 acres....”

Response: The cleanup currently being overseen by DTSC should address all portions of the marsh that are of concern to the commenters. The acreage provided in the listing is only an approximation. We will make it clear in the Fact Sheet that the Water Board’s Cleanup and Abatement Orders were rescinded and that DTSC is the lead agency.

### **Comment Letter 19: Save the Bay**

**Comment 19.1:** Save the Bay expresses support for the proposed trash listings for the 24 tributaries and two segments of San Francisco Bay, and for the Rapid Trash Assessment methods and staff’s “rigorous review of photographic documentation.” The commenter also notes that “it is highly likely that these 26 represent only a portion of the impacted water bodies.”

Response: We agree that there are other creeks in the region that are likely to be impaired, but we do not have data available at this time to evaluate their impairment status.

**Comment Letter 20: David Cooke, Allen Matkins Leck Gamble Mallory & Natsis LLP**

**Comment 20.1: “The Waterbody Fact Sheets supporting the proposed listing of Almaden Lake and Almaden Reservoir [as impaired by mercury] indicate that the objective of the listings is to address risks associated with human consumption of fish from these water bodies. The commenter inquires whether the Guadalupe River Watershed Mercury TMDL will address the impairment due to mercury in Almaden Lake and Almaden Reservoir.**

Response: We will clarify in the Staff Report (footnote to Table 4) and Fact Sheets for these listings that the Guadalupe River Watershed TMDL is intended to resolve these impairments.

**Comment Letter 21: Michael F. Cox**

**Comment 21.1: “I believe the method of listing waters as 303(d) impaired due to trash is flawed....If I am not mistaken, waterways are not to be listed as impaired under the Clean Water Act until it can be shown that feasible control measures have failed.”**

Response: Section 303(d)(1) of the federal Clean Water Act (CWA) requires states to identify waters that do not meet applicable water quality standards with current technology-based controls alone and prioritize such waters for the purposes of developing Total Maximum Daily Loads (TMDLs)[40 Code of Federal Regulations (CFR) 130.7(b).

Speculation that future application of technology-based controls may remedy the impairment does not obviate the need to list a water body as being currently impaired by a pollutant. If the impairment can, indeed, be remedied by technology-based controls, and monitoring data demonstrate the efficacy of the technology-based control, then these affected water bodies may be removed from the 303(d) list. Until such a demonstration is available, the listing of water bodies as impaired is appropriate when water quality standards are not being met.

**Comment 21.2: “I am worried that the 303(d) listings will result in regulatory burdens and costs that will actually retard creek and waterway cleanup. The 303(d) listings impose costly bias toward pollutant fate and transport studies rather than pollutant cleanup. It does not make sense to study trash rather than clean it up....Trash collection is a highly feasible and effective control technology....With respect to the above notice, I think it is not wise for the San Francisco Regional Board to seek the listing of so many waterways for trash prior to reaching out to volunteer creek cleanup projects to remedy the issue.”**

Response: The only action taking place now is identifying waters as impaired based on available data. We cannot respond to concerns over the consequences of the 303(d) listings. The Listing Policy does not allow or direct us to reach out to volunteer creek cleanup projects prior to listing a waterbody. We have noted elsewhere in this response document that if a creek requires repetitive cleanup to address trash accumulation, then that is strong evidence that sources of trash to that creek should be controlled, and that beneficial uses are likely impaired on many or most of the days between cleanups.

**Comment 21.3: “If I am not mistaken, the Regional Boards are given 303(d) assistance monies from the Federal government but assign the cost burden for the extra 303(d) studies to whoever is held responsible for the trash- generally local and regional public agencies. In my opinion, this is a grave conflict of interest. To make matters worse, the public agencies cannot afford both the burden of the extra 303(d) administration and studies on top of the trash collection activities, so the trash collection activities will likely suffer. Please expand support for the waterway trash collection projects and not the 303(d) listings for wasteful trash studies and administration!”**

Response: We understand the commenter’s concern, however, the listing process is separate from addressing the impairment. At this point, we do not expect public agencies to undertake costly 303(d) studies or administration.

#### **Comment Letter 22: Doug Darling, Friends of Lake Chabot**

**Comment 22.1: The commenter writes in support of the proposed listing for Rindler Creek in Solano County. Mr. Darling also submitted approximately 500 photos relating to trash impacts on Rindler Creek.**

Response: comment noted.

#### **Comment Letter 23: Roger B. James and Lawrence P. Kolb**

The commenters express support for the proposed listings.

**Comment 23.1: “As the federal government seeks to identify ready to go public works projects to revive our economy, this may be an ideal time for installing trash removal devices. These devices typically have only positive environmental impact, require very little engineering compared to other public works projects, and create considerable employment to install. This would be consistent with Gov. Schwarzenegger’s call for addressing our backlog of public infrastructure needs.”**

Response: We are only taking action to identify waters as impaired based on available data. We are not considering implementation actions at this time.

**Comment 23.2: The commenters note the Water Board’s August 2001 Staff Report supporting the 2002 303(d) list:**



*Between now and the next 303(d) listing cycle, municipalities will be expected to assess trash impairments in their jurisdiction, as documented in annual reports to the Regional Board....In order to ensure that this finding results in characterization, assessment, and management of trash in municipal jurisdictions, urban creeks with no new information by the next listing process will be automatically listed as impaired due to trash."*

**"While a significant number of water bodies have been proposed for listing, several of the storm water programs have not assessed trash impairments and creeks within those jurisdictions have not been listed. While automatic listing may not be feasible following SWRCB guidance there is evidence that Walnut Creek, Vista Grande Canal and San Pablo Creek (upstream of San Pablo Reservoir) should be listed as impaired based on our February 28, 2007, submittal."**

Response: As the commenter suggests, automatic listing without affirmative evidence is not possible according to the listing requirements set forth in the Listing Policy. We truly appreciate the efforts of the commenters in gathering data on the creeks they surveyed.

When we reviewed the evidence submitted for Walnut Creek, we were only able to establish RTA scores for the drop structure site on November 16, 2006, and the pedestrian bridge site on February 17, 2007. Of these two, only the former has poor condition scores for the "threat to aquatic life" parameter. We had difficulty establishing scores for the other sites and dates due to a general lack of panoramic scale photos. Therefore, we did not have enough evidence to list this creek.

For Vista Grande Canal, due to a lack of panoramic scale photos, we were only able to establish RTA scores for the site between John Muir Drive and the Outlet bar rack on January 16, 2003, and the John Muir Drive and Lake Merced Blvd. site on the same date. Only the latter showed poor condition scores in the "threat to aquatic life" parameter, so there were not sufficient data to support listing this waterbody.

The listing for San Pablo Creek includes the portion of the creek upstream of the reservoir, based on RTA data collected in the lower watershed. We were not able to establish RTA scores for the submitted photos due to the small numbers of photos submitted for each location.

**Comment 23.3: "Solano County - There are several creeks (including Ledgewood and McCoy) in Solano County that had observations at single locations. Additional observations and photographs were made at these locations in 2007 and 2008, and the creeks continue to be impaired by trash. We urge the RWQCB to require trash assessments at these two creeks for future listing considerations and/or enforcement of existing NPDES permits."**

Response: We appreciate the comment, and will consider any new data in the next listing cycle.

**Comment 23.4:** “It is discouraging to note that there’s been no discernable significant reduction in the amount of trash being found in the Bay Area’s creeks, wetlands and the Bay, even though municipalities have been regulated by NPDES storm water permits for over 18 years, and an estimated \$700 million has been spent by those programs during this period. The RWQCB’s next step in addressing the Bay Area’s trash problems need not wait for adoption of a TMDL (which may be some years away). The Board has the responsibility, and all the legal authority it needs to take action on trash right now. Enforcement actions, at least for the worst sites should be taken now.

Response: The evidence of widespread and persistent trash impairments motivated the listings of 26 water bodies during this listing cycle. We do not anticipate that the Water Board’s next step will be a trash TMDL since, as the commenters suggest, there are other regulatory authorities that the Board can use to pursue more rapid improvement of waters impaired by trash.

### **Comment Letter 24: Bay Area Clean Water Agencies**

**Comment 24.1:** BACWA requests, “based on new information and data and the establishment of new evaluation guidelines,” that the Water Board “reconsider the impairment assessment for selenium and find that selenium is not impairing the San Francisco Bay beneficial uses and should not be included on the 303(d) list....” The commenter references control strategies at oil refineries since the 1998 and 2002 listings; and shifts in the food web of the North Bay due to invasion of the overbite clam (*Corbula amurensis*); new information on selenium concentrations in the tissues of marine species including diving ducks, white sturgeon, and nesting bird eggs “that are protective of both wildlife and the health of human consumers” of fish; attainment of the current water quality objective for selenium throughout the Bay, except for Alviso Slough.

Response: We disagree with the conclusion stated by the commenter that selenium is not impairing San Francisco Bay beneficial uses. While there is some new information that exists that could be used to support delisting, e.g., new exposure assumptions relative to the human health risk of consuming diving ducks, there is also information about the risks to aquatic life, specifically sturgeon, due to exposure to selenium in their diet that is currently under review as part of the North Bay selenium TMDL. We review aspects of the selenium listing presented by the commenter below.

*Human Health:* There is an existing human health advisory issued by the California Department of Health Services in 1987 for consumption of two species of ducks (Greater Scaups and Surf Scoters) from the Bay-Delta area that supports the listing. The commenter points to the new recommended dietary allowance for selenium used by the State’s Office of Environmental Health Hazard Assessment (OEHHA) in 2008 to establish screening concentrations for fish consumption advisories as new information that should support the delisting for selenium. While we agree that application of these exposure assumptions to the duck tissue advisory may lead to removal of the advisory,

this change in the advisory is not yet in place. As part of the North Bay selenium TMDL project, we will work with OEHHA to resolve this issue.

*Wildlife (diving ducks, nesting bird eggs):* Based on new information relative to diving ducks and eggs, conditions in the Bay seem to be improving and may have a lesser than expected impact on diving ducks. However, there are still some concerns raised by stakeholders in the North Bay selenium TMDL project that the overall decline in the diving duck population wintering in the Bay-Delta area might be linked to selenium. Selenium body burden might be such that it adversely affects not only the ability of these birds to produce eggs but even causes incapacity to complete their journey to the breeding grounds. This is a scientific uncertainty that will be further evaluated as part of the North Bay selenium TMDL project.

*Aquatic life (white sturgeon):* Based on our review of selenium bioaccumulation and the resulting toxicity for species that are most at risk from selenium in the North Bay, it appears that fish, specifically those whose diet is based on consumption of benthic organisms, such as the clam-eating white sturgeon, are impaired. In addition, this fish has an unusual reproductive biology that significantly affects the bioaccumulation of selenium. Through the North Bay selenium TMDL project, we are evaluating the available toxicity studies to establish a threshold tissue concentration protective of white sturgeon. USEPA is also reviewing these data to support development of selenium water quality criteria for San Francisco Bay based on protection of fish species. Seventeen percent of the available data for white sturgeon (48 white sturgeon samples collected by the San Francisco Estuary Institute and the United States Geological Survey from 2000 thru 2006 – selenium concentrations ranging from 1.84 to 32  $\mu\text{g/g}$  dw) indicate exceedances of the threshold screening value proposed by the commenter of 12  $\mu\text{g/g}$  dry weight. In addition, it is likely that the level protective of sturgeon is significantly lower than the screening value proposed by the commenter. The average selenium concentration in sturgeon samples (8.6  $\mu\text{g/g}$  dw) also exceeds the draft wildlife criterion of 7.91  $\mu\text{g/g}$  dry weight, proposed by USEPA in 2004, and rejected by the US Fish and Wildlife Service as not being protective of wildlife.

*Water column concentrations:* We agree with BACWA that selenium concentrations in the water column in the North Bay are currently below the existing water quality objective of 5  $\mu\text{g/L}$ : however, the impact of selenium on wildlife occurs predominantly through dietary exposure and not through direct water contact/ingestion. As already mentioned, USEPA is reviewing the national water quality criteria for selenium, and is currently working on site-specific objectives for California with the San Francisco Bay as a pilot study, based on a fish tissue concentration-based criterion rather than the existing water column standard. Therefore, water column concentrations are not indicative of beneficial use protection and cannot be relied on to support delisting.

As we have pointed out, there are many scientific issues raised by the commenter that are being addressed through the development of a TMDL to address the selenium listing for the North Bay. There is an advisory committee and a technical review team

composed of stakeholders, including BACWA, that are working to resolve the scientific issues associated with the listing. We believe that delisting is not appropriate at this time for any San Francisco Bay segments. In addition, USEPA has advised that it does not support delisting at this time (personal communication, Diane Fleck, USEPA).

### **Comment Letter 25: Western States Petroleum Association (WSPA)**

**Comment 25.1: “We continue to assert that the Bay should not be listed as impaired for selenium. While studies continue to evaluate the level of impairment that might exist, there remains a lack of evidence to maintain the listing.....We remain wholeheartedly committed to working with the Board to develop a TMDL for selenium that is based on the best science and modeling available.”**

Response: Please see response to comment 24.1. We appreciate WSPA’s continued commitment to working on the TMDL.

### **Comment Letter 26: County of San Mateo, Department of Public Works**

**Comment 26.1: “We agree that large amounts of trash in Colma Creek likely impact aquatic organisms and are not ideal conditions for recreation. However, we are not confident that this methodology proves adverse impacts to these beneficial uses and is scientifically defensible. This methodology should be evaluated and validated through a transparent scientific and public process before being used to list these water bodies for impairment. The process should include development of standards and assessments for data quality and quantity, as detailed in Sections 6.7.4 and 6.1.5 of the Water Quality Control Policy (2004), and evaluation of factors such as photograph resolution, scoring subjectivity, impairment thresholds, and site representativeness.”**

Response: See response to various key comments in Part I under “Scientific Integrity of Trash Assessment Methods.”

**Comment 26.2: “The proposed listing for Colma Creek includes eight exceedances for (WILD) and five exceedances for (REC-2) based on photographic samples. The photographs were taken on six dates between December 2002 and April 2006 at three locations. These photographs may not be representative of current conditions or conditions along the entire creek channel. Since 2006, a collaborative program has been implemented and has resulted in significant reductions in the amount of trash in and along Colma Creek. The proposed listing for the entire creek channel (approximately 5 miles) is based on a limited number of photographs from only three sites over a 3,000 foot reach of the creek (approximately 0.6 miles). The three sites listed above are all located in the tidally influenced, lower portion of the creek.**

Response: Please see responses to Comments 9.1 and 9.2.

**Comment 26.3: “We acknowledge that trash is an issue of concern in the Colma Creek and San Francisquito Creek watersheds and are committed to continued improvement. However, we do not support the proposed listings and suggest that:**

- 1. The Regional Board further evaluate and validate the methodology for the trash listing,**
- 2. Collect and review more recent data for Colma Creek that reflects current conditions, and**
- 3. Acknowledge the collaborative, proactive programs that are currently in place and allow sufficient time for these programs, the upcoming MRP requirements, and planned projects to be implemented and assessed for effectiveness before undertaking costly source analysis studies and regulatory mandates as part of the TMDL process, which ultimately may not be necessary.”**

Response: See response to various key comments in Part I under “Scientific Integrity of Trash Assessment Methods.” The public will have an opportunity to collect data reflecting current conditions and submit this information during the next listing cycle. Also see response to Comment 4.4 concerning listing in the context of ongoing or anticipated control measures.

## **PART III: STAFF RESPONSES TO ISSUES RAISED AT THE JANUARY 14, 2009 TESTIMONY HEARING BEFORE THE WATER BOARD**

In this section, Staff responds to questions raised by members of the Water Board, and also to verbal comments from stakeholders that were either not responded to by staff or Board members at the hearing; or that were not included in written comments.

### **Board member Steve Moore**

**Board member Moore asked, "How would you explain that certain data the commenters said they submitted were not evaluated?"**

We evaluated and considered all readily available data we received by the February 28, 2007, deadline for data submittal stated in the December 4, 2006, solicitation letter. Data referred to by commenters that were more recently collected would not have been considered during this listing cycle.

### **Board member Rameshwar Singh**

**Dr. Singh had several questions about staff's standards for listing. "Depending on the length of the creek, what length has to be full of trash, or do you have certain criteria for adding that creek to the 303(d) list?...Just how many site-specific photographs do you have to take? Do you measure the linear length of the stream? Or check out a certain number of sites? I just want to make sure the standard is very consistent and unquestionably biased.**

Response: We applied a consistent set of rules in evaluating trash data. Namely, we listed creeks for trash if there was evidence that the trash problem exists in the creek at multiple locations and over an extended period of time. Additionally, for photographic evidence, we required both close-up trash photos and panoramic contextual photos in order to establish a "virtual" rapid trash assessment score. We explain more thoroughly our rationale for listing entire creeks for trash in our previous response to the key comment on "spatial representation" in Part I.

**"Staff should take into account new photographs and recent evidence" of the status of trash in creeks proposed for listing. "When we...list, the information must be accurate, and must be based on the current situation."**

Response: The December 4, 2006, solicitation letter explained that the cut-off date for data to be considered for this listing cycle was February 2007. We cannot continually allow additional data to be submitted because we would never have the opportunity to complete an evaluation. We have to move forward with the evaluation based on the data that were readily available as of February 2007. The public may submit additional data for consideration during the next listing cycle.

**Dr. Singh stated his support for listing limited reaches of a long creek.**

Response: The fact that we reviewed data from dozens of creeks in the Bay Region and found problem areas on more than two dozen suggests that the trash problem is not restricted to just a few isolated areas. It is a widespread problem. It also does not make practical sense to restrict listing to the 100-foot creek sections surveyed using the trash assessment or photographic methods. Our approach in this listing cycle was to focus on the available data from trash assessments and photos and identify trash problems comprehensively rather than so narrowly that we might erroneously or prematurely suggest that impairment is isolated to just a few small creek sections. Listing entire creeks is not expected to have a meaningful impact on the remedies employed to deal with the problem. We do not expect local governments to spend time or resources trying to solve trash problems where they do not exist. Please see the previous response to this issue in Part I under the key comment "Spatial Representation of Trash Data."

**Dr. Singh stated that staff should take into account trash reduction efforts of cities and counties, and the budget they are spending on these activities.**

Response: We are required to evaluate data to assess whether water quality standards are being met in accordance with the Listing Policy. The Listing Policy does not provide a means of taking into account trash reduction efforts in the context of evaluating whether water quality standards are being met.

### **Board member Terry Young**

**Dr. Young asked why staff is not recommending listing for PBDEs at this time. "Can you speak to whether we are going to be getting sufficient information in the next couple of years on both sides of the question – exposure and effects?"**

Response: Staff responded that we continue to collect data through the Regional Monitoring Program regarding levels of PBDEs in biota, including sportfish and bivalves, and in sediment and the water column. We are working with the San Francisco Estuary Institute (SFEI) as part of the Regional Monitoring Program to research the literature on effects to aquatic life including wildlife that would be relevant to San Francisco Bay and to identify opportunities to support studies that would establish effect thresholds.

**Dr. Young restated her hope that additional information will inform a future PBDE listing decision. She stated her support for elevating the issue of ocean CO<sub>2</sub> to the State Water Board.**

Response: comments noted.

### **Jody Hall Esser, County of Santa Clara Director of Planning and Development**

**She requested more time to review staff's written responses to comments, before the adoption hearing. "We believe the February turnaround time is too short. For us to**

receive comments or responses to our comments from your staff, have an opportunity to consider those, potentially prepare additional comments within a 30-day period, we do not believe this is sufficient....We ...recommend that you not move as quickly as is being proposed. We believe there is additional data which is absolutely necessary....[The] data available to you ...are insufficient.”

Response: As indicated at the testimony hearing, the public process for listing does not provide an opportunity for the public to review our responses to comments and offer additional comments to our responses. Our December 4, 2006, data solicitation letter explained that the cut-off date for submitted data to be considered for this listing cycle was February 2007. We cannot continually allow additional data to be submitted because we would never have the opportunity to complete an evaluation. We have to move forward with the evaluation based on the data that were readily available as of February 2007. Additional data may be submitted for consideration during the next listing cycle.

**Greg Van Wassenhoue, County of Santa Clara Agricultural Commissioner**

“Several agricultural operations in Santa Clara County abut creeks that will be listed...[and] there is trash that gets dumped illegally along those creeks.” He noted that photos that show possibly illegal dumping are dated April 2003 and April 2006. “In my opinion that does not represent a temporal span of time along [the] creek, especially if our growers have a May cleanup month....If the length of time could be expanded over a longer period, we might get better data from the photos.”

Response: The task at hand is to identify waters that are not meeting water quality standards. We used both data from an established trash assessment method and applied this method to submitted photographic evidence. We are not required to identify the source or cause of the impairment. If there are photos showing poor trash conditions at a water body on dates three years apart, this strongly suggests that the problem is persisting through time and is not only limited to just the dates represented in the photos.

**Mr. Van Wassenhoue noted a possible future single-use bag ordinance in Santa Clara County, or a statewide bag law that could significantly reduce bag trash in the future. “We think that some of these [efforts] ought to be evaluated...before we move forward with a TMDL.”**

Response: This public process is about our impaired waters list. During any future TMDL process, we will consider remediation efforts being done and potentially additional efforts needed. The TMDL process would have its own public participation component as well.



**Jeff Roubal, City of Concord**

**“The City respectfully requests the Board defer any determination that Mount Diablo Creek be added to the list of impaired water bodies” until current data is available and reviewed.**

Response: Our December 4, 2006, data solicitation letter explained that the cut-off date for submitted data to be considered for this listing cycle was February 2007. We cannot continually allow additional data to be submitted because we would never have the opportunity to complete an evaluation. We have to move forward with the evaluation based on the data that were readily available as of February 2007. Additional data may be submitted for consideration during the next listing cycle. See also the response to Comment 8.1.

**Chris Sommers, Santa Clara Valley Urban Runoff Pollution Prevention Program, Watershed Monitoring and Assessment Program Coordinator**

**“The applicability of the Rapid Trash Assessment method in different types of water bodies should also be addressed....We are finding that you might not be listing important water bodies that are channelized or do not have riparian vegetation.”**

Response: The RTA method is not intended as a means to assess all aspects of the trash problem. For example, channelized water bodies or those without extensive riparian vegetation may be conveyances for trash, but the degree to which these types of water bodies may be conveying trash may not be detected by the RTA method. That does not invalidate the method, however. The RTA method is aimed at evaluating the trash that can be seen and does not purport to be a tool to assess the degree to which water bodies act as trash conveyances. Therefore, we are using the RTA method appropriately for what it can accomplish.

**References:**

McCauley, Shannon J., Bjorndal, Karen A. 1999. *Conservation Implications of Dietary Dilution from Debris Ingestion: Sublethal Effects in Post-Hatchling Loggerhead Sea Turtles*. Conservation Biology. Volume 13, No. 4. August.

U.S. EPA. 2001. *Draft: Assessing and Monitoring Floatable Debris*. EPA-842-B-02-002.

Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). 2006. *Memo: Development of Urban Rapid Trash Assessment Protocol*. March 13, 2006

SF Bay Regional Water Quality Control Board (SFBRWQCB). 2007a. *A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams*. April 2007.

SF Bay Regional Water Quality Control Board (SFBRWQCB). 2007b. *Staff Response to Peer Review Comments on: Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams*. April.

U.S. Environmental Protection Agency (U.S. EPA). 2009. *Personal Communication with Diane Fleck of U.S. EPA*. February.