Appendix

Responses to Comments

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Responses to Comments

Part I: Staff responses to written comments submitted in response to September 5, 2008, Staff Report and proposed Basin Plan amendment

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RESPONSES TO COMMENTS

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INTRODUCTION

When considering approval of the Basin Plan amendment in May of 2008, the State Water Resources Control Board received written comments on the Basin Plan amendment that challenged the adequacy of the Environmental Analysis. To address these concerns, the Regional Water Quality Control Board (Water Board) requested that the item be pulled from consideration, to allow Water Board staff the opportunity to make clarifying revisions to the Environmental Analysis contained within the Staff Report, and related changes to the Basin Plan amendment. The Water Board then released a revised Basin Plan amendment and revised Staff report on September 5, 2008, for public review and comment[1].

The Water Board received four comment letters regarding the revised Basin Plan amendment and Staff Report: 1) Caltrans; 2) County of Napa; 3) Living Rivers Council; and 4) Napa County Farm Bureau. Our responses to these comments and earlier comments received by the State Board follow immediately below.

[1] If any substantive changes are made to the Basin Plan amendment after original adoption by the Regional Water Quality Control Board (Water Board), then the Basin Plan amendment must be readopted by the Water Board prior to consideration by the State Board.

PART I: STAFF RESPONSES TO WRITTEN COMMENTS SUBMITTED IN RESPONSE TO SEPTEMBER 5, 2008 STAFF REPORT AND PROPOSED BASIN PLAN AMENDMENT

Comment letter no. 1: California Department of Transportation

Comment 1.1: Caltrans appreciates the opportunity to comment. We strongly support efforts to protect human health and achieve the best possible water quality. In addition, we have been proactive in meeting TMDL goals within the San Francisco Bay Region. We are currently implementing many of the compliance measures discussed in the Staff Report.

Comment acknowledged.

Comment 1.2: Table 2 of the Basin Plan amendment (BPA) lists the major sediment sources including road-related sediment delivery. "It is our understanding that this [category] pertains mostly to unpaved rural roads, and thus Caltrans is not a contributor. A separate category [in Table 2] is urban stormwater runoff and wastewater discharges, which Caltrans falls under, based on values presented in Table 3b [wasteload allocations for urban runoff and wastewater discharges]." Later, Caltrans is identified as a responsible party in Table 4.4 [required implementation measures for sediment discharges associated with parks and open space, and/or public works]. In summary, the BPA leads us to believe that road-related sediment delivery listed in Table 2 is mostly contributed from unpaved rural roads; however, this should be clarified in the document.

Required implementation measures for Caltrans are listed in both Table 4.0 and Table 4.4. This is an artifact of how we defined and subdivided the sediment source categories listed in Table 2. The urban stormwater runoff and wastewater discharge category, with regard to calculation of discharges from Caltrans facilities, only considers discharges associated with construction and/or maintenance activities. The road-related sediment delivery source category considers discharges from operation of all public and private roads, paved and unpaved, within the watershed. Caltrans is one of several individual dischargers who share an allocation within this source category. Results of recent road erosion inventories conducted within the watershed along paved public roadways document that road drainage systems including road crossings over natural channels can be a significant source of sediment delivery (PWA, 2003a).

To clarify, the Water Board directs Caltrans to achieve the performance standards and actions specified in Table 4.4, consistent with requirements of the Statewide Stormwater NPDES Permit and Waste Discharge Requirements for Caltrans. Since all Caltrans roads in the watershed are paved, the primary focus of the inventory and actions to achieve the specified sediment delivery performance standard should be on opportunities for "stormwater drainage system retrofitting" (e.g., Provision F4, Order 99-06-DWQ), including the following: a) determine opportunities for retrofit and/or reconstruction of road crossings, as needed to convey runoff from the 100-year 24-hour duration storm event, effectively treat road crossings prone to plugging, correct road crossings prone to diversion, and stabilize gully erosion and/or landslides at road crossing outlets; and b) submit a schedule for implementation of sediment reduction actions by the completion

date specified in Table 4.4 of the Basin Plan amendment, as needed to achieve performance standards and support TMDL attainment by 2027.

Comment 1.3: We encourage the Board to coordinate the compliance schedule for this TMDL with other in the region. This would help with effective planning of resources and implementation controls to meet requirements.

We will do so.

Please Also Note: Caltrans comments to the State Board in May 2008, match the comments we received on the September 2008 draft of the Basin Plan amendment and staff report that are summarized above. Therefore, above responses also address these earlier comments.

Comment letter no. 2: County of Napa

Comment 2.1: Outreach and presentations by Water Board staff to explain the extent and purpose of recently proposed revisions was instructive and appreciated. We look forward to working with staff throughout the reminder of the process. It's our understanding that Water Board is proposing revisions based on comments received by the State Water Resources Control Board, questioning the adequacy of the environmental analysis, and specifically requirements pertaining to compliance.

Thanks for your acknowledgement and interest in working together. You are correct. Revisions presented in the 5 September 2008 draft of the Basin Plan amendment and Staff Report, respond to comments received by the State Board. Those revisions focused on the environmental analysis, and related additional specification of performance standards for nonpoint sediment discharge categories.

Comment 2.2: As noted in previous comments, we support the overall goals of the TMDL, and the County together with other stakeholders is taking many steps to conserve fishery resources, and appreciates the Water Board's support and assistance.

Comment acknowledged.

Comment 2.3: Although well intentioned, the proposed revisions are again a cause for concern due to additional uncertainties that proposed revisions raise, while not having fully addressed the County's earlier comments (see letter dated August 15, 2006).

Management actions that may be required on the ground to achieve the TMDL remain unchanged. Revisions to the Basin Plan amendment and staff report were made to clarify the environmental analysis, and to further specify performance standards.

Comment 2.4: Thanks for the opportunity to comment. More specific comments follow. We look forward to the opportunity to discuss our comments in more detail.

Comments acknowledged.

Comment 2.5: The geographic scope of the TMDL remains vague. It is unclear where proposed Basin Plan amendment performance standards and regulatory actions apply, particularly with regard to required implementation actions.

The Napa River Sediment TMDL and the habitat enhancement goals specified in the Basin Plan amendment, for the land types and roadways listed in Tables 4.1 through 4.4, apply to all parts of the Napa River watershed except areas upstream of municipal reservoirs ; all of these dischargers need to be included in the proposed sediment control

programs (WDR Waiver Programs). Minimum parcel size and/or pollutant discharge thresholds that would trigger the requirement to obtain a permit or waiver will be determined as part of the process of developing the WDR waiver programs.

It is also important to note that determining the scope and geographic extent for the WDR waiver programs is separate from adoption of the Basin Plan amendment, and the objectives for the WDR waiver programs are broader. Other nonpoint source pollutant control priorities in the Napa River and Sonoma Creek watersheds, including attainment of water quality objectives for pathogens and nutrients, addressing hydromodification impacts, and protection of all beneficial uses, will also be considered in determining the scope and geographic extent of the WDR waiver programs.

Comment 2.6: Absent waiver approval, explain how the Water Board would handle review/approval of the large volume of vineyard RoWDs [reports of waste discharge] that would be generated.

We expect to release a draft of the vineyard waiver in the winter of 2010. We are committed to developing all of the waivers listed in Tables 4.1 to 4.4 because we see these as the most efficient vehicle for achieving the TMDL. Please also see our responses below to Comment 2.7 and Comment 2.8.

Comment 2.7: No detail is provided regarding conditions of the waiver or how/when they will be approved. It likely will take a great deal of Water Board staff time to develop waiver requirements. Therefore, we request that you consider developing a unified waiver program [e.g., that all of the sediment source categories identified in tables 4.1 through 4.4 of the BPA be enrolled in one consolidated WDR and/or conditional waiver].

Initially, we plan to develop a waiver program for vineyards in the Napa River and Sonoma Creek watersheds, and to then to expand the geographic extent of the existing waiver program for grazing in the Tomales Bay watershed to the Napa River and Sonoma Creek watersheds. Once these waiver programs are established, we are open to amending one or both of these WDR waivers to include the land use categories and/or public roadways specified in Tables 4.3 and 4.4 of the Basin Plan amendment.

Comment 2.8: The compliance deadlines presented in the BPA implementation tables are not sufficient to successfully develop an effective yet flexible WDR waiver. Please explain how the Water Board envisions the waiver development process, and detail what the waiver requirements will be.

Acknowledging the significant delay in approval of the Sediment TMDL, and need to build local and Water Board institutional capacity, we have revised Tables 4.1 through 4.4 to extend the completion dates by two years from October of 2010 to October of 2012.

Comment 2.9: TMDL development has been unusually long and burdened with data and legal challenges. Please consider extending proposed completion dates [for required implementation measures for sediment discharges] by two years or more to allow ample time for developing and complying with applicable WDR waiver requirements.

Please see our response to Comment 2.8.

Comment 2.10: Suggested action items in Tables 5.1-5.4 are presumably part of the Water Boards recommended habitat enhancement plan. Although the action items appear to be voluntary (i.e., recommended), they have specified completion dates. Please confirm the actions are voluntary. We believe most of the dates listed cannot be met and should be eliminated or qualified based on funding and staff resources, and stakeholder derived priorities for the watershed. Furthermore, please explain how the Water Board intends to require the suggested deadlines be met.

Except for the State Water Board survey of illegal water storage (Table 5.2, Action 2.4), all recommended habitat enhancement actions are voluntary. Please also note that all, except for Actions 2.1 and 2.4 to protect or enhance baseflow (Table 5.2), are already underway, and recommended based on broad local support and participation. By listing habitat enhancement actions in the Basin Plan amendment, the Water Board formally establishes these actions as priorities for funding, permit review, and technical support. Finally, with regard to concerns about suggested completion dates, considering the significant delay in TMDL adoption, and that the State has recently enacted a freeze on all bond funded grants, all suggested completion dates in Tables 5.1 through 5.3 have been extended by two years from the dates listed in the January 2007 draft of the Basin Plan amendment previously adopted by the Regional Water Quality Control Board.

Comment 2.11: The County along with many stakeholders recognizes value of management objectives listed in Tables 5.1 - 5.4, and appreciates the Board's efforts in identifying possible actions to obtain them. We and others are presently working towards completion of many of the recommended action items, including stream restoration, fisheries monitoring, and watershed planning. One of highest priorities noted in TMDL staff report is monitoring the [number and] relative fitness of juvenile steelhead and timing of their outmigration. Napa County Wildlife Conservation Commission and Napa County RCD recently allocated funds for purchase of a trap to meet this identified need. County would appreciate any assistance the Water Board could provide in helping fund and maintain trap operation, as a key component of long-term fisheries monitoring program.

Please note that we have been working with the Napa County RCD to explore potential opportunities to obtain grant funding from the State Water Board and other organizations to maintain monitoring of salmonid smolts including outmigration timing, fitness, population level, and trends. Achieving these objectives for the monitoring remain very high priorities for the Water Board (see Basin Plan amendment, pp. 18-19).

Comment Letter no. 3: Living Rivers Council

We appreciate the opportunity to respond to the comments provided by the Living Rivers Council. Because comments 3.1 through 3.5, each relate to parts of a larger argument regarding a performance standard for vineyard stormwater runoff, our responses to all five comments are provided immediately after Comment 3.5. Similarly, the attached comments from Dr. Robert Curry, comments 3.RC1 through 3.RC5, each provide part of a larger logical argument regarding the vineyard stormwater runoff performance standard. For the same reason, our responses to all of these comments are provided immediately after Comment 3.RC5.

Living Rivers Council also incorporates by reference, the comments they provided to the State Water Board in May of 2008 on the version of Basin Plan amendment and Staff Report that was adopted by the Regional Water Quality Control Board in January of 2007. We also provide responses to these comments below.

Comments 3.1: LRC appreciates that the BPA now includes a performance standard for the quantity of storm runoff from vineyards. Based on the information contained with Table 4.1 of the Basin Plan amendment and page 80 of the Staff Report, we are concerned however, that the Water "Board may be prepared to accept" the peak runoff performance standard specified within the Fish Friendly farming Environmental Certification Program (e.g., vineyards should not increase peak stormwater discharge above pre-project conditions by more than 10-15% for the 2-, 5-, and 10-year events). LRC objects to this criterion for several reasons.

Please see our response below to Comment 3.5

Comment 3.2: First, the criterion does not account for the cumulative effects of other past closely related projects. For example, the criterion does not account for the effects of past projects developed before this criterion was required. Peak flows resulting from storm events may be significantly damaging already. In fact, evidence shows this is true in the Napa River watershed. Therefore, by allowing an increase of 10-15% above pre-project peak runoff for any new development will exacerbate a significant existing impact.

Please see our response below to comment 3.5.

Comment 3.3: Also, the criterion does not account for the effects of past land-use related impacts on peak flow that make the bed and banks of the Napa River much more susceptible to further damage. Paving and urbanization, stream incision due to past storm-flow changes and dams on tributaries, loss of riparian protection are all cumulative. Even a zero percent change from pre-project conditions may be too much to protect the exposed unvegetated channel banks from failure.

Please see our response below to comment 3.5.

Comment 3.4: To the extent you may wish to justify the 10% to 15% increase over pre-project rates based on idea that this level of variation is within the natural range of variability in watershed peak runoff in response to natural variability in climatic conditions, such an explanation would not account for the fact that you are replacing a potential hypothetical change with a fair certainty that whatever peak runoff rate is allowed will be reached by the watershed in a developed condition.

Please see our response below to comment 3.5.

Comment 3.5: The revised Staff Report also references the *Napa River Watershed Task Force Phase II Final Report.* Page 32 of that document recommends a standard of no-net increase in post-project peak runoff rates on sites with high vulnerability.

Our responses to Comments 3.1 through 3.5 are as follows. Please note that we have not reached a decision yet on numeric expression of the vineyard storm runoff performance standard (e.g., effectively attenuate significant increases in storm runoff) listed in Table 4.1 of the Basin Plan amendment. To avoid confusion, we have revised footnote 4 and the description of actions contained in Table 4.1 of the Basin Plan amendment as follows:

Actions

Submit a Report of Waste Discharge[2] (RoWD) to the Water Board that provides, at a minimum, the following: a description of the vineyard; identification of site-specific erosion control measures needed to achieve performance standard(s) specified in this table; and a schedule for implementation of identified erosion control measures.

Or

Implement farm plan certified under Fish Friendly Farming Environmental Certification Program or other farm plan certification program, as approved as part of a WDR waiver policy. All dischargers applying for coverage under a WDRs waiver policy also will be required to file a notice of intent (NOI) for coverage, and to comply with all conditions of the WDR waiver policy[4].

[4] ~~This Basin Plan amendment recognizes farm plans certified under the Fish Friendly Farming Environmental Certification Program as effective with regard to control of pollutant discharges associated with vineyards.~~ Additional conditions ~~will~~ may be required under a General WDR and/or waiver program consistent with the *Policy for Implementation and Enforcement of the Non-Point Source Control Program* (State Board, ~~(~~2004), and/or as needed to avoid potentially significant environmental impacts., and/or as needed to avoid potentially significant environmental impacts.

In developing the waiver, we welcome further input regarding numeric expression of this performance standard. Please also note that the performance standards for vineyards specified within the Basin Plan amendment apply to all vineyards including existing, replanted, and new vineyards.

Comment 3.6: It appears that the Water Board intends to further refine performance standards [contained in Tables 4.1 through 4.4, which describe required implementation measures for sediment discharges]. This approach violates CEQA because it segments the environmental assessment. All of the components constitute one project. Therefore, at this point, the project description is incomplete.

Please note that programmatic analyses of impacts are sufficient for agency plans, policies, and/or regulatory programs. Such documents evaluate broad environmental effects of a project, while acknowledging that site-specific environmental review may be needed for specific elements and/or actions that would be implemented to comply with the regulatory plan.

Comment 3.7: The updated environmental checklist does not sufficiently respond to comments in the May 7, 2008 letter to the State Board that an EIR equivalent analysis is required.

For Biological Resources, the resource category, where the Water Board has concluded impacts of reasonably foreseeable compliance actions may be potentially significant, the checklist explanation has been revised as follows:

"*IV. Biological Resources*

Introduction

The Basin Plan amendment was developed specifically to benefit biological resources, including fish, wildlife, and rare and endangered species. Nonetheless it is possible that in order to comply with the proposed Basin Plan amendment, specific projects involving construction and earthmoving activities could be proposed that could potentially affect biological resources either directly or through habitat modifications. While the minor construction and earthmoving operations would occur in already disturbed areas and mostly involve reconstruction, re-contouring or replacement of existing roads and structures, it is possible (although not likely) that these and other activities to reduce erosion and enhance habitat conditions in stream channels and riparian corridors could occur in and impact biological resources.

a) Table 11a provides a summary of: a) the types of reasonably foreseeable projects that may be implemented to comply with the Basin Plan amendment; b) related regulatory permitting; and c) resultant protections afforded to special-status species and sensitive natural communities. In general compliance projects fall into five source categories: 1) unstable channel reaches; 2) roads; 3) peak flow attenuation; 4) gullies and shallow landslides; and 5) vineyard erosion (Table 11a). For reasonably foreseeable projects that may adversely effect special-status species, all are subject to discretionary approval by Napa County (Table 11a). In their review, county staff examines and queries a GIS-based biological database (Jones & Stokes, 2005, Chapter 4 Appendices), which includes three layers: a)

land-cover; b) special-status species occurrence; and c) special-status species habitat. The land-cover layer identifies potential locations of sensitive natural communities. The land-cover layer, special-status species occurrence layer, and expert input were used to develop the special-status species habitat layer.

Using the above described database, county staff examines the location of a proposed project, and if it overlaps with potential habitat for one-or-more special-status species, then the county requires a biological resources evaluation and avoidance of impacts to the extent feasible (Policy Con-13, Napa County General Plan, 2008; County Code, Chapter 18.108.100). In cases where full avoidance is not feasible, effective mitigation measures are required to address impacts (Policies CON-16 and CON-17, Napa County General Plan, 2008).

In addition to county review, we also note that it is the Water Board's statutory responsibility to protect water quality and its beneficial uses. In the course of exercising its duties, the Water Board would either: a) not approve compliance actions that could cause significant adverse impacts to any water-dependent special status species either directly or through habitat modification; or b) require avoidance and mitigation measures to reduce impacts to less than significant levels.

Considering the above, we conclude that project-specific impacts to all special-status species are less than significant with mitigation incorporated.

b) Table 11b provides a list of the twenty-seven types of sensitive natural communities that occur within the Napa River watershed. Sensitive natural communities are designated by the Department of Fish and Game based on high degree of biological diversity, rare occurrence, and/or sensitivity to disturbance. Considering the protections described above, where a sensitive natural community provides potential habitat for a special-status species, the entire sensitive natural community is also fully protected from significant impacts.

All of the native grassland communities[39] (six) and old-growth Douglas fir-ponderosa pine forest listed in table 11b provide potential habitat for special-status species, and therefore, are fully protected from significant impacts. Similarly, considering the types of reasonably foreseeable compliance actions to reduce sediment delivery and enhance habitat in unstable channel reaches, and regulatory oversight by the Water Board and other agencies (as listed in Table 11a), potential effects on all riparian habitat types[40] (eight natural communities)

[39] Please also note that if a potential project is proposed with an area mapped as California Annual Grasslands Alliance, and/or Upland Annual Grasses and Forbs Formation, Napa County requires a biological survey to determine whether native grasses are present.

[40] Please also note that Napa County and the Water Board collaborated to prepare a complete mapping of the entire channel network within the Napa River watershed (Dietrich et al., 2004) that provides a basis for determining all potential locations of channels and riparian habitat within the watershed.

would be less than significant in all cases, and in almost all cases effects on riparian habitat quantity and quality would be positive. The same finding holds for riverine habitats.

With regard to other sensitive natural communities that are also wetland types, first potential impacts to Northern vernal pools are less than significant because the mapping of potential occurrence of vernal pool areas within Napa County is complete (Holland, 1996; Napa County, 2004), and this community also is protected from significant impacts under Section 404 of the Clean Water Act. We also note that no compliance projects are expected in any marsh community type (three natural communities), and hence these also would not be impacted.

Finally, considering the broad distribution and extensive acreage of California bay forests and woodlands within the watershed (several thousand acres), in comparison to the magnitude of land cover disturbances (tens of acres or less) that may result from reasonably foreseeable compliance actions, therefore potential impacts to this community are less than significant.

Based on the above, twenty-one of the twenty-seven sensitive natural communities are fully protected from potentially significant impacts. To further reduce potential impacts to the other six sensitive natural communities that may not be fully protected through County regulations, Basin Plan amendment compliance actions will not be required or approved beyond the development footprint authorized by local land- use authorities in any of the following sensitive natural communities within the Napa River watershed:

- Redwood forest
- Ponderosa Pine alliance
- Tanbark Oak alliance
- Oregon white oak woodland
- Mixed serpentine chaparral
- Wet meadow grasses NFD super alliance.

However, some of these six communities may occur in local patches that are smaller than the minimum mapping units included in the County GIS land-cover layer, and hence may not be completely mapped by the county. Considering the limited distribution of these communities (mapped areas within the watershed of these communities, range from a few-to-several hundred acres) and the fact that mapping is incomplete, the potential still exists for significant impacts. This is because losing even 10 acres of one of these communities, the maximum acreage of any community listed above that we estimate could be disturbed, would constitute a significant reduction in their total area and distribution within the watershed.

Table 11a: Summary of Compliance Actions and Permitting Requirements, as Related to Protected Special-Status Species and Sensitive Natural Communities[+]

Sediment Source Category	Reasonably Foreseeable Compliance Action(s)	Federal Permits	State Permits	Local Permits	Impacts to Special Status Species and/or Sensitive Natural Communities
Unstable Channel Reaches:	Passive recovery	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	All biological resources protected
	Biotechnical engineering	CWA 404 and ESA Section 7 consultation(s)	CWA 401, WDR or conditional waiver; Streambed alteration agreement/CESA protections	In cases where there is the potential for impact, use permit, biological survey, and CEQA determination.	All biological resource protected per County discretionary approval and General Plan policies (Policy Con-13, Con-16, and Con-17)
	Channel reconstruction	CWA 404 and ESA Section 7 consultation(s)	CWA 401, WDR or conditional waiver; Streambed alteration agreement/CESA protections	County floodplain management regulations, use permit/biological surveys/CEQA determination	As above
	Hard engineering locally (e.g., existing dwelling threatened)	CWA 404 and ESA Section 7 consultation(s)	CWA 401, WDR or conditional waiver; Streambed alteration agreement/CESA protections	At a minimum, use permit, biological survey, and CEQA determination.	As above
Road-related sediment delivery:	Re-vegetate cut and fill slopes	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	All biological resources protected
	Road reconstruction	If it effects jurisdictional waters, then CWA 404 and ESA Section 7 consultation(s).	At a minimum, WDR or conditional waiver.	Grading permit/biological surveys/CEQA determination; If slopes ≥ 5%, Conservation Regulations apply.	All biological resources protected, because focus in existing footprint, biological survey requirement, and County discretionary approval.
	Road removal	As above	As above	As above	As above
	Road segment relocation	As above	As above	As above	Potential for significant impact to some sensitive natural communities of limited distribution*.
	Road surfacing	Unlikely to require federal permits	As above	As above	All biological resources protected, because focus in existing footprint
	Road crossing and/or drainage reconstruction and/or retrofit	CWA 404 and ESA Section 7 consultation(s)	CWA 401, WDR or conditional waiver; Streambed alteration agreement/CESA protections	At a minimum, use permit, biological survey, and CEQA determination.	All biological resource protected per County discretionary approval and General Plan policies (Policy Con-13, Con-16, and Con-17)

Table 11a: (cont.) Summary of Compliance Actions and Permitting Requirements, as Related to Protected Special-Status Species and Sensitive Natural Communities[+]

Sediment Source Category	Reasonably Foreseeable Compliance Action(s)	Federal Permits	State Permits	Local Permits	Protected Special Status Species and/or Sensitive Natural Communities
Peak flow attenuation:	Detention basins	If in jurisdictional waters, then CWA 404 (Various NWP or IP)	At a minimum, WDR or conditional waiver.	At a minimum, grading permit, biological survey, and CEQA determination.	Potential for significant impact to some sensitive natural communities of limited distribution*.
	Dispersal of surface runoff	Unlikely to require federal permits	As above	Not regulated in all cases/depends on project scope and scale	All biological resources protected because WDR or waiver must achieve BPA performance standard for peak flow attenuation**
	Cover crops and/or composted mulch	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	All biological resources protected
	Reduce/disconnect engineered drainage	Unlikely to require federal permits	At a minimum, WDR or conditional waiver.	Unlikely to require permits	As above
	Terracing	As above	As above	Grading permit, biological surveys, CEQA determination, and County Conservation Regulations all apply.	All biological resources protected because terraced vineyard would remain within existing developed area
	Re-establish forest cover	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	All biological resources protected

Table 11a (cont.): Summary of Compliance Actions and Permitting Requirements, as Related to Protected Special-Status Species and Sensitive Natural Communities[+]

Sediment Source Category	Reasonably Foreseeable Compliance Action(s)	Federal Permits	State Permits	Local Permits	Protected Special Status Species and/or Sensitive Natural Communities
Gullies and shallow landslides:	Passive recovery	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	All biological resources protected
	Re-vegetation	As above	As above	As above	As above
	Biotechnical engineering	If in jurisdictional waters, then CWA 404 (Various NWP or IP)	At a minimum, WDR or conditional waiver.	May not require a use permit in some cases	All biological resource protected per County discretionary approval and General Plan policies (Policy Con-13, Con-16, and Con-17)
	Dispersal of runoff (to areas where runoff can be discharged without causing erosion)	Unlikely to require permits	At a minimum, WDR or conditional waiver.	Not regulated in all cases/depends on project scope and scale	All biological resources protected because WDR or waiver must achieve BPA performance standard for peak flow attenuation**
	Hard engineering	If in jurisdictional waters, then CWA 404 (Various NWP or IP)	At a minimum, WDR or conditional waiver.	At a minimum, grading permit, biological survey, and CEQA determination.	All biological resources protected
Surface erosion in vineyard area:	Cover crops and/or composted mulch	Not regulated/no impact	Not regulated/no impact	Not regulated/no impact	As above
	Conservation tillage	Not regulated	WDR or conditional waiver	Not regulated	As above
	Terracing (of an existing or replanted hillside vineyard)	As above	As above	Grading permit, biological surveys, CEQA determination, and County Conservation Regulations all apply.	All biological resources protected because terraced vineyard would remain in existing developed area
	Engineered drainage within vineyard footprint	Unlikely to require permits	WDR or conditional waiver	Not regulated in all cases	All biological resources protected because WDR or waiver must achieve BPA performance standard for peak flow attenuation

Notes on Table 11a:

+ Table focuses on evaluation of potential impacts to biological resources because we did not identify potentially significant impacts to other resource categories.

*Some sensitive natural communities of limited distribution are not fully mapped, and therefore, may not be identified and fully protected from significant impacts. Detention basins (to attenuate increase in storm runoff), typically would be located within the footprint of the developed vineyard area. Potential for impact to some sensitive natural communities of limited distribution arise only in cases where basins would be constructed outside the developed vineyard area, in areas with natural cover where some sensitive natural communities of limited distribution are not fully mapped and identified. Also, in a few special cases, where an existing road segment is located on a large active landslide, it may be necessary to relocate the road segment. Although these projects would be large enough to require a grading permit, and biological surveys (were special-status species may be present), because some sensitive natural communities of limited distribution are not fully mapped, the potential remains for significant impacts.

**The Basin Plan amendment requires that vineyard owners and/or operators "effectively attenuate significant increases in storm runoff. Runoff from vineyards shall not cause or contribute to downstream increases in rates of bank and bed erosion." As a result of achieving this requirement, disturbance to natural vegetation cover would be insignificant, and hence all sensitive natural communities are protected.

Note: the Water Board will not require or permit compliance actions in the following sensitive natural communities: Redwood forest, Ponderosa Pine alliance, Tanbark Oak alliance, Oregon white oak woodland, Mixed serpentine chaparral, and Wet meadow grasses NFD super alliance. This mitigation measure is proposed to reduce potential impacts of compliance actions on biological resources.

CWA 404 = Section 404 of the Clean Water Act

CWA 401= Section 401 of the Clean Water Act (State water quality certification)

NWP, IP, RGP = Nationwide Permit, Individual Permit, and Regional General Permit, US Army Corps, Section 404 of the Clean Water Act, wetland fill regulatory permit programs.

BPA = Basin Plan amendment

WDR = waste discharge requirements

Napa County Conservation Regulations (Chapter 18.108) include requirement to "not adversely affect sensitive, rare, threatened, or endangered plants or animals or their habitats as designated by state or federal agencies with jurisdiction, and as mapped on the county's environmental sensitivity maps."

Napa County floodplain management regulations (Chapter 16.04.050): objectives for riparian protection are to "preserve fish and game habitats; prevent or reduce erosion; maintain cool water temperature; prevent or reduce siltation; promote wise uses and conservation of woodland and wildlife resources of the county."

ESA: Federal Endangered Species Act
Section 7 Consultation: biological opinions prepared under Section 7 of the federal Endangered Species Act
Streambed alteration agreement: California Department of Fish and Game, Section 1603 streambed alteration agreement

Notes on Table 11a (cont.):

CESA: California Endangered Species Act

CEQA: California Environmental Quality Act

Other permits including streambed alteration agreements with the California Department of Fish and Game would also be required for any compliance project that may occur within a stream channel, riparian corridor, and/or floodplain.

Table 11b. List of Sensitive Natural Communities within the Napa River Watershed.

Upland Communities:	**Aquatic or Riparian Communities:**
Serpentine bunchgrass grassland	Fremont cottonwood riparian forest
Wildflower field (located within native grassland)	Arroyo willow riparian forest
Creeping ryegrass grassland	Black willow riparian forest
Purple needlegrass grassland	Pacific willow riparian forest
One-sided bluegrass grassland	Red willow riparian forest
Native grassland (limited distribution)	Narrowleaf willow riparian forest
Mixed serpentine chaparral	Mixed willow riparian forest
Oregon white oak woodland	Brewer willow alliance (limited distribution)
California bay forests and woodlands (also occurs in riparian areas; **wide distribution**, > 10,000 acres, within watershed)	Coastal and valley freshwater marsh
Tanbark oak alliance (limited distribution)	Coastal brackish marsh
Redwood forest (also occurs in riparian areas)	Northern coastal salt marsh
Douglas-fir ponderosa pine forest (old-growth) (also occurs in riparian areas)	Northern vernal pool (limited distribution)
Ponderosa pine alliance (also occurs in riparian areas; limited distribution)	Riverine, lacustrine, and tidal mudflats (limited distribution)
	Wet meadow grasses NFD super alliance (limited distribution)

Note: we did not include California bay forest and woodlands on the list of sensitive natural communities where we would not require or approve compliance actions. This is because this community has a very broad distribution and area within the watershed. Maximum estimate of the acreage of native vegetation cover (all natural cover types and communities) within the watershed that could be disturbed as a result of compliance actions is ten's of acres or less.

a b) The Basin Plan amendment was developed specifically to benefit, enhance, restore and protect biological resources, including fish, wildlife, and rare and endangered species. Nonetheless it is possible that in order to comply with the proposed Basin Plan amendment, specific projects involving construction and earthmoving activities could be proposed that could potentially affect candidate, sensitive or special status species (collectively, special-status species), either directly or through habitat modifications; riparian habitats; or other sensitive natural communities. While the minor construction and earthmoving operations would occur in already disturbed areas and mostly involve reconstruction, re-contouring or replacement of existing roads and structures, it is possible (although not likely) that these and other activities to reduce erosion and enhance stream habitats could occur in and impact areas where there are special-status species and habitats.

Specifically, the following types of projects may have the potential to cause significant adverse effects to some special-status species:

a) Large detention basins (≥ 1 acre) that may be constructed to attenuate increases in peak flow and/or reduce sediment delivery, and built on flat lying or gently sloping terrain;

b) Relocated road segments (e.g., replacing road segments that were located in unstable areas); and/or

c) Large scale grading and re-vegetation projects implemented to enhance stream, riparian, and/or floodplain habitat functions (e.g., the Rutherford, and Oakville-to-Oak Knoll Napa River habitat enhancement projects).

These and other reasonably foreseeable compliance projects would be subject to review and approval by the Water Board, which will, in the course of discharging its statutory duties to protect water quality and their beneficial uses (including preservation of rare and endangered species and wildlife habitat as set forth in the Basin Plan), either not approve compliance projects with significant adverse impacts on special-status species and habitats or require avoidance or mitigation measures to reduce impacts to less-than-significant levels. It is not reasonably foreseeable that the Water Board would approve earthmoving work that would disrupt or destroy habitat of a known special status species. Furthermore, it is the Water Board's standard practice to work with the proponents of compliance

~~projects to come up with actions that not only meet and further the proposed Basin Plan amendment's requirements and goals, but also all other components of the Basin Plan, such as the protection of rare and endangered species and habitat. For example, where avoidance of impacts is not possible, the Water Board requires mitigation measures for work it approves that may impact special status species, riparian habitats, or other sensitive natural communities. These include but are not limited to requiring pre-construction surveys; construction buffers and setbacks; restrictions on construction during sensitive periods of time; employment of on-site biologists to oversee work; and avoidance of construction in known sensitive habitat areas or relocation and restoration of sensitive habitats. In sum, through the course of the Water Board discharging its required mandate to protect beneficial uses such as rare and endangered species and wildlife habitat, impacts to special-status species and their habitats would be avoided or reduced to less than significant levels.~~

~~If, however, impacts to the special status species and their habitats occur outside the Water Board's jurisdiction (e.g., in areas with no proximity or relation to waters of the state), then impacts must be addressed through other local, state, and federal regulatory programs. State and federal laws prohibit the take of special status species and their habitats except where incidental take permits have been issued. When issuing incidental take permits, state and federal agencies must ensure that the impacts of the take are minimized and mitigated to the maximum extent possible and ensure that the take will not appreciably reduce the likelihood of the survival and recovery of the species. If proposed compliance projects affect special status species outside the Water Board's jurisdiction, then these agencies have the responsibility and jurisdiction to mitigate significant impacts. These agencies can and should mitigate their impacts. Unless and until that happens, the impacts remain significant and unavoidable.~~

c) Basin Plan amendment-related implementation actions may contribute to an increase in the acreage of land where habitat enhancement and/or erosion control projects are undertaken, a fraction of which could be within wetlands. The adverse impacts on wetlands would not be substantial, however because under the Nationwide or individual permit programs administered by the US Army Corps of Engineers, there are general conditions that require that for projects that may adversely affect all wetlands, as defined under Section 404 of the Clean Water Act, responsible parties must demonstrate that avoidance, minimization, and mitigation has occurred to the maximum extent practicable to ensure that adverse impacts to the aquatic environment are minimal. Furthermore for all potential projects where wetland losses would exceed 0.1 acres, applicants are required to provide compensatory mitigation at a ratio that is greater than or equal to 1:1. For projects where wetland losses are less than 0.1 acre, on a case by case basis the District Engineer may require compensatory mitigation. If TMDL implementation projects are proposed that could have the potential to disturb wetlands, they also would be subject to the Water Board's review and approval

under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and the Water Board must, consistent with its Basin Plan, require mitigation measures to avoid, minimize, and mitigate impacts to less-than-significant levels. As specified in the Basin Plan, the San Francisco Bay Regional Board uses the USEPA Section 404(b)(1) Guidelines for dredge and fill material in determining the circumstances under which the filling of wetlands may be permitted. This policy requires that avoidance and minimization be emphasized and demonstrated prior to consideration of mitigation. Furthermore, the California Wetland Protection Policy also is incorporated into the Basin Plan. The goals of this policy include ensuring that "no overall net loss" and "long-term net gains in the quantity, quality, and permanence of wetland acreage and values …" (Governor's Executive Order W-59-93). Wetlands not subject to protection under Sections 404 and 401 of the Clean Water Act are still subject to regulation, and protection under the California Water Code. Please also see discussion in part b) above relating to sensitive natural communities, some of which are wetland types.

d) The Basin Plan amendment would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The main goal of the Basin Plan amendment is to improve and enhance fish passage. Thus, compliance projects would entail improving migratory fish corridors, not adversely affecting them. It is possible, however, that projects could be proposed to comply with the Basin Plan amendment that involve construction or earthmoving activities that could interfere with wildlife movement, migratory corridors, or nurseries (e.g., channel habitat enhancement projects, fish passage enhancement projects, riparian corridor planting, etc.). If that occurs, the projects would be subject to and have the same process and impacts described in response a-b above. Furthermore, none of the reasonably foreseeable compliance actions (Table 11a) has the potential to substantially interfere with wildlife movement, therefore we conclude that the impact is less than significant.

e-f) The Basin Plan amendment itself does not conflict with any local policies or ordinances protecting biological resources such as trees, or with any adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional or state habitat conservation plan. There is no evidence to suggest that projects proposed to comply with Basin Plan amendment requirements would conflict with these plans."

Comment 3.8: The revised Staff Report, in Chapter 7, concedes that the Water Board must perform an analysis of reasonably foreseeable means of compliance with any TMDL performance standards. The first performance standard for vineyards is compliance with the County Conservation Regulations (Table 4.1 of the Basin Plan amendment).

To clarify, we are not requiring the County Conservation Regulations, only acknowledging they are in effect. Please also note that the County Conservation Regulations (Chapter 18.108) do not specify means of compliance, only conditions with regard to effectiveness of erosion control and/or other goals (e.g., protection of drinking water supply, water quality, etc.).

Comment 3.9: The Water Board also concedes that implementation actions to comply with the TMDL may cause significant effects on biological resources (Staff Report pp. 98 and 107). As I argued in my May 7, 2008 letter to the State Board, the Court of Appeal decision in *City of Arcadia vs. State Board* requires an EIR level analysis where TMDL implementation may cause significant impacts.

Please see our response to comment 3.7 above.

Comment 3.10: The Water Board apparently disclaims any obligation to evaluate the effects of the County Conservation Regulations/Erosion Control Permit Program as suggested by the following excerpt from the Staff Report (p. 124):

> **"although the probability is low, it is possible that some compliance projects could impact rare and endangered biological resources and their habitats. Without the details of specific compliance projects, it is impossible to determine the scope and extent of such impacts. If such impacts exist, however, when reviewing and acting on compliance projects, the Water Board is required to and will protect and minimize impacts to special status species which are beneficial uses of water…For impacts to species not within the Water Board's jurisdiction, other responsible state and federal agencies can and should mitigate the impacts, but until such time…, such impacts remain significant and unavoidable."**

This is an existing county regulatory program, for which the county will undertake environmental review where required. The Water Board is not adopting these programs as its own, such that we have to evaluate projects that come under this program.

Comment 3.11: The key sentence in that quote [included above in comment 3.10] is "Without the details of specific compliance projects, it is impossible to determine the scope and extent of such impacts." With this finding the Water Board apparently invokes the phrase in Section 21159 that states: "the agency shall not engage in speculation or conjecture."

Please see our response to Comment 3.8 above, where we clarify that we are not adopting or relying on county regulations, only acknowledging that they are in effect. Please also see our response to Comment 3.14 below, where we present revisions to the cumulative effects analysis including consideration of project effects together with effects of existing and projected future vineyard development.

Comment 3.12: "I previously submitted Dr. Curry's and Dennis Jackson's comments on numerous erosion control plans (ECPs) on which EDEN has commented (see exhibits 1-8 attached hereto). These ECPs provide great detail regarding the nature and extent of engineered drainage facilities that are typically used to comply with the ECP Program…" The Board could also review hundreds of ECPs approved for vineyards by the County since the program was begun in 1991, could access County enforcement records, and/or "do its own effectiveness monitoring on past ECPs as part of its EIR level analysis of the environmental effects of the ECP Program performance standard."

Thank you for providing these example erosion control plans (ECPS). It is always useful to review such plans and to visit the sites where they are implemented. Please note that through field surveys conducted to develop the Napa River watershed sediment budget, review of ECPs for other vineyard development projects, and in our role as a certifying agency for the Fish Friendly Farming Program, we have gained a good working knowledge of the types of erosion control practices employed in vineyards in the Napa River watershed.

For example, for the Fish Friendly Farming Program, we review (farm plan) documents similar in content, and/or more comprehensive than ECPs. These documents include (but are not limited to): a) specification of all natural and engineered drainage features; b) locations of all significant/active human-caused sediment sources; and c) the erosion control structures and management practices that are employed throughout the property (including for all roads, channel erosion sites, upland legacy erosion sites, and within the vineyard footprint). During the past five years, Water Board staff have reviewed farm plans and conducted site reviews for eighty-six vineyards covering more than 7,000 acres in the Napa River watershed. These reviews, field work for the sediment budget, and previous reviews of other ECPs, have helped us to become familiar with site development and management practices for vineyards.

As always, we appreciate your input and information in this area.

Comment 3.13: "In short, there is a wealth of factual evidence which the Board can use to perform an environmental evaluation of using compliance with the ECP Program as a performance standard for this TMDL."

Please see our response to Comments 3.8 and 3.14.

Comment 3.14: "Indeed, there are ECP projects in the pipeline at this moment that the Environmental Checklist's cumulative impacts analysis ignores. These include the Rodgers/Upper range, Stagecoach, Abbot, and Abreu ECPs."

The cumulative impacts analysis contained in the September 2008 draft of the Staff Report has been revised to consider the effects of development and management of existing vineyards, and projected future vineyard development; as described in the DEIR for the Napa County General Plan Update (Napa County, 2007). Revisions to the cumulative impacts analysis contained in the environmental analysis within the Staff report are as follows:

"*Discussion of Cumulatively Considerable Impacts*. We have concluded that project-specific impacts to a subset of sensitive natural communities of limited distribution that are not completely mapped within Napa County are potentially significant and unavoidable (see explanation above for Biological Resources). In examining the potential for cumulatively considerable effects, we consider impacts to these sensitive natural communities together with the effects of other projects in the watershed that also involve significant earth moving, habitat reconstruction, and/or large-scale changes in vegetation cover. We also examine less than significant project-impacts to hydrology and water quality in response to comments received. Based on these considerations, in evaluating the potential for contributing to cumulatively considerable effects, we also consider the following projects:

- The Napa River Flood Control Project;
- The Saint Helena Flood Control Project;
- The Napa Salt Marsh Restoration Project;
- The Upper York Creek Dam fish passage restoration project; and
- Existing and projected future vineyard development within the watershed.

Of the above listed projects, only vineyard development may have a significant impact on sensitive natural communities that may experience significant impacts from Basin Plan compliance actions. Because the total acreage of each of these communities within the watershed is typically very small and the distribution is limited, incremental effects of Basin Plan amendment compliance to this subset of biological resources may be cumulatively considerable.

- *Hydrology and Water Quality*: The Basin Plan amendment includes a performance standard for sediment discharges from vineyards requiring that erosion control actions "effectively attenuate significant increases in storm runoff." Basin Plan amendment-related activities are, by design, intended to decrease peak runoff rates from upland land uses, as needed to reduce fine sediment input to channels and channel erosion. Therefore, the Basin Plan amendment would not increase the rate or amount of runoff, exceed the capacity of storm water drainage systems, or degrade water quality, and the impact is less than significant with mitigation incorporation. Of the projects considered in the cumulative effects analysis, only existing and projected future vineyard development has the potential to cause significant long-term impacts to water quality as a result of increases in storm runoff quantity. The performance standard for vineyard storm runoff would apply to all existing, replanted, and new vineyards. Therefore by definition, incremental effects of the Basin Plan amendment on peak runoff increases associated with vineyards would be beneficial, and as such, not contribute to any cumulatively considerable effects.

  ~~In summary, we conclude that reasonably foreseeable projects to comply with the Basin Plan amendment considered in connection with other projects will not result in any cumulatively considerable impacts.~~

~~As discussed above, although improbable, it is possible that projects that may be implemented to comply with the Basin Plan amendment may cause project-specific impacts that could be potentially significant to biological resources (specifically as described in Section IV a, IV b, and IV d of the checklist) resulting from earthmoving and/or construction operations. In evaluating cumulatively considerable impacts, we have considered the potential for connection and/or interaction with the following projects that also involve geographically extensive earth moving, biotechnical engineering, re-vegetation, and minor construction along the Napa River and/or its tributaries:~~

~~a) The Napa River Flood Control Project;~~

~~b) The Saint Helena Flood Control Project;~~

~~c) The Napa Salt Marsh Restoration Project; and~~

~~d) The Upper York Creek Dam fish passage restoration project.~~

~~Based on review of the DEIR for the *Napa County General Plan Update* (Napa County, 2007), we have identified the following special-status species that theoretically could be impacted by compliance with the Basin Plan amendment, and/or cumulatively in connection with the above listed projects[42]:~~

~~a) Northwestern pond turtle;~~

~~b) Foothill yellow-legged frog;~~

~~c) Hardhead (a native resident fish species);~~

d) Cooper's hawk;

e) Yellow warbler;

f) Yellow-breasted chat;

g) Northern California black walnut.

Similarly, riparian habitat (a sensitive biotic community) also could experience potentially significant project-specific or cumulative impacts.

For riparian plant and animal species and/or riparian plant communities, although there may be local and short term impacts that are substantial during the construction of one or more of the projects listed above, these impacts would not cause the loss of important biological resources at the watershed- and/or population-level. This is because:

a) None of the above listed species has a distribution that is limited only to the areas of the projects being considered;

b) Basin Plan implementation, and the other projects being considered in the cumulative impacts analysis, are or will occur in phases over several years (e.g., only a sub-area of each project would be constructed at any one time, and therefore, disturbances to vegetation cover at each site should not persist for more than a period of months at any one site);

c) The pre-conditioned protections that are afforded to listed species within the project envelopes also should be effective in protecting other special-status species.We also note that the net long-term effect of projects implemented to comply with the Basin Plan amendment on riparian habitats and/or dependent species will be positive on both the quality and quantity of riparian habitats, and the distribution and status of the species we have identified. These projects include the Rutherford and Oakville-to-Oak Knoll Napa River Habitat Enhancement Projects, and stream-riparian habitat enhancement projects implemented under the Fish Friendly Farming Environmental Certification Program)[43]. Considering all of the above information, we conclude that the potential cumulative impacts to yellow warbler, yellow-breasted chat, northern California black walnut, and/or Cooper's hawk, and/or their habitats are less than significant.

Because foothill yellow-legged frog are not found in the Napa Salt Marsh and/or the Napa River within the reaches included in the Napa and/or St. Helena flood control projects, and because project-specific impacts to foothill yellow-legged frog associated with the Upper York Creek Dam Fish Passage Restoration Project were determined to be less than significant (City of St. Helena, 2007, pp. 87-88), we conclude by definition that impacts to foothill yellow-legged frog is not cumulatively considerable.

[42] As described earlier, in the explanations for the boxes checked with regard to Biological Resources Issues, almost all species that are listed or candidates under the state and/or federal Endangered Species Act are afforded pre-conditioned protection from significant

[43] See Section 6.5 Approaches to Achieve Allocations – Channel Incision for details regarding these implementation actions.

For hardhead, as described in Section 4.4 of this report (Potential Responses of Other Fish and Aquatic Wildlife Species), we conclude that reasonably foreseeable actions to comply with the Basin Plan amendment would not cause potential significant impacts to hardhead, and as such, cumulatively considerable impacts would not occur.

Northwestern pond turtle should benefit from reasonably foreseeable actions to comply with the Basin Plan amendment including enhancement of habitat complexity and connectivity in the Rutherford and Oakville-to-Oak Knoll reaches of the Napa River. Therefore, we have not considered the potential for cumulatively considerable impacts to this species."

Comment 3.15: The Environmental Checklist's cumulative impacts analysis includes only four other projects … (Staff Report, p. 124). The omission of the ECP Program, which consists of numerous past, present, and future projects (including open projects at this time such as Stagecoach, Rodgers, Abbot and Abreu) from the cumulative impacts section is an unfortunate example of trying to ignore the elephant in the room."

Please see our response to Comment 3.14 above. We have revised the cumulative effects analysis to include consideration of project effects together with effects of existing and projected future vineyard development.

Comment 3.16: "Moreover, even for the four identified projects, the Environmental Checklist provides no useful information regarding how their effects will combine with the effects of the TMDL implementation. All we are told is that "we have considered" the four projects. What information that consideration brought to light is not disclosed. CEQA requires more."

We have provided a basis for our evaluation of potential cumulative effects. Please see our response above to Comment 3.14.

Comment Letter no.3 (Dennis Jackson Attachment)

Comment 3.DJ1 (Apply the TMDL to the entire watershed): TMDL should apply to the whole watershed. For example, municipal water supply needs to be protected against turbidity and sedimentation impacts. Rainbow trout spawn and rear upstream of the reservoirs. They are landlocked steelhead, and hence, a valuable genetic reservoir for the downstream population. Also, it is important to acknowledge and address the fact that reservoir construction has resulted in significant steelhead habitat loss.

The mainstem of the Napa River is the only water body in the watershed listed as impaired by sedimentation, and no water bodies in the watershed are listed for turbidity (State Board, 2006). The TMDL address the Napa River sedimentation problem, which is expressed by a high concentration of sand in the streambed at potential spawning and rearing sites for steelhead and salmon in the Napa River watershed. We developed the Basin Plan amendment to resolve the sedimentation impairment, and to promote a broader program supporting conservation of steelhead and Chinook salmon populations in the watershed.

Because all five municipal dams are complete barriers to steelhead and salmon migration, absent dam removal, there is no potential habitat for anadromous salmonids upstream of these dams. Also, because all municipal reservoirs are very large, essentially all sand discharged into them is deposited therein. Therefore, sand delivery to channels from land areas located upstream of the municipal reservoirs does not exert a measurable effect on the sand concentration in channel reaches downstream of these dams, and hence does not influence sand concentration in the Napa River or tributary reaches that provide potential habitat for anadromous salmonids.

While we agree that all water bodies and beneficial uses in the watershed must be protected, including municipal water supply and cold freshwater habitat upstream of municipal dams, this is not the focus of this TMDL and Basin Plan amendment. We will consider these and other resource protection issues in determining the geographic scope and requirements for the WDR waiver programs, as discussed further in our response above to Comment 2.5.

Comment 3.DJ2 (Turbidity monitoring): Continuous turbidity monitoring is needed, especially in Subareas of the watershed that are underlain by bedrock units that are particularly susceptible to increased turbidity. Such monitoring is needed to evaluate the occurrence/significance of chronic turbidity and potential significance with regard to fish growth. Numeric targets for chronic turbidity could be set per Trush (2002).

As indicted in our previous responses to comments, dated 16 January 2007 (response to Comment 9.15), and in the Basin Plan amendment (Evaluation and Monitoring, p. 19), we have indicated our intent to conduct and/or support a turbidity monitoring program to further evaluate occurrence and/or significance of chronic sub-lethal turbidity.

Comment 3.DJ.3 (Dams): Dams play a significant role in channel incision. To address this issue, Jackson recommends that the Water Board: 1) investigate winter release operations of municipal reservoirs (for dams that can control releases) because sustained releases near bankfull discharge (a common reservoir operation procedure during large storm runoff events), saturate stream banks, and lead to bank failures after releases are reduced; 2) initiate a program to identify and map the locations of on-channel dams that do not have necessary water rights permits, require owners to obtain water rights that include conditions to pass fish and coarse sediment through the dams; and 3) identify on-channel dams where it would make sense to restore fish passage, and then require this.

With regard to the first recommendation, to investigate winter release operations, please note that none of the five municipal reservoirs is operated for flood control purposes. All are operated to provide water supply. Therefore, high flow releases are not controlled or planned. Instead, once these reservoirs reach capacity, they flow over their spillways.

With regard to the second recommendation, please note we previously conducted an analysis to identify on-channel dams (Dietrich et al., 2004), and requested that the Division of Water Rights conduct a survey of illegal storage (Wolfe, 2008). We agree that where water is being stored illegally, landowners should be required to obtain water rights permits, and those permits should be conditioned to require passage of coarse sediment, large woody debris, and fish, and flow bypasses as needed to conserve aquatic life in downstream reaches.

With regard to the third recommendation, identifying on-channel dams where it would make sense to restore fish passage, much progress has been made in recent years including full restoration of fish passage through a seasonal flashboard dam that was formerly located on lower Dry Creek, and retrofit of an on-channel dam on Bear Canyon Creek, to allow steelhead migration through the dam. Both projects have the potential to substantially increase steelhead smolt production from the watershed. A third major fish passage project, removal of the City of St. Helena's Upper Dam on York Creek, will be implemented in the dry season of 2009 and/or 2010. Once completed, this project will restore steelhead access to/from two-miles of very high quality spawning and rearing habitat. Also, please note that the State Coastal Conservancy is considering funding to develop "barrier removal plans" for the twenty highest ranked and known barriers to anadromous fish passage within the Napa River watershed. Planning and assessment efforts for other significant, non-dam related barriers also are underway on lower Ritchie Creek, and on the mainstem of the Napa River at the Zinfandel Lane Crossing.

Comment 3.DJ4 (Low flows): The revised Basin Plan amendment does not adequately address low flow problems that occur in dry years with a cold spring season. Minimum bypass flows for the frost protection period (March 15 through May 15) in the Napa River are too low. The Department of Fish and Game has demonstrated that diversions and on-stream reservoirs have played a significant role in the decline of salmonids in the watershed. Because diversions during the spring for frost protect impact baseflow, the Department of Water Resources Watermaster should be brought into the coordinated interagency process that you have proposed (Basin Plan amendment, Table 5.2, Action 2.1). What actions will the Water Board take, if the inter-agency plan is not implemented by the fall of 2010? Finally, the revised Basin Plan amendment and Staff Report do not address my earlier recommendation (attached as part of the comment letter submitted to the State Board in May of 2008) that near-stream wells should be examined to determine if they are impacting streamflow discharge.

All diversions during the March 15 through May 15 frost protection period are controlled by a court appointed Watermaster, who has enrolled all mainstem and tributary diverters, who withdraw between March 15 and May 15, in the frost protection program. With regard to increasing minimum bypass flows, it is our understanding that the Watermaster retains authority to modify the definition of "ample streamflow" and/or based on experience gained in administering the program, to suggest to the Superior Court that the definition of "available water supply" be refined or revised (Napa County Superior Court, 1976). By modifying one or both of these definitions, instream flows to protect fish could be increased. Key information needs to guide policy in this area may include: a) analyses of current relationships between fish passage and streamflow at critical riffles and man-made structures in the Napa River and key tributary reaches; b) streamflow monitoring in key tributaries to protect critical baseflows for steelhead; and c) steelhead and Chinook salmon smolt trapping to determine the timing of outmigration, smolt fitness, and smolt population levels and trends. We actively support these data collection efforts, and their application to water rights policy and regulation.

With regard to the proposed inter-agency plan, please note that participation is voluntary and the plan would focus solely upon municipal water supply facilities in relation to opportunities to jointly enhance water supply reliability and native fish populations. The City of Napa previously has indicated its support for, and willingness to participate in development of the proposed plan (Brun, 2007). Perhaps the most significant obstacle to development of the proposed plan is the availability of staff and contract resources to conduct necessary studies, direct the process, and prepare the plan. The Water Board remains committed to helping to obtain necessary resources and to working cooperatively with other partners on the plan.

Finally with regard to the concern that near-stream wells need to be examined to determine if they are affecting streamflow, please note that as a condition of the WDR waivers, staff will propose that the Water Board require compliance with all water rights laws in order to obtain coverage. We also are open to receiving additional input

regarding analytical approaches that could be used to determine whether well pumping affects streamflow.

Comment 3.DJ5 (Napa County Conservation Regulations): Reliance on the Napa County Conservation regulations to prevent sediment related impacts of new projects is unsatisfactory. For projects that I have reviewed, the hydrologic analyses prepared to examine potential impacts of new projects are inadequate. County planners do not appear to have necessary expertise to evaluate the reliability of the models that are prepared to evaluate these projects. The hydrological analysis prepared for the Rodgers EIR [vineyard development] provides an example of this problem; a long-term record of streamflow at a similar nearby location was not examined to validate the model used in the EIR. In doing so, it's clear that the model greatly overestimates pre-development runoff, making predicted changes following development highly suspect.

Based on inspections conducted over the past five years of eighty-six vineyards, covering more than 7,000 acres within the Napa River watershed, Water Board staff has concluded that on-site erosion and sediment control practices in vineyards typically are effective in controlling sediment delivery to channels from vineyard surface erosion (Napolitano, memo to file, 2008). As indicted in our previous responses to comments and in the Staff Report, at some hillside vineyards, excessive reliance on engineered drainage to control surface erosion on-site has inadvertently caused or contributed to off-site gully erosion at or near the points of discharge from the vineyards. To address this problem, and other land-use related causes for significant increases in storm runoff, the Basin Plan amendment requires avoidance and control of human-caused increases in sediment delivery from unstable areas, and effective attenuation of significant increases in storm runoff from vineyards (Basin Plan Amendment, Table 4.1, p. 10). In some cases, retrofit of existing vineyard drainage and/or management practices may be required to achieve the performance standards.

We also concur it is likely that vineyard development, urban development, and roads have increased storm runoff and peak flow in the Napa River and its tributaries. The real question is by how much, and what is the significance of such changes? To address these questions, more field data collection and analysis is needed to determine how much runoff may be increasing and under what circumstances, and to evaluate potential consequences with regard to location(s) and effects on channel physical habitat structure.

TR-55, HEC-1 and HEC-HMS models are commonly used in Napa County to evaluate effects of vineyard development on storm runoff. Changes predicted by these models are strongly influenced by professional judgment regarding the selection of key parameter values, and therefore it is not surprising that conclusions derived from these models are sometimes controversial.

Consistent with *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (State Board, 2004), as a condition of the WDR waiver program for

vineyards, we will propose a BMP effectiveness monitoring to evaluate effects of vineyard development and management on storm runoff peak and volume, and potential significance with regard to changes in channel structure and sediment delivery rates to channels. Information gained from the monitoring program would then be applied to empirical model development and to technical guidance for development redevelopment, and management of "low impact vineyards" (Booth, 2008).

Comment 3.DJ6 (Impacts of TMDL implementation): "Many aspects of the TMDL rely on Napa County being able to apply their Conservation Regulations to proposed development projects." However, the Conservation Regulations have not been subject to an evaluation of potential environmental impacts under CEQA. Also, as discussed earlier, there are problems with regard to County technical expertise that call into question whether the development projects will be conditioned as needed to achieve TMDL performance standards.

We do not rely on the County Conservation Regulations. We only acknowledge that they are in effect. With regard to this issue, please also see our responses above to Comment 3.8 and Comment 3.DJ5. With regard to in-house technical expertise, it is our understanding that the Napa County contracts with technical staff of the Napa County Resource Conservation District to provide review of the adequacy of erosion control plans, including analyses of predicted changes in runoff as a result of vineyard development.

Comment 3.DJ7 (Conclusions): The TMDL should regulate turbidity. The Water Board should require municipalities "to determine if the operation of individual reservoirs can be changed in a way to decrease the erosive power of their winter storm releases or whether their collective winter releases can be beneficially coordinated." Illegally constructed dams should be removed or modified to allow passage of fish and coarse sediment. "The apparent need to modify existing water rights" to protect fish should be addressed. The approach to protect baseflows outlined in Table 5.2 of the Basin Plan amendment is incomplete because it does not address the issue of diversion for frost protection, and does not name the watermaster as one of the implementing parties. "I have demonstrated that Napa County does not [have] the necessary in-house expertise to evaluate the validity of mathematical model output used to evaluate whether a project has the potential to increase peak storm discharge and sediment loads. It is crucial that mathematical models be carefully calibrated to real-world conditions."

Please see our detailed responses above to Comments 3.DJ1 through 3.DJ6.

Comment Letter no.3 (Dr. Robert Curry, Attachment)

Dr. Curry was asked by the Living Rivers Council to consider if requiring vineyards to keep peak runoff within 10-to-15 percent of pre-project level would avoid significant impacts. Because each of Dr. Curry's comments provide part of a larger logical argument regarding the vineyard stormwater runoff performance standard, our responses to all of these comments are provided immediately below Comment 3.RC5.

Comment 3.RC1: Such approaches are often justified based on the premise that this level of change is statistically within the natural range of variation for climatic conditions within the past few centuries.

Please see our response below to Comment 3.RC5.

Comment 3.RC2: However, other variables [e.g., other watershed and channel attributes] also have been changed. These include lowering of groundwater tables, paving and urbanization, channel incision due to past [land-use related] runoff increases, tributary dams reducing coarse sediment supply, and the loss of riparian vegetation.

Please see our response below to Comment 3.RC5.

Comment 3.RC3: By focusing on vineyard development sites, all of the other adverse changes [described immediately above] are not addressed.

Please see our response below to Comment 3.RC5.

Comment 3.RC4: "Vineyards are a source of new [fine] sediment and runoff [increases], but is control of 85 to 90% of the new vineyard contributions adequate to meet the requirements of the TMDL?" I conclude that it is a headwater target only, which cannot protect against adverse downstream channel changes, when considered together with other persistent adverse changes in watershed and channel conditions.

Please see our response below to Comment 3.RC5.

Comment 3.RC5 (Conclusion): "Control of 85-90% of the contributions [of] storm runoff from new hillside vineyards cannot prevent exacerbation of pre-existing storm-flow runoff damage to receiving water channels, nor can it prevent future new damage where multiple conversions, development, or increased vineyard acreages are contemplated in a single watershed."

Please see our response to Comment 3.5 above, where these same issues are raised. Please also note that the performance standard for vineyard storm runoff quantity would apply to all vineyards including new, existing, and replanted vineyards, and that

as a condition of the waiver, staff will propose that landowners develop a stream and riparian corridor management plan to passively or actively recover geomorphic and ecological processes in unstable channel reaches.

Comment Letter no.3 (continued): Living Rivers Council (May 2008 comments to State Board incorporated by reference)

Comment 3.May 2008.1: "An EIR equivalent analysis is required because TMDL implementation may cause significant impacts." The Basin Plan amendment cites the County Conservation Regulations as a performance standard. County approval of erosion control plans (ECPs) under the Conservation Regulations often relies on engineered drainage facilities that concentrate runoff and increase peak flows. However, the County review process often does not accurately evaluate or adequately mitigate significant impacts associated with increases in runoff (see exhibits 7-16 and 30-32 attached to the August of 2006 comment letter). "The Staff Report entirely fails to assess impacts of increases in peak flow as a result of installation of these engineered drainage facilities."

Please see our response to Comment 3.7 above.

Comment 3.May 2008.2: "The TMDL also incorporates the Division of Water Rights' appropriative permit program and it's *Policy for Maintaining Instream Flows in Northern California Coastal Streams* (see Table 5.2 of the Basin Plan amendment as adopted by the Regional Board)."

To avoid this confusion, in the September 5, 2008 draft of the Basin Plan amendment, we removed reference to *North Coast Instream Flow Policy*. Project scope does not include regulation of appropriative water rights.

Comment 3.May 2008.3: "The Staff Report fails to identify mitigation measures to reduce significant impacts and fails to discuss a reasonable range of alternatives required by CEQA, and fails to consider all relevant factors [related to impairment]. Comment letters by Curry, Jackson, and Higgins provide detailed analyses of a number of mechanisms by which human activity adversely effect the beneficial uses of water in the Napa River watershed. Many of these mechanisms are directly related to sediment-caused impacts. These include without limitation, increases in peak flow that increase downstream erosion and sedimentation by causing channel incision and bank failures, trapping of coarse sediment behind and passing of fine sediment through dams, reductions in streamflow by impoundments and diversions, groundwater withdrawals from stream channel underflow, which exacerbates low flow effects of sediment deposition in channels and many others. Yet, the Staff Report does not include any discussion of alternative approaches that would address these mechanisms of impact."

To avoid and minimize potential adverse impacts of compliance actions, we have added mitigation measures including performance standards for vineyard stormwater runoff quantity, and we have excluded TMDL compliance actions from a suite of sensitive natural communities of limited geographic extent (Basin Plan amendment:

Implementation Plan, pp. 7-8; Table 4.1, p. 10). The environmental analysis contained in the Staff Report considers a reasonable range of alternatives including: Alternative 3, Upland sediment control and passive recovery of incised channels (that reduces some short-term and less than significant impacts to riparian habitat), and Alternative 5, Management of coarse sediment and flow releases from municipal reservoirs. Alternative 3 was not preferred because it would delay attainment of water quality objectives for sediment and population and community ecology by several decades or more. Alternative 5 was not preferred because: a) it is not clear that gravel augmentation downstream of municipal reservoirs is needed to achieve the objectives of the Basin Plan amendment; b) it does not appear that reservoir flow releases significantly exacerbate channel incision; and c) this alternative has significant additional costs and potential impacts (e.g., downstream flood risk, reservoir water quality, etc.). Please also see our responses to Comments 3.DJ3, 3.DJ4, 3.May 2008.DJ1, and 3.May 2008.PH2.

Comment letter no. 3: Living Rivers Council (Dennis Jackson comments attached to May 2008 comments to State Board)

Comment 3.May 2008.DJ1: "Dams play a significant role in the channel incision process." … "The TMDL assumes that channel incision can be reversed by encouraging grant agencies to fund projects to reconfigure the geometry of the river." … "This approach does not address the imbalance between the disrupted sediment supply and the transport capacity of the stream downstream of dams."

Dams may significantly alter the discharge of streamflow and/or sediment supply to downstream channel reaches. Potential changes to both streamflow regime and sediment supply need to be examined in evaluating the potential significance of dams in causing and/or contributing to channel incision. Similarly, other direct and indirect disturbances to channels also need to be considered in attempting to determine cause and effect.

In the Napa River watershed, several types of land use activities that have contributed to channel incision in the River and the lower reaches of its tributaries. As described in the problem statement in the Basin Plan amendment, these include (but are not necessarily limited to): a) levee building; b) development related increases in peak runoff during storms; c) construction of large tributary dams; d) straightening of some mainstem channel reaches; e) filling of historical side channels; f) historical gravel mining; g) dredging to reduce flood risk; and h) intensive removal of large woody debris from channels.

Please see our response to Comment 3.DJ3, where we address all of the issues your raise here, except for examining potential effects of large municipal dams on coarse sediment supply in downstream channel reaches. With regard to that issue, we direct you to our response to essentially this same comment, when it was raised by another party earlier

in the review process (Response to Comments, 16 January 2007, response to Comment 14.1):

> "While we agree it is likely that tributary dam construction has contributed to the current episode of bed and bank cutting in the Napa River, other management actions also appear to be significant including:
>
> a) Land cover changes that have increased peak flows in the river (e.g., vineyards, rural residences, commercial buildings, and roads); and
>
> b) A suite of direct alterations to the river channel and/or its floodplain (e.g., levee building, channel straightening, filling of side channels, removal of debris jams, historical gravel mining, and dredging).
>
> We also agree that bed and bank erosion rates in the Napa River will not be substantially decreased until the imbalance between coarse sediment supply (e.g., cobbles and gravel) and transport capacity is rectified. We differ however in our diagnosis of the relative significance of various contributing factors (e.g., dams, direct alterations to the channels, and land cover changes) and in our conclusions regarding feasibility of various management measures to address this issue. Instead of introducing large quantities of coarse sediment to the channel, which would be extremely expensive and present important questions regarding technical feasibility and potential to substantially increase flood risk, we conclude that it is possible to solve this problem by focusing primarily on the other contributing factors: the direct alterations to the channel and increases in peak flow.
>
> The approach to restoration being emphasized in the Rutherford Reach (which we recognize as a key action in the plan to reduce fine sediment supply and enhance habitat conditions) involves setting back the river banks, increasing the sinuosity of the river (and hence reducing its slope), adding wood and large rock to force additional gravel bars to be deposited, and enhancing riparian vegetation to increase bank stability. We also call for design and management practices for new and replanted hillside vineyards to attenuate increases in peak runoff (see response to Comments 9.3 and 9.4). We think these approaches will prove effective in the reduction of bed and bank erosion rates along the Napa River.
>
> Finally, we should point out that channel responses to dam construction may vary substantially depending upon significance of the sediment supply from upstream areas relative to areas downstream of the dam, how the dam influences the frequency and duration of high flows that shape the channel, and/or in response to other significant changes (increases/decreases) in sediment supply from downstream areas following dam construction (Ligon, Dietrich, and Trush, 1995; Grant, Schmidt, and Lewis, 2003).
>
> In the case of the Napa River, we have developed sediment budget data (RWQCB, 2006) that provides an opportunity to examine the combined effects of

the dams and other human actions on coarse sediment supply to the Napa River. During 1994-2004, average annual coarse sediment supply to the Napa River at Soda Creek was approximately 51,000 metric tons per year. Absent dams and human-caused erosion, the supply during this period would have been approximately 45,000 metric tons per year. If the reductions in sediment supply recommended under the proposed TMDL are achieved, during a similar future period, we estimate that the average annual coarse sediment supply would be approximately 39,000 metric tons per year. This supply is approximately equivalent to the natural supply. Therefore, we do not conclude that the proposed reductions in human-caused erosion (where we primarily target sand and finer sediment) will further exacerbate bed and bank cutting.

Based on theory, we would expect instead that the river bed would be further coarsened, creating more favorable conditions for spawning and rearing (Dietrich et al., 2005).

Finally, we would point out that several Napa River tributaries were naturally disconnected from the river, and hence, much of their coarse sediment did not naturally reach the mainstem, and instead was deposited in large alluvial fans. Many of these channels were ditched soon after California's statehood to support agricultural and urban development of the Napa Valley."

Please also note that as a WDR waiver condition, staff will propose that landowners develop a stream and riparian corridor management plan to passively or actively recover geomorphic and ecological processes in unstable channel reaches.

Comment 3.May 2008.DJ2: "It is a common practice for large reservoirs to capture large flood peaks and then subsequently release the captured water at a rate approximating bankfull for an extended period. Release of stored flood waters at a rate near bankfull for extended time saturates banks and leads to bank failure when the release rate is subsequently reduced. The practice of releasing stored flood water at rates approximating bankfull can also contribute to redd scour, one of the numeric targets specified in the TMDL. Therefore, I propose that the State Board require that a study be conducted to determine if flood control operations of any of the large reservoirs contributes to bank erosion and channel incision."

Please see our response above to Comment 3.DJ3.

Comment 3.May 2008.DJ3: "Channel incision likely to result in lower flows during the latter part of the dry season than would have occurred without the incision." Lowering of the water table as a result of incision, may threaten survival of riparian plants, and loss of riparian vegetation may increases water temperatures. Channel incision may have the potential to degrade baseflow water quality through development of a steeper water table gradient that brings in flows from a greater distance, and therefore, the potential for greater inputs of farm chemicals and septage.

Objectives of the WDR waiver programs include resolution of sediment, nutrient, and pathogen impairments. Please see our response to Comment 2.5 for additional discussion of this topic. Also, note that as a specific condition of the waiver, staff will propose that landowners develop a stream and riparian corridor management plan to passively or actively recover geomorphic and ecological processes in unstable channel reaches. We are confident that such practices also will enhance the extent of the riparian vegetation, and its capacity to filter agricultural chemicals and septage. Please also note that drip irrigation/fertigation, and integrated pest management practices are the norm for grape growers within the Napa River watershed, and that the County Agricultural Commissioner has a strong pesticide safety program in place (for more information, see http://www.co.napa.ca.us/GOV/Departments/DeptPage.asp?DID=26400&LID=37).

Comment 3.May 2008.DJ4: "Another low flow problem occurs in dry years with a cold spring. Department of Fish and Game documents demonstrate that water diversions and on-stream reservoirs have played a significant role in the decline of salmonids in the Napa River watershed. Surface water diversions, groundwater pumping and the process of channel incision can all decrease the flow in the Napa River and its tributaries. The actions of the Division of Water Rights and of the watermaster should be considered under the cumulative impact discussion of the CEQA analysis for the sediment TMDL."

Please see our responses above to Comment 3.DJ4, and Comment 3.May 2008.2, where we respond to these same comments.

Comment 3.May 2008.DJ5: "Chronic turbidity appears to be a problem on Conn Creek. The photo [Figure 1] was taken six days after the last recorded daily rainfall of 0.32" at the [nearby] Angwin rain gauge. … Trush (2002) has identified "chronic turbidity thresholds" for anadromous salmonid populations for each of the following flow conditions:

- **mean daily average streamflow (23%-24%): NTU < 10**
- **winter base streamflow (10%): NTU < 25**
- **receding winter peak streamflow (5%): NTU < 70**
- **winter peak streamflow (2.5%): NTU < 100.**

The percentages in parentheses are water-discharge exceedence probabilities during the winter which is defined as October 1 through May 31." … According to Trush, the turbidity associated with the winter average discharge should be less than 10 NTU. Assuming that the discharge in Conn Creek was close to the winter average [when photographed] suggests that its turbidity should have been less than 10 NTU [in order to protect anadromous salmonids]. I did not measure the turbidity of Conn Creek when I photographed it … but water with a turbidity of 10 NTU (or less) is relatively clear and the water I observed and photographed was distinctly cloudy."

The single qualitative observation of turbid conditions on 25 February 2006 in upper Conn Creek and the associated interpretations do not support a finding of turbidity impairment in upper Conn Creek and/or in other water bodies within the Napa River watershed. If repeated sampling and measurement of turbidity had been completed to

document chronic turbidity at levels that may reduce growth opportunities then we might concur that upper Conn Creek is impaired by turbidity, although it would be important to first determine whether the turbidity was in response to a local sediment source or reflected ambient sediment supply conditions.

Comment 3.May 2008.DJ6: "Conn Creek drains into Lake Hennessey, one of the five large water supply reservoirs, and is therefore excluded from the sediment TMDL … . Therefore, the TMDL would not protect landlocked steelhead known to inhabit Conn Creek above Lake Hennessey (Leidy et al., 2005) from this chronic turbidity. In addition, this turbid water will degrade the City of Napa's municipal water supply. … In addition, the elevated level of turbidity in Conn Creek near Angwin should be seen as evidence of a chronic turbidity problem in other locations in the watershed because the geologic units upstream of where the photo was taken also occur in areas not controlled by the large water supply reservoirs."

Please see our responses above to Comment 3.DJ1 and Comment 3.May 2008.DJ4.

Comment letter no. 3: Living Rivers Council (Patrick Higgins comments attached to May 2008 comments to State Board)

Comment 3.May 2008.PH1: "Major problems with the Napa River sediment TMDL and Basin Plan amendment include:

- **Implementation will be largely voluntary**
- **No recommendations or guidelines to limit development or reduce road density that are needed to restore the natural hydrograph**
- **Decreased low flows are negatively impacting salmonids and continued development will exacerbate these impacts**
- **Proposed TMDL monitoring is insufficient to gauge recovery**
- **Site-specific mitigations and BMPs are main tools for achieving the TMDL, but cumulative effects will likely confound success**
- **Areas upstream of dams are exempt under from the TMDL despite passing sediment downstream and the need to protect remnant landlocked steelhead upstream of dams."**

The commenter is not correct in his impression that implementation actions to achieve the sediment TMDL are largely voluntary. Please note instead that all significant upslope categories of sediment delivery to the Napa River (see Chapter 3 of the *Staff Report*, and Tables 4.1 through 4.4 of the Basin Plan amendment) will be regulated by waste discharge requirements and/or conditional waivers. With regard to the second bullet point, no recommendations/guideline to limit development or reduce impacts of

roads, please note that sediment allocations by their nature place a cap on total discharge. With regard to the third bullet point, decreased flows are negatively impacting salmonids, note that we have called for a survey of illegal reservoir storage and other measures to protect and enhance baseflow. We also previously have added turbidity and residual pool volume monitoring to respond to earlier concerns (see Basin Plan amendment, Evaluation and Monitoring, p. 19). With regard to the assertion that land areas upstream of dams must be regulated under the TMDL, please see our response above to Comment 3.DJ1, where this issue is addressed.

Comment 3.May 2008.PH2: Table 5.2 of the Basin Plan amendment references the Northcoast Instream Flow Policy (see attached comments on that policy). There are major cumulative effects form diversions that also compound sedimentation (see excerpt from Band, 2008 included in comments). "The interaction of early season diversions … likely combine to deplete flow and cause fine sediment deposition in Chinook salmon redds in the mainstem reaches [of the Napa River]. This is another example of cumulative effects overlooked by the Napa River TMDL and yet another deficiency with regard to compliance with CEQA."

Please see our response to 3.May 2008.2 above. With regard to the potential for diversion operations to contribute to sedimentation, we note that based on the results of the sediment source analysis (Staff Report, Chapter 3) and the empirical linkage analysis (Staff Report, Chapter 5) that numeric targets can be achieved without considering this factor. Therefore, we do not agree that it is essential to control this potential mechanism of sedimentation.

Comment 3.May 2008.PH3 (Conclusion): "Many points I raised in my initial comments remain unaddressed. The final report demonstrates that the … staff interpret their responsibility narrowly." This "makes it unlikely that actions will prevent sediment pollution and allow restoration of Pacific salmon species in a timely fashion. Monitoring is insufficient in temporal and spatial extent to provide a feed back mechanism for meaningful enforcement … of waste discharge requirements, upon which the Napa River TMDL and Basin Plan extensively rely."

Please see our earlier responses to comments on the September 2006 draft of the Basin Plan amendment (BPA). We are confident that full implementation of the BPA will support conservation and recovery of steelhead and Chinook salmon populations with the watershed.

Comment letter no. 4: Napa County Farm Bureau

Comment 4.1: "We appreciate the opportunity for input and the outreach efforts of Water Board staff."

Comment noted.

Comment 4.2: For many years we have worked with the Water Board on the sediment problem and implementation of measures to reduce erosion and improve the health of the watershed. Within the framework of balancing beneficial uses, we support efforts to improve habitat for steelhead and Chinook salmon and indeed are already working on such efforts.

Comment acknowledged.

Comment 4.3: "As noted in our comment letter of August 11, 2006, we seek further clarity on the implementation measures and the specifics of the Waste Discharge Requirements (WDR) waiver policy. What will the waivers entail? Coordinating the flow of information to over 1700 grapegrowers and ranchers will be an enormous effort. We encourage the Board to allow enough time to thoughtfully develop a reasonable and comprehensive program which will achieve sediment reductions without creating bureaucratic confusion and undue burdens for landowners."

Please see our response above to Comment 2.5, where we provide some clarification regarding the potential scope of the WDR waiver programs. Please note that four essential WDR waiver conditions are envisioned: 1) BMPs to effectively control all pollutants of concern; 2) a detailed water quality protection plan documenting site conditions and BMPs; 3) Water Board staff review of plans/sites; and 4) monitoring at program-level to evaluate BMP effectiveness, and at the site-level to document implementation. Key management issues include: control of pollutant discharges from fields and pastures, road-related sediment delivery, stream corridor functions, unstable hillslope areas, storm runoff increases, and unstable channel reaches. Considering the significant delay in approval of the TMDL, and need to build local and Water Board institutional capacity, we have revised Tables 4.1 to 4.4 to extend completion dates by two years to October of 2014.

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