Written Comments

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CALIFORNIA REGIONAL WATER
MAR 27 2006
QUALITY CONTROL BOARD

COUNTY of NAPA
BOARD OF SUPERVISORS

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March 24, 2006

Peter Krottje, Environmental Scientist
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

SUBJECT: PATHOGENS IN THE NAPA RIVER - TOTAL MAXIMUM DAILY LOAD (TMDL) AND PROPOSED BASIN PLAN AMENDMENT

Dear Mr. Krottje:

While the County has the same overall goal as the Regional Water Quality Control Board (RWQCB) "to minimize exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities," the Environmental Management and Conservation, Development and Planning Departments believe the proposed TMDL measures to meet the goal are too broad and potentially subject the County to unattainable implementation measures.

The County is concerned that inadequate notice was provided and therefore sufficient time has not been given to the public or the County to thoroughly review the report and implementation measures. The County is further concerned that many of the findings are based on limited samples, do not address the feasibility of implementation, contain gaps between the data and the conclusions reached, and fails to rely on credible, substantial evidence of solid value all of which could render the environmental analysis legally inadequate and susceptible to legal challenge.

The County has reviewed the subject staff report as well as the draft Basin Plan Amendment and has significant concerns regarding the report and the draft amendments including the proposed implementation actions intended to reduce pathogens in the Napa River Watershed. The conclusions reached in the report are based on a small number of samples. Implementation and compliance impacts to individual septic system owners have not been addressed adequately. There will be significant financial impacts to the County, Cities and other public agencies in Napa County to oversee the proposed implementation measures. These public monetary and capital impacts have not been adequately addressed.

There is a large disparity between existing data and the conclusion that septic systems are a significant pathogen source. This has not been the Environmental Management Department's experience. The County's sewage disposal system code requirements and the Department's current procedures and practices have many controls to assure the installation of appropriate

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systems that should not result in contamination of the watershed. The report indicated faulty on-site sewage treatment systems (septic systems) as a significant, controllable pathogen source. This assumption is made on very little data.

The Environmental Management Department typically issues very few septic systems repair permits annually. For aesthetic and other reasons, homeowners typically find it uncomfortable to live with a failing septic system and will seek a remedy through a repair permit. Considering this, and lacking other data to support the report's conclusion, it is difficult to understand why the Regional Board believes that septic systems are a significant pathogen source. (It is acknowledged that not all failing systems will result in visual or odorous impacts.)

The inference that septic systems are a controllable pathogen source is true, but limited in application. The Environmental Management Department has issued construction permits and/or overseen construction of septic systems for almost forty years. Our database covering the last twenty years shows that about 4,500 permits have been issued. This is approximately half of the suspected septic systems in the County. The remaining systems are unknown in location and construction.

The report states that each source must assess and monitor itself, as well as take all corrective action necessary. To locate and assess these unknown sources would be a monumental task and probably unachievable. The sampling, monitoring and enforcement of existing systems is well beyond the current resources in the Environmental Management Department and would be infeasible to implement.

Increased costs and responsibility will be borne not only by the County and other public agencies, but placed on private property owners, too. The timeline to complete the recommended goals could be a hardship on private property owners without sufficient monetary resources to implement the plan. Efforts should be concentrated to achieve the most cost effective results for the potential reduction in pathogen loading. If after five years no change has occurred, a significant amount of money and resources will have been wasted.

The use of the Sediment TMDL stakeholders group(s) as a means to outreach and an avenue to proceed with the Pathogen TMDL was flawed. Major stakeholders such as the Environmental Management Department and Publicly Owned Treatment Wastewater Facilities were not engaged until last summer. The Environmental Management Department was the first to engage those who are also major stakeholders in the TMDL process. Lack of adequate contact by the RWQCB raises concerns about future communication with stakeholders as the implementation plan proceeds and the willingness of the RWQCB to work with stakeholders on a collaborative basis.

In addition to the following concerns it needs to be noted that the assumptions regarding the impairment of the Napa River due to excess pathogens is derived from the small amount of sampling that has been done, which leads to concerns about future new/additional tributary sampling and the expectations from those results. Above all, the future liability for the County and the citizens of the Napa River is not explicitly stated.

PROPOSED BASIN PLAN AMENDMENT CONCERNS

- RWQCB staff has inferred that a nutrient TMDL will not be pursued if the pathogen TMDL is adopted. Confirmation of this assertion will help all parties focus on the primary objectives of the efforts being made by the RWQCB and the County.
- The Salvador Creek area has not been determined to have potential septic system sources. However, that potential is inferred without the presence of septic systems in the area.
- The impact of wildlife was dismissed except for site specific instances. We do not believe this has been reviewed thoroughly to substantiate its dismissal on a wider basis.
- The County needs to confirm that, if any other local responsible agency fails to act/implement necessary actions, the County will not be held liable or responsible to act in the event of such other agency's inaction.
- The report is unclear as to the extent of On-Site Sewage Disposal System (OSDS) review and/or monitoring that will be required and who will be responsible. The specifics of this program need to be established in order to fully evaluate the mitigation and implementation costs. Between 70 to 860 existing systems are identified, with the potential of all OSDS in the County (approximately 9000) to be included. The cost of staff time to identify and evaluate these systems is ignored. Implementation of the program goals will require a great deal of staff oversight.
- The failure to abate septic problems may result in a taking of the property if no alternatives/options for repairs are available to the landowner. Small parcels created over 50 years ago, may require an eviction if the septic system failure cannot be abated.
- State-issued individual Waste Discharge Requirements (WDR) or waivers would essentially bring new development to a halt. The County should retain its flexibility to accommodate local land use desires and use the local knowledge and expertise in this area.

SANITARY SEWER SYSTEMS

- The municipalities within Napa County have limited knowledge of the RWQCB's TMDL process and timeline, in addition to the proposed implementation requirements and associated costs. Program success requires that the municipalities be brought into the process and become part of the solution.
- The existing countywide NPDES permit should address the pathogen TMDL and Basin Plan concerns.

GRAZING LANDS

- As the proposal for State issued WDR's or waivers is under development, the specifics of these should not be included in the Basin Plan amendment. Language such as "Upon completion of the grazing lands WDR protocol, such measures will be considered and incorporated into the Basin Plan at that time" should be used.
- Grazing and range land professionals of Natural Resource Conservation Service and University of California Cooperative Extension feel the draft WDR conditions under development will unnecessarily over-burden livestock producers, effectively discouraging program participation and causing some operators to cease production all together.
- It is very unlikely that livestock grazing (in the traditional sense) has a significant impact on pathogen levels in the Napa River. Grazing that does occur in the watershed is very

distant and scattered in upland areas and is not likely to impact pathogen levels due to the present management of those operations and the degree to which the land is utilized (known operations maintain very high levels of residual matter/vegetative cover).

- Herbaceous grazing techniques have been successfully used in Napa County to manage fuel loading in the urban-rural wildfire interface; this grazing practice is a preferred alternative to controlled burns in these high-risk areas. Regulating grazing will effectively remove this tool at our disposal to suppress the likelihood and catastrophic force of fire in Napa County.
- Targeted grazing has also been successful in controlling noxious weeds in the County. Again, if grazing is regulated as proposed, a tool to control local weed infestations may be lost.
- Use of exclusion fencing along "blue-line" streams as a solution in a "worst case" scenario is neither practical nor an effective way to meet the program's goals, particularly when other means of livestock management are available that have been proven effective.
- A few rigid standards burdening grazing operators to comply with a State mandated WDR or waiver requirements would likely close what limited grazing operations exist in the Napa River watershed. Closure of these operations (i.e., non-renewal of grazing leases) would further reduce the diversity of agriculture in Napa County.

CONFINED ANIMAL FACILITIES

- Again, since the proposal for WDR's or waivers is under development in this area, the specifics of these should not be included in this amendment. In addition, other than disperse family/hobby livestock husbandry and a handful of horse boarding facilities; there are no "Confined Animal Facilities" in the Napa River watershed. The widespread impact of these "facilities" is questionable and likely highly localized at worst.

MUNICIPAL RUNOFF

- The pathogen reduction measures are not due to be incorporated until 2008. It is difficult to assess these future measures or associated costs in the present proposal.

MUNICIPAL WASTEWATER DISCHARGES

- As point sources of discharge are more easily identified and controlled/regulated, this section seems straight forward.

COST ANALYSIS

- Local costs were not included for new program implementation, management and oversight.
- Costs prior to completion of repairs were not considered. Weather, funding, scheduling, etc. could all postpone the repair completion. At a minimum pumping and hauling of wastewater should be considered.
- The identification of new monitoring sites in future years has an unknown impact on the County's resources. How those monitoring sites are identified and concurred with by the stakeholders is of issue. How will the four additional tributaries be determined and their associated implementation plans be developed and implemented? (Table 7-g)

PATHOGENS IN THE NAPA RIVER WATERSHED TMDL - STAFF REPORT CONCERNS

All of the above concerns also apply to the Staff Report used to support the Pathogen TMDL, but will not be repeated below. In addition, we have the following specific concerns about the Staff Report:

- In the introduction it refers to Chapter 4 amendments but the Basin Report indicates it is Chapter 7 that is amended. What other changes in Chapter 4 are needed?
- We object to the use of dated sampling from the 60's, 70's and 80's, at best 25 years ago. Much improvement has been achieved since that time. This old data is not relative in a current context and programs.
- Under Numeric Targets, it is noted that "septic tanks provide minimal primary treatment." However, septic tanks are accompanied by leach fields, which should provide adequate treatment except in the case of failure. For rural areas, septic systems are adequate means of sewage disposal. (Page 15)
- The City of American Canyon Wastewater Treatment Plant is on Mezzetta, not Elliot Drive. (Page 17, Table 6)
- Section 5.2 fails to mention the potential of sewer transmission systems, which are more likely to be found in urban areas than are septic systems.
- Section 5.2.3 suggests that the primary cause is sewer transmission lines. Due to the limited septic systems in this area, we suggest that septic systems are not the cause of excessive pathogen levels.
- Section 5.2.3 indicates that septic systems are included as sources, which is highly unlikely due to the lack of septic systems in the area.
- Section 5.3 suggests that in the Browns Valley Creek, Murphy Creek and Salvador Creek areas, septic systems are the primary concern, but the samples indicate that only Murphy Creek may have septic concerns,.
- Section 9.4 states that "a public entity with the financial and legal capability to assure that the system provides protection to the quality of the water of the State for the life of the development project" is responsible. We have many systems that were installed prior to 1978. Who is responsible in those cases?
- Napa is unique with its parcel size limitations for parcel splits. These large minimum parcel sizes address many of the concerns of more urban counties. Less development potential exists with large minimum parcels which mean less septic systems can be installed.
- It needs to be determined that if a TMDL is in place, but more restrictive regulations from the AB885 process are enacted, the TMDL will be the guiding document because it is more site specific. The Environmental Management Department has almost completed a local sewage ordinance upgrade that incorporates many water quality improvements that parallel the AB 885 process and provide enhanced protection of water quality.
- Section 9.4 on page 38 fails to mention the City of American Canyon in the municipal runoff discussion.
- Section 9.5 suggests that operating permits be required for all 9,000 OSDS's. The cost and feasibility of this is unsubstantiated. This is not a practical or feasible additional regulation. It is not focused to reduce pathogens in the Napa River watershed.
- Table 14 again does not indicate if all OSDS would be included in this proposal or only a subset that could impact the watershed directly. Even if it is a subset, that group is not clearly defined.

- Section 10.2 indicates that "stakeholders in the Watershed will collaborate to monitor selected water quality…" which would be a cost to stakeholders that is not included in the cost analysis.
- Section 10.2 indicates that an analysis will be done that includes review of county files. No county staff is allocated for this project. Who will be conducting this review? Even if it is not county staff, the validity of the data will need to be confirmed by county staff, due to the possibility for incorrect interpretation.
- Table 19 refers to "four additional tributaries to be determined" – this creates a concern that this is a never-ending analysis of the watershed rather than a plan to achieve delisting of the watershed.
- Section 10.3 suggests that it will "provide opportunities for stakeholder participation." This has not occurred to date. What are the assurances that it will be done by RWQCB in the future?
- What is the true probability that, after a TMDL standard is set and valiant efforts are made to achieve it, the standard it will be reduced?
- There are incorrect references to "Tomales Bay." It is not in Napa County and in most cases is not an appropriate reference.
- We have many concerns regarding Section 11.4 (Municipal Runoff Cost Estimates). First, it fails to mention the City of American Canyon.
- The estimated costs for OSDS fail to include the need to pump and haul prior to repair as well as staff time for overseeing these activities. In addition, many parcels may be of a limited capacity so that easements or community solutions will require much more time than simple repair. The impacts of these circumstances need to be included.
- The discussion of the Salvador area on page 49 does not include OSDS, which is inconsistent with the sample findings.
- Cost estimates are derived from Marin and Sonoma County staff statements, which may not reflect Napa's costs (Smith and Ng). The $500 to $1,000 estimate as a minimum is probably not realistic for the situation in the Murphy Creek area. This lower end estimate is well under the probable cost to repair.
- The scope of OSDS needs to be delineated. There is a huge difference between using all parcels (860) within 15 meters of the stream versus the approximate 70 parcels in the study areas
- The Environmental Management Department's existing Alternative Sewage Treatment Systems monitoring program costs are much higher than those stated in the report. More research on these costs is needed.
- The low estimate of $7,000 to conduct a repair is not realistic. It includes no staff costs, which will add $7,000-14,000 to the estimate to achieve the level of effort.
- Implementation should be balanced against the ability to acquire additional funding to provide for the services. The County does not have existing funds to implement these programs. If no outside funds are available, there is no mechanism to provide these services.

Overall, the private and public burden has not been adequately addressed. The value of this program should be compared to other programs in which the County is engaged to de-list the Napa River; in short, our limited resources require further review of which efforts are the most cost-effective. While some minor concerns raised in our previous letters have been addressed,

the major concerns are still not resolved. As outlined above, the Environmental Management and Conservation, Development and Planning Departments have significant concerns about the TMDL Technical Report and proposed Basin Plan Amendments. The financial impacts to the County and the public of implementing the recommendations as presented have not been adequately addressed, nor have the proposed implementation measures been clearly identified as the most effective means to meet the goal of "minimizing exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities" in the Napa River.

Sincerely,

Bill Dodd

Bill Dodd, Chair
Napa County Board of Supervisors

cc: Jill Pahl, Environmental Management Acting Director
Hillary Gitelman, Conservation, Development and Planning Director
Rick Thomasser, Flood and Water Control District Engineer
Patrick Lowe and Jeff Sharp, Conservation, Development and Planning
Michael Abramson, Napa Sanitation District Manager
Robert Weil, American Canyon City Public Works Director
Michael Brown, Napa City Public Works Director
Myke Praul, Yountville Public Works
Jonathon Goldman, St. Helena Public Works Director
Paul Wade, Calistoga Public Works Director
Larry Hoffman Edgerly Island Reclamation District
Watershed Information Center and Conservancy Board of Napa County
Thomas Mumley and Dyan Whyte, San Francisco Bay RWQCB, TMDL Division

Dedicated to Preserving the Napa River for Generations to Come

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March 27, 2006 **BY EMAIL (pkrottje@waterboards.ca.gov) AND US MAIL**

Mr. Peter Krottje
San Francisco Regional Water Quality Control Board
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Oakland, CA 94612

Subject: ***Pathogens in the Napa River TMDL – Proposed Basin Plan Amendment and Staff Report***

Dear Mr. Krottje:

On behalf of the Napa Sanitation District, we would like to thank you for the opportunity to provide comments on the draft ***Pathogens in the Napa River TMDL – Proposed Basin Plan Amendment,*** released in February 2006. We have reviewed the Regional Board's proposed amendments and associated Staff Report and have provided details comments below.

1. **We Support the Fact that the Only Requirement for Sanitary Sewer Systems Under the TMDL Will Be To Implement the New Requirements From the NPDES Division to Develop a Sewer System Management Plan (SSMP)**

   The Bay Area Clean Water Agencies and the Regional Water Board worked over several years to develop a comprehensive, and successful, sanitary sewer overflow control program. The Napa Sanitation District has participated in the development of this effort, and supports the program, despite significant new requirements. Since this program is very comprehensive, we agree that it is sufficient also for the purposes of the Napa River Pathogens TMDL, as indicated in the Basin Plan Amendment. This is a good public policy decision by Water Board staff.

2. **Basin Plan Amendment Language Needs to Be Revised to Be Fully Consistent with Regional Water Board SSMP Requirements**

   The proposed Basin Plan Amendment language as currently drafted is not consistent with the Sewer System Management (SSMP) requirements. As an example, the Water Board has specifically decided *not* to approve the SSMPs. Instead, collection system agencies will be submitting documentation indicating that the SSMP has been completed, and will retain the detailed plan on-site. The language should be revised to be consistent with the SSMP development as shown on the following page:

Table 7-e Trackable Implementation Measures for the Napa River Pathogen Total Maximum Daily Load			
Source Category	**Action**	**Implementing Party**	**Completion Dates**
Sanitary Sewer Systems	Comply with applicable Waste Discharge Requirements (WDRs)	Napa Sanitation District, City of Calistoga, City of St. Helena, Yountville Joint Treatment Plant, City of American Canyon, Napa River Reclamation District #2109	As specified in the applicable WDRs
	Submit to the Executive Officer ~~for approval~~ **documentation that** a **Sewer System Management Plan (SSMP) is being developed.** ~~plan and implementation schedule for evaluating sanitary sewer line performance and correcting identified deficiencies~~. Priority should be given to the Browns Valley Creek and Salvador Channel subwatersheds		~~January 2008~~**As specified in the SSMP Requirements**
	Report progress on ~~inspection and evaluation of sewer systems~~[b]**SSMP development**		~~Annually~~**As specified in the SSMP Requirements**

Note that footnotes "a" and "b" to this table should be deleted.

3. Implementation Actions for Sanitary Sewer Collection Agencies in the Staff Report Need to Be Clarified

On Table 15 of the Staff Report, which describes the proposed implementation actions for sanitary sewer systems, additional actions are indicated in comparison with the Basin Plan Amendment. We believe that the language in Item No. 1, requiring cooperation with the Water Board and Napa County DEM, is not specific enough to indicate that the requirement for sewer system collection systems is really only to provide sewer system maps to the Water Board staff for their use, as indicated in conversations with Water Board staff. In addition, Item No. 3 should be removed because there is no context for it. We request that the language be revised as shown below:

Table 15 Proposed Implementation Actions to Reduce Pathogen Loading from Sanitary Sewer Systems	
Implementing Party	**Action**
Napa Sanitation District; City of Calistoga; City of St. Helena; Yountville Joint Treatment Plant; City of American Canyon; Napa River Reclamation District #2109	1. In cooperation with the Water Board and Napa County DEM, **provide existing sanitary sewer maps to Water Board staff so they may** identify **potential** areas of greatest water quality concern ~~from collection system failure~~ based on proximity **of sanitary sewers** to impaired reaches, soil type, topography, and other factors. 2. Develop Sanitary Sewer Management Plan in accordance with Water Board/BACWA guidelines (see Section 9.4, pages 36-37). Plan should include provisions to identify and repair collection system failures. Priority should be given to areas identified as posing water quality risks. 3. ~~Report progress on implementation of pathogen reduction measures.~~

4. **Insufficient Data Exist to Implicate Sanitary Sewers As a Source of Pathogens to the Napa River**

   After reviewing the Staff Report, we are concerned that sanitary sewer systems are being implicated as a source of pathogens to the Napa Rive tributaries without sufficient supporting data.

   a. **General Statistical Methodology is Flawed** - An important assumption was made to deduce that sanitary sewer system leaks may be a source of pathogens to Napa tributaries. Namely that this source and other groundwater inflow sources are evident in the dry season when the signal is not swamped by surface runoff. However, the statistical analysis performed (Kendall's Tau B) found no significant correlation between the dry season and land use associated with sanitary sewer systems. In addition, the monitoring conducted by the San Francisco Estuary Institute, which implicates Browns Valley, is the only such study that compares wet season and dry season data, and the data is admittedly sparse and cannot support rigorous quantitative analysis, nor point to a source. The supplemental monitoring performed in 2004 has more statistical power, but samples were only collected during the dry season, thus comparison to wet season is impossible.

   b. **Browns Valley Data Do Not Point to Sanitary Sewers as a Source** - Supplemental monitoring indicated an increase in bacterial abundance in Brown's Valley between stations BR-5 and BR-6 and sewer lines are implicated because most of the residential parcels adjacent to the creek rely on sewer lines, though all. However, bacterial abundances remained high downstream of BR-5, which suggests that the source is not localized as a sewer line leak, because dilution and or bacterial die off would occur (as suggested in the Salvador Channel monitoring description in the Supplemental Monitoring section, page 23); and

   c. **Salvador Channel Data Do Not Point to Sanitary Sewers as a Source** - Supplemental monitoring indicates a localized increase in abundance of bacterial indicators in upper Salvador Channel, but not downstream during the dry season. Again, most of residential parcels rely on sanitary sewer lines, but not exclusively as the Staff Report Source Assessment section indicates. In fact, the Staff Report indicates that further monitoring to differentiate between sewer lines and septic systems necessary, and is planned for the summer of 2006. We understand that this monitoring will be conducted by Water Board staff.

Summary

While the Napa Sanitation District does not believe there is a linkage between the extremely small amount of data indicating elevated bacteria levels in the Browns Valley and Salvador Channel areas and sanitary sewer system leakage, we are fully committed to fulfilling the new requirements of a brand new regulatory program by the Regional Water Board to require the

development of a Sewer System Management Plan (SSMP) starting in July, 2005. We will also comply with any requirements in the anticipated state-wide Waste Discharge Requirements for sanitary sewer systems, when they become finalized.

We are happy to discuss any of these comments with you at your earliest convenience. Please contact me with any questions or concerns. Thank you again for the opportunity to comment.

Sincerely,

Michael Abramson

Michael Abramson
General Manager

cc: Napa Sanitation District Board of Directors
Jill Pahl, County of Napa, Environmental Management Acting Director
Hillary Gitelman, County of Napa, Conservation, Development and Planning Director
Rick Thomasser, Napa County Flood Control and Water Conservation District
Robert Weil, Public Works Director, City of American Canyon
Myke Praul, Public Works Director, Town of Yountville
Jonathon Goldman, City of St. Helena, Public Works Director
Paul Wade, City of Calistoga, Public Works Director
Thomas Mumley and Dyan Whyte, San Francisco Bay RWQCB, TMDL Division
Monica Oakley, Larry Walker Associates

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CALIFORNIA REGIONAL WATER
MAR 29 2006
QUALITY CONTROL BOARD

March 27, 2006

Mr. Peter Krottje
Environmental Scientist
San Francisco Bay Regional Water Quality Control Board
1515 Clay St. Suite 1400
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Subject: Proposed Amendment to the Water Quality Control Plan for the San Francisco Bay Basin Establishing a TMDL for Pathogens in the Napa River Watershed

Dear Mr. Krottje:

Thank you for the opportunity to provide comments on the draft ***Pathogens in the Napa River TMDL – Proposed Basin Plan Amendment and Staff Report*** (February 2006). On behalf of the City of Calistoga, I have reviewed the Water Board's proposed amendment and associated Staff Report. The City has two concerns with the proposed actions related to sanitary sewer systems: 1) The text should be clarified in the reports to conclusively state what type of "collaboration" and "cooperation" is required between the City of Calistoga and the Water Board with regards to future water quality monitoring; and 2) the data cited by the Water Board do not support the implication of leaky sanitary sewer lines as a source of pathogens to Napa River and its tributaries.

Comment #1 – The Staff Report includes references to collection system agency "cooperation" and "collaboration" with the Water Board to identify river stretches of greatest water quality concern. These references should be expanded to clarify the exact meaning of "cooperation" and "collaboration." Monitoring of receiving waters by collection system agencies is beyond the scope of the existing Sanitary Sewer Management Plan (SSMP) program and not appropriate unless sanitary sewers are conclusively identified as a pathogen source.

In the Staff Report (Table 15), there is an implementation action specified for the City of Calistoga requiring "cooperation with the Water Board and Napa County Dept. of Environmental Management to identify areas of greatest water quality concern from collection system failure based on proximity to impaired reaches, soil type, topography, and other factors." The type of "cooperation" should be clarified to state the particular actions required by the City. For example, it is unclear if the City will be required to provide maps

of their collection system or be expected to contribute financially to a receiving water quality monitoring program.

A similar requirement is listed in Section 10.2 of the Staff Report (page 43). In this section, it is stated that "Water Board staff and stakeholders in the watershed will collaborate to monitor selected water quality stations within the watershed and the Bay." Monitoring of receiving waters by collection system agencies is not appropriate at this time. Leaky sanitary sewer systems have not been conclusively identified as a source of pathogens in the Napa River, and until that determination is made, it is inappropriate for collection system agencies to participate in a monitoring program.

In Section 11.4 of the Staff Report (Economic Considerations, page 52) it is stated [for sanitary sewer systems] that all activities specified in the Basin Plan Amendment are currently required under the existing SSMP program and that no new costs are anticipated as a result of implementing the pathogen TMDL. This statement confirms that implementation of the SSMP program is a sufficient level of collection system agency involvement at this time. The references to additional *collaboration and cooperation* should be clarified to be consistent with this level of participation.

Comment #2 – There is insufficient data linking leaky sanitary sewer lines to pathogens in the Napa River. It is therefore too soon to require actions over and above those outlined in the existing Sanitary Sewer Management Plan program.

After reviewing the Staff Report, the City believes that sanitary sewer systems are being implicated as a source of pathogens to the Napa River and its tributaries without sufficient supportive data. In Section 5.3 of the Staff Report (Source Assessment Summary), it is stated that high bacteria levels were found in areas with mostly septic tanks, areas with mostly sanitary sewers, and areas served by both types of systems. As such, it is difficult to distinguish between septic system failure and sewers as a source of elevated bacterial abundances. In fact, it is concluded that further monitoring is necessary to assess the relative importance of each source. This monitoring is planned during the implementation phase of the TMDL.

The additional monitoring results should be evaluated to determine if sanitary sewers can be linked conclusively to pathogen levels in the Napa River. Until that determination is made, the collection system agencies should not be required to implement actions above those required in the existing SSMP program.

Summary

There is currently a lack of data to link sanitary sewer systems to elevated bacterial abundances in the Napa River or its tributaries, and certainly too soon to require actions over and above those outlined in the existing SSMP program. The language included in the Staff

Report and the Proposed Basin Plan Amendment must be clarified to eliminate any confusion over actions required by collection system agencies.

Please contact me (707-942-2828) or Monica Oakley at Larry Walker Associates (925-962-9700) if you have any questions about the City's comments.

Sincerely,

Paul W. Wade
Public Works Director/City Engineer

cc: Jill Pahl, Napa County Department of Environmental Management
James C. McCann, City Manager – City of Calistoga
Monica Oakley, Larry Walker Associates

Friends of the Napa River

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March 26, 2006
California Regional Water Quality Control Board
San Francisco Bay Region
Attn. Peter Krottje, Environmental Scientist
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Total Maximum Daily Load for Pathogens in the Napa River Watershed
Project Report of June 30, 2005

We appreciate the opportunity to comment on the above report which describes proposed amendments to the Water Quality Control Plan for the San Francisco Bay Basin establishing a Total Maximum Daily Load (TMDL) for pathogens in the Napa River watershed.

Friends of the Napa River is a nonprofit community organization dedicated to the restoration, protection and celebration of the Napa River and its watershed. Friends is a diverse group, providing the community's voice for a healthy river that has been neglected too long. We are actively involved in addressing different concerns about the Napa River such as watershed and habitat protection and restoration, flood protection, river and boating trails, river celebration, and sensible urban riverfront development. In terms of the study, we are concerned about the "beneficial uses" (see Table 1 below) that are impaired by pathogens.

We would like to thank the California Regional Water Quality Control Board (Water Board) for the extensive study and the presentation of the findings. Our comments are directed to the implementation plan as outlined on pages 40ff in the report. We are including excerpts from the report to establish the context for our Board members.

Background (excerpted from the study):

The Napa River and its tributaries are listed on the Federal Clean Water Act, Section 303(d) list as impaired by pathogens. They are also listed as impaired by sediment and nutrients. The Clean Water Act Section 303(d) requires states to establish Total Maximum Daily Loads (TMDLs) for pollutants causing water quality impairments to ensure that impaired waterbodies attain their beneficial uses.

The goal of this TMDL is to assess pathogen sources in this watershed, and to identify and implement measures to reduce pathogen loading.

Table 1
Beneficial Uses of the Napa River Watershed
Potentially Impaired by Pathogens

Designated Beneficial Use	Description (as defined in Basin Plan)
Water Contact Recreation (REC-1)	Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs.
Non-contact Water Recreation (REC-2)	Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, bathing, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Problem Definition

Elevated levels of fecal bacteria have been observed in the Napa River since the 1960s. These bacteria indicate the presence of fecal contamination and attendant health risk to recreational users of the river from water-borne pathogens. Past and current bacterial water quality studies in the Napa River watershed provide a consistent picture of widespread, but moderate and somewhat localized pathogen impairment. Water quality objectives are exceeded at a number of locations in the watershed at all times of year.

Pollutant Source Assessment

Data collected in the Napa River watershed, as well as similar work conducted in the region, suggest a limited list of possible sources that may contribute significant pathogen loads to the system. Primary potential sources are:

- On-site sewage disposal systems (septic systems)
- Sanitary sewer systems (sewer lines).
- Municipal runoff.
- Cattle grazing.
- Equestrian facilities.
- Wildlife.
- Domestic wastewater treatment facility discharge.

Implementation Plan

The implementation plan presented in the report provides a general description of proposed actions necessary to achieve water quality objectives. Actions are proposed for each potential controllable pathogen source category identified in the source assessment Proposed actions generally involve identification of sources, implementation of actions to reduce these sources, and reporting of progress in source reduction activities. Many of these actions may be accomplished through participation in ongoing or emerging Water Board or third party programs.

- **On-site sewage disposal systems (OSDSs; septic systems)**
  There are an estimated 9,000 OSDSs, or septic systems, in the Napa River watershed. The majority of soils in the watershed are classified as having severe restrictions for use as septic tank leach fields, due either to low permeability, slope, depth to bedrock, impermeable layers, or wetness. Septic systems—especially older systems—located on these soils are especially prone to failure, and may release pathogens to adjacent surface waters even when system failure is not evident.
  This source category appears to be a significant, but relatively localized source of pathogen loading during the dry season. While residential development is widespread throughout the watershed, high indicator bacteria levels were associated with residential development at only a few hot spots. Hot spots have been identified in the Browns Valley and Murphy Creek areas, but additional monitoring may reveal additional locations. Since a single failing septic system can deliver extremely large numbers of bacteria, it is possible that a very small number of systems are responsible for much of the observed impairment. It is likely that septic system failure is also a significant pathogen source during the wet season, but this effect tends to be obscured by wet season stormwater loading.
- **Sanitary sewer systems (sewer lines).**
  The cities of Napa, Calistoga, and St. Helena, and the town of Yountville are served by sanitary sewer lines.
  Elevated indicator bacteria levels were found in areas dominated by septic systems, areas served exclusively by sanitary sewer systems, and in mixed areas. Further monitoring during the adaptive implementation phase of this TMDL will be required to assess the relative importance of septic system failure versus sewer line failure and identify additional areas where septic/sewer loading is a concern.
- **Municipal runoff.**
  Approximately 8% of the watershed is occupied by residential or commercial development. Urban runoff delivers pathogens to surface waters from domestic animal waste, trash, wildlife, failing septic systems, and in some cases human waste from homeless populations. Homeless encampments are readily observed at a number of locations along the Napa River, and may be an important source of waterborne pathogens.
  Data indicate that urban stormwater is a significant, widespread wet season pathogen source in the watershed. Most of the urban areas in the watershed are associated with elevated wet season indicator bacteria densities.
- **Cattle grazing.**
  Pasture/hayfield covers approximately 5% of the watershed, with an additional 22% in herbaceous grazing land (i.e., rangeland) cover.
  These do not in general appear to constitute a major, widespread pathogen source in the watershed. However, high levels of pathogen loading from cattle grazing was observed at one location, and pathogen loading from additional sites may be identified with further monitoring.
- **Equestrian facilities.**
  Numerous—mostly small, noncommercial—equestrian facilities can be found in the Congress Valley and Coombsville areas in the lower part of the Napa watershed
  While monitoring data for the Napa River watershed have not to date identified pathogen loading from this source category, horse facilities have been established as significant pathogen sources elsewhere in the region (Water Board, 2005a). These facilities are therefore considered potential pathogen sources in this watershed. Further monitoring will be required to establish the locations and magnitude of pathogen loading from this source category.

- **Wildlife.**
  Most of the Napa River watershed remains undeveloped, providing habitat for abundant wildlife. Most warm-blooded animals are capable of carrying pathogen indicator bacteria as well as a wide range of actual human pathogens. Wildlife have been identified as significant pathogen sources in other TMDLs in California, but generally in locations where there are concentrated populations of wildlife.
  The low indicator bacteria levels observed at all of the sampling sites that are not heavily affected by human activity indicates that wildlife are not, in general, a significant pathogen source in this watershed. Local problems may be present in certain areas where wildlife densities are particularly high.
- **Domestic wastewater treatment facility discharge.**
  Six major publicly owned treatment works (POTWs) are permitted to discharge treated municipal wastewater to the Napa River under the National Pollutant Discharge Elimination System (NPDES). Initial concern over potential pathogen impairment of the river impaired was partially based on the presence of these discharges. Treatment plant upgrades since that time have greatly reduced pathogen loading from these sources.
  Recent self-monitoring reports from the six plants that discharge to the Napa River indicate that discharges are well below numeric targets, and that the discharges do not significantly contribute to pathogen loading under normal conditions.

(End of Excerpts)

Comments by Friends of the Napa River:

We generally agree with the findings and support a sensible implementation plan as presented in this report with proposed actions necessary to achieve water quality objectives. In particular, we encourage the plan's intent to educate the general public, property owners and City and County agencies about the dangers to human health from pathogens in the river. Advocacy and education go a long way to improve detrimental habits and sensitize citizens to appropriate behavior.

We offer our support in such efforts by providing informational booths for agencies at our events and participate in training programs for monitoring of the watershed. We would look to other successful programs like the Marin County RCD's called "Septic Matters" to help the owners of septic tanks assess their performance. This seems like an important initiative to reduce or eliminate the OSDS discharge of pathogens.

We understand that the final implementation plan will be developed in close coordination with stakeholders and welcome the opportunity to participate in this process. We strongly urge Water Board staff to discuss source control actions with all interested stakeholders and seek their input in regard to cost and feasibility through structured and well-publicized input meetings.

We applaud the overall intent of this implementation plan to restore and protect beneficial uses of the Napa River and its tributaries by reducing pathogen loadings.

Sincerely,

Bernhard Krevet
President, Friends of the Napa River

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NAPA COUNTY GROUP

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March 17, 2006

Peter Krottje
San Francisco Bay Regional Water Quality Control Board
1515 Clay St. Suite 1400
Oakland, CA 94612

Re: Napa River Pathogen TMDL

Dear Mr. Krottje:

On behalf of the Executive Committee of the Napa Group of the Redwood Chapter of the Sierra Club I would like to extend our sincere appreciation to the Water Board for the excellent work on the Napa River Pathogen TMDL. The studies that you have provided have been both interesting and informative.

The Napa County Sierra Club looks forward to continuing to work with the Board and other stakeholders to expand the knowledge base of our watershed and to seek proactive solutions to solving our common problems. We certainly appreciate the commitment of the Board to moving this work forward.

Very truly yours,

Elisabeth Frater
Chair

February 27, 2006

Ms. Tina Low
Mr. Peter Krottje
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Ste. 1400
Oakland, CA 94612

Dear Ms. Low and Mr. Krottje:

Thank you for the opportunity to comment on the proposed Staff Report and Basin Plan Amendment for the Napa River Watershed Pathogens TMDL and the proposed Staff Report and Basin Plan Amendment for the Sonoma Creek Watershed Pathogens TMDL. We appreciate your hard work to develop these TMDLs. We have reviewed both proposed Staff Reports and Basin Plan Amendments, and our comments are below.

1) The proposed Staff Report and Basin Plan Amendment for the Napa River Watershed TMDLs, and the proposed Staff Report and Basin Plan Amendment for the Sonoma Creek Watershed TMDLs state that Napa River and its tributaries and Sonoma Creek and its tributaries, respectively, are listed on the 303(d) list as impaired for pathogens, and that these documents address those listings. However, a specific list of the water bodies that are on the 303(d) list and that are addressed by the documents is not included. Please include a list of the specific listed impaired water bodies for which TMDLs are to be adopted.

2) Since the Basin Plan objectives are in fecal and total coliform, we recommend for each set of documents that the numeric targets, TMDLs, load allocations, and waste load allocations be presented in terms of fecal coliform and/or total coliform, as well as E. coli. This makes the TMDLs straightforward and reduces uncertainty concerning whether or not the TMDLs will achieve water quality standards.

We appreciate your recognition that EPA currently recommends that states use E. coli as a preferred bacterial indicator. Your analysis suggests EPA guidance values for E. coli are at least as protective as the Basin Plan's fecal coliform objectives. Although there is significant uncertainty regarding the actual ratio of E. coli to fecal coliform in streams, the analysis provides a plausible rationale to support the conclusion that attainment of < 126 CFU/100 mL E. coli as a monthly geometric mean would also result in attainment of the Basin Plan objective of <200 MPN/100mL fecal coliform (log mean).

However, it is not clear that the target of < 320 CFU/100 ml E. coli (90th percentile) will be protective of the Basin Plan objectives and the (revised) EPA guidance values cited in the Basin Plan. The revised EPA guidance values for E. coli reflect a human health risk value associated with a single sample E. coli value. A value of 320 CFU/100 mL E. coli reflects the risk associated with water bodies designated for between moderately used areas (298 CFU/100 mL E. coli) and lightly used areas (406 CFU/100 mL E. coli). We recommend you either clearly designate the water bodies as moderately to lightly used areas (limited REC-1 uses), or use a target of 235 CFU/100 mL as a 90th percentile single sample value, EPA's default criteria recommendation, reflecting an appropriate risk for designated beaches (full REC-1 uses).

No discussion is provided to show that the proposed targets for E. coli will be result in a TMDL that will attain the Total Coliform Basin Plan water quality objectives. This analysis should be included in each Staff Report.

5) The proposed Staff Reports and Basin Plan Amendments state that an implicit margin of safety exists that includes conservatively established targets. Based on the discussion concerning use of E. coli as

surrogates for fecal coliform, it is not clear that the targets are conservatively established. However, if the approach of expressing the TMDLs and allocations specifically in terms of the applicable standards is used, there will be little uncertainty regarding the relationship between the TMDL and the associated standards of concern. This would be sufficient to address margin of safety requirements.

6) In each of the proposed Basin Plan Amendments, at page 4, the sources of pathogens are listed, then discussed. Although the discussion includes wildlife, the list does not. For clarity and completeness, please add wildlife to the list of sources in each proposed assessment.

7) In each of the proposed Staff Reports, the source assessments qualitatively estimate loads for some of the source categories within the watershed, while other categories are not clearly defined. Some source categories are described as "significant," "potentially significant", or "not significant", while other categories are not qualitatively described. Source estimates should be quantified, if at all possible; if this is not possible, then all sources should be qualitatively assessed.

8) In the proposed Basin Plan Amendment for the Sonoma Creek Watershed, it is not clear in the Table of Allocations, which are load allocations and which are waste load allocations. Please clarify this.

Thank you for this opportunity to comment on the proposed Staff Reports and proposed Basin Plan Amendments. Please call me at 415 972-3480 if you have any questions or would like to discuss these comments further.

Sincerely,

Diane E. Fleck, P.E., Esq.
Water Division

COUNTY *of* NAPA

BOARD OF SUPERVISORS

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Office (707) 253-4386 FAX (707) 253-4176

April 11, 2006

Peter Krottje, Environmental Scientist
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Pathogens in the Napa River – Additional comments on the Total Maximum Daily Load (TMDL) and proposed Basin Plan Amendment

Dear Mr. Krottje:

The purpose of this letter is to provide additional comments to the County's March 24, 2006 letter concerning the proposed Total Maximum Daily Load (TMDL) allocation and a Basin Plan Amendment addressing pathogens in the Napa River Basin.

Napa County has the same overall goal as the Regional Water Quality Control Board (RWQCB): "to minimize exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities." Napa County hopes that the pathogen listing as a federally impaired 303(d) waterway can be removed either through pathogen reduction or the determination that the pathogen sources cannot be further controlled. Wildlife and homeless encampments most likely contribute to the pathogen TMDL, but there is no way to control these sources.

Pathogens are not a severe or widespread problem in the Napa River Watershed, but instead appear to be limited in localized areas. Napa County believes the Basin Plan amendment and associated pathogen thresholds established by the Total Maximum Daily Load (TMDL) measures to meet the goal are too broad and potentially confine Napa County to unattainable implementation measures.

Therefore, in addition to our previous comments in the letter dated March 24, 2006, Napa County proposes the following implementation measures as appropriate to proceed to the eventual delisting of the Napa River for pathogens:

- Identify and survey the septic systems within 100 feet of a Napa River tributary in the localized areas identified as problems: Salvador, Browns Valley and Murphy creeks. Due to the high clay soils in these areas, it is unlikely that a septic system failure could reach a tributary through either surface or subsurface travel from 100 feet away. Since the sewage system setback is currently 100 feet it will likely be older systems that were built prior 1969 when Napa County established a 100 foot setback from blue line creeks for septic systems. This may make the repairs more challenging.
- Work with the property owners where failing septic systems have been identified to repair those failures. Monitor the system until the repair is completed.
- Update a 'Living in the Country' brochure and mail out to all septic system owners identified

BRAD WAGENKNECHT MARK LUCE DIANE DILLON BILL DODD HAROLD MOSKOWITE

during the initial survey of the problem areas.

- If future RWQCB sampling determines other areas of localized concern during sampling of additional tributaries, the above procedures will be followed once Napa County determines that the samples warrant such action.
- Review the various river and tributary sampling that is being conducted by agencies within the County to further evaluate potential pathogen problems.
- Existing Sanitary Sewer Overflow plans, Municipal Wastewater Permits (including their discharge conditions) and Non-Point Discharge Elimination Permits and plans (including the 2008 proposed pathogen implementation actions) should be adequate to address all concerns related to sanitary sewer systems and stormwater/non-point systems. No additional implementation measures are necessary in these areas.
- The public process for developing Waste Discharge Requirements, Waivers and Exemptions for grazing lands and confined animal facilities is not completed and the requirements/standards have not been fully developed. This is a public process and stakeholders must be engaged to complete the final product. Educational outreach and implementation of Best Management Practices offer a practical and efficient means to reduce the risks of pathogen transmission from our few grazing operations and confined animal facilities.

Implementation measures and deadlines associated with the TMDL should be balanced with the achievement of additional funding to provide for resulting added services and programs. The County does not have additional funds to implement any new programs. If no outside funds are available, there is no mechanism to provide the needed services associated with the proposed TMDL/Basin Plan Amendment.

Napa County appreciates the work that has gone into these reports and wants to limit, to the extent possible, pathogen entry into the Napa River watershed. If you have any questions please feel free to contact me at (707) 253-4386.

Sincerely,

Bill Dodd

Bill Dodd, Chair
Napa County Board of Supervisors

cc: Jill Pahl Environmental Management Acting Director
Hillary Gitelman, Conservation, Development and Planning Director
Rick Thomasser, Flood Control District Engineer
Patrick Lowe and Jeff Sharp, Conservation, Development and Planning
Michael Abramson, Napa Sanitation District Manager
Robert Weil, American Canyon City Public Works Director
Michael Brown, Napa City Public Works Director
Myke Praul, Yountville Public Works
Jonathon Goldman, St. Helena Public Works Director
Paul Wade, Calistoga Public Works Director
Larry Hoffman Edgerly Island Reclamation District
Napa County Watershed Information Center and Conservancy Board
Thomas Mumley and Dyan Whyte, San Francisco Bay RWQCB

Peer Review
Total Maximum Daily Load for Pathogens in the Napa River Watershed
By Saied Mostaghimi
Virginia Tech

Problem Statement:
The introduction presents a very clear description of the limitations of the use of indicator bacteria for protection of human health. General description of the watershed characteristics are well presented.

Although it is common usage to name a TMDL report based on the impairment, technically the TMDL is for the pollutant estimated in the target TMDL load, e.g. biological impairments may be addressed with a sediment TMDL or a phosphorus TMDL, and the TMDL for the bacteria impairment in this study is developed with an *E. coli* TMDL.

Numeric Targets:
It is very unclear in this section whether water quality "objectives" are the same as water quality "standards", as the term "standards" is used in the discussion in Section 3.2, but not in the tables referred to for numerical targets. If they are not the same, what is the relationship between "objectives" and state "standards"? The statement that EPA recommendations will be used to set numeric targets, instead of the state "objectives" sounds like the TMDL will be developed for criteria more stringent than state standards. That does not sound defensible.

In the discussion of the Margin of Safety, this more stringent EPA set of criteria is used as justification for an implicit MOS. However, in looking at the details, while the geometric mean criterion would be more restrictive, the single sample criterion would actually be less restrictive, so the basis for this justification is questionable.

The statement of the geometric mean target also needs to include a period over which this calculation will be made. Is the mean to be calculated over a running 30-day period, a calendar-month, or some other time period? The target should also specify the minimum number of samples to be used in the calculation.

Source Assessment:
The sampling-based approach for locating bacteria source hot spots is a reasonable "weight of evidence" approach for identification of source areas and critical seasons, especially within an adaptive management framework.

One description of localized concentrations of resident waterfowl under general trends (p.18) is never considered under source assessments or later allocations. Since this appears to be a human-influenced concentration of waterfowl, I would have expected some type of action to improve management of this source.

Another part of the justification for the implicit MOS (p. 31) is that bacteria concentrations will only decrease downstream due to die-off. Pathogen re-growth is stated to be very unlikely (p. 33), but no support is offered for this reasoning.

TMDL and Allocations:
Another terminology inconsistency – density vs. concentration –needs clarification. When referring to TMDL requirements, reference is made to "concentrations", but thereafter reference is only made to "density". Common usage is for "density" to refer to the amount of a substance within a solid, while "concentration" refers to the amount of a substance within a liquid. If these terms are being used synonymously, it should be so stated upon first use.

There was no justification given for writing the WLA targets in terms of different parameters (enterococci and total coliforms) than the one used for the LA target (*E coli*). With different units, they can not be summed together to specify an overall TMDL, which seems a bit awkward and will probably be a tough sell to EPA.

Implementation:
It was not clear who will be providing the oversight to implementation? Will there be a local stakeholders advisory group involved?

Monitoring:
Will the proposed monitoring be sufficient to verify compliance? The specified monitoring is 5 consecutive weekly samples, twice a year. The TMDL is not stated to be applicable only during those two periods, so the justification needs to include the rationale that these are the critical periods for standards exceedences, and that compliance during these periods is assumed to ensure compliance during the entire year.