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June 16, 2017

Submitted via email to: commentletters@waterboards.ca.gov

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

Re: Comment Letter - 303(d) List Portion of the 2014 and 2016 California Integrated Report

Dear Ms. Townsend:

This letter is submitted on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) regarding the listing for Guadalupe Slough for water toxicity pursuant to the *Proposed Statewide Clean Water Act Section 303(d) List for the 2014 and 2016 California Integrated Report*. SCVURPPP is an association of 13 cities and towns¹ in the Santa Clara Valley, unincorporated Santa Clara County and the Santa Clara Valley Water District.

Along with other San Francisco Bay Area public agencies, SCVURPPP participants share a common National Pollutant Discharge Elimination System (NPDES) permit to discharge municipal stormwater to receiving water bodies in the San Francisco Bay Area. Since its inception, SCVURPPP has been a recognized leader in stormwater management and monitoring in the San Francisco Bay region, and continues to be dedicated to protecting and improving the quality of our water bodies.

SCVURPPP submitted timely comments dated May 12, 2017 to the State Water Board (SWB), Surface Water Quality Assessment Unit requesting that the SWB review the San Francisco Bay Regional Water Quality Control Board's (RWB) listing adopted April 12, 2017 for water column toxicity in Guadalupe Slough (Decision ID 66762). A copy of the May 12, 2017 comment letter is attached as is a copy of the electronic notification that the comment letter had been received by the SWB.

Our May 12, 2017 letter presented additional information and analysis of existing information in the administrative record that we believe provide ancillary lines of evidence that support a conclusion that there is insufficient information to reach the determination that at least one beneficial use is not supported in Guadalupe Slough and that a 303(d) Category 5 listing and TMDL are needed. SCVURPPP believes that the weight of evidence supports changing the Guadalupe Slough water column toxicity listing from Category 5 to Category 3 and respectfully requests that the SWB make that change.

¹ Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga and Sunnyvale.

Ms. Jeanine Townsend
June 16, 2017
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Please contact me at (510) 832-2852 or Dr. Tom Hall (extension 110) if you have questions regarding the comments or recommendations included within. We look forward to continuing to work with SWB and RWB staff during adoption of the 2016 303(d) list.

Sincerely,



Adam W. Olivieri Dr.PH, P.E.
SCVURPPP Program Manager

Attachments:

- 1) SCVURPPP May 12, 2017 Comment Letter to SWB with Request for Review of Specific SFBRWQCB 303(d) Listing Recommendation (Guadalupe Slough water column toxicity)
- 2) Notification of SWB Receipt of SCVURPPP May 12, 2017 Request for Review of RWB 2 Guadalupe Slough Listing Decision

cc: Tom Mumley, Naomi Feger, Richard Looker - SFB RWB
Melody Tovar, City of Sunnyvale
SCVURPPP Management Committee



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San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

May 12, 2017

Submitted via email to: WQAssessment@waterboards.ca.gov

Surface Water Quality Assessment Unit
State Water Resources Control Board, Division of Water Quality
P.O. Box 100
Sacramento, CA 95814

**Re: Request for Review of Specific Regional Board Listing Recommendation - 303(d) List
Portion of the 2016 California Integrated Report**

Surface Water Quality Assessment Unit:

This letter is submitted on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) regarding the listing for Guadalupe Slough for water toxicity pursuant to *Clean Water Act Sections 303(d) and 305(b) 2016 Integrated Report for the San Francisco Bay Region* (Integrated Report). SCVURPPP is an association of 13 cities and towns¹ in the Santa Clara Valley, unincorporated Santa Clara County and the Santa Clara Valley Water District. Along with other San Francisco Bay Area public agencies, SCVURPPP participants share a common National Pollutant Discharge Elimination System (NPDES) permit to discharge municipal stormwater to receiving water bodies in the San Francisco Bay Area. Since its inception, SCVURPPP has been a recognized leader in stormwater management and monitoring in the San Francisco Bay region, and continues to be dedicated to protecting and improving the quality of our water bodies.

SCVURPPP appreciates the opportunity to submit additional comments regarding specific proposed 2016 revisions to the 303(d) list for the San Francisco Bay Region. SCVURPPP submitted timely comments dated March 13, 2017 on the proposed listings. Our specific comments on the Regional Water Board's (RWB) actions on the proposed listings April 12, 2017 are related to the continued impairment listing of Guadalupe Slough for water toxicity (Decision ID 66762). We present additional information and analysis of existing information in the administrative record that we believe provide ancillary lines of evidence that support a conclusion that there is insufficient information to reach the determination that at least one beneficial use is not supported in Guadalupe Slough and that a TMDL is needed.

Instead we believe that the available information supports the conclusion that because the water quality information is insufficient to determine an appropriate decision recommendation, that the Guadalupe Slough water toxicity evaluation should be moved from Category 5 to Category 3 pending collection of additional information to assess current water quality conditions.

COMMENTS

1. Guadalupe Slough Background Information

Guadalupe Slough is a tidal slough that connects to Lower South San Francisco Bay (LSB). The LSB is delineated as the Bay south of the Dumbarton Bridge. The attached Figure 1 shows the LSB and the location of Guadalupe Slough. The Sunnyvale Water Pollution Control Plant (WPCP) discharges

¹ Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga and Sunnyvale.

about 10 mgd of advanced secondary filtered and nitrified effluent to Moffett Channel which flows into Guadalupe Slough and into LSB.

Guadalupe Slough drains an 85-square-mile watershed. Historically, the Guadalupe River drained through Guadalupe Slough to the Bay. However, the river was diverted to Alviso Slough in the early 1900s during construction of the salt ponds. Presently, Guadalupe Slough conveys flow from San Tomas Aquino Creek, Calabazas Creek, Sunnyvale East and West Channels, and pumped flow from the independent storm-drainage systems of the City of Sunnyvale (the Sunnyvale Stormwater Pump Station that pumps into Calabazas Creek, the Lockheed Stormwater Pump Station that pumps into Moffett Channel, and a small pump station operated by the Twin Creeks Sports Complex that pumps into the Sunnyvale East Channel).

Guadalupe Slough is relatively narrow with depths of 5 to 10 feet at high tide. There is a significant amount of tidal exchange, and estuarine conditions extend into the upper reaches of the slough. The attached Figure 2 shows historic Guadalupe Slough monitoring stations including Station C-1-3 where the water toxicity data for the 303(d) assessment were collected from 1994 - 2001.

Station C-5-0 is at the mouth of Guadalupe Slough. Station C-4-0 is close to the location where adjacent former salt pond A3W was breached several years ago and discharges to Guadalupe Slough. Station C-3-0 is where Moffett Channel joins Guadalupe Slough. The Sunnyvale West Channel joins into Moffett Channel just upstream of the Sunnyvale WPCP outfall discharge location. The Sunnyvale East Channel joins into Guadalupe Slough upstream of Station C-2-0.

2. Data Limited to RMP Special Study Results

The Regional Monitoring Program for Water Quality in San Francisco Bay (RMP) conducted a special study at Station C-1-3 in Guadalupe Slough from 1994 - 2001. The intent of that study was to evaluate the extent to which conditions in a tidal slough differed from the main water mass of LSB. Samples were collected twice a year for those eight years for most of the same parameters being evaluated for the Bay-wide RMP monitoring, including water toxicity.

Monitoring at Station C-1-3 was terminated after 2001 when results showed that Guadalupe Slough water quality was generally equivalent to that in the LSB. This was not unexpected given the high volume of tidal exchange that occurs each tidal cycle in Guadalupe Slough. Therefore there are no additional C-1-3 water toxicity test results beyond the 16 collected as part of the RMP special study.

3. Water Toxicity Only Found in Two 1997 Samples

The Fact Sheet for Guadalupe Slough indicates that two of the 16 samples collected at Station C-1-3 between 1994 – 2001 exhibited toxicity. The two samples which exhibited toxicity (<80% mean % survival) were for *Americamysis bahia* collected 01/22/1997 and 07/29/1997. The Fact Sheet states that data collected after 1999 follows the San Francisco Estuary Institute 1999 Quality Assurance Project Plan Regional Monitoring Program for Trace Substances (note: earlier name for the RMP). An inquiry to current RMP staff indicated that they were not aware of the QA procedures in place in 1997 before the subsequent (2000) implementation of the 1999 QAPP.

There were approximately 300 water toxicity test results (excluding controls) in the RMP data spreadsheet linked to the Fact Sheet. Of those results, only six showed 0% survival. Three of those six results occurred on 07/29/1997. Two of these three occurred in the Southern Sloughs (Guadalupe Slough Station C-1-3 and Coyote Creek Station C-3-0) and one within the LSB itself (Station BA10). The reported toxicity on 07/29/1997 diminished with distance but extended north of the Dumbarton Bridge to Redwood Creek where tests at RMP Station BA40 showed 33% survival.

It is unknown what the cause of the widespread toxic effect was on that date, whether it was some significant environmental event and/or perhaps a laboratory QA related issue with samples from that event. However it does indicate that the toxicity evidenced on 07/29/1997 was not unique to conditions in or solely related to Guadalupe Slough. The LSB main water mass quality is what

dominates water quality conditions in Guadalupe Slough and therefore toxicity would be expected to have been equally low during the times since 1997 in Guadalupe Slough.

In the water toxicity assessment for the LSB (Decision ID 65462), one of 12 samples exhibited toxicity. The toxicity was reported in the sample collected at Station BA10 in the LSB on the same day (07/29/1997) as noted above. In the LSB, samples were collected twice each year by the RMP from 1993 – 1997 and once during the summer of 2002 and 2007. It is noteworthy that the RMP reduced its routine water toxicity monitoring from twice each year to once every five years, because of the limited to non-existent water toxicity being detected throughout the Bay including the LSB. Frequencies were then increased after approximately 2012 to every other year to coincide with the frequency of the routine RMP sampling events for water column monitoring.

The most recent (2015) RMP water toxicity monitoring data showed zero toxicity at both of the two LSB stations monitored: historic station BA30 located at the Dumbarton Bridge and random station LSB061W located in the northeast portion of the LSB. Water column toxicity will be assessed again by the RMP during summer 2017.

SCVURPPP program staff along with San Francisco Bay RWB staff have participated for over 20 years in the RMP Technical Review Committee (TRC) and other RMP committees and workgroups. All participated in the discussions and supported the decisions that led to these reductions in water toxicity monitoring and associated reallocation of resources to other higher priority pollutants of concern to this Region.

4. Numerous Pollutant Management Actions Implemented Since 1997 Have Reduced Pollutant Generation and Discharge Loadings to SF Bay

The SCVURPPP March 13, 2017 comment letter on the San Francisco Bay Water Board's proposed 303(d) listings noted the numerous pollutant management actions that have been implemented by stormwater agencies, wastewater treatment plants, and others since 1997. While there has been limited additional water toxicity data collected since 1997 to verify the absence of toxicity and the improvement in water quality in Guadalupe Slough, we believe that the weight of evidence supports a defensible conclusion that these actions have reduced pollutant loadings from upstream sources.

The Sunnyvale WPCP that discharges to Guadalupe Slough via Moffett Channel has since 1997 implemented significant pollutant control activities through its NPDES permit requirements, Pretreatment Program, Pollution Prevention Program, and as a member of SCVURPPP through its participation in the numerous pollutant reduction actions required by the Municipal Regional Stormwater NPDES Permit (MRP) (NPDES Permit No. CAS612008).

Pesticides are being addressed by the SF Bay Regional Water Board's Water Quality Attainment Strategy (WQAS) for Pesticide-Related Toxicity for Urban Creeks that is implemented through the MRP. Another pollutant reduction action is long-term WPCP and SCVURPPP implementation of copper control measures required by NPDES mandated Copper Action Plans. This has included participation in the Brake Pad Partnership which successfully supported adoption of legislation (SB 346, September 27, 2010) that will result in the reduction in copper in brake pads (and other friction materials) to less than 0.5% by 2025.

The Sunnyvale WPCP has been conducting monthly acute and chronic toxicity tests since the 1980s. Sunnyvale has a long-term history of consistently being in compliance with the survival endpoints of these monthly tests, evidence that the WPCP treated effluent discharge was not and is not contributing to water toxicity in Guadalupe Slough.

5. Listing Relies Solely on Two 20-Year Old (1997) Data Points

We understand that the Listing Policy does not explicitly contain guidance on the age of data acceptable for listing decisions. Data age requirements were addressed in the July 2004 Functional

Equivalent Document (FED) for the Listing Policy (Issue 7G, pp. 236-238). As part of that Issue Description the FED states that:

“An underlying assumption of the listing process is that the data and information assessment represent current conditions in States waters. If very old data are used to make assessments, it is possible that the data do not represent current water quality conditions. Another confounding factor is that as sampling and analysis methods improve, older data may be less relevant or not comparable to newer data and information.”

“Many states require that the data and information used to justify a listing be reasonably current, credible, and scientifically defensible. The range of older data allowed in these programs is generally from 5 to 10 years.”

The pros and cons of providing data age guidance or using all data regardless of age were presented in the FED, with the recommendation made to use all data with some caveats:

“Older data can be used to represent current if it can be established that the water body has not changed over time. Conversely, if data are available before and after a change in the water body setting (e.g., a cleanup has been implemented or new permit conditions exists), it may be appropriate to base assessments on only the most recent data.”

“If the Policy allows the use of all data, whatever the age, it becomes incumbent upon the RWQCBs to use their judgement to assess the reliability and quality of the data.”

The RWB staff in making the Guadalupe Slough toxicity listing did not interpret the Listing Policy as allowing them discretion in assessing the reliability and quality of the 20-year old data or whether management actions had likely resulted in improved water quality. In the RWB Response to Comments on the SCVURPPP comment letter, their comment number 6.7 stated in part:

“We are sympathetic to the argument put forth in the comment, but these older data are the only available basis for making a listing determination. While it is possible that conditions have changed due to the {salt pond} restoration project, we do not have more recent data to assess the water quality improvement.”

We believe that there is sufficient uncertainty in the data to support not listing Guadalupe Slough and instead placing it in Category 3 (see following comment).

6. Weight of Evidence is Appropriate to Utilize Rather Than Single Line of Evidence for Guadalupe Slough Toxicity

The Listing Policy is clear in stating that a weight-of-evidence approach should be used for the assessment process and that Regional Water Boards have wide discretion in evaluating how data and information are to be evaluated as noted below (emphasis added):

“Data and information from water bodies shall be analyzed under the provisions of this Policy using a weight-of-evidence approach. The weight-of-evidence approach shall be used to evaluate whether the evidence is in favor of or against placing waters on or removing waters from the section 303(d) list.” (p. 1)

“Before determining if water quality standards are exceeded, the Regional Water Boards have wide discretion establishing how data and information are to be evaluated, including the flexibility to establish water segmentation, as well as the scale of spatial and temporal data and information that are to be reviewed.” (6.1.5 Data Quantity Assessment Process)

“Data used to assess water quality standards attainment should be actual data that can be quantified and qualified. Information that is descriptive, estimated, modeled, or projected may be used as ancillary lines of evidence for listing or delisting decisions.” (6.1.5.1 Water Body Specific Information)

While a weight-of-evidence approach was stated to have been used for the Guadalupe Slough toxicity listing decision, a disproportionate weight appears to have been given to the binomial test calculation per Table 3-1. The 1994 – 2001 data (just) met the minimum sample size requirements (16) and minimum

exceedance requirements (2). We believe that based on the various factors and limitations in the data and information as described above, that if greater discretion had been exercised as allowed by the Listing Policy, Guadalupe Slough either should not have been listed (Category 5) or should have been put into Category 3.

Category 3 criteria as cited in Appendix E to the RWB Integrated Report Staff Report pertain to:

“A water with water quality information that is insufficient to determine an appropriate decision recommendation, but the available data and information that does exist indicates beneficial uses may be potentially threatened.”

We believe that from a multiple lines of evidence weight-of-evidence Listing Policy evaluation approach, that the two data points from 1997 do not support a determination that a TMDL is required for water toxicity for Guadalupe Slough. We also maintain that the weigh-of-evidence supports a conclusion that based on all the pollutant management actions implemented since 1997, plus the multiple salt pond restoration actions implemented since that time, that 1997 data are highly unlikely to be representative of current conditions in Guadalupe Slough. Category 3 is thus the most appropriate place to include Guadalupe Slough in this current listing cycle.

7. Category 5 (TMDL Required) Listing Unintended Consequences

It appears that part of the reasoning for placing Guadalupe Slough in Category 5 (instead of Category 3) was a presumption that this would be a “no regrets” action and that instead it would be a simple matter to get Guadalupe Slough delisted during the next (2022) listing cycle. For example, the RWB in their Response to Comments to comment letter 7 (Santa Clara Valley Water District) comment 7.1 on the Guadalupe Slough toxicity listing stated the following (emphasis added):

“As stated in response to comment 6.7, we cannot reject data based on the age of the data alone, and we do not have more recent data showing that the water quality has improved. While it is possible that conditions have changed due to the restoration project, we do not have more recent data to assess the water quality improvement. We do not plan on immediately launching a TMDL project based on these data. Documentation of the water quality improvements owing to the restoration along with more recent toxicity data can be put forward in subsequent water quality assessment cycles, and this information may suggest that a de-listing is appropriate.”

SCVURPPP is fully committed to work with Sunnyvale and the RMP to develop a work plan and help fund additional water toxicity data collection at Station C-1-3 to verify current conditions. However SCVURPPP has significant concerns about the ability to collect sufficient data to comply with the binomial delisting requirements in Listing Policy Table 4-1.

At Guadalupe Slough Station C-1-3 there were two samples (from 1997) out of 16 total samples that exhibited toxicity. Per Table 4-1 an additional 12 to 20 samples (for a total of 28 to 36 samples) without toxicity would need to be obtained to qualify for delisting. However, if during that new data collection process even one additional sample exhibited toxicity, the number of new samples needed without toxicity would increase to 21 to 31.

This is a very high if not insurmountable bar to get over. There is an inherent 5 to 10% false positive test rate in chronic toxicity tests using mysids. This translates to 1 to 2 false positive tests out of every 20 tests conducted. Therefore, if placed into Category 5 and required to strictly comply with the binomial test criteria in Table 4-1, it may not be possible to ever collect sufficient non-toxic results to qualify for delisting.

We believe that this is a compelling argument for not listing Guadalupe Slough in Category 5 but instead placing it in Category 3 for water toxicity. The next steps would be the same, that additional data and information would be collected to support a re-evaluation of a listing decision during the 2022 listing cycle. However the potential endless monitoring do-loop of having to comply with the

strict Table 4-1 delisting requirements would be avoided. We believe this to be a much more rational approach to use of public funds.

Historically RWB staff have made very limited use of Category 3 with only one water body included (Little Butano Creek) in prior 303(d) listing efforts. In its response to comments (5.7) received from SFPUC RWB staff did modify the draft 2016 proposed Category 5 listing for Pacific Ocean at Fort Funston for indicator bacteria from Category 5 to Category 3. Samples were determined to be temporally unrepresentative since they were only collected during combined sewer discharge (CSD) discharge events, not year round.

“Staff agrees with the commenter that Fort Funston should not be listed, and, that instead of listing, we recommend that this water body be placed in Category 3 (insufficient information to determine beneficial use support, but data indicate that uses may be threatened).

“Four of these five exceedance are clearly associated with intense rainfall events and do not constitute a strong basis for Listing Fort Funston, because these data are not temporally representative of water quality conditions relevant to assessment of the water contact recreation beneficial use.”

We believe that the weight-of-evidence supports a conclusion that the existing (1997) Guadalupe Slough data are not temporally representative of current water quality conditions relative to assessment of the water quality toxicity beneficial use. Additional data needs to be collected to verify current water quality conditions and attainment of beneficial uses.

RECOMMENDATION

Change the proposed listing for Guadalupe Slough from Category 5 (TMDL required) to Category 3 (additional information required). SCVURPPP, in coordination with the RMP, is committed to assist in the collection of additional data and information needed to support a more definitive assessment of the current protection of beneficial uses in Guadalupe Slough during the 2022 listing process.

Please contact me at (510) 832-2852 or Dr. Tom Hall (extension 110) if you have questions regarding the comments or recommendations included within. We look forward to continuing to work with SWB and RWB staff during adoption of the 2016 303(d) list.

Sincerely,



Adam W. Olivieri Dr.PH, P.E.
SCVURPPP Program Manager

Attachments:

Figure 1. Lower South San Francisco Bay Monitoring Stations

Figure 2. Guadalupe Slough Monitoring Locations

cc: Tom Mumley, Naomi Feger, Richard Looker - SFB RWB
Melody Tovar, City of Sunnyvale
SCVURPPP Management Committee

Figure 1. Lower South San Francisco Bay Monitoring Stations (by City of San Jose)

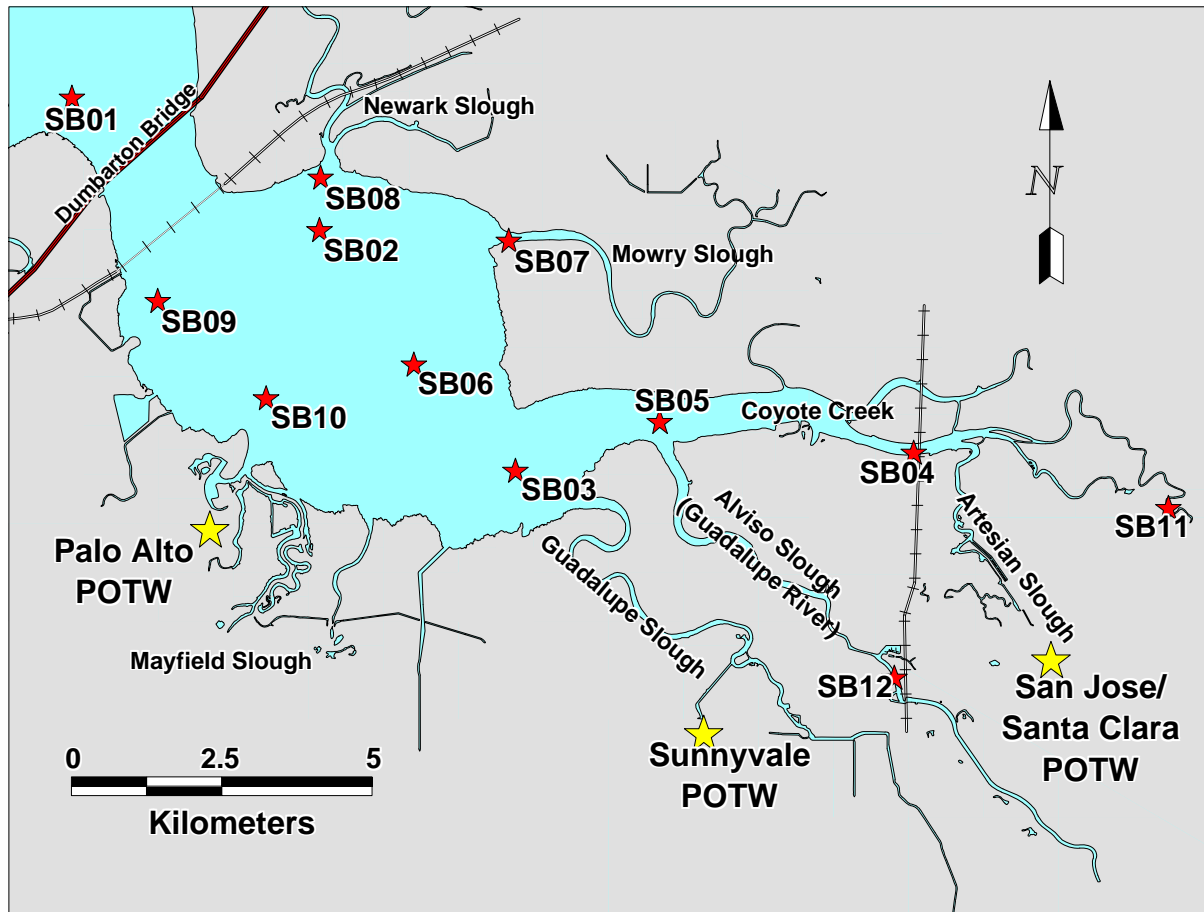


Figure 2. Guadalupe Slough Sampling Locations



Notification Receipt of SCVURPPP May 12, 2017 Request for SWB Review of RWB 2 Listing Decision

From: postmaster@cawaterboards.onmicrosoft.com [<mailto:postmaster@cawaterboards.onmicrosoft.com>]

Sent: Friday, May 12, 2017 2:09 PM

To: Tom Hall

Subject: Delivered: SCVURPPP Request for SWB to Review RWB 2 Listing of Guadalupe Slough for Water Toxicity

Your message has been delivered to the following recipients:

WQAssessment@waterboards.ca.gov (WQAssessment@waterboards.ca.gov)

Subject: SCVURPPP Request for SWB to Review RWB 2 Listing of Guadalupe Slough for Water Toxicity